Effect of consumer evaluation of advertising on the dimensions of brand equity

Marketing management

Keywords: Brand equity; Dimensions of brand equity; Advertising

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Abstract: This article explores the influence of consumer evaluations of advertising on the dimensions of brand equity of broadband service providers. We adopted a survey method with personal interviews. Descriptive statistics, ANOVA, exploratory factor analysis and structural equation modeling were applied to the 400 questionnaires collected. The results of the study demonstrate that the dimensions of Brand Awareness, Brand Associations, Perceived Quality and Brand Loyalty form the Brand's Overall Equity and that evaluations of advertisements have a positive affect on all dimensions of brand equity.

Keywords: Brand equity; Dimensions of brand equity; Advertising.

1. INTRODUCTION

Brands are property that bestow countless benefits and have valuable functions within the market environment. Essentially, the brand positions the firm's offer (KELLER and LEHMANN, 2006), improving marketing productivity and creating awareness and knowledge about the product in the minds of consumers (KELLER, 1993). To this end, it adds elements of product differentiation that distinguish the product from others available on the market, ensure quality and reflect the customer's complete product experience (KELLER and LEHMANN, 2006, KELLER, 2016, PINHO and ANDREOLI, 2017). Marketers strive to build unique identities for their brands, aiming to reflect positive images of the product in order to develop positions that generate competitive advantages for the company. In this sense, understanding what criteria consumers consider when choosing a brand is important in the development of assertive marketing strategies (NIADA and BAPTISTA, 2013, OLIVER, 2014).

Brand equity has become increasingly important to companies and several studies aim to analyze it (e.g., BUIL et al., 2008, CHATZIPANAGIOTOU et al., 2016, GIRARD et al., 2016, PAPPU et al., 2005, YOO and DONTHU, 2001). Although there is no consensus as to its definition and form of measurement (OLIVEIRA et al., 2015), the various concepts share a central theme: all directly or indirectly use structures of perceptions in the consumer mind as the source or rationale for brand equity, where consumer feelings, images, beliefs, attitudes and experiences are the real forces of the brand (KELLER, BREXENDORF, 2017). Many definitions have been proposed - qualitative versus quantitative, financial perspective of value for the organization versus consumer perspective - which may result in some ambiguity. From the point of view of brand management, the wide variety of tools and knowledge have had a positive impact, demonstrating the need for organizations to focus on brand strategies and to analyze the most appropriate models for valuing one of their assets (CÔRTE-REAL, 2006).

Researchers have presented numerous theoretical proposals on consumer-based brand equity (CBBE), with Aaker (1996) and Keller (1993) being the most prominent (DATTA, AILAWADI, VAN HEERDE, 2017, OLIVEIRA et al., 2015). This study is based in marketing theories springing from the CBBE perspective and draws on the studies of Aaker (1996, 1998), Yoo and Donthu (2001), Buil et al. (2013a, 2013b) and Calvo-Porral et al. (2014) which address brand equity in the following dimensions: Perceived Quality, Brand Loyalty, Brand Awareness and Brand Associations.

We also studied the affect of consumer evaluation of advertising on brand equity, since for Buil et al. (2013a), despite important, the influence of this variable on brand equity remains uncertain. Datta et al. (2017) believe that CBBE should be associated with higher advertising elasticities (DATTA, AILAWADI, VAN HEERDE, 2017). Consumer evaluation of advertising was chosen as the object of this study, because we believe that it has a significant impact, be it positive or negative, on all dimensions of brand equity.

The general aim of this study is to identify the effect of consumer evaluations of advertising on the dimensions of brand equity in companies of the Brazilian broadband sector. Our specific objectives are: a) to identify the profile of broadband customers; b) confirm the relationship between the dimensions of brand equity with the overall brand equity; and c) to differentiate the consumer evaluations of brands of broadband service providers.

The broadband sector directly influences businesses, communities and regions, where Internet development and increased broadband access generate substantial benefits for productivity, education, digital inclusion and economic development. Innovative production practices in business, government, education, healthcare and daily life are dependent on the ability to obtain information quickly (SPERS, WRIGHT and SILVA, 2012). In terms of theoretical implications, the focus of this study on Broadband providers is important since most of the studies on the subject have been applied to the product sector. This change in the sector will allow us to verify the suitability of the research instrument and the results may contribute to a better understanding of the theme and the sector.

Considering that many studies in this area focus on sectors that offer tangible goods - for example, studies by Buil et al. (2013a), applied to consumers of sports products, electronics and cars, Yoo, Donthu and Lee (2000), applied to consumers of sports shoes, cameras and color televisions and Datta el al. (2017), applied to a set of brands in 25 categories of a wide variety, including deodorant, beer, shown, mustard, among others. Given the continually growing importance of broadband service, both in terms of growth in recent years and its anticipated future growth, it is expected that the application of research to this sector may bring about promising and important results.

