Construction and validation of a corruption perception scale at the citizen level

Kelmara Mendes Vieira [1]
Monize Sâmara Visentini [2]
Ricardo Teixeira Cunha [1]

[1] Universidade Federal de Santa Maria (UFSM), Santa Maria – RS, Brazil
[2] Universidade Federal da Fronteira Sul (UFFS), Cerro Largo – RS, Brazil

Abstract

The study described the creation and validation of the Corruption Perception Scale (CPS), which assesses how citizens perceive corruption. In a qualitative step, the instrument was evaluated by experts, followed by a pre-test. In the quantitative step, exploratory and confirmatory factor analysis was performed, totaling a sample of 1,075 cases. Finally, a methodology for the application of CPS was suggested. The final structure of the measure was composed of five dimensions at the individual level (knowledge, behavior, reflexes, control, and attitude), which position the citizen as the protagonist in the analysis of the phenomenon.

Keywords: Corruption. Citizen. Metrics.

Construção e validação de uma escala de percepção da corrupção ao nível do cidadão

Resumo

O estudo descreve a criação e validação da Escala de Percepção da Corrupção (EPC), que se propõe a avaliar como o cidadão percebe a corrupção. Na construção e validação da EPC, em etapa qualitativa, o instrumento foi avaliado por especialistas, seguido de pré-teste. Já na etapa quantitativa, realizou-se análise fatorial exploratória e confirmatória, totalizando amostra de 1075 casos. Por fim, sugere-se uma metodologia para a aplicação da EPC. A estrutura final da medida é composta por cinco dimensões de nível individual (conhecimento, comportamento, reflexos, controle e atitude), que posicionam o cidadão como protagonista da análise do fenômeno.

Palavras-chave: Corrupção. Cidadão. Métrica.

Construcción y validación de una escala de percepción de la corrupción a nivel ciudadano

Resumen

El estudio describe la creación y validación de la Escala de Percepción de la Corrupción (EPC), que tiene como objetivo evaluar cómo los ciudadanos perciben la corrupción. En la construcción y validación de la EPC, en una etapa cualitativa, el instrumento fue evaluado por expertos, seguido de un pretest. En la etapa cuantitativa, se realizó un análisis factorial exploratorio y confirmatorio, totalizando una muestra de 1075 casos. Finalmente, se sugiere una metodología para la aplicación de la EPC. La estructura final de la medida está compuesta por cinco dimensiones a nivel individual (conocimiento, comportamiento, reflejos, control y actitud), que posicionan al ciudadano como protagonista en el análisis del fenómeno.

Palabras clave: Corrupción. Ciudadano. Métrica.

INTRODUCTION

Corruption is a pervasive problem, faced by several countries at different times, and which, although its extent may vary from one society to another, it threatens all nations (Mousavi & Pourkiani, 2013). It is defined as the abuse of power entrusted to personal gain (Brown, 2006; Transparency International, 2019), corruption undermines a society's justice, economic stability, and efficiency (Shacklock, Sampford, & Connors, 2006), in addition to placing their democratic and moral values at risk (Lambsdorff, 1998). Among the corrupt practices, the most common refer to the payment of bribes, money laundering, influence peddling (Controladoria Geral da União [CGU], 2009), favouritism, nepotism, illegal political sponsorship, extortion, theft and fraud (Cavalcante, 2018).

The most widely used and globally known indicator of the level of corruption in the public sector is the Corruption Perceptions Index (CPI), published annually since 1995 by the non-governmental organization Transparency International (TI) (Gorsira, Denkers, & Huisman, 2018; Transparency International, 2021; Villarino, 2021). According to Transparency International (2021), the CPI assesses 180 countries and territories and assigns them scores on a scale between 0 and 100, ranging from very corrupt to very transparent, respectively. Thus, in 2020, the best rated countries were Denmark (88 points), New Zealand (88), Finland (88), Singapore and Sweden (85); while Venezuela (15 points), Yemen (15), Syria (14), Somalia (12) and South Sudan (12) stand out negatively in the global context.

Another important index is the World Governance Indicators (WGI), a project of the World Bank Group, which has produced governance indicators for more than 200 countries and territories since 1996, considering six dimensions, including the 'Corruption Control' (CoC). In the ranking that varies from 0 to 100, comparing all countries in the world, in 2019, countries on the African continent such as South Sudan, Equatorial Guinea and Somalia, were in the three worst rankings in the indicator of Corruption Control, with positions less than 1.0. In turn, Finland, New Zealand and Singapore have scores close to 100, indicating adherence to the fight against corruption, based on this indicator. In the view of Villarino (2021), the CoC stands out in the comparison of nations, considering that it provides information on changes over time, for a relevant number of countries, based on methodological refinement and support from an institution renowned as the World Bank.

The use of indices and indicators to measure corruption has helped governments to make policy choices, presenting a scenario of popularity (Perumal, 2021) and, as far as possible, embarrassing corrupt governments (Mungiu-Pippidi & Dadašov, 2016). In the field of research, Malito (2014) emphasizes that there is a high application of these indices in academic production that deals with the impact of corruption in developed and developing countries. However, there are recommendations that they be applied with caution and carefully analysing the purpose of the investigation, considering that such metrics are largely based on the perceptions of experts, lacking both specificity and transparency (Mungiu-Pippidi & Dadašov, 2016).

In addition to this criticism, both metrics (CPI and CoC) are considered to be structured on the aegis of evaluating the administrative structure of the State, making no effort to understand how the common citizen perceives corruption in the face of the influences it is exposed to. This is the proposal of this investigation, which aims to build and validate a scale of perception of corruption in the view of the common citizen and not agents and specialists in government issues. Ko and Samajdar (2010) encourage the need to fill this gap, exploring the sources of perception from a theoretical point of view, from a bottom-up perspective, taking into account the perception of citizens about corruption. The validation of scales of this nature has merit in enabling the comparison of phenomena - in this case the perception of corruption by the population – between countries (Overman, Schillemans, & Grimmelikhuijsen, 2020) and regions of the same country, such as Brazil, with continental dimensions.

Studying citizens' perception of corruption is essential, considering that it can impact the population well-being and government actions. Školník (2020) highlights that the (negative) perception of corruption on the part of a citizen leads to the absence of all forms of social participation, such as, for example, electoral participation, acting in councils and municipal meetings and political parties and demonstrations. Neshkova and Kalesnikaite (2019) corroborate, noting that if citizens assess a government as corrupt and dishonest, they become sceptical about political life and, consequently, are less likely to participate in democratic governance.

