

HOW DO CITIZENS SEE PUBLIC INSTITUTIONS? DEVELOPMENT AND VALIDATION OF THE PUBLIC BRAND PERSONALITY SCALE

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INTRODUCTION

The adoption of private sector management strategies by the public sector has been changing the way public policies are conducted by managers (Laing, 2003). This opening has shed light into the role of marketing in contributing to approximate public institutions and citizens in a citizen-oriented approach based on non-commercial marketing exchanges specific to the public sphere (Buurma, 2001; Kotler & Lee, 2007). On the top of the marketing planning strategies for the public sector, there is communication with the public, with the aim of mapping citizens' needs, identifying opportunities to improve their satisfaction, the image of public services and the empowerment of citizenship (Kotler & Lee, 2007). Regardless the incipience of marketing in the public sector, both in academia and in management practice, its application strengthens public management, bringing institutions closer to citizens and collaborating with their overall performance (Ribeiro & Oliveira, 2013; Silva, 2015).

Among the perspectives embraced by public marketing is public brands management, a perspective focused on developing strong public brands, capable of creating and improving the image of public institutions, with the main purpose of allowing citizens to perceive and value the benefits of public services (Bankins & Waterhouse, 2018; Kotler & Lee, 2007; Leijerholt, Biedenbach, & Hultén, 2019). Research on this approach has shown that public branding contributes to develop value to the citizens (Daehn & Bianchi, 2020), promotes the relationship between institutions and citizens (Carvalho, Demo, Medeiros, & Scussel, 2021), and enhances citizens' trust in the government (Gromark & Melin, 2013; Kallinikos, 2006). However, despite the importance of public brands management for both public institutions performance (Kotler & Lee, 2007) and the promotion of social welfare (Shigaki, Pereira, Sousa, & Lara, 2019), building public brands image is still an undertheorized topic in the scientific literature, constituting a gap in the literature and then engendering the main issue of debate in this work.

One of the main objectives of brand management is the creation of positive associations with the brands on consumers' minds (Keller & Lehmann, 2006), which seems to be a starting point for public brands to foster a stronger relationship with citizens (Carvalho, Demo, & Scussel, 2019). In this scenario, the concept of brand personality arises as the "set of human characteristics associated with a brand" (Aaker, 1997, p. 347), concerning the way individuals evaluate a brand using the same analysis they would use to evaluate the personality of a person.

In the private sector, the brand personality is used so customers may identify and differentiate brands from the competition (Aaker, 1997) and as a major element in the construction of strong brands, also acting as a determinant of the relationship between brand and consumers (Brito, 2010; Fournier, 1998). Despite the lack of studies of brand personality in the public sector (Carvalho et al., 2019), we understand that exploring public brand personalities can be a fertile path for public marketing research. This is based on the notion that brand personality reflects how people feel about a brand and, unlike attributes related to the product and/or service, it serves a symbolic function (Keller & Lehmann, 2006), being a helpful construct in the development of strong public brands, meeting the agenda of a citizen-centered managerial approach (Kotler & Lee, 2007; Leijerholt et al., 2019; Ribeiro & Oliveira, 2013; Silva, 2015).

Waeraas (2008) has pointed out, in the early 2000's, that brand personality is a coherent concept for public sectors organizations. As discussed by Leijerholt et al. (2019), brand personality in the public arena is connected to reputation, credibility and performance. However, as these scholars agree, research must answer the call for implementing branding principles from the private sector, respecting the characteristics and the agenda of public institutions. On that basis, we understand there are risks involved in the replication of a brand

personality model from the private sector directly to the public context and, for this, we question: how to identify the personality that citizens attribute to public brands?

To address this question, the main objective of this paper is to develop the Public Brand Personality Scale – PBP Scale, by developing and presenting evidence of validity and reliability of a scientific instrument to measure public brand personality. To the best of our knowledge, this is the first scale to operationalize and evaluate public brand personality, being the main contribution of this paper, as it will serve as a diagnostic tool that will allow public managers to build an increasingly transparent and effective relationship with citizens.

THEORETICAL BACKGROUND

The need to improve the relationship between government and citizens, through marketing, has begun in the context of the New Public Administration, which seeks to make management more flexible and increase accountability (Bresser-Pereira, 2017). Given the new relationship dynamics between citizens and the public sector, governments started to adopt innovative practices and sought to better understand the citizens' demands, strengthening their relationship (Demo & Pessôa, 2015).

Thus, it is plausible to say that the concept of brand personality can be used in the public sphere since institutions and public services also have names or brands and, by unveiling the personality that citizens attribute to public brands, considering its influence on the relationship with the institution (Brito, 2010). Consequently, public managers will be able to identify strategies to improve the image of public services, encourage citizenship, and reposition the public brand (Ponte, 2015).

With origins in psychology studies, the concept of brand personality started to be studied under the marketing discipline in the 1950s, when it was used to describe products, brands, and organizations, fostering the first steps of brand personality as an element of brand differentiation (Carvalho et al., 2019; Scussel & Demo, 2016). Only during the 1980s, marketing scholars started to focus on brand personality as a research stream, resorting to the use of human personality measurement to study personality in the context of brands. It was Jennifer Aaker, in 1997, who first operationalized the concept of brand personality in marketing, presenting an adequate instrument to measure brand personality, being a seminal step in this body of knowledge (Peñaloza et al., 2019; Scussel & Demo, 2016).

