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THE IMPACT OF PRICE DISCRIMINATION ON CUSTOMER BRAND  
ENGAGEMENT: THE CASE OF THE PORTUGUESE  
TELECOMMUNICATIONS' SECTOR

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## **Biographic Note**

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Jorge enrolled in 2012 in the bachelor's Degree in Economics, at the School of Economics and Management of the University of Porto (FEP), which he completed in 2015.

Right after graduating, with the wish to continue his studies, he started the Master in Management at the same school, being also accepted to be one of the students to participate in the Double Degree with Kedge Business School, in Marseille.

After the first year of the Master, in 2016, Jorge started his contact with the professional world by joining the trainees program NOS Alfa at NOS. One year later, when the program finished, he was hired by the same company for the role of Product Manager, which he performs until this day.

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## Resumo

As práticas de discriminação de preço têm sido crescentemente aplicadas como um meio de capitalizar sobre a heterogeneidade de valores de reserva. Através de ofertas targuetizadas a cada segmento do mercado as empresas são capazes de capturar em maior proporção o valor de reserva de cada cliente e como consequência aumentar as suas receitas.

A discriminação de preço tem sido particularmente utilizada em sectores de serviços, alavancada no desenvolvimento de tecnologias de informação que por um lado providenciam às empresas as ferramentas necessárias para mais eficazmente identificar diferentes grupos de clientes e por outro disseminam conhecimento sobre a utilização destas práticas por parte das empresas. O conhecimento da utilização destas práticas pode ter um impacto duradouro na perceção da marca levando a uma deterioração da relação desenvolvida entre marcas e os seus clientes. Se não conduzidas corretamente tais estratégias poderão levar a um efeito oposto ao procurado com a implementação destas práticas prejudicando a capacidade da empresa suceder e impactando negativamente as receitas.

Múltiplos estudos têm sido realizados sobre o impacto da discriminação de preço, no entanto nenhum estudo foi conduzido com base no conceito de Customer Brand Engagement. O objetivo deste estudo é o de avaliar e descrever em maior detalhe quais os impactos que a implementação de discriminação de preço têm no Customer Brand Engagement. Para este fim um inquérito, com 246 respondentes, que incidia sobre os impactos de discriminação de preços no sector das telecomunicações em Portugal foi conduzido permitindo o desenvolvimento de um conhecimento mais aprofundado sobre os impactos que a implementação de práticas de discriminação de preço tem na relação complexa existente entre marcas e os seus clientes.

Foi exposta a criação de uma relação dissonante alimentada pelo calculismo em que os clientes que conheciam a utilização da prática demonstraram níveis mais elevados de engagement cognitivo, na procura de informação adicional com o objetivo de conseguirem influenciar a sua posição, tal conhecimento levou, no entanto, a um impacto negativo na esfera emocional do relacionamento dos clientes com as marcas.

Códigos-JEL: D400, M310, M370

Palavras-chave: Estratégia de preços, lealdade da marca, envolvimento do cliente com a marca, discriminação de preços

## **Abstract**

Price discrimination has become a common practice as a way of taking advantage of the heterogeneity of reserve prices each customer has. Companies are able to present tailored offers to each consumer segment in order to further the amount of the customer's reserve price that is captured by the company and leads to an increase in profits.

Price discrimination has been particularly used in service industries with a large boost in the growth of information technologies, providing companies with the tools to differentiate their customers more effectively as well as arming consumers with an increased awareness of price discrimination practices. Such awareness may pose a long lasting impact on brand perception with a deterioration of the developed relationship and a loss of trust from customers. If not managed correctly, these strategies may lead to the opposite effect of what was sought by the company, an increase in profits.

Various studies have been conducted on the impact of price discrimination, however none have made use of the customer brand engagement concept. The purpose of this investigation is to better assess and describe the impacts that price discrimination implementation poses on customer brand engagement and consequently a company's long term ability to succeed.

A survey was conducted in order to analyze the impacts of price discrimination on customer brand engagement in the Portuguese telecommunication's sector which permitted to further the understanding of the impacts on the complex relationship developed between brands and customers.

Results of a sample of 246 respondents revealed mixed effects of price discrimination, displaying the development of a dissonant relationship, such relationship was found to be fueled by rationality with customers' displaying higher levels of cognitive engagement in the search of additional information to influence their position while consequently harming the levels of emotional engagement with the brand.

JEL-codes: D400, M310, M370

Key-words: Pricing, brand loyalty, customer brand engagement, price discrimination

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## **Chapter 1. Introduction**

### **1.1. Motivation**

Price discrimination has become a common practice in telecommunication markets (Carroni, 2016), with this statement holding true for the Portuguese telecommunications industry.

Practices of price discrimination are instituted by product or sales channel management teams normally assisted by a CRM department in a quantitative marketing approach (Lambrecht, et al., 2012). The ultimate goal of these teams pursued through the implementation of such practices is to maximize revenue (Palmer & McMahon-Beattie, 2008). However, what these team fail to take into account are the long-term impacts that the usage of these policies have on the company's operations, with the company's ability to thrive in the market being put at risk (Fernandes & Calamote, 2016).

This happens since customers facing discrimination will have their perception of the company deteriorated (Weisstein, Monroe, & Kukar-Kinney, 2013) and perceptions of unfairness appear (Wu, Liu, Chen, & Wang, 2012). Although this culminates on a blow to these team's objectives, with a negative impact on sales and customer loyalty, it may not be directly witnessed by the teams responsible for instituting these practices. This creates a disconnection between the impact of these practices and product departments, with the knowledge of the negative outcome being concentrated on the brand management department.

Being in a product management position in the sector fuels my interest on this topic given its importance towards the considerations a product manager should have on decisions being made that impact the perception customers have of the brand.

### **1.2. Framework and relevance**

Companies adopt price discrimination practices in order to face the different valuations that consumers bestow their services with (Lambrecht, et al., 2012) and by doing

so, tailor the price offerings in order to maximize the amount of consumer surplus that is captured in each of the identified consumer groups (Palmer & McMahon-Beattie, 2008).

Through the adoption of this practice companies seek to maximize revenue, however the effects of offering different prices to different groups of consumers may impair this objective. If there is no clear reason that would justify differentiated treatment, consumers consider themselves to be equal to others that are acquiring the same goods and therefore believe there should only be one price being practiced with the difference in prices “affecting the formation of unfairness perception, negative emotions, internal reference price and store choice” (Wu, Liu, Chen, & Wang, 2012, p. 17).

There are already various studies approaching the impact of price discrimination on customers’ perception, however no such study is conducted with analysis on impact of the practice on customer brand engagement. Therefore a deeper analysis supported by a more complete construct is required in order to develop a better understanding of the practice’s impact on customer’s relationship with the brand (Bowden, 2009).

### **1.3. Objectives**

The objective of this study commences in the understanding of price discrimination practices as well as the identification and description of the various ways it is enforced as well as the markets in which it is most used.

Supported with a solid definition of the concept the main objective of this study is to measure awareness and the impact of the practice of price discrimination by Portuguese telecommunication companies in customer brand engagement.

It’s documented that effects of price discrimination vary depending on different aspects pertaining to nature of the customers such as if customers understand the inner workings of the practice (Palmer & McMahon-Beattie, 2008) or to specificities of the practice for instance if customers are involved in the price definition process (Richards, Liaukonyte, & Streletskaya, 2016). However, a more profound understanding of the impact of these factors is required, with customer brand engagement being the most adequate concept in order to further the current knowledge level pertaining to the impact of variable pricing.

With the results of this analysis it is expected that additional insight can be created as to how customers view companies which enforce price discrimination and to how it results

on the transformation of the customer and brand relationship characterized by customer brand engagement. In result of this insight it is expected that a behavioral marketing approach's importance is more easily understood and considered as a complementary necessity to quantitative marketing.

#### **1.4. Structure**

The approach to the research question of this Dissertation started with an extended investigation of the current line of knowledge. Therefore, Chapter 2. is dedicated to a wide Literature Review on the foundation of the practice of price discrimination, its impacts on customer's perception and then a presentation of the customer brand engagement concept. A definition for price discrimination is presented as well as the various forms that it can assume, then, different studies on the impact of price discrimination are selected and analyzed in order to understand the practices that are put in use by companies and the respective implications.

With different definitions of the customer engagement construct being offered and its managerial relevance is exposed.

On the following Chapter, the problem around the research question is exposed and a parallelism is made about the regarding the telecommunications' market in Portugal and its suitability for the study. After that, the chosen data collection method is explained as well as the treatment of the data gathered.

On Chapter 4. the results are displayed, starting with a descriptive analysis of the data, which then leads to a more profound treatment of the information with statistically stronger tests.

Chapter 5. is the aggregation between the findings of the Literature Review and the results of the investigation, leading then to Chapter 6. which is the aggregation of the main conclusions, contributions and implications, as well as a look into the future of the research about the topic in question.

## Chapter 2. Literature Review

### 2.1. Price discrimination

Price discrimination is a part of a set of practices of dynamic pricing that consists in a strategy where the company differs prices over time, different contexts or across sets of consumer groups identified by factors such as age, geography, levels of usage of a product/service (Haws & Bearden, 2006). It is a practice that has with time gained widespread usage for consumer goods (Weisstein, Monroe, & Kukar-Kinney, 2013), and is exploited in industries characterized by a diversity in consumers' appraisal and usage of the goods/service, limited possibilities of reselling and price as the key factor, reason why it's mostly used in service industries (Lambrecht, et al., 2012). Eased by the amount of consumer's information that companies are able to gather price discrimination is employed to face the different valuations consumers bestow their products/services with (Lambrecht, et al., 2012). The exponential advancement of information technologies has provided companies with the tools to gather higher levels of consumer information (Liu & Shuai, 2016), having such a deep understanding of consumer's behavior and preferences is crucial in order to provide the company the required knowledge to correctly differentiate its approach. The higher the level of information a company possesses, the more able said company will be to segment the market (Liu & Shuai, 2016), this is to divide customers into groups characterized by the same needs (Ouksel & Eruysal, 2011). Being able to target each customer group and in extreme each customer differently maximizes the chances of success for the company's offerings as well as the fit of the company's tailored offer in each identified group, maximizing the amount of consumer surplus captured in each group by pricing based on the consumer's reservation price (Palmer & McMahon-Beattie, 2008).

There are three possible forms of price discrimination (Samuelson & Marks, 2008): first degree price discrimination, second degree price discrimination and third degree price discrimination. First degree or perfect price discrimination is employed when a company is able to differentiate customers at an individual level, meaning that companies will charge each customer their reservation price being able to extract the entirety of an individual consumer surplus. This form of price discrimination is mentioned as a theoretical benchmark (Waldfogel, 2015) as companies would have to possess an enormous amount of information

regarding each possible customer or enter into a negotiation process in order to find the reservation price of each customer, and given the difficulty of said endeavor it is seldom used.

Second degree, or indirect, price discrimination occurs when customers are presented with nonlinear prices for a given product/service, this can be employed through quantity discounts, bundling and offering different levels. Oppositely to other forms of price discrimination indirect price discrimination relies in the self-selection of customers into the appropriated category of a product (Stole, 2007). Quantity discounts are a common practice in the retail industry, it consists of offering different assemblages of a product, with the unitary prices of the product dropping conditioned on the purchase of a higher quantity of the product, and is commonly presented as pay two, get three, kinds of deals. With the same strategic ground of quantity discounts is bundling which consists in offering different kinds of goods/services in a package (Stremersch & Tellis, 2002), being commonly associated with transaction savings possibly benefitting producers as well as consumers (Halmenschlager & Mantovani, 2017). It may be pursued with different objectives, being mostly associated with extension of monopoly power from one market to others and performing strategic alliances (Chung, Lin, & Hu, 2013) and has become a frequent practice in various markets (Stremersch & Tellis, 2002; Banciu & Ødegaard, 2016), to illustrate, in the energy industry consumers have the possibility to obtain their electricity and gas from the same company as well as in the telecommunications industry with companies offering integrated pay tv, telecommunications and internet services (Armstrong & Vickers, 2010; Halmenschlager & Mantovani, 2017). It can be pursued with different types of strategies that relate to the company's product line and with the integration of the products offered in the bundle. Considering the company's product line there are three possibilities, pure components by which companies choose not to bundle any of the components in their line, pure bundle where the company only sells components bundled with others in their offers and mixed bundling through which a company sells components both bundled and stand-alone (Banciu & Ødegaard, 2016). The strategies followed directly impact consumers' options in acquiring a certain component, potentially forcing them to acquire a bundle with products the customer has a reduced reservation price for. When regarding the integration of the products in the bundle, there can be two strategies related with bundling. If the bundle is fitted with unrelated items then the strategy pursued will be one of price bundling, while if selling a bundle of related products, a company can employ a product bundling strategy (Stremersch

& Tellis, 2002). If bundling unrelated items, meaning bundling these products creates no added value, then the bundle will have to be sold at a discount in order to present a savings opportunity, this may lead consumers to acquire a range of products/services with a sole provider, effectively deterring entrants in the markets the company is present in (Nalebuff, 2004). To illustrate bundling, a simple set of pots has no added value for the customer than if he were to acquire all the components separately, and for this reason the set of pots would be sold at a lower price than the sum of its components, effectively following a price bundling strategy. However, if there was some added functionality to the set of pots when acquired in a bundle, such as specifically designed features inducing synergies between the pots, then there would be an added value when compared to acquiring the components separately with the customer being willing to pay a premium, in this case the company would be pursuing a product bundling strategy.

From the limitations of first degree or perfect price discrimination, arises another form, third degree price discrimination where different prices are presented not to each individual based on their reference price, but to different groups of people according to their price sensitivity for the goods/services (Garbarino & Maxwell, 2010), values will differ across different segments but customers on a certain segment will be faced with the same price. With the latest developments to information technology, companies are increasingly capable of refining their market segmentation techniques (Liu & Shuai, 2016) which in turn allows them to price their products/services at a higher value to less price sensitive customers (Garbarino & Maxwell, 2010).

Third degree price discrimination is currently applied in various ways such as specific discounts for people from different age groups, intertemporal discrimination, coupons and behavior based price discrimination, based in information asymmetries and search costs (Round & McIver, 2006) which allow companies to identify the groups who are more or less impacted by price.

### **2.1.1. Behavior-based price discrimination**

Behavior-based price discrimination is where a company offers different prices to consumers based on if they are making a repeat purchase or if they are customers from a competitor. Markets that are characterized by repeated purchases allow companies to identify

previous customers from new customers and price discriminate between the two groups (Esteves, 2014). Subscription markets are a prime example of the usage of behavior-based price discrimination, given that in these markets consumers are not anonymous (Penmetsa, Gal-Or, & May, 2015). This explains why companies present in the telecommunications, streaming and payment services markets can regularly enforce such practices (Carroni, 2016), with some authors even considering the practice to be widely enforced without limiting it to any given market due to company's increasing capacity to gather consumers' information (Chen & Zhang, 2009; Nijs, 2013).

