Showrooming: a look into the Portuguese electronics market

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Dissertation submitted in partial fulfillment of the requirements for the degree of MSc in Management with Specialization in Strategic Marketing at Católica Lisbon School of Business & Economics

“Marketing takes a day to learn. Unfortunately, it takes a lifetime to master.” – Philip Kotler

ABSTRACT

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The Internet made information widely available to every person with a connection. Furthermore, the increasing popularity of tablets and smartphones in the 2000s made the Internet connection more accessible and mobile.

Nowadays, the combination of the facilitated access to the Internet and the growing number of online retailers generates transparency on the consumers' minds that wasn't possible before. We can check the price of an iPhone on a country on the other side of the world just by tapping a few times on the screen.

Therefore, there's a risk that brick-and-mortar stores turn into showrooms as consumers use them to see and touch the products but they never actually make the purchase offline.

Although online vs. offline behavior has been widely studied in the past, the research about showrooming is insufficient. Plus, showrooming has many times been addressed from a negative standpoint, where authors try to identify and quantify the adverse effects for retailers.

Keywords: Online, offline, decision-making, multi-channel shopping, showrooming.

RESUMO

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A Internet tornou a informação amplamente disponível para qualquer pessoa com uma conexão. Para além disso, a popularidade crescente dos tablets e smartphones nos anos 2000 fez com que esta conexão se tornasse fácil e móvel.

Hoje em dia, a combinação do acesso à Internet com o número crescente de retalhistas online criou uma transparência para os consumidores que não era possível até agora. Qualquer consumidor pode ver o preço de um produto num país que fica do outro lado do mundo ao clicar duas ou três vezes num ecrã.

Existe então o risco das lojas tradicionais se tornarem em lojas de exposição que os consumidores usam apenas para ver os produtos.

Embora o comportamento online vs. offline já tenha sido extensivamente estudado no passado, há uma quantidade limitada de investigação no que diz respeito ao showrooming. Para além disso, o fenómeno tem sido muitas vezes estudar ode uma perspetiva negativa em que os autores tentam identificar e quantificar os efeitos negativos para os retalhistas.

Palavras-chave: Online, offline, decision-making, multi-channel shopping, showrooming.

ACKNOWLEDGMENTS

First, I need to thank my family. My mother and Tiago were crucial during the months that I worked on this dissertation. Without them I do not think I could go through this phase I like to call "The most challenging time of my life.". When I end up getting a diploma, that diploma is only 1/3 mine.

I would also like to thank my friends and coworkers who showed me that even in times of high stress there's always something to laugh about. Also, to my four incredible bosses who allowed me to use some precious hours when I needed and understood the fact that some days my hours of sleep didn't allow me to think straight.

Moreover, the participants of the interviews/survey were also vital, and I could not finish this dissertation without them.

Finally, I must express my gratitude to my advisor, Nuno Crispim, for his continuous support and for pushing me to finish this cycle and move on to a new one. His advice and support were essential for me to finish this dissertation.

I can only hope for a bright future! Thank you!

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CHAPTER 1 – INTRODUCTION

1.1. Background

Sit, Hoang & Inversini (2017) defined showrooming as a shopper behavior in today's retail landscape, referring to consumers inspecting the desired product at a retailer's physical store and then buying it online, usually from a competitor.

Retail showrooming is one of the most debated topics nowadays. However, there is a clear need for researchers to cover this phenomenon in greater detail, to fully understand the motivations behind it and the impacts on brick-and-mortar, pure online and click-and-brick business models.

With the development of technologies, customer shopping habits are changing all the time, particularly with the Internet rising as a shopping channel. With these changing habits, traditional retailers face several challenges that can either represent threats or opportunities.

Consumers are now empowered to use almost infinite information to their advantage and make smarter decisions regarding what they buy. In complex categories, like consumer electronics, shoppers hardly make an instant purchase decision because they want to make sure that the various prices and intricate specifications do not deter them from getting the best possible deal.

On the other hand, retailers are already acting on this matter. As an example, Amazon in 2017 has won a patent that allows them to restrict customers' access to competitors' websites when they are using the store's free wi-fi. This strategic move from the e-commerce giant prevents other physical retailers from doing the same.

1.2. Problem Statement

The increasing relevance of showrooming in today's retail landscape represents the starting point of this thesis. This study strives to understand showrooming in detail by developing a framework that assesses the motivations behind the emerging shopping behavior and the impact that it might have on retailers. This will be possible by analyzing and describing the actual context of the phenomenon in the Portuguese market, with a focus on electronic goods, which is one of the most showroomed categories.

Hence, the following problem statement opens the discussion to all the topics mentioned before:

"What strategies should retailers adopt to manage showrooming?"

1.3. The Aim of the Research

The goal of this thesis is to provide insights on how showrooming is evolving in the electronic goods market in Portugal and how can retailers deal with it.

While the phenomenon is increasing in popularity, there is still little academic research able to provide insights regarding what is driving this behavior of shoppers and especially how should retailers deal with this emerging trend.

Plus, most of the existing studies focus on showrooming from a negative standpoint. This focus appears to relate to the theoretical lens of multi-channel shopping, which emphasizes browsing and switching behaviors across channels (Pantano & Viassone, 2015; Verhoef et al., 2007). This study focuses not only on the lens of multi-channel shopping but also on customer experience by assessing the personal reasons that lead shoppers to engage in the trending shopping behavior.

So, the research questions that this study strives to address are:

1. What demographic characteristics influence the likelihood to engage in showrooming?

2. What demographic characteristics influence the frequency of showrooming?

3. What personal characteristics influence the likelihood to engage in showrooming?

4. What personal characteristics influence the frequency of showrooming?

5. Does the willingness to pay online change according to where the consumer is at the moment of purchase?

6. Are pricing strategies perceived differently depending on the motivations to showroom?

7. Is the engagement in showrooming related to how likely a consumer is to buy different product categories online?

1.4. Research Method

To support the primary data, secondary data was collected through literature review.

Though this dissertation is based on theoretical literature, its prime focus is on the collection of primary data.

Regarding secondary data, academic articles are the primary source.

This study seeks to answer some questions and test some hypotheses through the following methods:

1) In-depth interviews with participants that went to a consumer electronics' store recently.

2) Online questionnaire administered to a sample of Portuguese population.

Initially, this study considers the reasons that lead a consumer to engage in showrooming and secondly, this research will deliver enough data to provide a set of best practices and advice for retailers in the electronic goods category.

1.5. Academic and Managerial Relevance

The controversial topic on which this thesis is based has drawn attention from researchers and retailers. While the competition between retailers reaches new levels, the traditional ones need to adapt to the new digital reality.

Because it focuses on a recent topic, this thesis contributes academically to the marketing literature by exploring the emerging behavior while trying to address it from a more positive standpoint.

As the online retail grows, price transparency highly increases and pushes consumers to engage in comparisons between competitors, which makes the management of online and offline prices one of the most significant challenges in retail. Thus, from a managerial point of view, it is relevant to know what strategies better help retailers in managing showrooming.

1.6. Scope of Analysis

This dissertation studies the shopping behavior of consumers regarding electronic goods with a focus on the Portuguese market.

Because Portuguese consumers do not represent the world population, this study aims to build empirical data about consumer behavior that is valid for Portugal.

1.7. Dissertation Outline

This dissertation is comprised of six chapters. The first chapter is an introduction to the research and presents the problem statement and research questions. The second chapter frames the current findings through the form of a literature review. Chapter three offers an overview of the methodology used to conduct the research. In chapter four, the results retrieved from both parts of the research are in-depth analyzed. This discussion of results is then followed by a general conclusion, limitations of the research and future recommendations in chapter five.

Lastly, chapter six corresponds to the appendices and presents additional information that couldn’t be included in the previous chapters due to length restrictions.

CHAPTER 2 – LITERATURE REVIEW

2.1. Foundations of Showrooming

2.1.1. From One-channel to Multi-channel

Before the e-commerce emergence, the retailing industry was composed of one single channel, the offline one. However, this scenario changed in the 90s when a pizza from Pizza Hut and a Sting's CD became two of the first products sold on the Internet.

E-commerce obliged retailers to face new challenges, as online shopping offers immediate and full access to a multitude of products, effortlessness comparison between alternatives and lower prices on average than a conventional store (Brynjolfsson, Hu & Rahman, 2013). As a result, online commerce posed a threat to traditional brick-and-mortar stores as they were afraid that the online channel would become a leader in a multi-channel environment where "special consumers" that are very price sensitive can quickly go for a cheaper option available on the Internet.

The propagation of new channels such as online, mobile and social media made retailers consider the design, deployment, coordination, and evaluation of channels through which retailers and customers interact (Neslin et al., 2006). The first decision that managers had to face was whether they should or shouldn't add new channels to their current retail mix (Deleersnyder et al., 2002).

Moreover, in some specific markets like the travel industry (Verhoef et al., 2015), the online channel has become so dominant that it can be considered disruptive (Christensen & Raynor, 2003). This dissemination of new ways of selling pushed traditional businesses to invest in multi-channel strategies and to add new shopping channels, such as the Internet, to better serve their customers (Deleersnyder et al., 2002).

Despite the challenges mentioned, the multi-channel environment also brings new opportunities for retailers (Pentina et al., 2009). For example, the proportion of multi-channel shopping relates positively to revenues and share of wallet (Kumar & Venkatesan, 2005), which suggests that investing in additional channels can potentially increase the revenues of a retailer.

2.1.2. From Multi-channel to Omnichannel

The appearance of multiple channels affected some industries more than others. Food retailing was one of the businesses that didn't experience a significant alteration. However, the overall retail mix has changed, and numerous different business models have been affected by the new landscape (Sorescu et al., 2011).

While many authors focused on multi-channel behavior (Neslin and Shankar, 2009), Verhoef et al. (2015) argue that retailing is entering a new phase where the integration of mobile, tablets and social media with online and offline retailing will push for a new business model, known as the omnichannel.

Omnichannel means that the different channels in the retail mix are used interdependently by customers during the search and purchase process, suggesting that companies cannot control this usage (Verhoef et al., 2015).

Until recently, the different channels within a firm were managed disjointedly with poor integration among them (Verhoef et al., 2015), with only some thorough attention being given to assortment integration and pricing strategies across the different channels (e.g., Pan et al., 2004).

Nowadays, the development and management of channels is becoming more integrated, which can blur the common borders between them (Verhoef et al., 2015) and prompt retailers to reevaluate their strategies as old obstacles like geography and customer ignorance start to disappear (Brynjolfsson et al., 2013).

Verhoef (2015) also argues that the omnichannel model makes the distinction between one-way communications (e.g., advertising) and two-way communications (e.g., social media) less clear.

In the current scenario, it is relevant to note that two-way communication is becoming a multiple-way communication, as consumers and brands can now interact in several directions (e.g., consumer-consumer, consumer-brand, and brand-consumer) through digital channels. In a recent campaign from McDonald's to celebrate the 50th anniversary of the Big Mac, the brand dared their customers to post their best black-and-white pictures of a Big Mac on Instagram so that they could win exclusive access to the anniversary party. This marketing move blends an advertising intention with social media customer-brand interaction. Therefore, it is no surprise that advertising and interactive channels become fully integrated (Verhoef, 2015) – **Appendix I (Table 2).**

As the industry evolves towards this synergetic model, the distinctions between online and offline will ultimately vanish (Brynjolfsson, Hu & Rahman, 2013). Ensure effective touchpoints with consumers across all channels is essential to provide a smooth and enjoyable journey for them.

2.1.3. Research Shopping

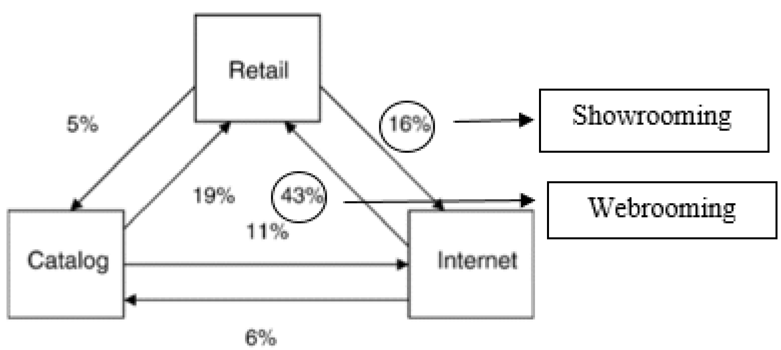
The dawn of new digital and mobile channels has resulted in a disruptive change in the retail environment (Rigby, 2011), both for customers and firms. From the customer's perspective, the shopping concept evolved from "leisure" to "precision" in the last few decades (Davis & Dyer., 2012) as consumers now want to get things faster and more efficiently.

The massive variety of both channels and products available in the market prompts consumers to widely evaluate their alternatives before they make a purchase, as they can purchase whatever, wherever and whenever they want.

These shoppers embrace mobile technologies to look for product information, price and convenient after-sales policies and turn some channels into showrooms, which may lead the firm to lose the customer during the purchasing process (Nunes & Cespedes, 2003). This is mentioned as the "research shopper" or "free-riding" phenomenon (Chiu et al., 2011), which implies that customers search in one channel and buy from a different one (Verhoef et al., 2007), whether it is online or offline. So, customers take advantage of one channel to find information efficiently but end up purchasing on the channel that offers the best deal.

Researchers until now have mainly considered three channels: physical stores, web stores and catalogs (e.g., Verhoef et al., 2007)).

Figure 1 - Previous Evidence of Research Shopping



Source: Verhoef et al. (2007)

According to previous literature, 20.4% of offline purchases take place after the customer has consulted a different retailer's website (Van Baal & Dach, 2005). Chatham et al. (2004) concluded that 65% of US online browsers research the product on the Internet and then purchase it in a brick-and-mortar store (as cited in Chiu et al. (2011)). In pace with these findings, Verhoef (2007) also concluded that webrooming is the dominant form of research shopping since 43% of consumers research for a product online and then buy it inside a physical store. Due to the domination of this behavior in the industry, many authors focused on studying it (e.g., Chiu et al., 2011).

Nevertheless, showrooming is becoming a challenge for retailers as mobile penetration increases (Dahana et al., 2017), since it allows consumers to be inside a store while they search online on their smartphone or tablet for better deals (Rapp et al., 2015). Research from Google (2011) indicates that 79% of smartphone owners use their device in some phase of the shopping journey and a more recent study specifies that 42% of in-store consumers consult online research while in stores (Google, 2014). Sit et al. (2018) suggest that the intensification of the showrooming phenomenon can also be explained by environmental factors such as improved internet connectivity and broadband speeds, continued appearance of new internet retailers and a growing number of small-sized stores.

Still, it is important to note that showrooming only happens when shoppers search inside brick-and-mortar stores and then buy online. It is not considered showrooming when they merely search on the web.

Customers nowadays prefer a variety of channel options when they undertake the process of purchasing (Verhoef et al., 2007) since it allows them to evaluate their alternatives more efficiently. However, the cross-channel switching behavior represents an issue for businesses because it makes purchasing behaviors harder to understand for marketers (Chiu et al., 2011).

Table 1 - Possible Behavious Across Channels

Do customers contact with the same company from searching to purchasing?

	Yes	No	
No	**Within-channel switching** Customers search at the online channel of company A, then purchase from the online channel of company B.	**Cross-channel free-riding** Customers search at the online channel of company A, then purchase from the offline channel of company B.	Free-riding loss (Neslin & Shankar, 2009)
Yes	**Within-channel retention** Customers search and purchase from the same online channel of the same company (company A).	**Cross-channel retention** Customers search at the online channel of company A; and they purchase from the offline channel of the same company (company A).	Free-riding retention (Neslin & Shankar, 2009)

Do customers use the same channel from searching to purchasing?