For Aaker (1997), brand personality is the set of human characteristics associated with a brand. While the perception of human personality traits occurs based on individual behavior, physical characteristics, attitudes, beliefs, and demographic characteristics, the perception of brand personality traits emerges from the direct or indirect iteration with the brand, using the same type of evaluation individuals would use to evaluate someone. This was her motivation to develop the first “reliable, valid, and generalizable scale to measure brand personality” (Aaker, 1997, p. 347), presenting five dimensions: sincerity, excitement, competence, sophistication and ruggedness. Since then, researchers covered the impact of brand personality in brand strategy (Naresh, 2012), brand positioning (Kim & Sung, 2013), brand experience (Choi, Ok, & Hyun, 2017), and relationship perception (Scussel & Demo, 2019). Thus, brand personality is associated with people's impression, constituting an important concept for strong public brands that are connected to the demands and concerns of citizens.

Despite the importance of her contribution, Aaker (1997) herself noted the need of respecting the context when replicating the concept of brand personality in different cultural settings and economy sectors. She made clear that the five dimensions of brand personality were based on the North-American consumer evaluation, indicating opportunities for further validation of the scale in other countries, considering the role of culture in the way consumers perceive brand personality (Aaker, 1997). Thus, the brand personality scale was validated in

different cultures and in different sectors of the economy in an attempt to achieve a more accurate measure of brand personality (Carvalho et al., 2019; Scussel & Demo, 2016).

Specifically in the context of public brands, brand personality is known as a partner-concept in developing the identity and the image of public brands (Leijerholt et al., 2019), contributing to citizens' perception and a better evaluation of public services (Bankins & Waterhouse, 2018; Kotler & Lee, 2007). In Brazil, Muniz and Marchetti (2012) validated the brand personality scale to the Brazilian customer context, identifying five dimensions: credibility, joy, audacity, sophistication and sensitivity. This study confirmed the internal structure of the scale, proving to be a reliable instrument to inspire the creation of the first public brand personality scale, meeting the purpose of the present research.

METHOD

This paper reports an exploratory and multimethod study with the objective of validating a scientific scale to identify brand personality in the public sector. To achieve this purpose, we followed the guidance of Churchill (1979) and Rossiter (2002) regarding scale development in marketing research. We propose a combination of their protocols, based on the integration proposal suggested by Oliveira and Veloso (2015). Thus, to build the Public Brand Personality Scale (PBP Scale), we designed a four-stage study: (i) development of a pilot version of the scale; (ii) scale purification through exploratory factor analysis; (iii) new scale purification, with a new sample and confirmatory factor analysis; and (iv) proposition of final items.

In the first step, development of the scale, we conducted a qualitative study with users of the service desk called *Na Hora*, in Brasília/DF, Brazil, a public sector initiative that deals with the demands of users of 11 service institutions/brands dedicated to the provision of public service. These institutions provide service in the areas of banking, environmental sanitation, electricity, housing development, traffic department, public defenders, police department, consumer protection, economy, penitentiary administration, and work and labor department.

The participants were asked to answer an online semi-structured questionnaire composed by multiple-choice questions to indicate whether each of the 11 public institutions could be evaluated. This part was followed by an open question to describe the institution with one to three adjectives to identify possible brand personality traits to allow grouping them into possible dimensions of brand personality. The sample was formed by 142 citizens, based on the principle of saturation in a heterogeneous and representative sample, as pointed out by Bardin (2016). The sample was predominantly formed by women (61%) with the average age of 35, with a college education (76%). We analyzed data using Bardin's (2016) assumptions, which defines the classification of results based on the frequency and thematic categories, composing a thematic categorical analysis.

Afterwards, we conducted a judges' analysis, in which 11 experts were divided into two focus groups, with the goal of verifying whether the items of the pilot scale made sense and were relevant in the public context, following the guidance of Kerlinger and Lee (2008). The first focus group was composed by four scholars of branding and public management. In the second focus group, we reunited seven public managers. By doing this, we assessed the managerial and the academic perspective in the operationalization of the construct. The experts checked the pertinence of the traits/items and were encouraged to allocate each item under one brand personality dimension. This step can result in the reformulation, inclusion, exclusion, suggestion, or reformulation of new items/traits or dimensions for the PBP Scale, respecting the minimum agreement of 80% among judges as the decision criterion (Pasquali, 2010).

The next step was a semantic analysis to evaluate the clarity and doubts that could arise when applying the research (Kerlinger & Lee, 2008). We sought to verify the understanding of each adjective/item, eliminating redundancies and adding new items if necessary. In this phase, 21 participants were intentionally selected among students, researchers, and professors of

Business Graduate Programs. We adopted the same 80% agreement criterion between the participants (Pasquali, 2010). Lastly, we conducted a pre-test with 11 citizens that had used a service from any institution of *Na Hora*, through an online questionnaire, with the objective of validating the pilot version, meeting the criterion of a minimum of 10 participants in a pre-test (Malhotra, 2012). The product obtained in the qualitative study was the PBP Scale application version.