Companies can then use this information in order to price lower to repeat customers and chose to reward loyalty or offer lower prices to new customers in order to poach from rivals (Brokesova, Deckb, & Peliova, 2014). The method of differentiated treatment of new and repeat customers is not consistent across industries and in some cases not even across companies in the same industry (Lee & Fay, 2017). The larger part of academic studies on the topic advocate that companies should present higher prices to their previous customers and lower to new ones (Lee & Fay, 2017). Authors argue for said practice since by coming for a repeat purchase, customers are demonstrating their preferences for the company's product/service and therefore signal the company that they are willing to pay a higher price (Fudenberg & Tirole, 2000), oppositely companies may want to price lower for new customers in order to poach them from rivals (Esteves, 2014). However, the usage of retention offers as an answer to rival's poaching attempts has become a widespread practice some markets have developed in a way that there is an established exit process that allows companies to become aware of a customers' willingness to leave. This in turn provides companies with the ability to further segment their customers base into customers who want to switch and those that want to remain as customers. With this information companies are capable of making retention offers to customers who wish to leave and reward loyalty only to customers for whom establishing barriers to exit are pertinent (Esteves, 2014). Due to the different methods employed, some authors have focused on the determinants of the basis of the practice, whether to reward loyal customers or poach customers from competitors (Brokesova, Deckb, & Peliova, 2014). What was found is that if customer preferences are fixed over time, then a company should exploit repeat customers and price lower to poach customers from rivals (Brokesova, Deckb, & Peliova, 2014). However if customer preferences are not fixed over time and price pre-commitment is allowed, this is if companies can commit to price a customer at a lower value on a second stage where the customer is



coming for a repeat purchase, then the method chosen will be to offer loyalty discounts to repeat customers (Chen & Percy, 2010).

### **2.1.2. Coupons as a mean of price discrimination**

Coupons are not only a price promotion strategy but also a mean for price discrimination because it allows companies to differentiate customers with higher price elasticity and reach them through coupons offers (Hu, Chiou, & Hwang, 2004).

The usage of coupons differs from seasonal price declines as coupons offers are often maintained throughout the year and employed as a market development strategy, not being associated with seasonal dynamics or excessive stock as well as being attached to some restrictions such as a promotion period or limited channels where one can use them (Ben-Zion, Hibshoosh, & Spiegel, 2000).

However, opposed to the most other methods of price discrimination presented so far, coupons are presented in economics and marketing literature as a means of voluntary price discrimination and therefore an effective way of conducting price discrimination when regular price discrimination is not appealing (Ben-Zion, Hibshoosh, & Spiegel, 2000). When price discrimination is pursued through the use of coupons it gives consumers the opportunity to choose to use or not use coupons in their purchases and that way select whether they pay a higher price than possible. This happens because some consumers don't go shopping for a specific product only when coupons are available for that product and the fact that different consumer groups will have different opportunity costs of time and therefore consumers with a high value of time will not be spending time looking for coupons, while customers with a lower value of time will use the coupon (Hu, Chiou, & Hwang, 2004; Levedahl, 1986). For this reason, the usage of coupons is more appealing for companies when there is a low value of time coupled with high elasticity of demand or where high storage costs coexist with high elasticity of demand (Ben-Zion, Hibshoosh, & Spiegel, 2000).

Considering its distribution strategy, coupons can be divided into two groups, companies use mass media coupons when their strategy is to distribute randomly to every consumer in the market and targeted coupons when companies take into account consumer information in order to decide which coupons to give to a consumer or consumer segment (Kosmopoulou, Liu, & Shuai, 2016). By making coupons easily available to each group,

companies are extending the number of loyal customers who will make purchases using coupons and therefore reducing revenues (Ben-Zion, Hibshoosh, & Spiegel, 2000). Also, the usage of coupons as a means of price discrimination has a commonly referred flaw which is of breaking the assumption of no consumer arbitrage (Kosmopoulou, Liu, & Shuai, 2016), the increasing trading of coupons online further disserves the ultimate goal of the practice of price discrimination by removing a company's ability to capture consumers surplus. This is where targeted coupons and associated limitations such as a restricted number of coupons per customer (Ben-Zion, Hibshoosh, & Spiegel, 2000) assisted by an ever increasing availability of consumer information allow companies to rely less on consumer self-selection (Kosmopoulou, Liu, & Shuai, 2016) and reduce the cases of coupons being redeemed by customers loyal to the brand by either avoiding the cases of loyal customers ever receiving coupons or by introducing limits to the number of coupons redemption, which prevents loyal customers from taking advantage of the coupons and permits market development, especially when consumers are deal prone (Ben-Zion, Hibshoosh, & Spiegel, 2000).

Contrasting with economists' association of coupons with price discrimination, marketing literature considers coupons as forms of product promotion with coupons having two possible uses depending on the targeted audience. When distributed to new customers its usage is meant to allow for new customers to experiment and understand the brand's attributes, a company can however deliver coupons to present customers in order to reward and increase their brand loyalty (Levedahl, 1986). Levedahl (1986) conducted an analysis in order to infer which coupon effect has a larger impact on net price, whether coupon as a price promotion tool or as a mean of price discrimination. What was found is that the full product price is increased when in conjunction with a coupon offers, which although being consistent with a stronger effect of price discrimination could also exhibit retailers' behavior of raising full product prices in order to absorb a part of the price reduction that was intended for customers.

### **2.1.3. Intertemporal Price Discrimination**

As pointed by Stokey (1979) many new products are introduced into the market at a high price, with price then decreasing over time, although price decreases could happen as a result of the introduction of new competing products in the market, or improvements to

the production process, some of the price reductions seem to be related with company's objective to price discriminate (Stokey, 1979). Lofgren (1971) presents an example of intertemporal price discrimination in the books industry, at start a book publisher launches an expensive hard cover version into the market, later introducing a cheaper paperback version, despite having, with the paperback edition, a lower production cost, such a decrease in cost is insufficient to explain the total price difference existent between the two versions, which allow us to conclude that the company looked to price discriminate customers with its actions.

Various products have the practice of intertemporal price discrimination instituted into its market regular processes, this is the case of software, books, CDs and movies (Stokey, 1979; Rodriguez & Locay, 2002), at first movies are available at movie theaters at a high price, later being available for rental at a lower price and finally being broadcasted in TV (White, 2004). Companies in these markets, and more broadly speaking in durable goods markets have incentives to price discriminate (Nair, 2007), ordinary consumers will buy a single unit of the product and in order for the company to take advantage of the differences in consumer reservation products are launched at a high price, at which point only consumers with high reservation prices and who are impatient will buy them, the price will then decrease and consumers with lower reservation prices and who are more patient will be acquiring the product (Stokey, 1979). Therefore consumers inability to anticipate the price declines and delay purchases to that moment is crucial to company's ability to achieve higher profits (Nair, 2007), time cost is as well a critical component to this form of price discrimination, since it will impact the amount of time consumers will be willing to wait until acquiring a product (White, 2004). Consumers may be unwilling to wait to acquire a product and therefore pay more to acquire it upon launch such as a book, to be able to have an early access and discuss it with other people. Other consumers might not value having such goods as soon as they are released given that their utility for the good does not have such a steep decline over time, meaning they'll be willing to wait until the price drops (White, 2004), Gately (1976) described this difference in behavior as the existence of two markets, a patient market that is willing to wait in order to pay a lower price, these customers will remain in the market until the price declines to the point where they are willing to buy it, and the impatient market, constituted by consumers who are willing to pay a higher fee in order to get immediate access to the product. Other explanations to the different valuations from these markets are given by Rodriguez & Locay (2002), which presents a possibility that consumers choose to pay a

higher fee when the product is launched due to being unaware on whether the product may sellout and therefore prefer to pay extra in order to avoid such a risk, a second explanation presented is that consumers may choose to pay an extra in order to get the product at launch because at that point it is more exclusive and the more people enjoy it the least exclusive it gets, reducing its perceived quality.

The practices of intertemporal price discrimination previously presented occur in an inverse order when considering a market such as air transport, where price increases the closer the date of booking is to the date of the flight, customers with lower valuations will purchase the goods first at “early bird-discount prices” (Bayer, 2010) while customers with a higher valuation such as business travelers will enter later and therefore pay higher fees.

## **2.2. Impacts of price discrimination**

Although enforced with the economical motivation of profit maximization, price discrimination may lead to a deterioration of the relationship between customers and the brand employing these practices (Weisstein, Monroe, & Kukar-Kinney, 2013). The increasing prevalence of these practices has also been accompanied by an increase in customers’ awareness with word of mouth being especially prevalent in service industries (Nguyen & Simkin, 2013; Fernandes & Calamote, 2016). The existence of different prices offered implies there’s a lack of equity characterizing the transactions, with different groups of customers receiving the more or less advantageous ratio of goods/services for the amount paid (Weisstein, Monroe, & Kukar-Kinney, 2013). This leads customers to question such practices, and if no clear explanations to the differential treatment are provided, costumers won’t fathom the reasoning behind the practice, considering that they’re similar to other groups of customers and should therefore receive the same prices (Wu, Liu, Chen, & Wang, 2012). Confrontation with this reality provokes the formation of perceptions of unfairness (Wu, Liu, Chen, & Wang, 2012). Triggering this sentiment in customers’ compromises the company’s long term success with the firm’s reputation and ultimately its ability to thrive against its competition being in risk (Fernandes & Calamote, 2016).

Although in general consumers perceive price discrimination as unfair (Richards, Liaukonyte, & Streletskaia, 2016; Palmer & McMahon-Beattie, 2008), consumers’ outlook on the practice depend on various conditions related to the specificities of the practice

regarding social norms (Wu, Liu, Chen, & Wang, 2012), possibilities provided to consumers to be determinant in the definition of their position (Richards, Liaukonyte, & Streletskaya, 2016; Palmer & McMahon-Beattie, 2008; Wu, Liu, Chen, & Wang, 2012; Rotemberg, 2004), how the inquired and others around are affected by it (Gelbrich, 2011) and overall similarity of the events (Weisstein, Monroe, & Kukar-Kinney, 2013).

These conditions result in different responses to practices of price discrimination as well as different intensities to the impact these pose on consumers. The concordance of the strategy put in place to price discriminate with social norms rises against all other circumstances about a specific practice of price discrimination. Social norms are a set of unspoken behavioral rules that although not specifically defined or mentioned are understood by most and influence the way people conduct themselves and how they expect others to act (Garbarino & Maxwell, 2010). When a social norm has sufficient backing, meaning that it gathers public consensus and it is held with sufficient belief, then breaking that norm will prompt a public response (Maxwell & Garbarino, 2010). When price discrimination is employed according to social norms, such as providing discounts to senior citizens, consumers perceptions of unfairness do not arise from disadvantaged consumers, however if direct price discrimination against social norms is employed, then consumers' equity justice is violated as they do not conceive a justifiable motive behind the practice other than increasing profits (Wu, Liu, Chen, & Wang, 2012). The preponderance of how the practice matches against social norms can be inferred from Wu, Liu, Chen, & Wang (2012) where it was found that price discrimination if conducted against social norms has a stronger impact on consumers' perceived unfairness than any other method that is currently employed.

Following the more central place that concordance of the practice with social norms has, there are factors concerning the position occupied by the inquired and also positions occupied by those around him that affect the impact on consumers. When in a disadvantaged position, individuals are sensitive to price inequity (Richards, Liaukonyte, & Streletskaya, 2016; Rotemberg, 2004) due to receiving the worse price to goods/service ratio. This in turn will result in a loss of customers for businesses employing such practices as these customers will avoid companies employing price discrimination and turn to companies using uniform pricing, where there's a certainty that there will be equity in transactions and there's no risk of being relegated to a disadvantaged position (Wu, Liu, Chen, & Wang, 2012).

Despite the negative effect that price discrimination has for consumers' perception due to it breaking the fundamental principal of equity justice, it was found that allowing consumers to influence their comparative position through being a part of the price setting process can reduce perceptions of unfairness (Richards, Liaukonyte, & Streletskaia, 2016; Rotemberg, 2004). If consumers feel that they can be responsible for their position, practices of price discrimination won't pose the same negative impact as customers do not focus only on matters of equality but also on the possibility to determine their position in the equation (Wu, Liu, Chen, & Wang, 2012) and if being capable to influence their position perceptions of unfairness will be reduced since they won't be discriminated for factors over which they have no influence but instead over factors they can alter through their actions.

The finding mentioned previously hints at an important factor in consumers' perception of price discrimination which relates to a competitive aspect of being able to do better than a consumers' peers. If consumers are aware of the inner workings of the practice, then they will not respond in such a negative fashion towards the practice (Elegido, 2011) since they will be able to sway the practices in their advantage and determine their position as advantaged consumers. By being exposed to these practices, customers learn from interacting with it and may adapt their behavior in order to get better deals (Lambrecht, et al., 2012). These customers may prefer companies employing such practices, as it was found by (Palmer & McMahon-Beattie, 2008) when confronted with a group of young educated consumers that comprehended the practice and as generally observed that advantaged consumers prefer to frequent shops using price discrimination (Wu, Liu, Chen, & Wang, 2012).

A testament to the influence of the spirit of competition in perception of the practice is that consumers are especially happy when aware of receiving a lower price than other consumers if there's a negative relationship between the two parties as well as prideful if such advantage was acquired through the consumer's abilities (Gelbrich, 2011). Oppositely if a party, with whom the consumer has a positive relationship, gets a worse deal, then sentiments of pity arise and the consumer is only outraged against the practices of the company if the result of transactions are due to the company's strategy and not to any of the parties' abilities to negotiate (Gelbrich, 2011), further extending the importance of allowing consumers to feel a part of the price setting process as a way to reduce perceived unfairness.

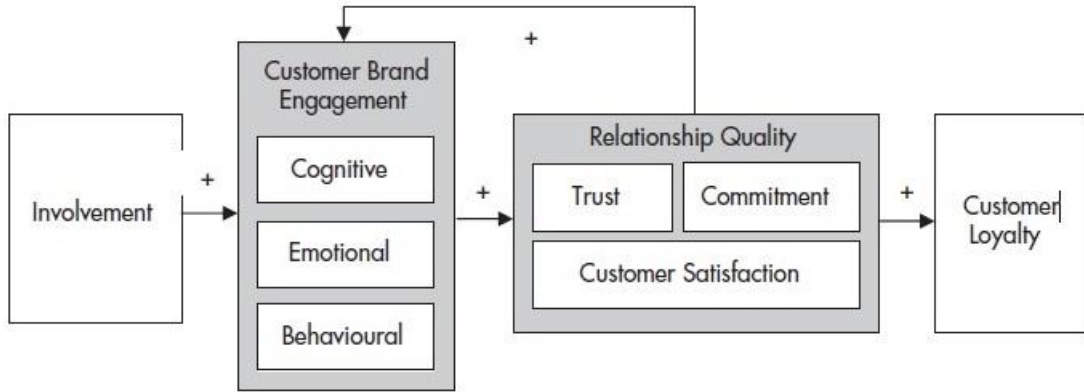
The nature of price discrimination in retention falls into conflicting areas, as offering worse conditions to current customers than to recently acquired customers, which was found

to go against social norms (Maxwell & Garbarino, 2010). Loyal customers receiving a worse deal perceive higher unfairness, have a lower intention to repurchase and a sense of betrayal (Weisstein, Monroe, & Kukar-Kinney, 2013), while the opposite case with loyal customers being in an advantaged position not being perceived as socially unfair (Huang, Ching-TeChang, & Chen, 2005). Loyal consumers being in a disadvantaged position goes against social norms however, given consumers' knowledge of the practice and it being tied to the contract period, gives consumers the ability to influence their position, using the practice to their advantage and lead to sentiments of pride and happiness, reducing perceptions of unfairness (Gelbrich, 2011). Additionally, the processes currently in place may provide companies with the ability to identify customers willing to leave before the fact, allowing companies to react to these intentions (Esteves, 2014). If these offers are framed as special offers in a different context, that to retain a customer, then the similarity with other transactions that the customer is aware is reduced and impact on the customers' perception will decrease (Weisstein, Monroe, & Kukar-Kinney, 2013) as price fairness perceptions are generated mainly from similarity in transactions (Xia, Monroe, & Cox, 2004).