Adapted from Chiu et al. (2011)

For understanding the table above, it is not necessary to define channels as online or offline. It is relevant though to note that free-riding does not necessarily imply that the shopper buys from another vendor, it just implies that there is a channel switch between the search and the purchase phase of the shopping journey (Neslin et al., 2006).

Neslin & Shankar (2009) define cross-channel retention as free-riding retention and cross-channel free-riding as a free-riding loss. These authors call the customer that engages in "free-riding loss" a "competitive research-shopper," which is a shopper that is comfortable with using channel A from company A to research and then channel B from company B to make the purchase. On the other hand, a customer that engages in "free-riding retention" is defined as a "loyal research-shopper," which consists of a type of buyer that stays loyal to a company despite switching channels during the shopping process (Neslin & Shankar, 2009). The goal of a retailer is to maintain or grow its loyal research-shopper customer base and try to get a share of the competitive research shoppers.

2.1.4. Online vs. Offline

Since the emergence of online channels, researchers have been focusing on distinguishing the factors that influence shoppers' intention to buy online and offline. The motives behind the channel choice can either be utilitarian or hedonic (Sahney et al., 2013). Utilitarian comprise price, product variety, and product access while hedonic motives can be fun, excitement or escapism (Sahney et al., 2013). Accordingly, utilitarian motivations are associated with problem-solving, satisfying needs and creating real utility, while hedonic motivations are linked to emotions and follow the principle that people seek pleasure and avoid pain (Higgins, 2006) to make their experiences as pleasant as possible.

Arnold and Reynolds (2003) suggest that focusing on utilitarian motives is not sufficient in the current retail landscape. That is why retailers nowadays invest in high service levels to provide a exciting environment in-stores to compete with online businesses.

However, online retailers satisfy utilitarian motivations like lower prices and higher convenience. In the multi-channel environment, research shopping is becoming more complex as consumers seek hybrid benefits through various channels (Wind et al., 2002 as cited in Chiu et al., 2011).

2.1.4.1. Motivations to Shop Offline

Despite the utilitarian nature of online shopping, physical stores can also provide some functional advantages like better personal services and more instant access to products.

Regarding the first motivation, one-on-one interaction with store employees can help customers make more informed decisions (Burns et al., 2010) and push them to buy inside the store. However, research shows that 60% of showroomers planned to buy inside a brick-and-mortar store and ended up purchasing in a different place (Kalyanam et al., 2013).

Regarding instant access, Rigby (2011) states that instant gratification is a primary utilitarian motivation to shop offline, as the consumer can immediately get his hands on the product without concerning about payment and delivery. Plus, consumers tend to perceive online channels riskier to buy from when compared to physical stores (McKnight et al., 2002).

Nevertheless, the significant upside of offline shopping is the intrinsic hedonic motivations that it fulfills for consumers, like entertainment, social interaction and real-life experience. Saying that people go shopping just to buy things is a mistake (Westbrook et al., 1985) since customers also go shopping due to social motivations like interacting others. Furthermore, shopping offline can sometimes be almost like an event (Herring et al., 2014).

Also, offline channels still provide the best opportunity to touch and try the product in real life. Web stores still need to invest in the use of photographs, videos, 3D models (Burke, 1997; Gurrea & Sanclemente, 2014) and leverage technologies like augmented reality to respond to the advantage that store-based channels have when it comes to seeing and experiencing the product. Lempert (2002) even argues that the lack of sensory stimuli can make online shopping boring and stop the consumer from buying on impulse.

2.1.4.2. Motivations to Shop Online

Regarding online shopping, its nature is way more utilitarian than hedonic. Some of the utilitarian motives that it fulfills are the convenience, price, access to information and assortment.

Convenience comprehends both the fact that customers can shop without leaving the comfort of their home and the fact that they can remain anonymous (Sahney et al., 2013). Therefore, customers who attribute a higher value to time and anonymity are more likely to use online channels to shop.

Regarding price, web stores are usually able to offer lower prices as they do not bear the costs of maintaining a physical store (Rigby, 2011). Moreover, online channels facilitate the comparison of prices as there are websites such as KuantoKusta that are simple comparison tools. Therefore, price-sensitive consumers tend to prefer online channels.

Furthermore, facilitated access to the product and after-purchase policies expand transparency (Konus et al., 2008) and impulses information-seekers to buy online, even though offline channels tend to be perceived as safer (McKnight et al., 2002).

The assortment is also a critical factor when deciding which channel to use. The Internet allows people to choose from a much more comprehensive variety of products by just clicking on a mouse or tapping on a screen (Sahney et al., 2013).

The referred benefits are the ones that usually make consumers opt for the online channels. However, escapism, pleasure, and arousal represent the hidden motivations behind online purchases as they allow customers to search for new and exciting products (Konus et al., 2008) while escaping from their daily routine. Furthermore, customers are also influenced by the surrounding social environment as they are more prone to buy online if online shopping is socially accepted and frequently used in their community (Konus et al., 2008). That is part of the reason why brands nowadays invest in building virtual communities that allow customers to share opinions and interests while getting a sense of belonging (Sahney, 2013).

2.2. Consumer Behaviour and Decision-making

2.2.1. From traditional decision-making to multi-channel consumer journeys

Two consumers that behave the same way do not exist. However, it is possible to find similarities regarding consumer decision making and establish patterns of behavior. Grasping decision making is mandatory to explain the reasons behind purchases (Solomon, 2015).

In the field of consumer behavior, many frameworks have been developed in the pre-internet era to "traditionally" explain decision making. The renowned funnel five-stage model (**Appendix I – Table 3**) comprises problem recognition, information search, evaluation of alternatives, product choice and outcomes as the main phases of the process. On the other hand, price, product involvement, familiarity with the brand and frequency of purchasing are the major influencing factors.

However, the more traditional representations do not consider all the crucial touchpoints and critical buying factors due to the increasing amount of product and channel choices (Court et al., 2009). The funnel model implies that the decision path is sequential and unidirectional. Moreover, it depicts decision making as a rational process where consumers search for information to maximize utility. By now, many authors like Sahney (2013) showed through research that consumers are not always rational and are influenced by utilitarian and hedonic factors.

Nevertheless, it is relevant to frame showrooming using the traditional model. Considering the showrooming behavior, the information search (2nd stage) will happen in a physical store and the evaluation of alternatives (3rd stage) and purchase (4th stage) will happen online.

As an alternative to the linear five-stage model, Court et al. (2009) proposed that the decision-making process is a circular journey with four phases: initial consideration, ongoing evaluation, closure, and post-purchases **(Appendix I – Figure 4)**. In this model, different channels are used interchangeably during the decision journey, and it assumes that there's not a specific sequence for shoppers to follow, they instead start and stop their journey wherever they want (Taylor, 2016).

The inherent complexity that multi-channels bring to the shopping journey is only real from a marketer's perspective. From a shopper's perspective, this increased complexity is a way of simplifying the decision-making process (Wolny et al., 2014). Consequently, choosing which channels to use is a dynamic course where the journey stage influences the channel usage intention (Sorescu., 2011) as consumers look for different benefits at the different stages of the whole decision process (Wolny et al., 2014).

Molenaar (2010) also developed an alternative model based in the new retailing landscape that illustrates a multi-channel consumer journey where information is gathered through several sources before the actual purchase takes place **(Appendix I – Figure 5)**.

However, the framework developed by Molenaar (2010) fails to consider social media and mobile as essential channels (Wolny et al., 2014) and lacks support from academics. Therefore, there's still a clear need to develop comprehensive models that include all the possible touchpoints across channels in a loop form as Court (2009) suggests.

2.2.2. Showrooming Decision-making

Sit et al. (2018) assessed showrooming through a customer experience lens and developed a model based on the traditional five-stage theory to explain the showrooming decision-making process, which comprises four phases **(Appendix I – Figure 2).**

2.2.3. Influencing Factors - Personal Motivations

2.2.3.1. Involvement

Involvement is related to how much a consumer feels attached to a product or a purchase. It is accepted that as the involvement increases, the effort spent on searching also increases (Clarke et al., 1979). The explanation for this correlation is the fact that higher involvement leads consumers to care more about a product or purchase, which increases the perceived benefits of searching (Dahana et al., 2017).

According to Dahana et al. (2017), involvement significantly affects the probability of showrooming but does not correlate with the frequency of this behavior. So, it is still unclear if consumers with higher involvement tend to showroom more than consumers with low-involvement.

It is also pertinent to state that for the same product or purchase, the level of involvement will differ from one consumer to another. However, consumers tend to show higher levels of involvement towards some categories. Identifying these categories is essential so that marketers can identify potential showroomers and efficiently target them.

2.2.3.2. Perceived Risk

When people are first introduced to new technologies, frequently they do not understand the benefits of it, and they also consider the associated risks (Sjoberg & Fromm, 2001) like financial and product performance. While the internet offers convenience and lower prices, it also creates uncertainty in the mind of consumers (Dahana et al., 2017). So, a higher perceived risk will make shoppers more reluctant to buy online (Bhatnagar et al., 2000).

Dahana et al. research (2017) showed that an increase in perceived risk decreases the number of times that consumers engage in showrooming. So, shoppers who are less risk averse have more chances of becoming frequent showroomers. However, there's no evidence that it influences whether a consumer engages in showrooming or not.

2.2.3.3. Price Consciousness

A price sensitive customer seeks to find the best deal for a specific product when shopping (Konus et al., 2008). Furthermore, financial advantages offered by online retailers have been one of the primary drivers for showrooming (Quint et al., 2013). Dahana et al. (2017) findings support these results, as they show that price consciousness influences positively both the engagement in and the frequency of showrooming.

2.2.3.4. Internet Usage

A shopper that uses the Internet more frequently is more likely to purchase online (Citrin et al., 2000). This can be explained by the higher ability that frequent Internet users have for searching products and discovering vendors on the web (Dahana et al., 2017). When customers think that they are incapable of doing a task, they will not engage in the action, even if it could be a better alternative (Seltzer et al., 1983).

Plus, the internet usage can be associated with positive experiences and enjoyment (Huang, 2003). Hedonic shoppers, hence customers with higher levels of enjoyment while shopping, are likely to change channels during their purchase journey (Konus et al., 2008) because they do not mind spending extra time searching for products across different channels.

Regarding showrooming, Dahana et al. (2017) research show that consumers who spend more time on the Internet are more likely to become frequent showroomers. On the other hand, there is no correlation between Internet usage and initial engagement in showrooming.

2.2.3.5. Demographics

Although previous studies have documented differences in attitudes towards online shopping between man and woman (e.g., Business Insider, 2016), Dahana et al. (2017) research shows that age is the only demographic variable with a significant effect in showrooming. Thus, younger generations are more likely to become frequent showroomers. It can be explained by the fact that millennials and later generations were already born in the digital age and their familiarity with online channels is way superior to previous generations.

2.2.3.6. Mobile Device Usage

Mobile shopping has shaped the retailing landscape in the last decade, and mobile devices usage is an important influencing factor when it comes to shopping on the web. M-shoppers, hence customers that buy online through a smartphone or tablet, not only purchase more regarding order size but also more frequently (Wang et al., 2015).

Dahana et al. (2017) research show that consumers who use mobile devices more frequently than fixed devices to access the internet are more prone to repeat the showrooming behavior. However, like perceived risk and internet usage, it is not clear how it affects the likelihood of one engaging in showrooming.

2.2.3.7. Store Loyalty

A customer is considered loyal to a store when he is willing to purchase from the same store several times due to positive attributes of the retailer (Srinivasan et al., 2002).

Store loyalty is related to other personal factors. For example, if a shopper is more price sensitive, it is more likely that he ends up buying on wherever he can get a better price, which means that store-loyalty correlates negatively with price consciousness (Martos-Partal et al., 2013). On the other hand, time-consciousness pushes consumers to search in a limited way, which usually leads them to buy from the retailer that they are loyal to (Martos-Partal et al., 2013).

Thus, the findings suggest that loyal shoppers are less likely to engage in showrooming behaviors.

2.2.4. Influencing Factors: Channel Motivations

The theory of reasoned action is one of the classic models of persuasion. Developed by Martin Fishbein and Icek Ajzen in 1967, it implies that an individual will engage in a particular behavior after evaluating reasonably the outcomes that the behavior will carry.

Based on this theory, Verhoef et al. (2007) assumed that *"consumer perceptions of search and purchase attributes of each channel translate into the actual search and purchase attractiveness of each channel, which in turn affects channel choice for search and purchase."*.

According to Verhoef et al. (2007) research, attribute-based decision making, lack of channel lock-in and cross-channel synergy are the three main factors behind research-shopping behavior and represent the channel motivations. These motivations are associated with the channels' characteristics and the relations among them.

Attribute-based decision making refers to the fact that usually, consumers find online channels convenient for gathering information but risky to make the purchase (McKnight et al., 2002), which can make them engage in webrooming. The Internet is perceived by the consumers as an information source and not as a store (Verhoef et al., 2007).

Moreover, the Internet is considered a channel with low lock-in because its high search attitudes do not translate into high purchase attitudes as it is much easier to abandon a website than a physical store where the personnel can persuade consumers to make a purchase (Neslin & Shankar, 2009). However, online stores can more easily use targeted online marketing to push the customer to complete the purchase. The Internet would only be a preferable purchasing channel if the lock-in were sufficiently high to compensate for its weak purchase attributes.

Additionally, high cross-channel synergies develop a sense of "smart shopping" in the consumer's mind as they feel like they can make better and more informed purchase decisions if they search on one channel and buy from a different one (Verhoef et al., 2007).

2.3. The Retailer's Perspective

2.3.1. Retailer's Strategies

Showrooming (as any other free riding-behavior) can be postulated as a problem or as an opportunity depending on which lens is used. However, it is widely reported that the increase in the showrooming phenomenon has adverse effects on brick-and-mortar stores (Rapp et al., 2015) since brick and mortar stores need to find new ways to justify the premium that they charge.

Previous studies focused on the multi-channel lens and conceived showrooming as a negative behavior (Sit et al., 2018). Daunt, and Harris (2017) characterized showrooming as a value co-destructive phenomenon whereby shoppers consume stores' resources but never get to make the purchase. Furthermore, it has been shown that showrooming has a negative impact on store personnel as it negatively affects employees' self-efficacy, selling performances and cross-selling abilities (Rapp et al., 2015). Sit et al. (2018) tried to evaluate showrooming through a customer-experience lens and showed that showrooming could be leveraged if managers understand the decision activities and emotions that consumers go through when they showroom.

2.3.1.1. Multi-channel Strategies

Research shopping behavior itself represents a threat to both offline and online channels as firms may lose their customers during the purchasing process (Verhoef et al., 2007) to another vendor. However, free-riding can be perceived as positive if the firm can push its customers from one firm's channel to another. Hence, if customers stay within the same retailer across channels, multi-channel firms have a direct advantage over one-channel competitors because shoppers that use multiple channels spend more on average than the ones that use the same channel to search and purchase (Grewal et al., 2009). Yet, most free-riders switch providers when they switch channels (Neslin et al., 2006).

So, it is crucial to implement a concise multi-channel strategy by offering a holistic customer experience (Weinberger et al., 2005) where consumers do not feel forced to use any channel. Within-firm lock-in works if customers can acknowledge the costs of switching retailers such as providing their information or expressing their needs more than once (Chiu et al., 2011). Other switching costs like the loss of loyalty discounts and emotional attachments can also strengthen switching barriers (Tsai et al., 2006), which implies that investing in loyalty strategies and creating an emotional bond with customers will increase lock-in and consequently stop them from engaging in showrooming.

Furthermore, within-firm lock-in is positively correlated with a multi-channel integration, hence synergy across the retailer's channels (Neslin et al., 2006). This means that is more likely that a shopper searches and buys from the same firm if the firm's channels work seamlessly. Consumers tend to feel more familiar with a retailer when there are more service opportunities (Dholakia et al., 2005) and customer satisfaction increases as the portfolio of offered channels expands (Shankar et al., 2003).