In addition to the theoretical contributions and contributions to marketing and brand management of broadband companies, this study may also contribute to society by allowing consumers to become more aware of how their assessments of broadband advertisements impact the brand equity of these companies and, to that extent, more conscientious in their evaluations of the communication strategies and actions promoted by these companies.

2. THEORETICAL FRAMEWORK

According to the American Marketing Association (2018), brand can be defined as "Name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers". In addition, the brand serves to identify the manufacturer of the product, differentiate it from other offers and add value, contributing to a competitive advantage (CAPUTO, MACEDO and NOGUEIRA, 2008; GONÇALVES FILHO, SOUKI and GONÇALVES, 2009; KAPFERER, 2012; KELLER and LEHMANN, 2006). In a more holistic conception, brands are seen as living objects that relate to consumers and can be understood as a promise of a set of attributes (real versus illusory, rational versus emotional, tangible vs. intangible) that generate satisfaction (LOURO, 2000, AMBLER and STYLES, 1997).

Strong brands affect economic value and loyalty, reduce vulnerability to competitive marketing actions and to marketing crises and increase profits, among other effects (KELLER, 1993; ZANOBIO et al., 2017). Kapferer (2012) emphasizes that strong brands create confidence and, consequently, less risk. When investments are made to improve production means, business know-how, marketing and communication media, a number of privileges are generated, including acceptance of a higher price, attraction differentiation due to satisfaction and loyalty and margin differential due to market size and leadership. Customers, suppliers and shareholders will focus on the brand when they witness any positive or negative event and it is important to keep in mind that everything reflects the brand: the product, the internal and external relationships, the environment, events and service. As brand has increasingly become a central element and a strategic asset in organizations' actions, its evaluation is of great importance for the management of this asset (KELLER, 2016; KAPFERER, 2012). For Muniz and Marchetti (2012), intensified competition causes consumers to face a growing availability of similar product alternatives to satisfy their needs and desires and the role of the brand is to act as the differentiating element, going beyond the rational and functional aspects. Shankar, Azar and Fuller (2008) emphasize brand, not only as a symbol, but a quantifiable resource, bringing the concept of brand equity, which is considered one of the main sources of differentiation and competitive advantage for companies (SHIMP, 1999; YOO et al., 2000; SCHULTZ, 2001; OLIVEIRA, 2013; SCHIVINSKI and DABROWSKI, 2016)

According to Chiu, Huang, Weng and Chen (2017), brand equity refers to the utility or added value that the brand name can give a product. According to the AMA (2018), brand equity is a term used in marketing to try to describe the value of having a representative brand name, springing from the idea that a known brand generates greater return to products and the services it represents compared to lesser-known brands, as consumers often associate a strong brand with superior products and services. Aaker (1991) defines brand equity as the set of brand assets and liabilities - its name and symbols - that add (or subtract) value to a product or service, generating benefits for the company or its customers. Brand equity is a matter of obtaining a higher price than would be obtained if the product were not identified by brand (AAKER, 1991; SCHIVINSKI and DABROWSKI, 2016; COSTA et al., 2017; KELLER and MACHADO, 2006).

The focus on the consumer in CBBE, whether an individual or an organization, aims at understanding consumer needs and desires, in order to subsequently offers products and programs in such a way as to meet those needs and desires, thus making the marketing tools successful in their functions (KELLER, 2013). Thus, CBBE can be understood as a concept that predicts that consumers will react more favorably to a branded product than to a non-branded product in the same category (AAKER, 1991; KELLER 1993; YOO, DONTHU and LEE, 2000; SCHIVINSKI and DABROWSKI, 2016).

Aaker (1996) argues that a brand will have a high value for the consumer if it meets both the tangible expectations - such as product/brand performance, quality level associated with product performance itself - and intangible expectations - such as consumer brand associations, based on its positioning in the market. Brady et al. (2008) reports that high equity brands have a much higher probability of being forgiven by their customers after a service failure than do low equity brands. For Keller and Machado (2006), the brand of products that the customer consumes can express its identity in society as a bearer of certain values and behaviors. Given this, it is important to identify CBBE, which is the focus of this study, because it denotes how much more the consumer is willing to pay, based on the positive experiences which the brand ensures (SAMPAIO, 2002; MAGALHÃES, 2006).