### **2.3. Customer brand engagement (CBE)**

Given the multiple interactions and sentiments developed towards a brand as presented in the previous chapter, there was a need to establish a more accurate model that recognized that during the different points in a customer-brand relationship, the valuation of different attributes associated with customer satisfaction would evolve, a model that could be more effective in predicting customer loyalty (Bowden, 2009). It was from the necessity to create a more complete metric than those being used in Marketing such as trust, customer satisfaction, commitment and many others that the customer brand engagement construct arose as a concept that sought to comprise many of the concepts used in Marketing either as a precedent or as a consequence of customer brand engagement as can be observed in the model in Figure 1 (Hollebeek, 2011). As argued by Hollebeek (2011), higher involvement from the customer leads to a higher degree of customer brand engagement while trust, commitment and customer satisfaction are measures that are positively influenced by customer brand engagement and that positively influence it, with customer loyalty being positively influenced by all of the constructs.

Figure 1 - Conceptual Model of customer brand engagement



Source: Hollebeck (2011, Figure 2, pp. 796)

As it can be observed in Table 1 the high degree of academic attention that the concept received resulted in various definitions as well as denominations in literature for the concept which aided in its development.

Table 1 - Consumer engagement definitions

Concept	Definition	Authors
<b>Consumer engagement</b>	The intensity of an individual’s participation in and connection with an organization’s offerings and/or organizational activities, which either the customer or the organization initiate.	Vivek, Beatty, and Morgan (2012, p. 133)
<b>Customer brand engagement</b>	The level of an individual customer’s motivational, brand-related and context-dependent state of mind characterized by specific levels of cognitive, emotional and behavioral activity in direct brand interactions’.	Hollebeck (2011, p. 790)
<b>Customer engagement</b>	Psychological process that models the underlying mechanisms by which customer loyalty forms for new customers of a service	Bowden (2009, p. 65)



<b>process</b>	brand as well as the mechanisms by which loyalty may be maintained for repeat purchase. customers of a service brand	
<b>Customer engagement</b>	Customer engagement (CE) is a psychological state that occurs by virtue of interactive, cocreative customer experiences with a focal agent/object (e.g., a brand) in focal service relationships. It occurs under a specific set of context dependent conditions generating differing CE levels; and exists as a dynamic, iterative process within service relationships that cocreate value.	Brodie (2011 p. 260)

Source: Author's elaboration

Given the complex, multifaceted relationship that customers establish with telecommunication's provider, customer brand engagement is the more complete construct to evaluate it since it takes into account the process nature of the relationship (Bowden, 2009) where multiple stages exist with each stage influencing the remainder. The concept also takes into account that the results on customer brand engagement of interactions with a certain brand will be dependent on the specific context the individual fits in (Brodie, Hollebeek, Juric, & Ilic, 2011; Hollebeek, 2011) and that there exist interactions between a focal brand and a consumer regardless of the consumer being a customer of the brand, (Vivek, Beatty, Dalela, & Morgan, 2014) extending the relevance of the concept to every individual that interacts with a brand, hence the denomination consumer used by the authors.

Not only is the formation of customer brand engagement exhaustively fitted to reality as presented previously, as its indicators are presented in a clear manner through a tripartite taxonomy consisting of "cognitive, emotional and behavioural engagement" (Hollebeek, 2011), entailing respectively of the customer rational evaluation of his satisfaction with the brand services' or products', his emotional connection to a brand and his behaviours towards or regarding the brand.

## **2.4. Literature Review Summary**

The first part of the literature review focused on defining price discrimination, identifying for which purpose it is applied and in which contexts it is used in. The markets where such practices applied were identified along with defining and exposing the main tools that companies used to discriminate their customers.

After identifying the specificities of the processes enforced, there was an exploration on studies regarding impact on customers of variable pricing. Through this study it was possible to understand the current knowledge regarding the ways these practices impact customers perception on brands as well as identify determinant factors already established in literature which displayed significant influence on how price discrimination was perceived by consumers.

Given the objective of understanding, in greater detail, the impact of variable pricing the CBE construct was explored given its more complete nature and possible comparison to similar studies which were conducted on variables which are either positively influenced by CBE or positively influence CBE results.

These inputs fueled the research design as to better understand the impact of specific factors on the perception of price discrimination in the Portuguese telecommunications market and towards furthering the impacts on the relationship dynamic between customers and their brand.

## **Chapter 3. Methodology**

In this chapter it will be presented the research questions instigated in this dissertation along with the research context. The chosen methodology to pursue the research questions is presented and argued for.

### **3.1. The Problem**

Price discrimination is a practice that has been increasingly enforced (Weisstein, Monroe, & Kukar-Kinney, 2013), with companies in the telecommunication's market regularly applying such practices (Carroni, 2016). As previously presented, many forms of price discrimination have been developed in order to extract larger value from each consumer segment with various studies being conducted in order to understand the impact of these practices. However, to the author's knowledge, no study has been conducted on the impacts of price discrimination on customer brand engagement. Studies are conducted on perceptions of unfairness (Wu, Liu, Chen, & Wang, 2012; Fernandes & Calamote, 2016; Richards, Liaukonyte, & Streletskaya, 2016), happiness (Gelbrich, 2011), trust and repurchase intentions (Weisstein, Monroe, & Kukar-Kinney, 2013) with conclusions being drawn on constructs that CBE seeks to comprise (Hollebeek, 2011).

The relationship existent between a brand and its customers is extremely complex (Bowden, 2009), however studies on the impact of price discrimination have been conducted with narrow singular concepts. As a result these studies display the impacts of price discrimination on a limited view, through the usage of the CBE concept this study aims to clarify the impacts of these practices at the use of a concept seeking to comprise various metrics being used in Marketing (Hollebeek, 2011). Through this clarification it is intended to enrich the knowledge regarding the impact of these practices and analyze the influence of factors that have been found to impact a customer's perception of price discrimination practices, such as one's ability to influence its position.

### 3.2. Hypotheses

With the presented objectives in mind and given the inputs provided by literature a list of hypotheses to be tested arose as present below in Table 2.

**Table 2 - Factors influencing the Impact of Price Discrimination**

Hypotheses	Sources
<b>H1: Awareness of price discrimination negatively impacts CBE</b>	(Richards, Liaukonyte, & Streletskaia, 2016)
	(Lambrecht, et al., 2012)
	(Wu, Liu, Chen, & Wang, 2012)
	(Garbarino & Maxwell, 2010)
	(Palmer & McMahon-Beattie, 2008)
<b>H2: Being in a disadvantaged position negatively impacts CBE</b>	(Richards, Liaukonyte, & Streletskaia, 2016)
	(Xia, Monroe, & Cox, 2004)
	(Rotemberg, 2004)
<b>H3: The nature of the relationship existent with an also price discriminated third party influences the impact on CBE</b>	(Gelbrich, 2011)
<b>H4: Higher levels of influence in a price setting process positively impact CBE</b>	(Richards, Liaukonyte, & Streletskaia, 2016)
	(Lambrecht, et al., 2012)
	(Wu, Liu, Chen, & Wang, 2012)
	(Palmer & McMahon-Beattie, 2008)
	(Rotemberg, 2004)

### 3.3. Data Collection

In order to answer the research question, a survey, composed by 5 parts, was prepared as presented in Annexes 1 1.

The first part of the survey was intended to filter people who never used any type of telecommunication service, such as a cellphone service, television or fixed internet. Given that the purpose of the survey was to understand the impact of price discrimination on customer brand engagement in the telecommunications market, people who claimed to have no contact with the type of services delivered in this market would not fit the target of the survey.

The second section of the survey, which started with a brief explanation of price discrimination, was directed to test for H1 and to understand if the respondents were aware of this practice being implemented and impacting customers whether directly or indirectly. If the respondent had experienced price discrimination, they had to report if the discriminated offer was better or worse in comparison to the offer someone of his reference had received, in order to understand if said respondent was in a privileged or disadvantaged position in comparison with others, to test for H2. It was also inquired which sort of relationship the respondent had with this third party, as to assess whether results found by Gelbrich (2011) (H3) would be also verified in Portugal and in this specific market. If instead, the respondent did not experience price discrimination from the company directly but knew someone who had such an experience, the respondent was also inquired on his perceived position facing this third party and the sort of relationship that existed between them, this permitted to determine the impact of the way respondents had grown aware of price discrimination, whether directly or indirectly. The purpose of analyzing the relationship between the respondent and the person that had a different offer was to understand if this indeed was a determinant factor in the customer brand engagement in a situation of price discrimination. As explained in the Literature Review, Gelbrich (2011) stated that price discrimination can have a positive effect on customer brand engagement if the person is aware of receiving a better offer than someone they are not fond of. On the other side, if a person was aware of a situation of price discrimination where someone they care about had been put in a disadvantaged position, it was interesting to confirm if that could lead to disengagement with the brand.

Additionally, as discussed in the Literature Review, customer brand engagement would vary depending on the customer's perception of the impact he had on the price definition process (Gelbrich, 2011; Richards, Liaukonyte, & Streletskaia, 2016). Therefore, the objective of the following part of the survey was to understand which respondents had specifically been part of the services acquisition and negotiation process as well as the influence they perceived they had in the price negotiation (H4). Due to the nature of telecommunication services, they may be used by the entire family while only one person, or a part of a family could have been involved in the subscription process, which could impact each family member's brand engagement differently.

The fourth section of the survey was based on the Customer Engagement scale (Vivek, Beatty, Dalela, & Morgan, 2014) which is composed of three major elements, specifically enthused participation, conscious attention and social connection. This scale was found to properly explain the levels of customer brand engagement through a formulation of a short, simple list of question which can be observed in Figure 2.

**Figure 2 - Customer Engagement Factors**

**Table 7**  
**Results of the Final CFA for Studies 2 and 3**

Dimension/Items*	Study 2: Apple Products (n = 206)		Study 3: Retail (n = 271)	
	Factor Loading	t-Value	Factor Loading	t-Value
Conscious Attention	AVE = .74, CR = .90		AVE = .63, CR = .83	
1. Anything related to ____ grabs my attention.	0.87	15.56	0.76	13.81
2. I like to learn more about ____.	0.74	12.30	0.75	13.52
3. I pay a lot of attention to anything about ____.	0.96	18.29	0.86	15.41
Enthused Participation	AVE = .85, CR = .96		AVE = .61, CR = .86	
1. I spend a lot of my discretionary time ____.	0.92	17.39	0.73	15.10
2. I am heavily into ____.	0.96	18.71	0.84	16.25
3. I am passionate about ____.	0.93	17.69	0.83	15.40
4. My days would not be the same without ____.	0.88	16.04	0.73	11.22
Social Connection	AVE = .69, CR = .87		AVE = .65, CR = .85	
1. I love ____ with my friends.	0.95	17.25	0.97	18.14
2. I enjoy ____ more when I am with others.	0.75	12.11	0.77	13.64
3. ____ is more fun when other people around me do it too.	0.77	12.70	0.75	12.84
Goodness-of-fit Statistics				
Minimum fit function $\chi^2$	67.63		59.33	
Degrees of freedom (df)	33		33	
Comparative fit index (CFI)	0.99		0.99	
Normed fit index (NFI)	0.98		0.98	
Root mean square error of approximation (RMSEA)	0.07		0.06	

Notes: CFA = confirmatory factor analysis; CR = composite reliability; AVE = average variance extracted. \* The blanks in the items were filled in by the description of the focus of engagement mentioned initially by the respondent (e.g., using my iPhone, shopping at Macy's).

Source: Vivek, Beatty, Dalela, & Morgan (2014, Table 5, pp. 409)

In order to evaluate the participants feelings towards the company in each of the fundamentals of the Customer Engagement scale, a Likert Scale was used, as it is widely considered an appropriate method and therefore vastly used in these type of studies (Croasmun & Ostrom, 2011). A 5-level scale, going from “completely disagree” to “completely agree” was used.

The last part of the survey was intended to get the sociological and demographic profile of each respondent to test for significant differences between people from different ages, different education levels as well as sex, as Palmer & McMahon-Beattie (2008) found significant differences when considering such attributes.

The survey was delivered by email and through social media in order to reach a meaningfully large sample, as well as ensure diversity from respondents.

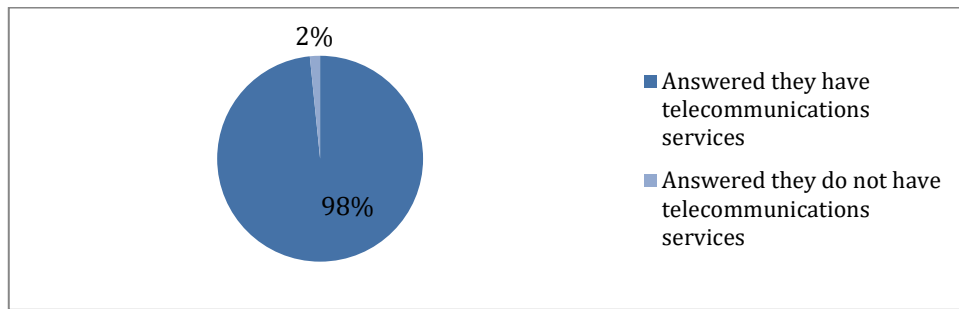
Before being sent by email or made available in social media a pilot survey was completed by 10 people, to make sure it was well structured and that each question was properly understood by the respondents (Farruggiaa, Crescimannoa, Galatia, & Tinervia, 2016). The survey was conducted throughout the month of March 2018, to which 250 responded, with 246 respondents having a telecommunication’s service and being eligible to answer to the following parts of the survey.

### **3.4. Sample Characterization**

The survey got 250 answers, all of them valid to the purpose of this investigation.

As the topic being investigation refers to engagement people feel towards telecommunications’ companies, the first question was meant to filter people who have no telecommunication services. Therefore for everyone that answered “No” to the question “Do you have any type of telecommunications services (even if you are not the person paying it)?”, the survey would be over, which was the case for 4 people (Figure 3). The sample characterization was therefore conducted on the 246 respondents who had telecommunications’ services.

