Transparência em universidades federais brasileiras: uma análise dos mecanismos de governança

Transparency in brazilian federal universities: an analysis of governance mechanisms

Transparencia en las universidades federales brasileñas: un análisis de los mecanismos de gobernanza

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Resumo

A governança consolida-se como algo relevante na esfera pública, capaz de auxiliar o fortalecimento da transparência e na disseminação ao acesso à informação. No contexto da administração pública as Universidades Federais Brasileiras (UFs) apresentam relevância social, uma vez que envolvem aproximadamente 1.072.379 estudantes de graduação, e foram responsáveis por R$ 79,7 bilhões de reais do orçamento do Ministério da Educação em 2017. Esta pesquisa tem como objetivo analisar os mecanismos de governança utilizados para a transparência nas UFs. Foram analisados os relatórios de gestão e os portais eletrônicos das 63 UFs, buscando identificar as práticas de transparência utilizadas. Para isso, desenvolveu-se

um check-list a partir das 4 dimensões da governança (accountability, disclosure, compliance e fairness). Utilizou-se da técnica quantitativa análise de clusters e testes não paramétricos. Constatou-se que das 63 UFs, 7 UFs não apresentavam os relatórios de gestão, 38 UFs apresentam maior evidenciação das práticas de governança em transparência, enquanto 18 apresentam menor evidenciação. Mesmo havendo diferenças entre os grupos o estudo apresenta que ainda há muito a ser percorrido pelas UFs quando o assunto é transparência.

Palavras-chave: Transparência; Governança; Relatórios de gestão; Universidades federais brasileiras.

Abstract

Governance is consolidated as relevant in the public sphere, capable of helping to strengthen transparency and the dissemination of access to information. In the context of public administration, the Brazilian Federal Universities (FUs) have social relevance, since they involve approximately 1,072,379 undergraduate students, and were responsible for R$ 79.7 billion of the Ministry of Education (MEC) budget in the year of 2017. This research aims to analyze the governance mechanisms used for transparency in the FUs. The management reports and electronic portals of the 63 Federal Universities were analyzed, seeking to identify the transparency practices used. For this, a checklist was developed based on the four dimensions of governance (accountability, disclosure, compliance, and fairness). The quantitative approach was used by cluster analysis and nonparametric tests. The main results highlight that from 63 FUs, 7 FUs did not present management reports, 38 FUs showed greater exposure of governance practices in transparency, while 18 FUs presented less exposure. Even though there are differences between the groups, the study shows that there is still much to be covered by the FUs when it comes to transparency.

Keywords: Transparency; Governance; Management reports; Brazilian federal universities.

Resumen

La gobernanza se consolida como algo importante en la esfera pública, capaz de ayudar a reforzar la transparencia y a difundir el acceso a la información. En el contexto de la administración pública, las Universidades Federales Brasileñas (UFs) tienen relevancia social, ya que implican a aproximadamente 1.072.379 estudiantes de graduación, y fueron responsables de R$ 79.700 millones de reales del presupuesto del Ministerio de Educación en 2017. Esta investigación tiene por objeto analizar los mecanismos de gobernanza utilizados para la transparencia en las UFs. Se analizaron los informes de gestión y los portales

electrónicos de las 63 UFs, buscando identificar las prácticas de Transparencia utilizadas. Para esto, se há desarrollado uma lista de comprobacíon a partir de las cuatro dimensiones de la gobernanza (accountability, disclosure, compliance y fairness). Se utilizó la técnica análisisanálisis cuantitativo de clústers y pruebas no paramétricas. Se constató que, de las 63 UFs, 7 UFs no presentaban los informes de gestión, 38 UFs mostraban una mayor evidencia de las prácticas de gobernanza en transparencia, mientras que 18 tenían menos evidencia. Aunque existen diferencias entre los grupos, el estudio muestra que las UFs todavía tienen mucho que hacer cuando se trata de Transparencia.

Palabras clave: Transparencia; Gobernanza; informes de gestión; Universidades federales brasileñas.

1. Introduction

The Federal Constitution of 1988 (CF/88) is a milestone in the process of Brazilian re-democratization and recognizes the publicity of the public acts as a mandatory principle of the Brazilian public administration. Advertising contradicts the culture of secrecy and proposes a culture of access and transparency of government information (Brasil, 1988). However, over-advertising information does not mean being transparent (Platt Neto et al., 2006). In this sense, transparency adds, since its concept involves much more than publicizing information, being considered one of the bases for the strengthening and consolidation of democracy, encouraging popular participation (Ibid, 1988).

