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Organizational Culture, Controllership Partnership Level, and Performance Appraisal Systems

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Abstract

Objective: To understand associations between the different intensities of organizational culture typifications (CO), levels of partnership exercised by controllership (NPC), and the breadth of organizational performance appraisal systems (ASADO).

Method: Descriptive, quantitative study based on a survey with 89 respondents, primarily controllers. The respondents' perceptions toward the three variables previously mentioned were analyzed using multivariate analysis (ANACOR and HOMALS).

Results: The results reveal that organizations with stronger organizational cultures are directly associated with more participatory controllership (higher levels of controllership partnership), using more comprehensive performance appraisal systems. Additionally, the results show an absence of a direct association between organizational culture and the breadth of performance appraisal systems.

Contributions: For academia, the results promote an understanding of the direct association between NPC and ASADO and the impossibility of establishing a direct association between CO and ASADO. Thus, this study transcends the usual explanatory approaches of the Contingency Theory. For professional practice, especially for those responsible for controllership, the results provide a clear perspective of the association between strong organizational cultures with higher levels of controllership partnership and between the latter, with more comprehensive performance appraisal systems.

Keywords: Organizational Culture, Controllership as a business partner, Performance Appraisal System.

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1. Introduction

The contingency relationships between the Organizational Culture variable (Schein, 1984; Smircich, 1983) and the variables Organizational Structure and Organizational Performance (Carmona, Silva, & Gomes, 2018; Gordon & DiTomaso, 1992; Kotrba *et al*., 2012; Parente *et al*., 2018; Smircich, 1983; Zheng, Yang, & McLean, 2010) have been studied for decades (O'Reilly *et al.*, 2014). Additionally, some studies report an association between the strength of culture (which can also be called cultural intensity and measured through the consistency, or centrality, of the responses obtained in surveys addressing specific cultural standards or values of a given organizational context) and its influence on performance (Lee & Yu, 2004; Gordon & DiTomaso, 1992).

Bringing this reflection to the field of Management Accounting, we may say that controllership, as an administrative area (Catelli, 2001; Melo & Paulo, 2000), is part of the organizational structure, and, contingently, through adapting the services it provides, it fits the organization's needs and other contingency factors, among which Organizational Culture, thus actively participates in the development and use of various artifacts intended to contribute to managers' decision-making processes (Tarifa *et al.*, 2011; Henri, 2006).

The evolution process of controllership and controller has been the subject of many studies, especially those assessing associated activities (Beuren, Fachini & Nascimento, 2010; Borinelli, 2006; Catelli, 2001; Tarifa *et al*., 2011). However, some authors (Goretzki, Strauss & Weber, 2013; Järvenpää, 2007; Weber, 2011) propose a new research approach, assessing controllership as a "Business Partner", as controllership and controller start developing more proactive tasks towards business areas (Weber, 2011). In a way, the literature is in line with what happens in practice because the term Business Partner is already incorporated into the organizational context, as business literature shows, and in companies, as in the case of BASF, which adopts this term (Arenales , 2016).

There is some criticism regarding performance appraisal systems' lack of clarity and objectivity and their breadth and purpose as to what is assessed (Neely, Bourne, & Kennerly, 2000; Neely, Gregory, & Platts 1995). The reason is that these systems determine what, how, and when measures are taken (Merchant & Van der Stede, 2007) and are used as the basis for performance assessments. In short, Performance Appraisal Systems can be understood as artifacts or devices that provide answers to managers' informational needs and are also subject to adjustments required by different elements in the organizations' internal and external contexts.

On the other hand, Organizational Culture can be understood as a relevant strategic resource (Parente *et al*., 2018; Santos,1998), while certain forms of Organizational Culture, especially those that show stronger typifications, may be associated with adjustments in the other existing structures (Santos *et al.*, 2014; Smircich, 1983; Lee & Yu, 2004; Gordon & DiTomaso, 1992). Thus, for example, controllership may be associated with different tasks and processes, resulting in different performances (Tarifa & Almeida, 2018; Bonisenha & d'Angelo, 2018; Parente *et al.*, 2018; Santos,1998).

Much effort has been exerted to highlight the contributions of controllership and the controller's role in organizations (Järvenpää, 2007; Weber, 2011; Goretzki *et al*., 2013; Arenales, 2016). However, professionals trying to implement controllership as a Business Partner still face many difficulties. Understanding the association between cultural factors and the development of performance appraisal systems can contribute to how controllership develops within organizations, characterized in terms of Level of Partnership. Thus, this study's objective is to improve understanding of the associations between the different intensities of types of Organizational Culture, levels of partnership in controllership, and breadth of performance appraisal systems.

Based on the arguments previously presented, and seeking to expand the reach of what previous studies addressed separately, the following guiding question was established: "**What are the associations between the different intensities of the types of organizational culture, level of partnership exercised by controllership, and the breadth of organizational performance appraisal systems?**"

In order to empirically investigate this question, a survey was conducted with 89 professionals working in non-financial companies in Brazil, in which controllership is an administrative body.