Bearing in mind the possibility of citizens losing the motivation to participate politically in an environment they consider corrupt, the relevance of this investigation stands out, which enables the identification of ways in which citizens understand about corruption in the country where they live, from different perspectives. Yu, Chen, and Lin (2013) point out that controlling corruption first requires a means of measuring the phenomenon, as only then problems can be correctly diagnosed, and solutions properly evaluated. Thus, according to the authors, for a democratic government to govern effectively, research that assesses the perception of corruption 'by those in the streets' must be taken into account (Yu et al., p. 57).

DEVELOPMENT OF THE CORRUPTION PERCEPTION SCALE (CPS)

The proposal to build the scale is highlighted, as, in addition to its theoretical innovative character, it reflects an effort to understand how the common citizen recognizes this complex phenomenon (Gorsira et al., 2018). More than 30 years ago, Hilgartner and Bosk (1988) already pointed out that, from a philosophical point of view, the use of subjective perception to measure corruption is justifiable, because public issues are a projection of the collective cognition of society as a whole and not simply a reflection of objective reality.

Collins, Uhlenbruck, and Rodriguez (2009) indicate that studies with a subjective perspective are complex to be conducted at the individual level, considering that corruption is difficult to define, observe and measure. To seek to eliminate these barriers, the instrument developed for this research is comprehensive in the analysis of corruption, elaborated from an extensive literature review, incorporating five dimensions of individual level (knowledge, behaviour, reflex, control and attitude) and positioning the citizen as protagonist of the analysis of the phenomenon.

The *knowledge* dimension reflects '*what the citizen knows about corruption*'. Politically aware citizens understand political information differently from those who do not give equal relevance to the topic (Weitz-Shapiro & Winters, 2016). Thus, it is essential that citizens are aware of the meaning of corruption (Lin & Yu, 2014), corrupt practices (Sadek, 2019), combat legislation (Abreu & Gomes, 2021) and that they seek information to update themselves on the theme (Bai, Liu, & Kou, 2014; Yu, Chen, & Lin, 2013), as well as taking it to the heart of the social discussion (Weitz-Shapiro & Winters, 2016). Box 1 lists the CPS' knowledge dimension items, defined based on current literature.

Box 1
Items of knowledge dimension

Code	Item
Item 1	I know what corruption means.
Item 2	I am interested in looking for information about corruption.
Item 3	In my school/academic background, corruption was/is a debated topic.
Item 4	I discuss corruption in my family/social relationships.
Item 5	I can identify corrupt practices.
Item 6	I know different forms of corruption (e.g., kickback, overpricing and/or other forms).
Item 7	I know the legislation on corruption.
Item 8	I know what are the appropriate punishments for the citizen who commits corrupt acts.
Item 9	I easily notice when corrupt practices occur.

Source: Elaborated by the authors.

The knowledge dimension is also justified, given that the understanding of corruption is reflected in a cultural phenomenon, however, individuals should not be pre-judged in relation to their country of origin (Barr & Serra, 2010). In a practical way, this dimension analyses the relationship between the different forms of obtaining knowledge about corruption and the relevance that such knowledge has under this perception. Thus, we imply that a citizen who is unaware of corrupt practices and acts may have his perception of this phenomenon impaired.

The *behaviour* dimension represents '*how the citizen behaves towards corrupt acts*'. Marquette and Peiffer (2018), when comparing the theory of collective action and the principal-agent theory, conclude that both have very close indications regarding the decision to get involved in corruption, which may be motivated by the citizen's conception that they will not lose their status of beneficiary of something and will not be held responsible for such an act. The relevance of knowing the perception of ordinary citizens regarding their actions towards corrupt acts is reinforced by behavioural analysis. Based on current literature, Box 2 lists the CPS items according to behaviour dimension.

Box 2
Items of behaviour dimension

Code	Item
Item 10	I have witnessed acts of corruption.
Item 11	I have lived with people who have been accused of the crime of corruption.
Item 12	I have already been invited to practice small acts of corruption to get some benefit in the public sector.
Item 13	I have already been invited to practice small acts of corruption to get some benefit in the private sector.
Item 14	I reported some corrupt act.
Item 15	I have already assisted in the process of investigating corrupt acts.

Source: Elaborated by the authors.

The literature indicates specific characteristics to be understood at the level of individual behaviour, segmenting those who have already witnessed (Gorsira et al., 2018), denounced or investigated corrupt acts (M. Bugarin & T. Bugarin, 2017; Independent Commission Against Corruption [ICAC], 2018), have lived with those accused of the crime of corruption (Asian Barometer Survey [ABS], 2016), or have been invited to commit small acts of corruption to obtain some benefit in the public or private sector (Gorsira et al., 2018).

Practically, the behaviour dimension items measure the perception of corruption among respondents who have already had contact with and witnessed corruptive practices and those who have never experienced them. Some questions assess the active and passive positioning of respondents in the face of corrupt practices, both in the private and public sectors, enabling an even more interesting analysis to understand the perceptions of different profiles of respondents.

In the *reflex* dimension, it is measured how the citizen perceives the '*consequences of corruption for their life and country*'. Neshkova and Kalesnikaite (2019) indicate that the consequences of the perception of corruption can be felt in the citizen's political participation; thus, if they assess their government as corrupt and dishonest, they are less likely to participate in democratic government. At the individual level, it is healthy to understand how much citizens feel affected by the effects of corruption (Neshkova & Kalesnikaite, 2019), the reflexes of corrupt actions for their quality of life (Warren, 2004) and their consequent feeling of deprivation of access to public goods or services (Amundsen, 1999; Leal, 2013; World Bank, 1997). In the social context, this dimension aims to understand how corruption can be harmful to the country's development (Abreu & Gomes, 2021), encourage the waste of public money (Amundsen, 1999), as well as being institutionalized in its culture (ABS, 2016; Lin & Yu, 2014). Box 3 lists the CPS items according to reflex dimension.

Box 3
Items of reflex dimension

Code	Item
Item 16	Corruption is widespread in the country.
Item 17	I feel particularly affected by corruption.
Item 18	Corruption harms my quality of life.
Item 19	I believe I have already been deprived of access to some good or service due to corruption.
Item 20	Public services offered to citizens are undermined by corruption.
Item 21	Corruption slows down the country's development.
Item 22	Corruption implies a waste of public money.

Source: Elaborated by the authors.

Reflex dimension items assess whether respondents are particularly affected by corruption and its consequences for citizens and the country. Nearly, the idea of this dimension is to measure whether respondents feel directly affected by corruption. And, having the knowledge and knowing how corruption manifests itself, if citizens can identify the consequences brought by corruption. The analysis of this dimension is justified, as we understand that the reflections of corruption are felt differently between those who know about corruption, both in the theoretical and practical fields, or have already been affected by it, and those who have not experienced the phenomenon. Thus, this dimension becomes even more relevant when analysed together with the knowledge and behaviour dimensions, for example.