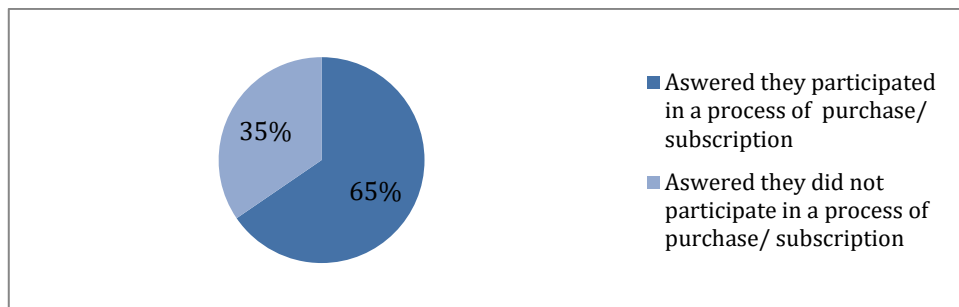
**Figure 3- Respondents' telecommunications' Client profile (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

From the 246 participants that continued the survey, it was asked which of them had been involved in a negotiation process of a purchase/ subscription of services with their current telecommunications company, to assess if that had any impact on their brand engagement. 161 respondents answered yes, that they did participate on the negotiation process, to this question (Figure 4), while the remainder respondents were merely using services over which they had no contact regarding its subscription with the telecommunications company.

**Figure 4 – Negotiation process participation in the purchase/ subscription of services with their current Telecommunications company (Relative Frequency)**

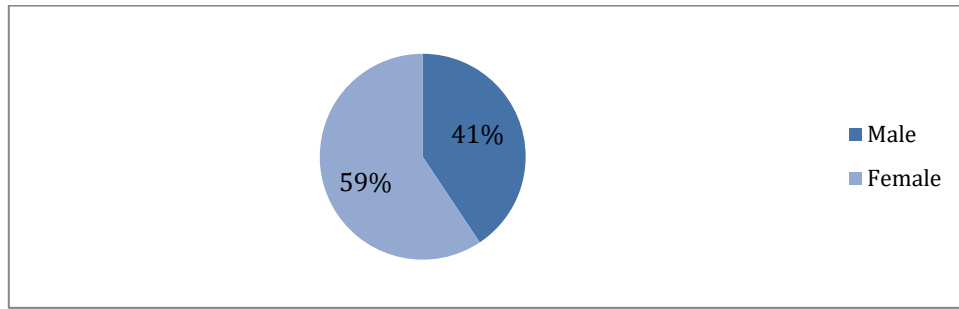


Source: Author's elaboration (Microsoft Office Excel Output)

Of the total of the participants, 100 were male (Figure 5).



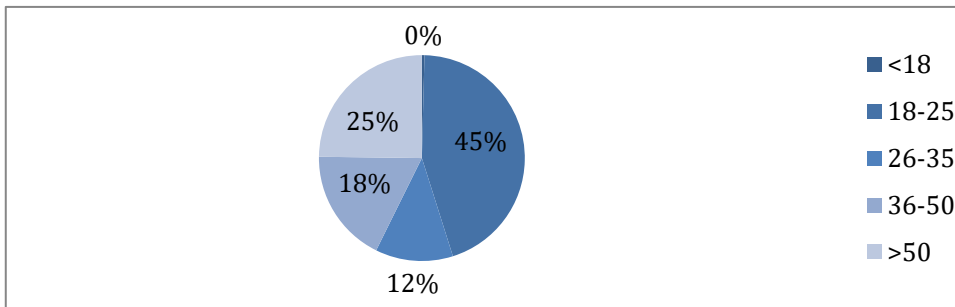
**Figure 5 - Respondents' sex (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

None of the participants of the survey was under 18 years old, 111 were between 18 and 25 years old, 30 respondents were between 26 and 35, 44 of the respondents were between 36 and 50 years old and the remainder 61 were over 50 years old (Figure 6).

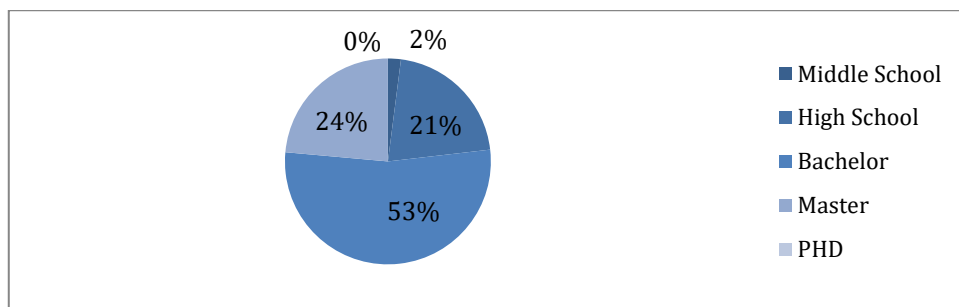
**Figure 6 - Respondents' age (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

Regarding the level of education, 5 attended school until Middle School, 52 reached High School, 131 had a Bachelor and 58 had a Master's Degree while none of the respondents had a PhD (Figure 7).

**Figure 7 - Respondents' level of education (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

### 3.5. Data Analysis

To assess the impact each factor had on the ten indicators of Customer Brand Engagement as defined by (Vivek, Beatty, Dalela, & Morgan, 2014) T-Tests and One-way ANOVAs were performed on each of the survey's tested variables. The specific test used depended on the characteristics of said variable. One-way analysis of variance (one-way ANOVA) were conducted when the variable of study had three or more sample groups, comparing the different sample means considering a single independent variable such as perceived influence in the price setting process to conclude on whether it is possible to assert that it has a significant influence on the dependent variable at study (Maroco, 2003).

Independent variables T-Tests were performed on variables with two groups, as this test is to be used when testing for significant differences between the mean of two sample group tests when the samples at study are not dependent of each other (Maroco, 2003).

Both mentioned tests are testing two hypotheses:

$$H_0: \mu_1 = \mu_2 \text{ (T-Test)}$$

or

$$H_0: \mu_1 = \mu_2 = \dots = \mu_k \text{ (ANOVA)}$$

$$H_1: \exists i, j \mu_i \neq \mu_j$$

Decision rule is:

$$\begin{cases} p < \alpha, \text{ reject } H_0 \\ p \geq \alpha, \text{ do not reject } H_0 \end{cases}$$

Analysis was conducted for a 5% significance value ( $\alpha$ ), which means that when p-values under 5% were found it was possible to reject the null hypothesis that each group mean scores were equal and conclude that there were significant differences between the means of two or more sample groups at a 95% confidence interval (Maroco, 2003).

In order to use the ANOVA there are some assumptions which should be met, such as independence of observation, homogeneity of variances as well as a normally distributed dependent variable. Although the distribution of dependent variables should follow the normal distribution, ANOVA tests are robust for violation of this assumption when the sample has reduced differences to a normal distribution. This was assessed by performing normality Q-Q plots in order to visually understand whether the sample's distribution was

significantly different from that of a normal distribution. The test was performed for each dependent variable, with the plots present in the Annexes and all approached a normal distribution. Moreover (Norman, 2010) defends that given the Central Limit Theorem, applicable in the sample studied, there is an acceptable approximation to the normal distribution and therefore the ANOVA can be used due to its robustness to violations of this assumption.

The assumption of independence of observations was assured through the study design given that each respondents' answers were not influenced by other respondents.

To assure homogeneity of variances, as defended by (Maroco, 2003) the Levene test was used given that it is robust to normality violations as well as one of the most potent tests for the objective.

When, after conducting one-way ANOVA, it was possible to reject the null hypothesis Tukey's post-hoc test was used so as to find the specific sample groups for which significant differences existed, however when the null hypothesis of homogeneity in variance was violated, instead of the ANOVA and Tukey's post-hoc test, the Well-Test and Games-Howell post-hoc were conducted, respectively.

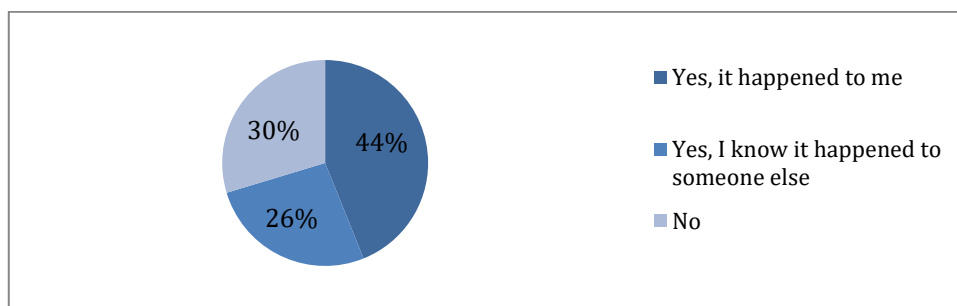
## Chapter 4. Results

The objective of this Chapter is to make a statistical analysis of the data collected for the purpose of this investigation, so that in the following Chapter the results can be discussed. With that in mind, firstly it was conducted a descriptive analysis and then the potential impact of Respondents' profile on CBE was examined.

### 4.1. Descriptive Analysis

Since this research is meant to understand the impact of price discrimination on brand engagement of telecommunications companies, it was necessary to assess respondents' awareness of this practice. 108 respondents believed they had been price discriminated by their telecommunications company, 65 answered they knew someone that had been discriminated and the rest of the responses did not believe their company practiced price discrimination (Figure 8). Through these results it's possible to conclude that the majority of the sample (74%) was aware of price discrimination practices in the Portuguese telecommunications market.

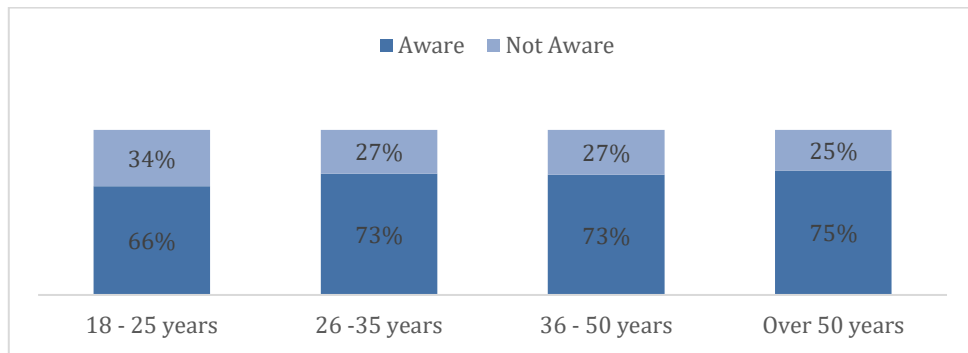
**Figure 8- Awareness of Price Discrimination (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

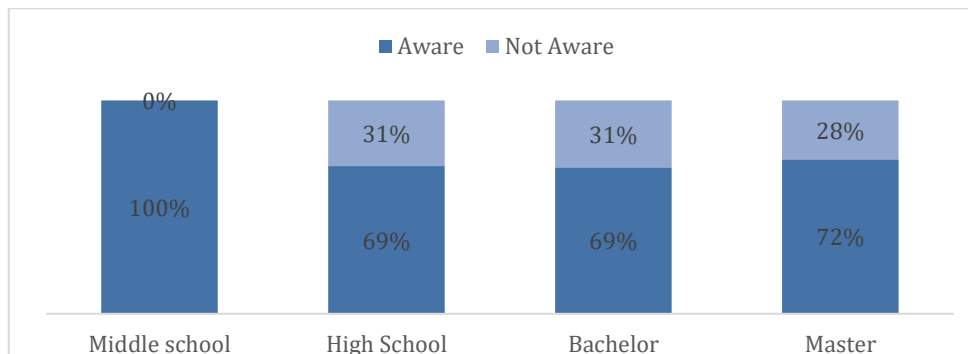
Continuing to analyze this question, in what concerns to the profile of the respondents in terms of age and educational level, it can be noticed that the proportion of people aware of the practice does not vary greatly, except for the 5 people who only attended Middle School, which are all aware of the practice (Figure 9 and Figure 10).

**Figure 9 – Awareness of Price Discrimination per respondents’ age (Relative Frequency)**



Note: Aware includes “Yes it has happened to me” and “Yes I know it happened to someone else”  
Source: Author’s elaboration (Microsoft Office Excel Output)

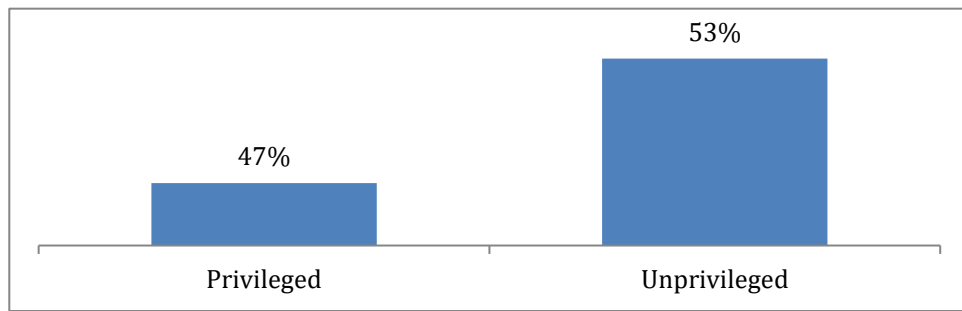
**Figure 10 - Awareness of Price Discrimination per respondents’ educational level (Relative Frequency)**



Note: Aware includes “Yes it has happened to me” and “Yes I know it happened to someone else”  
Source: Author’s elaboration (Microsoft Office Excel Output)

From the respondents who are aware of practices of price discrimination, the distribution between respondents in an advantaged to a disadvantaged position was extremely close (Figure 11), with 53% of the respondents in a disadvantaged position in result of price discrimination, and the remainder 47% ending in an advantaged position.

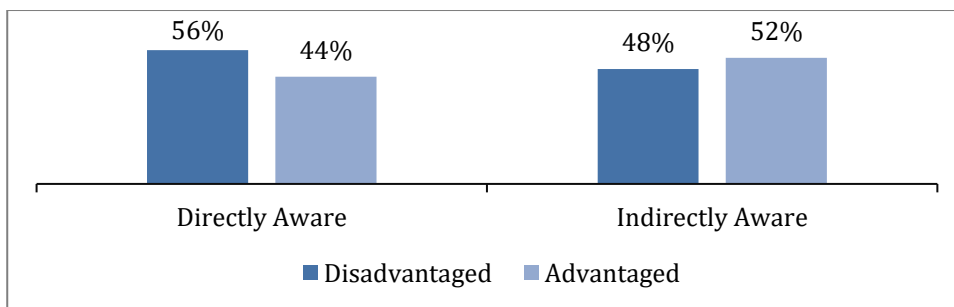
**Figure 11 – Situation facing others (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

Furthermore when these results are analyzed with awareness to price discrimination in mind it's observed (Figure 12) that there is a higher weight of respondents who are at a position of disadvantage when aware of price discrimination through a direct experience than when aware of said practices through other parties (56% vs 48% respectively).