In the following, we started a quantitative study for scale validation or first purification. For this stage, we used a non-probabilistic sample by convenience, which is admitted in the case of extremely large populations (Cochran, 2007), as the case of public services users. The sample was formed by 584 citizens over 18 who have used the services from any institution listed in the desk service *Na Hora*, and was shared online using the Google Forms platform. After data collection, we started a data treatment procedure in the software Statistical Package for Social Sciences (SPSS), version 22.

First, we performed descriptive statistical analyzes (frequency distribution, mean, standard deviation, maximum and minimum values). Following the recommendations from Tabachnick and Fidell (2019), we observed missing values, using the listwise method, excluding 22 questionnaires. To identify outliers, we used the Mahalanobis distance and 14 outliers were eliminated, resulting in a final sample of 548 respondents. Then, we performed multicollinearity and singularity analyzes. We found no deviations, as the tolerance values were greater than 0.1 and the Variance Inflation Factor (VIF) was less than 5.0 (Hair et al., 2018). Finally, we verified the assumptions for multivariate analysis (Field, 2020). For this, we analyzed normal and residual probability graphs to verify normality, linearity, and homoscedasticity of the data, although exploratory factor analysis is a robust technique against normality violations (Field, 2020). The assumptions for factor analysis were confirmed.

At the end of data processing, we selected a random sample of 210 participants to perform the Exploratory Factor Analysis (EFA), based on the recommendations of Tabachnick and Fidell (2019), who suggest between 200 and 300 individuals, considering between 5 and 10 subjects per questionnaire item. To perform the Confirmatory Factor Analysis (CFA), we used the remaining 338 responses, constituting an independent sample of the exploratory analysis and considering the quantity recommended in the literature of a minimum of 10 subjects per questionnaire item (Byrne, 2016; Kline, 2015).

For the new scale purification, with a new sample, we conducted a Confirmatory Factor Analysis, using Structural Equation Modeling (SEM) to verify the adjustment of the measurement model obtained through Exploratory Factor Analysis, using the statistical program Amos, integrated with SPSS. Uni and multivariate normality was also measured by Amos and no violation was found, according to Marôco (2018). We adopted the maximum likelihood estimation method due to its statistical robustness to overcome normality limitations and its applicability in different sample sizes (Hair et al., 2018).

Finally, according to the sole paragraph of article 1 of Resolution No. 510/16 of the National Health Council (CNS) in Brazil, consultative surveys, with the anonymity of respondents and the confidentiality of responses guaranteed, as is the case of this research, they are exempt from ethical analysis by the Research Ethics Committees (CEP) and by the National Research Ethics Commission (CONEP).

FINDINGS

The first findings report the development of a pilot version of the PBP Scale. In the qualitative study, we obtained 1,192 adjectives as possible brand personality traits. After the elimination of duplicates, we had 261. The adjectives represented synonyms for expressing the same characteristic and were unified into the one that was most repeated, reaching 36 traits. This final amount was grouped into brand personality dimensions.

Table 1 presents the consolidation of categories, or dimensions, and the adjectives identified for public brand personality after content analysis, as well as the representativeness of the category as a function of the frequency of adjectives citations related to each dimension.

Table 1

Dimensions and traits identified in the PBP Scale

Dimension	Traits	Frequency
Efficiency	Quality, Efficient, Fast, Competent, Proactive, Helpful, Productive	54.40%
Credibility	Accessible, Honest, Fair, Committed, Reliable, Serious, Transparent, Exempt	15.20%
Structure	Simple, Organized, Comfortable, Clean	10.90%
Relevance	Necessary, Important, Essential, Known, Present, Useful	9.00%
Innovation	Modern, Practical, Technological	7.30%
Appreciation	Regional, Strong, Attentive, Valuable, Cool, Beautiful, Admired, Engaged	3.20%

To evaluate the 36 traits of publicbrand personality and the six dimensions obtained for the PBP Scale in the content analysis, we carried out the judges' analysis. Two new traits were added to the scale - democratic and inclusive, totaling 38 items/traits. Afterward, in the semantic analysis, we excluded 17 items due to redundancy (accessible, attentive, beautiful, committed, comfortable, democratic, honest, legal, clean, necessary, practical, present, productive, regional, serious, simple, and valuable). Additionally, three traits were replaced by new adjectives: technological for digital, exempt for impartial, and modern for innovative. At the end of this stage, the PBP Scale had 21 items representing public brand personality traits.

The last step in the qualitative study was a pre-test, formed by the invitation letter and the consent form; the 21 items of the personality traits of public brands to be identified using a Likert-type agreement scale, ranging from 1 (totally disagree) to 5 (totally agree), being 3 (I do not agree, nor do I disagree/No applies) the neutral point; and three sociodemographic questions to characterize the sample. We had no changes, inclusion, or exclusion in this step.

For the scale validation, we started the quantitative study analysis. We started with the psychometric validation of the PBP Scale, as recommended by Field (2020) and Hair et al. (2018), to obtain evidence of validity and reliability of the scale. The feasibility of using factor analysis (factorability) was obtained, due to the matrix of correlations of the PBP Scale items presenting the most significant correlations from moderate to strong, as well as the KMO sample adequacy index of 0.94, considered "wonderful", attesting the adequacy of the data for factor analysis (Kerlinger & Lee, 2008).

