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Filipe**

**ANTECEDENTS OF BRAND EQUITY: THE CASE OF  
CONTINENTE, EDP AND VODAFONE**

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Dissertação apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Gestão, realizada sob a orientação científica da Doutora Sandra Maria Correia Loureiro, Professora Auxiliar do Departamento de Economia, Gestão e Engenharia Industrial da Universidade de Aveiro

Aos meus pais, os maiores mestres que tenho.

Ao meu primo (*in memoriam*) pelo exemplo que foi para mim.

## **o júri**

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**palavras-chave**

*Rebranding, brand personality, brand loyalty, brand trust, brand awareness, brand association, brand equity.*

**resumo**

A presente dissertação pretende estudar os antecedentes do *brand equity* de três marcas corporativas. Deste modo, baseado na revisão da literatura, foi proposto um modelo. Para validar o mesmo, um questionário foi lançado. Os dados de uma amostra de consumidores de três regiões de Portugal foram recolhidos e analisados. Da validação dos resultados, conclui-se que o *brand equity*, é positivamente influenciado pelo *brand personality*, *brand trust* e *brand loyalty*. Não foi possível identificar uma relação entre *brand awareness* e *brand equity*. Por fim, verificou-se que o *brand association* tem um efeito negativo sobre o *brand equity*.

**keywords**

Rebranding, brand personality, brand loyalty, brand trust, brand awareness, brand association, brand equity.

**abstract**

The present dissertation aims to study the antecedents of brand equity of three corporate brands after rebranding. Therefore, based on the literature review a model was proposed. In order to test the model, a survey was carried out. A sample of consumers from three regions in Portugal was collected and the data was treated. The results show that brand equity is positively influenced by brand personality, brand loyalty and brand trust. On the other hand, it was impossible to establish a relationship between brand awareness and brand equity. Finally, it was observed that brand association has a negative influence on brand equity.

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## Introduction

The original meaning of the word brand derives from the American Wild West, during a time where no fences separated the cattle from one ranch to another. This meant that the farmers would burn their symbol or brand into the skin of the cattle in order to differentiate and determine the owner (Pickton and Broderick, 2005 in Olsson *et al.*, 2008, p.16). However, the mass use of the term came after the Industrial Revolution. Many current consumer brands date from this period: Singer sewing machines, Coca-Cola soft drinks, Kodak photographic rolls, among others (Blackett, 2005). Nowadays, the term brand is still used to differentiate objects, thus, theorists define a brand as something that distinguishes and creates preference in the minds of consumers (Olsson *et al.*, 2008, p.17)

Encouraged by increasingly competitive markets, brands must take into account the needs of consumers. In this light, it is crucial to define the best strategy in order to differentiate a brand from its competitors. Managers should not forget that a brand is a main source of capital for the company and should therefore, treat it carefully.

When discussing brands, it is impossible not to take into account brand equity. However, there is still heterogeneity regarding the definition of this concept. As many academics conclude, the aim of rebranding is, in fact, to enhance brand equity (Aaker, 1991; Boyle, 2002; Muzellec and Lambkin, 2006).

The purpose of this study is to understand the antecedents of brand equity so that, the key to successful rebranding is identified. In other words the main objectives are:

- ✓ To contribute to clarify the relation of causal order between the variables of brand personality, brand loyalty, brand trust, brand awareness and brand association with brand equity;
- ✓ To know what is the importance of the variables' strength in the brand equity.

To accomplish these objectives and test the proposed conceptual model, 3 corporate brands were selected – Continente, EDP and Vodafone. In spite of having different business sectors, they also have things in common. They are the best positioned in the national market (according to their business sector) and all have a red logo.

In order to validate the research, an online questionnaire was created for each one of the brands (Continente, EDP and Vodafone) with the aim of measuring each construct. The consumers were from three geographic areas Aveiro, Coimbra and Oporto. Each respondent was invited to answer to all the questions measured by a Likert scale from 1 (completely disagree) to 5 (completely agree). These questionnaires intend to measure the variables under study.

This investigation is divided into five chapters apart from the introduction and the conclusion.

The first chapter focuses on the definition of brand, with the main conceptual models.

The second chapter is about the process of rebranding, which shows the importance of brand equity to this process as well as the variables that can be associated with brand equity.

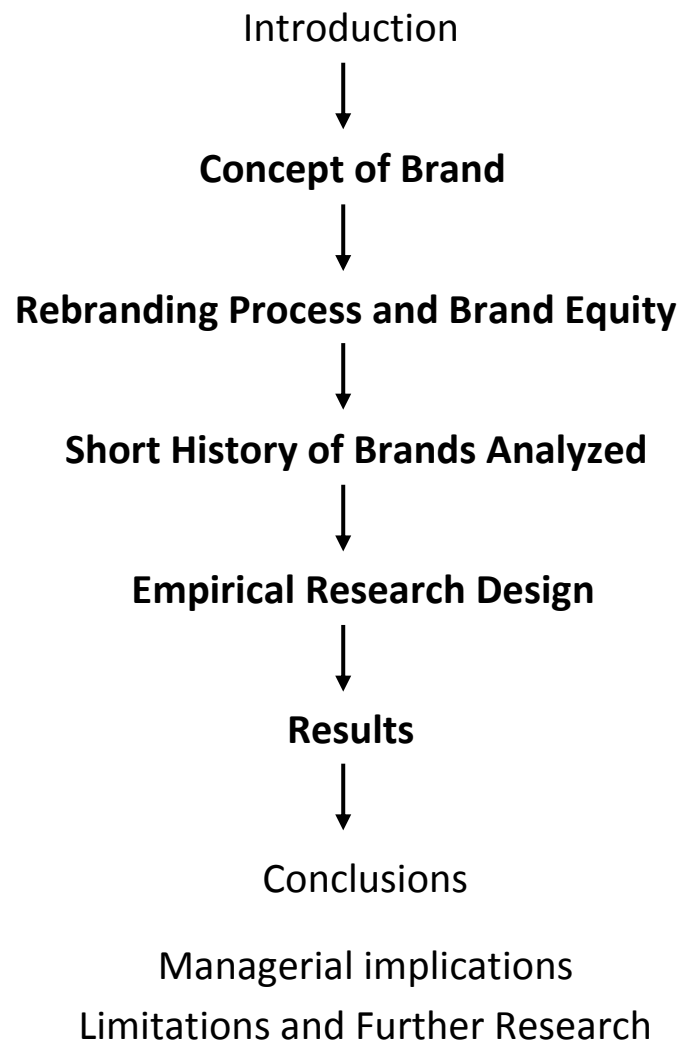
The third chapter is a short presentation of the brands under study, giving further attention to the importance of color in the context of marketing.

The fourth chapter refers to the empirical design, containing the description of the field research, the objectives, the conceptual model, the definition of hypotheses, the methodology used to carry out the research and the characterization of the sample.

Finally, the fifth chapter refers to the results. The results presented constitute of descriptive statistics, factor analysis and linear regressions of data collected from the survey.

The study ends with the appropriate conclusions, as well as the limitations encountered during the study's execution, with proposals for possible future research.

FIGURE 1. THESIS STRUCTURE



Source: By the author

# 1. Concept of Brand and models to build and manage brand

The following chapter focuses on the concept of brand throughout is various definitions. It seeks to present the most important definitions given by the most renowned researchers in this area. The second part shows the main conceptual models concerning brands, with a brief explanation of them.

## 1.1 Concept of brand

“A brand that captures your mind gains behavior. A brand that captures your heart gains commitment”(markarnold, n.d.). This is a philosophy that makes the difference in the context of marketing.

The brand has been present in the human life since the first human civilizations. Ancient civilizations used hot irons for the purpose to identifying animals. Nowadays, even a person can be a brand. Some authors dedicate their studies to understanding the brand and all that it involves. The main authors, which are, Keller (1993), Aaker (1997), Chernatony (2001) and Kapferer (2003) are the basis of all definitions that are given to this term.

This concept has gained importance over the years since marketers have realized that consumer perceptions are determinant to the success of the brand and primordial to build a long-term business relationship. Therefore, it is a top priority for many companies, all over the world, to build strong brand perceptions (Low *et al.*, 2000). However, first of all, it is crucial to define the brand.

According to Leslie de Chernatony (1998, p. 417) “a comprehensive theory of the brand construct is still missing”. As a result of the literature analysis, it was concluded that, a brand is a promise of satisfaction and is what the consumer thinks it is (Healey 2008). Under Kapferer (1992, p.11), “a brand is not a product. It is the product's essence, its meaning, and its direction, and it defines its identity in time and space”. In accordance with the American Marketing Association (AMA, 1960), “a brand is a name, term, symbol, sign, design, or some combination thereof that identifies the products of one firm while differentiating them from competitors’ offerings”. The impact of a brand is so high that it is possible to say that “a brand is the source of a promise to the consumer. It promises relevant differentiated benefits. Everything an organization does should be focused on enhancing delivery of its brand’s promise” (*Understanding the language of branding*, n.d.)



Aaker (1996) presents the stages of brand construction: strategic analysis of the brand, brand identity and finally, the brand implementation. To complement and enhance this vision, Kapferer (1992) goes beyond and presents four aspects to reflect on when building the brand identity: the essence, the identity, the positioning and the brand personality. Giving "soul" to the brand, brand identity presents six facets: physical, personality, relationships, culture, reflection and self-image. In turn, De Chernatory (1990) presents a set of variables that determine the success of a brand, "the company, distributors, competitors, consumers, the marketing environment and investors" (Pimentel, 2007, p.29).

In view of the fact that a brand is a promise of value for those who acquire it, while making the difference upon a consumer's choice of a product, the mention of brand image could not fail. Keller (1993) defines this concept as a set of perceptions and mental associations linked to a product (good or service).

Throughout the years, the brand has been gaining magnitude. The organizations see the brand as something that needs to be the center of all the work they do in order to draw consumers' attention. Thus, they reach their target, which is the loyalty of customers. As Aaker (1991) says, branding has been characterized as the process of creating value through the provision of a compelling and consistent offer and customer experience that will satisfy customers and keep them coming back. As customers develop trust in the brand through satisfaction in use and experience, companies have the opportunity to start building relationships with them, strengthening the brand further and making it more difficult for competitors to imitate (Blackett, 2005).

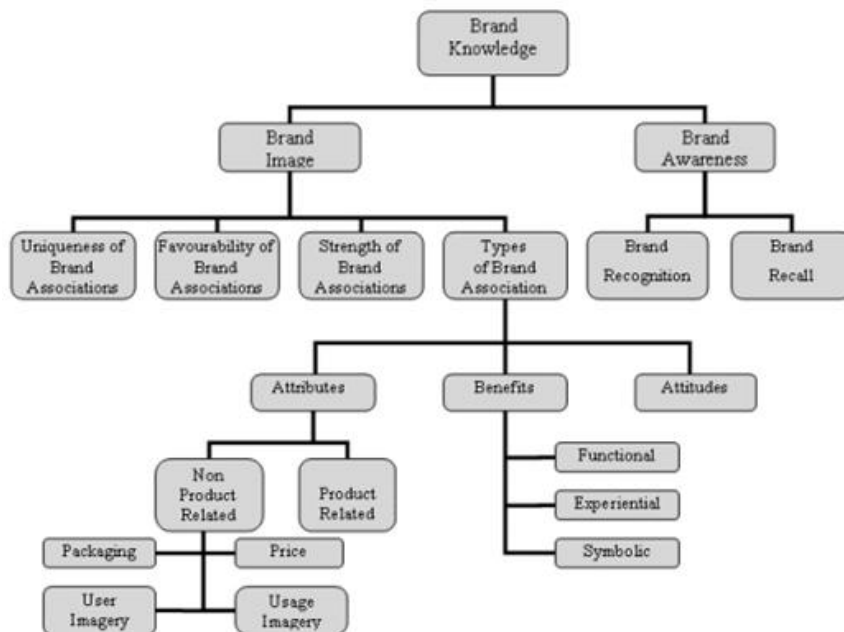
In the following section, the main models regarding brand management found in literature are presented.

## 1.2 Brand Knowledge by Keller (1993)

According to Keller, brand equity or in other words, the brand patrimony, is measured when comparing one brand to another brand with less reputation. The higher the difference between them, the greater will be the value associated with the strongest brand. From the consumer point of view, the brand has two main aspects that should be taken into account: the brand awareness and the brand image. Concerning brand awareness, the consumer can recognize a brand (spontaneously) or remember it, through a certain stimulus of brand in question. The first scenario is the desired image of the organization (Keller, 1993).

In regards to the brand image, Keller introduced some aspects that organizations should accomplish in order to reach the first scenario.

FIGURE 2. DIMENSIONS OF BRAND KNOWLEDGE



Source: Keller (1993)

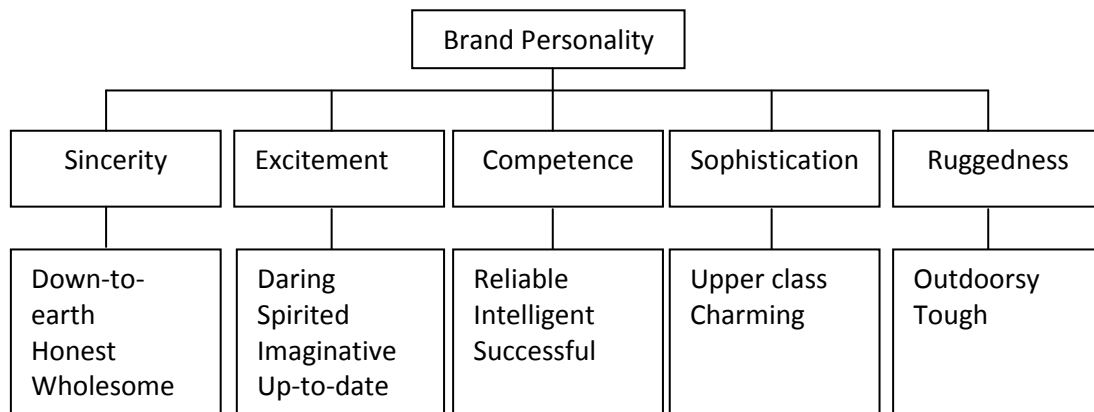
## 1.3 Dimensions of Brand Personality

This model shows the five dimensions that, in American context, stand out (see Figure 3):

- ✓ Sincerity: in branding creation there are some characteristics that can be associated to the human being.
- ✓ Excitement: this means that the brand is expressive and dynamic.

- ✓ Competence: this term classifies a brand that is successful, leading and reliable.
- ✓ Sophistication: a charming and beautiful brand.
- ✓ Ruggedness: this concept creates an image of “western” in the mind of the consumer– it is idea that the brand is able to face any obstacle.

**FIGURE 3. DIMENSIONS OF BRAND PERSONALITY**



Source: Aaker (1997)

## 1.4 A Model for Strategically Building Brands

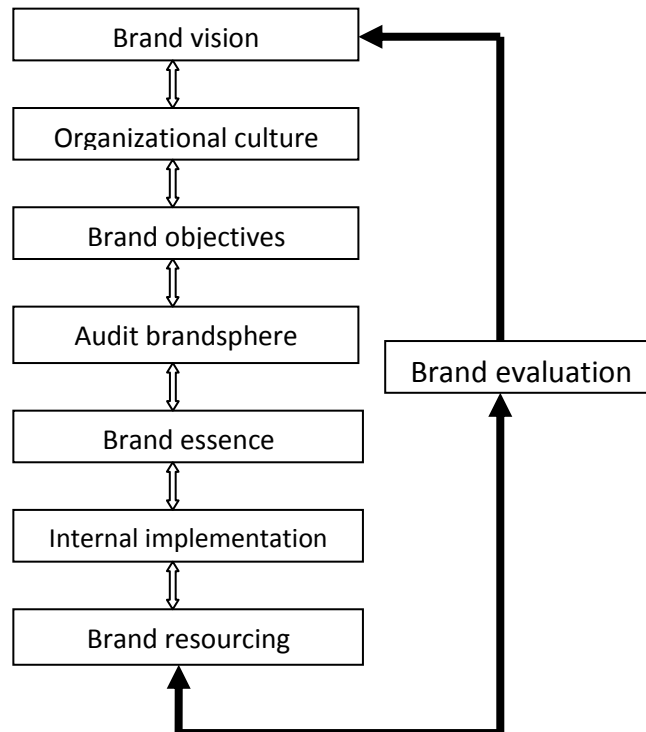
This model is different from the others because it highlights the stakeholders. De Chernatony (2001) presents a cyclical analysis model. There is a constant necessity of restructuring the brand. Although the model follows a sequential process, it is dynamic as it considers adjustments along the way.

As can be seen in Figure 4, the model begins with a brand vision created by the management and redefined over time (De Chernatony, 2001). The next stage relates to the organizational culture. An appropriate organizational culture can provide a competitive advantage to the brand. It is not what customers receive, but the way they receive (De Chernatony, 2001). The brand’s objectives, measurable in period of time, are originated by the sight, giving meaning to the brand (De Chernatony, 2001).

Following this, is the audit brandsphere. This can be done through five forces (organization, stakeholders, consumers, competitive set, macro environment). As De Chernatony (2001) states, it can help to improve the brand. The essence of the brand, or, in other words, its promise, can be analyzed through the brand pyramid (De Chernatony, 2001). This verifies the consistency of the brand’s essence with its vision and culture. The brand pyramid has three basic points: personality traits, attributes and benefits.

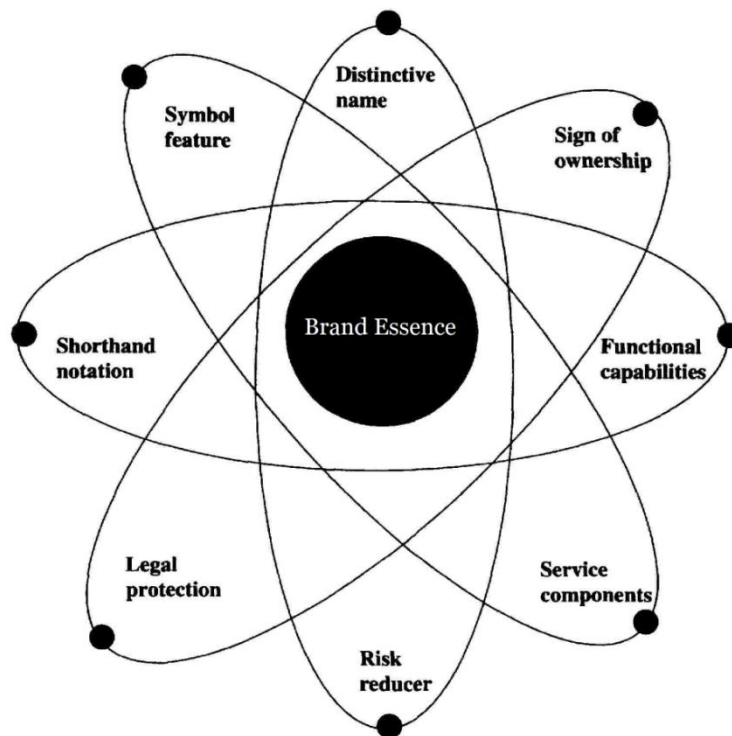
The internal implementation, through employees with a certain profile, norms and values that fit the characteristics of the brand, allows the understanding and incorporation of standards and brand values (De Chernatony, 2001). Regarding the resources of the brand, De Chernatony (2001) proposes an atomic model in order to visually describe the components that construct the essence of a brand. This model provides eight components that can characterize the essence of the brand: distinctive name, symbol feature, shorthand notation, legal protection, risk reducer, service components, functional capabilities and sign of ownership (see figure 5) (De Chernatony, 2001).

