



# Validation of a scale of measurement of service quality, image, customer satisfaction and loyalty in traditional trade

## Validação de uma escala de medição da qualidade de serviço, imagem, satisfação e lealdade do cliente no comércio tradicional

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### Abstract

The ability to create a satisfactory experience for the consumer in the retail industry remains in the hands of both the management and the retail staff to a considerable degree. The central purpose of this research is to validate an instrument for assessing the perceived quality of service, brand image, customer satisfaction and loyalty to traditional retail stores in Portugal. The findings of this research suggest that the 28 items of the scale can be grouped into four main dimensions and can be applied with confidence to Portuguese traditional retail as well. In addition, this survey can be regarded as a useful tool for traditional retail stores to help them to diagnose customer perceptions and, in a continuous search for customer satisfaction and loyalty to inquire about the drivers of these, moving towards the path of quality service and brand image, which is reflected in excellent organizational performance and higher profitability.

**Keywords:** SERVPERF, image, satisfaction, loyalty, Portuguese retail industry.

### Resumo

A capacidade de criar uma experiência agradável para o consumidor permanece, em grande medida, nas mãos da gerência e da equipa comercial. O objetivo central desta investigação é validar um instrumento para avaliar a qualidade de serviço percebida, a imagem de marca, a satisfação e a lealdade do cliente às lojas de comércio tradicional, em Portugal. Os resultados sugerem que os 28 itens da escala podem ser agrupados em quatro dimensões principais e também podem ser aplicados com confiança ao retalho tradicional Português. Adicionalmente, este estudo pode ser considerado uma ferramenta útil para as lojas de comércio tradicional, ajudando-as a diagnosticar as perceções dos clientes, numa busca contínua pela satisfação e lealdade dos clientes, e ainda para indagar sobre os fatores que fomentam essas mudanças, caminhando rumo ao serviço de qualidade e à imagem corporativa, que se refletem em excelente desempenho organizacional e maior rentabilidade.

**Palavras-chave:** SERVPERF, imagem de marca, satisfação, lealdade, retalho português.

### 1. Introduction

Several researchers (Disfani, Mantrala, Yusta & Ruiz, 2017; Durvasula & Lysonski, 2010; Khare, Parveen & Rai, 2010; Martinelli & Balboni, 2012; Tang, Stanworth, Chen, Huang & Wu, 2015; Yu & Ramanathan, 2012; Veloso, Magueta, Fernandes & Ribeiro, 2017; Yuen & Chan, 2010) suggest that service quality is one of the most important determinants of customer satisfaction and customer loyalty. In this sense, companies seek to improve the quality of service continuously in order to be able to keep their customers not only satisfied but loyal as well. While some researchers have studied service quality, satisfaction, perceived value and the exact nature of the links that exist between these constructs, understanding their effect on customer behaviour remains a key issue that requires more investigation (Hu, Kandampully & Juwaheer, 2009), so it is necessary to define instruments to accurately measure these relationships between the factors that influence customer behaviour. The service quality and performance of any service are dependent on customer expectations and on the efficiency of the company in serving its customers (Veloso, Ribeiro & Alves, 2018).

Many changes in the organisational context are being required by the evolution in the provision of services, in an increasingly

competitive environment. This is marked by clients' requirements, particularly when considering the rising awareness of the how to better serve customers, reflected in the excellence of service quality (Besharov, Barabashev, Baehler & Klerman, 2013). Gronroos (2009) argues that the term "service economy" emerges in this scenario and clarifies the structural change of the economy, praising the importance of services.

The service industry is highly competitive, mainly the retail industry wherefore is crucial that organisations have a good knowledge of the business aspects that are important to their customers (Yuen & Chan, 2010). Only with a thorough understanding is it possible to respond positively to the expectations of customers regarding the services offered. To this extent, the strategy for creating competitive advantage is inherent in providing high-quality service, which results in satisfied customers and customer retention, dimensions that are the core of survival in the retail industry.

