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SUBJECT AREA: MARKETING

## Brand Extension Evaluation: an experimental research study in the service sector

*Avaliação de Extensões de Marca: uma pesquisa experimental no setor de serviços*

*Evaluación de extensiones de marca: un estudio experimental en el sector servicios*

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### ABSTRACT

This study analyzed the effects, in consumers' evaluations, of different brand names (arbitrary, descriptive, and suggestive), of perceived similarities (high vs. low) and of perceived quality regarding brand extension in services. We implemented two experiments involving 1,338 respondents. In Experiment 1, by means of MANOVA, we managed to detect significant effects of brand names and of similarities in Attitude and Intention to Use of consumers. In Experiment 2, we added manipulation of perceived quality to the sample. We identified transfer of perceived quality to extended service, and that perceived quality overweighed effects of similarity and brand names in extensions, which

indicates that perceived quality is more relevant in evaluation of brand extension in service when brand names are not recognized by consumers.

**Keywords:** Brand extension. Services. Service quality. Perceived similarity.

### RESUMO

Este estudo tratou da análise dos efeitos, na avaliação dos consumidores, de diferentes nomes de marcas (arbitrária, descritiva e sugestiva), da similaridade (alta *versus* baixa) e da qualidade percebidas em relação a extensões de marcas em serviços. Foram realizados dois experimentos que envolveram 1.338 respondentes. No Experimento

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1, por meio da análise de variância multivariada (Manova), verificaram-se efeitos significantes dos nomes de marcas e da similaridade na atitude e na intenção de uso dos consumidores. No Experimento 2, adicionada a manipulação da qualidade percebida, verificou-se a transferência desta para o serviço estendido e sua sobreposição aos efeitos da similaridade e dos nomes de marcas nas extensões, indicando que esse construto é mais relevante na avaliação das extensões de marcas em serviço quando os nomes das marcas não são reconhecidos pelos consumidores.

**Palavras-chave:** Extensão de marcas. Serviços. Qualidade em serviços. Similaridade percebida.

## RESUMEN

Este estudio trata del análisis de los efectos en la evaluación de los consumidores de distintos nombres de marcas (arbitraria, descriptiva y sugestiva), de la similitud percibida en relación a extensiones de marcas en servicio. Se realizaron dos experimentos que abarcaron 1.338 encuestados. En el Experimento 1, mediante el análisis de MANOVA, se han verificado efectos significativos de los nombres de marcas y la similitud en la actitud y en la intención de uso de los consumidores. En el Experimento 2, sumada a la manipulación de la calidad percibida, se ha verificado la transferencia de esta para el servicio extendido y su sobreposición a los efectos de la similitud y de los nombres de marcas en las extensiones, indicando que este constructo es más relevante en la evaluación de las extensiones de marcas en servicio, cuando los nombres de las marcas no son reconocidos por los consumidores.

**Palabras clave:** Extensión de marca. Servicios. Calidad de servicios. Similitud percibida.

## 1 INTRODUCTION

It is possible to observe that the major use of brand extension occurs mainly because of the strong points that the parent brand can offer its

extension, which can make products and services more attractive to consumers (AAKER, KELLER, 1990; KELLER, 2003) and raise the awareness of the benefits to the supply and distribution chains involved, with possible cost savings and higher chances of success, in addition to the possibility of maintaining the brand equity (MORRIN, 1999).

The brand extension theme has been much studied in relation to the goods sector (AAKER, KELLER, 1990; KELLER, 2003; BATRA, LENK, WEDEL, 2010). Nevertheless, several authors indicate that there is lack of research on the theme applied to the service sector (MARTÍNEZ, PINA, 2005; HERNANDEZ et al., 2011).

Given the paucity of studies on brand extensions in the service sector (VAN RIEL, LEMMINK, OUWERSLOOT, 2001), which currently represents the largest part of several countries' economy, including Brazil's, and considering the importance and popularity of the brand extension strategy, it is essential to know how the consumer evaluates the extension in the service context (VÖLCKNER, SATTLER, 2006). Given the above, this study aimed to analyze the effect of different types of brand name (arbitrary, descriptive and suggestive) at different levels of perceived similarity between services (high similarity vs low similarity) and different levels of perceived quality of services (high quality vs low quality) of the parent brand, the consumer evaluations in the context of brand extension. There were, therefore, two field experiments, in which situations of brand extension services with different levels of similarity perceived by participants were simulated.

The results of the experiments are presented in this article, which is structured as follows: after this brief introduction, the second section presents the literature review in which we show the main theoretical concepts and brand extension strategies. Then, we formulate hypotheses to be tested in an empirical research phase. In the third and the fourth sections, we present the design of experiments and the results obtained. Then, in the fifth section, we discuss the results and the presentation of academic and management contributions, and suggestions for future studies.

## 2 LITERATURE REVIEW

In this section, we will display the main concepts that supported the research and hypotheses generated from the literature.

### 2.1 Brands and brand extension

Brands have been used for millennia, and its main purpose and distinguish goods and services from a manufacturer or service provider from others. According to the American Marketing Association (2014), a brand can be defined as a name, term, symbol, design or a combination of these, used to identify goods or services of a particular provider.

The brand extension occurs when a particular brand is embedded in products or lines and/or categories other than those to which it currently belongs, and can be considered a gimmick used by companies when they already have a brand accepted in the market (AAKER, 1998, KELLER, MACHADO, 2006; OLIVEIRA, MATTAR, 2001; NEERAKKAL, 2011). An example of this branding strategy has been given by Nestlé, when it used the Alpino brand, originally a chocolate bar, to launch an ice cream.

Since the study of Aaker and Keller (1990), the strategy of brand extension began to intensify, especially for advantages that it can provide, but it also drew attention to the risks that may be incurred in such action (OLIVEIRA, MATTAR, 2001). As an advantage, it is observed that the image of a well-known and well-appreciated brand among consumers creates certain expectations, which are inferred in brand extension, and improves the positive associations perceived and, consequently, the brand image. In the same line of thought, one can achieve a reduction in risk perception by consumers (KELLER, AAKER, 1992; MARTINEZ, PINA, 2005; KELLER, MACHADO, 2006; NEERAKKAL, 2011) and an increase in promotional efficiency (SULLIVAN, 1992; SMITH, 1992; SMITH, PARK, 1992), and other types of association regarding brand extensions done properly, which generate favorable

perceptions of the credibility of the company that owns the extension (KELLER, AAKER, 1992; MARTINEZ, PINA, 2005). Moreover, the product receiving a brand extension could be harmed if any problems occur with the product brand already established (AAKER, 1998).

### 2.2 Naming strategies

The brand name is a fundamental choice, often making the decision-making process difficult and one that can set guidelines for the success or failure of the goods or service (KELLER, HECKLER, HOUSTON, 1998). This study considered some types of brand names (KELLER, MACHADO, 2006) that can be classified as descriptive, suggestive, compounds, classics, arbitrary and fantasy. We opted for the use of the types of the brand name a) descriptive, which literally describes the function of the service or activity of the company; b) suggestive, which suggests a benefit or function of a service; c) arbitrary, which makes use of real words with no connection to the service or activity of the company, being the most usual (KELLER, HECKLER, HOUSTON, 1998).

### 2.3 Similarities and quality of brand extension in services

The literature indicates the establishment of similarity in the context of brand extension. To AAKER and KELLER (1990), the similarity is given by three attributes: complementarity, substitutability and transferability. The complementarity is associated with the possibility of using products (or services) together or simultaneously (for example, gasoline, and additives, or hair straightening or dyeing). Substitutability is associated with the choice between one or another product or service (for example, the choice between a candy or ice cream for dessert). The transferability is detected when a provider uses the same structure to provide two different products (or services). For example, a factory that can produce cups and picture frame simultaneously, because it uses the

same raw material (glass) or a hotel that offers accommodation to its guests and is also used as a venue for wedding parties.

A study by Hernandez et al. (2011), intended to evaluate the effect of perceived quality of the parent brand (defined by the author as the perception of consumers about the quality or brand superiority over competing brands) and perceived similarity (defined as the perception of the similarity between the original service and that receiving the brand extension) on evaluations of corporate brand extensions on services, found results that suggested that the perceived quality of the parent brand have key role in evaluating corporate brand extensions on services. Bringing contradictory evidence to previous studies (PINA et al, 2006; VÖLCKNER et al, 2010) have shown that the perceived quality of the parent brand is significantly more important than the perceived similarity in the context of services.

Lopes and Hernandez (2010), faced with several questions about the brand extension strategies, conducted a study in order to assess the effects of different types of brand name on consumers' assessment. After analyzing the data from 170-college-student sample, the authors concluded that: a) the brand name loaded with meaning shows better evaluation than the invented brand name, when the brand extension occurs for a format very similar to that which led to the extension; b) the brand name invented shows better evaluation than the name loaded with meaning, when the brand extension occurs for a format little similar to that which gave rise to the extension; c) the own brand name evaluation shows better evaluation than the brand name invented, when the brand extension occurs for a format similar to that from which the extent originated; d) the own brand name evaluation shows better evaluation than the brand name loaded with meaning, when the brand extension occurs for a format little similar to that which gave rise to extension.