**FIGURE 4. A MODEL FOR STRATEGICALLY BUILDING BRANDS**



Source: De Chernatony (2001)

**FIGURE 5. ATOMIC MODEL OF THE BRAND**

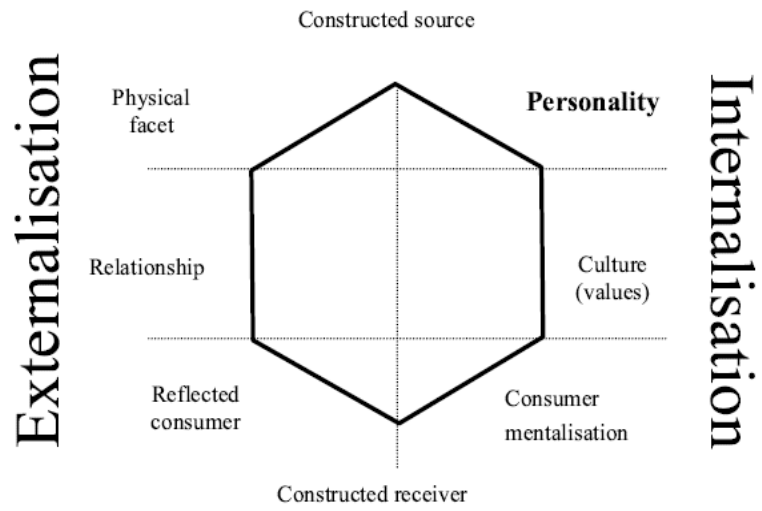


Source: De Chernatony (2001)

## **1.5 Brand Prism**

The main novelty of this approach is consistency. According to Kapferer (2003), everything has to be in consonance with the brand vision. The organization (the constructed source) will contribute to the brand identity. That message must be internalized by the consumer. In turn, when the consumer (constructed receiver) receives the brand message, they should feel as if they were seeing themselves in the mirror. This then reflects the externalization of the brand identity. The consumer, as a human being, takes shape in the brand.

**FIGURE 6. BRAND PRISM**



Source: Kapferer (2003)

## 2. Rebranding process and brand equity

In this section the concept and process of rebranding are clarified as well as, the presentation of some constructs that allow the rebranding process. Furthermore, the chapter also reveals some recommendations on the correct implementation of rebranding.

### 2.1 Rebranding process

As Wansink (1997) in Bellman (2005, p. 215) says, “many marketers believe that brands follow a distinct and irrevocable life cycle: growth, maturation, decline and death.” Some of them prefer to focus on the introduction of new brands but the truth is that, in recent years, a concept that brings new life to old brands was witnessed. Due to the life cycle of the brand, and knowing that the brand cannot always be at the most demanding level, the concept of rebranding was born. This term has gained sufficient evidence that merits academic attention (Merrilees and Miller, 2008). In spite of being a term that conquered importance in the academic research, rebranding is still under-researched in the academic field (Daly and Moloney, 2004; Muzellec and Lambkin, 2006).

“The word rebrand is a neologism developed by the two words re and brand. Re implies “again” and brand being the name or symbol that differentiates a company.”(Olsson *et al.*, 2008, p.22). With a rebranding strategy, the brand is “trying to change the already established perception of the brand in the minds of stakeholders” (Olsson *et al.*, 2008, p.22).

Ahonen (2008) presents a preliminary framework for the corporate re-branding process (see figure 7). With this, the author suggests that the corporate rebranding process has four stages: analyzing, planning, implementing and evaluating. Each of these stages consists of sub-processes that should not be considered as static (Ahonen, 2008). The first stage consists in making an analysis of the current situation and the forces that lead to rebranding. Planning consists of establishing where the rebranding will be executed. It is the phase of the decisions (Ahonen, 2008). “Implementation includes the re-launching of the new corporate brand that was previously planned. Launching the new brand is a twofold area including launching it first for internal stakeholders, and after that for external stakeholders” (Gotsi and Andriopoulos, 2007 in Ahonen, 2008, p. 35). Finally, in the evaluation phase, the success or failure of the process is analyzed. In this manner, the result should be evaluated regarding the initial goals (Ahonen, 2008).

In the literature, there are a lot of terms used to describe the idea of corporate rebranding as a process (see table 1) – changes in the brand elements - nevertheless, this study presents only some of them.

To Rosenthal (2003), repositioning is different from rebranding because brand is not changed in the repositioning, but the perception of brand is. This author sees repositioning as a part of rebranding. To refer to the rebranding process, Aaker (1991) and Keller (2000) use the term revitalization. According to Goi and Goi (2011), revitalization reflects the action of putting new life into a brand in order to respond to changes in the marketing environment. On the other hand, to Daly and Moloney (2004), revitalizing is considered as the first step in the rebranding process, consisting in the change of several or all of the tangible and intangible elements of a brand. To Aaker (1991), revitalization takes place when the product or service is at the declining stage of the product life cycle. However, the author defends that rebranding can be put into practice at any phase (of the product life cycle).

There are a lot of definitions concerning rebranding, as it is continuous and can sometimes be misunderstood with the process of brand identity and image changes. From the literature consulted, the most complete definitions are presented.

To Hankinson and Lomax (2006) rebranding involves the modification not only of the visual identity of the organization, but also the real change inside the organization. Muzellec and Lambkin (2006) define rebranding as the change in organizations self-identity and/or an effort to change perceptions of the image among outside stakeholders.

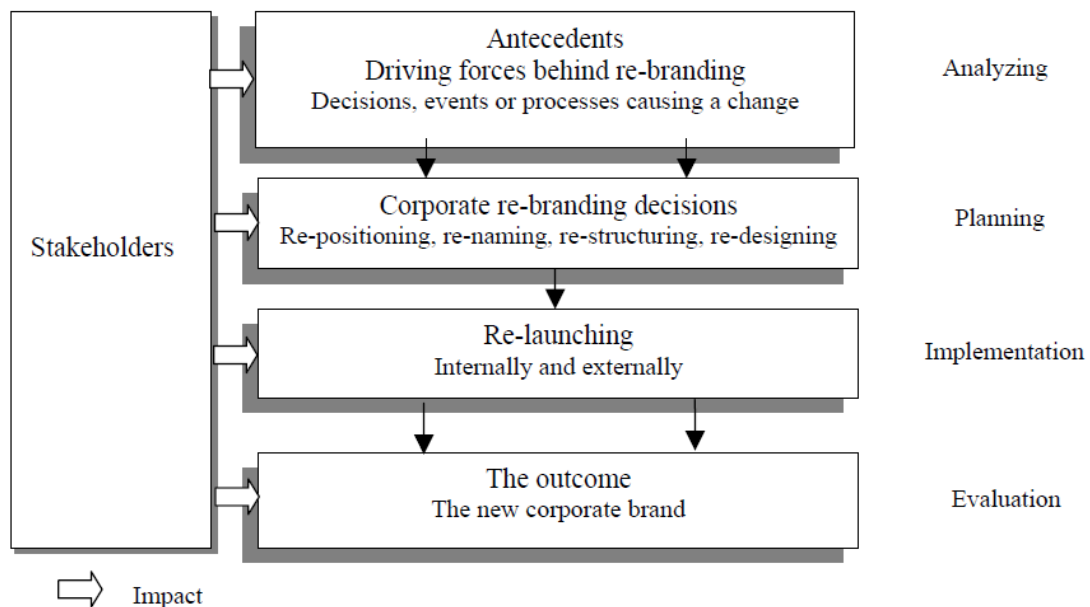
To Merrilees and Miller (2008), rebranding is the redesign, improvement and rejuvenation of brand. The rebranding comes as the promise to bring the organizations' loving, lasting, and stable relationship, and of course, the trade with the customer. According to the same author, a possible characterization of rebranding is the creation of a new name, term, symbol, design or a combination of them for an established brand with the intention of developing a differentiated (new) position in the mind of stakeholders and competitors. Most academics argue that it is cheaper to choose rebranding than to create a new and unknown brand (Bellmand, 2005 and Merrilees and Miller, 2008). Although this is a good strategy to create a connection with the customers, it also has disadvantages such as, the risk of losing loyal customers, the fact of being a costly and time-consuming process and even the loss of market share. To avoid this situation, it is crucial that managers should understand the potential benefits, and how to get that support (Merrilees and Miller, 2008).

When a brand chooses rebranding, it should be aware of the points that must be affected: repositioning, renaming, redesigning and re-communicating. In regards to repositioning, a brand must be rearranged frequently over time to stay in tune with shifting



market trends and competitive pressure as well as broader external events because brand positioning is a dynamic and incremental process (Pike, 2009). In the case of renaming, there is an academic consensus of the important part the process occupies, due to the fact that the name is the core indicator of the brand (Lomax and Mador, 2006). Redesigning (the logo, styles, and messages that must be changed to create a new brand image) is the key element in establishing the brand image. Finally, in re-communicating, when re-launching a brand, the customers should have been informed about it. It is essential to involve all the stakeholders in the process and inform them over time (Thomas and Kohli, 2009). The truth is that, although all there are many terms and definitions, the answer to the essential question is missing: what is the role of rebranding? This question is deeper analyzed in the following sections.

**FIGURE 7. CORPORATE REBRANDING PROCESS**



Source: Ahonen (2008)

**TABLE 1. ACADEMIC KNOWLEDGE ON CORPORATE REBRANDING AS A PROCESS**

Author(s)	Phases in the process	Sub-phases/description
<b>Muzellec <i>et al.</i> (2003)</b>	Re-positioning	Creating a new position for the company in the minds of the customers
	Re-naming	Corporate name is changed
	Re-designing	The aesthetics of a corporation are changed
	Re-launching	Publishing the new brand
<b>Kaikati (2003)</b>	Re-branding	Name & logo selection Introducing a new name
	Re-structuring	Change in ownership structure, incl. partners, employees
	Re-positioning	Reinforce new vision and strategy
<b>Daly and Moloney (2004)</b>	Analysis	Situation analysis, brand elements
	Planning	Target audience; internal and external customers, re-branding marketing plan
	Evaluation	Of all campaigns
<b>Muzellec and Lambkin (2006)</b>	Driving forces	Decisions, events or processes causing a change in a company's structure, strategy or performance
	Reasons	Change in ownership structure, corporate strategy, and competitive position and in external environment.
	Goals	Re-branding factors leads to the formulation of re-branding goals
	Re-branding process	Reflect a new identity and create a new image. Internalization (employees' culture) and externalization (stakeholders' images)
<b>Ahonen (2008)</b>	Analyzing	Antecedents, Driving forces behind re-branding: decisions, events or processes causing a change
	Planning	Corporate re-branding decisions: Re-positioning, re-naming, re-structuring, re-designing
	Implementation	Re-launching: Internally and externally
	Evaluation	The outcome: The new corporate brand

Source: By the author adapted from Juntunen *et al.*, (2009)

## 2.2 Recommendations for successful rebranding' implementation

There are some recommendations for brands to take into account when rebranding. From the literature review, three main suggestions were encountered.

First of all, according to Bellman (2005), the managers should be sensitive to the presence of brand equity in consumer's mind in order to maintain consumer loyalty. They must take care of this because before the consumers abandon a brand they start trying others (Thomas and Kohil, 2009). If brand equity is threatened, this situation could occur. The managers should have in mind that it is critical not to lose brand equity (Lassar *et al.*, 1995).

Secondly, marketing communications should be carefully conceived. These should have a strong commitment not only in informing the consumers, but also to inform employees, as if they are not conscious of what is going on, they will fail when the strategy is implemented (Bellman, 2005). As Goi and Goi (2011) state, customer and internal staff have to be involved in the process of changing a brand.

Finally, the marketing department should carefully plan their strategies to avoid negative impact upon their implementation (Bellman, 2005). All the steps should be analyzed before being put rebranding into practice.

When these recommendations are taken into consideration, rebranding offers advantages less costly and risky than implementing a new brand. After all, the consumers already know the brand and the values associated to it. They already have a brand equity image in their minds and, when informed, they feel part of the process, and therefore, accept the changes better (Aaker, 1991).

## **2.3 Concept of brand equity**

When talking about a brand, especially when the brand has passed through a process of re-branding, it is pertinent to focus on brand equity. After all, nowadays the strength of a brand lies in its equity with its consumers (Thomas and Kohil, 2009). This is a phenomenon that has as many definitions as the researchers that have studied it. To Keller (2000), brand equity is defined as the differential effect that consumer knowledge about a brand has on the customer's response to marketing activity, and consumer brand knowledge can be characterized in terms of brand awareness and brand image dimensions. As a result, when a brand has high awareness and consumers hold strong, favorable, and unique brand associations, it is considered to have strong equity (Keller, 2000). According to Vazquez *et al.* (2002), brand equity is the overall utility that the consumer associates with the use and consumption of the brand, including associations expressing both functional and symbolic attributes. Brady *et al.* (2008) presented a notable definition because it distinguishes brand equity from brand loyalty (Nam *et al.*, 2011). They state "brand equity is a perception of belief that extends beyond mere familiarity to an extent of superiority that is not necessarily tied to specific action. Familiarity does not imply belief in superiority . . . Brand equity does not imply action, only perception. Commitment and loyalty also do not imply superiority, whereas brand equity does..." (Brady et al. 2008, p.152). As was previously stated, there are many definitions of brand equity. For example, Agarwal (1996) presented it as a marketing effects or outcomes

that accrue to a product with its brand name compared with those that would accrue if the same product did not have the brand name. Some researches around brand equity were born from the fact that “brand equity is regarded as a very important concept in business practice as well as in academic research because marketers can gain competitive advantage through successful brands” (Lassar *et al.*, 1995, p.11). These authors explain, in the same article, that “there are five important considerations to define brand equity. First, brand equity refers to consumer perceptions rather than any objective indicators. Second, brand equity refers to a global value associated with a brand. Third, the global value associated with the brand stems from the brand name and not only from physical aspects of the brand. Fourth, brand equity is not absolute but relative to competition. Finally, brand equity positively influences financial performance”. This section could be completed with the definition of Rangaswamy *et al.* (1993) in Yoo and Donthu (2011, p.2) pointing out that “brand equity has many definitions and forms, such as favorable impressions, attitudinal dispositions, and behavioral predilections (Rangaswamy *et al.*, 1993); brand loyalty, brand awareness, perceived quality, brand associations, and other proprietary brand assets (Aaker, 1991); brand knowledge such as brand awareness and brand associations (Keller, 1993); loyalty and image (Shocker and Weitz, 1988); the added value endowed by the brand name (Farquhar *et al.*, 1991); incremental utility (Kamakura and Russell, 1993); the difference between overall brand preference and multi-attributed preference based on objectively measured attribute levels (Park and Srinivasan, 1994); and overall quality and choice intention (Agarwal and Rao, 1996).” The consensus among the overall theories and definitions is that brand equity is the fundamental value of a product due to the brand name (Srivastava and Shocker, 1991). Researchers have gone further and agreed on three dimensions where brand equity is based: brand loyalty, brand associations, brand awareness (Aaker, 1991; 1996; Keller, 1993). These terms will be explained further. However, this subdivision ends reporting Feldwick (1996) that has simplified the definition of this term “providing a classification of the different meanings of brand equity as: the total value of a brand as separable asset – when it is sold, or included on a balance sheet; a measure of the strength of consumers’ attachment to a brand; a description of the associations and beliefs the consumer has about the brand” (Wood, 2000, p.662).

## **2.4 Importance of brand equity for rebranding process**

To Aaker (1991) rebranding is used to create extra sales levels and improve equity. This definition could be completed with the one given by Muzellec and Lambkin (2006) alluding that rebranding aims to enhance, regain, transfer and/or recreate the corporate brand equity. There are many researchers that concluded that the aim of rebranding is, in fact, to enhance brand equity (Aaker, 1991; Muzellec and Lambkin, 2006). But a question arises: the authors agreed that rebranding has an influence on brand equity nevertheless is this a positive or a negative influence? As stated by Muzellec and Lambkin (2006) rebranding has either positive or negative effects on brand equity. In their study they found that rebranding influences brand equity in different ways. The researchers have seen and qualitatively proved the effect of rebranding on brand equity. As Rosenthal (2003) notices the effects of rebranding could only be felt in a decade or more and if the process is not well conducted people cannot accept the changes. This is why the authors, over the years established some rules for rebranding to be well implemented and have a positive effect on brand equity.

## **2.5 Constructs related with brand equity and rebranding process**

### **2.5.1 Brand loyalty**

The importance of brand loyalty has been recognized in the marketing literature for at least three decades (Chaudhuri and Holbrook, 2001). The researchers began to define brand loyalty from two major and distinct points of view. Therefore, there are two approaches: the stochastic approach and the determinist approach. The first one defends that loyalty is a behavior, in other words, an individual that repeats the purchase systematically is said to be loyal to this brand. On the other hand, the second approach supports that brand loyalty is treated more as an attitude namely, academics investigate the psychological commitment of the customer in the purchase, without necessarily taking the effective purchase into account (Odin et al., 2001). Later, Jacoby (1971) proposes to integrate the two approaches and present a new definition, seeing brand loyalty as the biased, behavioral response, expressed over time by some decision-making units with respect to one or more alternative brands. Out of a set of such brands is a function of psychological processes. Thus, the brand loyalty gained another dimension and started to be studied based on its new definition. In this light, customer loyalty

is analyzed by many researchers over the last three decades from two perspectives: behavioral loyalty and attitudinal loyalty. (Day, 1967; Nam *et al.* 2011). Behavioral loyalty refers to the frequency of repeat purchase. Attitudinal loyalty refers to the psychological commitment that a consumer makes in the purchase act, such as intentions to purchase and intentions to recommend, without necessarily taking the actual repeat purchase behavior into account (Nam *et al.*, 2011). As stated by Selnes (1993, p.21) “customer loyalty expresses an intended behavior related to the product or service. (...) Another important element of loyalty (...) is positive word-of-mouth. (...) When a company’s customers recommend the product to others, this reflects a high degree of loyalty”. According to Dick and Basu (1994) customer loyalty is viewed as the strength of the relationship between an individual’s relative attitude and repeat patronage. All these theories and definitions of brand loyalty could be resumed saying the triumph of a brand on the long term is not based on the number of consumers that buy it once, but on the number of consumers who become usual buyers (Jacoby and Chestnut, 1978). When a customer becomes loyal to a brand there are three big positive consequences that deserve to be mentioned: motivation, resistance to counter persuasion and word-of-mouth. These imply that the management should treat their customers as the core of its work (Dick and Basu, 1994). It is known that consumers loyal to a brand may be willing to pay more for it because they perceived some unique value in the brand that no alternative can provide. This is why brand loyalty has an important role in brand equity process. (Chauhuri and Holbrok, 2001).

### **2.5.2 Brand trust**

Brand trust appears to serve as the key of brand loyalty leading to commitment, once trust creates exchange relationships that are of high value. If considering commitment as an enduring desire to maintain a valued relationship, trust and commitment should be associated because they are important forces in relational exchanges, creating valued relationships. (Chauhuri and Holbrok, 2001; Morgan and Hunt, 1994). Gurviez and Korchia (2003) corroborate these findings saying that without trust, there can be no stable relationship. The cost of consumer trust in a brand is materialized by brand commitment. Trust is defined as a strong expectancy that the brand will provide what is expected (Fournier, 1994). The researchers propose three dimensions to classify brand trust. They are the honest dimension, altruism dimension and reliability dimension. From the consumer perspective, brand trust is a psychological variable mirroring a set of accumulated presumptions involving the credibility,

integrity and benevolence that a consumer attributes to the brand (Gurvies and Korchia, 2003). From the literature, there are some other definitions of brand trust, for instance, the one presented in Delgado-Ballester's study (2004, p.574) that joins some definitions given by other researchers "brand trust is conceptualized as the confident expectations of the brand's reliability and intentions in situations entailing risk to the consumer". From the many definitions of brand trust the one most used in this field was given by Morgan and Hunt (1994) conceptualizing brand trust as existing when one part has confidence in an exchange partner's reliability and integrity. "Trust is a feeling of security held by the consumer that the brand will meet his/her consumption expectations. This feeling is based on two general dimensions: brand reliability and brand intentions towards the individual" (Delgado-Ballester and Munera-Alemán, 2001, p.1242). As explain before, the main driver of brand equity is brand loyalty. Taking into account that the brand trust is the key of brand loyalty, brand trust plays an important role when creating brand equity (Delgado-Ballester and Munera-Alemán, 2005)

### **2.5.3 Brand personality**

Since celebrities started to endorse brands, personification of brands has existed. These people help marketers position their brands because they lead the consumer to identify themselves with the celebrity. It has long been recognized that brands, as any person, could have personality (Azoulay and Kapferer, 2003). In literature it is claimed that we must discuss brand personality since individuals chose a brand the same way they chose a friend. Researchers go deeper, stating that individuals tend to attribute facets of personality to brands, talking frequently about them. As Aaker (1997) points out, brand personality is the set of human characteristics associated to a brand. Later, Azoulay and Kapferer (2003, p.151), improve this definition classifying brand personality as "the set of human personality traits that are both applicable to and relevant for brands". This improvement comes from the evolution of the studies associated to psychology and social sciences that concluded personality is described by traits that differ from cognitive aspects of the person, or from his or her skills and abilities (Azoulay and Kapferer, 2003). By knowing that individuals associate themselves with those who have traits in common, it is logical to associate themselves with brands with which they identify. Since brand equity "derives from the set of brand associations and behaviors that have been developed towards the brand" (Delgado-Ballester and Munera-Alemán, 2005, p.188) it is possible to understand the impact that brand personality has on brand equity.