The *control* of corruption is another dimension analysed, indicating '*how the citizen perceives the fight against corruption in the country carried out by the State*'. The idea is to measure how corruption becomes visible to the citizen and how evident are the strategies to fight it. It is believed that the more evident these strategies, whether they are legally mediated, by state regulatory bodies or by the media, the easier it is for citizens to identify corrupt actions and acts. In this sense, the study by Weitz-Shapiro and Winters (2016) indicates that more educated individuals are more likely to discern reliable and unreliable information, making better decisions and with less misconduct, in addition to demanding a more ethical posture from authorities.

> These results should be encouraging for governments such as Brazil, which have invested in the creation of independent and reputable audit and control units. As long as these agencies are able to maintain their high-quality reputation, their influence can be expected to grow as the population becomes increasingly educated (Weitz-Shapiro & Winters, 2016, p. 71).

Abreu and Gomes (2021) highlight democratic levels related to the functioning of government and political participation significantly impacts the results of the perception of corruption. Thus, as shown in the Box 4 items, the premises investigated in this study are in line with the citizen's assessment of the efficiency of state regulatory bodies and legislation in identifying corrupt acts (Abreu & Gomes, 2021), in the transparency in the disclosure of these acts (Kaufmann, 2003) and efforts to punish and fight corruption (ABS, 2016).

Box 4
Items of control dimension

Code	Item
Item 23	Regulatory bodies are efficient in identifying corrupt acts.
Item 24	The legislation facilitates the identification of corrupt acts.
Item 25	The efforts currently made are sufficient to fight corruption.
Item 26	Over the past ten years, the country has made progress in fighting corruption.
Item 27	Media coverage helps to fight corruption.
Item 28	People convicted of corruption are correctly punished by the country.
Item 29	The existence of anonymous reporting channels helps to fight corruption.
Item 30	The country is transparent in disclosing corrupt acts.

Source: Elaborated by the authors.

The control dimension items seek to measure the respondents' perception of the practices carried out to prevent and fight corruption, some of them inspired and questioned by the CPI. The analysis of the dimension falls under the perception of efficiency and sufficiency of the efforts to combat corruption, if the punishments are correct and proportional, and if there is transparency in the actions to combat corrupt practices. It is believed that citizens who are more sceptical about the ability to punish the corrupt would have a different perception than those who are more confident.

Finally, the *attitude* dimension is defined as '*what the citizen thinks/experiences regarding corrupt acts*'. Sadek (2019) points out that perceptions are linked to the individual's level of education and their exposure to information and disclosure of corrupt acts. Judgments at a personal level regarding the (un)ethics of denouncing, practicing or tolerating corrupt acts can be configured as important elements to measure the citizen's trust in democracy. Manzetti and Wilson (2007) argue that corrupt governments can withhold support by distributing benefits to citizens, indicating that corruption can be seen as justifiable by a portion of the population. Thus, these authors reinforce, in countries where political institutions are underdeveloped

and weak, corruption can increase the participation of citizens, who seek to profit from these corrupt regimes. Neshkova and Kalesnikaite (2019) highlight that at the local level, where the links between the community and public officials are presumably stronger, corruption has a mobilizing effect, with greater tolerance for corrupt acts. Box 5 lists the CPS items according to attitude dimension.

Box 5
Items of attitude dimension

Code	Item
Item 31	Every person who becomes aware of any act of corrupt practice has a duty to report it.
Item 32	Corruption is justified by bringing benefits to the population. *
Item 33	Tolerating acts of corruption presupposes an unethical personality.
Item 34	I would feel uncomfortable if I knew of some corrupt act and didn't report it.
Item 35	I would vote for candidates investigated for crimes related to acts of corruption. *
Item 36	Carrying out acts of corruption is unjustifiable.

* Inverted questions.
Source: Elaborated by the authors.

The items presented in Box 5 are intended to assess the respondents' tolerance level to corrupt practices, as well as whether they are able to conceive realities in which corruption would be acceptable, endorsing such practices, such as voting for candidates investigated by such practices. When answering the items in this dimension, the citizen reflects on how he perceives, tolerates, and feels when having contact or knowledge of a corrupt act or action.

In this research, perception is defined as a process by which the world is represented by the citizen and whose product constitutes your conscious experience available for reporting (Milner & Goodale, 1995). Thus, the CPS assess how ordinary citizens perceive corruption in their country, considering the five dimensions in Figure 1.

The proposal of this Scale differs from internationally known indices, such as the CPI and the CoC, as it does not have interest in measuring corruption in the country, but rather in evaluating how this phenomenon is recognized in society. It is understood that this instrument is necessary and complements the already existing corruption analysis, considering that it can elucidate situations hitherto not understood with known metrics.

Figure 1
Dimensions of the CPS
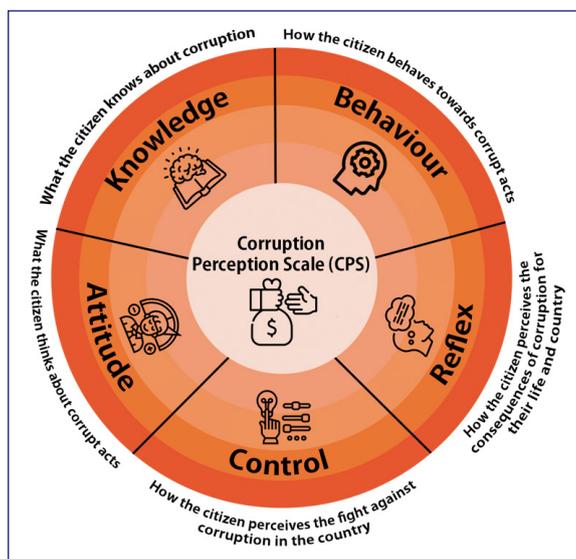
Source: Elaborated by the authors.

For example, countries where corruption is not pursued by public bodies and regulatory agencies, nor widely publicized in the media, will hardly have an acknowledgment by the citizen of how harmful the phenomenon can be to society. It is believed that, without combat and dissemination strategies, the possibilities of recognizing the impacts of corruption are mitigated, which could be proven from the application of the CPS.

CPS CONSTRUCTION AND VALIDATION PROCEDURES

The CPS development process began with a literature review on the subject, which provided theoretical support for the definition of its constructs and the initial set of items that comprise it. The literature review was followed by a qualitative approach for validation and refinement of the items. Next, the quantitative step was taken, which involved two more analyses. The first, with an exploratory nature, aimed at an initial validation of the items and dimensions proposed, and the second, with a confirmatory nature, to advance the validation and construction of the theoretical model of the scale. For each of the steps, different samples were obtained according to Box 6.

