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The Effects of Leadership on the Organizational Culture: The Case of the National Institute of Social Security

Efeitos da Liderança na Cultura Organizacional: O Caso do Instituto Nacional do Seguro Social

Efectos del Liderazgo en la Cultura Organizacional: El Caso del Instituto Nacional de Seguridad Social

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Abstract

Research objective: Leadership and culture are critical dimensions to understanding organizational dynamics. This article analyses the effect of leadership on organizational culture at the National Institute of Social Security in Brazil. The study also identifies the predominant types of leadership through the Multifactor Leadership Questionnaire and the type of organizational culture through the Competing Values Framework.

Theoretical framework: Models of leadership and organizational culture widely used in the international literature support the article. The Multifactor Leadership Questionnaire is a model composed of constructs about leadership styles and leadership outcomes. The Competing Values Framework is a model that provides a classification of corporate culture and values.

Methodology: This study is based on the survey as a research method. Data collection includes 153 professionals from the National Institute of Social Security. For data processing, descriptive and exploratory analyzes were performed. Structural equation modelling and partial least squares estimation were also used in the research method.

Results: The results reveal that leadership influences culture through a positive effect relationship with statistical significance. The results also show the predominance of the transformational leadership style and the clan culture in the case studied.

Originality: The article originally contributed by exploring the relationship between forms of leadership and organizational culture in a public organization. The study uses new constructs for the national literature by incorporating the models of the Multifactor Leadership Questionnaire and Competing Values Framework.

Theoretical and practical contributions: The article contributes to the advancement of theory in Public Administration by showing the influence of forms of leadership on organizational culture. The study also has practical and managerial implications as it indicates how forms of leadership should be developed to create collective identities.

Keywords: Leadership, Organizational culture, Structural Equations, Public administration, Non-profit organization.

Resumo

Objetivo da pesquisa: A Liderança e a cultura são dimensões críticas para entender a dinâmica organizacional. Este artigo analisa o efeito da liderança na cultura organizacional no Instituto Nacional do Seguro Social do Brasil. Também o estudo identifica os tipos preponderantes de liderança através do *Multifactor Leadership Questionnaire* e do tipo de cultura organizacional através do *Competing Values Framework*.

Enquadramento teórico: O artigo é apoiado nos modelos de liderança e de cultura organizacional amplamente utilizados na literatura internacional. O *Multifactor Leadership Questionnaire* é um modelo composto por constructos sobre estilos de liderança e os resultados de liderança. O *Competing Values Framework* é um modelo que fornece uma classificação da cultura e dos valores corporativos.

Metodologia: Este estudo se apoia na survey como método de pesquisa. A coleta de dados inclui 153 profissionais do Instituto Nacional do Seguro Social. Para o tratamento dos dados foram realizadas análises descritivas e exploratórias. A modelagem de equações estruturais e estimação de mínimos quadrados parciais também foram empregadas no método de pesquisa.

Resultados: Os resultados revelam que a liderança influencia a cultura através de uma relação de efeito positivo com significância estatística. Os resultados também mostram a predominância do estilo de liderança transformacional e da cultura do clã no caso estudado.

Originalidade: O artigo contribui originalmente ao explorar a relação entre as formas de liderança e a cultura organizacional em uma organização pública. O estudo utiliza constructos inéditos para a literatura nacional ao incorporar os modelos do *Multifactor Leadership Questionnaire* e *Competing Values Framework*.

Contribuições teóricas e práticas: O artigo contribui para o avanço da teoria em Administração Pública ao mostrar a influência das formas de liderança na cultura organizacional. O estudo também tem implicações práticas e gerenciais ao indicar como as formas de liderança devem ser desenvolvidas para a criação de identidades coletivas.

Palavras-chave: Liderança, Cultura organizacional, Equações Estruturais, Administração Pública, Organização sem fins lucrativos.

Resumen

Objetivo de investigación: El liderazgo y la cultura son dimensiones críticas para comprender la dinámica organizacional. Este artículo analiza el efecto del liderazgo en la cultura organizacional en el Instituto Nacional de Previsión Social de Brasil. El estudio también identifica los tipos de liderazgo predominantes a través del Cuestionario de Liderazgo Multifactorial y el tipo de cultura organizacional a través del Marco de Valores Competitivos.

Marco teórico: El artículo se sustenta en modelos de liderazgo y cultura organizacional ampliamente utilizados en la literatura internacional. El Cuestionario de Liderazgo Multifactorial es un modelo compuesto de constructos sobre estilos de liderazgo y resultados de liderazgo. El marco de valores competitivos es un modelo que proporciona una clasificación de la cultura y los valores corporativos.

Metodología: Este estudio se basa en la encuesta como método de investigación. La recolección de datos incluye a 153 profesionales del Instituto Nacional de la Seguridad Social. Para el procesamiento de datos, se realizaron análisis descriptivos y exploratorios. El modelo de ecuaciones estructurales y la estimación de mínimos cuadrados parciales también se utilizaron en el método de investigación.

Resultados: Los resultados revelan que el liderazgo influye en la cultura a través de una relación de efecto positivo con significancia estadística. Los resultados también muestran el predominio del estilo de liderazgo transformacional y la cultura de clan en el caso estudiado.

Originalidad: El artículo contribuyó originalmente explorando la relación entre las formas de liderazgo y la cultura organizacional en una organización pública. El estudio utiliza nuevos constructos para la literatura nacional al incorporar los modelos del Cuestionario de Liderazgo Multifactorial y el Marco de Valores Competitivos.

Aportes teóricos y prácticos: El artículo contribuye al avance de la teoría en la Administración Pública al mostrar la influencia de las formas de liderazgo en la cultura organizacional. El estudio también tiene implicaciones prácticas y de gestión, ya que indica cómo se deben desarrollar formas de liderazgo para crear identidades colectivas.

Palabras llave: Liderazgo, Cultura de la organización, ecuaciones estructurales, Administración pública, Organización sin ánimo de lucro.

Palabras clave: Liderazgo, Cultura de la organización, ecuaciones estructurales, Administración pública, Organización sin ánimo de lucro.

1 Introduction

Leadership and culture are critical dimensions to understanding organizational dynamics (Schein, 2004; Magada & Govender, 2016). Leadership is understood as the process by which an individual influences the conduct of others, to achieve a common objective (Faría, 2010). Leadership can be conceived as a relationship that occurs between leaders and their followers guided by purposes shared by both parties (Faría, 2010). Organizational culture is understood as the pattern of beliefs and values with shared meanings, which, through rituals or norms, guides the organization, and develops during the course of social interaction of organizational individuals (Morgan, 2006). In this sense, “[...] culture determines the identity of a human group in the same way that personality determines the identity of an individual.” (Barreto, Kishore, Kings, Baptista & Medeiros, 2013, p. 35).

Several studies stress the causal relationship between leadership and culture and the mutual influence of these two variables (Schein, 2004; Ralston, Terpstra-Tong, Terpstra, Wang & Egri, 2006; Dull & Tech, 2010; Barreto, et al., 2013; Hintea, 2015; Magada & Govender, 2016). Furthermore, there is also the understanding that organizational culture has a strong relationship with leadership (Popa, 2012; Popa, 2013; Barreto et al., 2013; Magada & Govender, 2016; Somenzari, Ramos & Sacomano Neto, 2017). In this sense, leadership can come to influence the organization's culture, just as organizational culture can also influence leadership (Bass & Avolio, 1993; Avolio & Gardner, 2005; Morgan, 2006; Ralston et al., 2006; Reed, Cohen & Colwell, 2011; Lambright & Quinn 2011; Popa, 2012; Popa, 2013; Nikcevic, 2016).