## 2.5.4 Brand association

As a measure to identify brand perceptions, the concept of brand association appears. According to Aaker (1991), brand association reports the customers to a brand through anything linked in memory to a brand. Keller (1998) talks about brand node in memory. The author mentioned that brand association was the informational nodes linked to the brand node in memory that encloses the meaning of the brand to the consumer. In short, it is fair to say that brand association is the mental connection that the consumer makes when something reminds him of the brand. These associations are important not only to marketers but also to consumers. According to Low (2000, p. 351) “marketers use brand associations to differentiate, position, and extend brands, to create positive attitudes and feelings toward brands, and to suggest attributes or benefits of purchasing or using a specific brand. Consumers use brand associations to help process, organize, and retrieve information in memory and to aid them in making purchase decisions”. When talking about brand associations, researchers talk about the three measures that establish the mental link between the consumer and the brand. The measures are brand image, brand attitude and perceived quality. (Aaker, 1991; Keller, 1993; Low and Junior, 2000; Ross *et al.* (2006). “Brand image is the reasoned or emotional perceptions consumers attach to specific brands. (...) Brand attitude is defined as the consumers’ overall evaluation of a brand – good or bad. (...) Perceived quality is defined as the consumers’ judgment about a product’s overall excellence or superiority” (Low and Junior, 2000, p. 352-353). In sum, it is logical to say that no matter what the brand is, it wants to create mental links between itself and its customers. As such, it is essential that brands be wary during marketing campaigns so that they result strong but well perceived by consumers.

## 2.5.5 Brand awareness

The importance of brand awareness has been recognized among the researchers. It has been defined by Hoyer and Brown (1990, p. 141) “as a rudimentary level of brand knowledge involving, at the least, recognition of the brand name. Awareness represents the lowest end of a continuum of brand knowledge that ranges from simple recognition of the brand name to a highly developed cognitive structure based on detailed information”. Keller



and Davey (2001) in Romaniuk et al. (2004, p.70), “describe building brand awareness as the way of ensuring that potential customers know the categories in which the brand competes. They see brand awareness as the foundation of their equity model”.

Brand awareness is crucial for a brand that wants customers to repeat purchase (Assael and Day, 1968; Hoyer, 1984; Nedungadi, 1990; Macdonald and Sharp, 2000). Through the advertising repetition, the companies try to create and maintain a set of positive considerations in the consumer’s mind in order to lead them to repeat purchase (Nedungadi et al, 1985; Macdonald and Sharp, 2000). After all, “a brand that is not considered cannot be chosen” (Macdonald and Sharp, 2003, p. 1). From the literature about this issue, and as stated by Macdonald and Sharp (2003, p. 1) “without brand awareness occurring, no other communication effects can occur. For a consumer to buy a brand he must first be made aware of it”. Some practitioners find out that the more aware the consumer is about a brand the more likely they will be to purchase the brand. As we live in a world dominated by competition and similar products, the brands must take into account awareness. Quoting Macdonald and Sharp (2003, p. 3) “investments in brand equity and in particular brand awareness can lead to sustainable competitive advantages and thus, to long term value. Brand awareness can add value by placing the brand in the consumer's mind, acting as a barrier to entry to new un-established brands, reassuring the customer of the organization’s commitment and product quality, and providing leverage in the distribution channels”. If the objective of a brand is to have consumers that buy it more than once, the brands should be aware of the importance of awareness for the customers at the time of the buying decision process.

### 3. Short History of Brands Analyzed

In this chapter the three brands selected for this research project are presented: Continente, EDP, and Vodafone Portugal. Several aspects are regarded in order to select these three brands, they have a large implementation in Portugal, they are usually regarded as energetic and in continuous evolution and transformation, and they communicate using a vibrant red color.

#### 3.1 Continente

Continente represents the hypermarkets owned by Sonae Distribution. It was the first chain of hypermarkets in Portugal (the first opened in 1985) and remains today a reference in the food retail sector of the country. Its stores are located mostly in large shopping centers in major Portuguese cities.

Contrary to what many people think, Continente brand was not created by the Sonae group, but by the French distribution group *Promodès*. The brand has its origins in France in 1972 ("Continent"), having been adapted to Spain in 1976.

The brand had a first international renovation in 1996. The colors (blue and red) remained and the lettering was modernized. The symbol became a "C" stylized as a Globe education.

In late 2005, the brand undergoes a thorough renovation, which changed the brand philosophy, the colors (it was the Red) and lettering. The symbol became a "C" stylized as a target.

They want to remain a national benchmark, providing a more diverse supply of the best products at the best prices and service closer to customers. The solid path over the years, punctuated by promotional initiatives and a strong social impact and innovation, distinguished the chain that has earned trust and empathy among the population (Sonae, n.d).

## **3.2 EDP**

EDP was established in 1976 following the merger of 13 companies that were nationalized last year. Three decades later, the company grew, conquered markets, extended the activity, expanded business, and changed cultures. Inevitably, the brand accompanied these changes.

EDP is a leading company in the energy sector, which includes in its cultural values commitments to their clients, people and the environment. They are among the major European operators in the energy sector being one of the largest energy operators of the Iberian Peninsula, the largest Portuguese industrial group and the third largest producer of wind energy.

EDP characterized itself as a global energy company, a leader in value creation, innovation and sustainability.

EDP entered a new phase in its history, with an image that conveys clearly what it is, what it feels and what it does. Now the logo is one for all companies and represents the dynamism and innovation of a company that is a multinational company present in over 13 countries (EDP, n.d.)

## **3.3 Vodafone Portugal**

The Vodafone Group is the mobile telecommunications company with the highest global presence. In June 2011, it had a base of more than 382 million customers in over 30 countries. The brand also began existing in over 40 countries through partner networks.

They intend to continue to respond in exemplary fashion to the global communication needs of their clients. Their goal is to be considered as an innovative, competitive and ambitious company always customer-oriented.

As they are at the forefront of the definition of mobile voice and data around the world, they believe in constant change and bet on innovation. This is an added-value to the consumers because they can be linked to each other anywhere they are. The main characteristic is providing the customer with up to date products and services, with good, transparent and competitive tariffs and, especially, offer the advantage to their customers of being a global operator (Vodafone, n.d.).

### **3.4 Color importance in marketing context: why red color?**

The color is an issue that needs special attention when it comes to marketing. A brand has to have the ability, before choosing the color to use, of examining three questions. A) Physical aspects of color related to graphic design. B) The sense that colors conveys to people. C) Cultural association of that color in that country. The great Renaissance artists deepened the study of color and decreed the warm colors such as those that appear to move in time and the cold colors that seem to recede. Red was classified as a warm color (Healey, 2008). The color red is hot, active and stimulating. It strengthens the body and gives more physical energy, will power, achievement, leadership and sense of self-esteem.

The color red stands for elegance, passion, achievement, leadership and refinement. Due to these characteristics, the pituitary gland goes into action when looking at the red, which increases the flow of adrenaline in the blood, thus altering the body's chemistry. In packaging, stores or products, red is sure to draw attention and induce action (Understanding the language of branding, n.d.).

## **4. Conception of the empirical research**

In the previous chapters a literature review was conducted about the concept of brand, rebranding process and brand equity which encompassed definitions, relations between them and constructs related with brand equity and the rebranding process. Finally, the brands in analysis were presented, justifying the color magnitude in marketing context. Therefore, from the literature review emerges the theoretical relationship between the variables that influence the process of rebranding. This chapter attempts to validate a conceptual model that has not yet been proposed by academics.

### **4.1 Field of research**

This study focuses on an empirical research with the sample target of the consumers of Continente, EDP and Vodafone. This choice was made thinking about the brand equity of brands prone to having aggressive and innovative marketing communication.

These three corporate brands in spite of having different business sectors, have things in common. They are the best positioned in the national market (according to their business sector) and all chose a red logo. This illustrates a dynamic, powerful and leadership brand. Red suggests excitement and strong emotions. It is a color easily recognized by the eye, being good for getting attention. (Continente, n.d.; EDP, n.d.; Vodafone, n.d.; The power of color in direct marketing, n.d.).

### **4.2 Objectives**

The main objectives of this research are:

- ✓ To contribute to clarify the relation of causal order between the variables of brand personality, brand loyalty, brand trust, brand awareness and brand association with brand equity;
- ✓ To know what is the importance of the variable' strength in the brand equity.

### 4.3 Model development

Given the exposed in the conceptual development of this dissertation, it is expected that brand equity depend on the positive and favorable relationship of brand personality; of brand loyalty; of brand trust; of brand awareness; and, of brand association. Therefore, five hypotheses are formulated:

H1: Brand personality has a positive impact on brand equity.

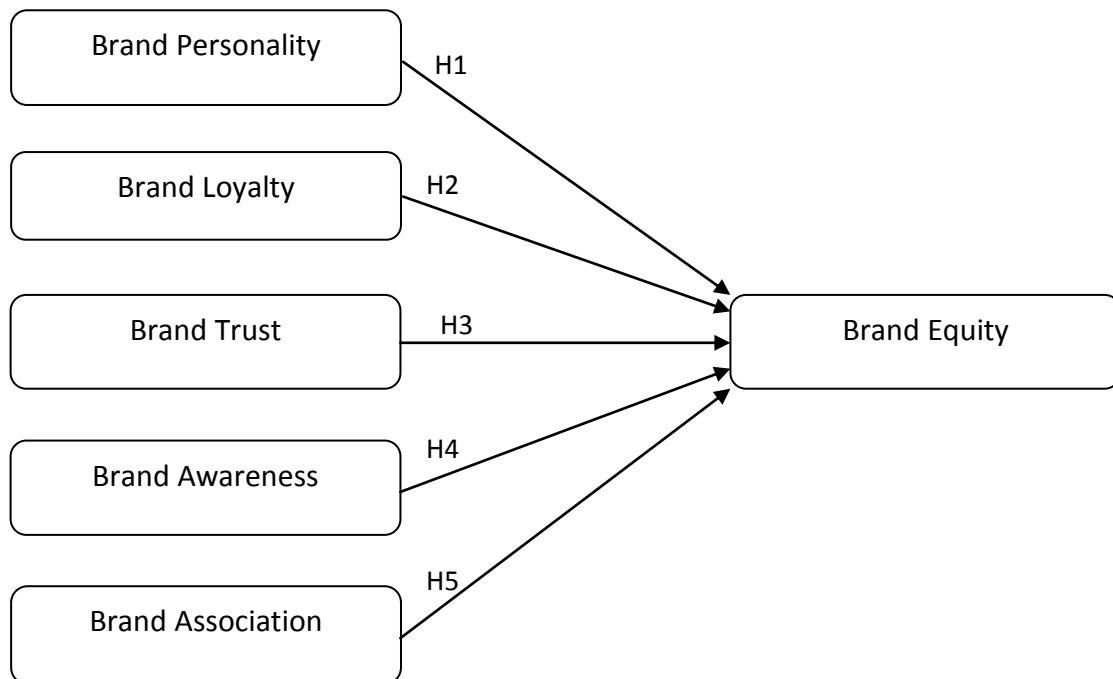
H2: Brand loyalty has a positive impact on brand equity.

H3: Brand trust has a positive impact on brand equity.

H4: Brand awareness has a positive impact on brand equity.

H5: Brand association has a positive impact on brand equity.

**FIGURE 8. CONCEPTUAL MODEL**



Source: By the author

## 4.4 Methodology

In order to test the hypotheses previously defined, an online questionnaire was elaborated to be answered by consumers of these three brands. Once made, it moved to the pre-test stage with the purpose of verifying the clarity of the sentences. The pre-test was made to a sample of ten students. Their suggestions were accepted (Walsh and Beatty, 2007).

The questionnaire has sixty- four items and each respondent was invited to answer to all the questions according to Likert scale from 1 (completely disagree) to 5 (completely agree). The items followed a random order so that the consumer did not associate the questions concerning the same construct. The questionnaire measured:

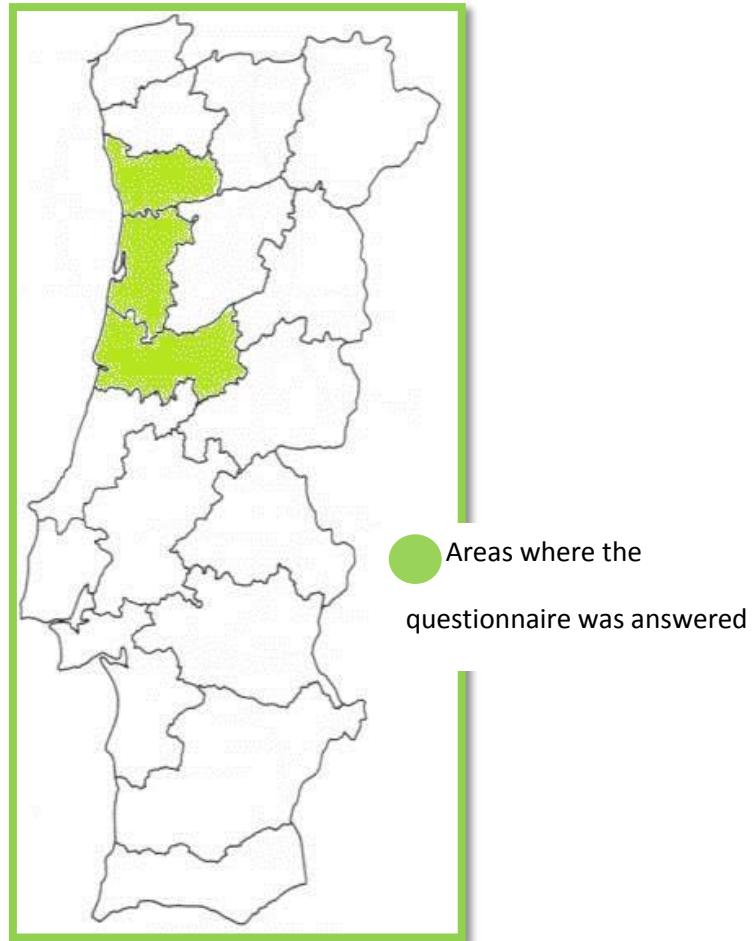
- ✓ 24 items related to equity based on papers of Lassar, Mittal and Sharma (1995) and Nam, Ekinci, Whyatt (2011);
- ✓ 15 items concerning to personality based in the papers of Aaker (1997), Geuns weijters, De Wulf (2009) and Lin (2010).;
- ✓ 7 items related to loyalty based on papers of Yoo and Donthu (2001);
- ✓ 5 items related to trust based on papers of Delgado-Ballester and Munuera-Alemán (2005);
- ✓ 4 items related to awareness based on papers of Loureiro and Miranda (2011));
- ✓ 5 items related to association based on papers of Azoulay and Kapferer (2003); Chang and Chieng (2006);
- ✓ 4 items concerning to social-demographic variables.

The online questionnaire was accessible from April 5<sup>th</sup> to May 31<sup>st</sup>. University students were instructed to recruit five people to fill out the survey. Four of these five people had to be non-students and represent a range of ages, genders, and professions (based on method of Walsh and Beatty, 2007). The data collection process lasted eight weeks. 152 people answered to the Continente questionnaire, 100 people answered to the EDP questionnaire and 163 answered to the Vodafone questionnaire in a total of 415 responses. In global terms most respondents fell into the 26–35 age group.

The target sample was composed of consumers experienced in the use of three brands. The geographical application of the questionnaire was extended to three areas: Aveiro, Coimbra and Oporto. These cities were chosen taking into account the knowledge of other

students from these three zones which, consequently, leads to a greater dispersion of the questionnaire. The geographic dispersion resulting from the selection made is shown in Figure 9.

**FIGURE 9. GEOGRAPHIC AREAS OF DATA COLLECTING**



Source: By the author

#### **4.5 Sample characterization**

After all the process, 415 questionnaires were collected. 152 people answered to Continente questionnaire, 100 people answered to EDP questionnaire and 163 answered to Vodafone questionnaire. The most frequent age is between 26 and 35 years. The majority are of the female gender (Continente 69%, EDP 55% and Vodafone 58%). Among the professions existent, most were students, businessmen and teachers. The major percentage of responses



came from Aveiro followed by Oporto and Coimbra. The profile of respondents is adjusting to the local of data collection, for the proportionality gender (INE, n.d.).

## 5. Results

This chapter is dedicated to data analysis presenting the results of the data collected from the questionnaires which were analyzed through three techniques: descriptive statistics, factor analysis and regression analysis.

### 5.1 Statistical analysis techniques

The collected data were analyzed using the computer software SPSS 20. First, the descriptive statistics and frequencies associated with each variable in the analysis were calculated. As was expected the existence of several dimensions, was made the principal components factor analysis. Finally, proceed the regression analysis. Internal consistency was evaluated through the Cronbach's Alpha coefficient (Ping, 2004). Cronbach's Alpha ranges from 0 to 1, considering a reasonable internal consistency if the value is higher than 0,7. Internal consistency is good when the value is above 0,8 and very good when the value is higher than 0,9.

In the analysis and selection of scale items, should be taken in mind that each one of them should have a good correlation (above 0,5) with the scale as a whole and with the dimension to which it belongs; the factor loading items (less than 0.4) and low communality (less than 0.3) are candidates to be eliminated (Netemeyer *et al.*, 1991; Reis *et al.*, 2001).

In statistical tests, the Type I error represents the probability of rejecting the null hypothesis, in case of this being true (the probability of committing this error is identified as the significance level of statistical test).

In what concerns the multiple linear regressions, the correlations that measure the degree of association between the dependent variable and each independent variable are used to predict the dependent variable. The application of multiple linear regression model, involves scanning a set of starting assumptions. It should be stressed that it should not be in the presence of multicollinearity, autocorrelation and heteroscedasticity under penalty of misinterpretation of results. These aspects were considered in this study.

Multicollinearity is mainly a problem of the sample and is related to the fact explanatory variables (independent) have sometimes, a high degree of correlation among them. In this case, it becomes more difficult to isolate the effect of each variable explained.

The existence of multicollinearity can lead to the incorrect conclusion of the existence of a good adjustment (measured by  $R^2$ ).

Autocorrelation is a common problem when facing chronological series, which is not the case in this study, and occurs when the covariance between errors from different periods is not zero.

Heteroscedasticity occurs when the error variance is not constant for all observations.

## **5.2 Descriptive statistics**

In this section, descriptive statistics are presented for each construct within the conceptual model. The results are divided in Continate, EDP and Vodafone in order to show the differences in the consumer's perceptions.