The quality perceived and similarity between the parent brand and the extended brand (hereinafter referred to as MM and ME, respectively) are the main determinants of a good

evaluation of brand extensions (BOTTOMLEY, HOLDEN, 2001; VÖLCKNER, SATTLER, 2006 ). Research has shown, however, different effects of these two variables on the evaluation of brand extensions in services. Some studies have found highly significant effects of similarity on brand extensions (RUYTER, WETZELS, 2000; LEI et al, 2004; MARTINEZ, PINA, 2005; VAN RIEL, OUWERSLOOT, 2005), whereas others indicated that the perceived quality of MM had a more significant effect than the effect of similarity on brand extensions in services (VÖLCKNER et al., 2010; HERNANDEZ et al., 2011).

While the literature does not point to a specific model for measuring service quality (CRONIN, TAYLOR, 1992; LEE, LEE, YOO, 2000), it is possible to observe that most of the models use of five general dimensions (Tangible Aspects, Reliability, Promptness, Security and Empathy) of Servqual (PARASURAMAN, ZEITHAML, BERRY, 1990). Given the need to create, in this study, evidence of quality services, we chose to use the five dimensions of Servqual, because this is the most used and replicated model to measure the perceived quality in services worldwide (LOPES, HENANDEZ, NOHARA, 2009).

#### 2.4 Formulation of hypotheses

The brand name is a fundamental choice. In the choice of name, we often use terms suggesting the category. It should be noted, however, that when the brand name really describes or suggests the category, it can become restrictive as to the brand extension (KELLER, HECKLER, HAUSTON, 1998).

Commonly, a greater degree of similarity implies a better evaluation of any type of extension (AAKER, KELLER, 1990; BOUSH, LOKEN, 1991; RUYTER, WETZELS, 2000). On the other hand, consumers may pay more attention to the attributes of the extension if its benefits are not similar to the MM, regardless of brand strength (BOUSH, LOKEN, 1991). The influence of perceived similarity in the assessment of extensions has been analyzed from perspectives

of tangible products (AAKER, KELLER, 1990; BOUSH, LOKEN, 1991), services (RUYTER, WETZELS, 2000; ALLARD, VAN RIEL, OUWERSLOOT, 2005; MARTINEZ, PINA, 2005) and both views (VAN RIEL, LEMMINK, OUWERSLOOT, 2001). Therefore, this research proposes the first hypotheses to be tested.

H1 = The brand extension with descriptive name is better assessed than the brand extension with arbitrary name when the perceived similarity of the MM and ME service is high (high vs. low).

H2 = The brand extension with suggestive name is better assessed than the brand extension with arbitrary name when the perceived similarity of the MM and ME service is high (high vs. low).

H3 = The brand extension with suggestive name is better assessed than the brand extension with descriptive name when the perceived similarity of the MM and ME service is high (high vs. low).

For both service and product brands, there is the direct influence of perceived quality in evaluating extensions (SUNDIE, BRODIE, 1993; VAN RIEL, LEMMINK, OUWERSLOOT, 2001; ALLARD, VAN RIEL, OUWERSLOOT, 2005; MARTINEZ, PINA, 2005; HERNANDEZ et al, 2011). The perception of higher quality in the core brand can provide a better assessment of the extension: therefore, we propose to test the following hypothesis:

H4 = The brand extension with descriptive name is better assessed than the brand extension with arbitrary name when the perceived similarity and quality of the MM and ME service is high (vs. low).

In the marketing activity, the use of brands goes beyond the objective of identifying the companies. Brands differentiate products and services and add value to them, in addition to

contributing to the achievement of competitive advantage (NEERAKKAL, 2011). Additionally, when purchasing a product or consuming a service, the consumer does not buy only an asset, but the whole set of symbolic values and brand attributes (LOPES; HERNANDEZ, 2010). The suggestive brand name can provide the consumer perception of certain benefits, but on the other hand, it can be restrictive in the case of use of the brand in a category that shows little similarity to the category of MM (KELLER; HEKLER; HOUSTON, 1998 ). Therefore, we formulate:

H5 = The brand extension with suggestive name is less well assessed than the brand extension with arbitrary name when the perceived similarity and quality of the MM and ME service is low (vs. high).

Keller (2003) states that, if a brand creates positive associations, it can ensure certain prominence in the market, i.e., a brand that suggests benefits, transferability and complementarity (AAKER, KELLER, 1990), in addition to providing good feelings to consumer perceptions about quality, will have a greater chance of success. Therefore, we formulate the following hypothesis:

H6 = The brand extension with suggestive name is better assessed than the brand extension with descriptive name when the perceived similarity and quality of the MM and ME service is high (vs. low).

The literature on brand extension has already pointed out that the main determinants of a good evaluation of brand extensions are perceived similarity and the perceived quality of the MM (BOTTOMLEY, HOLDEN, 2001; VÖLCKNER, SATTLER, 2006). Research has shown, however, conflicting results about the effects of these two variables in the evaluation of brand extensions in services. Ruyter and Wetzels (2000), Lei et al. (2004) and Van Riel and Ouwersloot (2005) found significant effects of similarity on evaluations of brand extensions.

Völckner et al. (2010) and Hernandez et al. (2011) showed that the perceived quality of the MM had a more significant effect than the effect of similarity in brand extensions in services. Probably, these contradictory results are justified by the use of different research designs. Based on this, we propose to test the following hypotheses:

H7 = The brand extension with descriptive name is less well assessed than the brand extension with suggestive name when the perceived similarity of the MM and ME service is low (vs. high), and the perceived quality of the MM and ME service is high (vs. low).

H8 = The brand extension with suggestive name is better assessed than the brand extension with arbitrary name when the perceived similarity of the MM and ME service is high, and the perceived quality of the MM and ME service is low.

H9 = The brand extension with arbitrary name is better assessed than the brand extension with descriptive name when the perceived similarity of the MM and ME service is low, and the perceived quality of the MM and ME service is high.

### 3 EXPERIMENT 1

Experiment 1 aimed to test the effects of different types of brand names and perceived similarity in the evaluation of consumers with respect to brand extensions, in a 3x2 format: three types of brand names [descriptive, suggestive, arbitrary] x 2 similarity [high vs. low]. In this experiment, H1, H2 and H3 hypotheses were tested.

#### 3.1 Development of experiment 1 stimuli

For the development of stimuli, brainstorming processes were conducted, followed by classifications with use of survey forms. Both brainstorming and classification processes were

carried out with Management undergraduate students of a large private university. These subjects, in addition to being students, have remunerated activities, which characterizes them as responsible for their buying decisions.

The first brainstorming process involved a group of students ( $n = 6$ ;  $M_{age} = 27$ ,  $dp = 3.14$ ) and aimed to build a list of types of services that would have their brands extended. The list generated by the group contained 47 different types of services.

The idealized list was submitted to a new group of students ( $n = 40$ ;  $M_{age} = 31$ ,  $dp = 6.77$ ), which classified the listed types of services as to the frequency of use on a ten-point scale, with 1 being (I never use this service) and 10 (I always use this service). To conduct experiment 1, we considered only the service that had the highest average [Supermarket ( $M = 9.30$ ,  $dp = 1.30$ )].

Having selected the service format for Experiment 1, a new group of students ( $n = 6$ ;  $M_{age} = 25$ ,  $dp = 2.31$ ), by means of another brainstorming process, devised a list of descriptive brand names ( $n = 12$ ) for the selected service. This list was submitted to another group of students ( $n = 40$ ;  $M_{age} = 28$ ,  $dp = 5.59$ ), who classified it on a ten-point scale, in which 1 (this brand name does not describe the supermarket service) and 10 (this brand name fully describes the service of a supermarket). The **Armazém** [Warehouse, in English] brand ( $M = 5.98$ ,  $dp = 3.53$ ) had the highest average.

The same procedure was adopted for suggestive brand name; therefore, a new group of college students ( $n = 6$ ;  $M_{age} = 23$ ,  $dp = 1.96$ ), by means of another process of brainstorming, devised a list of suggestive brand names ( $n = 16$ ). This list was submitted to another group of college students ( $n = 40$ ;  $M_{age} = 28$ ,  $dp = 7.68$ ), who classified it on a ten-point scale, in which 1 (this brand name does not suggest the benefits of a supermarket service) and 10 (this brand name certainly suggests the benefits of a supermarket service). The brand **Leve Mais** [Take More, in English] ( $M = 5.95$ ,  $dp = 3.12$ ) appeared as the most suitable option.

For the choice of an arbitrary brand name, the resources of the *namestation.com* website, specific for the generation of names and domains in several languages, were used. Fifteen arbitrary brand names were generated, and a group of students ( $n = 40$ ,  $M_{\text{age}} = 26$ ,  $dp = 5.66$ ) evaluated them on a ten-point scale, in which 1 (this brand name is very bad for a supermarket) and 10 (this brand name is certainly very good for a supermarket). **Ambra** brand ( $M = 5.43$ ,  $dp = 3.10$ ) had higher mean.

To manipulate the similarity of the extended service relative to the origin service, a process of brainstorming was conducted with a group of students ( $n = 6$ ;  $M_{\text{age}} = 24$ ,  $dp = 2.34$ ), who devised a list of types of services ( $n = 36$ ). This list was submitted to another group of students ( $n = 40$ ;  $M_{\text{age}} = 31$ ,  $dp = 6.28$ ), which classified the types of services listed in relation to the similarity to a supermarket using a ten-point scale, in which 1 (nothing similar) and 10 (very similar). The subjects who participated in the classification of services as to the similarity were submitted to the same similarity measures used by Aaker and Keller (1990), i.e., subjects receive information and guidance on complementarity, substitutability and transferability.