It is also important to note that evaluation of CBBE in this study focused on the dimensions of perceived quality, brand loyalty, brand awareness and brand associations, and the theoretical framework was based mainly on the studies of Aaker (1996, 1998), Yoo and Donthu (2001), Buil et al. (2013a, 2013b) and Calvo-Porral et al. (2014), in conjunction with a focus on the advertising literature, rather than other elements of marketing, based on the work of Buil et al. (2013a, based on Yoo et al., 2000), which can be considered a central element of marketing communication programs. The definitions of these elements are presented below:

2.1. Brand awareness

Brand awareness is the ability of consumers to recognize, assimilate and create awareness of a brand as belonging to a particular category of products (AAKER, 1996; FEITOR and RAMOS, 2017). According to Aaker (1991) and Keller (1993), brand awareness is related to the strength with which the brand is registered in the memory of consumers, enabling its recognition even in the presence of other brands. Brand awareness is related to the consumer's capacity to remember name, symbol or characteristic after contact with information regarding its product category, and it may be the main influence on the choice of purchase. Familiarity is a contingent factor in relationships between customers and brands, as consumers will be more willing to assign good attitudes to brands with which they are familiar (AAKER, 2007). Brand awareness adds familiarity and empathy, shortcutting to connect with new people and commitment, adding value to the brand. Based on this rationale, we put forth the following hypothesis:

Hypothesis 1: Brand Awareness has a positive influence on Brand equity.

2.2. Brand Associations

Brand associations are related to images present in the individual's memory. They bind the brand to an image, helping process and search for information, generate a purchase ratio and create positive attitudes and they are the basis for brand extensions (AAKER, 2007). Brand equity is largely sustained by the associations established by customers (AAKER, 2007). The measure of brand associations can be structured within three perspectives:

a) Perceived value: refers to the perspective of brand as product, which involves functional benefits and the value relative to price and benefits and competitors of the brand (AAKER, 1996). Perceived value is the consumer's assessment of the benefits minus the costs of maintaining a relationship with a supplier (ZEITHAML, 1988), where the question of cost is also associated with monetary and non-monetary sacrifices.

b) Brand personality: can be defined in terms of the different traits or characteristics that brands can take on from consumer perceptions (AAKER, 1991; KELLER 1993; PAPPU et al., 2005). The personality reflects clients' feelings toward the brand (KELLER and MACHADO, 2006), which is an emotional bond of the consumer to the brand and this differentiates one brand from another, favoring client retention (RANDAZZO, 1996).

c) Organizational associations: the brand is seen as an organization, highlighting the bases of differentiation generated by associations made by consumers between the brand and the organization that produces it (AAKER, 1996). According to Aaker (2007), it is especially prone to be a factor when brands are similar with regard to attributes, when the organization is visible (such as companies of durable consumer goods or services) or when the corporate brand is involved.

One of the main goals achieved by companies when they strengthen consumer associations and feelings toward the brand is to affect brand equity (KELLER, 1993; SCHIVINSKI and DABROWSKI, 2016). In this sense, we also put forth the following hypothesis:

Hypothesis 2: Brand Associations positively influence Brand equity.

2.3. Perceived Quality

Perceived quality is related to the general quality or superiority of a product or service in comparison with alternatives on the market. These evaluations made by the consumer are based on completely individual values and parameters may suffer variations from person to person. In this same sense, perceived quality is not a perspective based on managers or specialists and the consumer is the relevant element in the assessment (AAKER et al., 2007, BRAVO et al. 2007, YOO and DONTHU 2001, ZEITHAML, 1988). Louro (2000) defines perceived quality as consumer perceptions about the quality or superiority of a product or service in relation to its functionality and its alternatives. In short, perceived quality also generates brand equity, valuing extensions, improving distribution channels and affecting purchase decision and price differentiation. Based on this, we put forth the following hypothesis:

Hypothesis 3: Perceived Quality positively influences Brand equity.

2.4. Brand loyalty

The main differential of a brand is loyalty. This feature ensures that consumers will continue using certain brands even if competitors offer lower prices or higher quality. Loyalty springs from a previous contact with the product or service offered by the company (AAKER, 2007). States that loyalty occurs when favorable attitudes are demonstrated toward the brand over repeated purchase situations (NAM et al., 2011, OLIVER, 2014). Based on the attitude toward the brand, it becomes a point of reference, or focal point, and the primary choice within the intent of buying a product category (OLIVER, 2014). For Aaker (2001), loyalty adds value to the brand as it provides regular buyers for extended periods of time and ones who are less likely to be encouraged by competitors to make changes. From this, we put forth the following hypothesis:

Hypothesis 4: Brand Loyalty positively influences Brand equity.