Traditional retail stores must find a way to differentiate themselves so they can stand apart from other retailers and drive more consumers to their store. Several researchers point out that service quality, customer perceived value, image and satisfaction are some of the key success factors in gaining a competitive advantage within service providers (Bolton &



Drew, 1991; Hu et al., 2009; Parasuraman, Berry & Zeithaml, 1991; Parasuraman, Zeithaml, & Berry, 1988; Zeithaml, Berry & Parasuraman, 1996). These factors are becoming the priority for all managers in the growing competition for customers in the customer-centric marketplace today (Bolton & Drew, 1991; Gronroos, 2009; McDougall & Levesque, 2000; Ravald & Gronroos, 1996; Zeithaml, 1988). Retailers need an efficient way to assess the quality of service, value and image from their store (Simmers & Keith, 2015). However, the focus on customer retention is one of the precise strategies to generate profits for this business (Sirohi, McLaughlin & Wittink, 1998). It is believed that satisfaction is a consequence of the quality of service, value and image, and guaranteeing it increases the likelihood of involving customer satisfaction and loyalty. Several studies have shown that there is a positive relationship between service quality, value, image, and consumer satisfaction and loyalty (Zaibaf, Taherikia & Fakharian, 2013; Al Khattab & Aldehayyat, 2012; Yuen & Chan, 2010; Mohsin and Lockyer, 2009; Ekinci, Dawes & Massey, 2008).

The relationship between perceived service quality and customer satisfaction in the service industry has been studied (e.g. Cronin & Taylor, 1992; Veloso et al., 2017; Zaibaf et al., 2013; Zhang & Prybutok, 2005), confirming that service quality is a significant antecedent of satisfaction. In this regard, Dabholkar, Shepherd and Thorpe (2000) argue that traditionally, most researchers conclude that customer satisfaction resulting from a particular experience of consumption, leads to an assessment/attitude about the quality of service, perceived value and image over a period of time. However, the reverse situation has stood out as the most relevant. Whereas service quality in the retail industry has been extensively researched internationally, there has been little research done in Portugal. In this sense, the main purpose of this research is to build and validate an instrument to assess perceptions of traditional retail stores' customers in Portugal on quality service, brand image, customer satisfaction and loyalty provided by these traditional retail stores. The validation of this survey as a tool to measure and diagnose these factors will allow it to be used on new researches, considering a reduced questionnaire and organised in the dimensions identified by Factorial Analysis. The choice of this topic is due to the need for traditional retailers to properly understand whether the quality of service meets customer perceptions in the different dimensions of SERVPERF, since the quality of service contributes to customer satisfaction and loyalty, as they are determinant variables in maximizing profit, market share and return on investment (Hackl & Westlund, 2000). This study is particularly important for retail managers (survival and growth of traditional retail stores), politicians (wealth creation, economic growth, etc.) and for the development of the literature on the Portuguese traditional retail industry. The paper is structured in three sections, besides this introduction and the conclusion at the end. The first section presents a review of the main literature on service quality, brand image, customer satisfaction and loyalty. After that the questionnaire

for data collection is presented in section two, followed by the findings and discussion, and ending with the presentation of the conclusion and the contributions of the research.

## 2. Literature review

Currently, we are witnessing increasing competition in the market and companies, particularly in the retail industry (Veloso et al., 2018). One of the most recommended marketing strategies to gain a competitive advantage is to enhance customer satisfaction and loyalty, considering that the key to success lies in building relationship with customers, as customer loyalty and retention is related to retail industry profitability (Bolton & Drew, 1991; Hu et al., 2009, Parasuraman et al., 1991; Parasuraman, Zeithaml, & Berry, 1988; Zeithaml et al., 1996). In this way, the retail industry makes all efforts to keep their customers satisfied and loyal. In addition to traditional marketing strategies, for example advertising, rewards and promotions, personal communications, and delivering quality service, inviting customers to link numerous loyalty programmes are popular approaches to sustaining such relationships (Prentice, 2013; Zakaria, Rahman, Othman, Yunus, Dsulkipli & Osman, 2013; Stathopoulou & Balabanis, 2016). Service quality and customer satisfaction are regularly considered as determinants of customer loyalty (Disfani et al., & Ruiz, 2017; Durvasula & Lysonski, 2010; Khare et al., 2010; Martinelli & Balboni, 2012; Tang et al., 2015; Yu & Ramanathan, 2012; Yuen & Chan, 2010).