Then, we determine the number of factors in the scale, considering four criteria: eigenvalues, percentage of explained variance, scree plot, and parallel analysis (Field, 2020). We have identified six factors considering the explained variance above 3%; three factors with eigenvalues above 1; and three factors by the scree plot graph. Next, we performed a parallel analysis, a criterion that is increasingly recognized in the international literature, given its precision in establishing sets of extracted values, in addition to being little influenced by the sample size and by the factor loadings of the items (Hayton, Allen & Scarpello, 2004).

According to this criterion, the number of factors can be identified from the point where the estimated value exceeds the empirical value. Laros and Puente-Palacios (2004) showed the suitability of different criteria for extraction of factors, finding that while the criterion eigenvalue greater than 1.0 is adequate in 22% of cases and the criterion based on the scree plot test is adequate in 57% of cases, the criterion based on parallel analysis is adequate in 92% of cases. We used the software RanEigen to conduct the parallel analysis, and the results indicated three factors for the PBP Scale, as shown on Table 2.

Table 2

Paralell Analysis

<i>Eigenvalue / Factor</i>	Estimated Value	Empirical Value
1	1.61	10.75
2	1.51	1.94
3	1.41	1.17
4	1.34	0.86
5	1.27	0.76

Once we defined the number of three factors, we started the Exploratory Factor Analysis using Promax oblique rotation, as indicated by Pasquali (2012), since correlations between variables are assumed, limiting the possibility of using orthogonal rotations.

For the purposes of this research, a minimum factor loading of 0.55 was determined, with the aim of resulting in greater quality and internal validity of the PBP Scale. Thus, we kept only good, very good, and excellent items, according to the parameters defined by Comrey and Lee (2013), which are: negligible (loads < 0.3), poor (loads ≥ 0.32 and ≤ 0.44), reasonable (loads ≥ 0.45 and ≤ 0.54), good (loads ≥ 0.55 and ≤ 0.62), very good (loads ≥ 0.63 and ≤ 0.70), and excellent (loads ≥ 0.71). Factor loadings refer to the correlation of items with the respectively associated factor, allowing the verification of the internal validity of the scale, measured by the quality of the items. Due to low factor loads, we excluded the items known, engaged, strong, and transparent. After the analyses of internal validity, we obtained a scale with 17 items, being 5 good, 4 very good, and 8 excellent. These items were divided into the three factors Efficiency (9 items), Relevance (3 items) and Credibility (5 items).

The degree of reliability of the instrument was measured using Cronbach's alpha (α), an indicator of confidence, precision, or internal consistency of scales (Nunnally & Bernstein, 1994). According to the authors, values found for Cronbach's alpha above 0.70 are understood as reliable, while those above 0.80 are very reliable. All the three factors of the PBP Scale reached Cronbach's alphas considered very reliable: Efficiency reached $\rho=0.92$, Relevance $\rho=0.85$, and Credibility $\rho=0.77$. Furthermore, with the exploratory validation, a total explained variance of 66% was reached by the scale factors, which allows verifying the degree of explanation of the construct reached by such factors. According to Hair et al. (2018), this is a very satisfactory result, being above 50%. The psychometric indexes of the PBP Scale are summarized in Table 3.

Table 3

PBP Scale Psychometric Indexes

Item	Factor Load			Quality of the item
	Efficiency	Relevance	Credibility	
Fast	0.86			Excellent
Quality	0.86			Excellent
Efficient	0.85			Excellent
Competent	0.85			Excellent
Organized	0.77			Excellent
Proactive	0.70			Very good
Digital	0.70			Very good
Helpful	0.63			Very good
Innovative	0.58			Good
Essential		0.91		Excellent
Important		0.89		Excellent
Useful		0.62		Good
Admired			0.77	Excellent
Reliable			0.70	Very good
Fair			0.59	Good
Inclusive			0.56	Good

Item	Factor Load			Quality of the item
	Efficiency	Relevance	Credibility	
Impartial			0.55	Good
Cronbach Alpha	0.92	0.85	0.77	
Extracted Variance				66%

Considering the results of the exploratory validation, we started a new purification of the scale, with a different sample, the moment in which we performed a Confirmatory Factor Analysis. We carried out an assessment of the quality of the measurement model in structural equations, based on the adjustment of the model to the empirical data. As recommended by Hair et al. (2018), a model that presents the value of the normed χ^2 (CMIN/DF or NC, being CMIN the χ^2 statistic and DF the degrees of freedom of the model), GFI (Goodness of Fit Index), CFI (Comparative Fit Index) and SRMR (Standardized Root Mean Squared Residual) has enough information for its evaluation since the NC and the RMSEA are absolute indexes and the GFI is an incremental index.

Observing Byrne's (2016) recommendations for parsimony, we tested the PBP Scale in both the unifactorial and the multifactorial (three-factor) models. The results show that the one-factor model exhibited worse indices than the three-factor model, confirming that the multifactor model is a better framework for evaluating public brands, as shown in Table 4.