Adding to previous research, Neslin & Shankar (2009) suggest a model for developing and implementing a multi-channel strategy, which assumes that customer management is crucial throughout the whole process and that marketing efforts in a firm's channel X can increase sales in the same firm's channel Y **(Appendix I - Figure 3).**

On a different perspective, and based on the previously explained channel motivations, Verhoef et al. (2007) suggest three strategies for managers to prevent shoppers from searching online and buying at a physical store, hence webrooming:

1) After identifying that privacy and service failures are the attributes that turn the Internet into an information source instead of a store, it is essential to change the shoppers' perception of these attributes. This can be done by implementing strategies like adding a virtual shopping assistant and strict privacy restrictions to the online channel (Verhoef et al., 2007).
2) Making a website remember a customer's previous orders, personal details and delivery preferences can increase the Internet lock-in, making high attitudes of search translate into high attitudes of purchase on the online channel. (Verhoef et al., 2007)
3) Contrasting with what Chiu et al. (2011) suggest, Verhoef (2007) proposes that decreasing channels synergy could result in higher purchase intentions for the web channels (Verhoef, 2007). For example, not showing a store locator on the website can push consumers to buy online.

Although the suggested strategies by Verhoef (2007) are focused on fighting webrooming, it is also possible to look at them from a showrooming point of view. For example, physical stores are not usually information sources because information is widely more available online. Wu et al. (2012) suggest that advanced technologies are now able to integrate the benefits of the physical stores with the services provided by the digital scenario. Additionally, later research shows that store atmosphere and channels availability have a similar influence on the service quality perception (Pantano & Viassone., 2015). Pantano & Viassone (2015) study also shows that traditional elements such as lights, sounds, and product display need to be complemented with technological elements like interactive touch-screen displays and mobile apps that allow mobile payments.

So, to a certain extent, brick-and-mortars can provide product information by giving access to their website inside the store, like some fashion retailers (e.g., Pull&Bear) are already doing by displaying giant interactive screens where people can surf their web page. Consequently, this enhances the physical store as an information source and prevents people from searching online, reducing the risk of customers finding alternatives from a competitor.

2.3.1.2. Pricing Strategies

If firms seek to attract free-riders, different promotion strategies can be adapted for each channel. The retailer can offer different prices and discounts across different channels to push customers to visit each channel if they want to find the best deal (Heitz-Spahn, 2013). Moreover, Heitz-Spahn (2013) suggests that managers should provide price comparison tools on websites to enable customers to fulfill their need of finding the best price.

On the other hand, price-matching strategies do not advertise a price discount. Instead, they promise to match a competitor's inferior price (Lurie & Srivastava, 2005). Price-matching strategies usually are effective in increasing the showroomers willingness to buy inside the store (Sit et al., 2018). Lurie & Srivastava (2005) psychology studies showed that price-matching not only leads consumers to perceive stores as less expensive but also becomes more efficient when consumers are not aware of the range of market prices. Nevertheless, customers do not feel comfortable in asking for a price match to an employee (Sit et al., 2018), which means that marketers should communicate price-matching strategies as openly as they can and managers should instruct staff to offer the lowest price proactively.

2.3.2. Product Categories

Showrooming is prevalent, and it exists in many retail sectors like fashion, electrical goods, automobile, home and garden (Sit et al., 2018).

Among all the categories, consumers are more likely to adopt cross-channel switching behaviors for products that have high financial value and less frequent purchasing moments such as electronics, furniture, and appliances (Heitz-Spahn, 2013). Regarding showrooming, consumer electronics are more frequently showroomed as they represent a product with sophisticated specifications and different prices (Sit et al., 2018). Consequently, it is crucial that retailers recognize the importance of product characteristics.

2.4. Conceptual Framework

In **Appendix I - Figure 6**, there's a summary of the literature review presented in a framework. The development of the framework aims to contribute to a better understanding of the overall concepts and relationships discussed in the review of existing literature.

CHAPTER 3 – METHODOLOGY

3.1. Research Approach and Design

Exploratory, descriptive and explanatory are usually the three main categories of research approaches (Saunders et al., 2009) and are the ones under the spotlight in this chapter.

Quantitative research describes and answers research questions using numbers. On the other hand, qualitative research is grounded on feelings, emotions, and other elements that can't be quantified.

Regarding the nature of the research, exploratory research tries to find new ideas regarding a topic, and it is flexible in the sense that it does not require complicated procedures. Malhotra (2006) states that exploring is usually the starting point of the research process.

On the contrary, the descriptive research approach aims at describing characteristics of a phenomenon being studied, and it addresses the "what" question. Unlike the exploratory, the descriptive approach has a clear problem and hypotheses formulation. However, the latter can be a complement to, or a starting point of, exploratory studies (Saunders et al., 2009).

Finally, the explanatory research, hence casual research, tries to investigate cause-and-effect relationships. These relationships are studied by conducting experiments and manipulating variables (Malhotra, 2006).

A qualitative method (in-depth interviews) enables the gathering of empirical data, and it is favorable for this research since qualitative methods are particularly useful when the previous exploration of the research object is limited (Bryman & Bell, 2011). Therefore, through in-depth interviews and literature research, a preliminary search will be conducted to help generate and enhance research ideas.

On the other hand, an explanatory approach will be needed to answer the research questions of this study. A Research Frame is available in **Appendix II - Table 4.**

3.1.1. Literature Review

The literature review was used as an opening search to produce and polish research ideas, as well as critically examine the topic (Saunders et al., 2009).

The information was collected from published material, such as various authors' academic articles from high excellence journals and online studies.

3.1.2. In-depth Interviews

In-depth interviews, as they are not statistically significant, were conducted to collect empirical data about showrooming and not to test existing information. Thus, this qualitative methodology allows gathering answers from the participants while keeping the discussion open enough to cover angles that were not considered before.

All the interviews followed a similar structure, that can be defined as:

a) Semi-structured: with a previously prepared script consisting of open-ended questions and support questions. Semi-structured interviews offer the possibility to clarify and build upon responses (Bryman and Bell, 2011). Moreover, a picture stimulus **(Appendix III – Figure 7)** was included to enhance the interview process as it allows to keep the conversation under the scope of the research, which is consumer electronics.
b) One-to-one: a face-to-face approach allows a better connection with the participant and a more in-depth understanding of the meaning behind the responses.
c) Qualitative: a qualitative method allows to keep the focus on the respondent's perspective, instead of reflecting the researcher's concerns. Saunders et al. (2009) suggest that this type of interview is relevant to understand factors such as decision-making.

The complete script can be found in **Appendix III – Table 5**.

3.1.2.1. Sample and context

The amount of information a consumer requires before making a purchase decision and the eagerness to buy a specific product depends on the level of product involvement (Bauer, Sauer & Becker, 2006). The focus of this research is one product category that usually comprises high-involvement, and that is frequently showroomed, consumer electronics (Sit et al., 2018).

Considering these, it would be ideal to conduct an observational study on showroomers inside consumer electronics' stores. However, an observational study implies that showroomers can easily be identified within a store, which is not true as consumers can be using a smartphone to engage in several activities (e.g., text, take pictures) and not to search or buy online. It would be necessary to know why consumers are using their smartphones inside the stores to identify showroomers, which would raise ethical issues. Therefore, in-depth interviews were the chosen method.

By approaching consumers existing two stores, FNAC, and Worten, a sample of five participants was recruited for this research. Therefore, the sample can be defined as:

a) Non-probability: it does not represent a population in general, but validity can be increased by avoiding introducing bias into the sample selection.
b) Purposeful: the best sampling method to use for an exploration of a social phenomenon is purposeful sampling (Bryman & Bell, 2011). It consists of a non-representative subgroup of a more extensive population and is created to serve a specific purpose. With showroomers in mind, and considering that it is difficult to identify them, it is relevant to interview people who recently had to decide whether to buy an electronic product or not.

Thus, the participants were selected based on three criteria:

a) be 18 years or over
b) own a smartphone
c) went to a consumer electronics' store recently

On average, each interview lasted about forty-five minutes and was conducted at several public places accessible to the participants.

A complete description of the selected stores can be found in **Appendix IV – Table 8.**

3.1.2.2. Data Collection

Data was collected by taking notes and organizing information during the interviews. Later, the qualitative results were analyzed by sorting and reducing relevant information and blending it with the previous literature findings. Thus, the researcher ensured that the obtained data would be treated with confidentiality and only used for research objectives (Malhotra, 2006).

The results serve as "real-life" illustrations of the quantitative data derived from the online survey and provide more profound knowledge about the free-riding behavior.

3.1.3. Online Survey

The last research method used to conduct this study about showrooming was a survey. Because the previous method, in-depth interviews, has no statistical significance, a quantitative method is necessary to collect primary data that allows analyzing the relationships among the variables under study.

The survey was deployed online to reach a higher number of respondents and developed using Qualtrics. It has the advantage of providing fast responses for free and being less intrusive. However, response rates are low (Vehovar et al., 2008) and there is no way to check if participants are correctly answering the survey (Malhotra, 2006).

This method aims to understand how the motivations behind showrooming can affect the effectiveness of the strategies adopted by the retailers and provide conclusions on how retailers should deal with showrooming.

3.1.3.1. Population and Sample of the Study

According to Polit & Hungler (2003), the population is the aggregate of members that conform to a set of specifications. In pace with the scope of the research, the population of this study comprises all Portuguese individuals. However, some participants were excluded from the study as they did not match the eligibility criteria of living in Portugal, owning a smartphone and having bought an electronic product in the last two years. (Polit & Hungler, 2003).

A sample is a subset of a population (Brink, 2005). The bigger the sample, the more significant the results. However, due to time and money constraints, a non-probabilistic convenience sample was used.

3.1.3.2. The Questionnaire

The survey was spread around social media (e.g., Facebook and LinkedIn) in both Portuguese and English between the 7^{th} of March and the 16^{th} of the same month. The complete questionnaire can be found in **Appendix V.**

It was composed by forty-two questions divided into six main blocks.

The first block tries to understand how respondents search for product information before making a purchase decision and the second aims to assess how consumers perceive online vs. offline as shopping channels. After that, the fourth section comprised questions to identify how consumers feel about two physical retailers (FNAC and Worten) and three pure online players (Amazon, eBay, and Pixmania). The fifth part of the questionnaire is regarding showrooming and assesses if respondents ever engaged in it and why they did so. Finally, the sixth block aimed to characterize respondents in demographic terms.

3.1.3.3. Analysis

To answer the first four research questions, multiple linear regressions were run to test the impact of individual characteristics on showrooming likelihood and frequency. This was possible as all variables were coded in a Likert Scale (1 to 5) and could be used as metric variables. However, age and education needed to be recoded into dichotomous variables as they are categorical.

The last research question took advantage of Crosstabs and Chi-Square tests to assess the possible dependence between the reasons to showroom and the perception that consumers have about pricing strategies.

Furthermore, in the exploratory part, the following tests were developed:

- TwoStep Cluster: to differentiate two groups of consumers depending on how likely they are to buy specific product categories online.
- Paired Samples T-Test: to evaluate the differences in consumers' willingness to pay depending on when where they are.

Additionally, several Descriptive Statistics and Compare Means tests were run to organize results.

CHAPTER 4 – RESULT ANALYSIS

4.1. Qualitative Analysis: In-depth Interviews

The notes taken during the interviews can be found in **Appendix III – Table 6**. However, some meaningful conclusions need to be emphasized.

The interviews were led according to three main topics – shoppers' characteristics, change in retail landscape and decision-making – and the results are also presented in the same manner.

4.1.1. Shoppers' Characteristics

Five consumers, with ages that range from nineteen to thirty-three years old, and different types of backgrounds, were interviewed for this study.

Regarding mobile usage, the five participants owned a smartphone and stated that they carry it with them most of the time. This result was expected and in pace with an eMarketer (2016) study which showed that half of the world population would own a smartphone in 2016. Thus, texting, taking pictures and social networking are among the most used functionalities.

One fascinating insight is that when the participants were asked about what they do on the Internet, most of them did not make a distinction between smartphone and Internet usage, highlighting the fact that their smartphone is their usual tool to surf the web.

"I use the Internet for everything. The only thing I do not do online is grocery shopping." – Participant 1

When the question "how would you describe yourself as a shopper" was made, the opinions were somehow similar in some respects:

a) The participants have a preferred store, but they are not loyal enough to stop themselves from buying elsewhere.
b) Disregarding what they look for in an electronic good, as some look for appealing design and others are more concerned about technical attributes, they stated that the search process for electronic products is extensive and intricate. Thus, the price seems to be the most determinant factor when it comes to the searching efforts they are willing to make.

"I plan a lot and search everything that I can. I like to make good decisions." – Participant 3

c) Thus, the price seems to be the most important determinant when it comes to the searching efforts they are willing to make.

"I buy things by impulse when it is something in a lower price range. More expensive stuff I always think three times about it."- Participant 2

These three points show that these consumers are not loyal to any retailer and that they search extensively for the products before buying them, especially if they are in a higher price range.

4.1.2. Change in Retail Landscape

The five interviewees stated that the way they shopped changed in the last five years. The significant change that was emphasized is the fact that now they use their smartphone to look up products online, whereas a few years ago they just searched the products in different physical stores. The shopping journey is longer and more complicated than before.

"I would say that the purchasing process takes a lot longer. Moreover, I always try to buy things that will last more." -

Furthermore, one of the participants referred that now he can buy everything he wants with just a click and another one stated that the shopping process is in a loop form instead of being linear.

"The process is complex because I go online, then I go to the store, and then I go back online and then back to the store… it's not simple." – Participant 1

Overall, the interviewees perceived a change in the way they shop, being that the high amount of information available online which prompts them to search the products before the purchase is the significant change that they felt. A Google (2017) study shows that 70% of smartphone users who bought something in a store first used their phone for information about the purchase.

4.1.3. Decision-making

The third and last part of the interview ended up being the most enriching regarding research as the opinions and feelings of the participants regarding online vs. offline shopping and showrooming became clearer.

The first question on this part of the interview consisted in showing a picture stimulus and asking the participants what the story behind the image is. Some participants assumed that the person in the picture was looking up a TV online after leaving a BestBuy physical store and others assumed the contrary. However, the participants stated that the person was comparing the price of the offline and online channels.

"The person wants to buy a TV screen. He looked at it online, and he knows how much it costs. He is going to the store to see if the price is the same. In case the store price is higher, he is going to buy it online even if he is inside the store." – Participant 2

The second question – "Could you be the person in the picture?" – Revealed that all of them see themselves comparing prices between different channels. Thus, one of the participants stated that he has engaged in showrooming before and another one even said that he is a frequent "showroomer," even though he was not familiar with the concept.

"I do this all the time. I am an assumed showroomer. I do not mind switching channels and vendors to get the best possible deals." – Participant 4

Furthermore, there are some insights worthy emphasizing that can be found in **Appendix III – Figure 8.**

4.1.4. Framing the Results

According to these findings **(Appendix III – Figure 7),** utilitarian motivations have a higher impact on the channel choice of these consumers. Or at least, that is what they choose to say because it is easier to express utilitarian than hedonic motivations. Hedonic motivations are linked to emotions and sometimes are not even perceived by the consumer. This difference in the impact of the two types of motivations will be analyzed extensively in the next part of the research.

Regarding the showrooming behavior, there are four personal motivations – the level of involvement, level of perceived risk, price consciousness and store loyalty – and two-channel motivations – online allows a complete evaluation of alternatives and provides better product feedback – that influence the participant's decision to showroom.