Public governance came to the studies conducted by the World Bank in the 1980s; and in Brazil, it is developed from the second generation of state reforms, starting in the 1990s, to assist in the reconstruction of the state (Bresser-Pereira,1998). It is from the dissemination of governance and its good practices that transparency reaches new levels of relevance in the contemporary context (Zorzal, 2015). Good practices have been compiled by various national and international bodies to improve governance in the public sector and thereby expand values such as transparency, accountability, and equity in these organizations (IFAC, 2001; Brasil, 2009; 2011; Matias-Pereira, 2010; Zorzal, 2015).

In line with current legislation, all public institutions should implement transparency instruments that promote the policy of access to information, either through transparency portals or the development of information systems (Brasil, 2009; 2011). In this context, are the Federal Institutions of Higher Education (IFES), including the Brazilian Federal Universities (FUs), constituted in the form of special regime autarchy, linked to the Ministry

of Education (MEC), governed by laws and public sector regulations, accountable for the allocation of their resources and giving transparency to public acts (Gallego, Garcia, & Rodriguez, 2009).

Regarding the economic context that permeates the FUs, in 2017 the Ministry of Education (MEC) transferred, in a non-compulsory amount, approximately R $ 6.2 billion reais to the 63 Federal Universities. As for the total transfer of MEC to higher education, an amount of R$ 79.8 billion is reached, about 58% of the total budget of the ministry. Regarding the number of undergraduate enrollments, the Higher Education Census has a total of 1,072,379 students. Such data, besides helping to clarify the context of these public institutions in front of society, subsidize the relevance of public transparency (INEP, 2017; Brasil, 2018). Additionally, the scientific relevance and knowledge production of the FUs, as well as their social relevance in the national context, are highlighted.

Due to the legal framework to which public institutions are subject, the Federal Court of Accounts (TCU) is an external control body that is responsible for evaluating such accountability. This body advocates governance capacity in public entities and evidence of their good practices (TCU, 2014). In this sense, governance has a list of good practices that even propose greater levels of transparency, as well as encouraging popular participation and accountability (IFAC, 2001; Matias-Pereira, 2010). Given this, a transparent governance process contributes to the strengthening of democracy, greater participation of society in public affairs, and also to preventing and combating corruption (Zorzal, 2015; CGU, 2011).

Thus, the objective of this research was to analyze the governance mechanisms used in transparency in Brazilian Federal Universities. For this, the management reports and the electronic portals of each analyzed university were reviewed, seeking to identify the transparency practices used by the Universities.

To this end, a checklist was developed from the four dimensions of governance (accountability, disclosure, compliance, and fairness), which presented 32 variables. The data collection was performed from October 15 to November 17 of 2018. Data were compiled and statistical analyzes were performed, which are duly detailed in the methodological aspects section.

2. Theoretical Background

The concept of public governance adopted for this research is related to the set of practices employed by the State, in the figure of the Brazilian Federal Universities, to better

develop their management and provide efficient communication with citizens in general, based on factors such as accountability, exposure and availability of information, fairness and compliance with legal obligations (Gonzalez, 2004; Mimicopoulus, Kyj, Sormani, Bertucci, & Qian, 2007; Matias-Pereira, 2010; Rosseti & Andrade, 2012).

The origin of public governance is inspired by corporate governance, present in private organizations, that is, the principles that guide the governance in the public sector were incorporated and adapted from corporate governance (Gonzalez, 2004; Matias-Pereira, 2010). Although there are several principles that guide public governance, four of them are seen as fundamental (Gonzalez, 2004; Matias-Pereira, 2010; Rosseti & Andrade, 2012): fairness (equity), disclosure and transparency (divulgation/exposure and transparency), accountability (rendering of accounts) and compliance (compliance with laws).

The term disclosure signals towards the terms like divulgation, exposure, and dissemination of information, approaching to "transparency". The disclosure is inversely linked to the informational asymmetry of the institutions, which means that the gap between stakeholders and institutions is filled as it increases the level of divulgation of information (Murcia, 2009). The disclosure (transparency) can be summarized in three points: adequate and voluntary divulgation, the openness of organizations providing information and complete communication on all the actions (Cardozo, 2012).

Fairness is a principle linked to the sense of justice. In the public sense, it is concerned with the fair and isonomic treatment of citizens, aiming to guarantee access to the exercise of their civil, political and social rights, highlighting, in this work, the civil right of access to information (Brasil, 2014). In this perspective, equity is a key element to subsidize service delivery, policy power and information exchange in an appropriate and fair manner (Goodson, Mory, & Lapointe, 2012).