**Figure 12 - Situation facing others by respondents' form of awareness of price discrimination (Relative Frequency)**

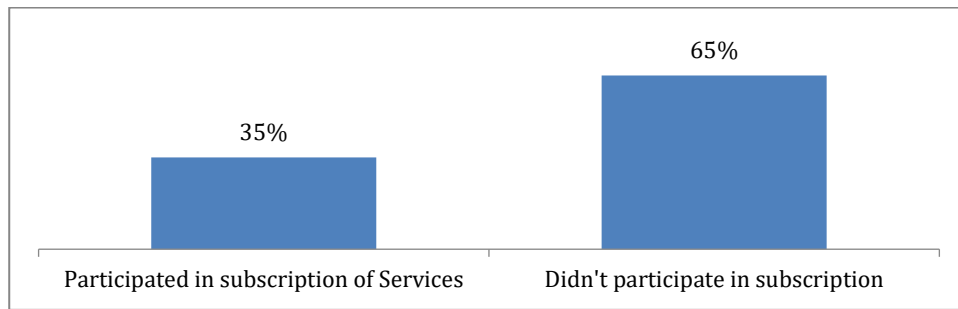


Note: "Yes it has happened to me"- Directly Aware, "Yes I know it happened to someone else" – Indirectly Aware

Source: Author's elaboration (Microsoft Office Excel Output)

From the 246 respondents that answered they had telecommunication services, 161 (65%) were present in the a process of subscription of services with their current telecommunication's company, with the remainder 85 (35%) only being users of the services and not coming into contact with their company on the moment of the services' acquisition (Figure 13).

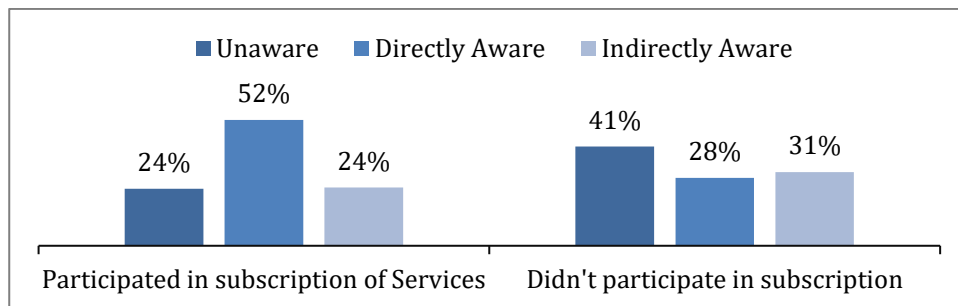
**Figure 13 – Participation in the Price Setting Process (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

From these respondents there was a higher incidence of awareness of price discrimination when they had been present in the subscription of services in comparison to respondents which were passive users of the services, 76% vs 59% respectively (Figure 14). It was also possible to observe a higher incidence of awareness of price discrimination through direct experience in respondents that were active parts of the services acquisition.

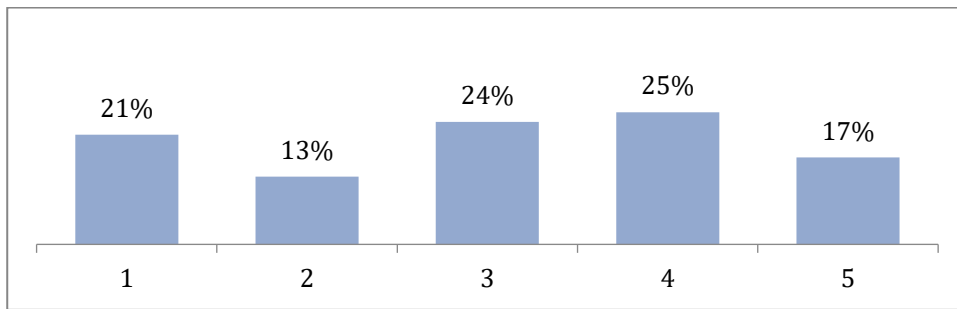
**Figure 14 – Awareness of Price Discrimination per respondents' role in the acquisition of telecommunication's services (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

From the respondents that were active parts in the subscription of telecommunication services with their current company, 68 (42%) perceived to have a high degree of influence in the price setting process (Figure 15).

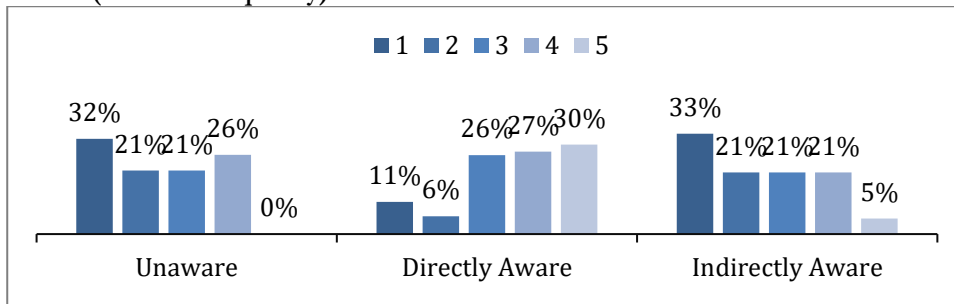
**Figure 15 – Perceived influence in the Price Setting Process (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

From the respondents who perceived to have a high degree of influence (answered 4 or more), 48 (71%) were respondents who were directly aware of price discrimination. As it can be observed from Figure 16 there is a higher relevance of respondents perceiving high degrees of influence in the negotiation process when directly aware of price discrimination, if unaware of price discrimination practices respondents perceive lower degrees of influence possibly given that they believe there is no way in which they can influence their offer.

**Figure 16 – Perceived Influence in the Price Setting Process per respondents' awareness of price discrimination (Relative Frequency)**



Source: Author's elaboration (Microsoft Office Excel Output)

From all the expressions the participants had to rate in accordance to their relation with their telecommunications company (Figure 17), the one that had the higher number of respondents choosing the lowest score was “4.8 - I love using my telecommunications company's products/services with my friends”, with 72 people rating it with 1, then “4.1 - Anything related to my telecommunications company grabs my attention” with 68 and “4.7 - My days would not be the same without my company's services” with 63 (Figure 17).

Since the rating went from 1 to 5, if it is analyzed the two negative scores, which means “1” and “2”, the expressions that deserved a worst punctuation from the respondents remain the same but with “4.1 - Anything related to my telecommunications company grabs

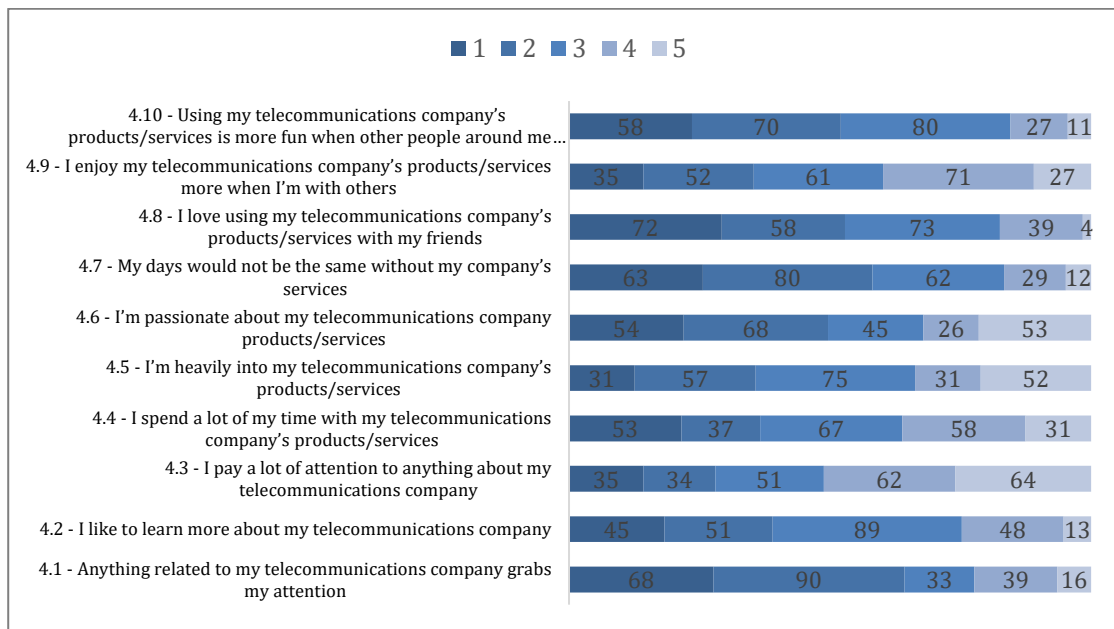


my attention” collecting the higher amount with 158 answers, then “4.7 - My days would not be the same without my company’s services” with 143 and “4.8 - I love using my telecommunications company’s products/services with my friends” with 130.

If we look at the positive side of the equation, the expressions that welcomed the highs sum of the best score were “4.3 - I pay a lot of attention to anything about my telecommunications company”, with 64 answers, then “4.6 - I’m passionate about my telecommunications company products/services” with 53 and right bellow with just one less answer “4.5 - I’m heavily into my telecommunications company’s products/services”. By aggregating the two most positive scores, “5” and “4”, the most awarded expression remains the same (with 126 answers), but it is followed by “4.9 - I enjoy my telecommunications company’s products/services more when I’m with others” (98 answers) and “4.4 - I spend a lot of my time with my telecommunications company’s products/services” (89 answers).

From these results it is not difficult to understand that the questions that show a higher number of neutral answers (rate “3”) are “4.2 - I like to learn more about my telecommunications company” with 89 and “4.10 - Using my telecommunications company’s products/services is more fun when other people around me use it too” with 80.

**Figure 17 – Displayed Levels of CBE (Respondents’ CBE) (Absolute Frequency)**

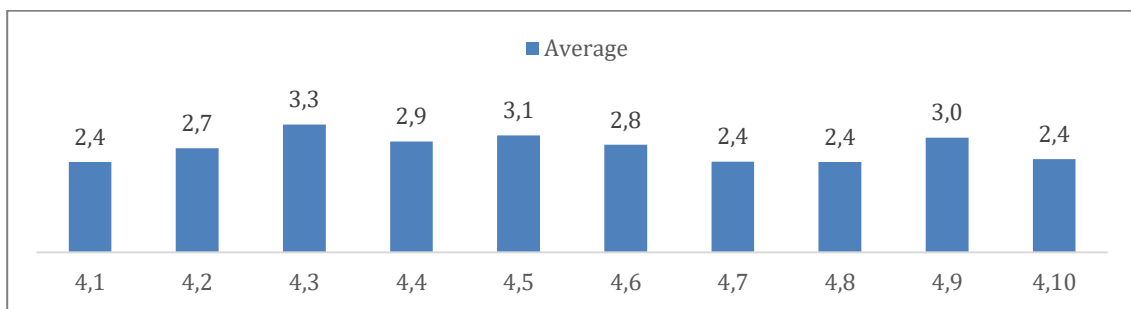


Source: Author’s elaboration (Microsoft Office Excel Output)

In order to take a more global approach on the analysis of the question 4, the average was made of the score of all of the expressions. In this sense, the ones with a higher average

were “4.3 - I pay a lot of attention to anything about my telecommunications company” with 3.3, “4.5 - I’m heavily into my telecommunications company’s products/services” with 3.1 and “4.9 - I enjoy my telecommunications company’s products/services more when I’m with others” with 3 (Figure 18). On the other hand, the expressions that received the lowest average were “4.1 - Anything related to my telecommunications company grabs my attention”, “4.7 - My days would not be the same without my company’s services”, “4.8 - I love using my telecommunications company’s products/services with my friends” and “4.10 - Using my telecommunications company’s products/services is more fun when other people around me use it too”, with 2.4.

**Figure 18 – Respondents’ CBE (Average)**

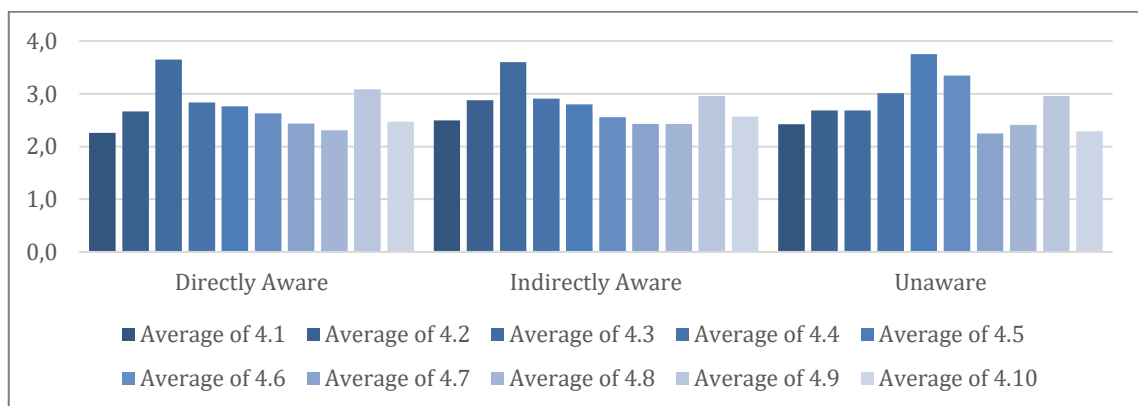


Source: Author’s elaboration (Microsoft Office Excel Output)

As the ambition of this investigation is to highlight the potential impact of price discrimination of brand engagement of telecommunications companies, the average of the rate given to the different expressions of question 4 were clustered depending on the awareness of the individuals of the practice in question. Therefore it can be noticed that the shape of the graphic that displays the answers of the participants that are aware of Price discrimination (whether because they stated they had been object of this practice by their telecommunications company or because they had knowledge of someone else that had) is quite similar (Figure 19). The difference is between these two types of respondents and the respondents that believe their telecommunications company does not practice price discrimination. While the expressions that gathered the best score for the participants aware of the practice was “4.3 - I pay a lot of attention to anything about my telecommunications company” (3.6 for both type of respondents) and “4.9 - I enjoy my telecommunications company’s products/services more when I’m with others” (3.1 for directly aware and 3.0 for indirectly aware), the participants that are not aware of the practice gave better scores the

expressions “4.5 - I’m heavily into my telecommunications company’s products/services” (3.8) and “4.6 - I’m passionate about my telecommunications company products/services” (3.3). On the lowest scores, the expressions that fill this place for the respondents aware of the practice are “4.1 - Anything related to my telecommunications company grabs my attention” (2.3 and 2.5 respectively), “4.8 - I love using my telecommunications company’s products/services with my friends” (2.3 and 2.4 respectively) and “4.7 - My days would not be the same without my company’s services” (2.4 for both). “4.7 - My days would not be the same without my company’s services” (2.2), “4.10 - Using my telecommunications company’s products/services is more fun when other people around me use it too” (2.3) and “4.8 - I love using my telecommunications company’s products/services with my friends” (2.4) are the expressions that gathered the lowest score for the respondents unaware of price discrimination.

**Figure 19 - Respondents’ CBE per awareness of price discrimination (Average)**



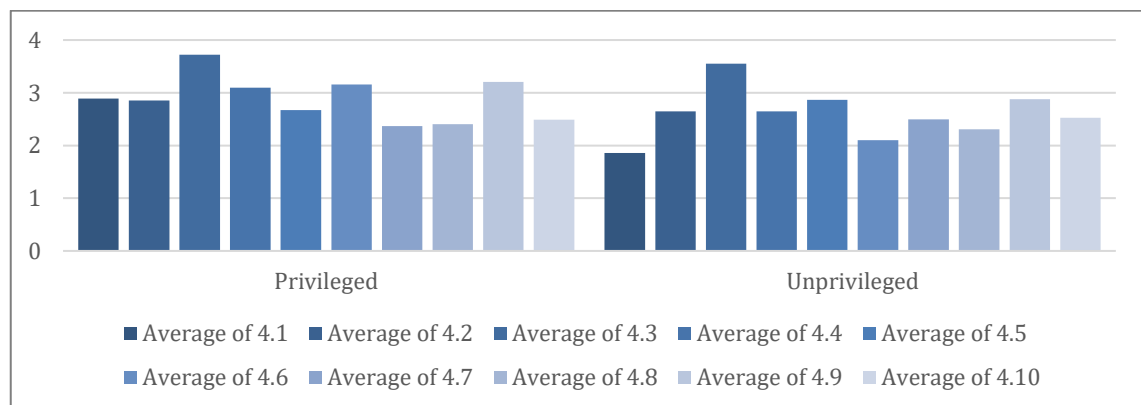
Source: Author’s elaboration (Microsoft Office Excel Output)

Afterwards, to the participants that were aware of price discrimination on their telecommunications company, the answers were bundled in terms of how they felt their situation was (privilege or unprivileged) in comparison to a second person that was a client of the same company.