2.5. Consumer evaluation of advertising

Advertising can be defined as a paid and impersonal form of presentation and promotion of ideas about goods and services or a brand (COSTA et al., 2017; SANTOS, 2017; SHIMP, 2009). These authors argue that advertising requires viable investments that meet the specific objectives of the brand. For Costa et al. (2017), advertising is the development and execution of any message of remembrance, information or persuasion created for a market or target audience. According to Yoo et al. (2000), brand image is based on multiple experiences, facts, episodes and exposures to brand information and therefore is developed over a long period. Advertising is a common way to develop, shape and manage this image (KIRMANI and RAO, 2000). Managers should invest in advertising with a clear goal to increase brand equity (YOO et al., 2000). Brand investments through advertising begin to bring significant results to the company as customers begin to consider its products more than the other options offered by the market (GIRARD et al., 2017; COSTA et al., 2017).

As pointed out by Keller (2003), brand awareness is a dimension resulting from frequent brand exposure. In this sense, Bravo et al. (2007) relates higher advertising expenditures to greater consumer exposures, increasing the scope of appearances, thereby increasing brand awareness. In this sense, we put forth the following hypothesis:

Hypothesis 5: Consumer evaluations of advertising positively influence Brand Awareness.

For the consumer, the different attributes of the brand are modified over numerous exposures to the brand (KELLER, 2003). These experiences following the formation of brand awareness facilitate brand associations, modifying or reinforcing it. Advertising expenditures are a decisive factor in brand associations. The greater the advertising expenditures, the stronger and more numerous the consumer exposures to the brand will be, strengthening associations in the consumer's mind (BRAVO et al. 2007, YOO et al. 2000; VILLAREJO and SANCHEZ-FRANCO, 2005), which leads to the following hypothesis:

Hypothesis 6: Consumer evaluations of advertisements positively influence Brand Associations.

Advertising can interfere in the perceived quality of a brand and this influence may be reflected in the customers' use experience (COBB-WALGREN et al. 1995). Customers identify signs that show greater investments of companies in promoting their brands in a positive way, linking the investment to expectations of product quality (KIRMANI and WRIGHT, 1989), thus investments in advertising relate to the perceived quality of the brand (COBB-WALGREN et al. 1995; BRAVO et al. 2007). In that sense, we put forth the following hypothesis:

Hypothesis 7: Consumer evaluations of advertisements positively influence Perceived Quality.

Increased spending and amount of publicity is positively related to brand awareness and associations (BRAVO et al., 2007; VILLAREJO and SANCHEZ-FRANCO, 2005; YOO et. 2000). As a result, it is possible that the perception of increased spending generates not only the probability of brand inclusion, but also the simplification of the decision-making process, a behavior of brand loyalty, but Villarejo and Sanchez-Franco (2005) did not confirm positive relations between greater perceived spending in advertising and increased consumer loyalty. Thus, we put forth the following hypothesis:

Hypothesis 8: Consumer evaluations of advertising positively influence Brand Loyalty.

Figure 1: Theoretical model

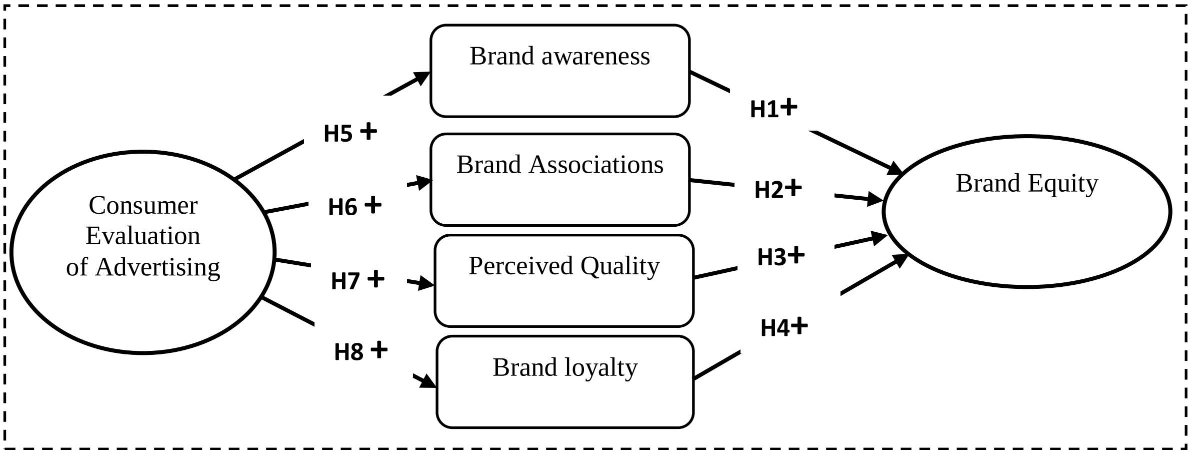


Figure 1 demonstrates the theoretical model of research, where hypotheses H1 to H4 indicate the dimensions that form overall brand equity and H5 to H8 indicate the premise that "Consumer Evaluations of Advertising" positively affect the dimensions of Brand equity.