Compliance is a principle aimed at compliance with laws (Gonzalez, 2004) and proposes compliance with regulatory standards, expressed in instruments such as statutes, guidelines, bylaws, and laws governing public institutions (Rosseti & Andrade, 2012). The consolidation of this principle reduces the risk linked to reputation and, especially, the legal/regulatory risk to which institutions are subject (Coimbra & Manzi, 2010), for example, in the public sector, respect for this principle corroborates the guidelines. control bodies, which appear as public account verifiers.

Accountability has a meaning related to a set of mechanisms and procedures that guide the accountability and accountability of actions taken by managers (Pinho & Sacramento, 2009; Matias-Pereira, 2010). Such accountability consists of a process of publicizing the

actions and decisions taken by public agents and institutions, and it is necessary that the agents have the perception that their responsibilities derive from the delegation made by the citizens (stakeholders) to the management of public resources, hoping, in contrast, for positive results that denote efficient public sector management (IFAC, 2001; Anao, 2002).

In short, the four principles described above are the basis of public governance and are even interconnected (Bakar & Salek, 2011). In addition, respecting them through practices adopted in institutions enables access to information to be real and effective. This proposition is viable, since the existence of disclosure is related to compliance with the laws, besides being the main way to account, broader and more equitably, to citizens (Ferlie & Pollitt, 2005).

Given the above, the best practices that foster the development of public governance are the conversion of these basic principles into recommendations that must be objective, aligned with the interests and purposes that allow the preservation and optimization of the long-term economic value of the organization, contributing to the quality of the management of the organization, its longevity and the common good (IBGC, 2015). Such practices can be analyzed, according to Mello (2009), Raupp & Pinho (2011), and Zorzal (2015), seeking to highlight these principles in elements available in electronic portals, management reports and other instruments of public institutions that demonstrate transparency of your information.

Regarding transparency in public areas, the emergence is due to the need to involve society in the processes that deal with the management of public resources and the accountability of managers, making available to the population, as much as possible, the unrestricted access to relevant and reliable information (Armstrong, 2005). By allowing this information to be discussed by society at large, it is assumed that the state works more efficiently and effectively, either by improving management or by criticizing performance by citizens (Stiglitz, 2002).

Hood (2007) puts transparency as the central aspect of modern democracy and motivating state reform, that is, when discussing democracy it is essential to speak of transparency in public administration. For Angelico (2012), the materialization of this concept occurs with access to public information. In this context, such access is the key to corruption prevention and public accountability (Hood, 2007).

Bairral, Silva, & Alves (2015) state that the concept of public transparency already reaches dimensions beyond the legal/fiscal line, starting to address other aspects of public management, such as performance, personnel, and internal control. In addition, the authors claim that the theme gained relevance after the enactment of the Fiscal Responsibility Law

(Brasil, 2000). After this milestone, other devices were implemented, promoting a new reality of divulgation of information (Ibid, 2009; 2011).

When dealing with transparency in the public sector, some characteristics of the information need to be highlighted: besides being relevant, complete and accessible, the information must be easy to understand, allow the possibility with previous periods, without bias, and be disclosed in the most varied possible means (Kim, Halligan, Cho, Oh, & Eikenberry, 2005). As well as highlighting the importance of ICTs for increasing public transparency regarding legal aspects, aiming at promoting access to information. In this sense, it is necessary to invest in the development and dissemination of such mechanisms, as they are essential for promoting both active (available without citizen request) and passive (presented through a request through a communication channel) transparency guidelines (Fierro & Gil-Garcia, 2012).

Public transparency for the purpose of this research is characterized by accessibility and availability of information. This means that public transparency is essentially related to truthful, relevant and easy to understand information, made available to citizens so that they can use it, interpret it and be able to evaluate decisions taken by public institutions (Armstrong, 2005; Kim et al., 2005; Bairral et al., 2015).

The international literature on public governance is vast, mainly fostered by entities such as IFAC, ANAO, World Bank and OECD. However, it is worth mentioning the Committee of University Chairs (CUC) Governance Guide and the study of the Education Information Network in Europe (EURYDICE), whose studies are aimed at governance in higher education. The "Guide for Members of Higher Education Governing Bodies in the UK" is a study that discusses governance in universities, emphasizing topics such as accountability and sustainability through recommendations and practices (CUC, 2009). For its part, the study "Governance in Higher Education in Europe" provides a compilation of information on the variations in different European countries regarding processes for governance in higher education in 30 European countries (Eurydice, 2008).