Researchers examined the relationship between perceived service quality and customer satisfaction, confirming that service quality is an important antecedent of satisfaction (e.g. Nadiri & Hussain, 2005; Hu et al., 2009). In this regard, Dabholkar et al., (2000) argue that, traditionally, most researchers conclude that customer satisfaction which results from a particular experience of consumption leads to evaluation about the quality of service over a period of time. Although the quality of service in the retail industry has been extensively researched internationally (e.g., Al Khattab & Aldehayyat, 2012; Zaibaf, et al., 2013) there has been little research done in Portugal to examine service quality as an antecedent of satisfaction and behavioural intention of customers in Portuguese traditional commerce. The choice of this topic is due to the need for traditional retailers to properly understand whether their service meets customer perceptions in the different dimensions of SERVPERF, contributing to corporate image, customer satisfaction and loyalty (intention to return and recommend services), since they are determining variables in maximizing profit, market share, and return on investment.

Gronroos (1995) refers that the definition of quality must consider the customer's perspective, given that it is their perception that matters. Quality orientation is based on judgments about the aptitude of consumption, and the expectation of quality is one of the previous functions which services must provide (Gibson, 2003). From the perception of customers, it is possible to make organisational decisions able to



meet their demands and consequently enable the continuous improvement of products and services (Paladini, 2002). Téoul (1999) warns that, unlike the quality of a product, the quality of service is judged by the service process and its results.

Customer satisfaction is the best indicator of the quality of service, according to several authors in the marketing area (e.g. Lang, 2011; Nadiri & Hussain, 2005; Zeithaml, Parasuraman & Berry, 1990). After the purchase, customer satisfaction depends on the performance of the offer in relation to your expectations. Kotler (2005) argues that the company provides quality whenever its service meets or exceeds the client's expectations. Thus, the measurement of quality of service is defined by Kotler and Keller (2013) as the feeling of pleasure or disappointment resulting from the comparison of performance expected by the service (or result) in relation to the expectations of the person.

Service quality has assumed a major role both in public and private institutions as an indispensable requirement to customer satisfaction. The assessment of service quality gained prominence after the contributions of Parasuraman et al. (1988), among others, who designed an instrument for measuring quality of service, called SERVQUAL. In their instrument, they consider five dimensions that can be defined as follows: (1) Tangibles: physical facilities, equipment and appearance of personnel; (2) Reliability: ability to perform the promised service dependably and accurately; (3) Responsiveness: willingness to help customers and provide prompt service; (4) Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence; (5) Empathy: caring, individualized attention the firm provides its customers.

SERVQUAL measures service quality from the gap between customers' perceptions and expectations of 22 items distributed by the five dimensions mentioned above. Cronin and Taylor (1992) observed that the validity of the use of expectations in the SERVQUAL model was called into question when consumers had no well-formed expectations and so they developed the SERVPERF scale, which consists of the same 22 items as SERVQUAL, although focused only on measuring consumer perceptions regarding the quality of service.

Despite the criticisms of SERVQUAL (Cronin and Taylor, 1992), it remains the most widely used theoretical framework for measuring service quality and has applications across physical and digital environments (Dabholkar, Thorpe & Rentz, 1996). In the retail industry there are also many studies using SERVQUAL (e.g. Abd-El-Salam, Shawky & El-Nahas, 2013; Durvasula & Lysonski, 2010; Khare et al., 2010; Martinelli & Balboni, 2012; Tang et al., 2015; Yu & Ramanathan, 2012; Yuen & Chan, 2010).