Although this topic has been widely studied in private organizations (Bass & Avolio, 1993; Morgan, 2006; Ralston et al., 2006) there is a lack of studies on this topic in public organizations (Lambright & Quinn, 2011), specifically in the Brazilian context. The effects of leadership on culture gain even more important because “new management practices” were widely implemented in the Brazilian public sector (Bresser-Pereira, 2018; Crumpton, 2016; Nohara, 2014; Barlach, 2012). Since the 1980s, the Brazilian national government has taken place as the process of public administration reform, the so-called “new public administration” (Nohara, 2014) with significant impacts on the leadership and culture of these organizations (Oliveira, et al., 2010; Brandão & Bruno-Faria, 2013).

With the reforms suggested by the “new public administration”, public organizations were pressured to review their structures and operating dynamics (Oliveira, et al., 2010). The public administration reform encompassed changes in management practices from processes to results (Hoffmann & Lima, 2017). This period implied by extensive changes resulting in downsizing, privatization, reengineering, and reducing the bureaucracy of public organizations (Oliveira et al., 2010). The challenges of this period were to outline new profiles, skills, and leadership in public administration (Barlach, 2012). The “new public administration” brought to its core several concepts, discourses, and practices of private companies. Due to the intense changes in managerial style, this phenomenon requires a deeper analysis, considering the specificities and the context of the public sector in Brazil (Barlach, 2012).

This movement and set of changes and reforms also affected the National Institute of Social Security (INSS). The National Institute of Social Security, an autarchy of the Brazilian federal government created in 1923, is responsible at the national level for the recognition and operationalization of the rights of Brazilian workers, covered by the General Social Security System (RGPS). Since its creation, there have been several moments of modifications in its policies and guidelines (Souza, 2011). The most recent reform started in the 1990s with the “new public administration”. Critics of the managerial reform highlight the simple transfer the managerial practices from private to public organizations, without taking into account the specificities and contexts (Traesel & Merlo, 2014; Hoffmann & Lima, 2017). This movement induced public managers to assume the role of leaders (Oliveira, et al., 2010) and a new sense of leadership (Barlach, 2012). This context implies the need for new studies to understand how leadership (Dias & Borges, 2015) affects or does not organizational cultures (Brandão & Bruno-Faria, 2013) in Brazilian public management. This setting also implies rethinking new practices for developing leadership

(Burbaugh, Seibel, & Archibald, 2017) and organizational culture (Janzen, et al., 2017; Vengrin, et al., 2018) in public organizations.

This study aims to contribute to this subject in public organizations in Brazil. The objective of this paper is to analyze the effect of leadership on the organizational culture of the Brazilian national institute of social security using the Multifactor Leadership Questionnaire (Bass & Avolio, 1990) for leadership, and the Competing Values Framework for culture (Cameron & Quinn, 2006). As well the papers identify the preponderant styles of leadership and culture inside these organizations. To explore this subject we adopted two widely accepted academic scale models: the multifactor leadership questionnaire (Bass & Avolio, 1990) for leadership, and the Competing Values Framework for culture (Cameron & Quinn, 2006). A statistical correlation analysis was performed between the two constructs, according to structural equation modeling (Hair, Ringle & Sarstedt, 2011), which is an efficient research method developed in recent years.

The results suggest that leadership influences the culture through a positive effect relationship (Hintea, 2015; Magada & Govender, 2016; Ashikali & Groeneveld, 2015). The results also indicate the predominance of transformational leadership style and clan culture. The paper allows the understanding of the relationships between the different types of leadership and the different types of organizational culture in the Brazilian public sector. Thus, the paper was organized into five sections, including this introduction, and then, respectively, the theoretical framework, the methodology used, the presentation and discussion of the research results, and the final considerations of the study.

2 Theoretical framework

2.1 Multifactor Leadership

Over the last decades, studies on leadership have gained significant prominence in the literature regarding organization management (Alatorre, 2013; Brandão & Bruno-Faria, 2013; Masood et al., 2006; Shao et al., 2012; Vargas et al., 2014). One of the most referenced studies on leadership is Burns' (1978) concept of Transactional Leadership (TL), Transformational Leadership (TFL), and laissez-faire leadership (LFL) in organizations. From this original study focusing on individuals, Bass and Avolio (1990) created the Multifactor Leadership Questionnaire (MLQ). This model is used to identify the type of leadership predominantly practiced in organizations.

Transactional leadership is conceived as one in which the organizational leader identifies the needs of his/her work team and exerts his/her influence to gain the team's acceptance, offering them mutual benefit by attaining personal interest and rewarding it for efforts made at work (Calaça & Vizeu, 2015). Exception (TL_ME) based on the leader's performance only when there are errors or oversights from his/her work team (Barreto et al., 2013; Bass & Avolio, 1990) can divide transactional leadership into two factors, namely Contingent Reward (TL_CR) guided by exchanges between the leader and employees to obtain rewards; and Management.

In turn, transformational leadership is understood as the kind in which the organizational leader goes beyond work transactions and contractual relations, seeking the development of his/her team, and thus transcending individual interests for the sake of the organization (Ashikali & Groeneveld, 2015; Wright, Moynihan & Pandey, 2012). It is leadership based on a collective orientation, in which the leader rationally strives for the integrity of his/her staff (Calaça & Vizeu, 2015; Trapero & Lozada, 2010).

Transformational leaders can be characterized by the four components described below (Bass & Avolio, 1990; Zahari & Shurbagi 2012): 1) Idealized Influence (TFL_II), based on a leader's charisma; 2) Inspirational Motivation (TFL_IM), based on a visionary leader; 3) Intellectual Stimulation (TFL_IS), characterized by a leader that stimulates and encourages employees and 4) Individualized Consideration (TFL_IC), determined by a leader who pays special attention to the needs of employees.

Laissez-faire leadership is understood as that whereby an organizational leader has neutral and carefree behavior, abdicating his/her responsibility by not being involved with the needs, development, and

achievements of the employees in his/her work team. It is, therefore, a kind of leadership in which there is no exchange between the leader and the workers of his/her team, as both individual interests and collective goals are ignored by the leader (Barreto et al., 2013).

2.2 Organizational Culture and leadership

Organizational culture is understood as the pattern of beliefs and values with shared meanings that, through rituals or norms, guide the organization, and develop during the social interaction of the members of the organization (Morgan, 2006; Schein, 2004; Masood et al., 2006; Shao et al., 2012; Silva & Fadul, 2010). The Competing Values Framework created by Cameron and Quinn (2006) is one of the most outstanding studies on this subject, supported by subsequent studies (Prajogo & Mcdermott, 2011; Ralston et al., 2006; Zahari & Shurbagi, 2012; Bruno-Faria & Fonseca, 2014; Yu & Wu, 2009).

The Competing Values Framework assumes that organizations can be characterized according to their common traits, which guide the various patterns of organizational effectiveness. To explain the differences in values that underlie these standards of organizational effectiveness, “[...] the Competing Values Framework addresses four groups of organizational values, [...] which represent opposing basic assumptions or those that compete with each other” (Barreto et al., 2013, p. 36). This competition, or opposition of values, gives rise to the Competing Values Framework so that the organizational values observed as preponderant represent a certain cultural style that guides the behavior of the organization.

Reference is made to the four types of organizational culture advocated by Cameron and Quinn (2006), namely: 1) clan culture (CC) or family-type organization, which seeks the development, commitment, and loyalty of workers; 2) adhocracy culture (AC) or ad hoc organization, based on change and flexibility, targeting teams; 3) market culture (MC) or market-type organization, characterized by productivity and goal-oriented; and 4) hierarchical culture (HC) or bureaucratic organization, based on values, norms, and rules, aiming at stability and formality.