The Restaurant service was considered the most suitable to represent high similarity, and the Travel Agency service, the most suitable for the service of low similarity before a Supermarket, as a result of the Student's  $t$  test for paired samples ( $= 7.31 M_{\text{Restaurant}}$ ,  $dp = 2.36$  and  $M_{\text{Travel Agency}} = 3.73$ ,  $dp = 2.71$ ,  $t(38) = 6.903$ ,  $p < 0.01\%$ ), which showed significant difference in perceived similarity between formats.

### 3.2 Sample and control procedures of experiment 1

The sample comprised service consumers and employees of a retailer of construction materials which has several stores in the state of São Paulo. In total, to conduct the research, we decided to apply the questionnaires in nine different stores. The distribution of questionnaires to the shops and to the respondents random;

However, as the selection was between stores goes on any given day, the sample was classified as non-probabilistic by convenience (FIELD, 2009).

The questionnaires, developed in the self-completing forms on paper, were applied by researchers trained by one of the authors of this article.

The final sample of Experiment 1 included 279 respondents and represented return of 93% out of 300 questionnaires applied, consisting of 125 male respondents (44.8%) and 154 female respondents (55.2%), with average 33 years of age ( $dp = 10.55$ ). Twenty-one questionnaires (7% of total), which returned unfilled or with missing values, were discarded.

### 3.3 Data analysis plan of experiment 1

Because this study is an experimental type research, we used the techniques of descriptive statistics of Exploratory Factor Analysis (EFA) and Multivariate Analysis of Variance (MANOVA). For processing the data, the SPSS statistical software was used for Windows version 15.

### 3.4 Data collection tool for experiment 1

The data collection instruments were structured in three parts. Forms showed few differences between them, which, in the first part, resulted from the manipulation of the variables involved. We used six forms containing different stimuli. Appendix 1 presents the operationalization of this manipulation.

In the second part of the forms, we dealt with the measurement of the evaluation of brand extensions and monitoring of efficiency of stimuli manipulation by means of a 7-point Likert scale, with 1 (Strongly Disagree) and 7 (Strongly Agree). As in previous experimental studies (LOPES, HERNANDEZ, 2010; SHEERAN, HARRIS, EPTON, 2014), the evaluation was measured by the Attitude and Intention to Use the ME service. In total, 12 statements were used, eight to measure Attitude and four to measure Intention to Use (Appendix 2), adapted from Lopes and Hernandez (2010). To check the type of brand

name, the perceived similarity and quality of MM, three statements, one for each variable (Appendix 2) were used. It is noteworthy that a pre-test was conducted with a group of Management students ( $n = 36$ ) that ratified the effectiveness of the survey instrument and allowed minor adjustments. The third part of the forms asked respondents categorical data.

### 3.5 Results of experiment 1

To check the efficiency of manipulation the types of brand names, we conducted the chi-square test. The test result ( $\chi^2 = 112.637/12$  g.l.;  $p < 0.01$ ) showed that participants identified the difference between suggestive, descriptive and arbitrary brands. Similarly, t-Student test for independent samples showed significant differences in the respondents' perception in manipulating similarity ("The activity of a <ME Service Format> is certainly very similar to the activity of a Supermarket" /  $M_{\text{Travel Agency}} = 2.82$ ,  $dp = 2.03$  and  $= M_{\text{Restaurant}} 3.58$ ,  $dp = 2.01$ ,  $t(271) = 3.097$ ,  $p < 0.01$ ).

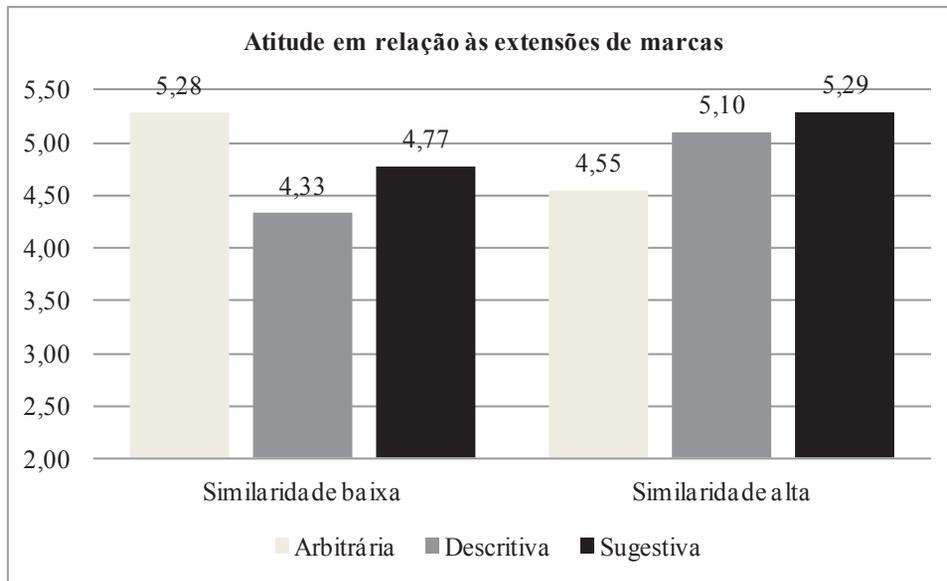
Having checked the manipulation of stimuli, we decided to check the assessment statements. The EFA was performed with Oblimin oblique rotation (non-orthogonal) (HAIR et al, 2005; FIELD, 2009). The adoption of this method of rotation is justified by the fact that there is high theoretical correlation between Attitude and Intention (AAKER, KELLER, 1990). The EFA used the principal components analysis, pointing to the two-dimensionality of the items of the dependent variables. The internal consistency of the factors was appropriate because we identified the Cronbach's alpha index of 0.867 for the items of the Attitude factor and 0.759 for the items of Intention (HAIR et al., 2005; FIELD, 2009). The factor loadings were adequate, being greater than 0.50, and crossed loads (between

factors) below 0.30. Similarly, the KMO (0.916) indicated that the sample is suitable for use in EFA technique (HAIR et al, 2005; FIELD, 2009). The analysis of Bartlett's sphericity test was not used, as in other experimental studies, because the test is very sensitive to sample size (FIELD, 2009).

We then proceeded to the checking process by means of Manova, to observe the effects of brand extension strategies on Attitude and Intention to Use of the respondents. As expected, the Manova identified interaction effect between Brand and Similarity with Attitude ( $F(2,278) = 9.831$ ,  $p < 0.01$ ) and Brand and Similarity with Intent ( $F(2,278) = 5.918$ ,  $p < 0.01$ ). The results are shown in Graphs 1 and 2.

There was a significant difference in attitude towards extension between descriptive and arbitrary brands with high manipulation similarity ( $M_{\text{Descriptive High Similarity}} = 5.10$  and  $M_{\text{Arbitrary High Similarity}} = 4.55$ ,  $t(93) = 2.259$ ,  $p < 0.05$ ). As expected, the descriptive brand was better assessed than the arbitrary brand when the perceived similarity between the MM and the extension was high. When perceived similarity was low, there was significant difference between the evaluation of the brands ( $M_{\text{Descriptive Low Similarity}} = 4.33$  and  $M_{\text{Arbitrary Low Similarity}} = 5.28$ ,  $t(88) = 3.383$ ,  $p < 0.01$ ); however, in the perception of low similarity, the arbitrary brand was better assessed than the descriptive brand.

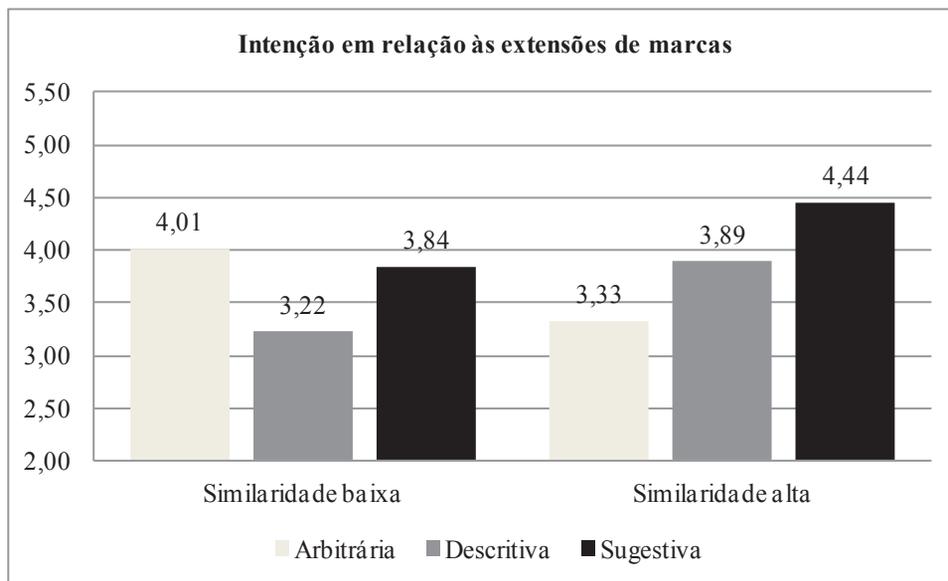
Likewise, the suggestive brand showed significant difference in relation to the arbitrary brand when the perceived similarity was high ( $M_{\text{Suggestive High Similarity}} = 5.29$  and  $M_{\text{Arbitrary High Similarity}} = 4.55$ ,  $t(91) = 3.040$ ,  $p < 0.01$ ) and low ( $M_{\text{Suggestive Low Similarity}} = 4.77$  and  $M_{\text{Arbitrary Low Similarity}} = 5.28$ ,  $t(90) = 1.949$ ,  $p < 0.10$ ). We observed that the suggestive brand was better assessed than the arbitrary brand when an high similarity was evaluated and less well assessed than the arbitrary brand when perception of similarity was low.