From the qualitative study, some new angles were not explored before and are worthy of focus in the quantitative research, such as:

a) Within the risk that online channels comprise in the mind of consumers, is transportation the primary concern when it comes to consumer electronics? Most of the consumers stated that they feel safe regarding payment methods but not regarding the way that the product is shipped.
b) Sit et al. (2008) suggest that consumers do not feel comfortable in asking for a price match. However, could it be because consumers do not bother asking for a price match when they can just get it elsewhere? Thus, it is relevant to evaluate how this strategy

affects brand equity as the consumers feel that the retailer tricked them and only lowered the price when they were forced to.

c) Some consumers shop online on Amazon and eBay, but because of time constraints, some participants specified that they buy on the websites of physical stores and sometimes they even wait for flash sales. Can retailers take advantage of this behavior and push consumers from one channel to another while preventing them from changing vendors? Furthermore, it is essential to assess what consumers think when retailers have different online and offline prices for the same product and what is their price sensitivity not to switch channels.

d) Employees expertise for both stores under analysis are underwhelming for the interviewees. Increasing the staff expertise to provide a better customer experience could prevent the consumers from engaging in showrooming? Would this increase in service level justify the premium that these physical stores charge?

e) Online and offline prices for the same retailer are often different, as referred by one of the participants. Do consumers accept this difference? Are promotions the better way to adopt different prices on different channels?

4.2. Quantitative Analysis: Online Survey

4.2.1. Preliminary Analysis

4.2.1.1. Data Collection and Analysis

As referred in chapter three, the survey was available online for nine consecutive days in the Qualtrics platform, collecting a sample of 321 participants. Because 126 participants did not complete the survey, 9 didn't live in Portugal, 13 didn't buy an electronic product in the last two years, and 13 didn't own a smartphone, only 160 responses were considered valid and used for this study.

The collected data was then analyzed with the statistical software IBM SPSS.

4.2.1.2. Sample Characterization

It is relevant to represent the profile of the respondents of this online survey. So, the last questionnaire block allows the following sample characterization:

From the 160 considered individuals, 34.4% are men and 65.6% are women. Concerning age, most of the participants are aged between [20,35[years old (53.8%). Regarding education, 40% have an undergraduate degree. Considering the household income, 26.9% of respondents' has a monthly income of [1500€, 2000€[. Lastly, 33.1% of the participants spend [250€, 500€[on electronic products per year.

4.2.2. In-depth Analysis

4.2.2.1. Personal Factors Impact in Showrooming

Before the analysis, it is important to state that the dependent variable (Showrooming Likelihood) under study in RQ1 and RQ3 was derived from Question 23.1 ("How likely are you to buy an electronic online after checking it at a physical store") and the dependent variable (Showrooming Frequency) under study in RQ2 and RQ4 was derived from Question 23.2 ("How frequently do you buy electronic products online after checking them at a physical store?").

RQ1. Which demographic characteristics influence the likelihood to engage in showrooming?

To learn which demographic variables (Gender, Age, Household Income, Money Spent on Electronics per year and Education) better explain consumer likelihood to engage in showrooming, a Multiple Linear Regression was run, considering a significance level of 0.05.

To run the MLR, the Education variable was recoded into five dichotomous dummy variables – Under Highschool, Highschool, Professional Degree, Undergraduate Degree, Master Degree. Additionally, Gender was also recoded into a dummy variable – Gender1 – where female was coded as "1" and male as "0".

The elicited model presented an Adjusted R^2 of 0.025, which means the demographics account for 2.5% of the variation in showrooming engagement likelihood. Furthermore, the model has a sig. of 0.173 > p-value, which means that the model does not exhibit to be significant.

All the tested variables presented sig. > 0.05, except for Gender (Standardized β = -0.177; sig. = 0.034). Thus, Gender is the only significant predictor, and on average, female respondents reported a likelihood to engage in showrooming that is 0.177 points lower than male respondents **(Appendix VI – Table 9, 10 and 11).**

RQ1. Which demographic characteristics influence the frequency of showrooming?

The elicited model presented an Adjusted R^2 of 0.045, which means the demographics account for 4.5% of the variation in showrooming frequency and the model has no explanatory power.

All the tested variables presented sig. > 0.05, expect for: Under Highschool (Standardized β = -0.371; sig. = 0.007); Professional Degree (Standardized β = -0.802; sig. = 0.011); Undergraduate Degree (Standardized β = -0,725; sig. = 0.041); Master Degree (Standardized β = -0,661; sig. = 0.033). Although the model didn't show to be significant (sig. = 0.068 > 0.05), the mentioned predictors hint that the frequency of showrooming is influenced by the education qualification of consumers. Under Highschool is the most significant factor and shows that consumers who didn't get an Highschool diploma showroom 0.371 points less frequently than the others **(Appendix VI – Table 12, 13 and 14).**

RQ3. Which personal characteristics influence the likelihood to engage in showrooming?

In pace with what was done in the first two research questions, a MLR was ran to test the effect of personal characteristics (Online Risk Aversion, Price Consciousness, Internet Familiarity, Smartphone Usage, Offline Loyalty, Online Loyalty, Online Shopping Frequency and Product Involvement) on the variable Showrooming Likelihood, considering a significance level of 0.05. Online Risk Aversion was computed as the average of the six online risks mentioned in the survey (Q.19) and Price Consciousness was calculated based on Q.14 ("I normally wait for promotions to buy electronics").

The model presented an Adjusted R^2 of 0.231, which means that personal characteristics account for 23.1% of the variation in showrooming engagement likelihood. Furthermore, the model has a sig. of 0.000 < p-value, which means it has explanatory power and is significant.

The factors that revealed to be significant: Online Risk Aversion (Unstandardized β = 0.331; sig. = 0.02); Price Consciousness (Unstandardized β = 0.208; sig. = 0.021) and Online Shopping Frequency (Unstandardized β = 0.571; sig. = 0.000). The most significant one is the Online Shopping Frequency, and it shows that if we increase 1 unit of this independent variable, it will increase 0.571 units of likelihood to engage in showrooming **(Appendix VI – Table 15, 16 and 17).**

RQ4. Which personal characteristics influence the frequency of showrooming?

A final MLR was conducted to assess the influence of personal characteristics on showrooming frequency. Overall, the model is significant and has explanatory power (Adjusted R^2 = 0.234 and sig. = 0.000 < 0.05).

The factors that are significant: Online Risk Aversion (Unstandardized $\beta = 0.260$; sig. = 0.028); Price Consciousness (Unstandardized $\beta = 0.177$; sig. = 0.018) and Online Shopping Frequency (Unstandardized $\beta = 0.473$; sig. = 0.000). Therefore, these three variables not only have an impact on the likelihood of a consumer engaging in showrooming but also on the number of times that they do it **(Appendix VI – Table 18, 19 and 20).**

RQ5. Does the willingness to pay online change according to where the consumer is at the moment of purchase?

The survey was composed of ten questions to assess price sensitivity of consumers. (Q.1, Q.2, Q.3, Q.4, Q.5, Q.6, Q.7, Q.8, Q.9, and Q.10). The results show that:

- When inside a physical store, consumers are willing to pay 13.1% more for a tablet on the retailer's website ($\mu = 178.43$) than on Amazon ($\mu = 157.76$).
- When at home, consumers are willing to pay 4.5% more for a tablet on the physical store ($\mu = 187.55$) than on the retailer's website ($\mu = 179.45$) and 18.6% more than on Amazon ($\mu = 158.12$).

The results are similar when the product under evaluation is a TV. However, it is relevant to see if there is a significant difference in the average price a consumer is willing to pay online when he is at home vs. when he is at a physical store. Therefore, a Paired Samples T-Test was run – considering H0: The means of both variables are equal. The results were the following:

- Tablet Store → Website * Tablet Home → Website: p.value = 0.587 > 0.05, so we can't reject H0. The means are not significantly different. **(Appendix VI- Table 28)**
- Tablet Store → Amazon * Tablet Home → Amazon: p. value = 0.790 > 0.05, so we can't reject H0. The means are not significantly different. **(Appendix VI- Table 29)**
- TV Store → Website * TV Home → Website: p.value = 0.544 > 0.05, so we can't reject H0. The means are not significantly different. **(Appendix VI- Table 30)**
- TV Store → Amazon * TV Home Amazon: p.value = 0.579 > 0.05, so we can't reject H0. The means are not significantly different. **(Appendix VI - Table 31)**

The paired samples show that there are no significant differences in the willingness to pay online whether a consumer is at home or inside the store. Therefore, a consumer is not willing to pay more online when he is at home even though it could save him the time and effort of going physically to the store.

RQ6. Are pricing strategies perceived differently depending on the motivations to showroom?

To answer the last research question, a group of Crosstabs and Chi-Square tests were conducted between each of the five strategy-related variables ("I do not like when a retailer charges different prices online and offline."; "I would not need to ask for a price match because I would just buy where it is cheaper."; "I do not believe that Worten matches the price of its competitors."; "I am not satisfied that Worten only charges a lower price if a consumer forces them to."; "If I find a lower price online, I will ask for a price match.") and Q.27 ("Why did you end up buying online?") - **(Appendix VI – Table 22, 23, 24, 25 and 26).**

Considering H0: Perception of pricing strategies is independent of online shopping motivations, H0 can be rejected as all the Chi-Square tests showed a sig. > 0.05.

The most striking result is the relationship between "I do not like when a retailer charges different prices online and offline" and "Why did you end up buying online?" (sig. = 0.641 > 0.05). 37% of the people that ended up buying online because the product was not available in the store strongly dislike the fact that retailers charge different prices online and offline **(Appendix VI – Table 21)**. On the other hand, 33.3% of the consumers who bought online because they did not want to transport the product do not feel either satisfied or dissatisfied with the adopted pricing strategy. This result hints that pricing strategies are perceived differently depending on why consumers choose to buy online.

RQ7. Is the engagement in showrooming related to how likely a consumer is to buy different product categories online?

The probability of a consumer buying a product online is highly dependent on the product category that it fits. By comparing the means of the different product categories, a flight ticket is the product most likely to be bought online ($\mu = 4.55$; $\sigma = 0.860$), followed by phone accessories ($\mu = 4.33$; $\sigma = 1.007$). On the other hand, cars are very unlikely to be bought online ($\mu = 1.53$; $\sigma = 0.958$), followed by jewelry ($\mu = 2.04$; $\sigma = 1.258$). These results show that more expensive products which probably comprise a higher involvement are less likely to be bought online. Interesting enough, the electronic category has a similar mean ($\mu \approx 3$) and standard deviation ($\sigma \approx 1.4$) for the six product types analyzed (TV, smartphone, smartwatch, tablet, home appliances and laptop).

Although the analysis in RQ3 and RQ4 didn't highlight Product Involvement as a significant factor, it is important to note that high-involvement products usually require more thorough search and a more exhaustive decision-making process (Bauer et al., 2006) and that showrooming requires cross-channel and extensive research and evaluation. So, it is predictable that the probability of showrooming has a positive correlation with product involvement.

A TwoStep Cluster analysis was run using the different product categories as variables and Online Buying Frequency ("How frequently do you buy electronic products online?"), Showrooming Likelihood and Showrooming Frequency as evaluation fields. The model showed the existence of two clusters with a fair quality **(Appendix VI – Figure 9)**, which hints that there are in fact two distinct groups of consumers. As expected, the cluster predictors with the highest importance are the six electronic product variables, which are products that usually comprise high involvement from consumers. **(Appendix VI – Table 27).**

These results show that even though the evaluation fields have low importance, consumers from Cluster 2 are, on average, more likely to buy online than consumers from Cluster 1. Furthermore, the consumers who, on average, are more prone to buy electronic products online, are also more likely to engage in showrooming.

4.2.2.2. Exploratory: Building Knowledge

4.2.2.2.1. Search Phase: How are consumers searching for products?

Regarding the pre-purchase phase where consumers actively search for information about electronic products, 39.4% of them search for information online most of the time, and only 22.5% use physical stores as information sources with the same frequency. This result shows that the online channel still has a high search attribute when compared to physical stores (Verhoef et al., 2007). It is also interesting to note that although 92.5% of consumers wait until they are home to conduct their research, 60% admit that they already searched online for product characteristics or price while they were inside a physical store.

Regarding influencing factors relevance, almost 80% of the consumers feel like it is essential to see and touch a product before buying it and 73% agrees that salesperson's feedback matters, even though 57% thinks that staff advice is biased. However, online reviews are by far the most useful source of information for consumers as 87% of them agree that reviews are relevant when they want to buy an electronic product.

4.2.2.2.2. Purchase Phase: How do consumers perceive online vs. offline shopping?

Online vs. Offline Channels

Regarding attributes of the different channels, most consumers agree that online channels offer bigger assortments of products (μ = 4.06), are time savers (μ = 4.05), are more convenient than physical stores (μ = 3.81) and offer lower prices (μ = 3.80). Therefore, convenience, price and product variety are the three main strengths of online retailers. On the other hand, fraud possibility (μ = 4.65) and not being able to return/change a product (μ = 4.50) are the highest concerns that consumers face when they purchase electronics online.

As Verhoef (2007) suggests, decreasing channels synergy could result in higher purchase intentions for the web channels. Consumers agree that cross-channel synergy strategies are crucial for them: websites need to display store locations (μ = 4.44); websites need to be mobile friendly (μ = 4.29); possibility of ordering in a physical store and getting home delivery (μ = 4.22); possibility of ordering online and picking up at the store (μ = 4.14).

4.2.2.2.3. Portuguese Market: How do consumers perceive the main players in electronics?

Five different retailers were considered in this study. Worten holds the title of the preferred retailer by consumers, as most of them say they would not only search for a product in a Worten store (μ = 4.44) but also buy it there (μ = 4.32). However, consumers are equally likely to search (μ = 4.32) and buy (μ = 3.91) a product in the Worten website and the FNAC website. Contrasting, Pixmania showed the lowest scores for both searching (μ = 3.02) and buying (μ = 2.68).

Considering customers favor FNAC and Worten, it is relevant to see what they think of these stores regarding the following aspects:

- Staff Expertise: 34.4% thinks that both stores' employees have the same level of knowledge. However, 51.2% agrees that FNAC offers better sales expertise than Worten.
- Store Environment: FNAC is considered to offer a friendlier environment than its competitor (63.7%).
- Product availability: 46.9% of the consumers feel like FNAC offers a broader variety of products. However, 32.5% thinks the offer is similar from both retailers.
- Product Variety: 31.9% think that both stores offer the same product variety.

- Source of Information: FNAC is considered a better source of information (55%).
- Websites: 40% of the respondents feel like both websites are useful to find product information.
- Loyalty: 59% of consumers do not consider themselves loyal to any of the retailers.

Although salesperson expertise is better at FNAC, Worten is the retailer where consumers would be more likely to search for a product, which means that salesperson expertise is not determinant of the likelihood to search. So, other factors could be considered (e.g., product display and informative screens quality).

CHAPTER 5 – CONCLUSION

5.1. Main Findings

Considering the research questions developed at the beginning of this dissertation, the main conclusions are:

- The models developed to explain the influence of demographic variables on the likelihood to and frequency of showrooming were not statistically significant (sig. > 0.05). This means that this type of variables does not determine whether consumers engage or not in showrooming nor how many times they do it.
- The models developed to study the influence of personal characteristics were statistically significant and had some explanatory power (sig. < 0.05). The significant predictors of showrooming likelihood and frequency are Price Consciousness, Online Risk Aversion, and Online Shopping Frequency. The last variable was the most relevant one (sig. = 0.00 < 0.05) and shows that consumers who frequently buy electronics online are not only more prone to engage in showrooming but also to do it more times.
- Regarding price sensitivity, a Paired Samples T-Test was used to check if there is a difference in willingness to pay when a consumer is at home vs. when a consumer is at a physical store. The test showed that the means are not significantly different and the value a consumer is willing to pay online does not vary according to where he is.
- To study the dependence between pricing strategies perception and motivations to showroom, Crosstabs and Chi-Square tests were run. All the Chi-Square tests were significant, and the strategy where retailers use different prices online and offline is the one that varies the most. For example, consumers who bought online because it was not available in the store do not like the fact that retailers charge different prices on different channels whereas consumers who bought online to avoid transporting the product did not feel satisfied nor dissatisfied with the fact that prices are different.
- Concerning the relationship between the likelihood of a consumer buying certain product categories online and engaging in showrooming, the Cluster Analysis showed that the group of consumers who is more likely to buy electronics online is also more likely to engage in showrooming.