Table 4
PBP Scale Confirmatory Analysis Fit Indices

Parameters	Reference (Kline, 2015)	Unifactorial Model	Multifactorial Model
NC (χ^2/DF)	< 5.0	8.01	3.96
GFI	≥ 0.90	0.82	0.93
SRMS	< 0.08	0.08	0.06
$\Delta \chi^2 (3)=377.04; p<0.001$			

The confirmatory multifactorial model presented two factor loadings considered “reasonable” (digital and impartial), which were excluded. In the following, we generated another multifactor model only with loads considered good, very good, and excellent. Figure 1 illustrates the final version of the PBP Scale, with three factors/dimensions and 15 items/traits.

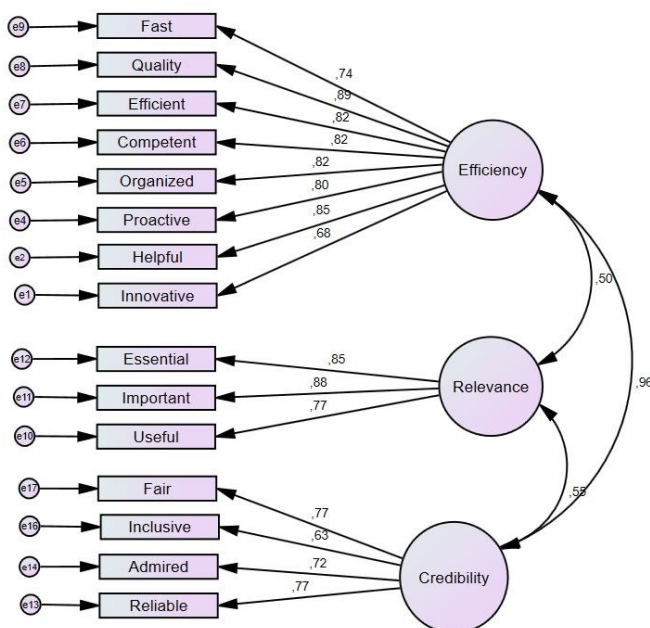


Figure 1. PBP Scale Confirmatory Factor Analysis Model

Note. $\chi^2 (116)=344.59; p<0.001$; NC(CMIN/DF)=3.96; GFI=0.93; RMSEA=0.09.

To analyze the reliability of the factors, we verified the respective Jöreskog' rho indices (ρ), which represent a measure of reliability for measurement models in structural equations based on the factor loadings of the variables, more recommended for confirmatory validations than the Cronbach's alpha, an index that uses correlations between items (Chin, 1998). The ρ values of all the PBP Scale factors are above 0.8 and are considered very satisfactory (Chin, 1998; Ursachi, Horodnic, & Zait, 2015): Efficiency with $\rho=0.93$, Relevance with $\rho=0.87$, and Credibility with $\rho=0.83$. Table 5 summarizes the psychometric indexes of the PBP Scale.

Table 5
PBP Scale Psychometric Indices

Factor	Scale Items	Standardized-Estimates	Unstandardized-Estimates	S.E.	C.R.	<i>p</i>
Efficiency	Quality	0,89	1,33	0,09	14,84	***
	Helpful	0,85	1,32	0,09	14,28	***
	Organized	0,82	1,26	0,09	13,84	***
	Efficient	0,82	1,18	0,09	13,79	***
	Competent	0,82	1,12	0,08	13,71	***
	Proactive	0,80	1,18	0,09	13,53	***
	Fast	0,74	1,15	0,09	12,57	***
	Innovative	0,68	1,00			
Relevance	Important	0,88	0,96	0,06	16,26	***
	Essential	0,85	1,03	0,07	15,90	
	Useful	0,77	1,00			***
Credibility	Reliable	0,78	1,00			
	Fair	0,77	0,98	0,07	14,97	***
	Admired	0,72	0,88	0,06	13,91	***
	Inclusive	0,63	0,75	0,06	11,77	***

Note. SE = standardized error; CR = critical ratio or t test; *** = $p < 0.001$.

In the next step, we evaluated construct validity through convergent, divergent, nomological, and discriminant validity. The construct validity of the PBP Scale corresponds to the verification that its items effectively portray the theoretical construct they propose to measure (Hair et al., 2018). To verify the convergent validity of a construct, we analyze the degree of agreement of its measurements. For this, the literature points out that such intercorrelations between items require values of at least 0.5 (Kline, 2015), which occurred with all PBP Scale loads. Another way to verify the convergent validity is based on the reliability of its factors through the Jöreskog' rho index. All of them were above 0.8, attesting the internal consistency, also being considered very satisfactory (Chin, 1998; Ursachi, Horodnic, & Zait, 2015). The last criterion is the extracted variance, which must be above 0.5 (Hair et al., 2018). The three PBP Scale factors had extracted variance above 0.5, as shown in Table 5. On that basis, it is possible to state that the PBP Scale has convergent validity.

In turn, divergent validity indicates that the factors found measure different constructs. To verify divergent validity, we assess the estimated variance extracted from each factor, which must be greater than the square of the correlation between the factors, according to the Fornell-Larcker criterion (Hair et al., 2018). Therefore, a latent construct should explain its item measures better than another construct. Results indeed confirm the divergent validity between the three factors of the scale; in other words, efficiency, relevance and credibility constructs are distinct from each other, constituting three independent scales, which can be applied separately. Table 6 presents these results.