This study also contributes to the literature on the topic, seeking to highlight associations between artifacts, structures, and cultural typifications (Schein, 1984), in addition to showing how the characteristics of the variables Organizational Culture, Levels of Controllership Partnership, and Breadth of Performance Appraisal Systems are identified in different organizational contexts, with a focus on improving the performance of controllership (Oyadomari *et al*., 2014).

2. Literature Review

The following items present the literature review that supported hypothesis formulation, the associations between the variables Organizational Culture, Levels of Controllership Partnership, and Breadth of Performance Appraisal Systems.

2.1 Characteristics of Organizational Culture and Controllership as a Business Partner

Schein (1984) conceptualizes Organizational Culture as a dynamic pattern of basic assumptions defined by a group, as a response to problems, which are taught to new members, characterizing "the correct way to perceive, think, and feel in relation to those problems" (Schein, 1984, p. 3). It can also be understood as "the social glue" or normative that promotes organizational cohesion (Schein, 1984, p. 14; Smircich, 1983), working as a control mechanism, albeit informal, approving or disapproving behaviors; giving meaning, direction, mobilization, and motivation to an organization's members; manifesting itself through practices, behaviors, and artifacts shared among a company's members (Pothukuchi *et al*., 2002; Cao *et al*., 2015). The literature shows that a company's business areas and units tend to respond better when management practices are compatible with the current organizational culture model (Pothukuchi *et al*., 2002).

Research shows that cultures perceived to be strong, i.e., in which there is a high level of consensus (Ho, Wu & Wu, 2014), or cultures that are more clearly defined and have consistent, and stable values and rules, regardless of their substantive value, are associated with greater adaptability and better performance (Gordon & DiTomaso, 1992; Hansen & Wernerfelt, 1989; Lee & Yu, 2004). Although there is evidence that Organizational Culture influences Organizational Structure (Smircich, 1983; Zheng & McLean 2010), it has not been identified whether the different perceptions of culture strength have direct implications in such an association, as has already been verified with performance (Lee & Yu, 2004; Gordon & DiTomaso, 1992).

Cameron and Quinn (2005) developed the Organizational Culture Assessment Instrument (OCAI), which enables identifying the cultural characteristics of a given organization, including the existence of predominant patterns, i.e., stronger patterns. Numerous studies have used the tool developed by Cameron and Quinn (2005) (Barreto *et al*., 2013; Dubey *et al*., 2019; Hartnell, Ou, & Kinicki, 2011; Hock-Doepgen *et al*., 2021; Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2011; Schein, 2010; Sony, Antony & Douglas, 2020; Tian *et al*., 2018).

The OCAI presents four groups of cultural values, with specific characteristics observed in organizations: (i) Clan Culture: it is similar with family businesses, the characteristics of which include valuing the participation of company members in the decision-making process, teamwork, and the development of human resources; (ii) Adhocracy Culture: focused on innovation processes and motivated by events external to the company, characterized by creative and motivating leadership, diversified internal operations, and flexibility and restructuring abilities; (iii) Hierarchy Culture: the objectives and actions to be performed by the organizational business' areas and units are established by the top management; it is characterized by bureaucratic and conservative motivational factors; and (iv) Market Culture: does not refer to the traditional aspects of a consumer market, but rather an inherent type of market, based on external influences and the company's specific activities, focused on results and customers, and others external factors that contribute to the company's development. Its characteristics include a focus on competitiveness and productivity.

Studies also show that controllership performs better when it is organizational strategy-oriented, acting with a high level of involvement and commitment to the company's global business, cooperating with the business' other areas and units, which has been considered to be a business partner behavior (Järvenpää, 2007; Weber, 2011, Goretzki *et al.*, 2013). The reason is that by acting at higher levels of partnership, controllership can contribute, more actively and directly, to the organization's strategic management (Weber, 2011; Rieg, 2018).

Figure 1 presents the conceptual framework developed by Weber (2011, p. 42), in which the author sought to highlight the controllership's different levels of action, the close connections between them, and the various activities performed at different levels. It enables characterizing, among the four stages presented, the stage of development and/or maturity of a given controllership based on the activities it performs. The ranges presented in Figure 1 are called in this paper "controllership's maturity stages" and are arranged from the lowest to the highest level of maturity, from bottom to top. In the fourth and last stage, controllership proactively provides information, contributes to the development of plans, and challenges and encourages management from a new perspective of the business and its context. In this last phase, controllership assumes a business partner behavior (Weber, 2011).