Furthermore, the results were studied in an exploratory perspective, and the key takeaways are:

- Consumers use different sources of information when searching for a product. However, online reviews comprise the most useful information source regarding electronics, as 87% of respondents considered online reviews relevant when deciding which product to buy. Moreover, 60% of consumers admit that they search for product information while they are inside a physical store.
- Although online channels offer hedonic advantages, three utilitarian advantages (a more comprehensive assortment of products, time-saving and cheaper prices) are the primary drivers of online shopping.
- Synergy among channels is a type of multi-channel strategy, and the results suggest that they are crucial to consumers' satisfaction. Consumers particularly pointed out the importance of websites displaying the location of physical stores and the need for them to be mobile friendly.
- When buying electronics, consumers' willingness to pay ranks in the following order: Store, Store Website, Amazon. This is true for different products with different price points (as it was tested for a tablet and a TV).
- Even though Amazon and eBay were highly scored by consumers, FNAC and Worten are still the retailers in which consumers are more likely to search for product information and complete the purchase.

5.2. Recommendations to Retailers

First of all, it is crucial that retailers bear in mind that showrooming doesn't imply switching retailers, it just implies switching channels. It is important to look at the consumers who engage in showrooming as an opportunity and not as a threat. The problem is that many studies emphasize the adverse effects of the free-riding behavior and fail to consider that the focus of retailers should be to make sure that their products are the ones being purchased.

The fact that consumers are using their mobile devices to search for competitors inside the store can be an opportunity for retailers to push customizable solutions that make "purchasing in the moment" more appealing. Pricing strategies are relevant but are more effective when a consumer is trying to find the best price. If brick-and-mortars can't compete with pure online businesses only based on price, adapting to the omnichannel environment by following simple rules like providing free wi-fi, making websites mobile friendly and displaying store locations at their websites is crucial. Moreover, there are more intricate strategies that retailers should look at:

- Provide scanning devices to support mobile coupons;
- Promote special offers through targeted marketing for customers that use the store wi-fi;
- Allow customers to pay and check-out through their smartphone;
- Provide customizable solutions in terms of purchase-delivery (e.g. purchase at the store and deliver at home);
- Deliver simple after-sales policies to ensure customers that they can ask for a refund in case the product doesn't meet their expectations;

Whether a consumer engages in showrooming because he is price conscious or because he just wants to buy the product without having to transport it, strategies that ensure synergies across channels can push sales and increase loyalty from consumers. So, it is vital that retailers don't think of "cutting prices" as their only strategy.

5.3. Limitations and Future Research

Even though this dissertation contributed to the empirical evidence on the Portuguese consumer attitudes regarding online shopping and showrooming, some limitations were identified:

- Sample Limitations: The sample size (N = 160) can be considered limited and not representative of the overall population. The small size is partially because the questionnaire was too long. Additionally, a non-probabilistic convenience sample was used and might not be representative of the population heterogeneity.

Recommendation: By keeping the survey active for a longer time and developing a more straightforward questionnaire it is possible to assure a higher number of participants.

- Biased Results: The two Multiple Linear Regressions that were conducted for the personal characteristics were significant and had explanatory power. However, Online Risk Aversion had a positive correlation with Showrooming Likelihood and Showrooming Frequency. This can be because consumers that attribute higher levels of importance to online risks are also the ones who are more familiar with online shopping and therefore are more likely to engage in showrooming.

Recommendation: It would be relevant to study more in-depth the relationship between online risk and the likelihood/frequency of showrooming engagement. The online risk could be studied in three different perspectives: Awareness, Relevance and Practical Effect (Do consumers know the risk? Are the risks important for them? Do these risks deter them from buying online?).

- Differences Between Groups: Although a Cluster analysis was conducted, this dissertation fails to assess the main differences between a showroomer and a non-showroomer.

Recommendation: Conduct a K-Mean Cluster analysis for two pairs of consumers – Showroomers vs. Non-showroomers and Frequent Showroomers vs. Non-frequent Showroomers – to determine if the distinction between the groups is significant and in what ways they differ from each other.

- Portuguese Market: This study evaluates the perception that Portuguese consumers have about different electronic retailers. However, it does not assess which ones could potentially experience more showrooming from its customers.

Recommendation: Test the risk of showrooming for the different retailers and draw conclusions on why certain stores are more likely to experience this phenomenon. This way, more specific recommendations could be made to managers.

- Showrooming types: Showrooming can comprise two main types - switching channels and retailers; switching channels and not retailers.

Recommendation: It is crucial to determine which kind of showrooming is more frequent among Portuguese consumers and why in some cases they buy online from the same vendor that they used for searching. After that, it is relevant to compare the results with the effectiveness of lock-in strategies.

CHAPTER 6 –APPENDICES

APPENDIX I – LITERATURE REVIEW

Table 2 - Multi-channel vs. Omnichannel Management

	Multi-channel management	Omni-channel Management
Channel focus	Interactive channels only	Interactive and mass-communication channels
Channel scope	Retail channels: store, online website, and direct marketing (catalog)	Retail channels: store, online website, and direct marketing, mobile channels (i.e., smart phones, tablets, apps), social media Customer Touchpoints (incl. mass communication channels: TV, Radio, Print, C2C, etc.).
Separation of channels	Separate channels with no overlap	Integrated channels providing seamless retail experiences.
Brand versus channel customer relationship focus	Customer – Retail channel focus	Customer – Retail channel – Brand focus
Channel management	Per channel	Cross-channel objectives (i.e., overall retail customer experience, total sales over channels)
Objectives	Channel objectives (i.e., sales per channel; experience per channel)	

Source: Verhoef et al. (2015)

Table 3 - Traditional Decision Making

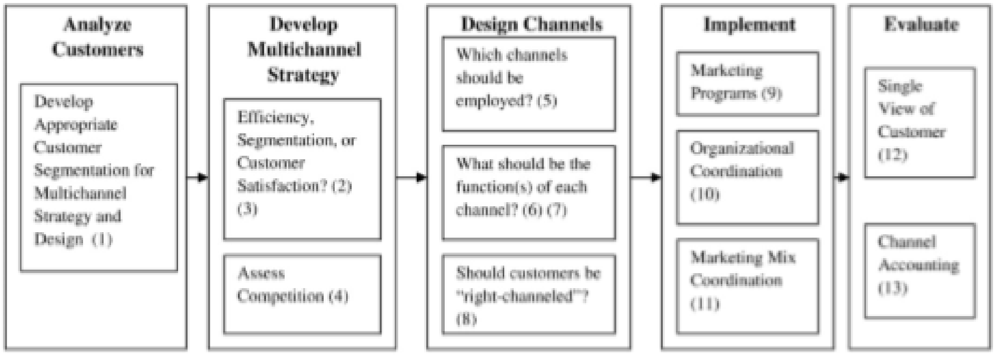
Stage	Description
Problem Recognition	Consumers are consciously or unconsciously scanning the marketplace
Information Search	Consumers search for information so that they can decide what products should be in their evaluation set
Evaluation of alternatives	Consumers narrow down alternatives and compare attributes
Purchase	Consumers choose what and how they want to buy
Post-purchase evaluation	Consumers evaluate their purchase and share their opinions

Influenced by price, produ involvement, familiarity with th retailer and frequency of purchase.

Figure 2 - Showrooming Decision Making

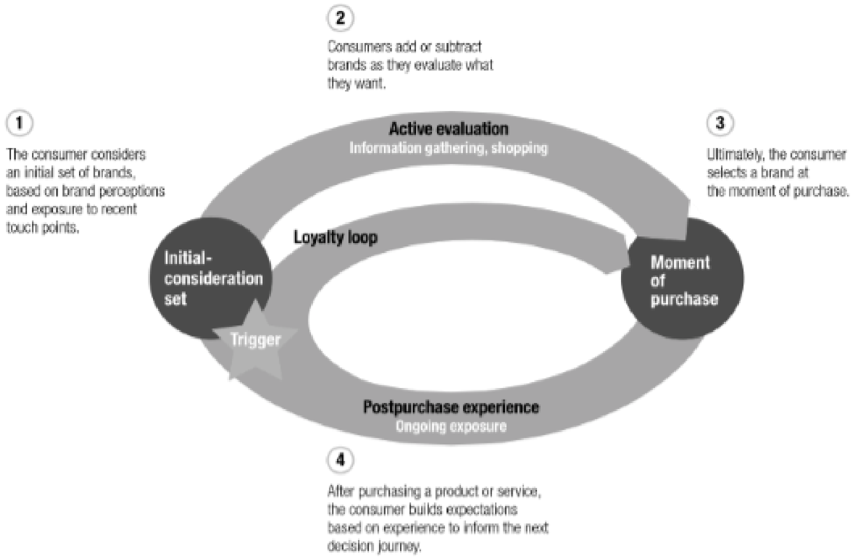
1) **Problem recognition and information search:** Problem recognition can be triggered by a need to buy a product or a need to showroom (Karaatli et al., 2010). Uncertainty pushes showroomers to search for information online so that they can narrow down their set of alternatives. However, these search activities can also be interpreted as needs that trigger showrooming (Balakrishnan et al., 2013). So, the two first stages of the five-stage model occur simultaneously and not sequentially due to the showroomers' buying uncertainty and need to seek information from several sources during problem recognition and information search (Sit et al., 2018).
2) **Evaluation:** Consumers narrow down alternatives in the evaluation stage. However, Sit et al. (2018) suggest that shoppers base their evaluation on economic (e.g., price similarity, price disparity, and in-store promotional activities) and service-excellence criteria (e.g., product warranty, payment plans, and after-sales service) instead of price, availability and purchase channels as the conventional model proposes.
3) **Purchase:** Following the evaluation stage, consumers will decide based on the trade-off between the economic and service-excellence factors (Sit et al., 2018). It is also suggested that showroomers will be prone to purchase from a physical store if price matching is offered proactively and openly to them.
4) **Post-Purchase:** By the five-stage theory, in this stage, the showroomer shares his honest opinions online both about the product and the service quality. (Sit et al., 2018).

Figure 3 - Multi-Channel Management Framework



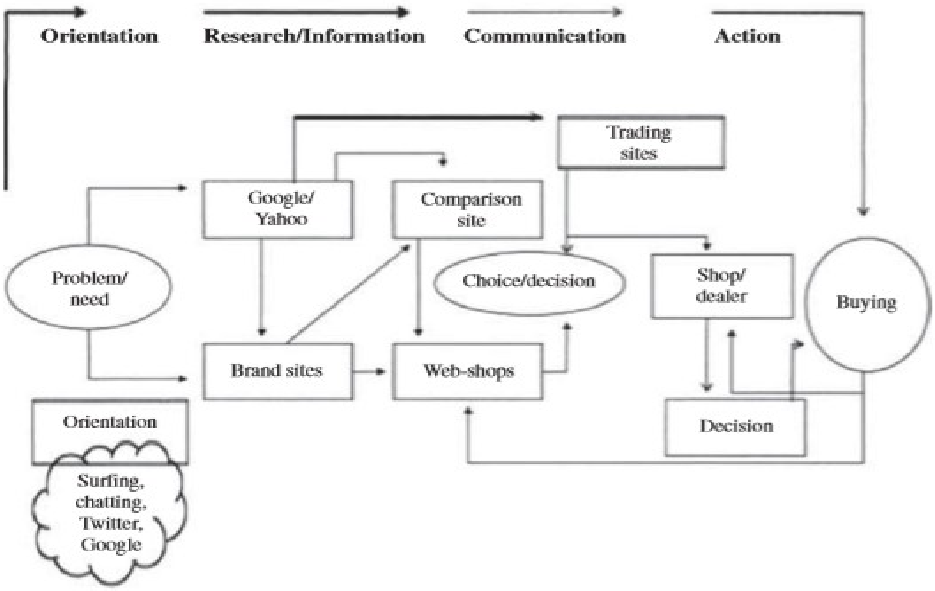
Source: Neslin & Shankar (2009)

Figure 4 - Consumer Decision-Making in a Loop



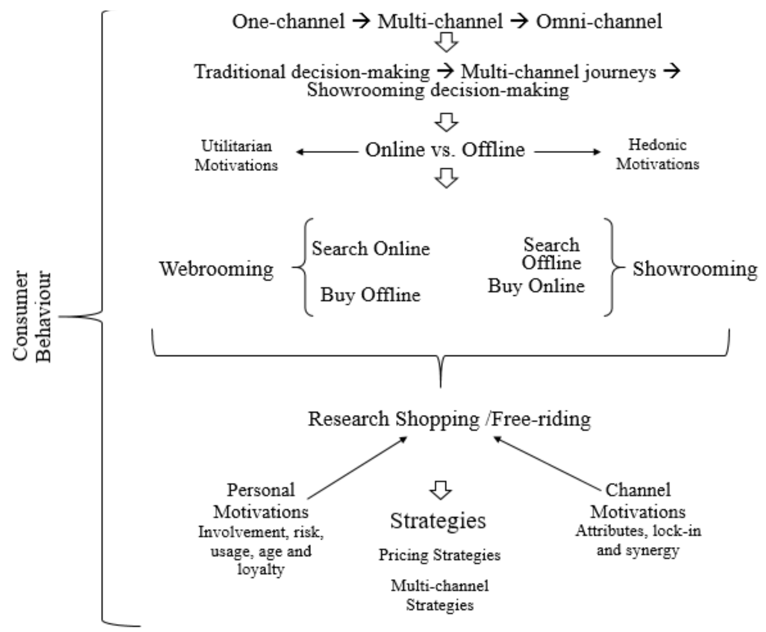
Source: Court et al. (2009)

Figure 5 - ORCA Model



Source: Molenaar (2010), cited in Wolny et al. (2014)

Figure 6 - Conceptual Framework



APPENDIX II - RESEARCH

Table 4 - Research Framework

	Literature Review	**Interviews**	**Online Survey**
Approach	Descriptive	Exploratory + Descriptive	Explanatory + Exploratory
Type	Qualitative	Qualitative	Quantitative
Research Questions	-	-	The goal of the quantitative research is to answer the five questions suggested by this dissertation.
Objectives	Identify the different motivations that lead customers to engage in showrooming and the strategies that retailers can use to deal with the phenomenon.	Build more in-depth knowledge of the showrooming experience (e.g., add new motivations that have not yet been identified. Integrate customers' experiences into the research to illustrate the quantitative results.	Understand how the motivations behind showrooming can affect the effectiveness of the strategies adopted by the retailers. Provide conclusions on how retailers should deal with showrooming. Build empirical knowledge on online vs. offline shopping behavior and showrooming.