Assessing service quality is a challenge for any company because it is linked directly to customer satisfaction and this is formed by several intangible factors. According to Nadiri and Hussain (2005), service quality increases customer satisfaction, stimulates intention to return, and inspires recommendations. Several authors have considered service quality as an important antecedent of satisfaction (see, for example, Cronin & Taylor,

1992; Martinelli & Balboni, 2012; Nikhashemia, Tarofderb, Gaura & Haque, 2014; Yuen & Chan, 2010; Zhang & Prybutok, 2005) as they found a statistically significant relationship in the service industry. Moreover, the literature suggests that perceived service quality positively influences brand image (Oh, 1999; Yu & Ramanathan, 2012). The relationship between brand image and customer satisfaction has gained little attention in the service industry literature (Ryu, Han & Kim, 2008; Hu et al., 2009; Yu & Ramanathan, 2012; Srivastava & Sharma, 2013). Ryu, Han and Kim (2008) evaluated the impact of the image of a restaurant on customer satisfaction, and they found a positive and significant relationship between this construct. In the area of retail industry, Yu and Ramanathan (2012) confirm that the corporate image of a retail store positively and significantly influences customer satisfaction.

In the literature review, we found that marketing services have extensively researched behavioural attitudes. These are behaviours related to the intention to repurchase and even the intention of recommending the product/service (Yuen & Chan, 2010; Zeithaml, et al., 1990). Several concepts have been examined as antecedent factors of behavioural intentions, such as service quality (Zeithaml et al., 1996) and satisfaction (Oliver, 1999). According to Liang and Zhang (2012, p. 156), "it is generally believed that satisfaction leads to repeat purchases and positive WOM (worth of mouth) recommendations", assuming that if customers are satisfied with a product/service, they are more likely to continue to purchase it, and are more willing to spread positive WOM.

In this study, the SERVPERF model and a brand image, customer satisfaction and loyalty scale will be applied to traditional commerce in Portugal. It is done in a similar manner to that of other studies carried out at an international level in the area of the retail industry, as already mentioned, in order to understand if this model can be validated as an instrument for this area of activity in Portugal. It also intends to understand if the items of the scale have relevant significance in the perception of the quality service, brand image, satisfaction and loyalty customer of Portuguese traditional retail stores.

### 3. Methodology

The adaptation and application of the instrument was based on a bibliographical review based on literature and research studies on the service quality, brand image and customer satisfaction and loyalty. The scale items which measure primary and sub-dimensions of service quality were adapted from several researchers (Cronin & Taylor, 1992; Dabholkar, et al., 1996; Wu, Lin & Hsu, 2011). In addition, a series of items focusing on behavioural intentions, customer satisfaction and corporate image were adapted on the basis of several researchers' results (Nadiri & Gunay, 2013; Nikhashemia et al., 2016; Ryu et al., 2008; Wu et al., 2011; Wu, 2013; Yu & Ramanathan, 2012; Yuen & Chan, 2010; Zeithaml et al., 1996). The present study was based on the customers' perspective on traditional retail stores in Portugal.



A questionnaire was designed as the survey instrument. The questions were based on a review of the literature in the area of the retail industry, described above in the theoretical background. This study was applied to customers of traditional retail stores in Portugal during the first half of 2017. A non-probabilistic sampling with a convenience technique was used. The questionnaires were distributed online (Facebook, emails) and the answers came from several cities and places of Portugal ( $n = 379$ ). The questionnaire is organised in three sections. The first section consists of a standard demographic profile of respondents. The second section contains the characterisation of the purchase process. The last section includes the statements of dimensions and their sub-dimensions related to service quality, brand image, customer satisfaction and customer loyalty. Respondents were asked to use a five-point Likert-type scale (where 1 = "strongly disagree" and 5 = "strongly agree") to record their perceptions. Construct reliability was assessed by using Cronbach's alpha coefficient. Reliabilities ranged from 0.881 to 0.978, suggesting that the construct could be used with confidence. After obtaining the questionnaires, statistical data were processed in the Statistical Package for the Social Sciences (SPSS) 20 program, to apply the factorial analysis as well as assess the reliability of the internal consistency of the scale.