Regarding this, it is also worth mentioning the Vereniging van Samenwerkende Universiteiten - VSNU (Association of Universities in the Netherlands), the entity responsible for the "Code of good governance for universities 2013", a code that defines good governance practices, which Dutch universities implement, denoting the importance of themes such as transparency, governance, and accountability present in this scenario (VSNU, 2013). Although the context just mentioned reveals the concern with governance in the context of Dutch universities, it is pertinent to make a counterpoint to another reality that involves

governance in higher education. Mulili (2014), in his research on governance practices adopted by public universities in Kenya, obtained results that allowed us to conclude the limitation of governance at this juncture, motivated by factors such as a large number of students, overburdened facilities, insufficient government support, and resistance to the changes.

At the national level, there are few studies involving Brazilian universities dealing with governance, as the approaches are relatively recent. The problematization found in such research includes exposure of governance policies at UFPR, UFRGS and UFSC universities (Cardozo, 2012), governance applied to public administration, from the perspective of the contributions of Internal Audits at federal public universities (Linczuk, 2012), and analysis of the governance mechanisms used for the management of UFC (Santiago, 2014) and IFES of Paraíba (Santos, 2016).

In time, there are studies, such as Zorzal (2015), that analyze the transparency of federal universities from the perspective of adopting the principles of good governance in management reports. Regarding transparency, studies on the use of the Internet by UFSC as a transparency instrument should also be highlighted (Platt Neto, Cruz, & Vieira, 2006); regarding the disclosure level in philanthropic IFES in Brazil (Lima, 2009), and also about the set of determinants that are related to the transparency of the Brazilian Federal Universities (Pessôa, 2013).

Based on the discussion of previous studies we understand that to measure and to analyze the transparency in any contexts are very important, mainly when the context analyzed involved public funds. Other interesting point is to analyze the institutions that are located in a country that are recognized for corruption scandals. In this way, Brazilian Federal Universities are a good example to be researched.

3. Method

This research is classified, regarding the nature of its objectives, as descriptive due to the documentary analysis of the characteristics recognized as governance practices for the public sector, proposed by international and Brazilian institutions (Gil, 2009). Descriptive research implies in the observation, recording, and analysis of the studied object (Marion, Dias, & Traldi, 2002), which means, aims to "discover the characteristics of a phenomenon as such" (Richardson, 2008, p.71), what is intended when analyzing the objective of the present work.

Regarding the procedures, the research is characterized by being documentary, because the data source is composed of documents that have not received analytical treatment (Marconi & Lakatos, 2009). Thus, the documentary research is configured by the format of the information available in the electronic portals and university management reports, in which such data were only publicized, presenting no statistical treatment.

The classification regarding the way of approaching the problem is quantitative, as it sought to analyze the level of exposure of governance practices, to promote effective transparency in the portals of Brazilian Federal Universities. The quantitative aspect praises the intention to guarantee the accuracy of the results, avoiding distortions of analysis and interpretation, enabling greater security in the inferences (Richardson, 2008).

To enable the development of this research, an instrument was built based on four fundamental principles of governance: disclosure, fairness, accountability, and compliance. Such principles are the pillars of what is considered good governance practices (Matias-Pereira, 2010; Rossetti & Andrade, 2012).

The four dimensions seek to measure different characteristics regarding the transparency of information. The accountability dimension aims to analyze managers' accountability and accountability through the transparency mechanisms provided. Regarding the compliance dimension, it is sought evidence for practices that correspond to legal requirements in general.

Regarding disclosure, the variables inserted in the instrument concentrated the concern on measuring practices aimed at exposure and divulgation of information. Finally, the fairness dimension was built with the concern for equity, in the sense of the right to access to information and popular participation, in addition to ensuring the right of employees to manifest.

The research instrument was elaborated in checklist format, being composed of 8 variables in each dimension, totaling 32 evaluated items. The above principles make up the dimensions of the instrument, based on codes and guidelines for governance practices; besides researches that constitute the theoretical foundation of this work.

The measurement of the fulfillment of each checklist item is based on the work of Bearfield and Bowman (2017). Thus, each variable will be classified with a value from 0 to 2, indicating the level of exposure of practices in the governance mechanisms of each institution, respectively: null/undisclosed (0), partially (1), broadly (2). Thus, a university could reach a maximum score of 16 in each dimension and a total score of 64.