APPENDIX III – In-depth Interviews

Table 5 - Interview Scrippt

Participants' Characteristics	**Questions and topics that it aims to address**
1. Introduce yourself: age, studies, and occupation	Demographics
2. Do you own a smartphone? For what do you use it the most?	Mobile device usage
3. How familiar are you with the Internet?	Familiarity with the Internet
4. What do you use the Internet for?	Purposes for using the Internet
5. How would you describe yourself as a shopper?	Personal characteristics as a shopper
Changing in Retail Landscape	
6. Do you feel like the way you shop changed in the last five years?	Did the participant follow the change from one-channel to multi-channel? What channels do you usually use when shopping? What is the purpose of using multiple channels?
7. If yes, explain what has changed	What were the significant changes that the participant perceived?
8. If no, do you think it will change in the future? Why?	What does the participant feel that could change in the future?
Decision Making	
9. Looking at the picture, what do you think is happening?	Are you familiar with showrooming?
10. Could you be the person in the picture? Why?	How does showrooming make you feel? Did you engage in showrooming before? Do you see yourself engaging in showrooming in the future? If you engaged in showrooming, what benefits did you derive from it?
11. Describe the last time you purchased an electronic product	When was the last time you purchased an electronic good? Did you already know what you wanted to buy? How did you start searching for the product? Why did you search on that specific channel? Did you make comparisons on different channels? What device did you use to search? What attributes were you looking for?
12. What do you think of stores like FNAC and Worten?	Do you enjoy visiting physical stores? How often do you come to these stores? Have you bought from them? Are you loyal to these stores?
13. How do you feel about online shopping?	What do you consider when choosing channels for shopping? What are the motivations for online and offline shopping? Why do you prefer one channel to another? How is the experience of online shopping?
14. What role does your smartphone play when you are shopping?	Do you use your smartphone while shopping? Do you use it for comparison of alternatives? Do you use it to make the purchase?
15. Are there products that you buy online more frequently? What products?	Why are physical stores showrooms for electronic goods? How is the shopping journey different for electronic goods compared to other product categories
16. How would you feel if you could not use the Internet on your smartphone inside physical stores?	Being able to use the Internet inside the stores is useful for you? If a store does not have an Internet connection, how does that make you feel?

Figure 7 - Picture Stimulus

Table 6 - Interview Notes

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
Personal Characteristics					
Age	19	29	33	33	27
Gender	Male	Female	Female	Male	Male
Occupation	Student	Banking	Renewable Energies Engineer	Consulting	Sales
Studies	Design	Social Studies	Engineering	Management	Highschool
Owns a smartphone	Yes	Yes. She owns 2 (a personal one and a work one)	Yes	Yes	Yes
Smartphone usage	"I take my smartphone everywhere. If I go to the kitchen to drink water, I bring my phone with me.". "I am always on Instagram and taking pictures." "I also enjoy watching YouTube instead of TV shows."	"I use both my devices a lot, and I always take them with me." "I use more my work phone because I have free mobile data everywhere. I use it for work, email apps, WhatsApp, and music."	"I use the smartphone a lot. Basically, for social networking, contacting friends and taking pictures."	"I use WhatsApp all the time." "I use it to book trips and flights." "I use the GoPro app a lot too because I do videos surfing."	"I always bring my smartphone with me, and I use it several times a day." "Instagram, iMessage and Clash Royale are the most used apps on my phone for sure." "I do not have a laptop, so I need to do everything on my smartphone."
Familiarity with internet	"I do not even remember not having Internet." "Being a designer makes me use my laptop a lot, it is a day-to-day reality for me."	"I know the Internet, and I use it for everything you can think of, from finding a recipe to planning a weekend out."	"I am very familiar. It is part of my job." "I do not think I use it to its full potential, but no one does… because the possibilities are endless."	"I think I am familiar with the Internet."	"I do everything on the Internet. I think I am very familiar with it."
Internet usage	"I use it for everything. The only thing I do not do online is grocery shopping."	"I always use the Internet on my smartphone because I do not have a personal computer."	"I use it to search all kinds of things, even things like curiosities that pop up on my head."	"I use the desktop to do everything regarding bank accounts because I feel	"Internet is a source of information for me. I found all my jobs on the Internet. I do not store

	"I do not always buy stuff online; I buy where it is more convenient at the time."	"Browsing is like a hobby to me."	"I also shop online frequently. However, I do not use apps to shop. I prefer the websites because I feel that websites have more stuff. When I use eBay, I always use the desktop version." "I always go on Worten, FNAC and Media Markt websites to compare prices."	like it is safer. It is the only thing I do on the Internet and not on the Smartphone."	any music or movies on my phone; I watch everything on streaming."
Shopper characteristics	"I do not buy stuff that I do not need to, and I never buy on impulse. However, I like to buy good quality products. Where I buy from depends on who offers the best deal regarding quality-price." "If we are talking about cheap products, I just buy them. If the products are more in a higher price range, I can spend weeks researching it before deciding what to buy."	"I am not an expert in consumer electronics. My husband is the one who buys that kind of things." "My husband and I plan a lot together. We search for attributes and prices online, and then we filter it down to one or two choices and go to the store to check it." "If it is a low-price device, I buy it right on the spot. If the price range is higher, we go back home and go online to see if there are cheaper options." "We will also buy online if there is no availability in a physical store. However, we prefer a physical store." "I buy things by impulse when it is something in a lower price range. More expensive stuff I always think three times about it."	"I plan a lot and search everything that I can. I like to make good decisions." "I only feel pressured to buy stuff when there are promotions that are going to end. Other than that, I am never in a hurry unless it is an emergency." "I do not feel loyal to any retailer; I always evaluate them when I want to buy something." "I search online for options and comparison of prices. Then, I go to a store to see the product in real-life and touch it. With electronic goods, I always have the problem of perceiving dimensions." "Usually I end up buying offline. With consumer electronics, I am afraid that the transportation might damage the product. Even if the retailer pays for the damage, I have the issue of the whole process that it implies. If I am the one picking up at the store, I know I am going to be careful."	"I do many searches. Before buying my iPhone, I was almost buying the 1+ phone. I saw many YouTube videos and review sites like PC Guia." "I wanted the iPhone X now, but the price is ridiculous. I had a budget of 400€ and was just trying to compare attributes online between two models." "I am a person who researches a lot before buying. I am not loyal to any store; I buy where it is more convenient. For example, the other day I did not have a birthday present to offer, and I immediately bought it offline. If it were not online, I would see it on Amazon." "I even search on all Amazons. If I know a brand is Italian, I go to Amazon Italia first."	"I have to refrain my impulse to buy because I need to manage the money well." "I always see what's my budget before. I search on the Internet for the prices, but I like to buy things in a physical store, not online. I only buy online if it is headphones or something less expensive. I feel like after-sales policies like the guarantee are trickier in online shopping. Plus, I am concerned with transportation issues." "I never search for attributes because I know what I want to buy initially. I care a lot about design and when it comes to consumer electronics I choose the prettier option for me if it respects the budget and the average quality."
Changing in Retail Landscape					
Do you feel like the way you shop changed in the last five years?	"Yes, it has."	"Yes, I feel like it has changed."	"Yes, it changed a lot."	"It has changed."	"Yes, but it did not change a lot."
If yes, explain what has changed	"I used to go to stores to search for products and for eventually buying them."	"My buying power was higher five years ago. I would upgrade my iPhone when there was a new one, for example."	"Nowadays, brands provide much information about products. So, I no longer go to physical stores unprepared. I always know what I	"I have now much more access to information. Moreover, I can buy so easily online with just a click. A few years ago, I did not have a smartphone to	"I used to live in a small town in Portugal. Nowadays, I live in Lisbon and the access to products is a lot easier."

	“I can see a difference from when I bought my Nokia a few years ago to when I bought my iPhone last year." "I never had an iPhone, and so I went to FNAC to see the different models and characteristics and then I looked it up online to see if there was a cheaper option anywhere else. I ended up buying it online from a different vendor. "	“Because my purchasing power is lower now, things have changed, and when I go to a store, it does not mean necessarily that I am going to buy. When I need to buy something, it requires much searching before.” “I would say that my purchasing process takes a lot longer. Moreover, I always try to buy things that will last longer.” “The process is complex because I go online, then I go to the store, and then I go back online and then back to the store… it’s not simple.”	want to buy. However, I am always open to new suggestions." "I used to doubt the information on the Internet. Nowadays I trust it more because there are real people providing reviews everywhere."	buy. Nowadays I buy from a smartphone and a desktop anywhere at any time.” “I never go with my wife to the store… We always change pictures on WhatsApp. So, in a way, there is still social interaction.” “Now I can post what I just bought on social media and provided instant reviews. I can immediately share my experience with friends and family.”	“When I want to buy something, now I can easily access through my smartphone the website of several stores. I am not interested in buying electronic goods from a retailer like eBay or Amazon.”
If no, do you think it will change in the future? Why?	-	-	-	-	-
Show Picture Stimulus					
Decision Making					
Looking at the picture, what do you think is happening?	“The guy is checking if there are cheaper options online for the same TV that he saw at BestBuy.”	“The person wants to buy a TV screen. He looked at it online, and he knows how much it costs. He is going to the store to see if the price is the same. In case the store price is higher, he is going to buy it online even if he is inside the store.”	"This person sees the characteristics and price of the TV. He is in front of the store because he is going to the store to see the product after comparing prices online."	“The person went to BestBuy and saw a TV and then went to Amazon to check if it is cheaper online.”	“The person is checking the price of the TV on the website of BestBuy before going to the store to check if the offline price is the same.”
Briefly explain the concept of Showrooming					
Could you be the person in the picture? Why?	“Yes. This is exactly what I did when I bought my iPhone.” “If I decide exactly what I want to buy, I will buy wherever the best price is.” “The only things that sometimes makes me buy in physical stores are promotions or a loyalty card. Books I usually buy at FNAC because I use the loyalty card discount.”	“Yes. I would plan before too. Moreover, I would buy it online if that is the BestBuy online store. If it is Amazon, I will not buy it. However, I think he is in BestBuy.”	"I have engaged in showrooming before. I bought my last laptop battery online because there was a special discount but first I went to the physical store to see the alternatives. I ended up buying from the same store but online." "It is possible that I engage in showrooming in the future... Buying in a store gives you instant access to the product, but I do not feel pressured by time. So, I can see myself buying online from another vendor after searching for it online as long as the price is competitive." “The cost of going to the store is also something to be considered."		
Describe the last time you purchased an electronic product	“I bought a printer for the iPhone (Prynt) just now. I started by searching online for	“The most recent one I bought was a personal computer (laptop)… That in the meanwhile it is broken.”	“I was at Worten today because my microwave is broken and I need a new one. I know my budget and the type of	“I do this all the time. I am an assumed showroomer. I do not mind switching	“Yes, I can see it being me. Because I always check the online and offline price for the same

	options and reduced my options to two: Prynt and HP sprocket. I could not find any discounts online, and I wanted to see the printers in real life because I needed something small and easy to carry. So, I went to FNAC to see both products and ended up buying the Prynt because the price was the same as online and I needed it with urgency for a project." "If it were not for the urgency to do the project, I would wait for flash sales on FNAC website or on any other online retailer."	"We started asking friends in the beginning of January for recommendations about which brand to buy." "After that, we established our budget, and we looked for computers online." "We filtered it down to two options. Our budget was very high, and so we only used the features to reduce our options. We wanted a good processor, high internal storage, and good graphics." "We went online to check the pricing on different retailers, and then we went to physical stores (FNAC, Radio Popular, Worten and Media Markt) to feel and see the two laptops. We did not get to feel the laptop that we were more inclined to buy because it was not available anywhere." "So, we started to think of going to other physical retailers that sell electronics… However, these other stores were far from our residence, and so we ordered it online on Worten."	microwave I want… However, I will only buy it online if the price difference is huge. I will not buy it on eBay or anything like that because I need it now… So, I will buy either in the store or on the store website. However, if the price is the same, I will buy it in the store even though there are money and time costs associated with going to the store." "I did not buy the microwave today because I want to see first the options in other stores like FNAC, Media Markt and online."	channels and vendors to get the best possible deals."	retailers. I work in retailing and now that prices online and offline don't always match." "I never engaged in showrooming because I never remember to check things on online retailers. I would not mind buying headphones online, but I think that if I needed them, I would just go to the store and buy them."

What do you think of stores like FNAC and Worten?	"They are different stores. The thing that I think that they have in common is that the employees do not appear to be experts in technology." "I have a FNAC loyalty card and a Worten one, but honestly I think I never used the Worten card. Even with FNAC's card, I only remember to use it when I buy expensive things like a laptop or a smartphone. If I buy headphones or a book, I will not remember to use the card unless they give a special discount to clients with a card." "The good thing about Worten is that they match the competitor's prices… Even though I cannot say if that is true because I never asked for it. If I see a lower price online, I will just buy it online because I would not feel comfortable asking the staff for a price matching… I never saw anyone do that."	"Honestly, I do like neither of them. I do not like them because when I needed to pay something in monthly installments, they never allowed me. As a consumer, that makes me not want to go back there." "I am not loyal to any of them, but I do tend to go to Worten because they have many more products that are always available." "Amazon, I do not dislike it. I fear it. I am not sure about their after-sales policies and who's selling. Sometimes, I go to Amazon and add things to the cart, but then I never end up buying." "The price matching strategy by Worten is a gimmick. I do not believe they do it. I would not also ask for a price matching because I am loyal to Worten but not loyal enough to stop me from buying elsewhere where is cheaper." "I was at Worten today just to buy a CD as a birthday present. I did not go online because I needed the gift today."	"I used to enjoy shopping offline to hang out with friends. Now I do not care; I feel like it is a waste of time to see stores with friends. It is just better to buy online." "FNAC does not have the best prices. The website is awful. I never know where to look for things, and now they sell used products, which makes it so confusing." "The good thing about FNAC is the live music; it prompts me to go there. Worten feels more like a commercial space. It is more industrialized and less engaging." "If I had to choose a physical store, I would go for FNAC. Regarding online, I would go for Worten as the search process is way simpler."	"The last product I purchased was a piece for my GoPro. I bought online on Amazon UK but before I went to FNAC to see it. This time I did not search a lot because I already know what I wanted. A friend recommended it to me. That was what I was doing at FNAC today."	"I bought an iPhone 8. I knew I wanted the iPhone but I did not know which. I went to the Apple store online to check the price for the different iPhones and went to a FNAC store to see all the iPhones in my hand. After that, I bought it there because I chose the one I liked the most within my budget. I did not care that much about attributes."
How do you feel about online shopping?	"I am used to it. It somehow makes me feel more empowered because I can choose whatever I want to from millions of options." "Although, I must admit that sometimes it is easier to buy in a physical store because the options are more limited and you spend less time choosing." "I do not mind where I buy. I like to go to the stores to check if the products look good. I do not want to buy a laptop online that looks thin and then it is huge in real life." "The Internet is the best tool for comparing attributes and prices. With consumer electronics, I use KuantoKusta,	"It depends on the type of product I want to buy. If it is clothing, I will go directly to the store." "If I want to buy a phone, I will go to FNAC and Worten websites and KuantoKusta. I only search online on FNAC and Worten, not on retailers like Amazon or eBay because I know I am not going to buy there anyway." "I am not comfortable with eBay nor Amazon because I do not know who's sending it, I am worried about the shipment, and it takes much time." "I do not feel comfortable paying for things online. I prefer giving money personally." "Social interaction does not matter to me. I like to buy only with my husband. You will be under social scrutiny when you do not have much	"I am somehow afraid to get the wrong product. One time, they sent me a wrong product from eBay. I ended up getting the right product too, but there is a risk that you will not." "Regarding payment security, I am not worried." "Transportation is always my main concern when it comes to electronic goods." "Convenience wise, online is much better than offline. I can buy something without leaving my couch, and the product is delivered to my house."	"I think they are both good displayers because they have many options. I will always buy where it is more convenient."	"I like both stores. However, I prefer FNAC. I will only buy at Worten if it is way cheaper. If it is a difference of 20€ or 30€, I still go to FNAC because I have the loyalty card and I am accumulating my points there." "The staff at FNAC has more expertise about the products, and they are nicer. Plus, FNAC feels less like a warehouse. For example, today I was at FNAC because I am thinking of buying a new tablet. I did not buy it right away because it was the first phase of my search process. Probably I will go online next to see reviews of the ones that I liked because there are thousands of them and they have credibility."