Table 6
PBP Scale Divergent Validity

Factor	Efficiency	Relevance	Credibility
Efficiency	0.65^a		
Relevance	0.10	0.70^a	
Credibility	0.44	0.17	0.54^a

Note. ^a Extracted Variance.

Nomological or criterion validity seeks to identify correspondence in relation to the theoretical and empirical literature, confirming the capacity of the scale to behave in relation to other constructs as expected. To assess nomological validity, we must carry out tests of correlations between constructs (Hair et al., 2018). Therefore, the average of the responses given by the individuals to the 15 items resulting from the final PBP Scale model was calculated, correlating it to the Net Promoter Score (NPS), or brand satisfaction index (Reichheld, 2011). We used the Pearson coefficient, resulting in a positive and strong correlation of 0.78 (Cohen, 1992), with a significance of 0.01. Thus, we confirm the nomological validity of the construct based on the expressive correlation between brand personality and satisfaction, as already pointed out by Brakus, Schmitt, and Zarantonello (2009), who state that one of the results arising from the identification of brand personality is satisfaction.

It is noteworthy that among the factors, all correlations were significant at the 0.01 level. Efficiency was the one with the strongest correlation in relation to satisfaction with the public service, with a correlation of 0.75. Efficiency is one of the principles of the Brazilian Federal Constitution, which according to Meirelles (2019), is a duty of the administration. Therefore, it is something that citizens already expect from public services, since one of the objectives of new models of public administration, such as the New Public Management, is the search for government efficiency and increased productivity (Abellán-López, Dias, & Nebot, 2020). The Credibility factor came next with a correlation of 0.66 and finally, Relevance with 0.57 of correlation with citizen satisfaction.

Lastly, we performed a discriminant analysis to attest the conceptual independence of the three factors of public brand personality and different, but possibly similar constructs, through Exploratory Factor Analysis, with promax oblique rotation (Brakus et al., 2009). In this case, we performed a factor analysis, with four factors, grouping the items of efficiency, credibility, relevance and the items of a Citizen Relationship Management (CiRM) Scale (Medeiros & Demo, 2021). All items were grouped into the expected factors, confirming the independence of the constructs and validating the discriminant analysis.

Once we analyzed the psychometric indicators and attested construct validity for the PBP Scale, we must assess content validity for the items in the scale, which means finding theoretical support for each item of the scale (Hair et al., 2018). Table 7 points to the content validity of the three dimensions of the PBP Scale. Additionally, Table 7 presents the final items of the scale, meeting the criteria of Churchill (1979), Rossiter (2002), and Oliveira and Veloso (2015) regarding the last step in the scale development and validation process.

Table 7

PBP Scale Content Validity

Item		Theoretical Support
Efficiency	Quality	Branding strategies enable citizens' to perceive and evaluate the quality of public services (Leijerholt et al., 2019).
	Helpful	Public institutions must be seen as partners of the population (Carvalho et al., 2021), ensuring their rights to security, health and social well-being (Kallinikos, 2006).
	Organized	Public brands must show their strategic vision and organizational culture for the citizens (Leijerholt et al., 2019), a fertile path to foster a better relationship between citizens and governments (Carvalho et al., 2021).
	Efficient	The adoption of private branding strategies helps to promote and efficient image for public institutions, also contributing to the effective implementation of corporate managerial principles in name of performance (Leijerholt et al., 2019).
	Competent	Brand personality contributes to citizens' perception and better evaluation of public services (Bankins & Waterhouse, 2018; Kotler & Lee, 2007).
	Proactive	Public institutions must face the increasing competition from the private sector, along with the public distrust, demanding a proactive position in order to create and develop strong brands (Gromark & Melin, 2013; Leijerholt et al., 2019).
	Fast	A citizen-based approach, inspired by the customer-centered approach, contributes to fast and better provision of public service (Carvalho et al., 2021; Kotler & Lee, 2007).
	Innovative	In order to innovate in the provision of quality public service, public organizations must adopt a customer-oriented approach, identifying opportunities to improve citizens' satisfaction, and, ultimately, the empowerment of citizenship (Kotler & Lee, 2007).
Relevance	Important	Public institutions must be capable of creating and projecting a strong image, allowing citizens to perceive and value the benefits of public services (Bankins & Waterhouse, 2018; Kotler & Lee, 2007; Leijerholt et al., 2019).
	Essential	Research on public branding shows that a strong public image helps to increase citizens' awareness of the value of public service, contributes to a positive reputation and enhances performance (Gromark & Melin, 2013; Leijerholt et al., 2019).
	Useful	Public institutions must foster in the citizens' minds they are a way to ensure democracy (Kallinikos, 2006) and an important bond between the needs of the population and social welfare (Carvalho et al., 2021; Shigaki et al., 2019).
Credibility	Reliable	The image of public brands is not related only to the service provision, but the confidence of population that they will have their needs fulfilled, ensuring their right to democracy (Kallinikos, 2006; Kotler & Lee, 2007; Leijerholt et al., 2019).
	Fair	Based on the several and sometimes conflictual interests of citizens' groups, public brands must reinforce the idea that public institutions work on the fulfilment of divergent demands, showing that public decisions are focused on the greater social welfare (Gromark & Melin, 2013).
	Admired	Due to the lack of confidence of many public organizations, public branding helps the institutions to build higher levels of legitimacy and trust in the eyes of the citizens, an important step into ensuring societal value (Gromark & Melin, 2013).
	Inclusive	The application of branding strategies brings public institutions closer to the citizens (Ribeiro & Oliveira, 2013; Silva, 2015), including the populations' rights to security, pluralism, equality and democracy (Kallinikos, 2006).