## 4. Results

### 4.1 Data analysis procedure

The data were examined for normality, collinearity and distribution of outliers. The factorial of the sample was tested by the Kaiser-Meyer-Olkin Coefficient and Bartlett's sphericity test, as recommended by Maroco (2010). After that, the data were submitted to analysis of the principal components (PC) and factorisation of the principal axes (PAF). The reliability of the factors was estimated by the calculation of Cronbach's alphas. In sum, for the validation of the scale, the first extraction was made of its factors (dimensions and components), performed by analysing its principal components in order to verify the initial number of factors in the matrix. Extreme cases, multicollinearity and matrix factorisation through sample size and intercorrelations were also analysed, as well as distribution of the eigenvalues and graphic analysis through the scree plot. Then, principal axis factoring was carried out. Factor scores were also calculated.

### 4.2 Sample profile

The sample was composed of total 379 Portuguese respondents, of whom 54.4% (206) were females and 45.6% (173) were males. The maximum number of responses was obtained from 35 – 44-year-olds with 43% (163) and the second age group 45 – 54-year-olds, with 26.4% (100) responses. Most respondents 63.1% (239) were married or in an unmarried partnership and 28% (106) were single. Most respondents had higher education qualifications, as 35.4% (134) were graduates, 10.8% (41) had postgraduate degrees, 12.4% (47) had a master's degree and 9% (34) were PhDs. As for professional

occupation, most, 78.6% (298), were employed. In the activity sector, banking stood out with 27.7% (105) of the respondents, followed by the education sector with 14.2% (54) of the individuals. Regarding average annual income, it was observed that 31.9% (121) of the respondents earned between €7001 to €20000 annually; 30.9% (117) earned between €20001 to €40000 and 20.6% (78) received between €40001 to €80000 annually.

### 4.3 Purchase process

The results obtained show that all of the respondents purchase in traditional commerce. It was found that 79.7% (302) of the individuals had made purchases in traditional trade for more than 12 months. The most popular frequency of purchases registered was weekly: 36.1% (137) of the respondents go to traditional trade once a week and 32.2% (122) do it monthly. As for the average annual spending on purchases in traditional retail, it was found that 29.3% (111) of the respondents spend under €100 and that 39.6% spend more than €400 annually.

### 4.4 Validity and reliability

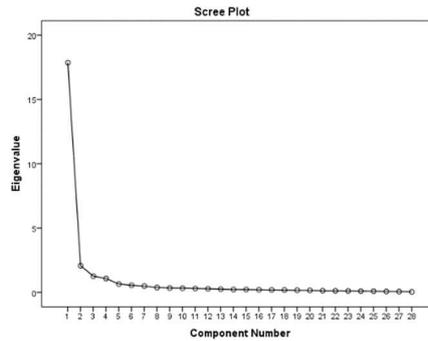
The legitimacy of the factorial analysis was assessed by the Kaiser-Meyer-Olkin (KMO) measure of adequacy. The value obtained was 0.957, which means that there is a strong correlation between the variables and, according to Maroco (2010), it is considered a very good recommendation in relation to the factorial analysis. The Bartlett test ( $p < 0.001$ ) allows us to conclude that the variables are significantly correlated. In this way, it can be ensured that with the available sample, the scale is subject to factorial analysis. That is, both tests allow the continuation of factorial analysis. Still in factorial analysis, it is common to evaluate the reliability and validity of the measuring instruments. The reliability of the instrument refers to the property of consistency and reproducibility of the measure (Maroco, 2010). An instrument is reliable if it measures a certain characteristic or interesting factor consistently and reproducibly. In this study, the Cronbach's alpha coefficient is used as a measure of reliability and the values obtained vary between a good and very good consistency.

### 4.5 Factor analysis

A graph criterion scree plot is the graphical representation of eigenvalues in relation to the number of factors, for extraction purposes. Typically, the graph shows a sharp interruption between the steep slope of the values with large eigenvalues and a gradual reduction related to the remainder of the values. In Figure 1, the graphic approach relative to the present study is presented. From what can be noted, there is a marked slope in the first factor, which represents the choice of a factor with the use of this criterion. Exploratory factorial analysis was performed, and four factors (components) were obtained with a value greater than 1 (Figure 1), explaining 79.569% of the total variance (Table 1). According to Maroco (2010), the obtained values demonstrated it was acceptable for the pursuit of the study.