### **5.2.1 Brand Equity**

Brand equity was measured by twenty-four items that can be consulted in the table 2.

**TABLE 2. DESCRIPTIVE STATISTICS OF CONTINENTE BRAND EQUITY**

	Mean	SD	Frequency %				
			1	2	3	4	5
e1: The image of Continente is consistent with the way I see myself.	3,3	0,900	4,0	11,3	42,4	35,8	6,6
e2: Employees of Continente are friendly.	3,8	0,841	0,7	4,6	27,8	45,7	21,2
e3: The image of Continente is consistent with how I would like others to see me.	3,2	0,927	5,3	15,2	41,7	33,1	4,6
e4: The quality of the products of Continente is extremely high.	3,5	0,738	0,7	6,6	39,7	47	6
e5: It makes sense to buy Continente instead of any other brand, even if they are the same.	3,5	0,978	3,3	12,6	31,8	39,7	12,6
e6: Continente is modern-looking.	3,8	0,812	2	3,3	25,2	55	14,6
e7: Continente fits my personality.	3,3	0,956	4,6	13,2	38,4	35,8	7,9
e8: Continente rarely gives me problems.	3,8	0,900	2,6	3,3	23,2	48,3	22,5
e9: Continent reflects my personal lifestyle.	3	1,019	11,3	16,6	40,4	28,5	3,3
e10: Over time, I will develop a warm feeling toward Continente.	2,4	1,087	25,8	28,5	32,5	9,3	4
e11: Materials associated to Continente are visually appealing.	3,3	0,908	2,6	13,9	38,4	37,1	7,9
e12: From Continente I can expect superior performance	3,3	0,863	2,6	10,6	44,4	35,1	7,3
e13: I consider Continente a good business given the benefits I receive.	3,3	0,993	3,3	16,6	38,4	29,8	11,9
e14: I review myself I the image of the typical consumers of Continente.	2,9	1,055	11,9	19,9	36,4	27,8	4
e15: Employees of Continente listens to me.	3,5	0,985	2,6	11,3	39,1	30,5	16,6
e16: Considering what I pay for Continente products I will get much more than my money's worth.	3	0,959	6	21,2	44,4	22,5	6

Source: By the author according to the SPSS output

(Continuation of Table 2)

	Frequency %						
	Mean	SD	1	2	3	4	5
e17: Employees of Continente are helpful.	3,7	0,832	0,7	6	35,1	43	15,2
e18: When someone criticizes Continente, it feels like a personal insult	1,8	1,081	55	21,2	14,6	6,6	2,6
e19: When I get something from Continente I feel delighted.	2,8	1,020	15,2	17,2	48,3	15,2	4
e20: If a story in the media criticizes Continente, I would feel embarrassed.	1,9	1,080	49,7	23,8	17,2	6,6	2,6
e21: I am proud of use Continente.	2,8	0,985	10,6	19,9	52,3	10,6	6,6
e22: Even if another brand has the same features as Continente, I would prefer to buy Continente.	2,8	1,082	13,2	21,2	42,4	15,9	7,3
e23: If there is another brand as good as Continente, I prefer to buy this brand.	2,6	1,062	19,9	18,5	43,7	14,6	3,3
e24: If there was a brand like Continente it would be smart not to change.	2,8	1,063	17,2	11,9	47,7	19,2	4
<b>TOTAL</b>	<b>3,1</b>	<b>0,098</b>					

Source: By the author according to the SPSS output

As Continente is concerned, the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,8 in the items e2, e6 and e8 which correspond to friendly staff, modern-looking brand and a reliable brand. On the other hand, the lower mean match to e18 item (1,8).

The lower standard deviation is e6 (0,812) and the higher SD is e22 (1,082).

In terms of frequency, the items best placed with 4 or 5 are e2 (66,9%), e6 (69,6%) and e8 (70,8%). The worst items with 1 or 2 are e18 (76,2%) and e20 (73,5%).

**TABLE 3. DESCRIPTIVE STATISTICS OF EDP BRAND EQUITY**

	Mean	SD	Frequency %				
			1	2	3	4	5
e1: The image of EDP is consistent with the way I see myself.	3	0,937	8,1	16,2	49,5	22,2	4
e2: Employees of EDP are friendly.	3,2	0,954	7,1	10,1	41,4	36,4	5,1
e3: The image of EDP is consistent with how I would like others to see me.	3	1,059	12,1	12,1	49,5	18,2	8,1
e4: The quality of the products of EDP is extremely high.	3,3	0,869	4	11,1	35,4	46,5	3
e5: If there was a competitor it would makes sense to buy EDP instead of any other brand, even if they are the same.	3,1	1,153	14,1	12,1	31,3	35,4	7,1
e6: EDP is modern-looking.	3,7	0,919	3	4	27,3	46,5	19,2
e7: EDP fits my personality.	2,8	1,091	19,2	7,1	51,5	17,2	5,1
e8: EDP rarely gives me problems.	3,2	1,082	10,1	14,1	33,3	35,4	7,1
e9: EDP reflects my personal lifestyle.	2,7	1,051	20,2	14,1	48,5	14,1	3
e10. Over time, I will develop a warm feeling toward EDP.	2,3	1,081	31,3	20,2	40,4	4	4
e11: Materials associated to EDP are visually appealing.	3,4	0,984	7,1	8,1	33,3	44,4	7,1
e12: From EDP I can expect superior performance	3,5	1,044	6,1	9,1	28,3	42,4	14,1
e13: I consider EDP a good business given the benefits I receive.	2,7	1,108	19,2	22,2	36,4	18,2	4
e14: I review myself in the image of the typical consumers of EDP.	2,9	1,001	12,1	10,1	60,6	9,1	8,1
e15: Employees of EDP listens to me.	3,2	1,079	8,1	18,2	30,3	35,4	8,1
e16: Considering what I pay for EDP products I will get much more than my money's worth.	2,5	1,063	23,2	20,2	44,4	8,1	4

Source: By the author according to the SPSS output

(Continuation of Table 3)

	Mean	SD	Frequency %				
			1	2	3	4	5
e18: When someone criticizes EDP, it feels like a personal insult	2	1,074	45,5	17,2	30,3	5,1	2
e19: When I get something from EDP I feel delighted.	2,7	1,038	16,2	20,2	49,5	8,1	6,1
e20: If a story in the media criticizes EDP, I would feel embarrassed.	2	1,138	46,5	16,2	29,3	4	4
e21: I am proud of use EDP.	2,6	0,974	14,1	25,3	47,5	9,1	4
e22: Even if another brand has the same features as EDP, I would prefer to buy EDP.	2,9	1,17	20,2	7,1	39,4	28,3	5,1
e23: If there is another brand as good as EDP, I prefer to buy this brand.	2,8	1,163	21,2	12,1	37,4	25,3	4
e24: If there was a brand like EDP it would be smart not to change.	2,8	1,181	20,2	11,1	38,4	24,2	6,1
<b>TOTAL</b>	<b>2,9</b>	<b>0,084</b>					

Source: By the author according to the SPSS output

In the case of EDP the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,7 in the item e6 which correspond to modern-looking brand. On the other hand, the lower mean match to e18 and e20 items. (2).

The lower standard deviation is e4 (0,869) and the higher SD is e24 (1,181).

In terms of frequency, the items best placed with 4 or 5 are e6 (64,7%) and e12 (56,5%).The worst items with 1 or 2 are e18 (62,7%) and e20 (62,75%).

**TABLE 4. DESCRIPTIVE STATISTICS OF VODAFONE BRAND EQUITY**

	Mean	SD	Frequency %				
			1	2	3	4	5
e1: The image of the Vodafone is consistent with the way I see myself.	3,3	0,776	2,5	3,7	65,4	19,8	8,6
e2: Employees of Vodafone are friendly.	3,5	0,724	0,6	3,7	51,2	36,4	8
e3: The image of Vodafone is consistent with how I would like others to see me.	3,2	0,769	3,1	8	64,8	18,5	5,6
e4: The quality of the products of Vodafone is extremely high.	3,4	0,795	0,6	6,2	53,7	28,4	11,1
e5: It makes sense to buy Vodafone instead of any other brand, even if they are the same.	3,3	0,948	5,6	6,2	51,2	25,9	11,1
e6: Vodafone is modern-looking.	3,7	0,832	1,2	45,7	32,7	20,4	20,4
e7: Vodafone fits my personality.	3,6	0,918	4,9	6,8	22,8	57,4	8
e8: Vodafone rarely gives me problems.	3,4	0,908	3,7	4,9	52,5	25,9	13
e9: Vodafone reflects my personal lifestyle.	3	0,852	6,8	9,9	63	15,4	4,9
e10: Over time, I will develop a warm feeling toward Vodafone.	2,6	0,925	17,9	13	58,6	9,3	1,2
e11: Materials associated to Vodafone are visually appealing.	3,9	0,701	1,9	2,5	13,6	71,6	10,5
e12: From Vodafone I can expect superior performance	3,4	0,823	1,2	6,8	53,7	27,2	11,1
e13: I consider Vodafone a good business given the benefits I receive.	3,1	0,897	6,2	10,5	58	18,5	6,8
e14: I review myself in the image of the typical consumers of Vodafone.	3,1	0,997	10,5	7,4	52,5	22,8	6,8
e15: Employees of Vodafone listens to me.	3,4	0,792	0,6	6,8	54,3	27,8	10,5
e16: Considering what I pay for Vodafone products I will get much more than my money's worth.	2,7	0,995	6,8	43,8	30,2	13	6,2

Source: By the author according to the SPSS output



(Continuation of Table 4)

	Frequency %						
	Mean	SD	1	2	3	4	5
e17: Employees of Vodafone are helpful.	2,9	1,503	34,6	2,5	19,8	29	14,2
e18: When someone criticizes Vodafone, it feels like a personal insult	2,2	1,052	35,8	11,7	46,3	4,3	1,9
e19: When I get something from Vodafone I feel delighted.	3	0,863	7,4	9,9	63	14,8	4,9
e20: If a story in the media criticizes Vodafone, I would feel embarrassed.	2,2	1,203	41,4	13,6	27,2	16	1,9
e21: I am proud of use Vodafone.	2,9	0,951	11,7	10,5	62,3	9,3	6,2
e22: Even if another brand has the same features as Vodafone, I would prefer to buy Vodafone.	3,2	1,031	9,3	5,6	53,7	19,8	11,7
e23: If there is another brand as good as Vodafone, I prefer to buy this brand.	2,9	1,092	10,5	24,7	39,5	16	9,3
e24: If there was a brand like EDP it would be smart not to change.	3,1	1,060	10,5	8,6	47,5	23,5	9,9
<b>TOTAL</b>	<b>3,1</b>	<b>0,174</b>					

Source: By the author according to the SPSS output

Regarding Vodafone the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,9 in the item e11 which correspond to materials visual appealing. On the other hand, the lower mean match to e18 and e20 items (2,2).

The lower standard deviation is e11 (0,701) and the higher SD is e17 (1,503).

In terms of frequency, the items best placed with 4 or 5 are e7 (65,4%) and e11 (82,1%). The worst items with 1 or 2 are e16 (50,6%) and e18 (47,5%).

**TABLE 5. MEAN AND SD COMPARISON**

	Mean	SD
Continente	3,1	0,098
EDP	2,9	0,084
Vodafone	3,1	0,174
<b>Total</b>	<b>3,0</b>	<b>0,133</b>

Source: By the author according to the SPSS output

The means extracted from the descriptive statistic analysis reveal that the best positioned is Continente once has less variability. On the other hand, EDP shows the lowest

mean but also the lowest standard deviation. In global terms, the results show that consumers have a relatively positive perception of this construct for these brands.

### 5.2.2 Brand Personality

Personality was measured by fifteen items. The results can be consulted in the following tables.

**TABLE 6. DESCRIPTIVE STATISTICS OF CONTINENTE BRAND PERSONALITY**

	Mean	SD	Frequency %				
			1	2	3	4	5
P1: The marketing campaign of Continente is strong.	4,1	0,868	2	1,3	17,9	44,4	34,4
P2: The marketing campaign of Continente is dynamic	3,9	0,865	2	2,6	21,2	49	25,2
P3: Continente is aggressive in their marketing campaign	3	1,221	13,2	19,9	29,1	25,2	12,6
P4: Contiente is tough to overcome.	3,1	1,001	4,6	26,5	31,8	31,1	6
P5: Continente is innovative.	3,6	0,835	2,6	4	35,8	47	10,6
P6: Continente is always up to date.	3,7	0,893	2,6	6	25,2	51	15,2
P7: Continente makes me feel sentimental.	2,2	1,031	33,1	30,5	25,8	9,3	1,3
P8: For using Continente I feel that everybody accepts me.	2,3	1,102	33,1	21,2	32,5	11,3	2
P9: I think Continente is charming.	3,5	0,916	4	6	37,7	41,1	11,3
P10: I consider Continente honest.	3,1	0,982	6	14,6	47,7	22,5	9,3
P11: I feel safe when I bought any product of Continente.	3,6	0,860	1,3	5,3	43,7	34,4	15,2
P12: I see Continente as reliable for me.	3,6	0,829	1,3	4	39,1	41,1	14,6
P13: Continente is dynamic.	3,5	0,815	2	5,3	39,1	44,4	9,3
P14: Contiente is ordinary in values it transmits.	3,2	0,752	2,6	6,6	60,3	25,8	4,6
P15: I feel secure when I consume something from Continente.	3,4	0,845	2,6	6	46,4	35,8	9,3
<b>TOTAL</b>	<b>3,3</b>	<b>0,124</b>					

Source: By the author according to the SPSS output

Regarding Continente, the total mean is close of the majority individual means. The higher mean is 4,1 which correspond to P1 item. The lower mean is 2,2 corresponding to the P7 item.

The lower standard deviation is P14 (0,752) and the higher SD is P3 (1,221).

In terms of frequency, the items best placed with 4 or 5 are P1 (78,8%) and P2 (74,2%). The worst items with 1 or 2 are P7 (63,6%) and P8 (54,3%).

**TABLE 7. DESCRIPTIVE STATISTICS OF EDP BRAND PERSONALITY**

	Mean	SD	Frequency %				
			1	2	3	4	5
P1: The marketing campaign of EDP is strong.	3,9	0,761	1	4	13,1	62,6	19,2
P2: The marketing campaign of EDP is dynamic	3,8	0,915	2	7,1	20,2	50,5	20,2
P3: EDP is aggressive in their marketing campaign	3,1	1,093	8,1	19,2	38,4	23,2	11,1
P4: EDP is tough to overcome.	3,3	1,199	13,1	9,1	24,2	41,4	12,1
P5: EDP is innovative.	3,7	0,960	3	7,1	29,3	42,4	18,2
P6: EDP is always up to date.	3,6	0,871	3	7,1	29,3	51,5	9,1
P7: EDP makes me feel sentimental.	2,3	1,113	33,3	15,2	42,4	5,1	4
P8: For using EDP I feel that everybody accepts me.	2,4	1,077	28,3	17,2	45,5	5,1	4
P9: I think EDP is charming.	3,3	0,974	5,1	14,1	33,3	40,4	7,1
P10: I consider EDP honest.	2,7	1,176	20,2	21,2	28,3	26,3	4
P11: I feel safe when I bought any product of EDP.	3,4	0,896	5,1	6,1	44,4	37,4	7,1
P12: I see EDP as reliable for me.	3,4	0,959	5,1	10,1	30,3	46,5	8,1
P13: EDP is dynamic.	3,5	0,873	2	9,1	32,3	46,5	10,1
P14: V EDP is ordinary in values it transmits.	3	0,769	6,1	7,1	71,7	11,1	4
P15: I feel secure when I consume something from EDP.	3,3	0,881	4	9,1	42,4	38,4	6,1
<b>TOTAL</b>	<b>3,2</b>	<b>0,137</b>					

Source: By the author according to the SPSS output

Regarding EDP, the total mean is close of the majority individual means. The higher mean is 3,9 which correspond to P1 item. The lower mean is 2,3 corresponding to the P7 item.

The lower standard deviation is P1 (0,761) and the higher SD is P4 (1,199).

In terms of frequency, the items best placed with 4 or 5 are P1 (81,8%) and P2 (70,7%). The worst items with 1 or 2 are P7 (48,5%) and P8 (45,5%).

**TABLE 8. DESCRIPTIVE STATISTICS OF VODAFONE BRAND PERSONALITY**

	Frequency %						
	Mean	SD	1	2	3	4	5
P1: The marketing campaign of Vodafone is strong.	3,7	0,834	0,6	2,5	45,7	32,1	19,1
P2: The marketing campaign of Vodafone is dynamic	3,6	0,846	0,6	3,7	49,4	28,4	17,9
P3: Vodafone is aggressive in their marketing campaign	3,2	0,875	4,3	9,3	59,9	17,9	8,6
P4: Vodafone is tough to overcome.	3,5	1,029	7,4	8,6	20,4	54,3	9,3
P5: Vodafone is innovative.	3,6	0,869	1,9	3,1	47,5	30,9	16,7
P6: Vodafone is always up to date.	3,6	0,820	1,2	1,9	46,9	34	16
P7: Vodafone makes me feel sentimental.	2,5	0,900	19,8	17,3	58,6	2,5	1,9
P8: For using Vodafone I feel that everybody accepts me.	2,7	1,010	17,9	15,4	53,7	8,6	4,3
P9: I think Vodafone is charming.	3,5	0,813	1,2	3,7	51,2	30,9	13
P10: I consider Vodafone honest.	3,2	0,807	3,1	6,8	64,2	17,9	8
P11: I feel safe when I bought any product of Vodafone.	3,3	0,864	2,5	9,3	53,7	24,7	9,9
P12: I see Vodafone as reliable for me.	3,5	0,812	0,6	6,8	50,6	30,2	11,7
P13: Vodafone is dynamic.	3,5	0,749	0,6	1,2	54,3	31,5	12,3
P14: Vodafone is ordinary in values it transmits.	3,2	0,603	0,6	3,1	73,5	18,5	4,3
P15: I feel secure when I consume something from Vodafone.	3,4	0,769	1,2	5,6	58	26,5	8,6
<b>TOTAL</b>	<b>3,3</b>	<b>0,101</b>					

Source: By the author according to the SPSS output

Regarding Vodafone, the total mean is close of the majority individual means. The higher mean is 3,7 which correspond to P1 item. The lower mean is 2,5 corresponding to the P7 item.

The lower standard deviation is P14 (0,603) and the higher SD is P4 (1,129).

In terms of frequency, the items best placed with 4 or 5 are P4 (63,6%) and P6 (50%). The worst items with 1 or 2 are P7 (37,1%) and P8 (33,3%).

**TABLE 9. MEAN AND SD COMPARISON**

	Mean	SD
Continente	3,3	0,124
EDP	3,2	0,137
Vodafone	3,3	0,101
<b>Total</b>	<b>3,3</b>	<b>0,130</b>

Source: By the author according to the SPSS output

The means extracted from the descriptive statistic analysis reveal that the best positioned is Vodafone once has less variability. On the other hand, EDP shows the lowest mean and the higher standard deviation. In global terms, the results show that consumers have a relatively positive perception of this construct for these brands.

### 5.2.3 Brand Loyalty

Brand loyalty was measured by seven items that can be consulted in the following tables.

**TABLE 10. DESCRIPTIVE STATISTICS OF CONTINENTE BRAND LOYALTY**

	Mean	SD	Frequency %				
			1	2	3	4	5
L1: The quality of Continente is extremely high	3,5	0,781	0,7	8,6	33,8	49,7	7,3
L2: Continente would be my first choice.	3,0	1,249	13,9	21,2	26,5	25,2	13,2
L3: I consider myself to be loyal to Continente.	2,6	1,214	23,2	23,8	25,2	22,5	5,3
L4: Next time I will choose Continente.	2,9	1,168	13,9	20,5	31,8	25,2	8,6
L5: How likely is it that you will buy products from Continente in the future?	3,7	0,955	1,3	10,6	26,5	41,7	19,9
L6: I will switch to other brands if I experience a problem with Continente.	3,5	1,131	4,6	11,3	40,4	17,9	25,8
L7: I will recommend Continente to someone who seeks my advice.	3,2	0,986	6	11,9	46,4	25,8	9,9
<b>TOTAL</b>	<b>3,2</b>	<b>0,168</b>					

Source: By the author according to the SPSS output

Concerning Continente, the total mean is close of the majority individual means. The higher mean is 3,7 which correspond to L5 item. The lower mean is 3,0 corresponding to the L2 item.