Organizational observation indicates that this interdependence between leadership and culture implies a mutual influence in which leadership can influence organizational culture, shaping it, just as an organization's culture can influence leadership by limiting the leader's performance (Schein, 2004). Thus, based on the theoretical framework (Brandão & Bruno-Faria, 2013; Giritli, et al., 2013; Imran, Zahoor & Zaheer, 2012; Shao, Feng & Liu, 2012; Silva & Fadul, 2010; Masood, Dani, Burns & Backhouse, 2006) the following research hypothesis was formulated: H1: Leadership positively affects the organizational culture. To test this hypothesis the paper measure this causality from these models of leadership and organizational culture scales (Multifactor Leadership Questionnaire and the Competing Values Framework). Nevertheless, this study verifies if there is a leadership effect on the culture of a public organization, by validating the relationship between these two constructs in the sample studied (Forza, 2002). Previous studies explore the positive effect of leadership on the culture in public organizations (Hintea, 2015; and Magada & Govender, 2016; Ashikali & Groeneveld, 2015). For example, studies by Zahari and Shurbagi (2012) and by Somenzari et al. (2017) explore how some types of organizational culture stimulate the development of commitment, loyalty, and decision-making in work groups.

2.3 The National Institute of Social Security

The origin of the INSS refers to the legal framework for the creation of the Brazilian social security system, through Decree 4682/23, of January 24, 1923. also known as the Eloy Chaves Law. Conceived through the formation of “*Caixas de Aposentadorias e Pensões*” (CAPs), the Eloy Chaves law appears with “*Santas Casas*” and Beneficent Societies. Workers associated with these organizations were affiliated by the companies, initially having a low number of insured persons in the system, which was characterized by the capitalization of resources, borne by each individual throughout their active life, for the training of future retirement at the time of inactivity, as a kind of savings account (Giambiagi & Além, 2011). This training period is considered the first phase in the history of Brazilian social security (Souza, 2011). According to Silva and Costa (2016), this context of the beginning of social security in Brazil occurred as a result of a

new economic and social reality existing in the country, at the beginning of the 20th century. This period is marked by the emergence of the first industrial centers, and the formation of a working-class, which sought to obtain protection at work through the creation of social legislation in Brazil.

From the 1930s onwards, with the advent of the first government of Getúlio Vargas, according to Souza (2011), the second phase of the history of Brazilian social security began, that is, the organization by clientele. In a context of strengthening trade unionism and the urban middle class, the Brazilian State began to interfere in social security issues, through the creation of the Retirement and Pension Institutes (Batich, 2004). In opposition to the previous context, it is possible to identify in this period the advent of systematic social legislation of an interventionist nature, especially with the enactment of the 1934 Constitution, by establishing norms regarding labor, assistance, and social security issues, and by establishing the tripartite contribution of this social system, between the Union, the employer and the employee (Gentil, 20019).

Furthermore, from the 1940s onwards, the Vargas government unified the Retirement and Pension Institutes, creating the Brazilian Institute of Social Services (ISSB). However, it was only from 1960 onwards that the contributions of the various institutes were standardized, as well as the unification of the legislation, through the enactment of Law No. 1966, with the creation of the National Institute of Social Security (INPS) (Giambiagi & Além, 2011). In this context, at the end of the 1960s and beginning of the 1970s, social security coverage was extended to workers that had not been covered until then, adding occupational accident insurance to the list of benefits. In 1974, the concern with the increase in the number of beneficiaries, together with issues related to social security, led to the creation of the Ministry of Social Security and Assistance, then responsible for the elaboration and execution of social security, medical and social policies. social (Schwarzer, 2009). In 1977, according to Schwarzer (2009), to reduce expenses and promote administrative rationalization, the National System of Social Security and Assistance was constituted.

In it, the INPS carried out the payments of benefits to the insured, the Institute of Financial Administration of Social Security and Assistance (IAPAS) managed and collected the financial resources of the INPS, and the National Institute of Medical Assistance of Social Security (INAMPS) managed the system of health. There was also the *Legião Brasileira de Assistência* Foundation (LBA), responsible for assisting the needy population. Finally, from 1985, the period of what can be considered the third and current phase of the history of Brazilian social security begins, namely, the organization by clientele and by purposes (Souza, 2011). In this scenario, INPS merged with IAPAS, through the creation of INSS, in the format in which it is currently known. INAMPS, on the other hand, was absorbed by the Ministry of Health, and LBA was transferred to the housing and social welfare portfolio. (Batich, 2004).

It is important to emphasize that the advent of the third period can be understood as a watershed for social security in Brazil, since the advent of the Federal Constitution of 1988. The government policy adopted in the area, until then assistance, became at least in theory, in the legal system, in a social security policy format, since it brought with it a new social security regime, the so-called simple distribution regime, grouping characteristics of the professional distribution regime and the social distribution regime, with the equivalence of urban and rural benefits, the diversification of the financing base and the universalization of the public social system (Gentil, 20019). In this way, it is possible to verify that the constitution of the current Brazilian social security was the result of the historical context of the 80s of the 20th century. These changes in public organizations draw attention to understanding how leadership (Dias & Borges, 2015) affects or does not organizational cultures (Brandão & Bruno-Faria, 2013) and how to develop plans for leadership (Burbaugh, Seibel, & Archibald, 2017) and organizational culture (Janzen, et al., 2017; Vengrin, et al., 2018) in public organization.

3 Method

This session explores the research method, such as the data collection, the measures and instrument, the sample and adjustments, and finally the data analysis.

3.1 Data collection

This study used survey data collection as a research method (Forza, 2002; Paranhos, Figueiredo, Rocha & Silva, 2013). The survey was conducted at the National Institute of Brazilian Social Insurance. The survey was conducted in thirteen social security agencies located in São Paulo state. The surveyed agencies have 240 employees, including public servants and interns, working in administrative and medical functions.

The sampling technique adopted in this research was non-probabilistic for convenience (Hair, Black, Babin, Anderson & Tatham, 2009). The target population was 240 and the survey reached 205 respondents, as explained in the session below. This research is therefore classified according to its temporal cut as a cross-sectional study, in which data are collected at a precise moment to look for common associations between variables (Oliveira, Marinho & Dias, 2016).

3.2 Measures and research instrument

The questionnaires applied in the branches took place from two validated quantitative instruments used in various research (e.g. Barbosa et al., 2017; Barreto et al., 2013; Prajogo & Mcdermott, 2011; Ralston et al., 2006; Shao et al., 2012; Zahari & Shurbagi, 2012). The first instrument is the scale developed by Bass and Avolio (1990), called the Multifactor Leadership Questionnaire. The scale consists of 21 assertions that seek to identify the three types of leadership advocated by Burns (1978), namely transactional leadership (comprising two dimensions: contingent reward and management by exception), transformational leadership (consisting of four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) and laissez-faire leadership (no dimension). Each dimension or factor has 3 items or observable variables for assessing the respondent's perception of this type of leadership in the organization, totaling 21.

The second instrument identifies the predominant cultural profile in the organization, based on the Competing Values Framework, developed by Cameron and Quinn (2006). The scale consists of 24 assertions, observing six dimensions of each organizational culture that make it possible to verify the respondent's perception of the presence of that type of culture in the organization. Respondents' perceptions of the type of culture and leadership profile of social security branch managers were measured by a 5-point Likert scale, ranging from (1) "strongly disagree" to (5) "strongly agree". A pilot test of the instruments used in the research was conducted to identify possible biases in the assertions (Forza, 2002).

3.3 Sample and adjustments

The target population was 240 managers and the survey reached 205 respondents to the questionnaire. To make the sample and analysis more reliable, some procedures were performed, in which invalid questionnaires were excluded due to missing data (Hair et al., 2009), suspicious response patterns or straight-lining (Schonlau & Toepoel, 2015), and outliers (Kannan & Manoj, 2015), to reach a valid and significant sample (Hair et al., 2009). Table 1 exhibits the characteristics of the sample.