Box 6
Steps, samples, and objectives of the scale construction process

Step	Sample	Objective
Qualitative	Four experts from different areas of knowledge.	The instrument was evaluated regarding the dimension represented by the item, the degree of relevance and the adequacy of the formulation.
	Ten individuals from different socioeconomic and demographic profiles.	Pre-test. Semantic analysis to assess the understanding of the scale by all levels of the target population.
Quantitative	420 individuals from all Brazilian regions.	Validation of items and dimensions through the application of exploratory factor analysis.
	655 individuals from all Brazilian regions.	Model validation through the application of confirmatory factor analysis and construction of the scale application methodology.

Source: Elaborated by the authors.

In the qualitative stage, the instrument was evaluated by four experts. Following the recommendation of DeVellis (2016), experts from different areas of knowledge were selected. To assess the level of agreement between the judges, the coefficient of content validity (CCV) and the Fleiss Kappa (Fleiss, 1971) were applied. Subsequently, a pre-test was carried out to assess the suitability of the instrument for application to the population of interest.

For the quantitative stage, the Brazilian population was considered, which according to the IBGE (Instituto Brasileiro de Geografia e Estatística, 2020) is 211,439,266 people, with a confidence level of 95% and a sampling error of 3%, obtaining a minimum sample of 1,075 individuals. The sample was divided into 420 cases for the exploratory phase and 655 cases for the confirmatory phase. The instrument was applied online, between January and February 2021.

In the first phase of the quantitative step, in order to validate the dimensionality of the scale, exploratory factor analysis was performed with the Factor program, version 10.10.01 (Ferrando & Lorenzo-Seva, 2017). A polychoric correlation matrix was used, with the Robust Diagonally Weighted Least Squares (RDWLS) factor extraction method and Robust Promin rotation (Lorenzo-Seva & Ferrando, 2019). The estimation of the number of factors used the optimal implementation of the parallel analysis (Timmerman & Lorenzo-Seva, 2011). To increase the accuracy of the method, the 95% confidence interval for random values was considered (Crawford et al., 2010). For the removal of items, two parameters were considered: 1) factor loadings less than 0.30; and 2) items with cross loads (difference between factor loadings in two factors less than or equal to 0.10). Thus, all items that met at least one of these criteria were removed.

As a complement, a factor replicability analysis was performed, based on the H index (Ferrando & Lorenzo-Seva, 2018), which assesses how well the items represent the latent factors found, with values above 0.80 indicating that the factor structure tends to be replicable across studies. Internal consistency was assessed by calculating Cronbach's Alpha (Cronbach, 1951) and McDonalds Omega (ω) (Mcdonalds, 1999), for which values equal to or greater than 0.7 were considered adequate (Hair, Black, Babin, & Anderson, 2014).

In the second phase, confirmatory factor analysis was applied to check the convergent validity, unidimensionality and discriminant validity of the constructs. The models are estimated with the variance-covariance matrix, estimation by maximum likelihood via direct procedure. The convergent validity was analysed by observing the magnitude and statistical significance of the standardized coefficients, using the following absolute fit indices: chi-square statistics (χ^2), Root Mean Square Residual (RMR), Root Mean Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI); and by the comparative fit indices: Comparative Fit Index (CFI), Tucker-Lewis Index (TLI).

For the chi-square/degrees of freedom ratio, the recommendations are of values less than three; for CFI, GFI, NFI and TLI, values greater than 0.950 are suggested and the RMR and RMSEA should be below 0.080 and 0.060, respectively (Byrne, 2016; Hair et al., 2014; Hooper, Coughlan, & Mullen, 2008; Kline, 2015). Unidimensionality, on the other hand, is evaluated based on the standardized residuals related to the indicators of each latent variable. Constructs that presented, for a significance level of 5%, standardized residuals below 2.58 are considered unidimensional (Hair et al., 2014). For discriminant validity, the chi-square test of differences was applied, for which differences between the restricted model and the free model greater than 3.84 indicate discriminant validity (Bagozzi, Yi, & Phillips, 1991).

Finally, a methodology for standardizing the application of the CPS was developed. At this stage, the perception of corruption is built from the weighted average of respondents' responses in each of the dimensions. The CPS ranges from one to five, and the closer to five, the greater the citizen's perception of corruption.

The research was approved by the Federal University of Santa Maria Research Ethics Committee (CAAE: 37890820.8.0000.5346), the interviewees read the Informed Consent Form (ICF) before agreeing to participate. The instrument was completely anonymous and data privacy guaranteed by the confidentiality term. The research database is available to readers by sending an e-mail request to the authors.

CONSTRUCTION OF CPS ITEMS

Based on the dimensions and their definitions, developed in the theoretical model, and considering the literature on corruption, we sought to build the items related to each dimension for the scale operationalization. At this stage, the construction techniques recommended by the psychometric literature were considered, such as objectivity, simplicity, clarity, relevance, variety and reliability of the items and the criteria for amplitude and balance of the instrument (Pasquali, 2009).

Boxes 1-5 list the CPS items according to dimensions. All CPS items were constructed considering as response categories the five-point Likert scale (1- strongly disagree, 2- disagree, 3-indifferent, 4- agree, 5- strongly agree).

The innovative character of the CPS, by proposing the construction of a perception assessment scale from the citizen's point of view, required the creation of all items, given the lack in the literature of previous instruments with this characteristic. However, six questions were based on the questioning of the Corruption Perceptions Index indicators (Transparência Internacional, 2020): Item 16 was inspired by the question 'How do you grade the problem of corruption in the country in which you are working?'. Items 25 and 26 were designed based on the question 'Has the government implemented effective anti-corruption initiatives?'. Items 27 and 30 were based on the question 'Are allegations of corruption given wide and extensive airing in the media?' Finally, item 28 was constructed from 'To what extent are public officeholders who abuse their positions prosecuted or penalized?'.

CPS QUALITATIVE VALIDATION

The qualitative step of validation began with the consultation of four experts. A specific instrument was developed for this step, which contained instructions to experts and, for each item of the instrument, questions were presented regarding the degree of pertinence of the item (1-Must be removed, 2-Must be kept after reformulation, 3- Must be kept as it is), the degree of relevance (1-Slightly Relevant, 2-Relevant, 3-Very Relevant), and the dimension represented (Knowledge, Behaviour, Attitude, Control, Reflex). Table 1 lists the results of this step for the coefficient of content validity (CCV) and the Fleiss' Kappa.