All of the expressions showed a higher average for the people that titled themselves in a privileged situation of price discrimination, besides for the expressions “4.5 - I’m heavily into my telecommunications company’s products/services” (2.7 against 2.9), “4.7 - My days would not be the same without my company’s services” (2.4 against 2.5) and “4.10 - Using my telecommunications company’s products/services is more fun when other people around me use it too” (2.49 against 2.53) (Figure 20).

For both groups of participants, the expression that got the higher average was “4.3 - I pay a lot of attention to anything about my telecommunications company” (3.7 and 3.5 for the privileged and unprivileged group respectively) and the one that got the second highest was “4.9 - I enjoy my telecommunications company’s products/services more when I’m with others” (3.2 and 2.9 respectively). On the bottom, the expressions that received a lower score for the participants in a privileged situation were “4.7 - My days would not be the same without my company’s services” (2.4) and “4.8 - I love using my telecommunications company’s products/services with my friends” (2.4). For the ones in an unprivileged situation the lower scored expressions were “4.1 - Anything related to my telecommunications company grabs my attention” (1.9) and “4.6 - I’m passionate about my telecommunications company products/services” (2.1).

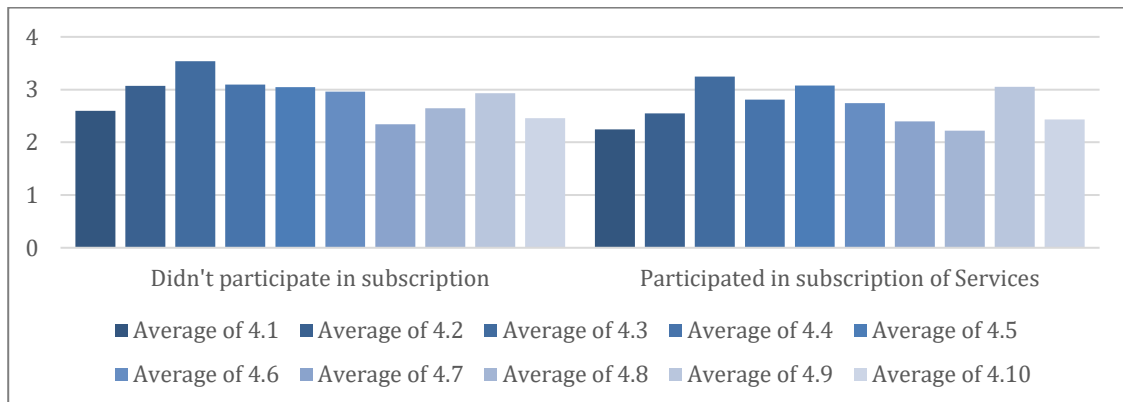
**Figure 20 - Respondents’ CBE per comparative relationship with third party (Average)**



Source: Author’s elaboration (Microsoft Office Excel Output)

After grouping the answers in terms of who participated in the acquisition of the service, in opposition to being just a consumer of it, the respondents that did not participate in the acquisition always gave, in average, a better score to all the question, except for “4.5 - I’m heavily into my telecommunications company’s products/services” (3.0 against 3.1), “4.7 - My days would not be the same without my company’s services” (2.3 against 2.4) and “4.9 - I enjoy my telecommunications company’s products/services more when I’m with others” (2.9 against 3.1) (Figure 21).

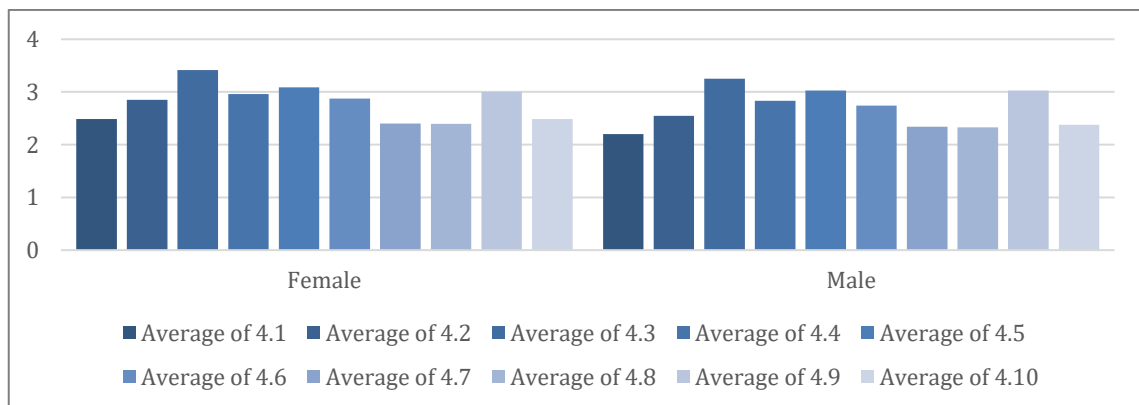
**Figure 21 - Respondents' CBE per participation in acquisition of telecommunication's services (Average)**



Source: Author's elaboration (Microsoft Office Excel Output)

When it comes to sex, for all the expressions the female participants gave more points than the male participants, except for “4.9 - I enjoy my telecommunications company’s products/services more when I’m with others” in which both groups showed an average of 3 (Figure 22). Even so, as it can be analyzed through the graphic, both groups’ graphic show the same shape.

**Figure 22 - Respondents' CBE per participant's sex (Average)**

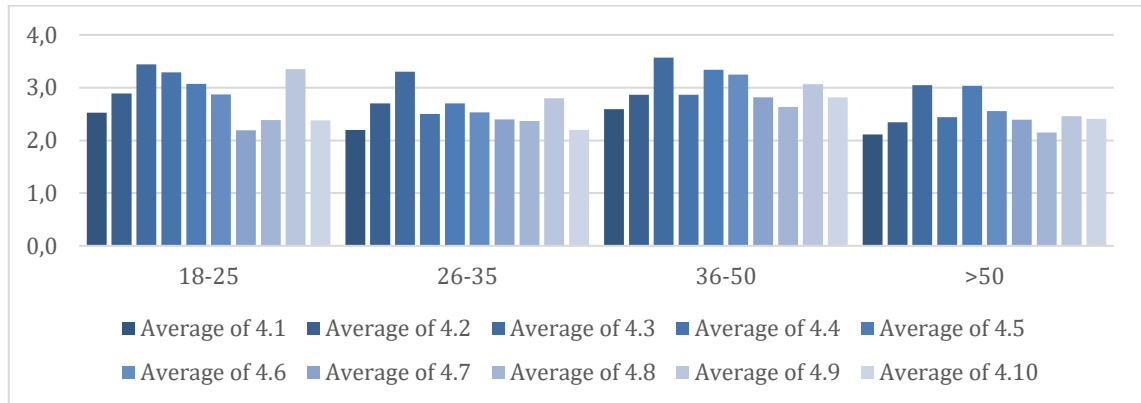


Source: Author's elaboration (Microsoft Office Excel Output)

In terms of age, the respondents between 36 and 50 years old gave in average the highest scores for all the expressions besides for “4.4 - I spend a lot of my time with my telecommunications company’s products/services” in which the group age that stood out was the participants between 18 and 25 years old (Figure 23). For all the groups, the expression that got a higher average was “4.3 - I pay a lot of attention to anything about my telecommunications company” (3.4, 3.3, 3.6, 3.5 in crescent order) and the expression with

the lowest average was “4.7 - My days would not be the same without my company’s services” for the younger group (2.2) and “4.1 - Anything related to my telecommunications company grabs my attention” for the rest of the respondents (2.4, 2.8 and 2.4 in crescent order).

**Figure 23 - Respondents’ CBE per respondents’ age (Average)**

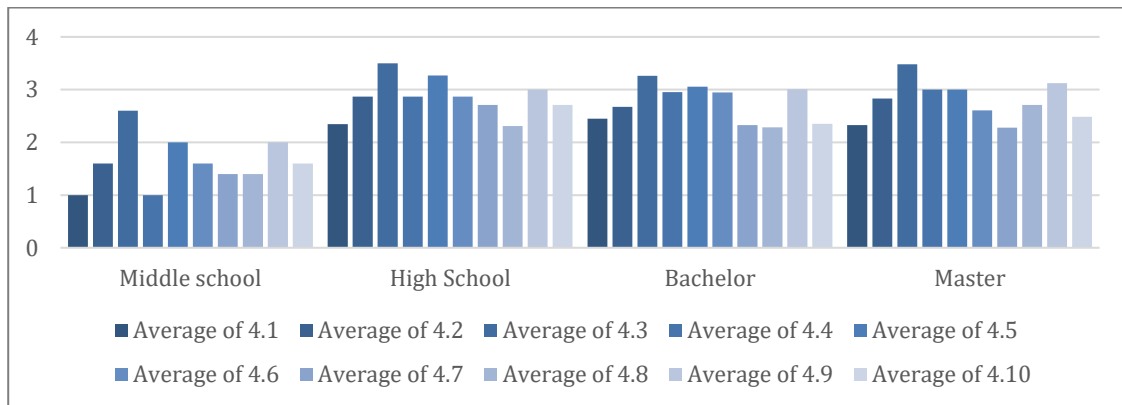


Source: Author’s elaboration (Microsoft Office Excel Output)

In relation to the educational level, it is clear that the answers of the respondents that just attended middle school were lower for all the expressions than the other groups of participants (Figure 24).

For all the groups, the expression best scored was again “4.3 - I pay a lot of attention to anything about my telecommunications company” (2.6, 3.5, 3.3 and 3.5 in crescent order) and the lowest scored was “4.1 - Anything related to my telecommunications company grabs my attention” and “4.4 - I spend a lot of my time with my telecommunications company’s products/services” for the middle school group (1 of average for both); 4.8 - I love using my telecommunications company’s products/services with my friends” for the high school and bachelor group (2.3 for both) and “4.7 - My days would not be the same without my company’s services” for participants with a Master degree (2.3).

**Figure 24 - Respondents' CBE per respondents' education level (Average)**



Source: Author's elaboration (Microsoft Office Excel Output)

## 4.2. Impact of Respondents' profile on CBE Analysis

In order to understand whether there were significant differences on customer brand engagement (CBE), depending on respondents' profiles, one-way analysis of variances or T-Tests were performed for each profiling question. Only the analysis where one could conclude there are significant customer brand engagement differences between different profiles are present below.

As it's possible to see in Table 3 and Table 4 significant differences exist.

On responses to "4.3 - I pay a lot of attention to anything about my telecommunications company" concerning to the respondents perception of the existence of price discrimination, respondents without perception of the existence of price discrimination displayed a lower mean of CBE on this conscious attention prong of the questionnaire then respondents who were aware of price discrimination practices, with no significant differences being found between respondents who were directly or indirectly aware of price discrimination.

Concerning answers to "4.5 - I'm heavily into my telecommunications company's products/services" and "4.6 - I'm passionate about my telecommunications company products/services" the reverse was found, where respondents with no perception of price discrimination presenting significantly higher levels of CBE than both those directly and indirectly aware of price discrimination who displayed on average lower levels of enthused participation on these questions. Once again no significant differences were found between the latter two groups. These results do prove H1 as there is a negative impact of CBE only

on 4.5 and 4.6 while a positive impact, dissonant to the hypotheses was also found for question 4.3.

**Table 3 - One-way Analysis of Variance (ANOVA) test for respondents' CBE in terms of respondents' price discrimination perception**

Profile	Perception of Price Discrimination	Mean	Standard Deviation	F	Sig	Levene Sig
4.3	No perception of price discrimination	2.68	1.129	13.442	0.000	0.070
	Perception through others	3.65	1.390			
	Perception through direct experience	3.60	1.356			
4.5	No perception of price discrimination	3.75	1.256	16.188	0.000	0.088
	Perception through others	2.76	1.206			
	Perception through direct experience	2.80	1.252			
4.6	No perception of price discrimination	3.34	1.387	7.116	0.001	0.553
	Perception through others	2.63	1.457			
	Perception through direct experience	2.55	1.370			

\* Welch's test for unequal variances

Source: Author's elaboration (IBM SPSS Statistics 24 Output)

**Table 4 - Multiple Comparisons test for respondents' CBE in terms of respondents' price discrimination perception**

	No perception	Perception through others	Perception through direct experience
4.3	No perception	-	0.000*
	Perception through others	-	0.970*
	Perception through direct experience	-	-
4.5	No perception of price discrimination	-	0.000*
	Perception through others	-	0.976*
	Perception through direct experience	-	-
4.6	No perception of price discrimination	-	0.003*
	Perception through others	-	0.938*
	Perception through direct experience	-	-

\* Tukey's Post-hoc test

Source: Author's elaboration (IBM SPSS Statistics 24 Output)



When analyzing the results for the CBE scale in regards to the position of the respondents facing a third party (Table 5) it's possible to conclude that H2 was confirmed for certain dimensions of CBE. With respondents who were in a privileged position facing a third party displaying significantly higher engagement when faced with questions “4.1 - Anything related to my telecommunications company grabs my attention”, “4.4 - I spend a lot of my time with my telecommunications company's products/services) and “4.6 - I'm passionate about my telecommunications company products/services”.

**Table 5 - T-test for respondents' CBE in terms of respondents' position facing a third party**

Profile	Position facing a third party	Mean	Standard Deviation	T	Sig	Levene Sig
4.1	Unprivileged	1.86	0.797	-5.596*	0.000*	0.000
	Privileged	2.89	1.491			
4.4	Unprivileged	2.65	1.303	-2.213	0.028	0.896
	Privileged	3.10	1.366			
4.6	Unprivileged	2.10	1.106	-5.177*	0.000*	0.000
	Privileged	3.16	1.527			

\*Tested without assumption of equal variance

Source: Author's elaboration (IBM SPSS Statistics 24 Output)

When analyzing CBE levels depending on respondents' participation on a price setting process it's possible to conclude that respondents who did not participate on a process of subscription with their current telecommunication's company display lower levels of conscious attention towards their company (“4.1 - Anything related to my telecommunications company grabs my attention” and “4.2 - I like to learn more about my telecommunications company”) as well as lower levels of enjoyment of their company's telecommunication services with others “4.8 - I love using my telecommunications company's products/services with my friends” (Table 6).