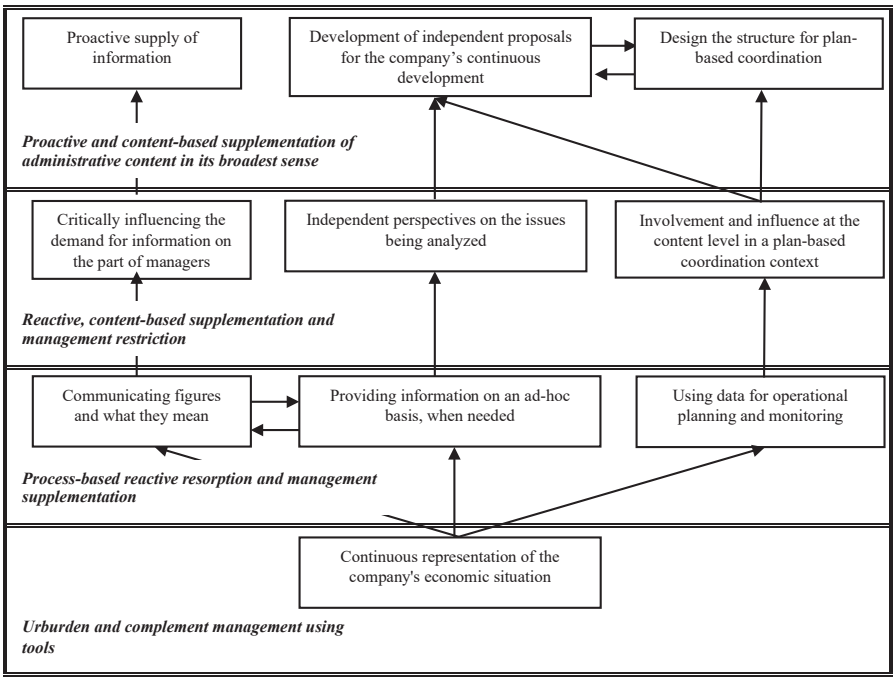

Figure 1. Conceptual framework of controllership evolution

Source: Weber (2011 p. 42)

As previously described, the evolutionary process of controllership occurs through the activities' progress, which considers the elimination of rationality' bottlenecks in its development due to controllership's increased maturity (Weber, 2011 p. 27). Therefore, the conceptual framework presents the range of tasks for each level considered controllership's responsibility, considering that the activities of the previous stages are not abandoned with the evolutionary process but added to the new tasks resulting from the process (Weber, 2011).

According to the level (or stage) reached by controllership, it will be more or less active as a business partner of the company's remaining areas and units, i.e., it may be more or less perceived as a business partner. Therefore, based on the elements presented, the first hypothesis is suggested:

Hypothesis 1: Stronger cultural typifications are directly associated with controllership' higher levels of business partnership.

2.2 Characteristics of Organizational Culture and Performance Appraisal Systems

Bititci *et al*. (2012, pp. 24-25) note that the organizational culture model and the nature of work conducted in an organization influence how a company's performance is measured and managed. The literature addressing Performance Appraisal Systems report the influence of organizational culture, and, as a result, of management styles, for the successful implementation of these systems (Bititci *et al*., 2006); systems seeking not to punish people, but rather, encourage discussions and analysis, present better results (Franco & Bourne, 2003).

"Performance measurement is a topic which is often discussed but rarely defined. Literally, it is the process of quantifying action, where measurement is the process of quantification and action leads to performance" (Neely, Gregory & Platts, 1995, p. 80). One of the factors leading to this is that individual authors tend to focus on different aspects of performance measurement systems. Hence, as a result of different visions and objectives, performance appraisal systems commonly aim to meet specific needs: some seek to assess performance in small and medium-sized companies (Garengo, Biazzo, & Bititci, 2005), whereas others are intended to measure and communicate the performance expected by the various stakeholders (Silva, Nuzum, & Schaltegger, 2019). Currently, the importance of systems helping measure performance in light of the sustainability of businesses and organizations is emphasized (Cagno *et al*., 2019; Silva *et al*., 2019).

Neely et al. (2000) consolidated various propositions based on Globerson (1985) and Maskell (1991) and developed a conceptual framework to identify the desirable attributes of a performance appraisal system (Table 1). This framework shows the breadth of such systems through two dimensions: 1) desirable characteristics of a performance appraisal (design) system; and 2) desirable characteristics for its use (process evaluation). This is the conceptual framework used to support this study's instrument.

Table 1

Characteristics of a Performance Appraisal System

Desirable characteristics for a performance measurement system	Desirable characteristics for the use of performance measurement systems (process evaluation)
The process should be easily reviewed – measures should change as circumstances change	Performance measures should allow/facilitate benchmarking
The purpose of each performance measure should be emphasized	Objective performance criteria are preferable to subjective ones
Data collection and methods to calculate performance level should be clear	Ratio-based performance measures are preferable to absolute numbers
Everyone (customers, employees, and managers) should be involved in the selection of measures	Performance criteria should be under the direct control of the organizational unit being assessed
The performance measures selected should take into account the organization	Performance measures should encourage continuous improvement, rather than just monitoring
Performance measures should derive from the company's strategy	Performance measures should be simple and easy to use
	Performance measures should provide quick feedback
	Non-financial measures should be adopted

Source: Neely et al. (2000, p. 1131), based on Globerson (1985) and Maskell (1991)

In this study, the breadth of a Performance Appraisal System is defined as a construct capable of operationalizing the combination of various characteristics present in the system's design and use, based on the conceptual framework of Neely *et al.* (2000).

Finally, Performance Appraisal Systems are artifacts that result from a organization's culture (Schein, 1984) and the different elements of an company's internal context, among which the strength of the different typifications of Organizational Culture, which is a relevant strategic resource (Parente *et al.*, 2018; Santos, 1998). The extent to which such systems are developed and used results from the culture strength (measured by the consistency of responses provided to surveys addressing organizational adaptability and stability).