Table 1
Sample characteristics

Characteristics	Number	Percentage (%)
Gender		
Female	85	55.5%
Male	68	44.4%
Total	153	100%
Age		
Up to 20 years	23	15.0%
Between 21-30 years	14	9.2%
Between 31 - 40 years	29	19.0%
Between 41 - 50 years	23	15.0%
Between 51 - 60 years	49	32.0%
More than 61 years	14	9.2%
Uninformed	1	0.7%
Education		
High school	50	32.7%
University education	69	45.1%
Postgraduate	34	22.2%
Position		
Intern	29	19.0%
Auxiliary / Agent	7	4.6%
Technician	80	52.3%
Analyst	15	9.8%
Medical expert	22	14.4%
Time in the company		
Up to one year	24	15.7%
Between 1 - 10 years	53	34.6%
Between 11 - 20 years	29	19.0%
Between 21 - 30 years	14	9.2%
More than 31 years	33	21.6%

Source: Author's work.

Considering all the mentioned inconsistencies, one questionnaire was excluded with missing data, 5 straight-lining cases, 33 outliers, and 13 questionnaires from managers out of 205 collected questionnaires. Therefore, 153 were considered valid for data analysis. This valid sample of 153 respondents represents 63.8% of the study population, reaching a response rate above 50%, considered relevant in social science studies (Forza, 2002).

3.4 Data analysis

To validate the relationship between leadership and organizational culture constructs we used SEM with Partial Least Squares (PLS) estimation (Hair et al., 2011). In recent years, SEM has been one of the methods for quantitative research that has been most prominent in studies in the field of social sciences, as it is an advanced technique for data treatment and statistical analysis (Bido, Godoy, Araujo & Louback, 2010). It enables the development of a confirmatory analysis of the theoretical model by checking, through factor analysis and multiple regression, if the collected data show evidence that they behave as predicted in theory, by hypotheses and research constructs, thus allowing the investigation of the relationships between the constructs and the observable variables (Bido, Godoy, Araujo & Louback, 2010; Oliveira et al., 2016). We choose PLS-SEM because it is a suitable method for small sample sizes, non-normal data (typical of most social science studies), and hierarchical component models (HCMs) (Hair et al., 2014, 2017b). The software used for the analysis was SmartPLS 2, which is a modeling package for the PLS-SEM technique (Ringle, Silva & Bido, 2014). The validation and measurement of the model are presented in section 4.

4 Results

4.1 Reliability and validity of the measurement model

We used an HCM to assess the relationship between leadership and organizational culture. We used a higher-order construct (HOC) for leadership and culture to reduce the number of relationships and make the model more parsimonious (Hair, Hult, Rongle & Sarstedt., 2017a).

To validate the measurement model, the following items need to be checked: internal consistency reliability (Cronbach's alpha – CA \geq 0.60 and Composite Reliability – CR \geq 0.70), convergent validity (Average Variance Extracted – AVE $>$ 0.50), item reliability (the indicator's outer loadings $>$ 0.708 or between 0.40 and 0.70 if AVE is above the suggested threshold value) and discriminant validity (Bido et al., 2010; Hair et al., 2011, 2017a). Other indices were not estimated, such as outer weights and VIF (Variance inflation factor). The model of this study enfolds first and second-order reflective constructs (Hair et al., 2017). Then, the Variance Inflation Factor (VIF) was not evaluated, because it is suitable for formative constructs. For reasons of item reliability or convergent validity, the following observable variables had to be removed from the model: AL1, AL2, AL3, LTS_GE2, and LTF_MI1 all related to the leadership constructs, and CC1, CC4, CC6, CH1, CH3, CH4, CIN3, CIN6, CM1, CM2, and CM3 all related to organizational culture were excluded (see Table 1). With the exclusion of variables AL1, AL2, AL3 laissez-faire had to be removed from the model. Table 1 shows the results of PLS-SEM for internal consistency reliability, indicator reliability, and convergent validity, and all criteria are met. For HOCs, the indices were calculated based on the loadings and correlation of the LOCs, given that is a reflective-reflective model (Hair et al., 2017a). Transformational Leadership (AVE = 0.832, CR = 0.952, CA = 0.918), Transactional Leadership (AVE = 0.807, CR = 0.893, CA = 0.821), Leadership (AVE = 0.967, CR = 0.983, CA = 0.902) and Organizational Culture (AVE = 0.694, CR = 0.899, CA = 0.915) met the validation criteria for reflective constructs.

It can be concluded from the data presented in Table 2 that all observable variables have an outer loading, with a value above the minimum recommended, the same occurs for AVE, Composite Reliability, and Cronbach's alpha, except for Cronbach's alpha of hierarchical culture (HC) and market culture (MC) constructs. However, such values were considered suitable as they are very close to the minimum recommended (Hair et al., 2011).

Table 2
Leadership construct validation

HOC2	HOC1	LOC	CA	CR	AVE	Loading	Item	Outer loading										
Leadership	Transformational Leadership	Individualized Consideration (IC)	0.782	0.874	0.698	0.929	TLF_IC1	0.889										
							TLF_IC2	0.803										
							TLF_IC3	0.801										
		Intellectual Stimulation (IS)					0.863	0.916	0.785	0.896	0.896	TLF_IS1	0.873					
												TLF_IS2	0.900					
												TLF_IS3	0.884					
		Idealized Influence (II)										0.878	0.925	0.804	0.907	0.907	TLF_II1	0.876
																	TLF_II2	0.889
																	TLF_II3	0.924
	Inspirational Motivation (IM)	0.766	0.895	0.810	0.810	0.917											TLF_IM2	0.891
																	TLF_IM3	0.909
																	Transactional Leadership	Management by Exception (ME)
	LTS_ME2						0.832											
	LTS_CR1						0.763											
	Contingent Reward (CR)						0.739	0.852	0.657	0.903	0.903							LTS_CR2
												LTS_CR3	0.851					
												CC2	0.855					
	Organizational culture											Cla (CC)	0.807	0.886	0.722	0.921	CC3	0.870
		CC5	0.823															
		CH2	0.854															
		Hierarquical (CH)	0.659	0.810	0.588	0.622						0.622					CH5	0.733
CH6																	0.706	
CIN1																	0.823	
Innovative (CIN)		0.833					0.889	0.667	0.926	0.926	CIN2						0.784	
											CIN4						0.837	
											CIN5						0.822	
Market (CM)	0.660										0.814		0.594	0.827	0.827	CM4	0.778	
																CM5	0.748	
																CM6	0.785	

Source: Author's work.

The LOC with a strong relationship with the Leadership construct (Figure 1) is Transformational Leadership (0.987), and the LOC with a strong relationship with Transformational Leadership is Individualized Consideration (0.929), which highlights the importance of the leader sharing his vision among workers and in the leader's charisma. The LOC with a strong relationship with the culture construct is innovative (0.926), which highlights the items related to change and flexibility.