3. Research Method

The field of analysis for this article was that of services, opting for a sector that provides sufficient data to carry out this study. Research conducted using secondary databases have been based on companies with the greatest representation in the national market. In line with this, we chose to use data from broadband service companies. The brands studied were: Grupo Claro (Claro and NET), Oi and Vivo (GVT).

We applied a questionnaire to clients of the main providers of broadband internet in the cities of Porto Alegre-RS and Florianópolis-SC to ascertain brand equity based on the consumers' evaluation of advertisements and to verify whether these evaluations affect the dimensions of brand equity. The stratification used was non-probabilistic quota sampling, observing patterns for neighborhood, gender and market share of the major broadband operators.

The data collection instrument was created based on the relevant literature. We chose the study carried out by Oliveira et al. (2015) to serve as the basis of the instrument, adding the theme of advertising as a determinant of brand equity. After the variables were chosen, the original scales were translated into Portuguese and then a reverse translation was carried out into English again, in order to determine the faithfulness of the translation.

Seven respondents answered a pilot questionnaire in order to verify its applicability and suitability for the Brazilian context. Based on the suggestions and questions raised in the pilot test, the collection instrument was reformulated and, after these adaptations aiming toward its suitability to its application context, it was evaluated by three experts in the field for adequacy and applicability.

The final instrument is divided into five sections and uses a six-point scale, ranging from strongly disagree to agree completely, in addition to the option of "doesn't apply". Section 1 has 14 questions aiming to identify the respondent's consumer profile, with information regarding broadband service consumption, the carrier they use, among other issues. Section 2 deals with issues related to advertising, section 3 covers the dimensions of brand equity and section 4 deals with issues related to overall brand equity. There are also 11 respondent profile issues in section 5 that aim to identify sex, age, marital status, income, occupation and family information.

Four hundred respondents answered the questionnaire. The following techniques were used to treat the collected data in order to prepare them for the statistical analysis:

a) Identification of missing values (data loss): data loss occurs when a respondent leaves one or more questions unanswered and this technique can be used to introduce a neutral value for missing answers by replacing the missing answer with the mean value for the response (MALHOTRA, 2001). There were 4 missing data for the Brand Awareness dimension, 7 for Brand Loyalty, 3 for Perceived Quality and 13 for Brand Associations. There were 2 missing data for Advertising, 2 for Brand equity, 20 for the consumption profile of respondents and 40 for the respondent profile section.

b) Identification of outliers (atypical observations): Microsoft Excel software and the Z Test with IBM SPSS software were used to identify outliers and data points with a score ± 3 were considered extreme (HAIR et al., 2009). The analysis showed only 4 atypical observations, which presented a score of -3.34. These were retained in the analysis, since they are not significant and do not interfere in the results.

c) Normality test: a simple test based on skewness and kurtosis was used, where the critical values depend on the desired significance level (HAIR et al., 2009). The assumption of normality based on skewness was obtained, with values between -0.970 (CM2) and 0.094 (VP3), within the limit of -3 and 3. In relation to kurtosis, the values range from -1.043 (LM4) and 0.940 (CM2), with a score below 10, and thus normality based on kurtosis was obtained, according to Hair et al. (2009).

d) Linearity test: Pearson's correlation coefficient was used for the variables and constructs, and the values range from -1 to 1, considering values close to these as a greater degree of association and 0 as an indication of no correlation (HAIR et al., 2009). The KMO statistic was used to complement the Pearson Correlation Matrix, with a value ranging from 0 to 1 (HAIR, et al., 2009). These analyses show adequate linearity, because the largest index for the correlation of variables was 0.868 (LM1 and LM2) and for the correlation of constructs the highest index was 0.839 (AM and LM).

e) Multicollinearity test: tolerance and its inverse, the variance inflation factor (VIF), were utilized, where tolerance presents values ranging between 0.1 and 1, which ensures low multicollinearity, and VIF must vary between 1 and 10 (HAIR et al., 2009). In this study, all tolerance values were in the range of 0.1 to 1, with the lowest value of 0.193 (LM1 and LM2) and the highest value of 0.685 (CM1). All VIF values were between 1 and 10, with the lowest value of 1.460 (CM1) and the highest value of 5.188 (LM1). Thus, the results showed no problems of multicollinearity.