DISCUSSION, CONTRIBUTIONS, LIMITATIONS AND RESEARCH AGENDA

Literature signalizes a strong interest in adapting corporate branding strategies to the public sector (Buurma, 2001; Bankins & Waterhouse, 2018; Daehn & Bianchi, 2020; Kotler & Lee, 2007). However, despite the benefits of such replication, adjustments are necessary in order to meet the expectations of the population and the possibilities of public administration, demanding from research a careful attention to fit the particularities of the public organizations (Leijerholt et al., 2019). Additionally, in the case of a brand personality model to public brands, scholars emphasize the need of understanding cultural perception in order to operationalize the concept in a distinct context (Aaker, 1997; Muniz & Marchetti, 2012; Scussel & Demo, 2016; Carvalho et al., 2019).

Thus, to develop a valid measurement model for brand personality in the public arena, the Public Brand Personality Scale – PBP Scale, with 15 traits of public brand personality

grouped into three dimensions, reflects distinct characteristics that enable us to analyze the way citizens perceive the brand personality of public institutions. During the labeling process of the factors, we sought to determine names that represent the personality traits grouped in each dimension.

The first dimension was called Efficiency, encompassing the traits quality, helpful, organized, efficient, competent, proactive, fast and innovative. This dimension is connect to the main purpose of public institutions, which is to provide efficient public service, with a focus on increasing productivity (Abellán-López et al., 2020; Meirelles, 2019). In this sense, when citizens perceive such personality traits, they understand that the efficiency principle is active and working for their well-being. This could be an important step into the development of a citizen-centered approach (Kotler & Lee, 2006), one of the fundamentals of CiRM, and for the creation of strong relationships between citizens and public organizations as well (Carvalho et al., 2021), strategies that will help the public sector to achieve a better performance.

The second dimension, Relevance, covers the personality traits of important, essential and useful. The citizen perception of this dimension is particularly important due to the lack of trust in the government strategies and initiatives (Gromark & Melin, 2013), which has increased in times of crises, and must be changed in order to foster a strong brand image or public institutions, ensuring the population’s right to exercise their citizenship (Kallinikos, 2006; Leijerholt et al., 2019). These scholars agree that being efficient is insufficient: citizens must see public institutions as relevant, increasing the effectiveness of public policies, in order to provide a better functioning of the relations between government and society in general.

The third and last dimension is Credibility, with the traits reliable, fair, admired and inclusive. This means that citizens must trust in the public institutions and their power to provide quality public service and promote social welfare and democracy (Kotler & Lee, 2007; Leijerholt et al., 2019). In this sense, the perception of credibility traits contributes to create and enhance higher levels of legitimacy and trust in the eyes of the citizens, an important step into ensuring societal value (Gromark & Melin, 2013), proving public institutions commitment to the populations' rights to security, pluralism, equality and inclusion (Kallinikos, 2006).

Next, considering the need of adaptation of corporate branding strategies to the public sector (Leijerholt et al., 2019) and the need of empirical validation of the brand personality scale for different contexts (Aaker, 1997), we compare the Brand Personality Scale for the Brazilian consumer (Muniz & Marchetti, 2012) with the Public Brand Personality Scale, validated in the present work. Table 8 shows the comparison.

Table 8
Comparison between the Brand Personality Scale and the Public Brand Personality Scale

Brand Personality Scale		Public Brand Personality Scale	
Dimensions	Items	Dimensions	Items
<i>Credibility</i>	Responsible, Secure, Reliable, Confident, Correct, Respectable, Loyal and Consistent	<i>Credibility</i>	Reliable, Fair, Admired, Inclusive
<i>Joy</i>	Cool, Happy, Festive, Extrovert, Fun, Good-natured, Playful	<i>Efficiency</i>	Quality, Helpful, Organized, Efficient, Competent, Proactive, Fast, Innovative
<i>Audacity</i>	Modern, Daring, Creative and Up-to-date		
<i>Sophistication</i>	Chic, Upper Class, Elegant, Sophisticated and Glamorous	<i>Relevance</i>	Important, Essencial, Useful
<i>Sensitivity</i>	Delicate, Sensitive, Romantic and Enchanting		

The only dimension that figures in both private and public measurement models is Credibility. In this way, we understand that, regardless of the challenges faced by public or private organizations, fostering a reliable and trustworthy brand is the starting point for a positive brand image. In the private sector, credibility is associated with the provision of quality products and services (Muniz & Marchetti, 2012), being a driver of loyalty (Demo et al., 2018) and customer experience (Scussel & Demo, 2019). On the other hand, in the public sector, credibility is a paramount element in the formation of trust in public service, the legitimacy of public institutions and the development of organizational assets (Gromark & Melin, 2013). This becomes especially important to adapt principles of business administration to public management and to face doubts of the society regarding the capacity of public organizations in keeping their promises to the citizens (Leijerholt et al., 2019). Likewise, Leijerholt et al. (2019) affirm that a reliable public brand can enhance public employees' commitment, which will be reflected in a better public service provision and high-quality citizen service.