Based on the elements previously presented, the second hypothesis is proposed:

Hypothesis 2: Stronger cultural typifications are directly associated with greater breadth of performance appraisal systems

On the other hand, research has shown associations between different cultural typifications and sets of Management Accounting practices (Tarifa & Almeida, 2018) and even people management processes (Santos *et al.*, 2014). Performance appraisal systems and their uses are adjusted over time as the culture, and associated structures mature (Bititci *et al.*, 2006). Hence, controllerships with higher levels of partnership might have conceptual elements, knowledge, and operating systems that result from higher levels of aggregation, integration, and scope that ensure timely reports (Frezatti, Relvas & Junqueira, 2010), which enable the development of more comprehensive or sophisticated Performance Appraisal Systems. Hence, the third hypothesis is proposed:

Hypothesis 3: Higher levels of controllership's business partnership are directly associated with greater breadth of performance appraisal systems.

3. Methodological Procedures

This descriptive, quantitative, cross-sectional study was based on a survey. The quality, reliability, and applicability of the questionnaire developed to collect data were tested using Cronbach's alpha coefficient (Hora, Monteiro & Arica, 2010) in addition to a pretest applied to eight controllership professionals, chosen according to typicality. These professionals were not included in the final sample. This procedure enabled clarifying unclear aspects and measuring the average response time.

The survey was conducted online (Miranda, Riccio & Miranda, 2012, p. 119), which enabled reaching a higher number of respondents and reduced traditional research costs (Dillman, 2000). The primary source used to identify the participants was one of the authors' professional social networks, LinkedIn.

The questionnaires were collected between September and October 2018: 119 questionnaires returned out of a total of 336 contacts from the author's network, whose functional profile was aligned with the study's objectives, i.e., professionals working with the management and use of performance appraisal systems developed by their companies' controllership. Hence, 35.42% of the questionnaires were returned. Those questionnaires that did not clearly inform a direct involvement with the three dimensions under study – organizational culture, controllership, and performance appraisal systems – were excluded. Hence, the final sample consisted of 89 professionals: 48 controllers, 26 controllership managers, four directors, two Chief Operating Officers (COO), and nine professionals with different job positions. Most professionals worked in medium and large companies (34 large and 45 medium); only ten were from small companies.

The results were obtained using multivariate data analysis (Figueira, 2004a,b; Fávero *et al.*, 2009), according to Correspondence Analysis (ANACOR), a model used to analyze the relationship between two qualitative variables.

Categorical indicators were used as a measurement of the latent variables "breadth of the performance appraisal system" and "controllership partnership level," while the OCAI measured the variable "organizational culture".

The categories presented in Table 2 refer to the results obtained with OCAI and statistical tests.

Table 2
Categorization of the Types of Organizational Culture (Cat_Cult)

Acronym	Cultural typification	Quantity
Cla	Predominantly Clan culture	30
Ino	Predominantly Adhocracy culture	7
Hie	Predominantly Hierarchy culture	32
Mer	Predominantly Market Culture	16
Cla_Hi	Mixed cultural model, with equivalent proportions of cultural aspects predominantly associated with the Clan culture and Hierarchy culture	1
Ino_Hi	Mixed cultural model, with equivalent proportions of cultural aspects predominantly associated with the Adhocracy culture and Hierarchy culture	3

The results concerning the questionnaire's part 2 (Table 2) show that the hierarchy cultural model (Hie) predominated among the companies in the sample. The clan cultural model (Cla) was the second most frequent, partially corroborating the findings of Tarifa and Almeida (2018), who also found a predominance of companies with group cultural typification (Cla) followed by the hierarchy model.

As for the results concerning Levels of Controllership Partnership (Table 3) and Breadth of Performance Assessment Systems (Table 4) obtained with the instruments, we sought to establish categories that expressed a direct relationship with the characteristics under study (see the categories' descriptions in Tables 3 and 4). Based on this structure, the scores were classified in groups: six for the first instrument and five for the second.

Table 3
Categorization of Level of Controllership Partnership (Cat_Contr)

Acronym	Description of Levels of Controllership Partnership	Quantity
BP_F	"Weak": it shows that the company's controllership is limited to the reactive supply of data and information	6
BP_B	"Low": it shows that, in addition to activities related to the previous level, the company's controllership also reports information and uses it for planning purposes	2
BP_M	"Moderate1": it shows that, in addition to activities related to the previous stages, the company's controllership also provides independent information perspectives and acts in the coordination of the company's action plans	2
BP_R	"Moderate2" shows that controllership provides independent proposals for the needs identified, develops and coordinates the rites, but does not satisfactorily perform the previous levels' activities	13
BP_A	"High": it shows that controllership operates satisfactorily in providing independent proposals for the needs it identifies, develops, and coordinates the rites as a protagonist, and satisfactorily perform the previous stages' activities for which it is responsible	31
BP_S	"Advanced": it shows that controllership, with a high level of performance, provides independent proposals for the needs it identifies, develops, and coordinates the rites as a protagonist, and satisfactorily perform the previous stages' activities, thus is considered a business partner	35

The questionnaire's part 3 (Table 3) shows a predominance of companies (74%) with controllerships characterized by a high level of partnership (BP_A=31 and BP_S=35). Comparing the findings with the literature was not possible because few studies categorize the functions of controllership as a business partner (Arenales, 2016; Silva, 2017; Lunkes, Schnorrenberger & Alexadre, 2016; Järvenpää, 2007; Weber, 2011), and most are case studies so that the comparisons are restricted.