Descriptive statistics (mean, mode and standard deviation) and multivariate analyses were also performed using SPSS 20.0 ® and Amos ™. Descriptive statistics of the variables were calculated in order to characterize the sample and describe the behavior of individuals in relation to each of the constructs. In addition, we used analysis of variance (ANOVA) and the Tukey test to verify whether there are differences between the brands for each of the constructs. Then, an exploratory factor analysis (EFA) of the non-validated constructs was performed, followed by a confirmatory factor analysis, using structural equation modeling (SEM). In order to verify the validity of the measurement model, the magnitude and statistical significance of the standardized coefficients and the absolute indices of adjustment were verified, in addition to the significance of the estimated coefficients and the magnitude of the factorial load. Cronbach's Alpha test (AC) was used to verify reliability.

5. RESULTS

The results of the ANOVA test show statistically significant differences, at the 0.000 level, in the responses of respondents with respect to the different brands of mobile network operators for questions PP2 (there are frequent advertisements of brand X), PP3 (advertising and publicity campaigns of brand X are seen more often compared to brands of competing broadband providers) and CM2 (when I think of broadband Internet, brand X is one of the first that comes to my mind).

There were also significant differences, at the level of 0.05, for questions PP1 (0.036) and PP4 (0.010) related to Advertising, CM1 (0.022) and CM4 (0.002) regarding Brand Awareness, QP5 (0.008) regarding Perceived Quality, LM1 (0.050) and LM5 (0.008) related to Brand Loyalty, VP3 (0.021), VP4 (0.011), PM1 (0.032), PM2 (0.015) PM3 (0.049) and PM4 (0.014) regarding Brand Associations and VG2 (0.014) regarding Overall Brand Equity.

To complement the analysis of variance, the Tukey test was performed to compare the response means for each of the brands. There was a significant difference between brands NET and OI and between NET and GVT for question PP2 (There are frequent advertisements of brand X) and between brands NET and OI for question PP3 (Advertising and publicity campaigns of brand X are seen more often compared to brands of competing Broadband providers).

There was also a significant difference between brands NET and OI for questions CM2 (when I think of broadband Internet, brand X is one of the first that comes to my mind) and CM4 (I can recognize, distinguish the logo of the Internet provider brand X among the other brands of competing broadband Internet companies). There was a significant difference between the brands GVT and OI for QP5 (this brand has a better performance than other brands of broadband providers).

With regard to the means of the brands for each of the constructs, NET presented the highest means in the Advertising constructs (except for variable PP4, where OI presented the highest mean (4.30)) and Brand Awareness (except for CM1 and CM3, where GVT presented the highest mean (4.06 and 25, respectively)).

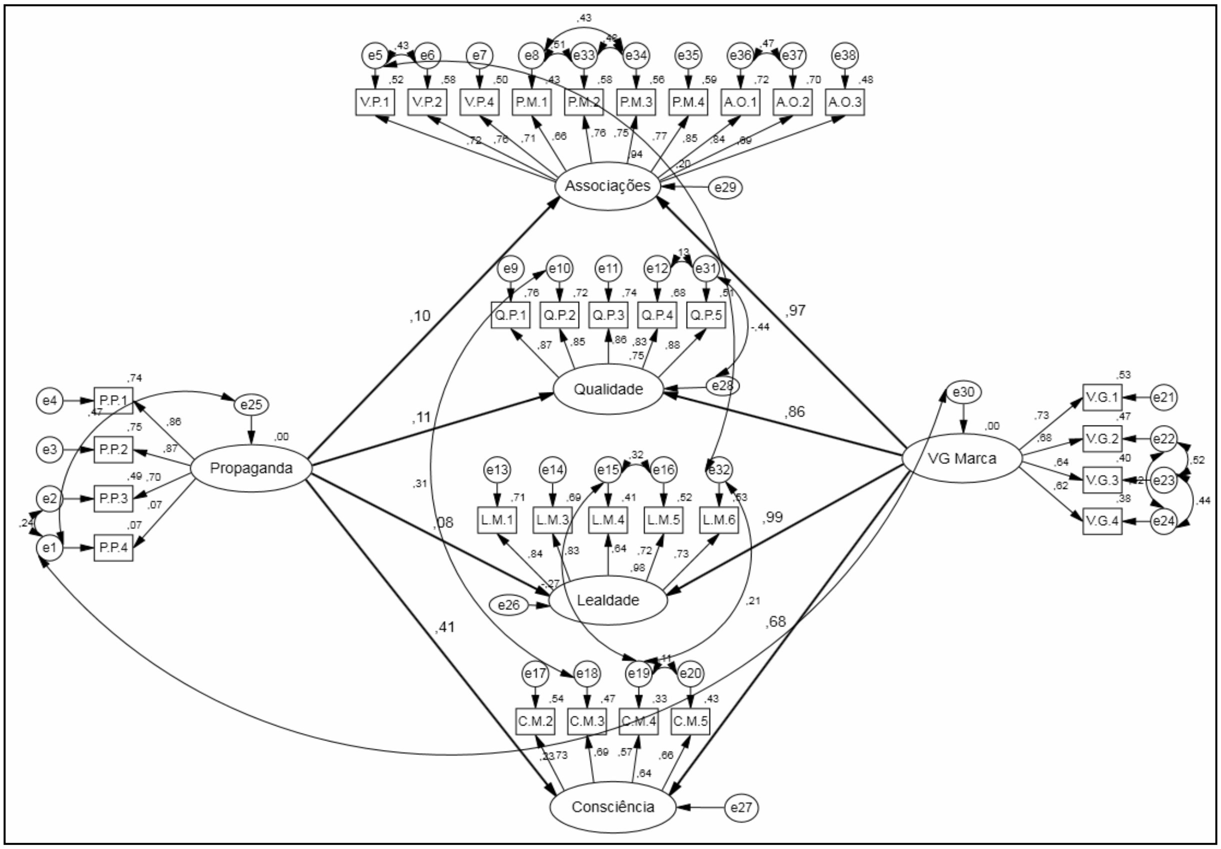
In addition, the brand GVT, for the most part, presented the highest mean in the constructs of Perceived Quality, Brand Loyalty -for variable LM3 the mean was the same as that of NET (4.14)-, Brand Associations -except for variables VP3, where the highest mean was that of OI (3.27) - and variables PM1 and PM2, where NET presented the highest mean (3.97 and 3.99, respectively) and in variables of Overall Brand equity. The company OI presented the lowest overall mean in each of the constructs, and presented the highest mean only for two isolated variables (PP4 and VP3).