Similarity / Brand	Arbitrary	Descriptive	Suggestive
Low	5.28	4.33	4.77
High	4.55	5.10	5.29

**GRAPH 1 – Experiment 1 – attitude vis-à-vis extensions**

**Source:** Research data, prepared by the authors.



Similarity / Brand	Arbitrary	Descriptive	Suggestive
Low	4.01	3.22	3.84
High	3.33	3.89	4.44

**GRAPH 2 – Experiment 1 – intent vis-à-vis extensions**

**Source:** Research data, prepared by the authors.

The Attitude vis-à-vis the suggestive brand compared to descriptive brand with high perceived similarity was not significantly different ( $M_{\text{Suggestive High Similarity}} = 5.29$  and  $M_{\text{Descriptive High Similarity}} = 5.10$ ;  $t(86) = 0.811$ ,  $p = ns$ ). On the other hand, when the perception of similarity was low, the comparison between the means of descriptive and suggestive brands was significantly different ( $M_{\text{Suggestive Low Similarity}} = 4.77$  and  $M_{\text{Descriptive Low Similarity}} = 4.33$ ,  $t(96) = 1.684$ ,  $p < 0.10$ ), having been the suggestive brand better assessed than the descriptive brand.

There was also significant difference in Attitude vis-à-vis the extension of arbitrary brand when there is low (vs high) perceived similarity between the format of MM services and the extended format ( $M_{\text{Arbitrary High Similarity}} = 4.55$  and  $M_{\text{Arbitrary Low Similarity}} = 5.28$ ,  $F(1,90) = 7.807$ ,  $p < 0.01$ ). The Attitude is more positive when an arbitrary brand is extended in a format of low similarity. It was also found that there is significant difference in Attitude about the extension of descriptive brand ( $M_{\text{Descriptive High Similarity}} = 5.10$  and  $M_{\text{Descriptive Low Similarity}} = 4.33$ ,  $F(1,91) = 8.592$ ,  $p < 0, 01$ ) and suggestive brand ( $M_{\text{Suggestive High Similarity}} = 5.29$  and  $M_{\text{Suggestive Low Similarity}} = 4.77$ ,  $F(1,91) = 4.581$ ,  $p < 0.05$ ), upon manipulation of similarity (high vs. low), and both the descriptive and suggestive brands were better assessed when the format of the extension showed high similarity to the MM service format.

The results observed in the Intention to Use of the respondents as to the brand extensions were quite similar to those observed in Attitude. A significant difference in the Intention to Use in relation to the extension between descriptive and arbitrary brands with perceived high similarity ( $M_{\text{Descriptive High Similarity}} = 3.89$  and  $M_{\text{Arbitrary High Similarity}} = 3.33$ ,  $t(93) = 2.212$ ,  $p < 0.05$ ). Just as happened with Attitude, the descriptive brand was better assessed than the arbitrary brand when perceived similarity between MM and the extension was high. When perceived similarity was low, significant difference between brands was detected

( $M_{\text{Descriptive Low Similarity}} = 3.22$  and  $M_{\text{Arbitrary Low Similarity}} = 4.01$ ;  $t(88) = 2.297$ ,  $p < 0.05$ ). In the perception of low similarity, however, the arbitrary brand was better assessed.

The suggestive brand showed significant difference in relation to the arbitrary brand when the perceived similarity was high ( $M_{\text{Suggestive High Similarity}} = 4.44$  and  $M_{\text{Arbitrary High Similarity}} = 3.33$ ,  $t(91) = 3.640$ ,  $p < 0.01$ ). When similarity perception was low ( $M_{\text{Suggestive Low Similarity}} = 3.84$  and  $M_{\text{Arbitrary Low Similarity}} = 4.01$ ,  $t(90) = 0.491$ ,  $p < ns$ ), we observed no significant difference, which is different from what we expected to find and from what happened in Attitude.

The Intention to Use vis-à-vis the suggestive brand compared to descriptive brand with high perceived similarity was significantly different ( $M_{\text{Suggestive High Similarity}} = 4.44$  and  $M_{\text{Descriptive High Similarity}} = 3.89$ ;  $t(86) = 0.811$ ,  $p = 0.10$ ).

Likewise, significant difference was observed when the perceived similarity was low between the means of suggestive and descriptive brands ( $M_{\text{Suggestive Low Similarity}} = 3.84$  and  $M_{\text{Descriptive Low Similarity}} = 3.22$ ,  $t(88) = 2.297$ ,  $p < 0.05$ ). The suggestive brand was better assessed than the descriptive brand both in low and high perception of similarity.

We also detected significant difference in Intention to Use vis-à-vis the extension of arbitrary brand when there is low (vs high) perceived similarity between the format of MM service and the extended format ( $M_{\text{Arbitrary High Similarity}} = 3.33$  and  $M_{\text{Arbitrary Low Similarity}} = 4.01$ ,  $F(1,90) = 4.546$ ,  $p < 0.05$ ). The Intention to Use is more positive when an arbitrary brand is extended in a format of low similarity. We also found that there is significant difference in Intention to Use about the extension of descriptive brand ( $M_{\text{Descriptive High Similarity}} = 3.89$  and  $M_{\text{Descriptive Low Similarity}} = 3.22$ ,  $F(1,91) = 5.759$ ,  $p < 0, 05$ ) and suggestive brand ( $M_{\text{Suggestive High Similarity}} = 4.44$  and  $M_{\text{Suggestive Low Similarity}} = 3.84$ ,  $F(1,91) = 3.190$ ,  $p < 0.10$ ), upon manipulation of similarity (high vs. low), and both the descriptive and suggestive brands were better assessed when the format of the extension showed high similarity to the MM service format.

### 3.6 Discussion of experiment 1 results

The results confirm previous studies (KELLER, HECKLER, HOUSTON, 1998; KELLER, MACHADO, 2006), as it was observed that descriptive and suggestive brand names showed better evaluation of both the Attitude and the Intention to Use, when the extension similarity was high between the extended format and the format of MM. A brand name that suggests benefits of a service or that describes it can facilitate interpretation by the consumer about the brand (MOORE, LEHMANN, 1982; LOPES, HERNANDEZ, 2010).

On the other hand, research on brand extensions has found that brand names that suggest or describe the very category they belong to can be quite restrictive as to the extent (Keller, HECKLER, HOUSTON, 1998; KELLER, MACHADO, 2006; LOPES, HERNANDEZ, 2010). The results of Experiment 1 confirmed these findings. It was found that when manipulating the similarity of the extension format is low compared to the MM service format, the name of an arbitrary brand was rated better than the suggestive brand names. Thus, as seen from the results of Experiment 1, we may say that H1 was fully accepted.

The measured results show that there was no significant difference between arbitrary and suggestive brands only in relation to the Intention with low manipulation similarity. While observing certain trend towards acceptance of Hypothesis 2 when checking the ratings assigned to the brand names, we decided to reject it partially.

Among the descriptive and suggestive brand names, the results showed no significant difference between them only in relation to the Attitude when the similarity manipulation was high. This may result from the fact that both the descriptive and suggestive brands have a certain meaning for the consumer, which makes them quite similar when an evaluation is conducted. However, we tended to accept Hypothesis 3, since in the construct Intention to Use there was significant difference between those brands. Even so, we decided to partially reject H3.

## 4 EXPERIMENT 2

Experiment 2 aimed to measure the same effects of Experiment 1 plus manipulation of perceived quality. Its format was 3x2x2, with three types of brand names [descriptive, suggestive, arbitrary] x 2 similarity [high vs. low] x 2 perceived quality of the MM [high vs. low]. Experiment 2 tested H4 to H9 hypotheses.

### 4.1 Development of experiment 2 stimuli

The format of MM service used in this second experiment was also the result of the first brainstorming done for Experiment 1. As described in section 3.1, the list generated and subsequently analyzed identified that the service format most used by the college student participants was the Supermarket – use measured by the ten-point scale with 1 (I never use this service) and 10 (I always use this service). The second most used format was the Petrol Station (M - 7.13; dp - 2.31)

Having set the format, we moved to the development of brand names for a Petrol Station.

The same procedures described in Experiment 1 were adopted for the development of Experiment 2 stimuli. After completion of the brainstorming process, the types of names of descriptive, suggestive and arbitrary brands were also exposed to different groups of students to be rated, and types of brand names were those with the highest average.