Table 1
Content validity coefficient and Fleiss' Kappa

Dimension	Item	CVC		Fleiss' Kappa
		Pertinence	Relevance	
Knowledge	1	0.829	0.996	0.775
	2	0.913	0.829	
	3	0.746	0.829	
	4	0.913	0.913	
	5	0.746	0.913	
	6	0.746	0.829	
	7	0.829	0.829	
	8	0.913	0.913	
	9	0.996	0.829	
Behaviour	10	0.746	0.996	0.625
	11	0.913	0.829	
	12	0.913	0.996	
	13	0.913	0.996	
	14	0.913	0.913	
	15	0.913	0.996	
Reflex	16	0.913	0.913	0.954
	17	0.913	0.913	
	18	0.913	0.996	
	19	0.913	0.829	
	20	0.913	0.913	
	21	0.996	0.913	
	22	0.996	0.829	
Control	23	0.996	0.829	0.786
	24	0.996	0.913	
	25	0.913	0.913	
	26	0.996	0.913	
	27	0.996	0.913	
	28	0.913	0.996	
	29	0.996	0.996	
	30	0.829	0.829	
Attitude	31	0.996	0.829	0.698
	32	0.913	0.996	
	33	0.913	0.829	
	34	0.996	0.913	
	35	0.913	0.829	
	36	0.913	0.996	
CPS		0.910	0.906	0.768

Source: Elaborated by the authors.

The mean coefficient of content validity for relevance was 0.906, with item values ranging between 0.829 and 0.996. As for pertinence, the mean CCV was 0.919, with the item values in the range between 0.746 and 0.996. Fleiss' Kappa presented a value of 0.768 (z=22.5; sig<0.001) with values in the dimensions ranging from 0.625 to 0.954. Therefore, the expert assessment pointed to the scale content validity (CCV >0.70) (Pasquali, 2009) and substantial agreement (Kappa>0.6) (Landis & Koch, 1977) among experts.

In the second phase of the qualitative step, a pre-test was carried out to ensure that the items are significant for the target population (Boateng, Neilands, Frongillo, Melgar-Quiñonez, & Young, 2018). The sample of ten citizens was selected for convenience, in order to guarantee the representation of different socioeconomic and demographic profiles. The instruments were applied through interviews in order to assess the face validity of the items. At this stage, respondents reported an adequate understanding of the items, with no need for change being identified.

CPS QUANTITATIVE VALIDATION

Next, the step of quantitative validation was carried out, using exploratory factor analysis. The Bartlett test (4,687.7; sig<0.001) and the KMO (0.885) indicated the factorability of the data. Items 3 and 27 were excluded for presenting factor loadings below 0.30 and item 29 due to cross loading, with the final results of the factor analysis presented in Table 2.

Table 2
Dimensions, factor loadings, explained variance, parallel analysis, H index,
Cronbach's Alpha and Mcdonald's omega for the CPS

Dimension	Items	Factor loading	Explained Variance (%)	Real Parallel Analysis (estimated 95th percentile)	H Index	Alpha and Omega
Knowledge	Item 1	0.829	22.931	23.152 (7.023)	0.929	α=0.902 ω=0.902
	Item 2	0.553				
	Item 4	0.616				
	Item 5	0.762				
	Item 6	0.869				
	Item 7	0.785				
	Item 8	0.797				
	Item 9	0.640				
Behaviour	Item 10	0.568	12.993	13.104 (6.384)	0.818	α=0.856 ω=0.858
	Item 11	0.558				
	Item 12	0.741				
	Item 13	0.670				
	Item 14	0.887				
	Item 15	0.748				
Reflex	Item 16	0.404	9.974	9.964 (5.982)	0.924	α=0.874 ω=0.879
	Item 17	0.559				
	Item 18	0.592				
	Item 19	0.621				
	Item 20	0.870				
	Item 21	0.960				
	Item 22	0.727				

Dimension	Items	Factor loading	Explained Variance (%)	Real Parallel Analysis (estimated 95th percentile)	H Index	Alpha and Omega
Control	Item 23	0.570	6.845	6.915 (5.673)	0.908	α=0.759 ω=0.763
	Item 24	0.431				
	Item 25	0.622				
	Item 26	0.576				
	Item 28	0.624				
	Item 30	0.684				
Attitude	Item 31	0.661	5.464	5.511 (5.424)	0.853	α=0.802 ω=0.804
	Item 32	-0.528				
	Item 33	0.727				
	Item 34	0.763				
	Item 35	-0.494				
	Item 36	0.570				

Source: Elaborated by the authors.

The optimal implementation of the parallel analysis indicated that the scale would have five dimensions, confirming the dimensionality predicted in the theoretical model. Together, the five dimensions explained 58.21% variance, with an emphasis on the knowledge dimension, with 22.93%. All H indices are greater than 0.80, indicating that the factor structure tends to be replicable in different studies. And, the five dimensions have internal consistency since Cronbach's Alpha and Macdonald's Omega are greater than 0.70.

Since the five dimensions were considered adequate in the exploratory phase, the second stage of the quantitative step sought to analyse the constructs from a confirmatory perspective. Table 3 lists the results of the fit indices of the initial and final models. For constructs in which the initial models were not adequate, the model improvement strategy was adopted, especially with the removal of variables with low factor loadings.

Table 3

Fit indices for the five CPS constructs

Fit indices	Knowledge		Behaviour		Reflex		Control		Attitude	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Chi-square (value)	423.891	5.900	182.150	2.433	339.930	0.670	40.897	1.558	46.452	1.587
Chi-square (probability)	0.000	0.052	0.000	0.119	0.000	0.413	0.000	0.459	0.000	0.208
Degrees of freedom	20	2	9	1	14	1	9	2	9	1
Chi-square / Degrees of Freedom	21.195	2.950	20.239	2.433	24.281	0.670	4.544	0.779	5.161	1.587
GFI	0.847	0.996	0.911	0.998	0.850	0.999	0.978	0.999	0.977	0.998
CFI	0.774	0.995	0.796	0.996	0.762	1.000	0.947	1.000	0.921	0.998
TLI	0.683	0.986	0.660	0.988	0.642	1.000	0.911	1.000	0.869	0.994
RMR	0.082	0.019	0.153	0.045	0.057	0.004	0.049	0.012	0.046	0.025
RMSEA	0.176	0.055	0.172	0.047	0.189	0.000	0.074	0.000	0.080	0.030

Source: Elaborated by the authors.

In the process of improving the model, the following items were removed, all with factor loadings less than 0.5: Knowledge - items 1, 4, 5, and 6; Behaviour -items 11, 14 and 15; Reflex - items 16, 21 and 22; Control - items 24 and 26; and Attitude - items 32, 35 and 36. After these exclusions, the final models of the five dimensions met all the fit criteria, which can be concluded for their convergent validity. All standardized residuals were below 2.58, also confirming unidimensionality.

Then, to test the discriminant validity of the constructs, the chi-square difference test was applied. Table 4 lists the chi-square values and degrees of freedom for the restricted model and the free model, as well as the chi-square difference.