The questionnaire's part 4 (Table 4) revealed that most respondents (66%) perceived their companies to have performance appraisals systems with great breadth (SD_A=49 SD_S=89), while the same table shows that 22% of the respondents rated their systems as unsatisfactory (SR_F=20).

Table 4

Categorization of the Breadth of the Performance Appraisal Systems (Cat_Sis_Desem)

Acronym	Description of Levels of Breadth of Performance Assessment Systems	Quantity
SDF	"Weak": it shows that the company has a performance appraisal system that operates with an unsatisfactory breadth	20
SDB	"Low": it shows that the breadth of the company's performance appraisal system is adequate but has room for improvement to achieve good functioning	2
SDM	"Moderate": it shows that the company has a performance appraisal system of satisfactory breadth only for one of the metrics considered, while it only reaches adequate breadth for the other (has potential for improvement)	8
SD_A	"High": it shows that the company has a performance appraisal system with high breadth, where both metrics of analysis work with the breadth that already presents higher levels of evolution/development	48
SD_S	"Advanced": it shows that the company has a performance appraisal system with advanced breadth, as both metrics present the highest rate of evolution/development they can achieve	11

Next, the Homogeneity Analysis (HOMALS), a model designed to verify the relationship between two or more qualitative variables, was used. According to Fávero et al. (2009 p. 291), HOMALS enables to simultaneously analyze the relationships between all variables together, using a simple two-dimensional configuration, the reason why it applies to social sciences.

The two techniques are intended to investigate the existing associations between the variables considered in a multidimensional space (Figueira, 2004a,b) and are interdependence models that have become increasingly popular for dimensional reduction in the analysis process. The easy graphical interpretation of data, presented with percentage mappings, it enables direct application by showing the correspondence of variable categories, particularly those measures in nominal scales (Hair et al., 2009, p. 441). The statistical tests were performed using Stata, version 12.

4. Results and Discussion

Associations between Organizational Culture x Controllership Partnership Level (associated with H1); Controllership Partnership Level x Breadth of Control Evaluation Systems (associated with H2); and Organizational Culture x Breadth of Performance Appraisal Systems (associated with H3) were verified via ANACOR.

Table 5 presents the results obtained for assessing the association between Organizational Culture and Controllership Partnership Level.

The ANACOR test was statistically significant at 1% (pr=0.0000), showing that the association between organizational culture and controllership partnership levels did not occur randomly in our sample, failing to reject H1. Thus, this finding corroborates Smircich's (1983) statements, for whom culture influences managers' behavior, in such a way that they constitute structures that contribute to keeping the organizations' balance. It also makes us reflect on the results reported by Zheng et al. (2010) and Santos et al. (2014). These studies report an association between organizational culture and structure; the first study qualifies it as a mediator of organizational performance, and the second emphasizes its influence.

Table 5
Level of Association: Organizational Culture x Controllership Partnership Level

Cat_Cult	Cat_Contr						
	BP_F	BP_B	BP_M	BP_R	BP_A	BP_S	Total
Cla	1	0	1	7	12	9	30
Ino	0	0	1	0	3	3	7
Hie	2	1	0	4	10	15	32
Mer	2	0	0	1	6	7	16
Cla_Hi	0	1	0	0	0	0	1
Ino_Hi	1	0	0	1	0	1	3
Total	6	2	2	13	31	35	89

Pearson Chi2 (25) = 62.6006 Pr = 0.000
Cultural typifications s: Cla=Clan; Ino=Adhocracy; Hie=Hierarchic; Mer=Market; Cla_Hi=Clan and Hierarchic, simultaneously; Ino_Hi= Adhocracy and Hierarchic, simultaneously.
Level of Controllership Partnership: BP_F=Weal; BP_B=Low; BP_M=Moderate; BP_R= Moderate2; BP_A=HIgh; BP_S=Advanced.

Likewise, for the analysis of the association between Level of Controllership Partnership and Breadth of Control Evaluation Systems, the ANACOR test was statistically significant at 1% (pr=0.003), showing that the association between these two variables did not occur randomly in our sample, failing to reject H2.

The results presented in Table 6 confirm the findings of Franco-Santos, Lucianetti, and Bourne (2012, p. 41). They consider that performance appraisal systems influence the capabilities of organizational structures, considering that controllership at its different levels reflects this set of skills and capabilities. The results also confirm what Zheng *et al.* (2010) report, i.e., that the breadth of performance appraisal systems directly reflects the different dimensions that enable understanding an organization's performance. Finally, the results confirm Goretzki *et al.* (2013) reports regarding how controllers were transformed into business partners after a new CFO's entry, leading to the reformulation of roles and, consequently, changing the controllership's performance which reflected on information systems.