For the descriptive brand name, **Gasolina&Companhia** [Gasoline&Company, in English] (M = 5.62, dp = 3.34) was the most appropriate. For the suggestive brand name, **Tanque Cheio** [Full Tank, in English] (M = 7.03, dp = 2.95) appeared as the most highly rated; for the arbitrary brand name, **Pacific** (M = 5.15, dp = 3.27) proved to be the most appropriate.

For the manipulation of perceived similarity in Experiment 2, we adopted similar process to that used in Experiment 1. The service format of a **Carwash** (M = 8.17, dp = 2.27) showed to be the most suitable for the high

similarity and the **Bookshop** service ( $M = 2.37$ ,  $dp = 2.47$ ) was best suited for low similarity in relation to the Petrol Station. For paired samples, the t-Student test showed significant difference at the 1% level between perceived similarity regarding **Carwash** and **Bookshop** services ( $t(35) = 8.810$ ,  $p < 0.01$ ).

For manipulation of perceived quality, a text containing the description of the type of service selected was idealized, and as described above, the dimensions of quality of Servqual were used to highlight the perceived quality of the MM. For the wording of the text to be appropriate for the experiment, its content was emailed to ten management professors, PhD, who research marketing. They were asked to rate, on a ten-point scale, the presence of each of the five dimensions of perceived quality of the service, with one (this quality dimension is not present in the text) and 10 (this quality dimension is certainly present in text). Of the ten professors, PhD, asked to perform content validation, eight responded. The averages for the presence of the dimensions of perceived quality of the service in the text were: Tangible Aspects ( $n = 8$ ,  $M = 9.69$ ,  $dp = 0.70$ ), Security ( $n = 8$ ,  $M = 8.63$ ,  $dp = 8.63$ ), Reliability ( $n = 8$ ,  $M = 8.25$ ,  $dp = 1.67$ ), Promptness ( $n = 8$ ,  $M = 7.64$ ,  $dp = 1.94$ ) and Empathy ( $n = 8$ ;  $M = 7.75$ ,  $dp = 2.92$ ). The operationalization of this manipulation, which resulted in the development of 12 different questionnaires, is presented in Appendix 3. For the low perceived quality, a similar text to that used in Experiment 1 was used.

#### 4.2 Sample and control procedures of experiment 2

The questionnaires were distributed in the same nine stores used in Experiment 1 by the same researchers trained by one of the study authors. However, as there was a loss of 7% of the questionnaires in the first experiment, the researchers were advised to discard the questionnaires left blank or with missing values, considered invalid. After completion of data

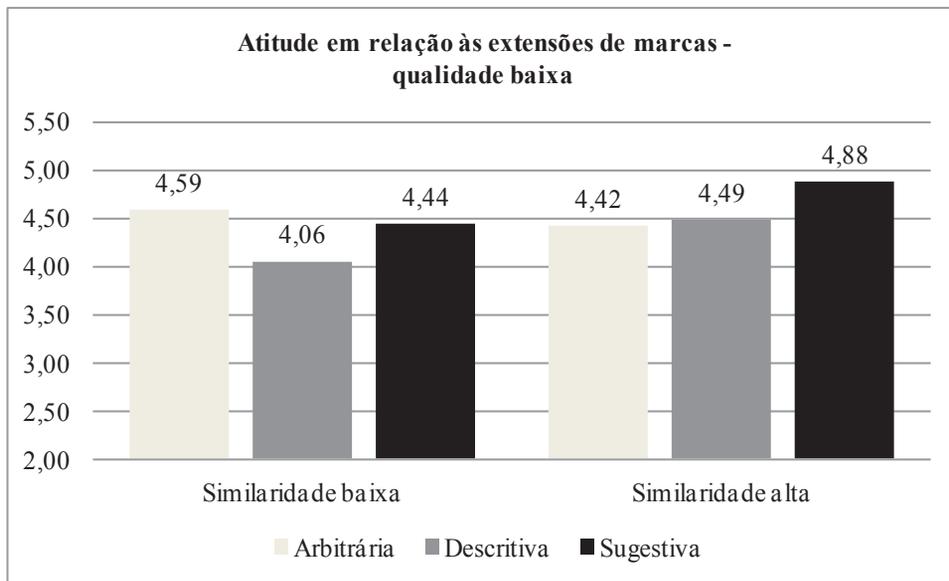
collection, only one form was discarded because the respondent pointed out two alternatives simultaneously in one of the items of the evaluation of brand extension.

The final sample of Experiment 2 was 599 respondents, consisting of 305 male respondents (50.9%) and 294 female respondents (49.1%) with average 31 years of age ( $dp = 9.36$ ).

#### 4.3 Results of experiment 2

We began checking the efficiency of manipulations with the Chi-square test ( $\chi^2 = 181.513/12$  g.l.;  $p < 0.01$ ), which showed the efficiency in the manipulation of brand names. Regarding the verification of the efficiency of the manipulation of perceived similarity, t test ( $M_{\text{Low Similarity}} = 2.92$ ,  $dp = 2.04$  and  $M_{\text{High Similarity}} = 4.26$ ,  $dp = 2.06$ ,  $t(595) = 7.964$ ,  $p < 0.01$ ) indicated that there was significant difference in the perception of similarity between formats. The manipulation of the perceived quality of MM was also successful, according to the t test ( $M_{\text{High Quality}} = 4.60$ ,  $dp = 1.84$  and  $M_{\text{Low Quality}} = 3.91$ ,  $dp = 1.93$ ,  $t(595) = 4.453$   $p < 0.01$ ), which indicated that there was significant difference in the perceived manipulation of quality.

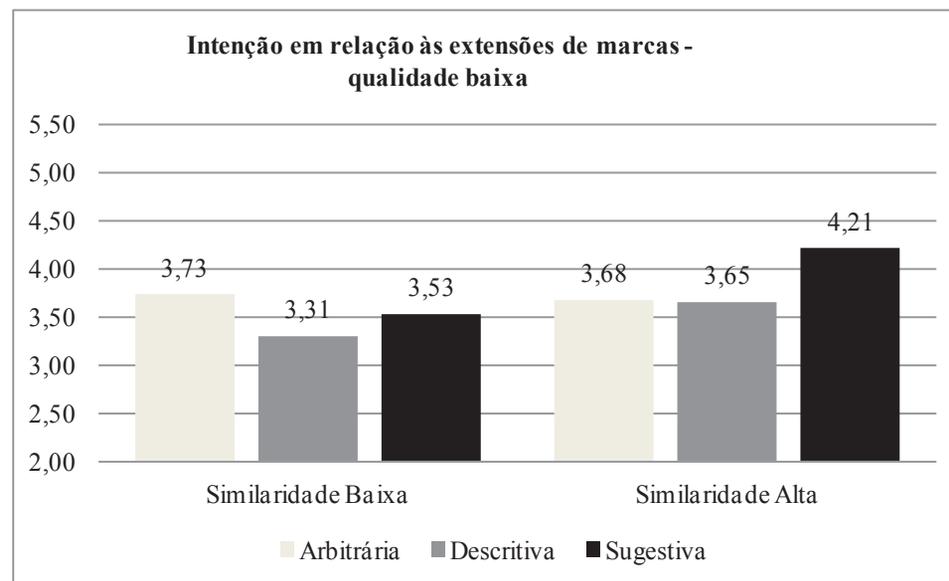
This was followed with the EFA, which was performed with oblique non-orthogonal rotation and principal component analysis. Like in Experiment 1, the analysis pointed to the two-dimensionality of the items of the dependent variables. The Cronbach's alphas for the items of Attitude (0.911) and intention (0,786) ensured the consistency of the factors. The factor loadings were appropriate, greater than 0.60, and crossed loads (between factors) lower than 0.35. Likewise, the KMO (0.929) indicated that the sample is suitable for use of the EFA technique (HAIR et al, 2005; FIELD, 2009). The MANOVA identified the main effect of perceived similarity with Intention to Use ( $F(1.593) = 3.085$ ,  $p < 0.10$ ) and perceived quality with Attitude ( $F(1.593) = 7.305$ ,  $p < 0.01$ ). Results are shown in Graphs 3, 4, 5 and 6.



Similarity / Brand	Arbitrary	Descriptive	Suggestive
Low	4,59	4,06	4,44
High	4,42	4,49	4,88

**GRAPH 3** – Experiment 2 – attitude vis-à-vis extensions – low quality

**Source:** Research data, prepared by the authors.



Similarity / Brand	Arbitrary	Descriptive	Suggestive
Low	3,73	3,31	3,53
High	3,68	3,65	4,21

**GRAPH 4** – Experiment 2 – intent vis-à-vis extensions – low quality

**Source:** Research data, prepared by the authors.

The analysis showed significant difference in the relations between arbitrary and suggestive brands with perceived high similarity and low quality in Attitude of respondents ( $M_{Arbitrary} = 4.42$  and  $M_{Suggestive} = 4.88$ ;  $t(97) = 1.721$ ;  $p < 0, 10$ ), with the suggestive brand better assessed than the arbitrary brand, as expected. The same difference was found between the arbitrary and descriptive brands with perception of low similarity and low quality ( $M_{Arbitrary} = 4.59$  and  $M_{Descriptive} = 4.06$ ,  $t(96) = 1.728$ ;  $p < 0.10$ ) and we observed that the arbitrary brand was better assessed than the descriptive brand.