The lower standard deviation is L1 (0,781) and the higher SD is L2 (1,249).

In terms of frequency, the items best placed with 4 or 5 are L1 (57%) and L5 (61,6%). The worst items with 1 or 2 are L2 (35,1%) and L3 (47%).

**TABLE 11. DESCRIPTIVE STATISTICS OF EDP BRAND LOYALTY**

	Mean	SD	Frequency %				
			1	2	3	4	5
L1: The quality of EDP is extremely high	3,4	0,896	4	12,1	32,3	47,5	4
L2: EDP would be my first choice.	3,2	1,214	14,1	9,1	31,3	32,3	13,1
L3: I consider myself to be loyal to EDP.	3,0	1,169	16,2	9,1	37,4	29,3	8,1
L4: Next time I will choose EDP.	3,1	1,079	10,1	12,1	40,4	28,3	9,1
L5: How likely is it that you will buy products from EDP in the future?	3,3	1,020	8,1	6,1	40,4	35,4	10,1
L6: I will switch to other brands if I experience a problem with EDP.	3,3	1,036	6,1	10,1	50,5	18,2	15,2
L7: I will recommend EDP to someone who seeks my advice.	2,8	1,047	13,1	18,2	46,5	16,2	6,1
<b>TOTAL</b>	<b>3,2</b>	<b>0,104</b>					

Source: By the author according to the SPSS output

Relating to EDP, the total mean is close of the majority individual means. The higher mean is 3,4 which correspond to L1 item. The lower mean is 2,8 corresponding to the L7 item.

The lower standard deviation is L1 (0,896) and the higher SD is L2 (1,214).

In terms of frequency, the items best placed with 4 or 5 are L1 (51,5%) and L5 (45,5%). The worst items with 1 or 2 are L3 (25,3%) and L7 (31,3%).

These results show that the item L1 is better perceived than the others from the consumer's point of view.

**TABLE 12. DESCRIPTIVE STATISTICS OF VODAFONE BRAND LOYALTY**

	Mean	SD	Frequency %				
			1	2	3	4	5
L1: The quality of Vodafone is extremely high	3,4	0,778	0,6	6,2	53,7	29,6	9,9
L2: Vodafone would be my first choice.	3,0	1,351	9,3	40,7	13	14,8	22,2
L3: I consider myself to be loyal to Vodafone	3,1	1,152	13	9,3	46,9	17,3	13,6
L4: Next time I will choose Vodafone.	3,2	1,095	9,9	5,6	51,2	17,9	15,4
L5: How likely is it that you will buy products from Vodafone in the future?	3,5	1,040	5,6	4,3	49,4	20,4	20,4
L6: I will switch to other brands if I experience a problem with Vodafone	3,5	1,070	3,7	8,6	49,4	13,6	24,7
L7: I will recommend Vodafone to someone who seeks my advice	3,2	0,983	7,4	6,2	51,9	24,1	10,5
<b>TOTAL</b>	<b>3,3</b>	<b>0,173</b>					

Source: By the author according to the SPSS output

Relating to Vodafone, the total mean is close of the majority individual means. The higher mean is 3,5 which correspond to L1 item. The lower mean is 3,0 corresponding to the L2 item.

The lower standard deviation is L1 (0,778) and the higher SD is L2 (1,351).

In terms of frequency, the items best placed with 4 or 5 are L1 (53,9%) and L5 (40,8%). The worst items with 1 or 2 are L2 (50%) and L3 (22,3%).

**TABLE 13. MEAN AND SD COMPARISON**

	Mean	SD
Continente	3,2	0,168
EDP	3,2	0,104
Vodafone	3,3	0,173
<b>Total</b>	<b>3,2</b>	<b>0,144</b>

Source: By the author according to the SPSS output

The means extracted from the descriptive statistic analysis reveal that the best positioned is Vodafone. Spite has the higher standard deviation also has the higher mean. On the other hand, comparing Continente with EDP the table 13 shows that in global terms EDP is better positioned. In global terms, the results show that consumers have a relatively positive perception of this construct for these brands.

#### 5.2.4 Brand Trust

Brand trust was evaluated by five items as presented in the following tables.

**TABLE 14. DESCRIPTIVE STATISTICS OF CONTINENTE BRAND TRUST**

	Mean	SD	Frequency %				
			1	2	3	4	5
T1: My overall trust in the products of Continente is high.	3,7	0,773	0,7	5,3	29,1	53,0	11,9
T2: Continente seems to be very helpful with regard to the interests of consumers.	3,4	0,917	3,3	12,6	32,5	44,4	7,3
T3: I consider the company and people who stand behind Continente to be very trustworthy.	3,4	0,857	2,6	8,6	43,0	37,7	7,9
T4: I believe that Continente does not take advantage of consumers.	2,7	1,083	15,9	25,2	37,7	15,9	5,3
T5: I have more confidence on the products of Continente than in their competitor's products.	2,9	1,080	10,6	23,8	35,1	23,8	6,6
<b>TOTAL</b>	<b>3,2</b>	<b>0,137</b>					

Source: By the author according to the SPSS output

In the case of Continente the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,7 in the item T1 which correspond to the brand overall trust. On the other hand, the lower mean match to T4 (2,7).

The lower standard deviation is T1 (0,773) and the higher SD is T4 (1,083).

In terms of frequency, the items best placed with 4 or 5 are T1 (64,9%) and T2 (51,7%).The worst items with 1 or 2 are T4 (41,1%) and T5 (34,4%).

These results show that T1 is the item best perceived by consumers and, in contrast T4 is the worst perceived in the consumers mind.

**TABLE 15. DESCRIPTIVE STATISTICS OF EDP BRAND TRUST**

	Mean	SD	Frequency %				
			1	2	3	4	5
T1: My overall trust in the products of EDP is high.	3,3	0,951	5,1	17,2	28,3	46,5	3,0
T2: EDP seems to be very helpful with regard to the interests of consumers.	2,9	1,223	18,2	17,2	24,2	34,3	6,1
T3: I consider the company and people who stand behind EDP to be very trustworthy.	3,2	1,000	8,1	13,1	33,3	41,4	4,0
T4: I believe that EDP does not take advantage of consumers.	2,5	1,155	26,3	20,2	38,4	9,1	6,1
T5: I have more confidence on the products of EDP.	3,3	0,965	7,1	7,1	40,4	38,4	7,1
<b>TOTAL</b>	<b>3,0</b>	<b>0,123</b>					

Source: By the author according to the SPSS output

In the case of EDP the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,3 in the items T1 and T5 which correspond to the brand overall trust and to the products confidence. On the other hand, the lower mean match to T4 (2,5).

The lower standard deviation is T1 (0,951) and the higher SD is T2 (1,223).

In terms of frequency, the items best placed with 4 or 5 are T1 (49,5%) and T3 (45,4%).The worst items with 1 or 2 are T2 (35,4%) and T4 (46,5%).

These results show that T1 is the item best perceived by consumers and, in contrast T4 is the worst perceived in the consumers mind.



**TABLE 16. DESCRIPTIVE STATISTICS OF VODAFONE BRAND TRUST**

	Mean	SD	Frequency %				
			1	2	3	4	5
T1: My overall trust in the products of Vodafone is high.	3,6	0,848	1,9	7,4	27,8	51,9	11,1
T2: Vodafone seems to be very helpful with regard to the interests of consumers.	3,3	0,833	2,5	6,8	55,6	25,9	9,3
T3: I consider the company and people who stand behind Vodafone to be very trustworthy.	3,0	1,072	2,5	38,9	22,8	25,9	9,9
T4: I believe that Vodafone does not take advantage of consumers.	3,0	0,884	8,0	11,1	63,0	12,3	5,6
T5: I have more confidence on the products of Vodafone than in their competitor's products.	3,2	1,014	7,4	8,6	53,1	18,5	12,3
<b>TOTAL</b>	<b>3,2</b>	<b>0,107</b>					

Source: By the author according to the SPSS output

In the case of Vodafone the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,6 in the item T1 which correspond to the brand overall trust. On the other hand, the lower mean match to T3 and T4 (3,0).

The lower standard deviation is T2 (0,833) and the higher SD is T3 (1,072).

In terms of frequency, the items best placed with 4 or 5 is T1 (63%) and T3 (45,4%). The worst item with 1 or 2 is T2 (41,4%).

These results show that T3, which match to the trustworthiness of Vodafone staff is the worst perceived in the consumer's mind.

**TABLE 17. MEAN AND SD COMPARISON**

	Mean	SD
Continente	3,2	0,137
EDP	3,0	0,123
Vodafone	3,2	0,107
<b>Total</b>	<b>3,2</b>	<b>0,129</b>

Source: By the author according to the SPSS output

The means extracted from the descriptive statistic analysis reveal that the best positioned is Vodafone with higher mean and lower standard deviation. Alternatively, in global terms EDP is worst placed. The results show that consumers have a relatively positive perception of this construct for these brands.

### 5.2.5 Brand Awareness

Brand awareness was evaluated in four items as show in the following tables.

**TABLE 18. DESCRIPTIVE STATISTICS OF CONTINENTE BRAND AWARENESS**

	Mean	SD	Frequency %				
			1	2	3	4	5
Aw1: Some characteristics of Continente come quickly to my mind.	3,3	1,073	6,6	15,2	33,1	33,1	11,9
Aw2: I can recognize Continente among other competitors.	3,5	0,957	4,0	7,3	33,1	41,7	13,9
Aw3: I can quickly recall the symbol or logo of Continente.	4,2	0,870	1,3	2,0	14,6	35,8	46,4
Aw4: I am difficulty of imagine Continente in my mind.	2,0	1,046	43,0	25,2	23,8	6,0	2,0
<b>TOTAL</b>	<b>3,3</b>	<b>0,092</b>					

Source: By the author according to the SPSS output

Considering Continente the majority of individual means are close in value to the total mean. The higher percentage of mean was 4,2 in the item Aw3 which correspond to the brand recall. On the other hand, the lower mean match to Aw4 (2,0).

The lower standard deviation is Aw3 (0,870) and the higher SD is Aw1 (1,073).

In terms of frequency, the item best placed with 4 or 5 is Aw3 (82,2%). The worst item with 1 or 2 is Aw4 (68,2%).

These results show that Aw3, is the best perceived by consumers.

**TABLE 19. DESCRIPTIVE STATISTICS OF EDP BRAND AWARENESS**

	Mean	SD	Frequency %				
			1	2	3	4	5
Aw1: Some characteristics of EDP come quickly to my mind.	3,4	1,052	6,1	11,1	28,3	41,4	13,1
Aw2: I can recognize EDP wherever I am.	3,6	1,002	6,1	6,1	26,3	48,5	13,1
Aw3: I can quickly recall the symbol or logo of EDP.	4,0	0,915	3,0	3,0	14,1	50,5	29,3
Aw4: I am difficulty of imagine EDP in my mind.	2,5	1,034	22,2	23,2	42,4	9,1	3,0
<b>TOTAL</b>	<b>3,4</b>	<b>0,061</b>					

Source: By the author according to the SPSS output

Considering EDP the majority of individual means are close in value to the total mean. The higher percentage of mean was 4,0 in the item Aw3 which correspond to the brand recall. On the other hand, the lower mean match to Aw4 (2,5).

The lower standard deviation is Aw3 (0,915) and the higher SD is Aw1 (1,052).

In terms of frequency, the item best placed with 4 or 5 is Aw3 (79,8%). The worst item with 1 or 2 is Aw4 (45,4%).

These results show that Aw3, is the best perceived by consumers.

**TABLE 20. DESCRIPTIVE STATISTICS OF VODAFONE BRAND AWARENESS**

	Mean	SD	Frequency %				
			1	2	3	4	5
Aw1: Some characteristics of Vodafone come quickly to my mind.	3,3	0,960	4,3	7,4	52,5	21,6	14,2
Aw2: I can recognize Vodafone among other competitors.	3,3	1,192	0,6	38,3	17,3	22,8	21,0
Aw3: I can quickly recall the symbol or logo of Vodafone.	3,9	0,935	0,6	1,2	40,7	21,0	36,4
Aw4: I am difficulty of imagine Vodafone in my mind.	2,4	0,947	24,7	19,1	50,6	4,3	1,2
<b>TOTAL</b>	<b>3,2</b>	<b>0,123</b>					

Source: By the author according to the SPSS output

Considering Vodafone the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,9 in the item Aw3 which correspond to the brand recall. On the other hand, the lower mean match to Aw4 (2,4).

The lower standard deviation is Aw3 (0,935) and the higher SD is Aw2 (1,192).

In terms of frequency, the item best placed with 4 or 5 is Aw3 (57,4%). The worst item with 1 or 2 is Aw4 (43,8%).

These results show that Aw3, is the best perceived by consumers.

**TABLE 21. MEAN AND SD COMPARISON**

	Mean	SD
Continente	3,3	0,092
EDP	3,4	0,061
Vodafone	3,2	0,123
<b>Total</b>	<b>3,5</b>	<b>0,087</b>

Source: By the author according to the SPSS output

The means extracted from the descriptive statistic analysis reveal that the best positioned is EDP with higher mean and lower standard deviation. Alternatively, in global terms, Vodafone is worst placed. In general, the results show that consumers have a relatively positive perception of this construct for these brands.

## 5.2.6 Brand Association

Brand association was evaluated by five items which can be seen in the subsequent tables.

**TABLE 22. DESCRIPTIVE STATISTICS OF CONTINENTE BRAND ASSOCIATION**

	Mean	SD	Frequency %				
			1	2	3	4	5
As1: I think Contинente manufacture method is modern.	3,4	0,769	2,0	7,9	46,4	39,7	4,0
As2: Contинente has a professional and well trained staff.	3,6	0,801	0,7	4,6	41,7	39,7	13,2
As3: Contинente uses a modern design in their products.	3,6	0,900	4,0	4,6	28,5	51,0	11,9
As4: Contинente has good interaction with customers.	3,5	0,822	2,0	3,3	44,4	38,4	11,9
As5: Contинente has great innovative ability.	3,5	0,886	3,3	7,3	36,4	43,7	9,3
<b>TOTAL</b>	<b>3,5</b>	<b>0,056</b>					

Source: By the author according to the SPSS output

Considering Contинente the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,6 in the item As3 which correspond to design. On the other hand, the lower mean match to As1 (3,4).

The lower standard deviation is As1 (0,769) and the higher SD is As3 (0,900).

In terms of frequency, the item best placed with 4 or 5 is As3 (62,9%). The worst item with 1 or 2 is As5 (10,6%).

These results show that As3, spite having the higher standard deviation has the higher mean and the higher percentage in frequency 4 or 5. So, it is the best perceived by consumers.

**TABLE 23. DESCRIPTIVE STATISTICS OF EDP BRAND ASSOCIATION**

	Mean	SD	Frequency %				
			1	2	3	4	5
As1: I think EDP manufacture method is modern	3,5	0,896	4,0	5,1	37,4	43,4	10,1
As2: EDP has a professional and well trained staff.	3,5	0,861	4,0	4,0	36,4	47,5	8,1
As3: EDP uses a modern design in their products.	3,7	0,849	3,0	3,0	24,2	55,6	14,1
As4: EDP has good interaction with customers.	3,3	0,998	7,1	12,1	33,3	41,4	6,1
As5: EDP has great innovative ability.	3,6	0,867	3,0	6,1	28,3	52,5	10,1
<b>TOTAL</b>	<b>3,5</b>	<b>0,031</b>					

Source: By the author according to the SPSS output

Taking into account EDP the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,7 in the item As3 which correspond to design. On the other hand, the lower mean match to As4 (3,3).

The lower standard deviation is As1 (0,849) and the higher SD is As4 (0,998).

In terms of frequency, the item best placed with 4 or 5 is As3 (69,7%). The worst item with 1 or 2 is As4 (19,2%).

These results show that there is a consistence in the item As3, among the results. As3 is the item with best mean, lower standard deviation and best placed in frequency 4 or 5. Alternatively, As4 has the worst mean, the higher standard deviation and is the better positioned in frequency 1 or 2. The results show a clear difference between these two items, placing one better perceived than the other.

**TABLE 24. DESCRIPTIVE STATISTICS OF VODAFONE BRAND ASSOCIATION**

	Mean	SD	Frequency %				
			1	2	3	4	5
As1: I think Vodafone manufacture method is modern.	3,2	1,061	0,6	35,2	24,7	27,2	12,3
As2: Vodafone has a professional and well trained staff.	3,1	1,076	1,2	37,0	20,4	30,2	11,1
As3: Vodafone uses a modern design in their models.	3,7	0,820	0,6	1,9	46,9	32,1	18,5
As4: Vodafone has good interaction with customers.	3,5	0,731	0,6	3,1	56,2	30,9	9,3
As5: Vodafone has great innovative ability.	3,4	0,953	1,2	16,7	37,7	31,5	13,0
<b>TOTAL</b>	<b>3,4</b>	<b>0,151</b>					

Source: By the author according to the SPSS output

Taking Vodafone into consideration the majority of individual means are close in value to the total mean. The higher percentage of mean was 3,7 in the item As3 which correspond to design. On the other hand, the lower mean match to As2 (3,1).

The lower standard deviation is As4 (0,731) and the higher SD is As2 (1,076%).

In terms of frequency, the item best placed with 4 or 5 is As3 (50,6%). The worst item with 1 or 2 is As2 (38,2%).

These results show that As2 is the worst item classified by consumers. It has the lower mean, the higher variance and the higher frequency on 1 or 2.

**TABLE 25. MEAN AND SD COMPARISON**

	Mean	SD
Continente	3,5	0,056
EDP	3,5	0,031
Vodafone	3,4	0,151
<b>Total</b>	3,5	0,100

Source: By the author according to the SPSS output

The means extracted from the descriptive statistic analysis reveal that the best positioned is EDP with higher mean and lower standard deviation. Alternatively, in global terms, Vodafone is worst placed. In general, the results show that consumers have a relatively positive perception of this construct for these brands.

### 5.3 Factor analysis

In this part the factor analysis results are presented. Each construct of the conceptual model were analyzed independently.

#### 5.3.1 Equity factor analysis

The value of KMO (0,943) and the Bartlett's Test of Sphericity (6961,945; sig.0,,000) reveal a good correlation among variables, which allow to realize the factor analysis. The principal components extraction method indicates the presence of 3 components. These explain 63,308% of total variance (Table 26). Component 1 accounts for 47,475%, component 2 accounts for 11,019 and component 3 accounts for 4,813% the variance.

**TABLE 26. TOTAL VARIANCE EXPLAINED: EQUITY FACTOR ANALYSIS**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11,394	47,475	47,475	11,394	47,475	47,475
2	2,645	11,019	58,495	2,645	11,019	58,495
3	1,155	4,813	63,308	1,155	4,813	63,308
4	0,996	4,150	67,458			
5	0,761	3,173	70,630			
6	0,706	2,943	73,574			
7	0,624	2,599	76,173			
8	0,604	2,518	78,691			
9	0,511	2,129	80,820			
10	0,472	1,968	82,787			
11	0,422	1,760	84,548			
12	0,417	1,738	86,285			
13	0,388	1,618	87,903			
14	0,371	1,547	89,450			
15	0,356	1,483	90,933			
16	0,334	1,393	92,326			
17	0,313	1,305	93,632			
18	0,294	1,226	94,858			
19	0,263	1,098	95,956			
20	0,249	1,038	96,994			
21	0,233	,969	97,964			
22	0,194	0,810	98,773			
23	0,154	0,643	99,417			
24	0,140	0,583	100,000			
<b>Extraction Method: Principal Component Analysis.</b>						

Source: By the author according to the SPSS output

In Table 27, it can be seen that all communalities are higher than 0.4, the lowest being item e11 (0,458). In the Varimax rotation with Kaiser Normalization, 3 components were extracted. Component 1 reflects service quality, component 2 represents attachment and component 3 depicts self-congruence. The item e11 has a low loading being similar in the 3 components. Despite do not have a significant influence in the results, was eliminated.