Table 6
Association Level: Level of Controllership Partnership x Breadth of Performance Appraisal Systems

Cat_Contr	Cat_Sis_Desem					
	SD_F	SD_B	SD_M	SD_A	SD_S	Total
BP_F	5	1	0	0	0	6
BP_B	0	0	1	1	0	2
BP_M	1	0	1	0	0	2
BP_R	2	0	1	10	0	13
BP_A	6	1	3	19	2	31
BP_S	6	0	2	18	9	35
Total	20	2	8	48	11	89

Note: Pearson chi2 (20) =41.9299 Pr=0.003
Levels of Controllership Partnership: BP_F = Weal; BP_B = Low; BP_M = Moderate1; BP_R= Moderate2; BP_A= High; BP_S= Advanced.
Breadth of Performance Appraisal Systems: SDF=Weak; SDB=Low; SDM=Moderate; SD_A=High; SD_S=Advanced.

Finally, the ANACOR test used to analyze the association between Organizational Culture and Breadth of Performance Appraisal Systems, was not statistically significant (pr=0.969), showing that the association between these two variables was random; thus, rejecting H3. Table 7 presents the test results.

Table 7
Level of Association: Organizational Culture x Breadth of Performance Appraisal Systems

Cat_Cult	Cat_Sis_Desem					
	SD_F	SD_B	SD_M	SD_A	SD_S	Total
Cla	6	2	3	16	3	30
Ino	1	0	1	5	0	7
Hie	8	0	2	18	4	32
Mer	4	0	2	7	3	16
Cla_Hi	0	0	0	1	0	1
Ino_Hi	1	0	0	1	1	3
Total	20	2	8	48	11	89

Note: Pearson chi2 (20) = 9.9302 Pr = 0.969
Cultural typifications s: Cla=Clan; Ino=Adhocracy; Hie=Hierarchic; Mer=Market; Cla_Hi=Clan and Hierarchic, simultaneously; Ino_Hi=Adhocracy and Hierarchic, simultaneously.
Level of Controllership Partnership: BP_F=Weak; BP_B=Low; BP_M=Moderate1; BP_R= Moderate2; BP_A=High; BP_S=Advanced.

First, this result is not in line with those presented by Braunscheidel, Suresh, and Boisnier (2010), who identified that organizational culture can be considered the basis that supports a company's management practices and operations. Second, we could not confirm the position of Bititci *et al.* (2012, pp. 14-15), for whom organizational culture is a critical factor for successfully implementing a performance appraisal system. However, based on our results, it does not mean that organizational culture is not indirectly associated with these systems. In this sense, we agree with Pothukuchi *et al.* (2002), for whom business areas and units tend to respond better when management practices are compatible with a company's organizational culture model.

To improve understanding of the relationships between the three variables addressed here, the HOMALS technique was adopted to simultaneously investigate the relationship between the three variables. The results are presented in Tables 8 and 9.

Table 8

Jointly Analysis 1 (HOMALS): Organizational Culture x Level of Controllership Partnership x Breadth of Performance Appraisal System

Dimension	singular value	principal inertia	chi2	percent	cumul percent
dim 1	1	1	89.00	60.13	60.13
dim 2	.5243248	.2749165	24.47	16.53	76.67
dim 3	.4449859	.1980125	17.62	11.91	88.57
dim 4	.364188	.1326329	11.80	7.98	96.55
dim 5	.2395453	.0573819	5.11	3.45	100.00
Total		1.662944	148.00	100.00	

Note: Correspondence analysis - Number of observations=89; Pearson chi2 (85) = 148.00;
Prob > chi2 = 0.0000; Total inertia = 1.6629; Number of dimensions=2; Exp. Inertia (%) = 76.67
Statistics for row and column categories in symmetric normalization.

The results obtained by HOMALS reveal a statistically significant association at 1% (pr=0.000) between the three variables. Thus, this association is not random. The HOMALS results also show that the most intense associations (measured based on inertia, the most significant figures are highlighted at the top of Table 9) occur when there are clearly defined organizational culture patterns in organizations, without mixing different types of cultural values. The highest significance occurred with hierarchic culture organizations, followed by clan, market, and adhocracy organizations. These findings are indirectly aligned with Gordon and DiTomaso (1992) and Lee and Yu (2004), for whom the strength of culture is a predictor of performance's intensity.

The OCAI has been criticized because it is considered an instrument that does not measure culture correctly; instead, it classifies it into different groups according to types of cultural values (Berkemeyer et al., 2015; Zoghbi-Manrique-de-Lara & Ting-Ding, 2016). However, in this study, we verified that the companies that were clearly categorized into a single type of cultural value, according to the OCAI, were more strongly associated with higher levels of partnership in controllership. Thus, in a way, we may say that the strength of culture when the OCAI distinctly identifies a single culture typification differs from when a mix of cultural profiles is identified.

The most intense associations found for the other two variables (levels of controllership partnership and breadth of performance appraisal systems) are present when there are higher levels of controllership partnership and greater breadth of performance appraisal systems (greater inertia highlighted at the bottom of Table 9).