The universe of this research covers all Brazilian Federal Universities, which are listed

on the portal of the Ministry of Education. The data collection stage was performed in institutional portals and management reports, both essential elements of the FUs.

Information collection took place from October 15 of 2018 to November 17 of 2018. During this period, institutions that were randomly selected for collection and had problems accessing the portal on the day in question or did not provide the 2017 management report were searched again, respecting the interval mentioned above.

From the analyzed universe, a total of seven universities were discarded from the sample for not making available the management report for 2017. Thus, the collection was restricted to 56 universities.

After the data collection stage, the data were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS) software. To achieve the proposed objectives, the multivariate technique known as cluster analysis was used.

Cluster analysis is a technique that seeks to group cases that present similar characteristics as a function of the selected set of variables (Everitt, 1993; Corrar, 2007; Hair, William, Babin, & Anderson, 2009). In this sense, cluster analysis was applied to classify the 56 universities in clusters that presented high homogeneity among internal elements at a given level of significance. This analysis was performed based on the sum of the scores found in each of the four dimensions. For example, the variable "Accountability" contained the sum of the scores obtained by the eight variables of the dimension of the same name (this proposition applies to the other dimensions) and the variable "sum" contained all the scores of the four accumulated dimensions.

Based on the results of the cluster analysis, a normality test was performed to define the best way to ensure that the clusters formed by this analysis contained the universities with the highest similarities. The normality test used was the Kolmogorov-Smirnov, having as hypothesis H0 - the distribution is normal, and H1 - the distribution is not normal (at a significance level of 5%), that is, it allows to identify if a variable has a normal distribution (Corrar, 2007). From this test, it was noticed that the data did not follow a normal distribution and, therefore, the data were analyzed using non-parametric statistical techniques.

Subsequently, to expose the internal homogeneity and external heterogeneity of the groups, the Kruskal-Wallis and Wilcoxon-Mann-Whitney tests were applied. The Kruskal-Wallis Test can be used to evaluate whether two or more samples come from the same population or different populations, thus testing the null hypothesis that k samples come from the same or identical populations with the same median. (Siegel & Castellan, 2006).

Regarding the U-Mann-Whitney Test, it is possible to verify if two independent

groups were extracted from the same population, with the null hypothesis that these groups have the same distribution (Siegel & Castellan, 2006). Thus, both nonparametric tests would confirm whether the best solution (number of clusters) was selected and, consequently, whether universities were inserted into the correct conglomerates.

4. Analysis and Discussion of Results

The materialization of the dimensions of this work occurs in elements such as institutional portals and university management reports. Thus, the analysis of the data collected from these instruments is presented below.

Once data were collected and tabulated, they were inserted into the SPSS software to perform cluster analysis and subsequent statistical tests to validate the results obtained. Table 1 shows the collected data, with summary information of the 4 dimensions, in addition to the total sum found.

Table 1. Sum of Analyzed Dimensions.

University	Accountability	Compliance	Disclosure	Fairness	Summation
UNIPAMPA	14	13	14	14	55
UFFS	13	13	16	10	52
UFSC	14	12	16	10	52
UFSM	14	9	14	14	51
UFMS	15	12	13	10	50
UFRN	14	13	13	10	50
UFSCar	15	11	14	10	50
UFOP	15	11	13	10	49
UNIFEI	13	11	13	12	49
UFABC	13	11	12	12	48
UFERSA	10	13	12	13	48
UFU	13	13	12	10	48
UNILA	15	11	13	9	48
UFAL	14	10	13	10	47
UFC	13	11	12	11	47
UFSJ	12	13	10	12	47
UnB	13	12	13	9	47
UNIFESP	13	13	9	12	47
UFG	15	8	11	12	46
UFOPA	10	11	14	11	46
UFVJM	15	12	12	7	46
UFAC	13	10	12	10	45

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UFMT	15	12	8	10	45
UFPEL	14	10	11	10	45
UFSB	12	8	14	11	45
UNILAB	12	13	12	8	45
UFBA	12	11	11	10	44
UFCSPA	11	12	11	10	44
UFES	12	12	9	11	44
UFT	14	9	11	10	44
UNIFESSPA	12	9	10	13	44
UNIRIO	13	9	11	11	44
UFJF	13	8	9	13	43
UFMG	11	7	14	11	43
UFPR	14	8	12	9	43
UFS	14	9	10	10	43
UFTM	13	11	10	9	43
UNIFAL	10	12	11	10	43
UFRB	10	10	12	10	42
UFMA	11	11	9	10	41
UNIVASF	10	11	11	9	41
UFPB	14	11	8	7	40
UFPE	11	10	10	9	40
UFPI	12	9	8	10	39
FURG	13	11	9	5	38
UFAM	12	10	9	7	38
UFRPE	10	7	8	13	38
UFCA	8	11	9	9	37
UFGD	13	8	10	6	37
UFRRJ	10	9	9	9	37
UFOB	10	7	11	8	36
UFF	9	6	10	10	35
UFRA	7	7	8	11	33
UNIFAP	11	9	8	4	32
UFPA	8	5	10	8	31
UNIR	11	3	7	6	27

Source: Research Data.