Table 4
Chi-square difference test

Dimensions	Restricted model		Free model		Chi-Square Difference
	Chi-square	DF	Chi-square	DF	
Knowledge-Behaviour	313.654	14	66.187	13	247.467
Knowledge-Reflex	701.489	19	64.537	14	636.952
Knowledge-Control	434.658	20	40.278	19	394.380
Knowledge-Attitude	412.577	14	20.234	13	392.343
Behaviour-Reflex	350.303	13	27.949	12	322.354
Behaviour-Control	263.458	14	21.132	13	242.326
Behaviour-Attitude	258.163	9	11.431	8	246.732
Reflex-Control	663.044	21	65.138	20	597.906
Reflex-Attitude	464.458	13	25.676	12	438.782
Control–Attitude	354.318	14	14.933	13	339.385

Source: Elaborated by the authors.

It is observed in Box 6 that for all sets of constructs, the chi-square difference between the restricted and free models is greater than 3.84, confirming the discriminant validity between each pair of constructs. Therefore, all constructs are discriminating among themselves, indicating that they represent different dimensions of the CPS. Thus, after the confirmatory validation step of the measurement model, the scale maintained the five dimensions proposed in the theoretical model, which are measured by a final set of 18 items.

METHODOLOGY FOR THE APPLICATION OF THE CORRUPTION PERCEPTION SCALE

From the five dimensions proposed for the CPS, validated in the previous steps, the methodology for applying the scale was established, which is defined in five steps.

Step 1: With the respondents' answers, according to the CPS items, code the answers according to Box 7.

Box 7
Coding of questionnaire questions

Dimension	Acronym	Items	Codes
Knowledge	KW	2, 7, 8 and 9	Strongly Disagree= 1;
Behaviour	BE	10,12 and 13	Disagree = 2;
Reflex	RE	17, 18, 19, 20	Indifferent = 3;
Control	CT	23, 25, 28, and 30	Agree = 4;
Attitude	AT	31, 33 and 34	Strongly Agree= 5

Source: Elaborated by the authors.

Step 2: Obtain the perceptions of each respondent for each of the five dimensions, based on the average of the responses of the items belonging to each dimension:

KW_j=[Item2 + Item7 + Item8 +Item9]/4

BE_j=[Item10 + Item12 + Item13]/3

RE_j=[Item17 + Item18 + Item19 +Item20]/4

CT_j=[Item23 + Item25 + Item28 +Item30]/4

AT_j=[Item31 + Item33 + Item34]/3

Step 3: Obtain the average perceptions for the entire sample. The average perception in each dimension represents the respondent perception in the dimension. So, for example, for the Perception of Knowledge, the following expression is used:

$$KW_p = \frac{\sum_{j=1}^{n} KW_j}{n}$$
(1)

where KW_p is the Perception of Knowledge for country p; KW_j is the perceived knowledge of corruption for respondent j and n is the number of respondents. A similar procedure should be adopted to calculate the perception for the country in the other dimensions.

Step 4: With the average values for each dimension, it is possible to calculate the Corruption Perception Level, which is constructed by the average of perceptions in the five dimensions, mathematically:

$$CPL_p = \frac{KW_p + BE_p + RE_p + CT_p + AT_p}{5}$$
(2)

where:

CPL_p is the Corruption Perception Level of country p;

KW_p is the Perception of Knowledge of Corruption in country p;

BE_p is the Perception of Behaviour towards Corruption of country p;

RE_p is the Perception of Corruption Reflex in country p;

CT_p is the Perception of Control of Corruption in country p;

AT_p is the Perception of Attitude towards Corruption in country p.

Step 5: Classification of Corruption Perception Level. From the values obtained in step 4, it is possible to classify the country's Corruption Perception Level, as illustrated in Figure 2.

Figure 2
Classification of the country's corruption perception level
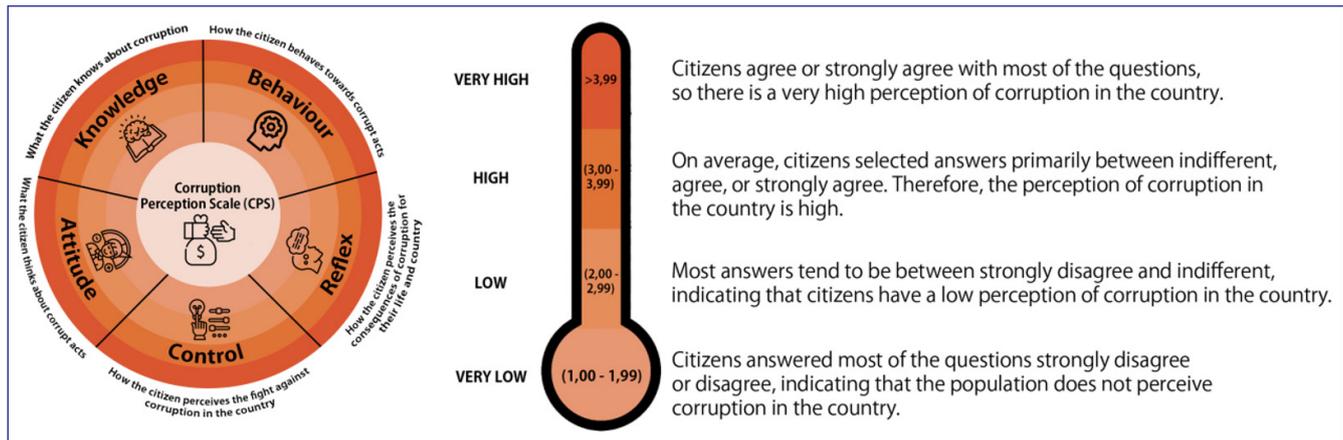
Source: Elaborated by the authors.

In addition to these steps, it is important that the scale user is aware that the CPS was designed to be self-administered and in online forms. The application using interviews will require the adaptation of the instrument. It is also indicated that the term 'country' present in some items is replaced by the name of the country in which the scale will be applied, providing greater identification for the respondent.

FINAL CONSIDERATIONS

Corruption has grown in scale, magnitude, and sophistication of operations as governments around the world seek new approaches and tools to help identify corrupt activities (Bajpay & Myers, 2020). The increase in corruption increases the need to obtain measurement models for its identification and understanding, from different formats and points of view (public agents, managers, institutions and citizens). As for objective measures, over the past few years, much has been made in the construction of corruption indices capable of allowing comparisons between different countries and sectors. However, from a subjective point of view and focusing on the citizen, there is still no consolidated instrument. Thus, this study aimed to create and validate the Corruption Perception Scale (CPS), which aims to assess how the citizen of a given country perceives corruption.

It is understood that objective and subjective corruption measures are necessary and complementary. While the objective measure aims to present a picture of corruption practices in a country, the perception measure assesses to what extent citizens living in that country are able to assess the existence of corruption. In this context, highly corrupt countries, but with a low perception of corruption by the population, may be fertile fields for the proliferation of corruption, since the population will not assume its role as a social agent, which participates and demands ethical actions in management. On the other hand, in countries where the perception of corruption is high, citizens more aware of the existence and reflexes of corruption, can become active agents against corrupt acts and act with social control. In this sense, the main practical contribution of the study is the construction of a tool that allows all interested researchers and governments to evaluate corruption from a citizen's point of view.