We attribute the absence of personality traits concerning Joy, Audacity, Sophistication, and Sensitivity, present in the Brazilian scale for consumers, to the focus of public institutions in improving performance and demonstrating a positive return for the taxes paid by the population (Kotler & Lee, 2007). Therefore, there is no need for brand differentiation against competition or the need of obtaining new customers or getting their loyalty, but a commitment with the citizens and their social well-being. In alignment with such purposes, the PBP Scale has shown the dimensions Efficiency and Relevance.

While in the private sector, efficiency is related to the optimal combination of resources and products to maximize production while minimizing the resources applied, in the public sector, efficiency is associated with the optimization of the application of resources to increase accountability, especially in a scenario of mistrust, and the quality of services provided (Silva & Crisóstomo, 2019). For Struecker and Hoffmann (2017), the need for new forms of participation capable of dealing to complex situations in the solution of public problems is evident. Thereby, the interest in more participatory models appears as an alternative to establishing bonds between citizens and governments to give credibility to public policies and services (Kluvers & Pillay, 2009). This search for credibility and legitimacy of state actions strengthens processes of transparency to give more credibility to decisions and public services (Kallinikos, 2006; Kotler & Lee, 2007; Leijerholt et al., 2019).

As for the role of Relevance, the image of public institutions contributes to increase citizens' awareness of the value of public service (Gromark & Melin, 2013; Leijerholt et al., 2019), enhances the trust that institutions will provide social welfare (Shigaki et al., 2019), and, most importantly, engender a way to ensure democracy and citizens' rights (Kallinilos, 2006). As soon, the importance and usefulness of services may be linked to the fulfillment of fundamental rights observed by the respondents, who brought these traits and this new dimension, highlighted by the PBP Scale.

Academic Contributions. This study presents a first effort to produce a measurement model to evaluate brand personality in the public sector, so called the Public Brand Personality Scale (PBP Scale), fulfilling a gap in the scientific literature, both for the brand personality research and the body of knowledge of public management. The use of triangulation by means of different qualitative analysis techniques and advanced statistical methods to validate the scale through exploratory and confirmatory factor analysis with structural equation modeling represents a methodological advance to obtain evidence of validity and reliability in measurement models. The development and validation of the PBP Scale, with reliable psychometric indexes, opens the path for future studies that allow greater external validity and generalization of the referred scale. By finding the factors Efficiency, Relevance, and Credibility as dimensions of the personality of brands attributed to public institutions, from the

perspective of the citizen, we deepened the understanding of how citizens identify the personality of public brands, answering the research question.

Managerial Implications. The PBP Scale offers a scientifically validated instrument, which can serve as basis for decision-making involving a more effective brand positioning, as well as the optimization of public services provision. The PBP Scale results also works as a diagnostic tool that allows public managers to better understand the perception of citizens concerning the image of institutions, represented by their brands, in addition to identifying areas with potential for improvement to generate greater citizen satisfaction, and establish relationships based on transparency and trust

Limitations. The PBP Scale represents a seminal step to develop a brand personality scale designed specifically for the context of public service. Thus, the results obtained are more indicative than conclusive. Other limitation is related to the common-method variance problem. Nevertheless, the comparison between the one-factor and the three-factor structures (please refer to Table 4) of the scale showed that if the one-factor model presented adjustment, there is common-method variance. As this did not happen, we may conclude that the common-method variance alone does not explain the results. The cross-sectional nature of the study is also a limitation, as it makes any causal inference impossible, and the sampling performed for convenience prevents generalizations of the engendered results.

Future Research. Regarding the research agenda, we recommend scholars to deepen the theoretical research on public brand personality, an area still unexplored when compared to brand personality studies in the private sector. We also suggest the association of public brand personality with other variables, from the marketing discipline and other managerial areas, such as relationship perception, citizen satisfaction and. Considering the differences between private and public employees, which directly affect branding strategies in the public sector (Leijerholt et al., 2019), we recommend the association of public brand personality with variables like engagement, commitment and job satisfaction. We also understand the importance of understanding the effects of public organizational performance, operational performance, public service quality and organizational culture in citizens' perception of public brand personality. Lastly, we highlight the relevance of new validations in different spheres of government and powers, culture and countries, to provide greater external validity to the PBP Scale in order to strengthen the model obtained, pluralizing the diagnostic possibilities that the scale offers, and to identify variations in behavior and strategic distinctions related to nationality and regionalism.

CONCLUSION

The main contribution and advancement of our study is in the development and validation of the Public Brand Personality Scale (PBP Scale) to identify the brand personality attributed by citizens to public institutions. From the results found during the stages of the research, the general objective was achieved by obtaining evidence of exploratory, confirmatory, internal, construct (convergent, divergent, nomological and discriminant) and content validity, as well as reliability.

Therefore, new structural models of relationships between variables can be tested, signaling an advance in the construction of theoretical-empirical knowledge on the subject. The findings point to an operationally valid and reliable measure to identify personality of public brands, which can be used as a diagnostic tool to support an effective evidence-based public management.

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