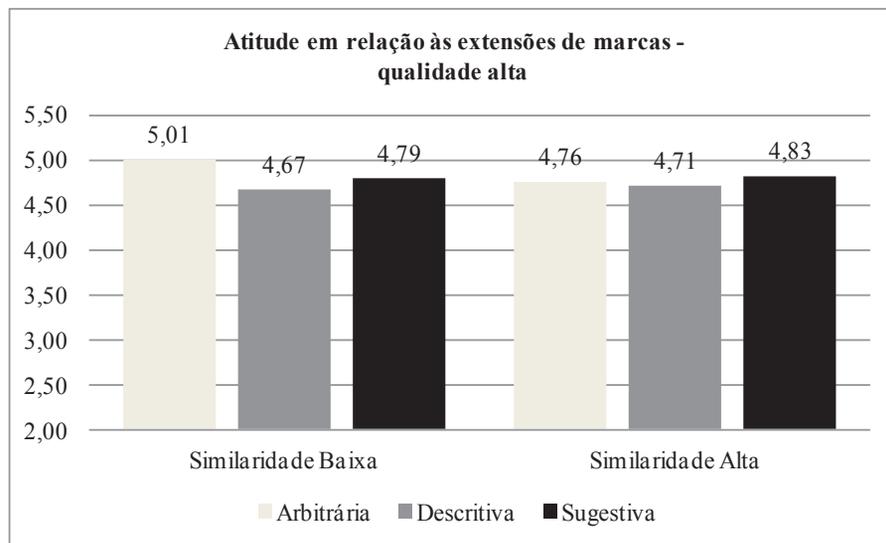
Regarding Intention to Use of the respondents in relation to brand extensions, we observed significant difference between arbitrary and suggestive brands with perceived high similarity and low quality ( $M_{Arbitrary} = 3.68$  and  $M_{Suggestive} = 4.21$ ;  $t(97) = 1.830$ ;  $p < 0.10$ ), and that suggestive brand was better assessed than arbitrary, just as in Attitude, subject to the same conditions. We also found significant differences between descriptive and suggestive brands with perceived high similarity and low quality ( $M_{Descriptive} = 3.65$  and  $M_{Suggestive} = 4.21$ ;  $t(96) = 1.790$ ;  $p < 0.10$ ),

with the suggestive brand better assessed than the descriptive brand.

There was significant difference between the means assigned to the suggestive brand with variation in perceived similarity (high vs. low). The suggestive brand was better evaluated when the perceived similarity was high, maintaining the conditions of perceived low quality on Intention to Use of the respondents in relation to brand extensions in services ( $M_{Suggestive\ High\ Similarity} = 3.53$  and  $M_{Suggestive\ Low\ Similarity} = 4.21$ ;  $F(1,98) = 5.325$ ;  $p < 0.05$ ).

Graph 5 presents the evaluations concerning the Attitude of the respondents in relation to extensions with high quality perception. We observed that none of the comparisons between the means were significant.

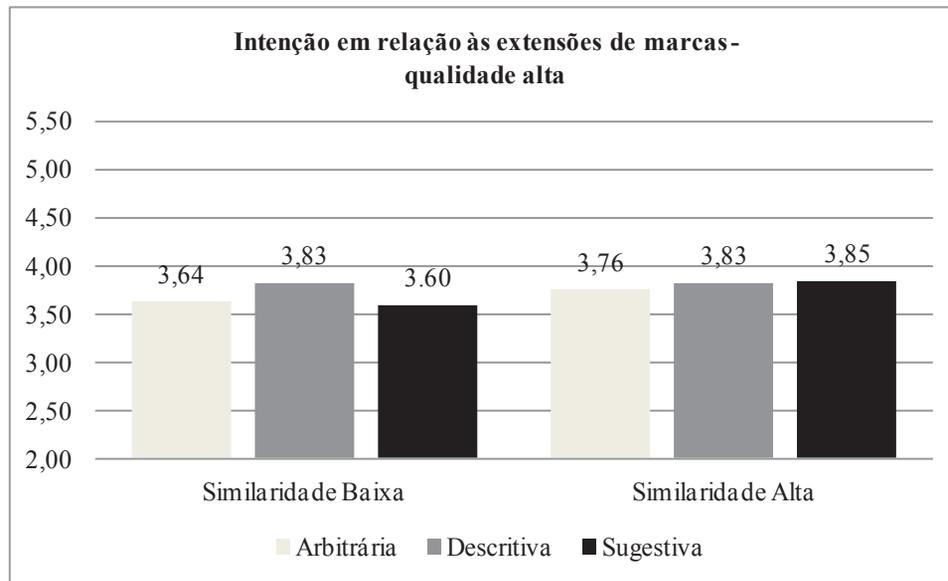
Graph 6 presents the results of Intention to Use of the respondents in relation to extensions with the perception of high quality. We observed that the effects of perceived quality of MM are also significant in the Intention of the respondents. None of the comparisons showed significant difference when the perception of quality was high, just as in Attitude.



Similarity / Brand	Arbitrary	Descriptive	Suggestive
Low	5.01	4.67	4.79
High	4.76	4.71	4.83

**GRAPH 5** – Experiment 2 – attitude vis-à-vis extensions – high quality

**Source:** Research data, prepared by the authors.



Similarity / Brand	Arbitrary	Descriptive	Suggestive
Low	3.64	3.83	3.60
High	3.76	3.83	3.85

**GRAPH 6** – Experiment 2 – intent vis-à-vis extensions – high quality

**Source:** Research data, prepared by the authors.

#### 4.4 Discussion of experiment 2 results

Results show that the effect of the MM perceived quality affects consumers' assessment regarding the extensions, both in attitude and in Intention to Use. Direct influence of perceived quality in the assessment of extensions has been observed in several studies (SUNDIE, BRODIE, 1993; VAN RIEL, LEMMINK, OUWERSLOOT, 2001; ALLARD, VAN RIEL, OUWERSLOOT, 2005; MARTINEZ, PINA, 2005; LOPES, HERNANDEZ, 2010; HERNANDEZ et al, 2011) and, as stated earlier, a perception of higher quality in MM may interfere in the evaluation of the brand extension, since the perceived quality may be transferred to the new product or extended service.

We noticed that, when observing the conditions of perceived high similarity and quality, there was no significant difference between the arbitrary and descriptive brand names, differently from expected. However, when the perception of similarity is low, as the perception of quality,

there was significant difference between arbitrary and descriptive brands, with the arbitrary brand better evaluated than descriptive brand. Even so, the H4 hypothesis was rejected.

Observing the conditions of the comparison of consumers' assessment between the suggestive brand and arbitrary brand under low quality and similarity perception conditions, we found that even if there is a tendency for a better assessment of the arbitrary brand in comparison to the suggestive brand, and that suggestive brand names might have restrictions when the brand extension occurs for low perceived similarity formats (KELLER, HEKLER, HAUSTON, 1998), there were no significant differences between brands. Likewise, there was no difference when the arbitrary and suggestive brands with high perceived similarity and quality were compared. Therefore, we rejected the H5 hypothesis, and found clear relevance of the effects of manipulation of quality overlapping the other variables manipulated in this experiment.

The H6 hypothesis proposed that the suggestive brand would be better assessed than the descriptive brand, when the extension perceived similarity was high and the perceived quality of the MM was also high. However, there was no significant difference between the ratings given by respondents within these constraints, differently from what we expected. No significant difference between suggestive and descriptive brands, with low similarity and quality perceptions, was observed. Therefore, we also rejected H6.

As previously commented, the marketing literature points to the perceived similarity of the extension with the MM and the perceived similarity of the MM as the main determinants for a good evaluation of brand extensions (BOTTOMLEY, HOLDEN, 2001; VÖLCKNER, SATTLER, 2006). By observing the results in comparisons of descriptive and suggestive brands with low perceived similarity and high perceived quality, we expected that the suggestive brand would be more thoroughly evaluated than the descriptive, as proposed in hypothesis H7. However, we found that there was no significant difference between the brands, so we rejected H7. On the other hand, when the perception of the similarity of the extended service was high in relation to the MM service and the perceived quality was low, the suggestive brand was better evaluated than the descriptive brand in Intention of respondents with respect to the brand extension. The arbitrary brand was also well assessed both in Attitude and in the Intention of the sample subjects regarding brand extensions in services. Therefore, we accepted the hypothesis H8.

The suggestive brand, as expected, was better evaluated under conditions of high similarity and perception of low quality compared with the conditions of low similarity and conditions of low quality perception. The results showed that there was no significant difference between descriptive and arbitrary brands in low similarity conditions of the extended service and perceived high quality. Thus, we rejected hypothesis H9.

We noticed, with the results of Experiment 2, that, upon perception of high quality, the effects of brand names (arbitrary, descriptive and

suggestive) and similarity (high versus low) were annulled. Respondents, based on a perception of high quality, evaluated brand extensions in services without regard to the names and the similarity. Such evidence collaborates with the findings of Völckner et al. (2010) and Hernandez et al. (2011) studies.

It should be noted here that the observed effects are in a context of unrecognized brands, for all brands used were developed for Experiments 1 and 2, as described in items that addressed the development of stimuli. Therefore, evaluations of consumers could differ on the manipulation of recognized brands.