**Table 6 – T- test for respondents’ CBE in terms of respondents’ participation on the subscription of telecommunication services**

Profile	Participation on the subscription of telecommunication services	Mean	Standard Deviation	T	Sig	Levene Sig
4.1	Didn't participate	2.60	1.227	2.124	0.035	0.312
	Participated	2.25	1.206			
4.2	Didn't participate	3.07	1.044	3.632*	0.000*	0.009
	Participated	2.55	1.134			
4.4	Didn't participate	3.09	1.221	1.591*	0.113*	0.036
	Participated	2.81	1.361			

\*T tested without assumption of equal variance

Source: Author's elaboration (IBM SPSS Statistics 24 Output)

Regarding participants' perceived influence in the process of negotiation with their telecommunication's company, analysis in Table 7, H4 was verified for 4.6 and 4.3. With respondents who perceived to have extremely reduced levels of influence (1) displaying significantly lower means on question "4.3 - I pay a lot of attention to anything about my telecommunications company" than those who perceived to have high leverage in the negotiation process (4 and 5) and participants who perceived to have a level of 2 or 3 in negotiation influence also displaying significantly lower scores than those who claimed to have an extremely high level of influence (5) (Table 8).

Concerning displayed passion towards their telecommunication services (4.6), participants who felt to have a very low degree of influence (1) displayed significantly lower results than others who answered 2, 4 or 5 in the scale of influence in the price setting process, with respondents that perceived having high degrees of influence (4 and 5) also presenting significantly higher results than those who answered 3.

**Table 7 - ANOVA test for respondents' CBE in terms of respondents' influence in the price setting process**

Profile	Influence in the price setting process	Mean	Standard Deviation	F	Sig	Levene Sig
4.3	1 – No influence	2.26	1.136	10.360	0.000	0.285
	2	3.05	1.396			
	3	3.05	1.432			
	4	3.68	1.350			
	5 – High degree of influence	4.26	1.263			
4.6	1 – No influence	1.68	0.976	12.910*	0.000*	0.003
	2	3.00	1.483			
	3	2.37	1.217			
	4	3.39	1.394			
	5 – High degree of influence	3.44	1.601			

\* Welch's test for unequal variances

Source: Author's elaboration (IBM SPSS Statistics 24 Output)

**Table 8 - Multiple Comparisons test for respondents' CBE in terms of respondents' influence in the price setting process**

	1 - Very Negative	2	3	4	5 – Very Positive	
4.3	1 – No influence	-	0.200*	0.083*	0.000*	0.000*
	2	-	-	1.000*	0.369*	0.015*
	3	-	-	-	0.206*	0.003*
	4	-	-	-	-	0.388*
	5 – High degree of influence	-	-	-	-	-
4.6	1 – No influence	-	0.008**	0.069**	0.000**	0.000**
	2	-	-	0.467**	0.854**	0.856**
	3	-	-	-	0.007**	0.039**
	4	-	-	-	-	1.000**
	5 – High degree of influence	-	-	-	-	-

\* Tukey's Post-hoc test

\*\*Games Howell Post-hoc test

Source: Author's elaboration (IBM SPSS Statistics 24 Output)

When it comes to the impact of respondent's age on their CBE levels displayed for question "4.8 - I love using my telecommunications company's products/services with my friends" and "4.4 I spend a lot of my time with my telecommunications company's products/services" respondents who were between 18 and 25 years old displayed higher levels of CBE than those over 50 years old, with a significant difference also existing between those on the 18-25 years old level and those on the 26-35 level, with younger respondents showing higher results for time spent with their company's services (4.4) (Table 9 and Table 10).

Concerning the level of importance their company's services have on their day to day (4.7) respondents in the 36-50 group displayed significantly results than those younger on the 18-25 years old group. Respondents from the latter two groups valued more highly their company's services when enjoyed with others (4.9) than respondents who were over 50 years old.

**Table 9 - ANOVA test for respondents' CBE in terms of respondents' age**

Profile	Age	Mean	Standard Deviation	F	Sig	Levene Sig
4.2	18-25	2.88	1.131	3.441	0.017	0.807
	26-35	2.70	1.022			
	36-50	2.86	1.133			
	>50	2.34	1.109			
4.4	18-25	3.27	1.313	7.022	0.000	0.944
	26-35	2.50	1.225			
	36-50	2.86	1.268			
	>50	2.44	1.232			
4.7	18-25	2.17	1.021	3.349	0.020	0.140
	26-35	2.40	1.192			
	36-50	2.82	1.263			
	>50	2.39	1.115			
4.9	18-25	3.35	1.200	7.856	0.000	0.967
	26-35	2.80	1.157			
	36-50	3.07	1.246			
	>50	2.46	1.119			

\* Welch's test for unequal variances

**Table 10 - Multiple Comparisons test for respondents' CBE in terms of respondents' age**

	4.2	18-25	26-35	36-50	>50
4.2	18-25	-	0.809*	0.999*	0.014*
	26-35	-	-	0.916*	0.434*
	36-50	-	-	-	0.097*
	>50	-	-	-	-
4.4	18-25	-	0.015*	0.289*	0.000*
	26-35	-	-	0.575*	0.997*
	36-50	-	-	-	0.294*
	>50	-	-	-	-
4.7	18-25	-	0.795*	0.009*	0.660*
	26-35	-	-	0.390*	1.000*
	36-50	-	-	-	0.221*
	>50	-	-	-	-
4.9	18-25	-	0.109*	0.535*	0.000*
	26-35	-	-	0.773*	0.568*
	36-50	-	-	-	0.048*
	>50	-	-	-	-

\* Tukey's Post-hoc test

Source: Author's elaboration (IBM SPSS Statistics 24 Output)

In terms of education level, respondents who only achieved Middle School education displayed significantly lower levels of CBE than all others for question “4.4 - I spend a lot of my time with my telecommunications company’s products/services”, as well as lower levels of importance of their company’s services 4.7 in their daily life (4.7) in comparison with respondents with a High School level of education (Table 11 and Table 12).

**Table 11 - ANOVA test for respondents’ CBE in terms of respondents’ educational level**

Profile	Education Level	Mean	Standard Deviation	F	Sig	Levene Sig
4.4	Middle School	1	0.447	3.035	0.030	0.151
	High School	2.87	1.268			
	Bachelor	2.95	1.329			
	Master	3.00	1.311			
4.7	Middle School	1.40	0.548	5.929*	0.004*	0.013
	High School	2.71	1.289			
	Bachelor	2.33	1.003			
	Master	2.28	1.225			

\* Welch’s test for unequal variances

Source: Author’s elaboration (IBM SPSS Statistics 24 Output)

**Table 12 - Multiple Comparisons test for respondents’ CBE in terms of respondents’ educational level**

		Middle School	High School	Bachelor	Master
4.4	Middle School	-	0.034*	0.018*	0.017*
	High School	-	-	0.976*	0.949*
	Bachelor	-	-	-	0.996*
	Master	-	-	-	-
4.7	Middle School	-	0.008**	0.055**	0.067**
	High School	-	-	0.226**	0.274**
	Bachelor	-	-	-	0.992**
	Master	-	-	-	-

\* Tukey’s Post-hoc test

\*Games Howell Post-hoc test

Source: Author’s elaboration (IBM SPSS Statistics 24 Output)

## Chapter 5. Discussion of the Results

The objective of this chapter is to discuss the results displayed previously and relate them with the Literature Review.

The usage of price discrimination is becoming more and more prevalent, especially in service industries with the public's awareness of these practices growing stronger (Nguyen & Simkin, 2013; Fernandes & Calamote, 2016) as it was possible to conclude from the survey: 70% of the respondents were already aware that their telecommunications company implemented such processes. Customers' awareness of the usage of such practices may be prejudicial to the company's ultimate goals of implementing such practices, which are to increase profits through the acquisition of a larger part of consumers' surplus (Palmer & McMahon-Beattie, 2008) through differentiated offers. Such behavior affects customers' long-term view of the company (Fernandes & Calamote, 2016), with the specific impacts on the Customer Brand Engagement dimensions being the objective of the study, given its determination regarding customer loyalty (Bowden, 2009).

From the study it was possible to conclude that the awareness of price discrimination practices being used by their telecommunications company had mix effects on CBE, specifically customers aware of such practice demonstrated higher levels of attention payed to information that surfaced about their company (question 4.3), which indicates that being aware of the practices increases customers' conscious attention as they may feel that by being informed they will be able to influence their position due to the company's usage of such practices. However, although leading to a higher declared attention to news about the company, it leads to lower results on demonstrated passion and excitement towards the company (4.5 and 4.6). This combination of effects complements the findings of price discrimination leading to perceptions of unfairness (Wu, Liu, Chen, & Wang, 2012), where one can conclude that such unfairness perceptions are detrimental to the levels of enthused participation existent of a customer towards its company, while provoking a higher level of attention from customers towards the company, positively impacting customer's connection to companies in consequence of the pursuit of information on their offers with the objective of correctly taking advantage of the existent differentiated treatment as to determine their position. Such a conclusion had already been had (Palmer & McMahon-Beattie, 2008), however in such study this conclusion was limited to a small group of highly educated men which were also frequent purchasers with such characterization leading them to be more

acquainted with the inner workings of price discrimination practices. However, it was possible to conclude from this investigation that there is already, in the Portuguese telecommunications market, a large awareness of price discrimination practices, and, oppositely to what was found in other studies with different country and market context, showed no boundaries with no significant differences for different age groups or different levels of education being found (Figure 9 and Figure 10). This in turn lead to a generalized demonstration of higher customer attention levels to anything related about the company, given customers interest in being able to influence their future position. The end result depends on whether such learning dynamics lead consumers to be able to identify the best solution available to them (Lambrecht, et al., 2012), given that they already showed to be aware and attentive to learning opportunities.

When considering customers' position as a result of price discrimination practices, when in a disadvantaged position, which was defended to lead to perceptions of unfairness (Richards, Liaukonyte, & Streletskaya, 2016) and deterioration of a relationship companies aspire to build with customers (Weisstein, Monroe, & Kukar-Kinney, 2013), results from this investigation displayed no positive effect found in any dimension of CBE. Two dimensions of enthused participation were negatively affected, namely the amount of time affected with the enjoyment of the company's services (4.4) as well as declared passion towards the company (4.6). Disadvantaged customers were also less in concordance with paying attention to anything about their company (4.1), which allowed to conclude that although the factor of being conscious of price discrimination practices fuels customers interest in the company, oppositely being put in a disadvantaged position leads to a pronounced detachment with customers apparently losing interest in engaging with the company (in order to develop a closer relationship and influence their future position). This is in concordance with findings that customers in such a position are more sensitive to price inequity and prefer companies which employ no such practices (Richards, Liaukonyte, & Streletskaya, 2016).

Participation in a price setting process, which was a question introduced in order to identify which respondents were eligible to answer on their level of perceived influence during the transaction, proved to be a factor, not previously found on literature review, which was determinant towards customers willingness to learn more about their company (4.2), amount of time allocated to using the company's services (4.4) as well attentive of every news about the company (4.1). Customers who were in involved in a price setting process displayed lower levels of each of the mentioned dimensions, which displays the impact of

coming into direct contact with a price setting process, where customers more easily become aware of being price discriminated as it's possible to conclude from Figure 14. Being directly involved in the subscription process where one becomes aware of being price discriminated shows to have a more nefarious effect than simply being aware of being price discriminated by their telecommunications company with no added interest in learning on how to improve their position in the future.

However when involved in such a transaction, customers' perceived level of influence in determining their position was determinant in atoning for the negative impact of a lack of equity in the company's practices (Wu, Liu, Chen, & Wang, 2012) with once again the impacted dimensions being attention towards news about the company (4.3) and passion demonstrated towards the brand (4.6). Regarding the more emotional dimension customers who perceived to have an extremely low level of influence during the negotiation process displayed significantly lower levels of concordance with being passionate about the company when compared with other respondents. When considering attention given to news about the company it was found that not only did respondents who perceived to have high degrees of influence (answered 4 or 5) display higher levels of attention than customers in the opposite end of perceived perception, but also, customers who considered to have the maximum level of influence in the process displayed significantly higher levels of attention than all but respondents who also perceived to display high levels of influence (4). From these findings it's possible to complement what had been found so far regarding the impact of customers perceiving to have influence when price discriminated (Richards, Liaukonyte, & Streletskaya, 2016; Palmer & McMahon-Beattie, 2008; Wu, Liu, Chen, & Wang, 2012) with the information that it leads to two separate positive impact, on the one hand it lessens the negative emotional impact on perception of companies using price discrimination, and on the other hand it leads to higher engagement levels on a more calculating agenda of customers gathering information on the company's practices to better position themselves.

Regarding the impact of the social categorization, there was no evidence found of the impact of the tested variables being more or less prevalent in specific groups, with differences being found between respondents from ages 18-25 and those over 50 years old. Younger respondents exhibited different CBE levels than those over 50 years old, specifically, being more in concordance with appreciating to learn more about the company (4.2) along with spending more of their discretionary time with the company's services (4.4) and further enjoying the company's services when in the company of others (4.9).



## Chapter 6. Final Remarks

### 6.1. Conclusions

From the results of the analysis it was possible to assess the considerable awareness over practices of price discrimination in the Portuguese telecommunications market, with information technologies aiding both the extent and finesse of price discrimination processes (Lambrecht, et al., 2012) as well as the passage of information between customers regarding such practices, with word of mouth being an important factor in service industries (Nguyen & Simkin, 2013; Fernandes & Calamote, 2016). It's also possible to conclude that given the high extent of awareness over such practice, the atoning effect of dissimilarity of events seems to not be in play in the studied market with its found impact in reducing customer's perception of inequity (Weisstein, Monroe, & Kukar-Kinney, 2013). From the more complete and versatile construct of CBE (Bowden, 2009) it was possible to find that there are specific conflicting effects of perception of price discrimination as well as customer's influence in the price setting process. Customers aware of price discrimination practices and customers who considered to have a high degree of influence during the subscription of their services displayed higher levels of cognitive engagement, being more interested in learning about their telecommunications company than other respondents. However such awareness of price discrimination also lead these customers to display lower levels on the enthused participation objects of the CBE scale, with higher levels of perceived influence merely atoning for the negative effects on emotional responses to the brand. The results hint at the development of a calculistic relationship formed between brands and its customers, with higher levels of engagement being explained by customers' rational desire to take advantage of price discrimination practices as a way of bettering their deal while displaying lower levels of emotional attachment to the company. With such an inconsistent relationship being developed the side that tips the scale defines the future impact of such practices.

Regardless of this apparent balance on a knife's edge, the awareness of price discrimination through being present in a negotiation process as well as being put in a disadvantageous position resulted in nefarious effects regarding both cognitive and emotional aspects of CBE. This shows that the previously mentioned mixed effects may never be realized when customers are shocked by the inequality in treatment that defines

price discrimination (Weisstein, Monroe, & Kukar-Kinney, 2013) and that may be in conflict with customers' social norms, with such a discordance surpassing all possible atoning effects being introduced in search of a perfection of price discrimination processes (Wu, Liu, Chen, & Wang, 2012) and ultimately leading to a public response (Maxwell & Garbarino, 2010).

## **6.2. Contributions**

With this research, light was shed on the awareness and perceptions of price discrimination in the Portuguese telecommunications' market. Supported by literature a study was conducted which put to test the impacts of price discrimination previously found on other countries and industries context and sought to explain in higher detail the impacts that practices of price discrimination have in the relationship developed between customers and brands.