The analysis performed in the SPSS used the columns presented in Table 1, using the 4 dimensions and the total. The analysis was performed in two clusters, which will be called Cluster 1 and Cluster 2.

In Cluster 1, were grouped a total of 38 universities. In the composition of this cluster, universities with homogeneous characteristics of "medium and high levels of transparency" were grouped. In Cluster 2, were grouped the remaining 18 sample universities. This cluster has concentrated universities with "low levels of transparency".

Figure 1 shows the composition of university clusters generated by cluster analysis. In order to validate these two generated groups, following the analysis, the Kolmogorov-Smirnov, Kruskal-Wallis and Mann-Whitney U tests were performed.

Figure 1. *Cluster* Composition.
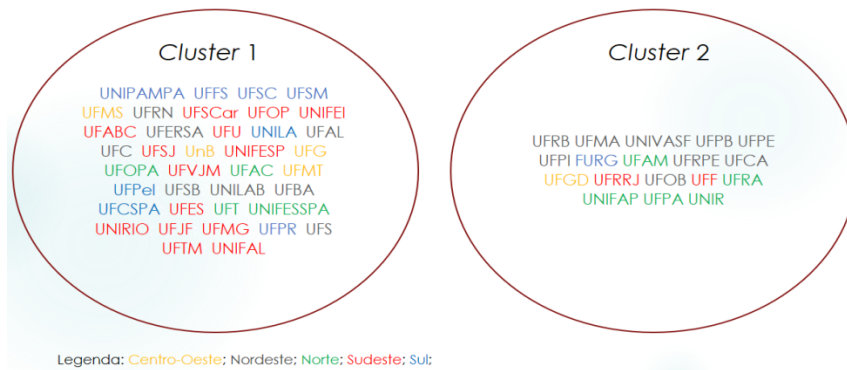
Source: Research Data.

From the groupings formed, the Kolmogorov-Smirnov test was used to identify if the data set had a normal distribution. The result of this test, shown in Table 2, indicated that the Accountability and Disclosure variables had an asymptotic significance $p > 0.05$, ie, these variables did not have a normal distribution.

Table 2. One-Sample Kolmogorov-Smirnov Test.

		Accountability	Compliance	Disclosure	Fairness	Summation
N		56	56	56	56	56
Normal parameters [a, b]	Average	12,29	10,14	11,09	9,91	43,43
	Deviation Error	1,979	2,219	2,134	2,065	5,676
More extreme differences	Absolute	,177	,186	,106	,196	,148
	Positivo	,090	,099	,106	,161	,052
	Negative	-,177	-,186	-,094	-,196	-,148
Kolmogorov-Smirnov Z		1,322	1,392	,792	1,465	1,111
Asymp. Follow (2 ends)		**,061**	**,041**	**,557**	**,027**	**,169**
A. The distribution of the test is normal; B. Calculated from the data.						

Source: Research Data.

Based on the reflection of the normality test result, we chose to use nonparametric tests following the statistical analyzes, since the data set had variables with non-normal distribution. In other words, parametric tests are not the best indication for analyzing variables

that have non-normal distribution. Thus, the tests chosen were Kruskal-Wallis and Mann-Whitney U.

When considering the formed clusters, the Kruskal-Wallis test allowed the analysis of the differences of the values of each one of the variables that compose the dimensions obtained by the groups generated by the Ward method, used in the cluster analysis. Table 3 presents the degree of freedom, the chi-square statistics and the significance levels of the variables. From this table, it appears that all four variables, in addition to the overall sum, showed significant differences between the two groupings formed.

Table 3. *Kruskal-Wallis Test [b].*

	Accountability	Compliance	Disclosure	Fairness	Summation
Chi square	18,678	11,775	21,357	13,839	36,173
Df	1	1	1	1	1
Significance Sig.	,000	,001	,000	,000	,000
A. Kruskal Wallis test; B. Grouping Variable: Ward Method					

Source: Research Data.