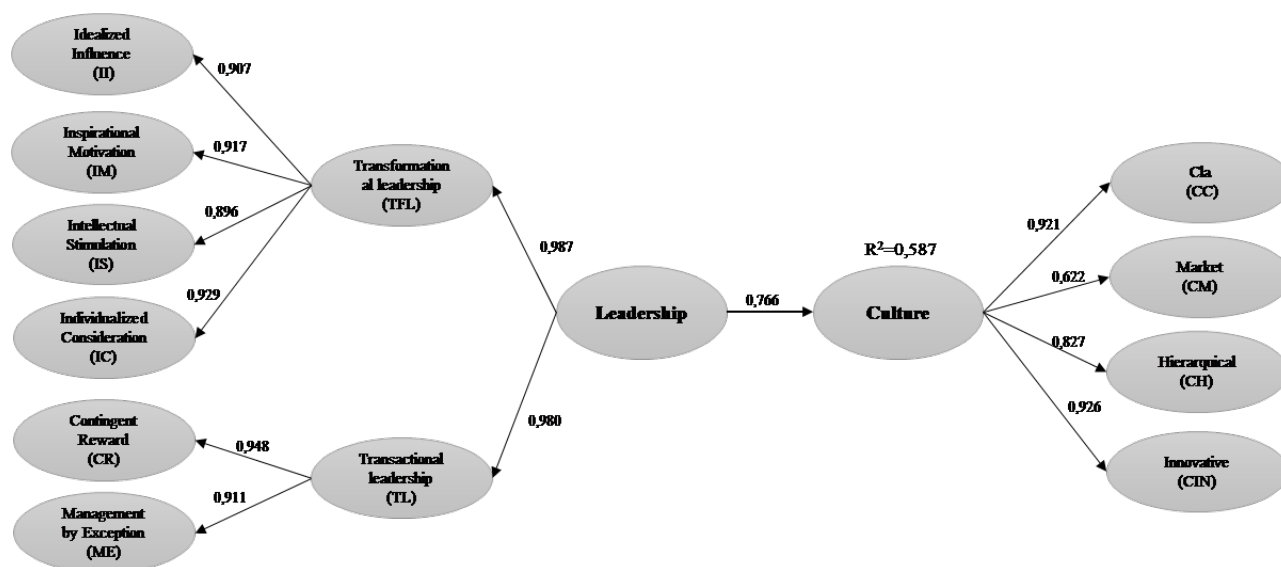


Figure 1: Structural model

Source: Author's work.

The discriminant validity was validated using two criteria, cross-loadings and Fornell-Larcker. The cross-loading values are shown in Table 3 (leadership observable variables) and Table 4 (culture observable variables). All higher loadings occur in the construct that the observable variable measures, ensuring discriminant validity by that criterion

Table 3
Leadership discriminant validity crossloadings criterion

Observable variable	IC	IS	II	IM	ME	CR
TLF_IC1	0.899*	0.778	0.752	0.798	0.712	0.714
TLF_IC2	0.803*	0.561	0.615	0.637	0.590	0.613
TLF_IC3	0.801*	0.539	0.654	0.616	0.605	0.563
TLF_IS1	0.650	0.873*	0.562	0.665	0.643	0.675
TLF_IS2	0.686	0.900*	0.658	0.721	0.615	0.623
TLF_IS3	0.682	0.884*	0.646	0.732	0.637	0.710
TLF_II1	0.689	0.600	0.876*	0.700	0.587	0.609
TLF_II2	0.730	0.630	0.889*	0.651	0.576	0.606
TLF_II3	0.757	0.660	0.924*	0.720	0.589	0.632
TLF_IM2	0.709	0.667	0.674	0.891*	0.613	0.690
TLF_IM3	0.774	0.765	0.711	0.909*	0.674	0.726
TLS_ME1	0.696	0.552	0.667	0.671	0.870*	0.652
TLS_ME3	0.633	0.689	0.465	0.574	0.869*	0.649
TLS_CR1	0.569	0.562	0.460	0.533	0.548	0.763*
TLS_CR2	0.663	0.574	0.679	0.675	0.665	0.815*
TLS_CR3	0.609	0.698	0.518	0.694	0.601	0.851*

Table 4
Culture discriminant validity crossloadings criterion

Observable variable	CC	CH	CIN	CM
CC2	0.855*	0.607	0.662	0.273
CC3	0.870*	0.639	0.703	0.304
CC5	0.823*	0.610	0.742	0.419
CH2	0.739	0.854*	0.673	0.394
CH5	0.462	0.733*	0.367	0.273
CH6	0.401	0.706*	0.349	0.355
CIN1	0.660	0.567	0.823*	0.379
CIN2	0.694	0.471	0.784*	0.326
CIN4	0.665	0.534	0.837*	0.394
CIN5	0.690	0.512	0.822*	0.487
CM4	0.259	0.374	0.355	0.778*
CM5	0.391	0.353	0.436	0.748*
CM6	0.251	0.301	0.328	0.785*

Source: Author's work.

*Outer loading

Regarding Fornell and Larcker criterion, Table 5 presents the results for the leadership construct and Table 6 for the cultural construct. It can be inferred from the results that the measurement model, because the square root of the AVE was higher than the construct correlations, consequently, ensuring discriminant validity for all the constructs (Ringle et al., 2014). After the validation of the model about reliability (Hair et al., 2011) and validity (Ringle et al., 2014), the measurement model was confirmed. The next step is the evaluation of the structural model.

Table 5: Leadership discriminant validity: Fornell and Larcker criterion

Constructs	IC	IS	II	IM	ME	CR
Individualized Consideration (IC)	0.835*					
Intellectual Stimulation (IS)	0.759	0.886*				
Idealized Influence (II)	0.809	0.703	0.897*			
Inspirational Motivation (IM)	0.825	0.798	0.770	0.900*		
Management by Exception (ME)	0.764	0.713	0.651	0.716	0.869*	
Contingent Reward (CR)	0.758	0.756	0.686	0.787	0.748	0.811*

*Square root of the AVE. Source: Author's work.

Table 6
Culture discriminant validity Fornell and Larcker criterion

Constructs	CC	CH	CIN	CM
Cla (CC)	0.850*			
Hierarchical (CH)	0.729	0.767*		
Innovative (CIN)	0.829	0.638	0.817*	
Market (CM)	0.394	0.448	0.488	0.771*

Source: Author's work.

* Square root of the AVE.

4.2 Structural model

The structural model makes it possible to verify the proposed relationships and the quality of the model used (Hair et al., 2011; Ringle et al., 2014; Oliveira et al., 2016), confirming or refuting the research hypotheses (Bido et al., 2010). Figure 1 shows the main structural model results for the leadership and organizational culture HOCs. The key criteria for assessing the PLS-SEM structural model are the evaluation of the model's predictive capability and the validation of the relationship between the constructs, estimating the coefficients of determination (R²) for the research endogenous variables and examining the sizes and significance of the path coefficients, respectively (Hair et al., 2017a).

Figure 1 shows the path coefficient of the model and the results of the hypothesis testing. The proposed hypothesis is supported: by the relationship between leadership and organizational culture ($\beta = 0.766$). Figure 2 shows the results of the Bootstrapping procedure (5000 resamples) presented by the t-test values (Hair et al., 2011). This analysis confirms the statistical significance of loadings and path coefficients. The t-test values of 1.65, 1.96. and 2.58 are associated with the following significant levels 10%, 5%, and 1%, respectively (Hair et al., 2011; 2017a). The t-values show that the loadings and path coefficients are valid with a 1% level of significance. In other words, the relationship between LOCs and HOCs is statistically validated, as well as between leadership and organizational culture.