Individual validation was performed for each of the six constructs pertaining to the research model: consumer evaluation of Advertising, Brand Awareness, Brand Associations, Perceived Quality, Brand Loyalty and Overall Brand equity, using Factor Confirmatory Analysis, which is a technique used to test a pre-specified relationship (HAIR, ANDERSON, TATHAM and BLACK, 2005). All constructs and their variables underwent individual analyses, with the objective of adapting each component of the integrated research model. For each of them, the NFI, CFI, GFI, TLI, RMSEA and Chi-square indices were verified, as recommended by the literature, and all the individual models presented adequate indices.

The validation and suitability of the final model were evaluated using several processes, and analysis of model adequacy was assessed using indices recommended in the existing literature. As needed, variables with standardized coefficient below 0.4 were excluded. Some variables, despite presenting an adequate standardized coefficient, interfered in the model and were thus excluded as well. Covariance between errors of two constructs was also verified, taking into account that significant covariances of error between constructs suggest that the two items are more closely related than the original model predicts (HAIR et al., 2009) . The validation process for each construct is described below.

After all the necessary modifications were performed for each of the constructs, the following integrated research model was obtained:

Figure 2: Integrated model



The final integrated model shown in Figure 2 was obtained following some necessary adjustments, because despite having performed individual adjustments for each construct, when put together in the integrated model, some indices remained inadequate.

Thus, in addition to covariances being added throughout the individual analyses for each construct, it was necessary to add covariance for some sampling errors. These covariances were added one by one, and after the inclusion of each, the system was reprocessed. Table 1 shows the final values for adjustment indices, following these alterations.

Table 1: Adjustment indices - Final integrated model

χ^2	**χ^2/GL**	**RMSEA**	**TLI**	**CFI**	**NFI**	**SRMR**
p > 0.05	**<5**	**≤ 0.08**	**≥0.9**	**≥0.9**	**≥0.9**	**≤0.10**
1000.325	2.28	0.057	0.934	0.941	0.901	0.090

The adjustments performed provided adequate indices, based on the reference values. The information regarding the hypotheses is in Chart 1.

Chart 1: Results of hypotheses

Hypot.	Ind. Const.	Relation	Effect	Depen. Const.	Stand. Coeff.	Signif.	RESULT
H1	Brand Awareness	→	+	Brand equity	0.68	0.000	Supported
H2	Brand Associations	→	+	Brand equity	0.97		Supported
H3	Perceived Quality	→	+	Brand equity	0.86	0.000	Supported
H4	Brand Loyalty	→	+	Brand equity	0.99	0.000	Supported
H5	Advertising	→	+	Brand Awareness	0.41	0.005	Supported
H6	Advertising	→	+	Brand Associations	0.10		Supported
H7	Advertising	→	+	Perceived Quality	0.11	0.003	Supported
H8	Advertising	→	+	Brand Loyalty	0.08	0.004	Supported

The analyses performed using the tests shown in Chart 1 demonstrate that the tested hypotheses presented significance, indicating that they were not refuted and thus showing corroboration with the previous literature.