In order to corroborate the Kruskal-Wallis test result, the Mann-Whitney U test was also performed. Table 4 presents the values obtained, demonstrating that all variables obtained an asymptotic significance lower than 0.05.

Table 4. Mann-Whitney U Test.

	Accountability	Compliance	Disclosure	Fairness	Summation
Mann-Whitney U	99,000	149,000	81,000	135,500	0,000
Wilcoxon W	270,000	320,000	252,000	306,500	171,000
Z	-4,322	-3,432	-4,621	-3,720	-6,014
Significance Sig. (2 ends)	,000	,001	,000	,000	,000
A. Grouping Variable: Ward Method					

Source: Research Data.

Thus, both tests performed proved the difference detected in both groups at this level of significance. Thus, the Ward method of cluster analysis separated universities into two groups that are statically different.

4.1. Discussion on the results of statistical analysis

Regarding the result of the cluster analysis, it was evidenced a separation of the 56 universities in two large clusters. The 38 universities with the best results obtained in the research, that is, those that best evidence the governance practices addressed, makes up Cluster 1. In this cluster are universities from all Brazilian regions, as shown in Table 5.

From these data, it is clear that most universities in the southern region have the best levels of transparency, according to the built model. Moreover, the fact that the 4 universities that scored the most in the collection (UNIPAMPA, UFFS, UFSC, and UFSM), see Table 5, are located in the South region, reinforces this finding.

Proportionally, it is evident that the Southeast and Midwest regions also mostly have universities in Cluster 1.

Table 5. Composition of *clusters* by geographic region.

Region	*Cluster* 1		*Cluster* 2	
	Number of FUs	**% of region**	**Number of FUs**	**% Of region**
South	8	88,88%	1	11,12%
Sudeste	14	87,5%	2	12,5%
Midwest	4	80 %	1	20%
Northeast	8	47,06 %	9	52,94%
North	4	45,55 %	5	55,55 %

Source: Research Data.

Looking at Table 5, it is clear that the same result does not stand out in the Northeast and North, since most of the universities that were grouped in *Cluster* 2 belong to such regions. As the *cluster* had presented, in its internal homogeneity, a low exposure of practices is composed of 18 institutions, it is noted that half of the universities that compose it are from the Northeast. Regarding the North region, it stands out negatively, because it has 4 universities with the lowest score in this collection: UFRA, UNIFAP, UFPA, and UNIR.

4.2. Discussion of results from the perspective of research dimensions

Regarding the scores obtained by the universities, when rescuing the data from Table 3, it is clear that no institution reached the level of excellence, reaching the 64 possible points, that is, having all 32 practices in a level of wide exposure. Considering these notes, it is

noteworthy that UNIPAMPA was the university that presented the most practices at a wide level - a total of 23 - and, also, was the only one that did not present any practice as null or not evidenced. However, according to this study, if the percentage level is compared, even the university with the highest exposure rate (UNIPAMPA) reached only 86% of the possible scores, indicating that even in the institution with the highest evidence of transparency, there are points to be improved.

Regarding particularities of the Accountability dimension, we highlight the perception of competitions and selection processes, as such practice is widely evidenced in most universities, as well as the concern to disclose both the plan and the annual internal audit activity report (accountability dimension best evidenced in the FUs).On the other hand, information related to expenses presented many flaws, because of this, it is the practice with the worst result in this dimension.

The main positive finding of the Compliance dimension is the fact that it has the practice with greater exposure in the vast majority of universities, as it is the availability of the Regulations and Statute that guide the respective institutions, although it is an expected result, because such documents are fundamental. Regarding the negative aspects, the most important ones are the delay regarding the implementation of universities' Open Data Portals, the little relevance of information on the topics related to the Ethics Committee and the problem, already seen in the other dimensions, about the carelessness about updates of external electronic pages, pointed out by the institutional portal.

Regarding the trends that were found from the perspective of the content of Disclosure practices, the satisfactory divulgation of Pro-Rectories regarding active transparency is emphasized, a fact that allows us to classify this practice as the best evidenced in the Disclosure dimension (and the fourth-best score regarding the universe of evaluated practices). As for the main flaws in this dimension, the following are the ones who stand out: the lack of availability of the financial statements of the FUs and the lack of concern about the quality of the links available on the university portals.