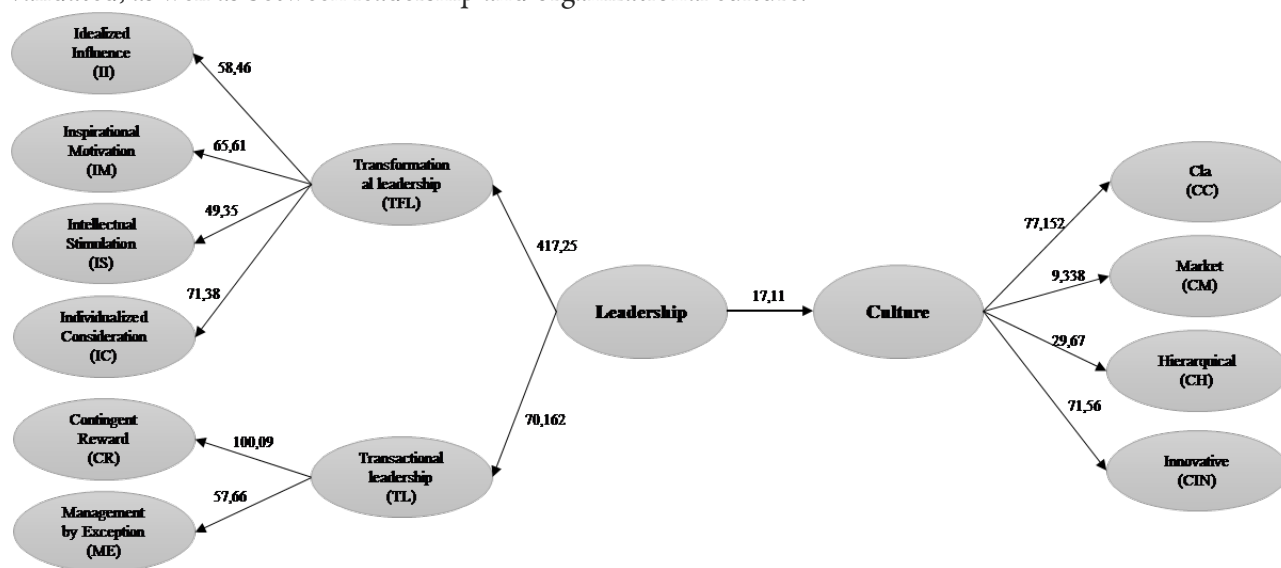


Figure 2: T-tests values (Bootstrapping procedure)

The prediction power of the structural model was evaluated by the coefficient of determination (R²) for the endogenous latent variables (Hair et al., 2017a), in this case, organizational culture. R² values higher than 0.26 are considered with high explanatory power for social sciences (Cohen, 1988). In this study, leadership explains a great amount of organizational culture variance (R²=0.578), and the model has predictive power. The path coefficient between leadership and organizational culture ($\beta = 0.766$) shows that there is a positive impact of leadership on culture, emphasizing that leadership can reinforce and even shape an organization's culture, even if public. The greater the investment in leadership practices, the greater the reinforcements of the culture. In addition to the R² values, the impact on the endogenous constructs can be evaluated by the change in the R² value when a specified exogenous construct is omitted, called effect size - f. (Hair et al., 2017a). $f^2 \geq 0.35$ represents large effect sizes in the endogenous construct (Cohen, 1988) and the effect size of leadership on culture is 0.510, reinforcing that leadership is a factor that explains the cultural construct. Therefore, hypothesis H1 is supported by the model.

4.3 Correlation analysis

For a better understanding of the relationship between culture and leadership, the authors proposed an analysis of the correlation between the different types of culture and leadership, using the factor scores generated from the model for the LOCs. The factor scores summarize the loadings of the observable variables in the constructs and allow an analysis of the correlation between constructs (Hair et al., 2011).

PLS-SEM results in precise estimates for factor scores since they are calculated as linear combinations of the values of all the observable variables associated with a latent construct (Hair et al., 2011). We then analyze Spearman's correlations (Ringle et al., 2014). Table 7 presents Spearman's correlation results between the LOCs of the leadership and culture presented by the structural model in the SmartPLS 2 software.

Table 7 shows that the LOCs of transformational and transactional leadership styles, in all their components, have significant and positive correlations with the types of clan, hierarchical, innovative, and market culture. Clan culture stands out as the cultural type with the highest correlation with transformational and transactional leadership styles, in all its components. In contrast, market culture is the cultural type that has minor correlations with transformational and transactional leadership styles, in all its components. The market culture is also the one with the lowest loading with the HOC organizational culture (Figure 1). Showing that this LOC does not have much in common with the other organizational culture LOCs.

Table 7
Spearman's rank correlations

Leadership	Culture			
	Cla (CC)	Innovative (CIN)	Hierarchical (CH)	Market (CM)
Individualized Consideration (IC)	0.668*	0.524*	0.491*	0.281*
Intellectual Stimulation (IS)	0.671*	0.589*	0.544*	0.287*
Idealized Influence (II)	0.663*	0.531*	0.543*	0.229*
Inspirational Motivation (IM)	0.638*	0.510*	0.476*	0.232*
Management by Exception (ME)	0.604*	0.463*	0.461*	0.272*
Contingent Reward (CR)	0.615*	0.504*	0.476*	0.309*

Note: Correlation is significant (*) at level 0.01. Source: Author's work.

Table 7 shows that the transformational style of leadership, in all its components (IC, IS, II, and IM), has more significant correlations with Clan (CC), Hierarchical (CH), and Innovative culture (CIN) compared to the transactional leadership style in its two factors (ME and CR). This may be an indication that the components of the transformational style of leadership can reinforce these types of cultures and should be further investigated.

Regarding the correlation between leadership and organizational culture LOCs, this analysis is relevant for this study since it allows us to understand the relationships between the different types of leadership and the different types of culture. Since there is a highly significant positive correlation (Cohen, 1992) between the leadership and organizational culture constructs.

4.4 Discussion: leadership and culture

The first theoretical implication of this study concerns the confirmation of the research hypothesis. The PLS-SEM method validated the relationship between the leadership and organizational culture constructs, as mentioned by Dull and Tech (2010), especially in the public sector (Ashikali & Groeneveld, 2015; Faría, 2010; Hintea, 2015; Magada & Govender, 2016; Ralston et al., 2006; Zahari & Shurbagi, 2012). The main objective of this study was to capture, from the respondents' perception, whether leadership affects the culture of the branches under study. This objective was achieved in two ways, a positive and statistically significant relationship between leadership and organizational culture was identified, and, through the correlation analysis, it was verified which components of leadership are related to the different styles of culture.

Results highlight evidence of the positive effect of leadership on the culture of a public organization as mentioned by Hintea (2015) and Magada and Govender (2016). Similarly, this positive effect was also observed by Ashikali and Groeneveld (2015), using the same investigative method (PLS-SEM) in the

Dutch public service. Considering PLS-SEM analysis, it was concluded that transformational leadership, is the most characteristic leadership style of organizational management that explain the leadership construct, and innovative and clan culture is the cultural type that most represents the core values of the organization.

Thus, in the respondents' perception, the manager has the role of making the collective interests prevail over the personal interests of the individuals, through the leader's charisma towards his/her work team in a leadership style. The surveyed branches also have a family-type organizational culture in which the development, commitment, and loyalty of workers are sought, as well as appreciation of team participation in organizational decision-making. These research findings were also observed, respectively, in the studies by Zahari and Shurbagi (2012) and by Somenzari et al. (2017) in a national public organization. One of the possible explanations for these findings may be the advent of the management reform of the Brazilian public administration at the end of the twentieth century, aiming to improve performance in the public service by attempting to change the management paradigm from processes to results (Hoffmann & Lima, 2017). In the specific case of social security services, to improve performance, the agencies establish general management and principles of governance (Pereira, Couto & Sindeaux, 2015).

However, despite the changes resulting from this reform, according to the respondents' perception, bureaucratic practices coexist with managerial ones (Traesel & Merlo, 2014). This is because, through structural model research constructs, the loadings and significance of transactional leadership, in its management by exception factor, and the hierarchical culture can be observed with high values. This means that an organizational culture based on values, norms, and rules that aim at stability and formality is also present in social security branches, as well as leadership with an individualistic orientation, in which the manager and the team rationally aim for their interests. Similar results can be seen in the literature, respectively, in the studies of Zahari and Shurbagi (2012) and Dias and Borges (2015).

The third theoretical implication of this study refers to the understanding of the statistical correlations identified between the types of leadership and organizational culture styles in the surveyed social security branches. Through the exploratory analysis of the data, among the several correlations presented between the leadership and organizational culture constructs, it could be observed that the most prominent one occurred between the transformational leadership style and the clan culture, as investigated by Wright, Moynihan, and Pandey (2012).