	GSM Arena, and more to compare my alternatives easier." "Stores should provide a more specialized help… The staff should be able to make better recommendations and be more knowledgeable about the products that they sell. I feel like online reviews influence me way more than the staff of a store."	buying power, and you buy something expensive. It could be better to buy online to maintain anonymity though. "However, when you have purchasing power and buy something expensive in a physical store while being seen by others, it boosts your status."			"I trust FNAC and not Worten. I feel like Worten staff tries to sell me whatever they want to instead of giving me honest advice." "Worten has a price matching strategy. However, I would never ask for it because I think they only match the prices to other physical stores and not to online stores."
What role does your smartphone play when you are shopping?	"When I say I use the Internet to compare products, I am talking about my smartphone. I almost never do it on my laptop." "I use the smartphone inside physical stores to search for products on online vendors and to look up prices on other physical stores." "Although I buy online, I do not like to use OLX and similar apps that much… I prefer to buy something new. There is always a risk in buying used things, and I never feel like the thing is mine, which is strange." "I am registered with vendors like eBay, Amazon, etc. I have some resistance in buying from an online player that I do not know, even if it offers a lower price. That does not happen with physical stores; I do not care if the store is familiar to me or not. because I can always go there and talk face to face with someone if something goes wrong."	"My smartphone has an important role when it comes to the searching process. Regarding buying, we never use our smartphone to buy." "Usually I go to stores, and when I am inside, I go to other stores' websites to compare prices." "After-sales policies are critical to me. It loyal to a retailer."	"I use it only to compare prices and see attributes. To buy things, I prefer using my laptop or desktop."	"Regarding products being wrong or damaged, I trust Amazon. Even if something goes wrong, the after policies are excellent." "Payment does not matter to me because I only buy from online vendors that I know. I use Amazon almost every time. Buying from an unknown online store can be risky as they may not be legit and send me a fake product for example." "It annoys me when brands track my IP. I bet they exchange information between them." "Regarding payment methods, I do not feel any risk when buying online."	"The only thing that can make me buy online is if it the price is lower. Moreover, if we are talking about more expensive goods like phones, tablets, cameras, I will not buy online anyway." "If I want to buy a Vacuum Cleaner, I do not mind buying online because it is something that I will only use one day per week and the smartphone I use every day." "I also don't think online is that much more convenient because most of the times you need to go to the post office to get your products."

Are there products that you buy online more frequently? What products?	"It is indifferent to me… Because I always check everything online before going to the store."	"Home décor I never buy online because I use stores as Zara Home and the price is the same as online." "I do surf, and I always buy surfboards in stores because of the experience. It is something I am passionate about." "Electronic goods are the only thing I buy online frequently. Books I buy online too because they are usually cheaper on Amazon."	"If I want to buy food for my cat, I will buy online because it is less expensive. However, if it is a phone, I will go to the store." "The simpler the products, the higher likelihood of buying online."	"It allows me to compare prices and characteristics easily. However, I prefer to buy on a desktop because you can see menus better."	"The role of my iPhone is to serve as a search assistant. Sometimes I just want to check if a product is sold on a certain physical store and then I will go there."
How would you feel if you could not use the Internet on your smartphone inside physical stores?	"It would annoy me… Because it would make me step out the store just to search something online." "If anything, that would give me even more incentive to buy online."	"I would just use it outside." "If I bought everything online, I would go out less, and I do not want that."			

Figure 8 - Additional Results

a) All the participants have bought online in the past. Some are adepts of retailers like Amazon and eBay because they offer lower prices and others prefer online versions of physical stores like FNAC and Worten. Consumers who prefer FNAC and Worten online referred that the delivery time for products bought on Amazon or eBay is too long, which makes them avoid these platforms. Thus, it was mentioned that it could be risky to buy from the e-commerce giants because consumers do not know who the vendor is and it is probably harder to return or change a product in case of need. However, all of them agree that when there's a sense of urgency or time pressure, the best option is always to buy at a physical store.

"Amazon, I do not dislike it. I fear it. I am not sure about their after-sales policies and who's selling." – Participant 2

b) The money and time costs involved in going to a physical store is something that matters when they decide on which channel to buy. Thus, both FNAC and Worten are perceived as good displayers for products.

c) There is some resistance in buying online when the vendor is not familiar to the consumer. However, the same is not true regarding physical stores. Online stores are already associated with a certain level of uncertainty, which increases if the retailer is entirely unknown.

"I am registered in vendors like eBay, Amazon, etc. I have some resistance in buying from an online player that I do not know, even if it offers a lower price. That does not happen with physical stores; I do not care if the store is familiar to me or not because I can always go there and talk face to face with someone if something goes wrong." – Participant 1

d) Social interaction was referred by several participants. The general feeling that consumers have is that the weak social interaction that the online channels provide doesn't impact their choice on where to buy.

"I used to enjoy shopping offline to hang out with friends. Now I do not care; I feel like it is a waste of time to see stores with friends. It is just better to buy online." – Participant 3

e) Under consumer electronics scope, the motivation behind the need of seeing and touching products inside a physical store is that dimensions of electronic products are hard to perceive on a website.

f) The primary concern with buying electronics on the web is that the transportation might not be safe. Plus, there is a general concern that the vendor ships out the wrong product.

"Transportation is always my main concern when it comes to electronic goods." – Participant 3

g) When it comes to strategies from retailers, most of the participants are aware of the price matching strategy that Worten adopts. However, none of them has asked for a price match in the past, nor they think they ever will. Moreover, the reason is not that they do not feel comfortable asking, is that they do not believe in it. Thus, there's no point in asking for a price that is possible to get elsewhere easily.

"The price matching strategy by Worten is a gimmick. I do not believe they do it. I would not also ask for a price matching because I am loyal to Worten but not loyal enough to stop me from buying elsewhere where is cheaper." – Participant 2

h) Among the people who engaged in showrooming before, the motivations behind the behavior are lack of availability in the physical store, lower online prices, and deficiency of staff expertise. However, FNAC employees are usually resources of advice and suggestions as they are more perceived as experts than Worten staff.

"The last product I purchased was a piece for my GoPro. I bought online on Amazon UK while I was on FNAC to see it. This time I did not search a lot because I already knew what I wanted. A friend recommended it to me. That was what I was doing at FNAC today." – Participant 4

Table 7 – Results' Frame

Utilitarian Motivations	
To Shop Offline	To Shop Online
Instant access to products	Lower prices
No need for product transportation	Higher product availability and assortment
Easier to return or change a product	Time pressure
Real live feedback from salespersons	
Opportunity to touch and feel the product	

Hedonic Motivations	
To Shop Offline	To Shop Online
Buying something expensive while being seen by others can boost a consumer sense of empowerment	Some online stores provide the possibility to post on social media what the consumer just purchased and an instant review, which allows them to share their experience with others

Motivations to Showroom	
Personal	Channel
Attachment to the product	Online allows to look up products without feeling time pressure and with a broader variety of products
Level of perceived risk	Salespersons opinions are usually perceived as biased to push the products that they want to. Plus, there are thousands of online reviews for a single product, which makes them more influential than staff expertise
Price consciousness	-
Store loyalty	-

APPENDIX IV – MAIN PLAYERS

Table 8 - Retailer's Brief Description

Retailer	**Logo**	**Description**
Worten	worten	Worten is a company that belongs to the SONAE group, and it operates in Portugal since 1996. It exists in all significant commercial spaces with a total of 180 stores, and it is a market leader in the electronic products category.
FNAC	fnac	The French brand started its operations in Portugal in 1998 and has now 22 physical stores from north to south. The brand's website is an e-commerce market leader in the market.
AMAZON	amazon	Created by Jeffrey Bezos, which is now the wealthiest man alive, Amazon is an online retailer that started its operations in 2012. The company that started by selling books online now occupies the position of biggest e-commerce company in the world and sells the most diversified portfolio of goods.
eBay	ebay	eBay was founded in 1995 and started working as an "auction website." It was one of the 1st online platforms to offer better prices for the same products that customers could find in brick-and-mortar stores. It is still one of the major e-commerce players nowadays.
Pixmania	PIXMANIA	Pixmania is a French brand founded in 2000 that is present in 13 European countries and had physical stores across Europe until 2013. The brand only operates online nowadays, and it does not have a good reputation in Portugal.

APPENDIX V – ONLINE SURVEY

Start of Block: Introduction
This survey has a focus on consumer electronics and all the questions are related to the purchasing behavior of this product category.
All your answers are confidential. If you wish, you can leave your email in the last part of the survey to get a chance to win a 20€ FNAC gift card.
It won't take you more than 7 minutes to answer the full survey and I would really appreciate it.
Thank you very much.

End of Block: Introduction

Start of Block: Search Phase

Q1 How frequently do you research electronic products online before making a purchase?
- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

Skip To: Q18 If How frequently do you research electronic products online before making a purchase? = Never

Q2 Where do you do so?
- At home (1)
- At work (2)
- In stores (3)
- Other (4)

Q3 What device do you use to do so?
- Smartphone (1)

Q4 How frequently do you research electronic products in physical stores before making a purchase?
- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

Q5 Have you ever looked online for price, specs or reviews while you were at a physical store?
- Yes (1)
- No (2)

Q6 How much do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I'm familiar with the Internet (1)	o	o	o	o	o
I use online and offline channels to search for a product (2)	o	o	o	o	o
I use different physical stores to search for a product (3)	o	o	o	o	o
I use different online stores to search for a product (4)	o	o	o	o	o
It's important to see, touch and feel a product before buying it (5)	o	o	o	o	o
Online reviews are relevant to me (6)	o	o	o	o	o
Salesperson feedback is relevant to me (7)	o	o	o	o	o
Online searching is useful to compare prices (8)	o	o	o	o	o
Online searching is useful to compare product attributes (9)	o	o	o	o	o

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Family and friends' recommendations matter to me (10)	○	○	○	○	○
Price comparison tools (e.g. KuantoKusta) are important to get the best deal (11)	○	○	○	○	○
Price comparison tools are trustworthy (12)	○	○	○	○	○

Q7 How likely are you to buy the following products online?

	Extremely unlikely (1)	Somewhat unlikely (2)	Neither likely nor unlikely (3)	Somewhat likely (4)	Extremely likely (5)
TV (1)	○	○	○	○	○
Smartphone (2)	○	○	○	○	○
Smartwatch (3)	○	○	○	○	○
Tablet (4)	○	○	○	○	○
Home appliances (5)	○	○	○	○	○
Laptop (6)	○	○	○	○	○
Accessories (iPhone cases, headphones, chargers...) (7)	○	○	○	○	○
Makeup (8)	○	○	○	○	○
Clothes (9)	○	○	○	○	○
Jewelry (11)	○	○	○	○	○
Groceries (12)	○	○	○	○	○
Flight tickets (13)	○	○	○	○	○
Home decor (14)	○	○	○	○	○

End of Block: Search Phase

Start of Block: Purchase phase

Q8 How frequently do you buy electronic products online?

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

Skip To: Q45 If How frequently do you buy electronic products online? = Never

Q9 What online platforms do you normally use to buy these products?

- FNAC, Worten, MediaMarkt or similar (1)
- Amazon, eBay, AliExpress or similar (2)
- Other (3)

Q10 What device do you normally use to buy online?

- Tablet (1)
- Smartphone (2)
- Computer (3)

Q11 On average, how much time passes between the moment you realize you want to buy an electronic product and the moment you purchase it?

- Less than one week (1)
- One week (2)
- Two weeks (3)
- Three weeks (4)
- More than three weeks (5)

Q12 How many physical stores do you visit before buying an electronic product?

- I don't visit any (1)
- One (2)
- Two (3)
- Three (4)
- More than three (5)

Q13 How many online platforms do you visit before buying an electronic product?

I don't visit any (1)

One (2)

Two (3)

Three (4)

More than three (5)

Q14 How much do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Prices are usually cheaper online (1)	○	○	○	○	○
Online shopping is more convenient (2)	○	○	○	○	○
Online customer service is better than physical stores customer service (3)	○	○	○	○	○
Online shopping is useful when I don't want people to know what I'm buying (4)	○	○	○	○	○
I use my smartphone when I'm shopping (5)	○	○	○	○	○
I feel lonely when I shop online (6)	○	○	○	○	○
After-sales policies are less clear in online channels (7)	○	○	○	○	○
Online shopping saves me time because I don't need to go to the store (8)	○	○	○	○	○
I prefer to buy offline when I need something urgent (9)	○	○	○	○	○
I'm loyal to a physical retailer (10)	○	○	○	○	○
I'm loyal to an online retailer (11)	○	○	○	○	○
I feel good when other people see me shopping (12)	○	○	○	○	○
I normally wait for promotions to buy electronics (13)	○	○	○	○	○
Online offers bigger assortments of products (14)	○	○	○	○	○

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I only buy from online stores that I'm familiar with (15)	○	○	○	○	○
I only buy from physical stores that I'm familiar with (16)	○	○	○	○	○

Q15 Imagine you are at a store to buy a tablet. The tablet you want costs 200€ in the store. How much would you be willing to pay online?

	0 25 50 75 100 125 150 175 200 225 250
Price at the store website (1)	
Price at Amazon (2)	

Q16 Imagine you're at home and want to buy a tablet. The tablet you want has a price point of 200€. How much would you be willing to pay for it?

	0 25 50 75 100 125 150 175 200 225 250
At a physical store (1)	
At a physical store website (2)	
At Amazon (3)	

Q17 Imagine you are at a store to buy a TV. The TV you want costs 900€ in the store. How much would you be willing to pay online?

	0 100 200 300 400 500 600 700 800 900 1000 1100 1200
Price at the store website (1)	
Price at Amazon (2)	

Q18 Imagine you're at home and want to buy a TV. The TV you want has a price point of 900€. How much would you be willing to pay for it?

	0 100 200 300 400 500 600 700 800 900 1000 1100 1200
At a physical store (1)	
At a physical store website (2)	
At Amazon (3)	

Q19 How important are the following risks for you regarding online shopping?

	Not important at all (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)
Getting the wrong product (2)	○	○	○	○	○
Lack of my preferred payment method (7)	○	○	○	○	○
Not being able to return/change the product (3)	○	○	○	○	○
Long delivery time (4)	○	○	○	○	○
Inadequate transport conditions (5)	○	○	○	○	○
Fraud possibility (6)	○	○	○	○	○

Q20 FNAC and Worten are two of the biggest electronics retailers in Portugal. How likely are you to do the following?

	Extremely unlikely (1)	Somewhat unlikely (2)	Neither likely nor unlikely (3)	Somewhat likely (4)	Extremely likely (5)
Searching a product in a FNAC store (11)	○	○	○	○	○
Buying a product in a FNAC store (12)	○	○	○	○	○
Searching a product in a Worten store (13)	○	○	○	○	○
Buying a product in a Worten store (14)	○	○	○	○	○

End of Block: Purchase phase

Start of Block: Online VS. Offline Stores

Q21 Pixmania, eBay and Amazon are pure online retailers. FNAC and Worten are physical retailers but they also sell online through their websites. How likely are you to do the following?

	Extremely unlikely (1)	Somewhat unlikely (2)	Neither likely nor unlikely (3)	Somewhat likely (4)	Extremely likely (5)
Searching a product on Pixmania (1)	○	○	○	○	○
Buying a product on Pixmania (2)	○	○	○	○	○
Searching a product on Amazon (3)	○	○	○	○	○
Searching a product on eBay (5)	○	○	○	○	○
Buying a product on eBay (6)	○	○	○	○	○
Searching a product at FNAC website (7)	○	○	○	○	○
Buying product at FNAC website (8)	○	○	○	○	○
Searching a product at Worten website (9)	○	○	○	○	○
Buying a product at Worten website (10)	○	○	○	○	○

Q22 What do you think of FNAC and Worten regarding the following aspects?