**Figure 1 – Scree Plot**



Moreover, Table 1 shows that all variables have a strong or moderate relationship with the retained factors because, for the extracted factors, the percentage of the variance of each variable explained by the common factors extracted was higher than 71.3% for all variables.

**Table 1 - Components Matrix**

Factors	Eigenvalues	% de Variance	% Cumulative Variance
1	17.857	63.776	63.776
2	2.078	7.422	71.198
3	1.264	4.513	75.711
4	1.080	3.858	79.569

By analysing Table 2, we grouped the 28 items by the 4 factors, taking into account the score obtained. The adjustment quality was carried out by determining the goodness of fit index (GFI), for which the obtained value was 0.968. However, the GFI tends to overestimate the true value of the adjustment quality, which is why the degrees of freedom were calculated (AGFI), obtaining a value of 0.975 and the root mean square residual (RMRS) was calculated, obtaining 0.029. By analysing the three indicators (GFI, AGFI and RMRS), we can say that a very good adjustment was achieved, according to Maroco (2010). In this Table, the main factor matrix obtained by the Varimax rotation method is shown. In the factorial analysis, of the 37 items that constituted the scale used in the questionnaire, 9 items were excluded (6

items of the quality service and 3 items of the value perceived and staff loyalty), which presented values close to 0.5, and the 28 items that had a correlation value higher than 0.50 were chosen (in fact, the minimum value obtained was 0.516). After the four factors were obtained, their designation was made, taking the theoretical reference into account. Thus, the dimensions that make up the scale composed by SERVPERF and by the dimensions of image, satisfaction and loyalty, were denominated: Factor 1 – which encompasses four dimensions of the SERVQUAL model - Quality of Service of Intangibles; Factor 2 – Customer Satisfaction and Loyalty; Factor 3 – Quality of Service of Tangibles and Factor 4 – Brand Image.

**Table 2 – Rotated Component Matrix**

	Component			
	1	2	3	4
Q19 – QS - INT	.872			
Q20 – QS - INT	.867			
Q17 – QS - INT	.853			
Q13 – QS - INT	.816			
Q12 – QS - INT	.803			
Q18 – QS - INT	.781			
Q15 - QS - INT	.764			
Q16 – QS - INT	.758			
Q8 – QS - INT	.733			
Q14 – QS - INT	.719			
Q9 – QS - INT	.703			
Q21 – QS - INT	.702			
Q7 – QS - INT	.700			
Q23 – CS	.682			
Q32 - CL		.811		
Q29 - CL		.791		
Q28 - CL		.748		
Q30 – CL		.715		



	Component			
	1	2	3	4
Q31 - CL		.706		
Q33 - CL		.689		
Q25 - CS		.606		
Q24 - CS		.599		
Q5 – QS - TAN			.824	
Q2 - QS - TAN			.758	
Q4 - QS - TAN			.643	
Q35 – CI				.861
Q34 - CI				.821
Q36 - CI				.668

QS – INT – Quality Service Intangibles; QS – TAN – Quality Service Tangibles; CS – Customer Satisfaction; CL – Customer Loyalty; CI – Corporate Image.

By performing a cross-analysis of Tables 1, 2 and 3, we can describe the four dimensions in relation to the composition of the items and the explanation of each dimension for the total variance. The quality of service of intangibles provided to customers was the first dimension obtained after factorial analysis of the scale. The name assigned is related to the nature of the most relevant items for this dimension, which refer to the main items of the SERVQUAL model, in aspects related to empathy, assurance, reliability and responsiveness. It consists of 14 items that relate to providing individualised care and attention to clients, to having the ability to convey trust and security with courtesy and knowledge of what they do, to the appearance of personnel and ability to perform the promised service dependably and accurately. This first factor explains 63.776% of the total variance. The second dimension, named customer satisfaction and loyalty, is composed of eight items. Three of these items refer to aspects related to customer satisfaction, understood as the outcome of the customer's perception of the value received in a transaction or relationships, where value equals perceived service quality, compared to the value expected from transactions or relationships with competing vendors. The five other items are related to behavioural intentions (customer loyalty), namely the intention to buy again and the recommendation of the traditional retail store to family and friends. The items of satisfaction and loyalty customer describe the emotional tendency of a customer towards repurchase of products and