These results reinforce the need for a deeper analysis of the construct of leadership in the Brazilian public sector (Barlach, 2012). As highlighted by Oliveira et al. (2010), unlike private organizations, public sector leaders must deal with a greater multiplicity of interests, not always formally. Then, teams in public bodies would thus present themselves as more dependent on their leaders (Oliveira et al., 2010). Further the public reforms induced public managers to assume the role of leaders (Oliveira, et al., 2010) and a new sense of leadership (Barlach, 2012). By empirically verifying the influence of leadership on the culture of a national public organization, this work indicates, in the context of the research, that a public manager can influence the culture of an INSS agency and, in a broader sense, signals, the existence of a correlation between leadership and the culture of the public sector in Brazil.

5 Conclusions and implications

This study contributes by filling the gap in the literature concerning the relationship between leadership, organizational culture, and evaluation and program planning for leadership. This issue entails important questions about the development of evaluation plans for leadership (Burbaugh, Seibel, & Archibald, 2017) and to improve the culture for evaluation (Janzen, et. al., 2017; Vengrin, et al., 2018). This study indicates, that public managers can influence the culture and, more broadly, this study makes evident the existence of a correlation between leadership and culture (Brandão & Bruno-Faria, 2013; Giritli, et al., 2013; Imran, Zahoor & Zaheer, 2012; Shao Feng & Liu, 2012; Silva & Fadul, 2010; Masood, Dani, Burns & Backhouse, 2006;).

The findings have managerial implications, due to the analysis; the clan culture is compatible with transformational leadership. This means that a culture characterized by a work environment in which the team shares personal and professional experiences, seeking everyone's development, commitment, loyalty, and participation, is compatible with the transformational leadership style, in which the manager goes beyond labor transactions and contractual relations, transcending individual interests for the sake of the organization. Somenzari et al. (2017) also saw this implication in the study, in a Brazilian public organization. This implication is supported by other studies about leadership and organizational culture (Dull & Tech, 2010; Ashikali & Groeneveld, 2015; Faría, 2010; Hintea, 2015; Magada & Govender, 2016; Ralston et al., 2006; Zahari & Shurbagi, 2012). The influence of leadership in culture has significant implications for evaluation and planning, as explored by Bean, Harlow, and Kendellen (2017) Murphy, Yuan, and Elias (2020) and Guerrero and Kim (2013).

However, it is important to highlight the limitations of the research. One limitation may be that this study used only one type of research method, namely the quantitative approach, without the aid of the qualitative method. Thus, possibilities for future studies emerge from qualitative research intending to deepen the understanding of the relationships between different styles of leadership and culture. In-depth studies can allow the positive and negative effects of management reform in the public sector can be observed and analyzed, as well as the role of leadership in this recent attempt at the transformation: of Brazilian public organizational culture, in this moment of transition between the bureaucratic and managerial models. Finally, the limited population scope selected, and non-probabilistic sampling may have made it difficult to generalize the conclusions reached in this study.

Therefore, it is suggested as a possibility of future studies, to consider the expansion of the population to be investigated, through the inclusion of other public institutions (national and international) using probabilistic sampling techniques to establish analyses, comparisons, and generalizations that may indicate whether the relationships between leadership and organizational culture are confirmed in other contexts.

References

- Alatorre, A. V. (2013). Interdependencia entre el liderazgo transformacional, cultura organizacional y cambio educativo: una reflexión. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 11(1), 73-91.
- Ashikali, T., & Groeneveld, S. (2015). Diversity management in public organizations and its effect on employees' affective commitment: the role of transformational leadership and the inclusiveness of the organizational culture. *Review of Public Personnel Administration*, 35(2), 146-168.
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The leadership quarterly*, 16(3), 315-338.
- Barbosa, F. M., Gambi, L. N., & Gerolamo, M. C. (2017). Liderança e gestão da qualidade – um estudo correlacional entre estilos de liderança e princípios da gestão da qualidade. *Gestão & Produção*, 24(3), 438-449.
- Barlach, L. (2012). Liderança e inovação na administração pública. *Revista Gestão & Políticas Públicas*, 2(1).
- Barreto, L. M. T. S., Kishore, A., Reis, G. G., Baptista, L. L., & Medeiros, C. A. F. (2013). Cultura organizacional e liderança: uma relação possível? *Revista de Administração*, 48(1), 34-52.
- Bass, B. M., & Avolio, B. J. (1990). *Multifactor leadership questionnaire*. Palo Alto, CA: Consulting Psychologists Press.
- Batich, M. (2004). Previdência do trabalhador: uma trajetória inesperada. *São Paulo em Perspectiva*, São Paulo, v. 18, n. 3, p. 33-40.
- Bean, C., Harlow, M., Kendellen, K. (2017). Strategies for fostering basic psychological needs support in high-quality youth leadership programs. *Evaluation and Program Planning*, 61, 76-85.
- Bido, D. S., Godoy, A. S., Araujo, B. F. V. B., & Louback, J. C. (2010). Articulação entre as aprendizagens individual, grupal e organizacional: um estudo no ambiente industrial. *Revista de Administração Mackenzie*, 11(2), 68-95.
- Brandão, S. M., & Bruno-Faria, M. F. (2013). Inovação no setor público: análise da produção científica em periódicos nacionais e internacionais da área de administração. *Revista de Administração Pública*, 47(1), 227-248.
- Bresser-Pereira, L. C. (2018). *Construindo o Estado republicano: democracia e reforma da gestão pública*. Editora Fgv.
- Bruno-Faria, M. F., & Fonseca, M. V. A. (2014). Medidas de cultura de inovação e de cultura organizacional para análise da associação com inovação. *Revista de Administração e Inovação*, 11(3), 30-55.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Burbaugh, B., Seibel, M., & Archibald, T. (2017). Using a Participatory Approach to Investigate a Leadership Program's Theory of Change. *Journal of Leadership Education*, 16(1), 192- 204.
- Calaça, P. A., & Vizeu, F. (2015). Revisitando a perspectiva de James MacGregor Burns: qual é a ideia por trás do conceito de liderança transformacional? *Cadernos EBAPE.BR*, 13(1), 121-135.
- Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: based on the competing values framework*. Revised ed. San Francisco: Jossey-Bass.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2. ed. New York: Psychology Press.
- Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, 1(3), 98-101.

- Crumpton, C. D., Medeiros, J. J., Ferreira, V. D. R. S., Sousa, M. D. M., & Najberg, E. (2016). Evaluation of public policies in Brazil and the United States: a research analysis in the last 10 years. *Revista de Administração Pública*, 50, 981-1001.
- Dias, M. A. M. J., & Borges, R. S. G. (2015). Estilos de liderança e desempenho de equipes no setor público. *Revista Eletrônica de Administração*, 21(1), 200-221.
- Dull, M., & Tech, V. (2010). Leadership and organizational culture: sustaining dialogue between practitioners and scholars. *Public Administration Review*, 70(6), 857-866.
- Faría, L. C. P. (2010). Liderazgo y cultura organizacional en instituciones de Educación Básica. *Revista Venezolana de Gerencia*, 15(51), 486-503.
- Forza, C. (2002). Survey research in operations management: a process-based perspective. *International Journal of Operations & Production Management*, 22(2), 152-194.
- Gentil, D. L. (2019). *A política fiscal e a falsa crise da seguridade social brasileira: uma história de desconstrução e de saques*. Mauad Editora Ltda.
- Giambiagi, F., Além, A. C. (2011). A crise da Previdência Social. In: Giambiagi, F. *Finanças públicas: teoria e prática no Brasil*. 4.ed. Rio de Janeiro: Elsevier, p. 279-311.
- Giritli, H., Oney-Yazici, E., Topçu-Oraz, G., & Acar, E. (2013). The interplay between leadership and organizational culture in the Turkish construction sector. *International Journal of Project Management*, 31(2), 228-238.
- Guerrero, E. G., Kim, A. (2013). Organizational structure, leadership and readiness for change and the implementation of organizational cultural competence in addiction health services, *Evaluation and Program Planning*, 40(1), 74-81.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados*. Bookman editora.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-151.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2017a). *Multivariate Data Analysis*. New Jersey.
- Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017b). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
- Hintea, C. (2015). Transformational leadership and performance in the romanian public administration. *Revista de Cercetare si Interventie Sociala*, 51(1), 103-121.
- Hoffmann, D. S., & Lima Filho, R. N. (2017). Reforma gerencial e indicadores de desempenho: uma revisão bibliográfica. *Revista Contribuciones a las Ciencias Sociales*, 2, 1-12.
- Imran, R., Zahoor, F., & Zaheer, A. (2012). Leadership and performance relationship: culture matters. *International Journal of Innovation, Management and Technology*, 3(6), 713-717.
- Janzen, R., Ochocka, J., Turner, L., Cook, T., Franklin, M., & Deichert, D. (2017). Building a community-based culture of evaluation. *Evaluation and Program Planning*, 65, 163-170.
- Kannan, K. S., & Manoj, K. (2015). Outlier detection in multivariate data. *Applied Mathematical Sciences*, 47(9), 2317-2324.
- Lambright, W. H., & Quinn, M. M. (2011). Understanding leadership in public administration: the biographical approach. *Public Administration Review*, 71(5), 782-790.