In the construction and validation of the CPS, a series of exploratory and confirmatory techniques were adopted that showed that the scale is capable of being considered valid under different criteria. The final structure of the measure is composed of five dimensions, which seek to assess the perception of corruption in a comprehensive way.

The proposed application methodology presents a simple way to assess Corruption Perception, allowing both the general assessment (level of corruption perception) and in each of its dimensions. For institutions and public agents, the CPS can be useful to analyse the advances and challenges of the corruption reduction agenda, considered an important tool for achieving

the goals of sustainable development, established by the United Nations (Agenda 2030, 2014). It can also be interesting for analysing differences in perception in different socioeconomic profiles, allowing, for example, to identify groups with greater deficits in knowledge about corruption that should be priority of public policies.

For researchers, the CPS is a useful measure to be applied in surveys or longitudinal studies to assess the perception of a population in general or in a specific group, alone or in association with other measures. For example, as an antecedent to the perception of financial citizenship or quality of life, or as a consequence of the improvement of a country's transparency levels.

We can suggest a broad research agenda in which the CPS can be used: 1) studies that seek the incorporation of new dimensions, such as, for example, a dimension of perception of corruption transparency. 2) cross-cultural validation, for the validation and adaptation of the scale to different cultures. 3) longitudinal studies, for the identification of changes in perception of corruption over the years. 4) correlational studies, assessing the association between perception of corruption and active social participation in the identification and reporting of illegal acts. 5) comparative studies, relating the CPS to other corruption indices. 6) structural equation modelling, having the CPS as an antecedent of other factors such as social control, financial citizenship, and choices in electoral processes. 7) difference tests and cluster analyses, to identify socioeconomic and demographic groups with different perceptions of corruption. 8) evaluation of differences in the perception of corruption for different administrative, political, and legal regimes. Finally, 9) impact studies, such as the evaluation of the change in perception from the adoption of strategies of disclosure of corruption and punishment of corrupt acts.

ACKNOWLEDGEMENTS

REFERENCES

Abreu, W. M, & Gomes, R. C. (2021, February). Shackling the Leviathan: balancing state and society powers against corruption. *Public Management Review*. Retrieved from https://doi.org/10.1080/14719037.2021.1893802

Agenda 2030. (2014). *A integração dos ODS*. Retrieved from http://www.agenda2030.org.br/os_ods/

Amundsen, I. (1999). *Political corruption: an introduction to the issues*. Bergen Norway: Chr. Michelsen Institute. Retrieved from https://www.cmi.no/publications/file/1040-political-coiTuption.pdf

Asian Barometer Survey. (2016). *Asian barometer survey of democracy, governance and development*. Retrieved from http://www.asianbarometer.org/pdf/core_questionnaire_wave4.pdf

Bagozzi, R. P., Y. I., Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly*, *36*(3), 421-458.

Bai, B., Liu, X., & Kou, Y. (2014). Belief in a just world lowers perceived intention of corruption: the mediating role of perceived punishment. *PLoS ONE*, *9*(5), e97075.

Bajpay, R., & Myers, C. B. (2020). *Enhancing government effectiveness and transparency: the fight against corruption*. Washington, DC: World Bank Group. Retrieved from http://documents.worldbank.org/curated/en/235541600116631094/Enhancing-Government-Effectiveness-and-Transparency-The-Fight-Against-Corruption

Barr, A., & Serra, D. (2010, December). Corruption and culture: An experimental analysis. *Journal of Public Economics*, *94*(11-12), 862-869.

Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018, June). Best practices for developing and validating scales for health, social, and behavioral research: a primer. *Frontiers in Public Health*, *6*, 1-18.

Bratton, M., & Gyimah-Boadi, E. (2016). *Do trustworthy institutions matter for development? Corruption, trust and government performance in Africa*. Retrieved from https://media.africaportal.org/documents/ab_r6_dispatchno112_trustworthy_institutions_and_development_in_africa.pdf

Brown, A. J. (2006). What are we trying to measure? Reviewing the basics of corruption definition In A. Shacklock, F. Galtung & C. Sampford (Eds.), *Measuring corruption* (pp. 57-79). Aldershot, UK: Ashgate.

Bugarin, M., & Bugarin, T. (2017). Ética & incentivos: devemos recompensar quem denuncia corrupção? *Revista Direito GV*, *13*(2), 390-427.

Cavalcante, R. J. (2018). Legalidade: combate à corrupção e compliance na era digital. *Revista Brasileira de Estudos da Função Pública*, 7(20). Retrieved from https://dspace.almg.gov.br/handle/11037/31605

Collins, J. D., Uhlenbruck, K., & Rodriguez, P. (2009). Why firms engage in corruption: A top management perspective. *Journal of Business Ethics*, *87*(1), 89-108.

Controladoria Geral da União. (2009). *A responsabilidade social das empresas no combate à corrupção*. Retrieved from https://www.gov.br/cgu/pt-br/centrais-de-conteudo/publicacoes/integridade/arquivos/manualrespsocialempresas_baixa.pdf

Corruption Perceptions Index. (2014). *The 2014 corruption perceptions index measures the perceived levels of public sector corruption in 175 countries and territories*. Retrieved from https://www.transparency.org/en/cpi/2014/index/bdi

Crawford, A. V. D. B., Levy, R., Lo, W. J., Scott, L., Svetina, D., & Thompson, M. S. (2010). Evaluation of parallel analysis methods for determining the number of factors *Educational and Psychological Measurement*, *70*(6), 885-901.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297-334.

DeVellis, R. F. (2016). *Scale development: theory and applications* (Vol. 26). London, UK: Sage publications.

Ferrando, P. J., & Lorenzo-Seva, U. (2017). Program FACTOR at 10: origins, development and future directions. *Psicothema*, *29*(2), 236-241.

Ferrando, P. J., & Lorenzo-Seva, U. (2018). Assessing the quality and appropriateness of factor solutions and factor score estimates in exploratory item factor analysis. *Educational and Psychological Measurement*, *78*(5), 762-780.

Fleiss, J. L. (1971). Measuring nominal scale agreement among many raters. *Psychological bulletin*, *76*(5), 378-382.

Gorsira, M., Denkers, A., & Huisman, W. (2018). Both sides of the coin: motives for corruption among public officials and business employees. *Journal of Business Ethics*, *151*, 179-194.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis: pearson new international edition.* Essex, UK: Pearson Education Limited.

Hilgartner, S., & Bosk, C. (1988). The rise and fall of social problems: a public arenas model. *American Journal of Sociology*, *94*(1), 53-78.

Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, *6*(1), 53-60.

Independent Commission Against Corruption. (2018). *Corruption and integrity in the NSW public sector: an assessment of current trends and events*. Retrieved from https://apo.org.au/node/208446

Instituto Brasileiro de Geografia e Estatística. (2020). *Projeções e estimativas da população do Brasil e das Unidades da Federação*. Retrieved from https://www.ibge.gov.br/apps/populacao/projecao/index.html

Kaufmann, D. (2003, March). Rethinking Governance: Empirical Lessons Challenge Orthodoxy. *SSRN Eletronic Journal*. Retrieved from http://dx.doi.org/10.2139/ssrn.386904

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York, NY: Guilford publications.

Ko, K., & Samajdar, A. (2010). Evaluation of international corruption indexes: Should we believe them or not? *The Social Science Journal*, *47*(3), 508-540.

Lambsdorff, J. G. (1998). Corruption in comparative perception. In A. K. Jain (Ed.), *Economics of corruption* (pp. 91-109). London, UK: Kluwer Academic Publishers.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*(1), 159-174.

Leal, R. G. (2013). *Patologias corruptivas nas relações ente Estado, administração pública e sociedade: causas, consequências e tratamentos*. Santa Cruz do Sul, SC: EDUNISC.

Lin, M. W., & Yu, C. (2014). Can Corruption Be Measured? Comparing Global Versus Local Perceptions of Corruption in East and Southeast Asia. *Journal of Comparative Policy Analysis: Research and Practice*, *16*(2), 140-157.

Lorenzo-Seva, U., & Ferrando, P. J. (2019). Robust Promin: a method for diagonally weighted factor rotation. *Liberabit: Revista Peruana De Psicología*, *25*(1), 99-106.

Malito, D. (2014, February). Measuring Corruption Indicators and Indices. *SSRN Eletronic Journal*. Retrieved from http://dx.doi.org/10.2139/ssrn.2393335

Manzetti, L., & Wilson, C. J. (2007). Why do corrupt governments maintain public support? *Comparative Political Studies*, *49*(8), 949-970.

Marquette, H., & Peiffer, C. (2018). Grappling with the real politics of systemic corruption: Theoretical debates versus real-world functions. *Governance*, *31*(3), 499-514.

Mcdonalds, R. P. (1999). *Test theory: a unified treatment*. Mahwah, NJ: Lawrence Erlbaum

Milner, A. D., & Goodale, M. A. (1995). *The visual brain in action*. Oxford, UK: Oxford University Press.

Mousavi, P., & Pourkiani, M. (2013). Administrative corruption: Ways of tackling the problem. *Online Journal of Natural and Social Sciences*, *2*(3), 178-187.

Mungiu-Pippidi, A., &, Dadašov, R. (2016). Measuring control of corruption by a new index of public integrity. *European Journal on Criminal Policy and Research*, *22*(3), 415-438.

Neshkova, M., & Kalesnijaite, V. (2019). Corruption and citizen participation in local government: Evidence from Latin America. *Governance*, *32*(4), 1-17.

Overman, S., Schillemans, T., & Grimmelikhuijsen, S. (2020). A validated measurement for felt relational accountability in the public sector: gauging the account holder's legitimacy and expertise. *Public Management Review*, *23*(12), 1748-1767.

Pasquali, L. (2009). *Instrumentação psicológica: fundamentos e práticas*. Porto Alegre, RS: Artmed Editora

Perumal, K. (2021, February). Corruption measurements: caught between conceptualizing the phenomenon and promoting new governance agenda? *Vision: The Journal of Business Perspective*. Retrieved from https://doi.org/10.1177/0972262920983946

Sadek, M. T. A. (2019). Combate à corrupção: novos tempos. *Revista CGU*, *11*(20), 1276-1283.

Shacklock, A., Sampford, C., & Connors, C. (2006). Introduction. In A. Shacklock, F. Galtung & C. Sampford (Eds.), *Measuring corruption* (pp. 1-6). Aldershot, UK: Ashgate.

Školník, M. (2020). The Effects of Corruption on Various Forms of Political Participation in Colombia. *Latin American Policy*, *11*(1), 88-102.

Timmerman, M. E., & Lorenzo-Seva, U. (2011). Dimensionality assessment of ordered polytomous items with parallel analysis. *Psychological methods*, *16*(2), 209-220.

Transparency International. (2019). *What is corruption?* Retrieved from https://www.transparency.org/what-is-corruption

Transparency International. (2020). *Corruption Perceptions Index 2020: Full Source Description 2020*. Retrieved from https://www.transparency.org/en/cpi/2020/index/nzl

Transparency International. (2021). *Índice de Percepção de Corrupção 2020*. Retrieved from https://transparenciainternacional.org.br/ipc

Villarino, J. M. B. (2021). Measuring corruption: A critical analysis of the existing datasets and their suitability for diachronic transnational research. *Social Indicators Research*, *157*, 709-747.

Warren, M. (2004). What Does Corruption Mean in a Democracy? *American Journal of Political Science*, *48*(2), 328-343.

Weitz-Shapiro, R., & Winters, M. S. (2016). Can Citizens Discern? Information Credibility, Political Sophistication, and the Punishment of Corruption in Brazil. *The Journal of Politics*, *79*(1), 60-74.

World Bank. (1997, September). Corruption and Economic Development. In World Bank (Ed.), *Helping Countries Combat Corruption: The Role of the World Bank* (pp. 8-23). Washington, DC: Author. Retrieved from http://www1.worldbank.org/publicsector/anticorrupt/corruptn/cor02.htm

Yu, C., Chen, C. M., & Lin, M. W. (2013). Corruption Perception in Taiwan: reflections upon a bottom-up citizen perspective. *Journal of Contemporary China*, *22*(79), 56-76.

Kelmara Mendes Vieira
ORCID: https://orcid.org/0000-0002-8847-0941

Ph.D. in Administration from the Federal University of Rio Grande do Sul (UFRGS); Adjunct Professor at the Federal University of Santa Maria (UFSM).
E-mail: kelmara.vieira@ufsm.br

Monize Sâmara Visentini
ORCID: https://orcid.org/0000-0001-6233-6106

Ph.D. in Administration from the Federal University of Rio Grande do Sul (UFRGS); Master in Administration from the Federal University of Santa Maria (UFSM); Adjunct Professor of the Administration Program at the Federal University of Fronteira Sul (UFFS); Professor of the Permanent Staff of the Master's Program in Development and Public Policies (UFFS). E-mail: monize.visentini@uffs.edu.br

Ricardo Teixeira Cunha
ORCID: https://orcid.org/0000-0002-4228-4713

Master in in Management of Public Organizations from Federal University of Santa Maria (UFSM). E-mail: rt.cunha@hotmail.com