When analyzing Fairness's strengths, it is necessary to say that central aspects of fairness and ease of access to information have only median results: issues such as accessibility, placeholder with the main documents of the institution, space aimed at solving common and frequent doubts, in addition to approaches focused on real-time communication presented, in the general context, only partial attendance. Regarding the practices with the worst results in the Fairness dimension, there are the variables that approached portal access in several languages, and also the one that made possible the access to text files that allowed

some comparison of data. These practices were also responsible for the worst rates of all 32 variables.

In time, comparing the level of exposure of governance practices, the dimensions presented the following classification: Accountability obtained the best scores, followed by Disclosure. The remaining ones, Compliance, and Fairness presented inferior and close results among them.

4.3. Discussion about FUs excluded from the survey

The universe that encompasses the Brazilian Federal Universities is made up of 68 institutions. However, five were discarded from the research, since they were formalized this year, they did not have a management report for analysis purposes, and these Universities became extinct at the beginning of 2019. Of the remaining 63 universities, governance practices were assessed through information collected from the institution's electronic portals and management reports.

Also, a total of seven universities were removed from the collection universe for not making the 2017 management report available on the electronic portal. In an attempt not to discard such universities, due to limited search in the portals, we searched for 2017 + "University Name" management report in the Google search engine and no correct information was found. Given this situation, it was decided to exclude them from the collection and analysis, as supported by the legal guidelines of TCU, Normative Decision 161/2017, the absence of a document called "Management Report 2017" on the portals of the FUs until the end of the year. November 17, 2018, in addition to denoting a lack of concern for transparency, would also undermine this research, as the collection instrument requires access to the current management report to highlight practices.

In this context, it is necessary to emphasize that the discarded FUs represent 11% of the universities of the entire sample universe, with a high percentage of institutions that did not meet an essential requirement, both of this research and legally: the availability of the exercise management report. 2017 Such universities were: UFRJ, UFRGS, UFV, UFRR, UFLA, UFCG, UFTPR.

5. Considerações Finais

The main goal of this research is to analyze of the governance mechanisms used for

transparency in Brazilian Federal Universities. In this context, governance and transparency stand out, which are extremely necessary for the public sector, since while governance provides the means for better management, transparency meets legal requirements and is related to access to information. In this sense, this study highlights the theoretical contribution and addresses the development of a collection instrument directed to the Brazilian Federal Universities, which rescues and adapts characteristics and concepts from private administration to public administration.

These characteristics and concepts deal with dimensions that are fundamental to the understanding of governance and public transparency. In time, this study , in order to analyze the rendering of public accounts, the attention to the legal requirements that guide the public agencies, the exposure and availability of information, and the concern of the fair access to this information from the Brazilian Federal Universities, made possible to bring together several governance practices from the perspective of four basic dimensions: accountability, compliance, disclosure and fairness (Gonzalez, 2004; Matias-Pereira, 2010; Rosseti & Andrade, 2012).

Considering the empirical context, this work also contributes to the extent that investigates the totality of the Brazilian Federal Universities. Besides, it concluded that there are no FUs who submit 100% of transparency, since none of the investigated universities presented full divulgation of all 32 variables investigated. From this perspective, based on the ideal exposure at dimension level (8 variables), only Disclosure presented such a proposition, with the universities UFFS and UFSC corroborating the previous argument.

The analysis of the level of exposure of transparency made it possible to separate institutions into 2 groups: with medium and high levels of transparency, a total of 38 FUs, and, with low levels of transparency, 18 FUs. In this second group, it is relevant to identify the deficient practices in order to develop them as a priority.

Despite the clusters formed, from the levels of exposure found, the most critical situation can be found in 7 FUs (UFRJ, UFRGS, UFV, UFRR, UFLA, UFCG, UFTPR), which had not published the management reports for 2017 period. It is noteworthy that not only this research obtained sample limitation with this fact but citizens, in general, are deprived of access to information.

Regarding the limitations of this research, we can list the discarded FUs and eventual problems of access to the portals on the collection days. From the first limitation, although the exclusion had been made by technical/legal criteria, it is recognized that a scenario that could cover all the FUs, would enable new considerations on transparency in these institutions.

Regarding the problem of access to portals, the limitation lies in the randomness of the collection period, where a portal could have some restrictions on access to information from the respective university.

Finally, given the scenario presented, we suggest, as future studies a new approach to insert the 63 FUs in the analysis regarding transparency; adapt the instrument in order to insert other higher education institutions in further analysis; and, approaches focused on the evolution of transparency and governance in FUs in the Northern region, as universities in this region proved to require greater attention to these issues, since 4 of their 9 FUs had the worst scores in this research.

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