## 5 GENERAL DISCUSSION OF RESULTS

Encouraged by a lack of research on brand extension in services in the marketing literature, this study aimed to analyze the effects of types of brand names (arbitrary, descriptive and suggestive), manipulated along with the perception of similarity (high vs. low) and the perception of quality of MM (high vs. low), the evaluations of consumers about brand extensions in services.

By means of structured questionnaires, 460 individuals were invited to develop the stimuli used in the experiments and 878 consumers to evaluate brand extensions in services, thus making up a total of 1,338 subjects. In Experiment 1, with the findings, we noticed that the consumer tends to have certain skill in interpretation about the brand when connecting the service with its attributes or benefits. This application validates studies involving manipulation of brand names (MOORE, LEHMANN, 1982; LOPES, HERNANDEZ, 2010) and perceived similarity with the extension to the MM (HERNANDEZ et al., 2011; NEERAKKAL, 2011).

In Experiment 2, we added manipulation of perceived quality of MM. The presence of the dimensions of service quality in the stimuli set for Experiment 2 had the extensions be evaluated taking into consideration only the perceived quality.

All in all, the findings of this study indicate that the similarity of brand extension in service before the MM has significant effects on consumer evaluations both in attitude and in Intention to Use.

As for names, we noticed that the brand extension with arbitrary brand name in services can be better judged when the extension similarity is low. And the brand extension with descriptive or suggestive brand names in services is more thoroughly evaluated when the extension

similarity is high, with significant effects both in Attitude and in consumer Intent. When we manipulated the perceived quality of MM, it was found that it was transferred to the brand extension in services, in both cases with perceived high and low similarity. The effects of perception of high quality of the MM outweigh the effects of similarity (high vs. low) and brand names on brand extensions in services, both in consumers' attitude and in Intention to Use. Table 1 shows the results of testing of hypotheses.

**TABLE 1** – Test of hypotheses

Hypotheses	Conclusion	Hypotheses	Conclusion	Hypotheses	Conclusion
H1	Not rejected	H4	Rejected	H7	Rejected
H2	Partially rejected	H5	Rejected	H8	Not rejected
H3	Partially rejected	H6	Rejected	H9	Rejected

**Source:** Research data, prepared by the authors.

Most of the hypotheses tested were rejected because the perceived high quality of services of MM annulled the effects of the MEs in the evaluation of consumers. Although unrecognized brands have been used in the experiments, we observed transfer of perceived quality of the MM to brand extension in services, different from that of Aaker and Keller (1990) for tangible product extensions and also different from the findings of Pina et al. (2006) and Völckner et al. (2010) on brand extensions in services. With this, we believe that a new gap has been identified: the perceived quality of the MM may influence the evaluation of the ME in specific contexts, such as in pure services.

Still on the effects of the perceived quality in evaluations of brand extensions in services, the results resemble those of Hernandez et al. (2011), who demonstrated that services with high perceived quality are more likely to launch successful brand extensions. Such studies, however, did not manipulate types of brand names, as in this study. Therefore, we expect that this effort in order to better understand how consumers perceive and evaluate the brand

extensions in services can serve as a basis for further research on the same line.

### 5.1 Management implications

As shown in the results, arbitrary brand names may have better acceptance in extensions of low similarity, whereas suggestive or descriptive brand names may have better acceptance on brand extensions with high similarity, when there is no perceived high quality. For example, the brand extension in low similarity between the MM and ME tends to be favored when the brand is arbitrary, because, in this study, the brand extension Ambra Supermarket was more positive than the other when used in a Travel Agency. Moreover, the extension of MM for ME in conditions of perceived high similarity tends to be better assessed when the MM is suggestive (in this application, the extension of Leve Mais Supermarket for Leve Mais Restaurant).

Generally, the marketing professionals who deal with brands in the service sector, in a context of unrecognized brands, should dedicate themselves to making their service brands

present high quality perception, as portrayed by the results observed that the perception of high quality overweighs the effects of brand names and perceived similarity in the evaluations of brand extensions in services.

## 5.2 Research limitations and suggestions for future studies

Because this is an experimental research, even though much care was taken in the preparation of stimuli their manipulation, it is assumed that the effect of the stimuli may not have been similarly interpreted by the participants of the experiment, which affects their internal validity. To mitigate this limitation, we suggest replication of this study in order to validate its findings.

Another limitation is not using real names and recognized brands. This opens the possibility of new replications using brands recognized by consumers and further manipulation (or measurement) of the quality perceived in these cases. With that, there would be confirmation of the internal validity of the experiments and greater external validity of the results.

The non-probabilistic characteristic of the sample was another limitation identified. Even though they are widely used in experimental research (LOPES, HERNANDEZ, 2010), due mainly to the budget and time constraints for completion of academic studies (HAIR et al., 2005), this characteristic prevents generalization of the results to universe.

An inherent limitation of the adopted method is the lack of comparability of the variables behavior by means of observation of a control group. Even though the lack of a control group does not invalidate the results, inclusion thereof would strengthen them. In this regard, we suggest that the next steps in advancing the study of this topic include control groups in the experimental designs.

We suggest that future research address the investigation, not only of the variables involved in this study, but also others, such as manipulation of service formats and brands involving electronic

channels in order to check whether the results have validity in the face of new channels of service provision. We also recommend the manipulation of recognized brands, as aforesaid, and that studies be conducted to measure the effects of emotional attachment and consumer engagement before brand extensions strategies in services.

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## REFERENCES

- AAKER, D. A. **Marcas: brand equity gerenciando o valor da marca**. São Paulo: Negócio, 1998.
- \_\_\_\_\_; KELLER, K. L. Consumer evaluations of brand extensions. **Journal of Marketing**, Chicago, v. 54, n. 1, p. 27-51, Jan. 1990.
- ALLARD, C. R.; VAN RIEL, A.; OUWERSLOOT, H. Extending electronic portals with new services. **Journal of Retailing and Consumer Services**, [S. l.], v. 12, 4, 245–254, July 2005.
- AMERICAN MARKETING ASSOCIATION (AMA). c2014. Disponível em: < <https://www.ama.org/Pages/default.aspx> >. Acesso em: 25 jun. 2014.
- BATRA, R.; LENK, P.; WEDEL, M. Brand extension strategy planning: empirical estimation of brand–category personality fit and atypicality. **Journal of Marketing Research**, [S. l.], v. 47, n. 2, p. 335–347, Apr. 2010.
- BOTTOMLEY, P. A.; HOLDEN, S. J. S. Do we really know how consumers evaluate brand extensions? Empirical generalizations based on secondary analysis of eight studies. **Journal of Marketing Research**, [S. l.], v. 38, n. 4, p. 494-500, Nov. 2001.
- BOUSH, D. M.; LOKEN, B. A process tracing study of brand extension evaluation. **Journal of Marketing Research**, [S. l.], v. 28, n. 1, p. 16-28, Feb. 1991.

- CRONIN, J.; TAYLOR, S. Measuring service quality: a reexamination and extension. **Journal of Marketing**, Chicago, v. 56, n. 3, p. 55-68, July 1992.
- FIELD, A. **Descobrimos a estatística usando o SPSS**. 2. ed. Porto Alegre: Artmed, 2009.
- HAIR, J. F. et al. **Análise multivariada de dados**. 5. ed. Porto Alegre: Bookman, 2005.
- HERNANDEZ, J. M. C. et al. Extensão de marcas corporativas de serviços: o efeito da similaridade percebida da extensão e da qualidade percebida da marca. **RAC – Revista de Administração Contemporânea**. Curitiba, v. 15, n. 4, p. 561-579, jul./ago. 2011.
- KELLER, K. L. **Strategic brand management: building, measuring, and managing brand equity**. New York: Prentice Hall, 2003.
- \_\_\_\_\_; AAKER, D. A. The effects of sequential introduction of brand extensions. **Journal of Marketing Research**, [S. l.], v. 29, n. 1, p. 35-50, Feb. 1992.
- \_\_\_\_\_; HECKLER, S.; HAUSTON, M. J. The effects of brand name suggestiveness on advertising recall. **Journal of Marketing**, Chicago, v. 62, n. 1, p. 48-57, Jan. 1998.
- \_\_\_\_\_; MACHADO, M. **Gestão estratégica de marcas**. São Paulo: Pearson Prentice Hall, 2006.
- LEE, H.; LEE, Y.; YOO, D. The determinants of perceived service quality and its relationship with satisfaction. **Journal of Services Marketing**, Bradford, n. 14, n. 3, p. 217-31, 2000.
- LEI, J. et al. Service intensiveness and brand extension evaluations. **Journal of Service Research**, Bradford, v. 6, n. 3, p. 243-255, Feb. 2004.
- LOPES, E. L.; HERNANDEZ, J. M. C. Percepção da estratégia de extensão de marca em estabelecimentos comerciais: qual o melhor nome para uma loja? In: IV Encontro de Marketing (EMA) da ANPAD. 5, 2010, Florianópolis. **Anais eletrônico...** Florianópolis: ANPAD, 2010. Disponível em: <[http://www.anpad.org.br/diversos/trabalhos/EMA/ema\\_2010/2010\\_EMA355.pdf](http://www.anpad.org.br/diversos/trabalhos/EMA/ema_2010/2010_EMA355.pdf)>. Acesso em: 10 set. 2012.
- \_\_\_\_\_; \_\_\_\_\_; NOHARA, J. J. Escalas concorrentes para a mensuração da qualidade percebida: uma comparação entre a Servqual e a RSQ. **RAE – Revista de Administração de Empresas**, São Paulo, v. 49, n. 4, p. 401-416, out./dez. 2009.
- MARTÍNEZ, E.; PINA, J. M. Influence of corporate image on brand extensions: a model applied to the service sector. **Journal of Marketing Communications**. London, v. 11, n. 4, p. 263-281, 2005.
- MOORE, W. L.; LEHMANN, D. R. Effects of usage and name on perceptions of new products. **Marketing Science**, Linthicum, v. 1, n. 4, p. 351-370, Nov. 1982.
- MORRIN, M. The impact of brand extensions on parent brand memory structures and retrieval processes. **Journal of Marketing Research**, [S. l.], v. 36, n.4, p. 517-525, Nov. 1999.
- NEERAKKAL, J. A. Consumer evaluations of product line brand extension. **The IUP Journal of Brand Management**, [S. l.], v. 8, n. 1, 22-35, Mar. 2011.
- OLIVEIRA, B. A. C. de; MATTAR, F. N. Um estudo acerca das estratégias de extensões de marca e de linha de produtos. **RAM – Revista de Administração Mackenzie**, São Paulo, v. 2, n. 1, 39-54, 2001.
- PARASURAMAN, A.; ZEITHAML V. A.; BERRY, L. L. **Delivering quality service. Balancing customer perceptions and expectations**. New York: The Free Press, 1990.
- PINA, J. M. et al. The effect of service brand extensions on corporate image: an empirical model. **European Journal of Marketing**, [S. l.], v. 40, n.1/2, p. 174-197, 2006.