**TABLE 27. ROTATED COMPONENT MATRIX: EQUITY FACTOR ANALYSIS**

Rotated Component Matrix <sup>a</sup>					
Factor Dimension	Item	Communalities	Component		
			1	2	3
SERVICE QUALITY	e2	0,567	<b>0,686</b>	0,089	0,298
	e4	0,613	<b>0,717</b>	0,174	0,261
	e5	0,499	<b>0,595</b>	0,315	0,214
	e6	0,540	<b>0,646</b>	-0,021	0,349
	e8	0,539	<b>0,715</b>	0,096	0,136
	e12	0,533	<b>0,593</b>	0,311	0,289
	e13	0,608	<b>0,599</b>	0,430	0,253
	e15	0,644	<b>0,737</b>	0,259	0,185
	e16	0,596	<b>0,663</b>	0,297	0,261
	e17	0,717	<b>0,833</b>	-0,126	0,083
ATTACHMENT	e9	0,686	0,316	<b>0,474</b>	0,600
	e10	0,652	0,050	<b>0,689</b>	0,418
	<b>e11<sup>b</sup></b>	<b>0,458</b>	<b>0,410</b>	<b>0,432</b>	<b>0,321</b>
	e14	0,646	0,476	<b>0,562</b>	0,323
	e18	0,762	-0,092	<b>0,839</b>	0,223
	e19	0,605	0,331	<b>0,589</b>	0,386
	e20	0,703	-0,073	<b>0,817</b>	0,174
	e21	0,676	0,371	<b>0,644</b>	0,351
	e22	0,709	0,577	<b>0,606</b>	0,092
	e23	0,698	0,558	<b>0,620</b>	0,045
	e24	0,602	0,421	<b>0,651</b>	-0,025
SELF -CONGRUENCE	e1	0,695	0,357	0,179	<b>0,732</b>
	e3	0,738	0,318	0,224	<b>0,766</b>
	e7	0,709	0,252	0,474	<b>0,649</b>

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization  
 a. Rotation converged in 6 iterations  
 b. Item eliminated

Source: By the author according to the SPSS output

In table 28 it can be seen that the elimination of item e11 only altered the item e9 from component 2 to the component 3. It makes sense once the content of the item fits better in the last component.



**TABLE 28. ROTATED COMPONENT MATRIX: EQUITY FACTOR ANALYSIS (2)**

Rotated Component Matrix <sup>a</sup>				
Factor Dimension	Item	Component		
		1	2	3
Service Quality	e2	<b>0,687</b>	0,087	0,299
	e4	<b>0,718</b>	0,170	0,258
	e5	<b>0,598</b>	0,316	0,215
	e6	<b>0,645</b>	-0,028	0,343
	e8	<b>0,715</b>	0,090	0,131
	e12	<b>0,595</b>	0,307	0,286
	e13	<b>0,601</b>	0,428	0,253
	e15	<b>0,737</b>	0,254	0,182
	e16	<b>0,667</b>	0,302	0,267
	e17	<b>0,834</b>	-0,125	0,086
Attachment	e10	0,053	<b>0,688</b>	0,418
	e14	0,478	<b>0,558</b>	0,320
	e18	-0,089	<b>0,839</b>	0,224
	e19	0,335	<b>0,589</b>	0,387
	e20	-0,069	<b>0,818</b>	0,177
	e21	0,375	<b>0,643</b>	0,351
	e22	0,580	<b>0,605</b>	0,091
	e23	0,561	<b>0,619</b>	0,044
Self-congruence	e1	0,360	0,180	<b>0,733</b>
	e3	0,321	0,225	<b>0,768</b>
	e7	0,255	0,472	<b>0,648</b>
	e9	0,320	0,474	<b>0,600</b>

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization  
 a. Rotation converged in 6 iterations

Source: By the author according to the SPSS output

The table 29 shows the internal consistency. All dimensions have a good internal consistency. The higher value is 0,912 (attachment) and the lower is 0,867 (self-congruence).

**TABLE 29. CRONBACH'S ALPHA**

Dimension	Cronbach's Alpha
Service quality	0,910
Attachment	0,912
Self-congruence	0,867

Source: By the author according to the SPSS output

### 5.3.2 Personality factor analysis

The value of KMO (0,928) and the Bartlett's Test of Sphericity (3923,117; sig.0,,000) reveal a good correlation among variables, which allow to realize the factor analysis. The principal components extraction method indicates the presence of 3 components. These explain 69,186% of total variance (Table 30). Component 1 accounts for 49,548%, component 2 accounts for 11,694 and component 3 accounts for 7,945% the variance.

**TABLE 30. TOTAL VARIANCE EXPLAINED: PERSONALITY FACTOR ANALYSIS**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7,432	49,548	49,548	7,432	49,548	49,548
2	1,754	11,694	61,242	1,754	11,694	61,242
3	1,192	7,945	69,186	1,192	7,945	69,186
4	0,744	4,963	74,149			
5	0,561	3,740	77,890			
6	0,529	3,525	81,415			
7	0,490	3,264	84,679			
8	0,396	2,639	87,318			
9	0,350	2,330	89,648			
10	0,326	2,172	91,821			
11	0,315	2,100	93,921			
12	0,264	1,757	95,678			
13	0,244	1,626	97,304			
14	0,218	1,451	98,755			
15	0,187	1,245	100,000			
<b>Extraction Method: Principal Component Analysis.</b>						

Source: By the author according to the SPSS output

In Table 31, it can be seen that all communalities are higher than 0.4, the lowest being item p14 (0,497). In the Varimax rotation with Kaiser Normalization, 3 components were extracted. Component 1 reflects reliable and component 2 represents dynamic and component 3 depict emotional connection. All items present factor loading that are superior to 0,5.

**TABLE 31. ROTATED COMPONENT MATRIX: PERSONALITY FACTOR ANALYSIS**

Rotated Component Matrix <sup>a</sup>					
Factor Dimension	Item	Communalities	Component		
			1	2	3
Reliable	p5	0,680	<b>0,522</b>	0,612	0,181
	p6	0,684	<b>0,613</b>	0,539	0,132
	p9	0,741	<b>0,764</b>	0,314	0,242
	p10	0,678	<b>0,742</b>	0,005	0,358
	p11	0,685	<b>0,797</b>	0,162	0,150
	p12	0,762	<b>0,823</b>	0,253	0,145
	p14	0,497	<b>0,536</b>	0,304	0,342
Dynamic	p15	0,753	<b>0,816</b>	0,210	0,205
	p1	0,759	0,357	<b>0,793</b>	-0,053
	p2	0,752	0,479	<b>0,722</b>	-0,035
	p3	0,666	-0,191	<b>0,748</b>	0,266
Emocional connection	p13	0,701	0,580	<b>0,600</b>	0,067
	p4	0,502	0,426	0,207	<b>0,527</b>
	p7	0,775	0,126	0,046	<b>0,870</b>
	p8	0,743	0,244	0,044	<b>0,826</b>

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
**a. Rotation converged in 8 iterations.**

Source: By the author according to the SPSS output

The table 32 shows the internal consistency. All dimensions have a good internal consistency. The higher value is 0,920 (reliable) and the lower is 0,749 (emotional connection).

**TABLE 32. CRONBACH'S ALPHA**

Dimension	Cronbach's Alpha
Reliable	0,920
Dynamic	0,789
Emocional connection	0,749

Source: By the author according to the SPSS output

### 5.3.3 Loyalty factor analysis

The factor analysis reveals a KMO of 0,889 and Bartlett's Test of Sphericity of 1769,759 (sig. 0.000). The principal components extraction method indicates the presence of 1 component. This explains 61,049% of total variance (Table 33).

**TABLE 33. TOTAL VARIANCE EXPLAINED: PERSONALITY FACTOR ANALYSIS**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,273	61,049	61,049	4,273	61,049	61,049
2	0,992	14,168	75,218			
3	0,631	9,019	84,237			
4	0,366	5,232	89,468			
5	0,322	4,604	94,072			
6	0,249	3,560	97,632			
7	0,166	2,368	100,000			
<b>Extraction Method: Principal Component Analysis.</b>						

Source: By the author according to the SPSS output

In Table 34, it can be seen that only communality L6 (0,022) is below than 0,4. Moreover, the value of communality to this item is below than 0,3. Due to that it was eliminated. In the extraction method Principal Component Analysis, only 1 component was extracted. All items present factor loading that are superior to 0,5.

**TABLE 34. COMPONENT MATRIX: LOYALTY FACTOR ANALYSIS**

Component Matrix <sup>a</sup>		
	Component	Communalities
	1	Extraction
<b>L1</b>	0,708	0,502
<b>L2</b>	0,868	0,754
<b>L3</b>	0,840	0,706
<b>L4</b>	0,897	0,804
<b>L5</b>	0,860	0,739
<b>L6</b>	-0,148	0,022
<b>L7</b>	0,864	0,746

Extraction Method: Principal Component Analysis.  
a. 1 components extracted.

Source: By the author according to the SPSS output

The table 35 shows the internal consistency. The dimension has a good internal consistency. The value of Cronbach's Alpha is 0,842.

**TABLE 35. CRONBACH' ALPHA**

Dimension	Cronbach's Alpha
Loyalty	0,842

Source: By the author according to the SPSS output

### 5.3.4 Trust factor analysis

The factor analysis reveals a KMO of 0.848 and Bartlett's Test of Sphericity of 715,187 (sig. 0.000). The principal components extraction method indicates the presence of 1 component. This explains 59,845% of total variance (Table 36).

**TABLE 36. TOTAL VARIANCE EXPLAINED: TRUST FACTOR ANALYSIS**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,992	59,845	59,845	2,992	59,845	59,845
2	0,638	12,752	72,597			
3	0,556	11,122	83,719			
4	0,452	9,037	92,756			
5	0,362	7,244	100,000			

Extraction Method: Principal Component Analysis.

Source: By the author according to the SPSS output

In Table 37, it can be seen that all communalities are higher than 0.4 the lowest being item T4 (0,505). In the extraction method Principal Component Analysis, only 1 component was extracted. All items present factor loading that are superior to 0,5.

**TABLE 37. COMPONENT MATRIX: TRUST FACTOR ANALYSIS**

Component Matrix <sup>a</sup>		
	Component	Communalities
	1	Extraction
T1	0,793	0,629
T2	0,820	0,673
T3	0,817	0,668
T4	0,710	0,505
T5	0,720	0,518

Extraction Method: Principal Component Analysis.  
a. 1 components extracted.

Source: By the author according to the SPSS output

The table 38 shows the internal consistency. The dimension has a good internal consistency. The value of Cronbach's Alpha is 0,828.

**TABLE 38. CRONBACH'S ALPHA**

Dimension	Cronbach's Alpha
Trust	0,828

Source: By the author according to the SPSS output

### 5.3.4 Awareness factor analysis

The factor analysis reveals a KMO of 0.650 and Bartlett's Test of Sphericity of 397,826 (sig. 0.000). The principal components extraction method indicates the presence of 1 component. This explains 53,936% of total variance (Table 39).

**TABLE 39. TOTAL VARIANCE EXPLAINED: AWARENESS FACTOR ANALYSIS**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,157	53,936	53,936	2,157	53,936	53,936
2	0,953	23,835	77,771			
3	0,563	14,064	91,835			
4	0,327	8,165	100,000			

**Extraction Method: Principal Component Analysis.**

Source: By the author according to the SPSS output

In Table 40, it can be seen that all communalities are higher than 0,4 except the item AW4 (0,196). In the extraction method Component Analysis, only 1 component was extracted. All items, excepting AW4 (-0,442), present factor loading that are superior to 0,5. Therefore, based on the criterion presented in the first part of this chapter (section 5.1 ), the item AW4 was eliminated.

**TABLE 40. COMPONENT MATRIX: AWARENESS FACTOR ANALYSIS**

Component Matrix <sup>a</sup>		
	Component	Communalities
	1	Extraction
<b>AW1</b>	0,714	0,510
<b>AW2</b>	0,820	0,673
<b>AW3</b>	0,882	0,779
<b>AW4</b>	-0,442	0,196

Extraction Method: Principal Component Analysis.  
a. 1 components extracted.

Source: By the author according to the SPSS output

The table 41 shows the internal consistency. The dimension has a good value of Cronbach's Alpha (0,760).

**TABLE 41. CRONBACH' ALPHA**

Dimension	Cronbach's Alpha
Awareness	0,760

Source: By the author according to the SPSS output

### 5.3.5 Association factor analysis

The factor analysis reveals a KMO of 0.833 and Bartlett's Test of Sphericity of 1131,647 (sig. 0.000). The principal components extraction method indicates the presence of 1 component. This explains 69,328% of total variance (Table 42).



**TABLE 42. TOTAL VARIANCE EXPLAINED. ASSOCIATION FACTOR ANALYSIS**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,466	69,328	69,328	3,466	69,328	69,328
2	0,496	9,918	79,246			
3	0,480	9,606	88,851			
4	0,321	6,423	95,275			
5	0,236	4,725	100,000			
<b>Extraction Method: Principal Component Analysis.</b>						

Source: By the author according to the SPSS output

In Table 43, it can be seen that all communalities are higher than 0.4 the lowest being item AS4 (0,657). In the extraction method Principal Component Analysis, only 1 component was extracted. All items present factor loading that are superior to 0,5.

**TABLE 43. COMPONENT MATRIX: ASSOCIATIONN FACTOR ANALYSIS**

Component Matrix <sup>a</sup>		
	Component	Communalities
	1	Extraction
AS1	0,831	0,691
AS2	0,821	0,673
AS3	0,847	0,718
AS4	0,810	0,657
AS5	0,853	0,728

Extraction Method: Principal Component Analysis.  
a. 1 component extracted.

Source: By the author according to the SPSS output

The table 44 shows the internal consistency. The dimension has a good internal consistency. The value of Cronbach's Alpha is 0,889.

**TABLE 44. CRONBACH' ALPHA**

Dimension	Cronbach's Alpha
Association	0,889

Source: By the author according to the SPSS output

## 5.4 Regression analysis

In this section, the results from regression analysis are presented. In this vein, eight multiple regression were performed.

### 5.4.1 Global Regressions

This section presents data from the global equity, from the standpoint of the sample.

The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 45, all tolerance values are superior to 0.1 and all VIF values are inferior to 10. Given the sample size, the Durbin-Watson value was inconclusive.

The dependent variable (equity) can be explained in 87% by the independent variables. The only factor dimension that do not present statistically significant coefficient is Awareness. The statistically significant variables have a positive effect on Equity excepting Association. Personality has the highest impact, whereas Loyalty has the lowest. A visualization of this analysis can be seen in Figure 10, which presents the Beta value of the standardized coefficients.

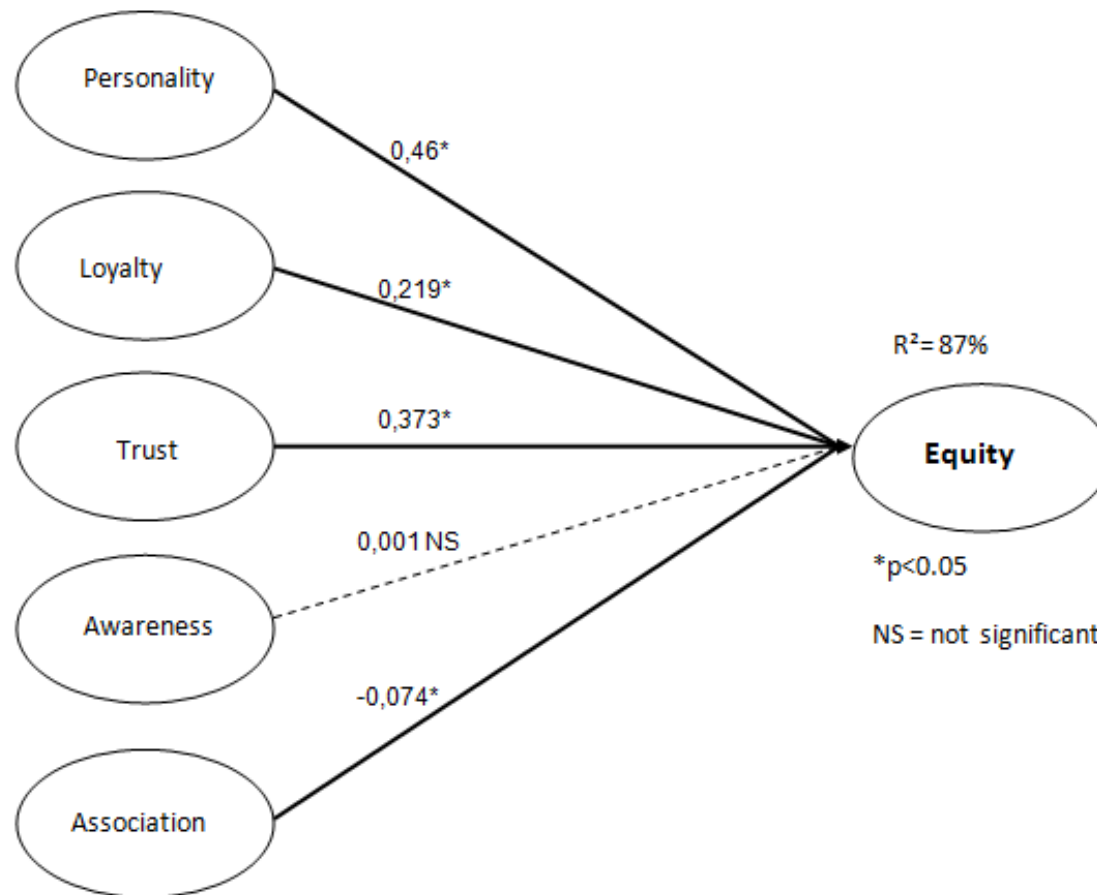
**TABLE 45. GLOBAL REGRESSION ANALYSIS**

		Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
		B	Beta					Tolerance	VIF
<b>1</b>	<b>(Constant)</b>	-0,082		-1,173	0,242	87%	570,537 (0,000)	1,761	
	<b>Personality</b>	0,503	0,460	9,955	0,000				0,144 6,968
	<b>Loyalty</b>	0,232	0,219	6,822	0,000				0,297 3,363
	<b>Trust</b>	0,332	0,373	10,809	0,000				0,258 3,883
	<b>Awareness</b>	0,001	0,001	0,031	0,976				0,411 2,432
	<b>Association</b>	-0,067	-0,074	-2,346	0,019				0,308 3,246

a. Dependent Variable: equity

Source: By the author according to the SPSS output

FIGURE 10. GLOBAL REGRESSION



Source: By the author according to the SPSS output

### 5.4.2 Contiente Regressions

The following results were concerned about Contiente global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 46, all tolerance values are superior to 0.1 and all VIF values are inferior to 10, demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson value revealed the inexistence of autocorrelation.