services offered by a retail store and recommendation of the traditional retail store. This dimension explains 7.422% of the total variance. The third dimension obtained after a factor analysis was called quality of service of tangibles, whose items are related to physical facilities and the equipment of the traditional retail store. This dimension consists of 3 items that explain 4.513% of the variance. The fourth and last dimension obtained after conducting a factorial analysis was called the brand image dimension. The name assigned is related to the nature of the items, which refer to the corporate image and the reputation of the retail store. This dimension consists of 3 items that explain 3.858% of the variance.

The internal consistency of the study was determined using Cronbach's alpha (Table 3). All dimensions obtained values for Cronbach's alpha ranging from 0.881 to 0.978, which means that the dimensions have a good or very good internal consistency. We highlight the first and second dimensions of scale with values above 0.90, which, according to Hill and Hill (2009), means that these dimensions present excellent internal consistency. In the third and four dimensions, Cronbach's alpha values are good, according to Maroco (2010). Thus, taking into account the above-mentioned, it can be said that the values demonstrate an internal consistency appropriate to the achievement of the study (Table 3). Regarding the dispersion of responses, it can be stated that this is moderate.

**Table 3 – Statistic Summary of Factors Extracted by Factorial Analysis**

Factors	Items	Cronbach's Alpha	Minimum-Maximum	Average	Standard Deviation	Coefficient of Variation	Medium
F1	7; 8; 9; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21 & 23	0.978	2.00-5.00	4.214	0.652	15.47%	4.071
F2	24; 25; 28; 29; 30; 31; 32 & 33	0.951	1.00-5.00	3.984	0.744	14.68%	4.000
F3	2, 4 & 5	0.881	2.00-5.00	3.916	0.771	19.69%	4.000
F4	34; 35 & 36	0.882	1.33-5.00	3.785	0.690	18.23%	4.000



**4.6 Correlation between factors**

Concerning the correlations between factors, all correlations are at least of moderate or weaker intensity, although they are all statistically significant and positive, namely moderate correlations between dimension 1 and dimension 2 (0.763), between dimension 3 with dimension 1 (0.695) and dimension

3 with dimension 2 (0.662). The remaining ones, although significant, have weaker intensity. In short, the correlations between the factors are positive and statistically significant and are an indicator of consistency between the dimensions of the construct and also the validity or fidelity argument of the measure (Table 4).

**Table 4 – Correlation between factors**

	F1	F2	F3	F4
F1	1			
F2	.763**	1		
F3	.695**	.662**	1	
F4	.560**	.619**	.540**	1

Note: \*\*Correlation is significant at the 0.01 level (2-tailed).

**5. Conclusions**

In this study, the application of an instrument for evaluation of the service quality, brand image, customer satisfaction and loyalty was validated for a population of customers of traditional retail in Portugal. It was found that the minimum, maximum, average and median values are distributed over the intervals of the response scale, revealing some sensitivity in the evaluation of the construct. The obtained value from KMO was 0.957, which, according to Maroco (2010), is considered excellent. Concerning the values of Cronbach’s alpha, the scale dimensions presented values varying between 0.881 and 0.978, values that mean there is a very good internal consistency (Hill & Hill, 2009; Maroco, 2010), which shows a good reliability of the instrument of the service quality scale. By means of the above, it can be stated that the obtained results have proved satisfactory in all dimensions to the pursuit of the study. An exploratory factorial analysis with varimax rotation was performed. Then, the 28 items under evaluation were grouped into four dimensions renamed, according to the literature review, mainly from definitions built by the authors of the SERVQUAL scale (Parasuraman et al., 1988) and for image, satisfaction and loyalty customers items from definitions proposed by Nadiri and Gunay (2013), NIKHASHEMIA, et al. (2016), Ryu et al. (2008), Wu et al., (2011), Wu (2013), Yu and Ramanathan (2012), Yuen and Chan (2010) and Zeithaml, et al. (1996). The four dimensions are: 1) Service Quality of Intangibles; 2) Customer Satisfaction and Loyalty; 3) Service Quality of Tangibles and 4) Brand Image. The dimensions that constituted the final version of the quality service, brand image, satisfaction and loyalty customer from traditional retail assessment instrument explain 79.569% of the total variance.