RUYTER, K.; WETZELS, M. The role of corporate image and extension similarity in service brand extensions. **Journal of Economic Psychology**, Amsterdam, v. 21, n. 6, p. 639-659, Dec. 2000.

SHEERAN, P.; HARRIS, P.R.; EPTON, T. Does heightening risk appraisals change people's intentions and behavior? A meta-analysis of experimental studies. **Psychological Bulletin**, Washington, D.C, v. 140, n. 2, p. 511, Mar. 2014.

SMITH, D. C. Brand extension and advertising efficiency: what can and cannot be expected. **Journal of Advertising Research**, New York, v. 32, n. 6, p. 11-20, Nov. 1992.

\_\_\_\_\_; PARK, C. W. The effects of brand extensions on market share and advertising efficiency, **Journal of Marketing Research**, [S. l.], v. 29, 296-313, Aug. 1992.

SULLIVAN, M. W. Brand extensions: when to use them. **Management Science**, Linthicum, v. 38, n. 6, jun., p. 793-806, June 1992.

SUNDIE, L.; BRODIE, R. J. Consumer evaluations of brand extensions: Further empirical results. **International Journal of Research in Marketing**, Amsterdam, v. 10, n. 1, p. 47-53, Mar. 1993.

VAN RIEL, A. C. R.; LEMMINK, J.; OUWERSLOOT, H. Consumer evaluation of service brand extensions, **Journal of Service Research**, Thousand Oaks, v. 3, n. 3, p. 220-231, Feb. 2001.

\_\_\_\_\_; OUWERSLOOT, H. Extending electronic portals with new services: exploring the usefulness of brand extension models. **Journal of Retailing and Consumer Services**, [S. l.], v. 12, n. 4, p. 245-254, July 2005.

VÖLCKNER, F.; SATTLER, H. Drivers of brand extension success. **Journal of Marketing**, Chicago, v. 70, n. 2, p. 18-34, Apr. 2006.

\_\_\_\_\_.et al. The role of parent brand quality for service brand extension success. **Journal of Service Research**, Thousand Oaks, v. 13, n. 4, 379-396, June 2010.

## APPENDIX A – Manipulation of experiment 1 variables

**Dear Consumer,**

We are advising a **Supermarket Network** headquartered in São Paulo, which currently has a large number of stores. This is **<brand> SUPERMARKET**. The stores of **<brand> SUPERMARKET** offer a wide range of products suitable for their clientele, with food, dairy, meats, breads, beverages, grocery and frozen food, in addition to hygiene, cleaning and beauty products, among others. It operates with quality and fair pricing practices. It keeps products separated by categories on shelves arranged to provide a flow of customers in their stores, has parking lot and is well located, which ensures convenience to all customers.

To diversify its operation in the market, this retailer plans to open a **<RESTAURANT / TRAVEL AGENCY>** to be called **<BRAND RESTAURANT / BRAND TRAVEL AGENCY>**.

[a] In the **<brand> TRAVEL AGENCY**, you will find a variety of choices of destinations for your trips in a very appropriate environment. The units of **<brand> TRAVEL AGENCY** are well located and will have common services for travel agencies of its size.

[or b] In **<brand> RESTAURANT**, you will enjoy a variety of dishes in a very appropriate environment. The units of **<brand> RESTAURANT** are well located and will have common services to restaurants of its size.

We would like to know your opinion about the **<BRAND RESTAURANT / BRAND TRAVEL AGENCY>**. All answers are strictly confidential and will be analyzed only in aggregate form. Read the following statements and classify them assigning them grades from **1 (Strongly Disagree)** to **7 (Strongly Agree)**. If your answer is intermediate, please check one of the numbers between 2 and 6. There are no right or wrong answers, we just want to know your opinion about **<BRAND RESTAURANT / BRAND TRAVEL AGENCY>**.

## APPENDIX B – Variables of the scale to measure brand extension assessment in services – breakdown by attitude and intent.

Construct	Code	Statements
Attitude	A1	The <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> will be feasible.
	A2	The <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> will be excellent.
	A3	The <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> will be successful.
	A4	The <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> will be well accepted by consumers.
	A5	I am very favorable to the launching of the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> .
	A6	I would certainly recommend the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> to relatives and friends.
	A7	I would love to go to the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> .
	A8	I would certainly consider the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> interesting.
Intention	I1	I would surely go more to the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> than the <b>&lt;SERVICE FORMAT&gt;</b> I currently go to.
	I2	I will undoubtedly no longer go to the <b>&lt;SERVICE FORMAT&gt;</b> I currently go to go to the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> .
	I3	I would certainly spend most of my <b>&lt;SERVICE FORMAT&gt;</b> budget in the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> .
	I4	It will definitely be worth using the <b>&lt;SERVICE FORMAT+ BRAND&gt;</b> instead of the one I currently use, even if prices are the same.

**APPENDIX C – Variables to check stimuli manipulation**

Stimulus	Statements
Arbitrary brand	I surely know the <ARBITRARY BRAND NAME> brand.
Descriptive brand	The <DESCRIPTIVE BRAND NAME> brand surely describes the services rendered by a <PARENT BRAND SERVICE FORMAT>.
Suggestive brand	The <SUGGESTIVE BRAND NAME> brand surely suggests benefits of the services rendered by a <PARENT BRAND SERVICE FORMAT>.
Similarity of the extended service	The activity of an <EXTENDED SERVICE FORMAT> is certainly very similar to the activity of a <PARENT BRAND SERVICE FORMAT>.
Perceived quality	The quality of the <EXTENDED SERVICE FORMAT + BRAND NAME> is excellent.

**APPENDIX D – Manipulation of experiment 2 variables****Dear Consumer,**

We are advising a Network of Petrol Stations headquartered in São Paulo, which currently has a large number of stores. This is the **<brand> PETROL STATION**. The **<brand> PETROL STATION** have great facilities, equipment for serving vehicles are the latest generation, the placement of fuel pumps provides optimum circulation for consumers and their vehicles. The **<brand> PETROL STATION** have effective systems to ensure total safety for all customers as to forms of payment, avoiding any kind of fraud. The Stations have closed circuit TV, and also provide a direct channel of communication with the management of the stations. They offer loyalty card to customers and keep records up to date, allowing the customer a customized service. They always keep in touch with their customers to communicate new services and, increasingly, to understand the preferences of their audience. Employees are encouraged to give special attention to all customers; they are trained to ensure complete safety when handling products sold, and are trained to adverse situations. The **<brand> PETROL STATIONS** have all licenses and certifications required for their operation. Everyone who works in **<brand> PETROL STATIONS** are always uniformed and have skills to carry out the services with agility and excellence.

To diversify its operations in the market, this retailer plans to open a **<CARWASH / BOOKSHOP>** to be called **<BRAND CARWASH / BRAND BOOKSHOP>**. Using all the knowledge in the automotive service petrol station network, we intend to offer a service with the same quality to which the customer is already used. Just as **PETROL STATIONS**, you will always find **<BRAND CARWASH / BRAND BOOKSHOP>** near you.

We would like to know your opinion about <the **BRAND CARWASH / BRAND BOOKSHOP**>. All answers are strictly confidential and will be analyzed only in aggregate form. Read the following statements and classify them assigning them grades from **1 (Strongly Disagree)** to **7 (Strongly Agree)**. If your answer is intermediate, please check one of the numbers between 2 and 6. There are no right or wrong answers, we just want to know your opinion about **<BRAND CARWASH / BRAND BOOKSHOP>**.