- Magada, T., & Govender, K. (2016). The relationship among leadership, organisation culture, and performance: a South African public service organization perspective. *International Conference on Management, Leadership & Governance*, 210-216.
- Masood, S. A., Dani, S. S., Burns, N. D., & Backhouse, C. J. (2006). Transformational leadership and organizational culture: the situational strength perspective. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 220(6), 941-949.
- Morgan, G. (2006). *Imagens da organização*. Edição Executiva. 2. ed. São Paulo: Atlas.
- Murphy, N. A., Yuan, M., & Elias, M. J. (2020). Youth leadership programming in high-poverty minority students. *Evaluation and Program Planning*, 79(1), 101728.
- Nikčević, G. (2016). The influence of organizational culture on leadership: case study montenegro. *Tehnicki Vjesnik/Technical Gazette*, 23(1).
- Nohara, I. P. (2014). Contrato de gestão para ampliação da autonomia gerencial–Case jurídico de malogro na importação e novas formas de se alcançar maior eficiência na gestão pública. *A&C-Revista de Direito Administrativo & Constitucional*, 14(55), 169-185.
- Oliveira, F. B. D., Sant'Anna, A. D. S., & Vaz, S. L. (2010). Liderança no contexto da nova administração pública: uma análise sob a perspectiva de gestores públicos de Minas Gerais e Rio de Janeiro. *Revista de Administração Pública*, 44, 1453-1475.
- Oliveira, R. R., Marinho, M. F. A., & Dias, A. T. (2016). Um estudo sobre a utilização da modelagem de equações estruturais na produção científica nas áreas de administração e sistemas de informação. *Revista de Administração-UFES*, 9(4), 559-578.
- Paranhos, R., Figueiredo Filho, D. B., Rocha, E. C., & Silva Junior, J. A. (2013). Corra que o survey vem aí: noções básicas para cientistas sociais. *Revista Latinoamericana de Metodología de la Investigación Social*, 3(6), 7-24.
- Pereira, R. M. M., Couto, F. F., & Sindeaux, R. V. (2015). Mudanças normativas para uma nova administração pública no INSS: considerações sobre a transição dos modelos na gestão de pessoas. *Revista de Carreiras e Pessoas*, 5(2), 232-248.
- Popa, B. M. (2012). The relationship between leadership effectiveness and organizational performance. *Journal of Defense Resources Management*, 3(1), 123-127.
- Popa, B. M. (2013). Risks resulting from the discrepancy between organizational culture and leadership. *Journal of Defense Resources Management*, 4(1), 179-182.
- Prajogo, D. I., & Mcdermott, C. M. (2011). The relationship between multidimensional organizational culture and performance. *International Journal of Operations & Production Management*, 31(7), 712-735.
- Ralston, D. A., Terpstra-Tong, J., Terpstra, R. H., Wang, X., & Egry, C. (2006). Today's state-owned enterprises of China: are they dying dinosaurs or dynamic dynamos? *Strategic Management Journal*, 27(9), 825-843.
- Reed, L. L., Vidaver-Cohen, D., & Colwell, S. R. (2011). A new scale to measure executive servant leadership: Development, analysis, and implications for research. *Journal of business ethics*, 101(3), 415-434.
- Reis, M. L. (2014). Reforma do Estado: da administração burocrática à administração pública gerencial: o caso brasileiro. *FOCO*, 7(1), 104-137.
- Ringle, C. M., Silva, D., & Bido, D. (2014). Modelagem de equações estruturais com utilização do Smartpls. *Revista Brasileira de Marketing*, 13(2), 56-73.
- Schein, E. H. (2004). *Organizational culture and leadership*. 3. ed. San Francisco: Jossey-Bass.

- Schwarzer, H. (2009). Previdência social: reflexões e desafios. Brasília: MPS, 233 p. *Coleção Previdência Social, Série Estudos*; v. 30, 1. Ed. Recuperado de http://www.previdenciasocial.gov.br/arquivos/office/3_100202-164641-248.pdf, em dez. 2016.
- Shao, Z., Feng, Y., & Liu, L. (2012). The mediating effect of organizational culture and knowledge sharing on transformational leadership and enterprise resource planning systems success: an empirical study in China. *Computers in Human Behavior*, 28(6), 2400-2413.
- Silva, L. P., & Fadul, E. (2010). A produção científica sobre cultura organizacional em organizações públicas no período de 1997 a 2007: um convite à reflexão. *Revista de Administração Contemporânea*, 14(4), 651-669.
- Silva, L. L. & Costa, T. M.T. (2016). A formação do sistema previdenciário brasileiro: 90 anos de história. *Administração Pública e Gestão Social*, v. 8, n. 3, p. 159-173, jul./set.
- Somenzari, M. S., Ramos, A. C. C., & Sacomano Neto, M. (2017). Estilos de liderança e cultura organizacional: estudo comparativo de uma organização pública vis-à-vis uma empresa privada. *Revista Espacios*, 38(53), 22-38.
- Souza, M. E. A. (2011). Déficit previdenciário: fato ou mito? *Cognitio Juris*, 1(3), 77-86.
- Trapero, F. G. A., & Lozada, V. M. (2010). Differences between the relationship of integrity and leadership styles according to the model of Bernard Bass. *Estudios Gerenciales*, 26(114), 59-76.
- Traesel, E. S., & Merlo, Á. R. C. (2014). "Somos sobreviventes": vivências de servidores públicos de uma instituição de seguridade social diante dos novos modos de gestão e a precarização do trabalho na reforma gerencial do serviço público. *Cadernos de Psicologia Social do Trabalho*, 17(2), 224-238.
- Vargas, K. S., Horbe, T. A. N., Figueira, K. K., Moura, G. L., & Lopes, L. F. D. (2014). Estilo de liderança e dimensões da cultura organizacional em incubadora tecnológica. *REUNA*, 19(4), 21-40.
- Vengrin, C., Westfall-Rudd, D. Archibald, T., Rudd, R. & Singh, K. (2018). Factors affecting evaluation culture within a non-formal educational organization. *Evaluation and Program Planning*, 69, 75-81.
- Wright, B. E., Moynihan, D. P., & Pandey, S. K. (2012). Pulling the levers: transformational leadership, public service motivation, and mission valence. *Public Administration Review*, 72(2), 206-215.
- Yu, T., & Wu, N. (2009). A review of study on the competing values framework. *International journal of business and management*, 4(7), 37-42.
- Zahari, I. B., & Shurbagi, A. M. A. (2012). The effect of organizational culture and the relationship between transformational leadership and job satisfaction in the petroleum sector of Libya. *International Business Research*, 5(9), 89-97.