Table 9

Joint Analysis 2 (HOMALS): Organizational Culture x Level of Controllership Partnership x Breadth of Performance Appraisal System

Categories	overall			dimension_1			dimension_2		
	mass	quality	%inert	coord	srcorr	contrib	coord	srcorr	Contrib
Cultura									
Cla	0.337	0.656	0.098	0.107	0.024	0.004	0.762	0.633	0.374
Ino	0.079	0.610	0.114	0.107	0.005	0.001	-1.668	0.605	0.417
Hie	0.360	0.435	0.069	0.107	0.036	0.004	-0.493	0.399	0.167
Mer	0.180	0.040	0.063	0.107	0.020	0.002	0.148	0.020	0.008
Cla_Hi	0.011	1.000	0.595	-9.381	1.000	0.989	0.000	0.000	0.000
Ino_Hi	0.034	0.096	0.062	0.107	0.004	0.000	0.736	0.093	0.035
BP_Sist_Inf									
BP F/SDF	0.056	0.008	0.051	0.107	0.007	0.001	0.018	0.000	0.000
BP F/SDB	0.011	0.570	0.013	0.107	0.006	0.000	1.454	0.564	0.045
BP B/SDM	0.011	0.267	0.012	0.107	0.006	0.000	-0.941	0.260	0.019
BP B/SD A	0.011	1.000	0.595	-9.381	1.000	0.989	0.000	0.000	0.000
BP M/SDF	0.011	0.570	0.013	0.107	0.006	0.000	1.454	0.564	0.045
BP M/SDM	0.011	0.454	0.079	0.107	0.001	0.000	-3.180	0.453	0.217
BP R/SDF	0.022	0.105	0.006	0.107	0.026	0.000	0.257	0.079	0.003
BP R/SDM	0.011	0.570	0.013	0.107	0.006	0.000	1.454	0.564	0.045
BP R/SD A	0.112	0.606	0.023	0.107	0.033	0.001	0.613	0.573	0.081
BP A/SDF	0.067	0.968	0.012	0.107	0,040	0.001	-0.711	0.928	0.065
BP A/SDB	0.011	0.570	0.013	0.107	0.006	0.000	1.454	0.564	0.045
BP A/SDM	0.034	0.138	0.037	0.107	0.006	0.000	0.673	0.132	0.029
BP A/SD A	0.213	0.169	0.018	0.107	0,082	0.002	0.151	0.087	0.009
BP A/SD S	0.022	0.267	0.024	0.107	0.006	0.000	-0.941	0.260	0.038
BP S/SDF	0.067	0.598	0.008	0.107	0.055	0.001	0.461	0.542	0.027
BP S/SDM	0.022	0.105	0.006	0.107	0.026	0.000	0.257	0.079	0.003
BP S/SD A	0.202	0.955	0.049	0.107	0.028	0.002	-0.844	0.927	0.275
BP S/SD S	0.101	0.347	0.027	0.107	0.025	0.001	0.526	0.321	0.053

Note: Level of Controllership Partnership: BP_F=Weak; BP_B=Low; BP_M=Moderate1; BP_R= Moderate2; BP_A=High; BP_S=Advanced.
Cultural typifications: Cla=Clan; Ino=Adhocracy; Hie=Hierarchy; Mer=Market; Cla_Hi=Clan and Hierarchy simultaneously; Ino_Hi= Adhocracy and Hierarchy simultaneously.
Breadth of Performance Appraisal System: SDF=Weak; SDB=Low; SDM=Moderate; SD_A=High; SD_S=Advanced.

These results suggest that when the controller is close to the managers, understanding the factors that influence the result of the areas under their command, s/he can favor an increase in the breadth of the performance appraisal systems and measure the results more broadly and deeply (Frezatti et al., 2010), possibly reaching the transaction level, as argued by the GECON model (Catelli, 2001). In short, using the market language, such actions lead to what is conventionally called "obtaining different granularities of information". Furthermore, by being close, s/he manages to improve the breadth of information systems by helping managers plan, control, and make decisions, contributing to their performance and that of controllership (Oyadomari *et al.*, 2014).

Therefore, the tests' results indicate that stronger typifications of organizational culture, or in other words, clearly defined typifications, are associated with higher levels of controllership partnership, which in turn, are associated with a greater breadth of performance appraisal systems. However, no direct association was found between the organizational culture model and the breadth of performance appraisal systems. In this sense, the results, although not in a similar way, diverge from the results reported by Henri (2006), for whom there is a positive association with the diversity of performance measures, which is one component of the breadth of the performance appraisal system, regardless of the type of culture (flexible or control).

However, we cannot deny that the organizational culture model influences the breadth of performance appraisal systems, which may occur indirectly, considering that these types of culture influence controllership areas, and these operationalize more or less broad models. In this sense, controllership would "mediate" the relationship between organizational culture and performance appraisal systems, which would confirm the statements of Zheng et al. (2010), who identified that structure mediates the effect of organizational culture on performance (business effectiveness).

Additionally, this study's findings empirically confirm the reports of Ho et al. (2014), for whom companies aligned around a consensus – possibly, among other reasons, as a result of a distinctly defined organizational culture (Cameron & Quinn, 2005) – have better conditions to develop management technologies, a central role of the controllership area. It contributes to achieving the congruence of organizational goals and developing and disseminating management practices, such as performance appraisal systems (Neely *et al.,* 2000).

5. Conclusions

This study met the main objective of understanding associations between different intensities of organizational cultural typifications, the level of partnership exercised by the controllership area, and the breadth of organizational performance appraisal systems.