Findings from the factorial analysis show that traditional retail store customers are concerned about the appearance of the store, as well as the level of confidence, tangible aspects and empathy that Portuguese traditional retail conveys at the time of making a purchase, negotiation, or acquisition of products or services, and also the image of traditional retail stores. In the present research, the fact that it was a convenience sample could be considered as a limitation, since the results should not

be generalised. The translation of the items of the SERVPERF scale, as well as of the brand image, customer satisfaction and loyalty items into Portuguese can be considered another limitation. Future research is, therefore, necessary to test the existence of the four dimensions of service quality, brand image, satisfaction and loyalty customer in the traditional retail industry, as it is to compare these new results with those of this research.

This research aimed to validate an instrument to measure the service quality, brand image, customer satisfaction and loyalty scale. It was intended to verify the factorial structure of this instrument obtained in a convenience sample of customers of traditional retail in Portugal. It, therefore, intends to verify the validity of the application of the SERVPERF brand image, customer satisfaction and loyalty model, developed in an American context, to measure the perception of service quality, corporate image, satisfaction and loyalty of customers in the service industry. Findings pointed to an empirical structure similar to the SERVPERF model, made up of 19 items but grouped into just two factors to evaluate intangible and tangible service quality. These identified items allow the evaluation of the customers’ perception of service quality in relation to traditional retail, such as their perception of service quality with empathy, assurance, responsiveness, reliability and tangibles to the traditional retail stores. The other two dimensions allow the measurement of the brand image of the retail store and the satisfaction and loyalty of the traditional retail stores’ customers. These dimensions can be assessed separately, in the case of replication of this instrument in Portuguese traditional retail stores. If there is, for example, an interest in investigating the greater or lesser perception of the customers with the brand image, it is recommended to analyse the items belonging to this factor. The same can be observed in relation to other dimensions identified, such as the perception of service quality with empathy, responsiveness, reliability and assurance, among others. In summary, the scale of quality service, brand image, customer satisfaction and loyalty was reliable for what it aims to evaluate, and it is an important tool in management and marketing strategy within retail industry,



especially in the specific case of traditional retail stores. It is recommended that there should be replication in other retail stores, with distinct cultural characteristics and a diversified organisational structure compared to those used both in their original design of model and in this research.

Moreover, according to several studies (e.g. Disfani et al., 2017; Durvasula & Lysonski, 2010; Khare et al., 2010; Martinelli & Balboni, 2012; Tang et al., 2015; Yu & Ramanathan, 2012; Veloso et al., 2017; Yuen & Chan, 2010) in the service industry, service quality correlates positively and significantly with brand image and customer satisfaction and loyalty, and these contribute to enhanced profitability and the sustainable competitiveness of companies. It is therefore important to assess the perceived service quality and the satisfaction of customers and to provide a service quality in accordance with the expectations, desires and needs of customers of traditional retail. The purpose of this study was to present the validation of the SERVPERF scale and brand image, customer satisfaction and loyalty scale for the context of the traditional retail industry in Portugal. The scale consisting of 28 items that were grouped in four factors, allows the service quality, brand image, satisfaction and loyalty of the customers that buy in Portuguese traditional trade to be evaluated. This model proved to be easy to apply and presented a good index of reliability and validity, so it is a valuable tool for studies that intend to evaluate the perception of service quality, brand image, customer satisfaction and loyalty of retail industry.

Lastly, this study shed light on the tangible and intangible aspects that customers observe and appreciate whenever making a purchase, as well as allowing a closer observation of the way in which the customer would like to be attended by the employees of the retail industry. Therefore, the results of this research make a contribution to a better understanding of the new dynamics and challenges that will most likely impact the traditional retail industry significantly.

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