	Very much	Somewhat	Neither	Somewhat	Very much	
	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
FNAC offers better salesperson expertise (1)	○	○	○	○	○	Worten offers better salesperson expertise
FNAC has a friendlier environment (2)	○	○	○	○	○	Worten has a friendlier environment

	Very much	Somewhat	Neither	Somewhat	Very much	
FNAC has more products available (3)	○	○	○	○	○	Worten has more products available
FNAC is usually cheaper (4)	○	○	○	○	○	Worten is usually cheaper
FNAC has more product variety (5)	○	○	○	○	○	Worten has more product variety
FNAC is a good source of information about products (6)	○	○	○	○	○	Worten is a good source of information about products
FNAC website is useful to find prices, attributes and reviews (7)	○	○	○	○	○	Worten website is useful to find prices, attributes and reviews
Is easy to return/change a product at FNAC (8)	○	○	○	○	○	Is easy to return/change a product at Worten
I'm loyal to FNAC (9)	○	○	○	○	○	I'm loyal to Worten

End of Block: Online VS. Offline Stores

Start of Block: Showrooming

Q23.1 How likely are you to buy electronic products online after checking them at a physical store?

Extremely unlikely (1)
Somewhat unlikely (2)
Neither likely nor unlikely (3)
Somewhat likely (4)
Extremely likely (5)

Q23.2 How frequently do you buy electronic products online after checking them at a physical store?

Never (1)
Sometimes (2)
About half the time (3)
Most of the time (4)
Always (5)

Skip To: Q31 If How frequently do you buy electronic products online after checking them at a physical store? = Never

Q24 What was the last electronic product you bought after checking it at a physical store?

Tablet (1)
Computer (2)
Smarpthone (3)
TV (4)
Smartwatch (5)
Other (6)

Q25 How many different online stores have you visited before deciding what to buy?

One (1)
Two (2)
Three (3)
More than three (4)

Q26 How many different physical stores have you visited before deciding what to buy?

One (1)
Two (2)
Three (3)
More than three (4)

Q27 In that particular situation, why did you end up buying online?

Because it wasn't available in the store (1)
Because it was cheaper online (2)
To avoid transporting it myself (3)
Other (4)

Q28 What device did you use to make the purchase?

Tablet (1)
Smartphone (2)
Computer (3)

Q29 When did you make the purchase?

While I was still inside the physical store (1)
After I left the physical store (2)

Q30 What online platform did you end up buying from?

- ○ Worten, FNAC, MediaMarkt or similar (1)
- ○ Amazon, eBay, AliExpress or similar (2)

Q31 How much do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I don't like when a retailer charges different prices online and offline (1)	○	○	○	○	○
Customer service is important to me (2)	○	○	○	○	○
It's important to have a person to complain to in case of need (3)	○	○	○	○	○
Salesperson feedback is biased to make buy what they want (4)	○	○	○	○	○
I am aware that Worten says that it lowers the price if I find it cheaper (5)	○	○	○	○	○
I wouldn't need to ask for a price match because I would just buy where it's cheaper (6)	○	○	○	○	○
I don't believe that Worten matches the prices of its competitors (7)	○	○	○	○	○
I'm not satisfied with the fact that Worten only charges a lower price if a consumer forces them to (8)	○	○	○	○	○
If I find a cheaper price online, I will ask for a price match (9)	○	○	○	○	○
It's important that physical stores are present on social media (10)	○	○	○	○	○

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I'm interested in engaging with brands like FNAC and Worten on social media (11)	○	○	○	○	○
It's important that physical stores websites are mobile friendly (12)	○	○	○	○	○
Apps are better than websites to purchase electronic products online (13)	○	○	○	○	○
Temporary promotions on websites are					
It's important to be able to order a product in a store and have it delivered at my house (16)	○	○	○	○	○

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
It matters if physical stores provide free wi-fi (17)	○	○	○	○	○
It's useful that physical stores display their locations in their websites (18)	○	○	○	○	○

End of Block: Showrooming

Start of Block: Demographics

Q37 What is your education qualification?

Under High School (1)
Professional Degree (2)
High School (3)
Undergraduate Degree (4)
Master Degree (5)
PhD (6)

Q38 How many people constitute your household?

One (1)
Two (2)
Three (3)
Four (4)
More than four (5)

Q39 What is your monthly household income?

Less than 500€ (1)
[500, 1000[(2)
[1000, 1500[(3)
[1500, 2000[(4)
[2000, 2500[(5)
More than 2500€ (6)

Q40 How much money would you say you spend per year on electronic products?

Less than 250€ (1)
[250, 500[(2)
[500, 750[(3)
[750, 1000[(4)
[1000, 1250[(5)
More than 1250€ (6)

APPENDIX VI – RESULT ANALYSIS

Table 9 - MLR Model Summary (Demographics Inflience in Showrooming Likelihood)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,283[a]	,080	,025	1,213	2,092
a. Predictors: (Constant), Master_Degree, Money_Spent, UnderHighschool, Highschool, Gender1, Professional_Degree, Age, Household_Income, Undergraduate_Degree					
b. Dependent Variable: Showrooming_Likelihood					

Table 10 - ANOVA (Demographics Influence in Showrooming Likelihood)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19,148	9	2,128	1,446	,173[b]
	Residual	220,627	150	1,471		
	Total	239,775	159			
a. Dependent Variable: Showrooming_Likelihood						
b. Predictors: (Constant), Master_Degree, Money_Spent, UnderHighschool, Highschool, Gender1, Professional_Degree, Age, Household_Income, Undergraduate_Degree						

Table 11 - Coefficients (Demographics Influence in Showrooming Likelihood)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,526	1,034		4,378	,000
	Gender1	-,456	,213	-,177	-2,142	,034
	Age	-,144	,142	-,097	-1,011	,313
	Household_Income	,048	,085	,054	,559	,577
	Money_Spent	-,007	,078	-,008	-,090	,928
	UnderHighschool	-1,758	1,072	-,224	-1,641	,103
	Highschool	-,646	,942	-,144	-,686	,494
	Professional_Degree	-1,054	,887	-,373	-1,189	,237
	Undergraduate_Degree	-,710	,886	-,284	-,802	,424
	Master_Degree	-,927	,901	-,319	-1,029	,305
a. Dependent Variable: Showrooming_Likelihood						

Table 12 - Model Summary (Demographics Influence in Showrooming Frequency)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,314[a]	,099	,045	,997	2,011
a. Predictors: (Constant), Master_Degree, Money_Spent, UnderHighschool, Highschool, Gender1, Professional_Degree, Age, Household_Income, Undergraduate_Degree					
b. Dependent Variable: Showrooming_Frequency					

Table 13 - ANOVA (Demographics Influence in Showrooming Frequency)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16,356	9	1,817	1,828	,068[b]
	Residual	149,138	150	,994		
	Total	165,494	159			
a. Dependent Variable: Showrooming_Frequency						
b. Predictors: (Constant), Master_Degree, Money_Spent, UnderHighschool, Highschool, Gender1, Professional_Degree, Age, Household_Income, Undergraduate_Degree						

Table 14 - Coefficients (Demographics Influence in Showrooming Frequency)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,463	,850		5,252	,000
	Gender1	-,284	,175	-,133	-1,624	,107
	Age	-,091	,117	-,073	-,775	,440
	Household_Income	,028	,070	,038	,404	,687
	Money_Spent	-,032	,064	-,045	-,502	,616
	UnderHighschool	-2,414	,881	-,371	-2,739	,007
	Highschool	-1,496	,774	-,402	-1,932	,055
	Professional_Degree	-1,884	,729	-,802	-2,584	,011
	Undergraduate_Degree	-1,504	,729	-,725	-2,065	,041
	Master_Degree	-1,595	,741	-,661	-2,154	,033
a. Dependent Variable: Showrooming_Frequency						

Table 15 - Model Summary (Personal Characteristics Influence in Showrooming Likelihood)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,519[a]	,269	,231	1,077	2,282
a. Predictors: (Constant), Product_Involvement, Offline_Loyalty, Online_Risk, Internet_Familiarity, Online_Smartphone, Price_Consciousness, Buying_Frequency, Online_Loyalty					
b. Dependent Variable: Showrooming_Likelihood					

Table 16 - ANOVA (Personal Characteristics Influence in Showrooming Likelihood)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64,568	8	8,071	6,956	,000[b]
	Residual	175,207	151	1,160		
	Total	239,775	159			
a. Dependent Variable: Showrooming_Likelihood						
b. Predictors: (Constant), Product_Involvement, Offline_Loyalty, Online_Risk, Internet_Familiarity, Online_Smartphone, Price_Consciousness, Buying_Frequency, Online_Loyalty						

Table 17 - Coefficients (Personal Characteristics Influence in Showrooming Likelihood)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,775	1,191		-,651	,516
	Online_Risk	,331	,141	,172	2,344	,020
	Price_Consciousness	,208	,089	,176	2,333	,021
	Internet_Familiarity	,168	,198	,061	,846	,399
	Online_Smartphone	-,124	,065	-,141	-1,913	,058
	Offline_Loyalty	-,124	,088	-,121	-1,408	,161
	Online_Loyalty	,057	,089	,053	,642	,522
	Buying_Frequency	,571	,105	,440	5,455	,000
	Product_Involvement	,024	,070	,026	,345	,731
a. Dependent Variable: Showrooming_Likelihood						

Table 18 - Model Summary (Personal Characteristics Influence in Showrooming Frequency)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,522[a]	,273	,234	,893	2,144
a. Predictors: (Constant), Product_Involvement, Offline_Loyalty, Online_Risk, Internet_Familiarity, Online_Smartphone, Price_Consciousness, Buying_Frequency, Online_Loyalty					
b. Dependent Variable: Showrooming_Frequency					

Table 19 - ANOVA (Personal Characteristics Influence in Showrooming Frequency)

Model		Sum of Squares		df	Mean Square	F	Sig.
1	Regression	45,148		8	5,644	7,081	,000[b]
	Residual	120,346		151	,797		
	Total	165,494		159			
	a. Dependent Variable: Showrooming_Frequency						
	b. Predictors: (Constant), Product_Involvement, Offline_Loyalty, Online_Risk, Internet_Familiarity, Online_Smartphone, Price_Consciousness, Buying_Frequency, Online_Loyalty						

Table 20 - Coefficients (Personal Characteristics Influence in Showrooming Frequency)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,467	,987		-,473	,637
	Online_Risk	,260	,117	,162	2,220	,028
	Price_Consciousness	,177	,074	,180	2,388	,018
	Internet_Familiarity	,030	,164	,013	,183	,855
	Online_Smartphone	-,095	,054	-,129	-1,761	,080
	Offline_Loyalty	-,120	,073	-,141	-1,646	,102
	Online_Loyalty	,116	,074	,129	1,575	,117
	Buying_Frequency	,473	,087	,439	5,459	,000
	Product_Involvement	,046	,058	,060	,785	,434
a. Dependent Variable: Showrooming_Frequency						

Table 21 - Crosstab (Different Prices in Different Channels * Online Motivations)

			Why_Online				
			Because it was not available in the store	Because it was cheaper online	To avoid transporting it myself	Other	Total
DifferentPrices_Retailers	Strongly disagree	Count	2	2	1	0	5
		% within Why_Online	5,7%	2,6%	11,1%	0,0%	3,8%
	Somewhat disagree	Count	1	9	0	2	12
		% within Why_Online	2,9%	11,7%	0,0%	16,7%	9,0%
	Neither agree nor disagree	Count	5	16	3	4	28
		% within Why_Online	14,3%	20,8%	33,3%	33,3%	21,1%
	Somewhat agree	Count	14	26	3	3	46
		% within Why_Online	40,0%	33,8%	33,3%	25,0%	34,6%
	Strongly agree	Count	13	24	2	3	42
		% within Why_Online	37,1%	31,2%	22,2%	25,0%	31,6%
Total		Count	35	77	9	12	133
		% within Why_Online	100,0%	100,0%	100,0%	100,0%	100,0%

Table 22 - Chi-Square Test (Different Prices in Different Channels * Online Motivation)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9,712[a]	12	,641
Likelihood Ratio	10,754	12	,550
Linear-by-Linear Association	1,874	1	,171
N of Valid Cases	133		

a. 13 cells (65,0%) have expected count less than 5. The minimum expected count is, 34.

Table 23 - Chi-Square Test (Price Match Relevance * Online Motivation)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,045[a]	12	,442
Likelihood Ratio	13,361	12	,343
Linear-by-Linear Association	,258	1	,612
N of Valid Cases	133		
a. 14 cells (70,0%) have expected count less than 5. The minimum expected count is ,20.			

Table 24 - Chi-Square Test (Price Match Trustworthiness * Online Motivation)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13,328[a]	12	,346
Likelihood Ratio	18,496	12	,101
Linear-by-Linear Association	,279	1	,597
N of Valid Cases	133		
a. 12 cells (60,0%) have expected count less than 5. The minimum expected count is ,81.			

Table 25 - Chi-Square Test (Price Match Satisfaction * Online Motivation)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,620[a]	12	,397
Likelihood Ratio	16,340	12	,176
Linear-by-Linear Association	2,135	1	,144
N of Valid Cases	133		
a. 13 cells (65,0%) have expected count less than 5. The minimum expected count is ,27.			

Table 26 - Chi-Square Test (Price Match Online * Online Motivation)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,029[a]	12	,443
Likelihood Ratio	12,993	12	,370
Linear-by-Linear Association	,035	1	,851
N of Valid Cases	133		

a. 11 cells (55,0%) have expected count less than 5. The minimum expected count is 1,02.

Figure 9 - TwoStep Cluster Model Summary

Model Summary

Algorithm	TwoStep
Inputs	14
Clusters	2

Cluster Quality

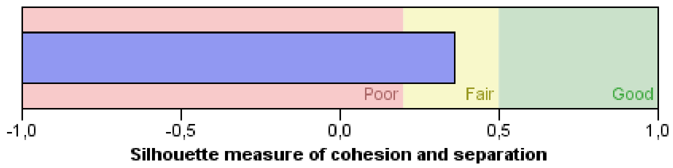


Table 27 - TwoStep Cluster Variables Importance

CLUSTER	2 (61.9%)	1 (38.1%)	
Proposed Name	Online Shopping Enthusiasts	Online Shopping Detractors	
Tablet	PI[a] = 1; μ = 4.17	PI = 1; μ = 1.90	Variables
Smartphone	PI = 0.96; μ = 4.35	PI = 0.96; μ = 2.18	
Smartwatch	PI = 0.81; μ = 3.87	PI = 0.81; μ = 1.75	
TV	PI = 0.67; μ = 3.32	PI = 0.67; μ = 1.51	
Laptop	PI = 0.63; μ = 3.71	PI = 0.63; μ = 1.85	
Home Appliances	PI = 0.55; μ = 3.43	PI = 0.55; μ = 1.72	
Online Shopping Frequency	PI = 0.38; μ = 2.77	PI = 0.38; μ = 1.79	Evaluation Fields
Showrooming Likelihood	PI = 0.20; μ = 3.52	PI = 0.20; μ = 2.59	
Showrooming Frequency	PI = 0.20; μ = 2.74	PI = 0.20; μ = 1.97	

[a]PI: Predictor Importance

Table 28 - Paired Samples T-Test (Tablet_StoreWebsite * Tablet_HomeWebsite)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Tablet_StoreWebsite – Tablet_HomeWebsite	-1,02500	23,79682	1,88130	-4,74057	2,69057	-,545	159	,587

Table 29 - Paired Samples T-Test (Tablet_StoreAmazon * Tablet_HomeAmazon)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Tablet_StoreAmazon – Tablet_HomeAmazon	-,35625	16,87257	1,33389	-2,99069	2,27819	-,267	159	,790

Table 30 - Paired Samples T-Test (TV_StoreWebsite * TV_HomeWebsite)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	TV_StoreWebsite – TV_HomeWebsite	4,19375	87,20009	6,89377	-9,42142	17,80892	,608	159	,544

Table 31 - Paired Samples T-Test (TV_StoreAmazon * TV_HomeAmazon)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	TV_StoreAmazon – TV_HomeAmazon	-3,61250	82,26579	6,50368	-16,45725	9,23225	-,555	159	,579

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