Data were analyzed using multivariate analysis (ANACOR, HOMALS), which enabled identifying the existence of a statistically significant association in our sample between Organizational Culture Model and Levels of Controllership Partnership, and between Levels Controllership Partnership and Breadth Performance Appraisal Systems. However, no statistically significant association was found between the Organizational Culture Model and the Breadth of the Performance Appraisal Systems.

These findings suggest that when controllership materializes management practices in the organization (a fundamental role), it can be more assertive if a given type of organizational culture is stronger. Thus, from this perspective, controllership can be characterized as a mediator between Organizational Culture and Performance Appraisal Systems.

The results also reveal the importance of controllership[to be more participative, to expand performance appraisal systems, which, in addition to the Contingency Theory approach, explains the breadth of performance appraisal systems.

In terms of organizational practices, our results suggest that controllership, based on interactions with the areas that use its services, interprets the elements of organizational culture and influences the breadth of performance appraisal systems. For example, if culture has a more participatory and democratic nature, controllership services, in normative terms, should serve different users of information, in different areas and organizational levels, providing information to validate, or not, the different interpretations of these users regarding the formulation of diagnoses and solving-problems proposals, in addition to monitoring these initiatives. Thus, the breadth of performance appraisal systems should be of a more collective type, based on interdependent goals that prioritize the group's performance. On the other hand, if culture is hierarchical, in light of the Contingency Theory, controllership in the interaction with users should prioritize information for decision-makers, resulting in performance appraisal systems more focused on the hierarchical levels that make decisions.

The results indicate that senior managers should develop actions to 'impregnate' the culture in people, in a way it is present in the organization's routine actions, because it facilitates the controllership's performance as a business partner, though statistical techniques do not allow establishing causality between the variables. These results complement the view of Dambrin, Lambert & Sponem (2007) and Goretzki *et al*. (2013), in which the authors infer that cultural change occurs through the actions of new controllers, who expand the participation in the controllership areas in which they work, and, consequently, influence the culture of their respective organizations.

Additionally, this study's results contribute to the development of academic knowledge, to the extent it provides empirical elements to reflect on the influence of organizational culture on management practices through the development and use of constructs and instruments, promoting a reflection beyond the concepts of Contingency Theory.

On the other hand, these results do not confirm which types of organizational culture are associated with specific levels of controllership partnership and breadth in performance appraisal systems. However, the results show that a clearly defined organizational culture positively influences controllership, leading to active and participatory practices, regardless of its type. Finally, the statistical analyses do not allow establishing causal relationships between the variables or making generalizations; thus, future studies investigating potential causal relationships will be helpful to expand knowledge on the subject.

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Appendix 1 – Study's Instrument

Part 3 The Controllership area:

1. Generates reports on the company's economic situation.
2. Delivers support reports only to the department to which it reports.
3. Generates support reports for other organizational areas.
4. Provides information to other organizational areas, which are used in the decision-making process of these departments, and to establish their strategies.
5. Delivers the reports it configures and provides support to ensure these are understood.

6. Seeks to find out with the remaining organizational areas information relevant to their decision-making processes - to ensure that such information is provided.
7. Presents, either to the senior management or other organizational departments, information (even if not requested) it considers relevant to the organizational decision-making process.
8. Generates information for specific purposes (on demand) whenever necessary.
9. Acts independently and critically, is free to express its opinion to the senior management regarding the results (thus presenting its opinions).
10. Develops models of proposals and projects to be implemented in the company – to contribute to organizational development and continuity.
11. Generates data that are used in organizational planning (i.e., setting goals and strategies).
12. Generates data used to assess whether organizational goals and strategies are being achieved as planned.
13. Gets involved and influences the development of goals and strategies for other areas – to ensure that their goals are aligned with the company's goals.
14. Is responsible for coordinating and aligning the activities developed by the company – to ensure that organizational goals and targets are achieved.

Part 4 Performance Appraisal = PA

1. There is a formal PA system in the organization where I work.
2. The purpose of each measure used to conduct PA in the company is clarified (clearly and precisely stated).
3. The measures adopted in the company for PA are based on the company's strategies and are related to the activities assessed.
4. The method used to collect data for the organization's PA is always clear and objective.
5. There is a transparent and objective method/calculation used for the organization's PA.
6. The opinion of everyone in the company (customers, employees, and managers) is considered when establishing/preparing the company's PA measures.
7. The measures adopted for the PA are based on the company's characteristics and particularities.
8. The measures and methods used for the company's PA are flexible – open to adjustments and amendments, when necessary.
9. The measures adopted for the company's PA allow it to assess itself against its competitors – facilitating the incorporation of perceived best practices and/or improving its methods.
10. The measures adopted for the company's PA are exclusively based on data presented in its financial and accounting measures – not taking into account any other information or data available.
11. Criteria adopted for an area's PA are defined by the organizational unit itself.
12. Criteria adopted for the company's PA are well defined, and its objectives are clear.
13. The measures adopted for the company's PA consider financial and "non-financial" measures (increase in the number of customers, market share, etc.) generated at the end of the period analyzed.
14. The measures adopted for the company's PA are simple and easy to use/apply.
15. The measures adopted for the company's PA encourages quick actions by the parties involved.
16. The measures adopted for PA encourage the continuous improvement of the parties involved – instead of just monitoring them.