7 RESEARCH CONCLUSION AND LIMITATIONS

7.1 Managerial and theoretical implications

Brand equity is an important tool for evaluating the construction of a brand. By dissecting the brand through its drivers we gain deeper insight into its success. In this sense, the first major contribution of this article is to provide an instrument adapted to the Brazilian context, with tested and confirmed reliability. The analyses of the individual constructs, in addition to the analysis of the construct of Brand Associations, has brought to the Brazilian context a solid instrument with dimensions capable of explaining Brand equity in alignment with the existing literature. Brand Awareness explains

68% Brand equity, Brand Associations explain 97%, Perceived Quality explains 86% and Brand Loyalty explains 99% of Brand equity. It is noteworthy, however, that Yoo et al. (2000) presented the constructs of Brand Awareness and Brand Associations as a single construct, contrary to the conceptual framework they adopted, which treated them as distinct concepts. This was not the case in the study of Buil et al. (2013) or in the present study, where these concepts are treated as two distinct dimensions of brand equity. It is also important to note that the instrument had not been validated in its entirety in Brazil previously, which required tests that could prove its adequacy to the Brazilian context, primarily the construct of Brand Associations, which underwent an exploratory factor analysis, followed by a confirmatory factor analysis for structural equation modeling of all constructs individually.

Strategically, the proposed improvements in the collection tool may contribute to a more in-depth perception, rooted in the theoretical precepts related to the logical structure of perceptions of customers in relation to the brand, of how the stimuli influenced by advertisements affect this construction. Indeed, instruments that lead to greater understanding of brand are fundamental in the ideal allocation of resources, bringing about dynamism and efficiency.

This study also provides an empirical study of the service sector, namely the Brazilian broadband industry. With regard to the differentiation of brands, the company NET presented the highest means for Advertising and Brand Awareness and the company GVT the highest means for Perceived Quality, Brand Loyalty, Brand Associations and for Overall Brand equity. In addition, the company OI presented the lowest overall mean in each of the constructs. This study brings up a number of different theoretical implications.

In the theoretical field, this article demonstrates that the evaluations of consumers about advertisements positively affect all of the dimensions evaluated, which together make up brand equity. Villarejo and Sanchez-Franco (2005) reported that many of the dimensions of brand equity were affected by perceived advertising spending. However, in that study, this phenomenon did not occur with the dimension of Loyalty, which is counterintuitive to the existing literature. In contrast, in this study, which analyzed consumer evaluation of advertising, we identified a positive affect on brand loyalty.

Buil et al. (2013) and Yoo et al. (2000), working with advertising spending, report divergent results in relation to its affect on the dimensions of brand. Yoo et al. (2000) confirms the affect of advertising spending on the dimensions of Perceived Quality, Loyalty and Brand Awareness, while Buil et al. (2013) only identify a relationship with the Brand Awareness dimension. Buil et al. (2013) also deal with attitudes towards advertisements and show positive relationships with the dimensions of Perceived Quality, Brand Associations and Brand Awareness. Our study responds to the aforementioned studies, addressing the affect of advertisement, seen from different angles, on brand equity and its dimensions.

7.2 Limitation of the study and future research

Our review of the literature demonstrates that this topic needs more research for its full development, since different countries, sectors and other dimensions of brand equity could be further addressed in order to shed more light on the subject. In Brazil, studies dealing with the theme are quite scarce, and even more so if we account only for those considering investment in advertising and its affect on the dimensions that make up brand equity. Studies on this subject can foster the development of researchers and institutions and also offer valuable indicators for the market, which would allow closer ties between organizations and universities, benefiting both sides.

One of the limitations of the study is the location of its application, as data collection was restricted to customers of broadband operators of two capitals in states in the region of Southern Brazil. Future research could use the developed data collection instrument for other sectors, or even to deepen the research in this specific sector, by improving the constructs analyzed, or applying the instrument to other regions.

In addition, it is recommended that future research be carried out with a larger number of respondents, because, although 400 respondents is a substantial number, additional analyses which require a larger number of respondents can be performed, such as Modeling of Structural equations. A larger sample would also provide more accurate indicators.

Future research can relate the different angles of advertising and its relationships in the construction of brand equity. Is there a positive relationship between advertising spending x perceived advertising spending x consumer evaluation of the advertising? Does increased advertising spending generate an accurate perception of spending? In addition, when there is such a perception, does it impact the consumer's evaluation of the advertising? Does this interaction impact the dimensions of brand equity in different ways?

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