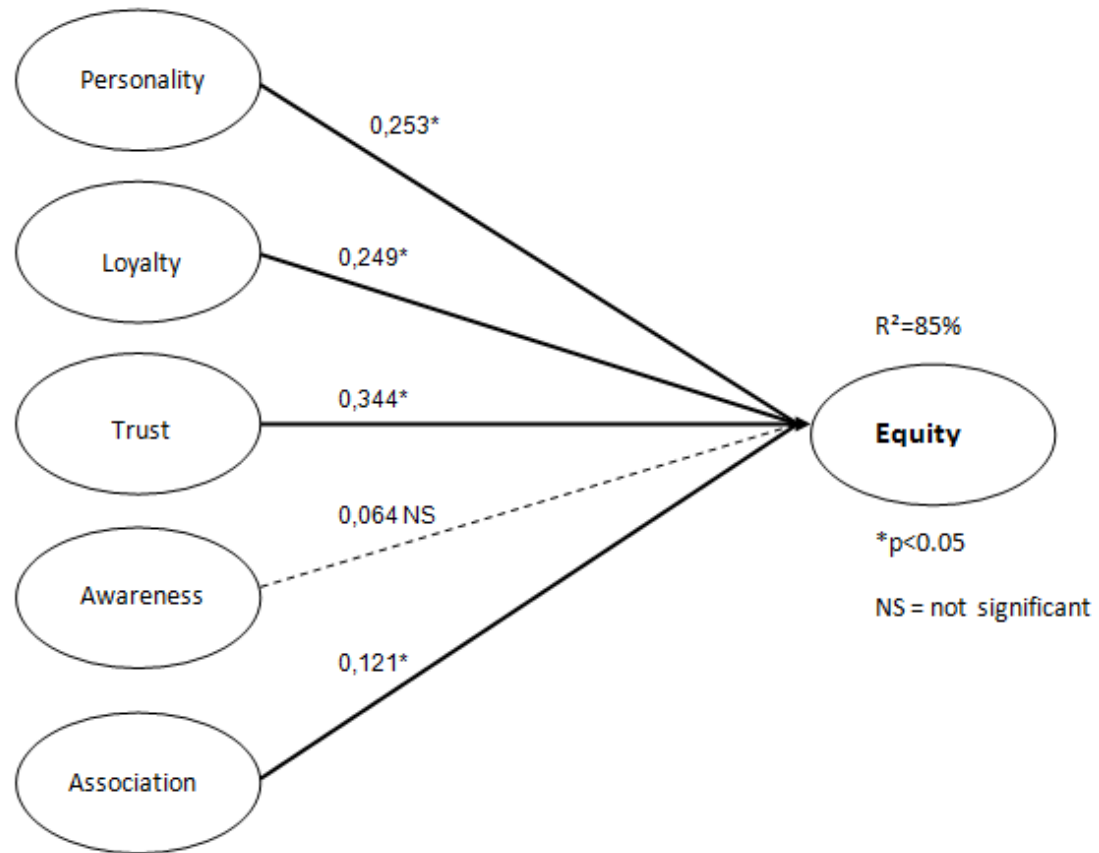
The dependent variable (equity) can be explained in 85% by the independent variables. The statistically significant variables all have a positive effect on Equity. The only factor dimension that do not present statistically significant coefficient is Awareness. Trust has the highest impact, whereas Association has the lowest. A visualization of this analysis can be seen in Figure 11, which presents the Beta value of the standardized coefficients.

**TABLE 46. CONTINENTE REGRESSIONS**

Model	Coefficients <sup>a</sup>							
	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
	B	Beta					Tolerance	VIF
<b>1 (Constant)</b>	-0,206		-1,632	0,105	85%	179,509 (0,000)	2,023	
<b>Personality</b>	0,270	0,253	2,962	0,004			0,131	7,622
<b>Loyalty</b>	0,257	0,249	4,714	0,000			0,343	2,917
<b>Trust</b>	0,319	0,344	5,461	0,000			0,242	4,128
<b>Awareness</b>	0,072	0,064	1,474	0,143			0,51	1,96
<b>Association</b>	0,118	0,121	2,143	0,034			0,302	3,308
<b>a. Dependent Variable: equity</b>								

Source: By the author according to the SPSS output

FIGURE 11. CONTINENTE REGRESSION



Source: By the author according to the SPSS output



### 5.4.3 EDP Regressions

The following results were concerned about EDP global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 47, all tolerance values are superior to 0.1 and all VIF values are inferior to 10 demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson values revealed the inexistence of autocorrelation.

The dependent variable (equity) can be explained in 89% by the independent variables. The statistically significant variables have a positive effect on Equity. The factor dimensions that do not present statistically significant coefficient are Loyalty, Awareness and Association. Trust has the highest impact, whereas Personality has the lowest. A visualization of this analysis can be seen in Figure 12, which presents the Beta value of the standardized coefficients.

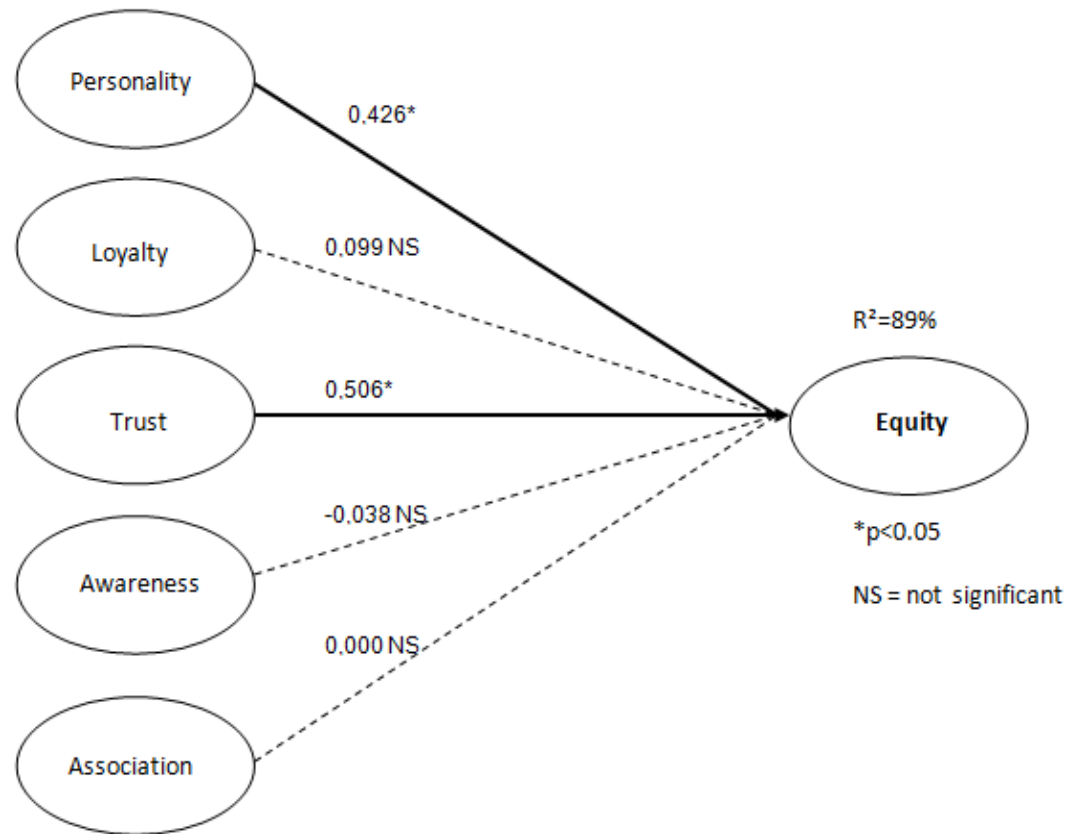
**TABLE 47. EDP REGRESSIONS**

Model	Coefficients <sup>a</sup>		t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics	
	Unstandardized Coefficients	Standardized Coefficients						Tolerance	VIF
	B	Beta							
<b>1 (Constant)</b>	-0,141		-1,006	,317	89%	123,200 (0,000)	1,87		
<b>Personality</b>	0,475	0,426	4,372	0,000				0,116	8,650
<b>Loyalty</b>	0,118	0,099	1,520	0,132				0,257	3,895
<b>Trust</b>	0,434	0,506	8,637	0,000				0,320	3,125
<b>Awareness</b>	-0,043	-0,038	-0,757	0,451				0,429	2,334
<b>Association</b>	0,000	0,000	0,003	0,997				0,240	4,158

**a. Dependent Variable: equity**

Source: By the author according to the SPSS output

FIGURE 12. EDP REGRESSIONS



Source: Own development according to the SPSS output

#### **5.4.4 Vodafone Regressions**

The following results were concerned about Vodafone global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 48, all tolerance values are superior to 0.1 and all VIF values are inferior to 10 demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson value test reveals inconclusive.

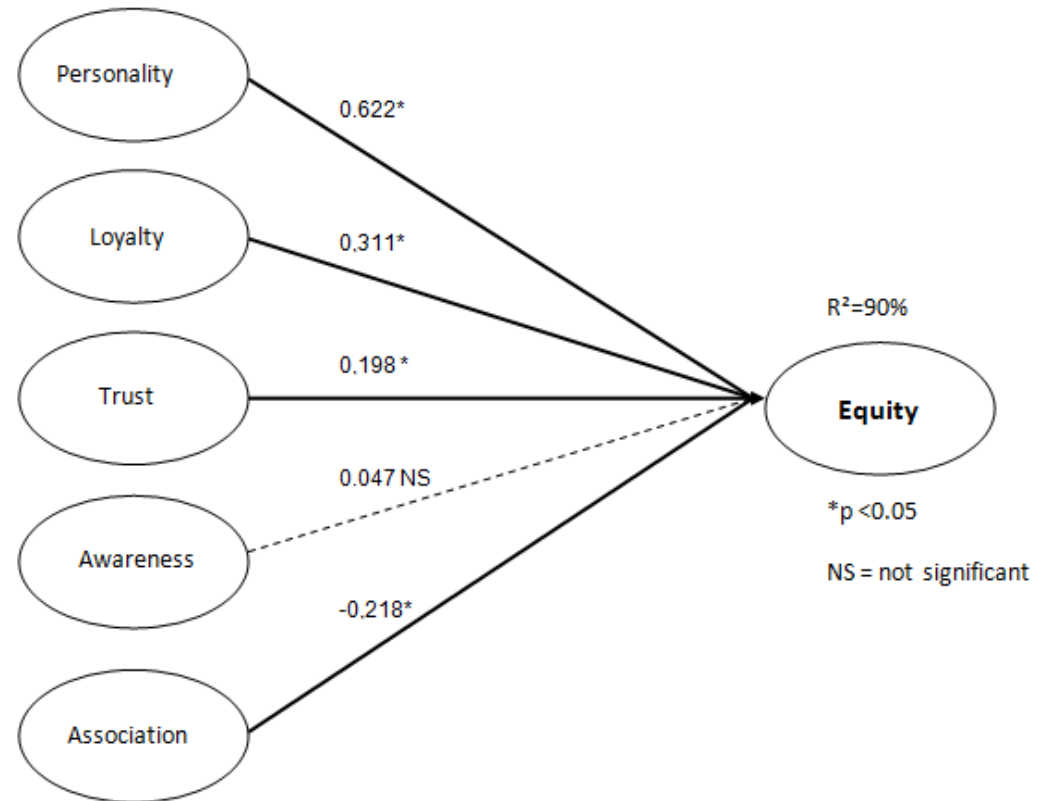
The dependent variable (equity) can be explained in 90% by the independent variables. The statistically significant variables have a positive effect on Equity excepting Association. The factor dimension that do not present statistically significant coefficient is Awareness. Personality has the highest impact, whereas Trust has the lowest. A visualization of this analysis can be seen in Figure 13, which presents the Beta value of the standardized coefficients.

**TABLE 48. VODAFONE REGRESSIONS**

Model	Coefficients <sup>a</sup>							
	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
	B	Beta					Tolerance	VIF
<b>1 (Constant)</b>	-0,123		-1,231	0,220	90%	290,643 (0,000)	1,699	
<b>Personality</b>	0,671	0,622	9,159	0,000			0,135	7,426
<b>Loyalty</b>	0,301	0,311	6,361	0,000			0,260	3,844
<b>Trust</b>	0,174	0,198	3,540	0,001			0,198	5,042
<b>Awareness</b>	0,050	0,047	0,964	0,337			0,258	3,869
<b>Association</b>	-0,166	-0,218	-4,522	0,000			0,268	3,731
<b>a. Dependent Variable: equity</b>								

Source: By the author according to the SPSS output

**FIGURE 13. VODAFONE REGRESSIONS**



Source: By the author according to the SPSS output

## 5.5 Global regression with personality components

In this section was presented the results from global data analysis with personality dimensions as independent variables. First, was analyzed the global perceptions and after, was presented the data from each brand.

The following results were concerned about Vodafone global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 49, all tolerance values are superior to 0.1 and all VIF values are inferior to 10 demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson value reveals the inexistence of autocorrelation.

The dependent variable (equity) can be explained in 90% by the independent variables. The statistically significant variables have a positive effect on Equity. The factor dimension that do not present statistically significant coefficient is Awareness and Dynamic. Emotional connection has the highest impact, whereas Association has the lowest. A visualization of this analysis can be seen in Figure 14, which presents the Beta value of the standardized coefficients.

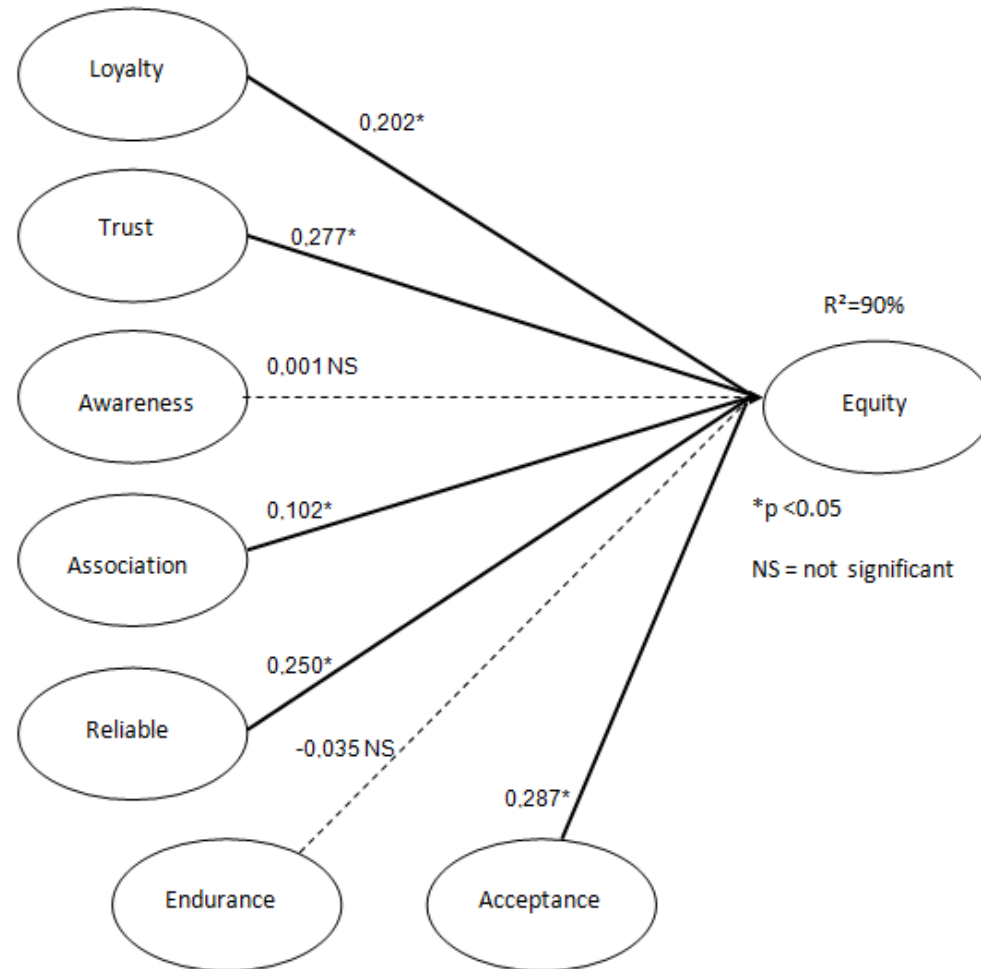
**TABLE 49. GLOBAL REGRESSIONS WITH BRAND PERSONALITY DIMENSIONS**

		Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
		B	Beta					Tolerance	VIF
1	<b>(Constant)</b>	0,032		0,497	0,620	90%	519,875 (0,000)	1,817	
	<b>loyalty</b>	0,213	0,202	6,826	0,000			0,283	3,539
	<b>trust</b>	0,247	0,277	8,155	0,000			0,214	4,682
	<b>awareness</b>	0,002	0,001	0,057	0,954			0,410	2,437
	<b>association</b>	0,092	0,102	2,978	0,003			0,212	4,708
	<b>Reliable</b>	0,245	0,250	5,685	0,000			0,128	7,840
	<b>Dynamic</b>	-0,034	-0,035	-1,412	0,159			0,400	2,499
	<b>Emotional connection</b>	0,226	0,287	13,358	0,000			0,537	1,863
a. Dependent Variable: equity									

Source: By the author according to the SPSS output



FIGURE 14. GLOBAL REGRESSIONS WITH BRAND PERSONALITY DIMENSIONS



Source: By the author according to the SPSS output

### 5.5.2 Contingente regressions

The following results were concerned about Contingente global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 50, all tolerance values are superior to 0.1 and all VIF values are inferior to 10 demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson value reveals the inexistence of autocorrelation.

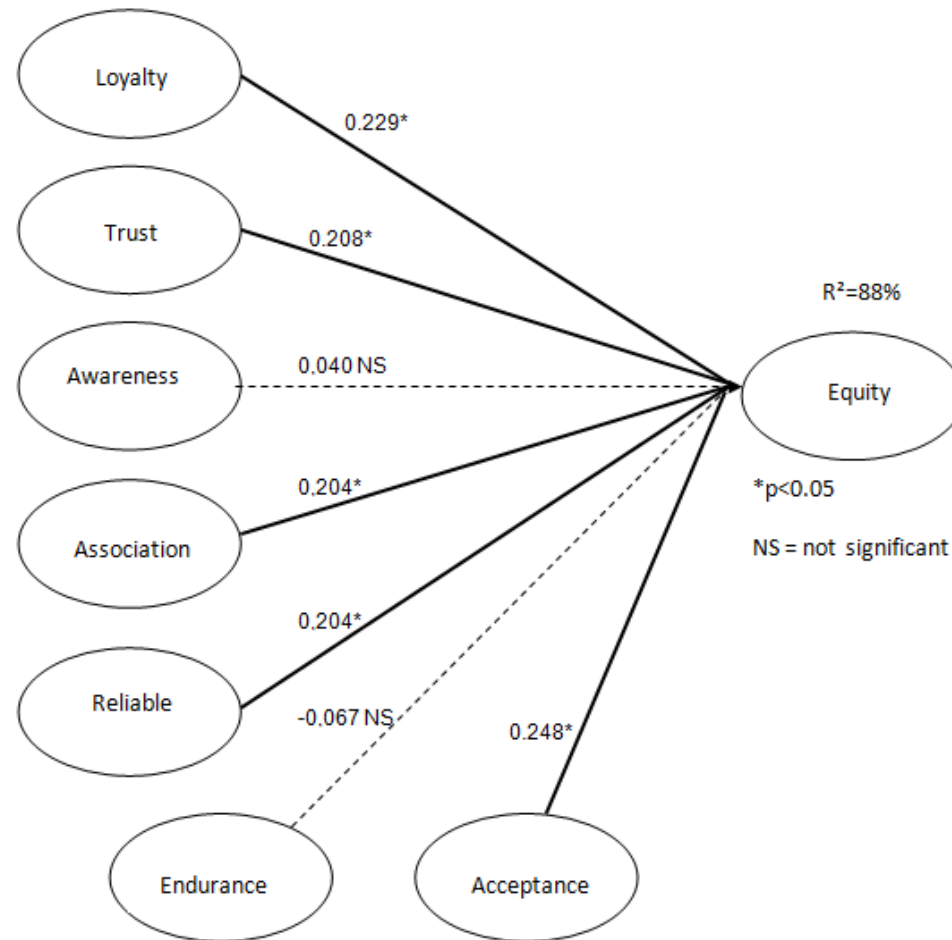
The dependent variable (equity) can be explained in 88% by the independent variables. The statistically significant variables all have a positive effect on Equity. The factor dimensions that do not present statistically significant coefficient are Awareness and Dynamic. Emotional connection has the highest impact, whereas Reliable has the lowest. A visualization of this analysis can be seen in Figure 15, which presents the Beta value of the standardized coefficients.