Through the use of CBE it was possible to assess the already previously studied impacts of price discrimination on a more holistic construct. This ultimately resulted in the furthering of knowledge around the impacts of price discrimination by providing a more detailed assessment of which dimensions of a cognitive, emotional and behavioral engagement are impacted by the use of price discrimination as well as how certain identified factors affect the relationship developed between brands and customers. The results were the presentation of the formation of an analytical relationship developed between brands employing these practices and customers aware with positive results on cognitive engagement and the deteriorating effects on an emotional aspect of CBE.

## **6.3. Theoretical and managerial implications**

Findings from this research put into question the understanding of price discrimination practices being limited to higher educated customers or if given the development of information technologies awareness of the practice is easily widespread with customers being able to easily learn how to act in this context. Considering these learning dynamics, price discrimination practices may turn out to be detrimental to the company's profit objectives in the long term, where customers are able to identify pricing structures and

act in such a way where the company believes their reserve prices to be lower than what they truly are. If a significant part of the market is able to understand these practices, the value in the industry may end dropping, so companies should seek to develop their practices in such a way where exposure to these practices do not lead the market as a whole to know how to take advantage, but instead to complexify them in a way where only consumers with a lower valuation of time will be willing to invest their time in learning how to assure better deals.

Additionally, the dissonance of effects existent on cognitive and emotional dimensions of CBE may mean that customers are either more or less likely to be loyal to the company, depending on whether the negative emotional impact of price discrimination overcomes its impact of additional attention given to news about the brand. In order to understand the specific impacts of this clash companies should investigate on the behavior and spending of customers who present such awareness of their practices.

#### **6.4. Limitations and Future Research**

The results found are true to the specific context of the Portuguese telecommunications market, with no possibilities to generalize such results to other countries or markets, given that CBE may be industry and country specific (Hollebeek, 2011). Additionally, the results found in this research are drawn from a limited sample size that represents a very small portion of the Portuguese population.

Conclusions are built on significant differences being found for the ten different questions composing the CBE scale, however, when significant results were found, they were not found in all of the determinants of a CBE dimension, for example, when a negative impact of price discrimination awareness was found on attention paid to anything related to the telecommunications company (4.3) there were no significant differences found for other levels of conscious attention (4.1 and 4.2).

In order to further advance on the impacts of price discrimination, the impact of learning dynamics should be pursued in an economic analysis as to assess whether such market awareness corrodes a portion of the additional profit enabled by these practices or even if it leads to the destruction of value in the market due to companies' poor ability to identify a customers' real reservation price.

Considering the impact of price discrimination, the study of atoning measures should be enhanced given the lack of literature approaching such measures in methodological way for companies to better take advantage of price discrimination without the negative aspects attached to it. This could be conducted specifically through investigating the creation of a dissimilarity of events with customers who are discriminated in different orientations as well as the development of the more adequate tools for correct identification of customer segments, where learning dynamics may not lead to customers taking advantage of such markets and behaving in a manner where they are identified as customers with lower reserve prices. Still on price discrimination impact, the dissonant results on CBE found on this study, exposing an apparently rationally based engagement could be pursued in order to understand its specific impact on the outcomes of CBE such as customer loyalty and future patronage intent.

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## Annexes

### Annexes 1- Survey

The objective of this research is to understand the impact of price discrimination in the relation between the consumer and Portuguese Telecommunication companies, as part of the an investigation done in the scope of a Dissertation for the Master in Management of the School of Economics and Management of the University of Porto. The questionnaire takes approximately 5 minutes long and is anonymous. Please answer it with maximum honesty.

*\*Mandatory*

#### **1 – Do you have any type of telecommunications services (even if you are not the person paying it)? \***

*For exemple: mobile service, pay tv, internet or fixed phone .*

- Yes  
 No

*If you answered “No”, the questionnaire is over. If you answered “Yes” please continue the questionnaire.*

#### **Perception of Price Discrimination**

Price discrimination is the practice of offering different prices to different consumers, for the same product or service. In a situation of price discrimination, the consumer can be either in a privileged situation in comparison to other consumers as in a unprivileged situation.

#### **2 – Do you believe the company that offers you telecommunications services institutes practices of price discrimination to its clients? \***

*Chose only one option.*

- Yes, it happened to me  
 Yes, I know it happened to someone else  
 No

*If you answered “No”, please move to question number 3. If you answered “Yes, it happened to me” please continue the questionnaire. If you answered “Yes, I know it happened to someone else” please move to the section “Last Experience of Price Discrimination (b)”.*

**Last Experience of Price Discrimination (a)**

Please answer the following questions taking into account the last situation of price discrimination you experienced.

**2.1 a – How was your situation in comparison to the offer of someone else? \***

- Privileged
- Unprivileged

**2.2 a – What was the type of relation you had with that person? \***

With 1 being a negative relation and 5 a positive relation.

Negative Relation 

1	2	3	4	5

 Positive Relation

*Please move to question number 3.*

**Last Experience of Price Discrimination (b)**

Please answer the following questions taking into account the last situation of price discrimination you acknowledged.

**2.1 b – How was your situation in comparison to that other person? \***

- Privileged
- Unprivileged

**2.2 b – What was the type of relation you had with that person? \***

With 1 being a negative relation and 5 a positive relation.

Negative Relation 

1	2	3	4	5

 Positive Relation

**3 – Have you been involved in a process of purchase/ subscription of services with your current Telecommunications company? \***

- Yes
- No

*If you answered “No”, please move to the section “Telecommunications Companies”. If you answered “Yes” please continue the questionnaire.*

Please answer the following question taking into account the last purchasing/ subscription process.

**3.1 – What was the level of influence you believe you had in the definition of the price during the negotiation?\***

With 1 being no influence and 5 a lot of influence.

No influence 

1	2	3	4	5

 A lot of influence

**Telecommunications Companies**

In this section it is questioned your opinion about your current Telecommunications company.

**4 – Rate the level of agreement with the following expressions in terms of your relation with your current Telecommunications company.\***

With 1 being completely disagree and 5 completely agree.

	Completely Disagree	1	2	3	4	5	Completely Agree
4.1 - Anything related to my telecommunications company grabs my attention							
4.2 - I like to learn more about my telecommunications company							
4.3 - I pay a lot of attention to anything about my telecommunications company							
4.4 - I spend a lot of my time with my telecommunications company's products/services							
4.5 - I'm heavily into my telecommunications company's products/services							
4.6- I'm passionate about my telecommunications company products/services							
4.7 - My days would not be the same without my company's services							
4.8 - I love using my telecommunications company's products/services with my friends							

4.9 - I enjoy my telecommunications company's products/services more when I'm with others

4.10 - Using my telecommunications company's products/services is more fun when other people around me use it too.


**Profile**

**5 - Sex \***

- Female
- Male

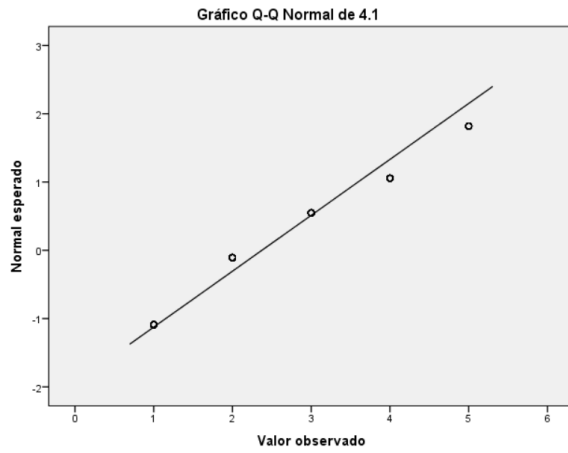
**6 - Age \***

- Under 18 years
- 18 - 25 years
- 26 -35 years
- 36 - 50 years
- Over 50 years

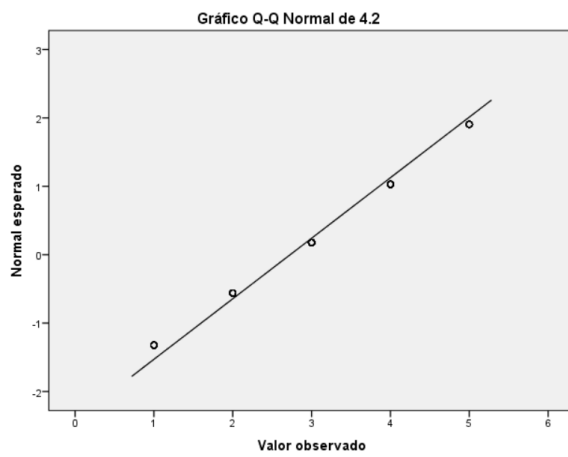
**7 – Level of education \***

- Middle school
- High School
- Bachelor
- Master
- PHD

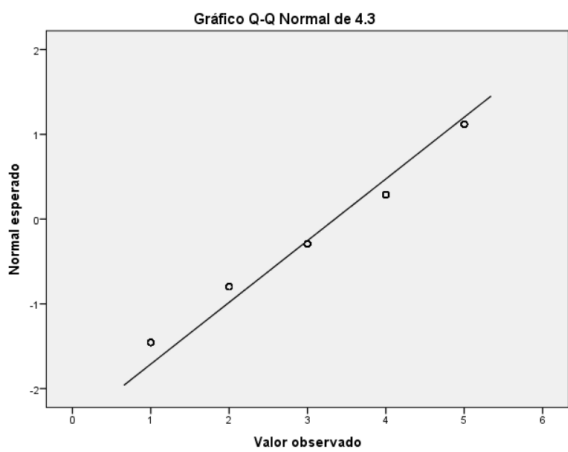
### Annexes 2 – Question 4.1's Sample Distribution



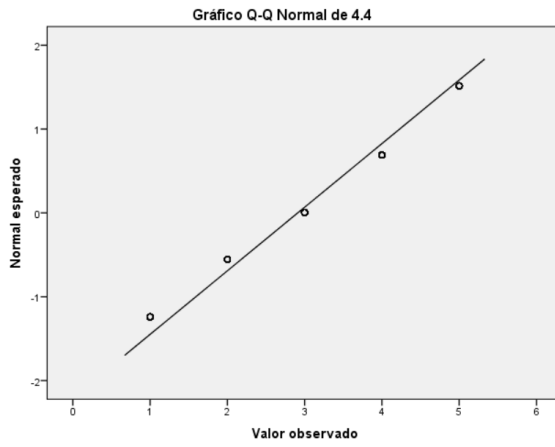
### Annexes 3 – Question 4.2's Sample Distribution



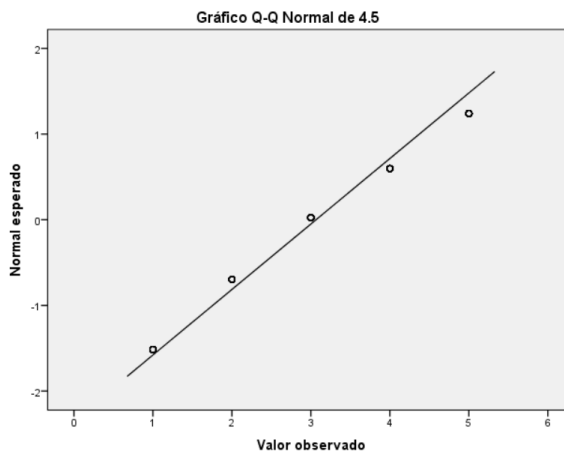
### Annexes 4 – Question 4.3's Sample Distribution



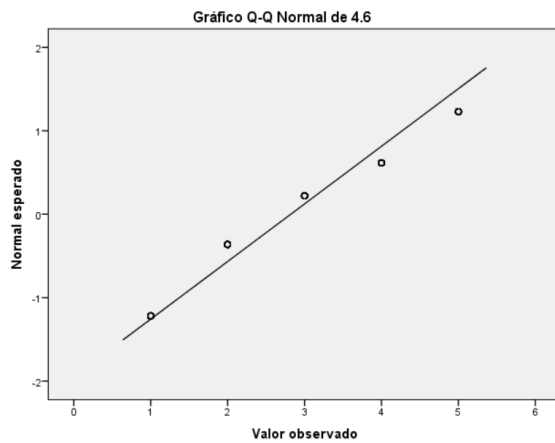
### Annexes 5 – Question 4.4's Sample Distribution



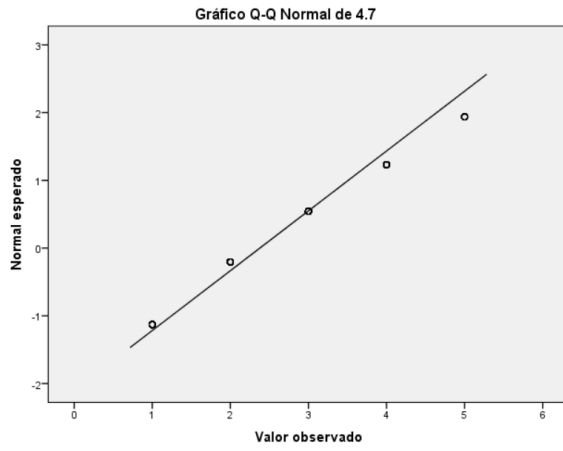
### Annexes 6 – Question 4.5's Sample Distribution



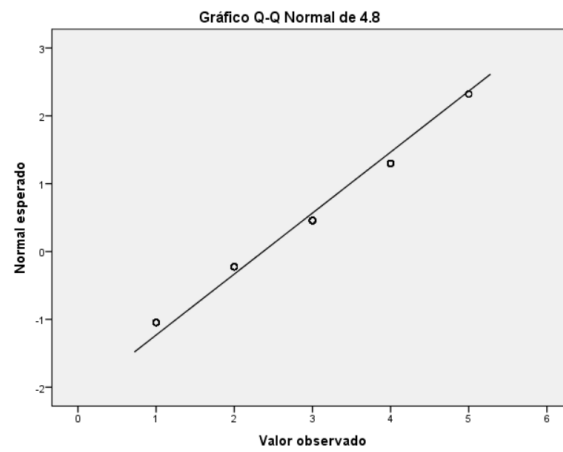
### Annexes 7 – Question 4.6's Sample Distribution



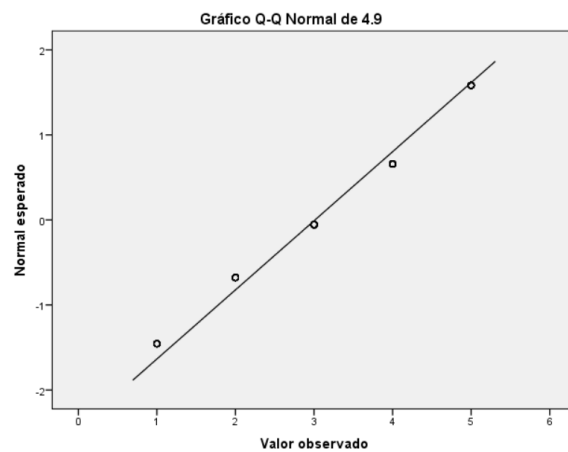
### Annexes 8 – Question 4.7's Sample Distribution



### Annexes 9 – Question 4.8's Sample Distribution



### Annexes 10 – Question 4.9's Sample Distribution





## Annexes 11 – Question 4.10's Sample Distribution