**TABLE 50. CONTINENTE REGRESSION WITH BRAND PERSONALITY DIMENSIONS**

		Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
		B	Beta					Tolerance	VIF
<b>1</b>	(Constant)	-0,041		-0,345	0,731	88%	159,290 (0,000)	2,080	
	loyalty	0,235	0,229	4,709	0,000			0,338	2,962
	trust	0,193	0,208	3,255	0,001			0,195	5,119
	awareness	0,045	0,040	1,014	0,312			0,504	1,983
	association	0,199	0,204	3,821	0,000			0,279	3,583
	Reliable	0,206	0,204	3,103	0,002			0,171	5,849
	Dynamic	-0,058	-0,067	-1,587	0,115			0,447	2,235
	Emotional Connection	0,199	0,248	5,880	0,000			0,445	2,246
a. Dependent Variable: equity									

Source: By the author according to the SPSS output

FIGURE 15. CONTINENTE REGRESSION WITH BRAND PERSONALITY DIMENSIONS



Source: By the author according to the SPSS output

### 5.5.3 EDP regressions

The following results were concerned about EDP global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 51, all tolerance values are superior to 0.1 and all VIF values are inferior to 10 demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson value revealed the inexistence of autocorrelation.

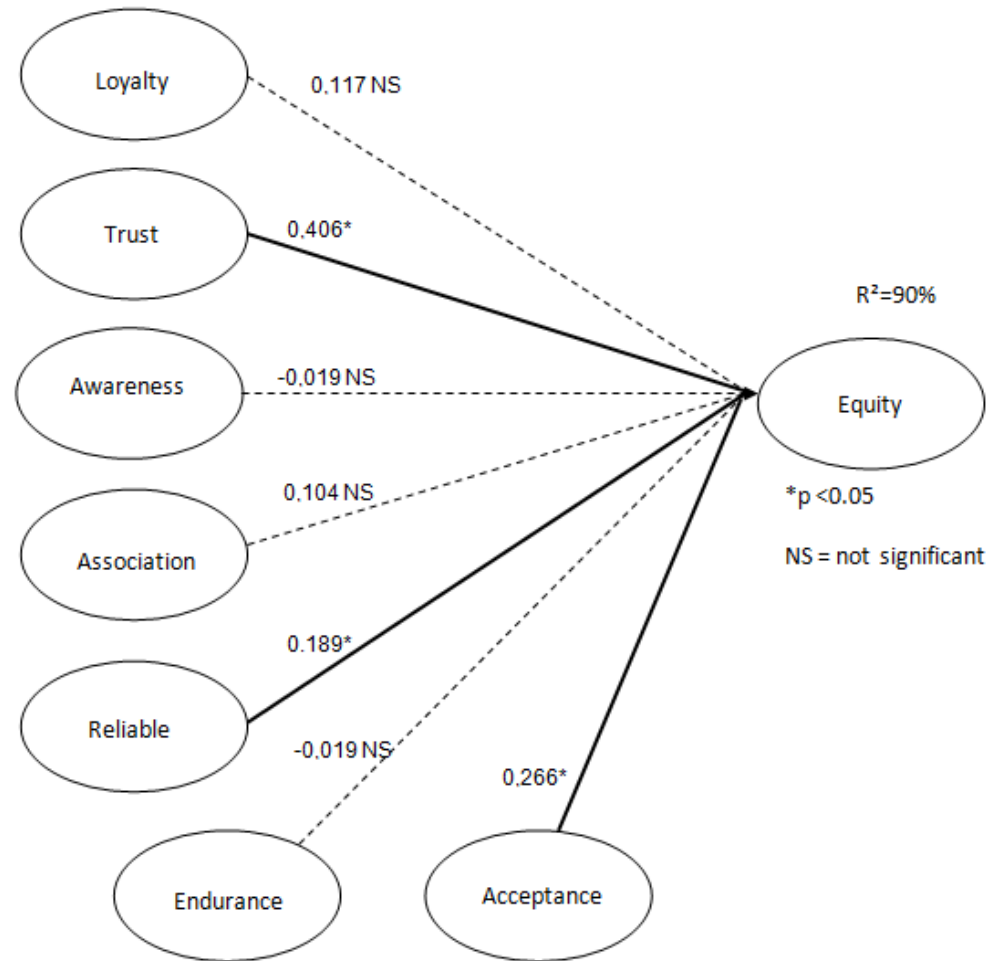
The dependent variable (equity) can be explained in 88% by the independent variables. The statistically significant variables all have a positive effect on Equity. The factor dimensions that do not present statistically significant coefficient are Awareness and Dynamic. Trust has the highest impact, whereas Reliable has the lowest. A visualization of this analysis can be seen in Figure 16, which presents the Beta value of the standardized coefficients

**TABLE 51. EDP REGRESSION WITH BRAND PERSONALITY DIMENSIONS**

		Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
		B	Beta					Tolerance	VIF
<b>1</b>	(Constant)	0,001		0,010	0,992	90%	132,676 (0,000)	1,884	
	loyalty	0,139	0,117	1,748	0,084				0,220 4,536
	trust	0,348	0,406	6,354	0,000				0,240 4,167
	awareness	-0,022	-0,019	-0,401	0,689				0,416 2,405
	association	0,110	0,104	1,477	0,143				0,198 5,059
	Reliable	0,192	0,189	1,971	0,052				0,107 9,364
	Dynamic	-0,020	-0,019	-0,356	0,722				0,358 2,797
	Emotional connection	0,220	0,266	5,124	0,000				0,365 2,742
a. Dependent Variable: equity									

Source: By the author according to the SPSS output

FIGURE 16. EDP REGRESSION WITH BRAND PERSONALITY DIMENSIONS



Source: By the author according to the SPSS output

#### 5.5.4 Vodafone regressions

The following results were concerned about Vodafone global equity from the sample's standpoint. The analysis of residuals does not reveal any increasing or decreasing tendencies, and therefore reflect normal distribution. In this manner, residuals reflect constant variance and do not violate the hypothesis of homoscedasticity. As can be seen in Table 52, all tolerance values are superior to 0.1 and all VIF values are inferior to 10 demonstrating the absence of multicollinearity. Given the sample size, the Durbin-Watson value revealed the inexistence of autocorrelation.

The dependent variable (equity) can be explained in 88% by the independent variables. The statistically significant variables have a positive effect on Equity excepting Endurance. The factor dimensions that do not present statistically significant coefficient are Awareness, Association and Dynamic. Emotional connection has the highest impact, whereas Trust has the lowest. A visualization of this analysis can be seen in Figure 17, which presents the Beta value of the standardized coefficients.

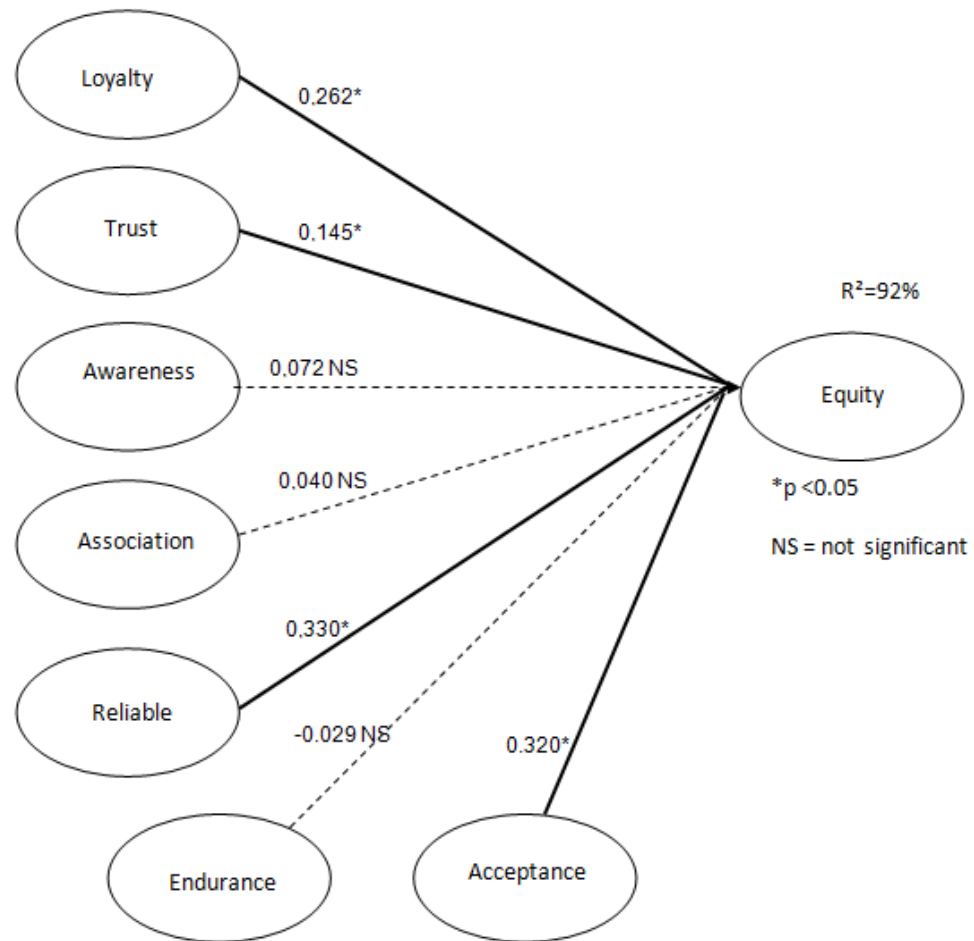


**TABLE 52. VODAFONE REGRESSION WITH BRAND PERSONALITY COMPONENTS**

		Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	R <sup>2</sup>	F (sig.)	Durbin-Watson	Collinearity Statistics
		B	Beta					Tolerance	VIF
<b>1</b>	(Constant)	-0,015		-0,171	0,865	92%	290,210 (0,000)	1,829	
	loyalty	0,255	0,262	6,056	0,000			0,244	4,104
	trust	0,127	0,145	2,784	0,006			0,170	5,897
	awareness	0,075	0,072	1,696	0,092			0,257	3,894
	association	0,030	0,040	0,635	0,527			0,118	8,491
	Reliable	0,311	0,330	4,105	0,000			0,071	14,164
	Dynamic	-0,027	-0,029	-0,801	0,424			0,344	2,910
	Emotional connection	0,244	0,320	10,705	0,000			0,511	1,958
a. Dependent Variable: equity									

Source: By the author according to the SPSS output

FIGURE 17. VODAFONE REGRESSION WITH BRAND PERSONALITY DIMENSIONS



Source: By the author according to the SPSS output

## Conclusions

This research was intended to measure the importance of brand equity after the process of rebranding. Thus, through the literature review, a conceptual model was proposed and an empirical research was carried out, taking into account the following main objectives: to contribute to clarify the relation of causal order between the variables of brand personality, brand loyalty, brand trust, brand awareness and brand association with brand equity; and to know what is the importance of the variables' strength in the brand equity. These objectives were achieved. Thereunto, an online questionnaire was created for each one of the brands (Continente, EDP and Vodafone) with the aim of measuring each construct. The consumers were from three geographic areas: Aveiro, Coimbra and Oporto. Each respondent was invited to answer to all the questions measured by a Likert scale from 1 (completely disagree) to 5 (completely agree). This questionnaire intended to measure the agreement of the consumers' sample in respect to all items related to each of the variables under study.

With respect to brand equity, the results show the existence of three distinct dimensions (service quality, attachment and self-congruence). Regarding Continente, the highest mean of brand equity was 3,8 and the lowest 1,8 (in a Likert scale). EDP presented the highest mean in brand equity of 3,7 and the lowest of 2 (in a Likert scale). Vodafone has 3,9 as the highest mean and 2,2 as the lowest one (in a Likert scale). The variables classified with this mean, show that the consumers consider the brands strong in tangible terms, however, they do not want to create emotional ties. In global terms, the mean of the three brands shows that they are positively perceived by consumers. The global mean for brand equity is 3,0 in a Likert scale.

In regards to brand personality, the results show the existence of three distinct dimensions (reliable, dynamic and emotional connection). Regarding Continente, the highest mean was 4,1 and the lowest 2,2 (in a Likert scale). EDP presents the highest mean in brand equity of 3,9 and the lowest of 2,3 (in a Likert scale). Vodafone has 3,7 as the highest mean and 2,5 as the lowest one (in a Likert scale). Once again, the consumers perceived the tangible terms to be more important than the emotional ties. In global terms, the mean of the three brands shows that they are well perceived by consumers. The global mean for brand personality is 3,3 in a Likert scale.

Concerning brand loyalty, the results show the existence of one dimension. Regarding Continente, the highest mean was 3,7 and the lowest 3,0 (in a Likert scale). EDP presents the highest mean in brand equity of 3,4 and the lowest of 2,8 (in a Likert scale). Vodafone has 3,5

as the highest mean and 3,0 as the lowest one (in a Likert scale). The results show that, although considering buying products from these brands in the future, the consumers are not as loyal as expected, putting in question having these brands as their first option. In global terms, the mean of the three brands shows that they are well perceived by consumers. The global mean for brand personality is 3,2 in a Likert scale.

With respect to brand trust, the results show the existence of one dimension. Regarding Continente, the highest mean was 3,7 and the lowest 2,7 (in a Likert scale). EDP present the highest mean in brand equity of 3,3 and the lowest of 2,5 (in a Likert scale). Vodafone has 3,6 as the highest mean and 3,0 as the lowest one (in a Likert scale). The results show that, although consumers rely completely on the products of these brands, they do not have the same confidence in their employees. In global terms, the mean of the three brands shows that they are well perceived by consumers. The global mean for brand personality is 3,2 in a Likert scale.

In regards to brand awareness, the results show the existence of one dimension. Regarding Continente, the highest mean was 4,2 and the lowest 2,0 (in a Likert scale). EDP present the highest mean in brand equity of 4,0 and the lowest of 2,5 (in a Likert scale). Vodafone has 3,9 as the highest mean and 2,4 as the lowest one (in a Likert scale). The results show that although consumers remember the logo of the brands, they cannot imagine them as a whole. In global terms, the mean of the three brands shows that they are positively perceived by consumers. The global mean for brand personality is 3,5 in a Likert scale.

Concerning brand association, the results show the existence of one dimension. Regarding Continente, the highest mean was 3,6 and the lowest 3,4 (in a Likert scale). EDP present the highest mean in brand equity of 3,7 and the lowest of 3,3 (in a Likert scale). Vodafone has 3,7 as the highest mean and 3,1 as the lowest one (in a Likert scale). The results show that although consumers consider the brand as having products with modern design, they believe that employees do not match the expectations created in tangible terms. In global terms, the mean of the three brands shows that they are well perceived by consumers. The global mean for brand personality is 3,5 in a Likert scale.

Using the linear regression model, it was possible to measure the strength of the relationship between the variables which, in turn, aided the confirmation or non-confirmation of the hypothesis formulated for the empirical research. Therefore, in a global analysis, the following hypotheses were completely supported: H1 ("Brand personality has a positive impact on brand equity"), H2 ("Brand Loyalty has a positive impact on brand equity") and H3 ("Brand trust has a positive impact on brand equity"). Nevertheless, H4 was not supported ("Brand

awareness has a positive impact on brand equity”) and H5 (“Brand association has a positive impact on brand equity”) showed a negative influence on brand equity.

In a deeper analysis, as far as Continente is concerned, H4 was the only hypothesis not supported. According to the data of EDP, it was only possible confirm H1 and H3. In the case of Vodafone H4 was not supported and H5 shows a negative impact of brand association on brand equity.

Globally, the results show that brand trust is the construct that has more impact on brand equity followed by brand personality. The variable that has the lowest influence on brand equity is brand loyalty.

As far as Continente and EDP are concerned, the results of brand personality dimensions are consistent. Reliability and Emotional Connection are the ones that support brand equity whereas Dynamic does not support the construct. Vodafone shows the same result but, while in the other two brands reliability has the lowest value, in this case, the opposite happens.

### **Managerial implications**

Based on the findings, managers should be more concerned about creating a relationship of trust with consumers so that they can identify themselves with the brand, increasing, consequently, a higher loyalty to the brand.

As far as Continente is concerned, managers should be more concerned in improving the association of their brand in the consumers’ mind.

The EDP results show that brand personality, in comparison with the others constructs is less favorably perceived by consumers. Therefore, managers should be more aware of this item.

Concerning Vodafone, trust is the concept that required more attention by managers.

The results of this study that support brand equity show that: brand personality, brand loyalty and brand trust have a positively effect on brand equity (Valette-Florence *et al.* 2011; Delgado-Ballester and Munuera-Alemán, 2005).

### **Limitations and Further research**

Once completed, there are some limitations of the research that should be pointed out.

First, the study was conducted just to three brands. Although the choice of these brands have been planned intentionally, due to the red color, in a forthcoming research it can

be extend to other brands or to brands of the same sector of activity in order to make comparisons between sectors.

Second, the data collected for the survey was limited to three geographic areas of the country – Aveiro, Coimbra and Oporto. This limited the study, since data cannot be generalized to Portugal as a whole or in other countries.

Third, the instruments used to measure the perceptions can be improved or even expanded to consider other dimensions and other variables preceding the brand equity.

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## Appendices

## Questionnaire

Please indicate what your gender is.

Please choose your age.

Please chose which zone you live in.

Please indicate what your job.

The image of x is consistent with the way I see myself.

Employees of x are friendly.

The marketing campaign of x is strong.

The image of x is consistent with how I would like others to see me.

My overall trust in the products of x is high.

The marketing campaign of x is dynamic.

The quality of x is extremely high.

The quality of the products of x is extremely high.

x is aggressive in their marketing campaign.

x is tough to overcome.

x is innovative.

x is modern-looking.

x fits my personality.

x is always up to date.

x makes me feel sentimental.

x seems to be very helpful with regard to the interests of consumers.

x rarely gives me problems.

x reflects my personal lifestyle.

x would be my first choice.

Some characteristics of x come quickly to my mind.

For using x I feel that everybody accepts me.

Over time, I will develop a warm feeling toward x.

Materials associated to x are visually appealing.

I consider the company and people who stand behind x to be very trustworthy.

I consider myself to be loyal to x.

Next time I will choose x.

From x I can expect superior performance.

I think x is charming.

I believe that x does not take advantage of consumers.

I consider x honest.

I consider x a good business given the benefits I receive.

I review myself the image of the typical consumers of x.

I can recognize x among other competitors.

I feel safe when I bought any product of x.

I have more confidence on the products of x than in their competitor's products.

I see x as reliable for me.

Employees of x listen to me.

I can quickly recall the symbol or logo of x.

Considering what I pay for x products I will get much more than my money's worth.

Employees of x are helpful.
How likely is it that you will buy products from x in the future?
When someone criticizes x, it feels like a personal insult.
x is dynamic.
When I get something from x I feel delighted.
If a story in the media criticizes x, I would feel embarrassed.
I will switch to other brands if I experience a problem with x.
x is ordinary in values it transmits.
I feel secure when consumer something from x.
I am difficulty of imagine x in my mind.
I am proud of use x.
I will recommend Vodafone x to someone who seeks my advice.
It makes sense to buy x instead of any other brand, even if they are the same.
I think x manufacture method is modern.
x has a professional and well trained staff.
Even if another brand has the same features as x, I would prefer to buy x.
x uses a modern design in their models.
x has good interaction with customers.
If there is another brand as good as x, I prefer to buy this brand.
x has great innovative ability.
If there was a brand like x it would be smart not to change.

Brand's logos

