

INFLUENCE OF INFORMAL CONTROLS ON ORGANIZATIONAL COMMITMENT AND PERFORMANCE IN ACCOUNTING FIRMS

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ABSTRACT

This study aims to analyze the influence of personnel and cultural controls on accounting services firms' organizational commitment and performance. For this, a survey was conducted with 204 professionals, and the hypotheses were analyzed through structural equation modeling. The results indicate a positive influence of cultural controls on organizational performance. Also, it was observed that informal controls positively impact organizational commitment, which, in turn, affects organizational performance. Organizational commitment was also found to play a partial mediation role in the relationship between cultural controls and organizational performance and a total mediation role in the relationship between personnel controls and organizational performance. These findings contribute to the existing literature by expanding knowledge about informal controls, especially in accounting firms. Moreover, they offer practical insights to managers in these firms, highlighting the importance of informal controls to promote employee engagement and improve organizational performance.

Keywords: Personnel control. Cultural control. Organizational commitment. Organizational performance. Accounting firms.

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1 INTRODUCTION

Management controls are present in organizations in several ways. According to Merchant and Van der Stede (2007), formal controls can be identified as the structuring of a budget process until its execution, as well as the analysis of performance indicators. On the other hand, the cited authors argue that informal controls are observed as the organizational culture, norms, and social pressures that can directly influence the commitment and performance of employees at the organizational level. Goebel and Weißenberger (2017) state that although formal controls are quantifiable, analyzing informal controls in an organizational environment can help organizations achieve greater levels of organizational commitment and performance, which draws attention to organizations observing informal controls instead of focusing only on formal controls.

Additionally, the focus on specific management control, such as informal control, concerns the social changes in organizations, which even impact the motivation of those involved (Akinyele et al., 2022). Thus, informal control plays a vital role in enabling the exchange of information between those involved in the process (Chenhall, 2003), facilitates communication between superiors and subordinates, acting as an internal influencer of decision-making (Norris & O'Dwyre, 2004), and can be a facilitating control in the face of daily routines and processes of organizations (Jung-Gehling & Strauss, 2018).

Informal controls are divided into two large groups: (i) personnel control and (ii) cultural control (Merchant & Van der Stede, 2007; Goebel & Weißenberger, 2017). Personnel control is related to the motivation of individuals regarding their participation in the company, from the establishment of organizational standards, monitoring the process from the recruitment stage, hiring, training, and the development of new skills for employee retention (Abernethy & Brownell, 1997; Kleine & Weißenberger, 2014). Cultural control, on the other hand, is used to direct behavior. It consists of a set of values, beliefs, and organizational norms that facilitate identifying people with the organization and influencing the organizational climate in the work environment.

In this sense, the use of management controls, such as informal control, can influence organizational commitment and performance since management controls are implemented in organizations to direct behaviors so that employees feel good and are directed to achieve corporate objectives (Chenhall, 2003; Kaveski et al., 2021; Monteiro & Lunkes, 2021). Previous studies have provided evidence of these variables in isolation, so this study seeks to fill this gap in the literature.

Therefore, in order to understand the role of a specific control on organizational commitment and performance, following the study by Cruz et al. (2022), who used one of the management controls to understand its effect on a specific field by focusing on informal control, this study aims **to analyze the influence of personnel and cultural controls on organizational commitment and performance of accounting services firms.**

Thus, exploring the effect of a form of management control on a specific audience, such as accounting firms, can help understand how informal controls (personnel and cultural) can influence organizational commitment and performance since accounting firms are highly coercive environments (Von Muhlen et al., 2019).

The research contributes to the management accounting literature, specifically on informal controls, and also by specifying informal controls to organizational commitment and performance. The focus on a region of Brazil is one of the differentials of this study since Frare et al. (2020) conducted a survey regarding the target audience of the research and identified that new variables could be added to management control and that, preferably, they investigated new regions of Brazil, considering that most doctors are concentrated in the South and Southeast regions of the country (Silva et al., 2011).

2 THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

2.1 Informal Controls and Organizational Performance

Informal controls encompass personnel and cultural controls (Merchant & Van der Stede, 2007; Goebel & Weißenberger, 2017). Personnel controls are instituted in organizations to motivate individuals and must be aligned with company values. As an example, it would be implementing this control in the first stages of selection of new employees, followed by training and development of employees, as Abernethy and Brownell (1997) mentioned.

On the other hand, cultural controls seek to establish norms and values that the organization expects (Merchant & Van der Stede, 2007). These controls influence the internal environment of the entity and the mindset of individuals (Goebel & Weißenberger, 2017). Thus, informal controls are associated with intrinsic rewards, such as opportunities for personal growth and autonomy, and achieving goals and improving organizational performance is expected (Espinosa Sáez et al., 2022).

Hence, the use of informal controls occurs in the daily lives of organizations since the role of managers is to direct the activities of those involved, which could generate high levels of organizational performance and even the established task (Goebel & Weißenberger, 2017). Furthermore, managers influence the alignment of employees with the organizational culture, the transmission of values, and the provision of feedback. Thus, the effectiveness of the relationships established and the effect of trust between the parties facilitate the immediate correction of deviations, for example, the exchange of verbal information, thus directing organizational performance (Goebel & Weißenberger, 2017; Monteiro et al., 2021).

Also, informal controls create perceptions about the legitimacy of management decisions and encourage team members to connect with their managers (Monteiro et al., 2021). The study by Monteiro et al. (2021), when analyzing family businesses, identified that informal controls (personnel and cultural) positively affected managerial performance much more than formal controls (action and result) since formal controls often had the opposite effect and caused dysfunctional behaviors. On the other hand, informal controls generated positive effects, with the identification of learning for employees and the influence of task engagement, and cultural controls influence the performance of managers to achieve the established objectives.

Although informal controls are tools managers use, their guiding role is worth mentioning. They act in a relevant way for controls in different environments, acting positively regarding organizational performance, whether family businesses (Monteiro et al., 2021), industries (Alves et al., 2022), or fintechs (Frare et al., 2023). The study by Alves et al. (2022) identified that using management controls to share information influences organizational resilience, which is also considered a type of organizational performance. This result was also found by Frare et al. (2023) when analyzing the use of formal and informal controls in fintechs, and these controls are responsible for fostering resilience, again considered a proxy for organizational performance.

Therefore, Espinosa Sáez et al. (2022) found that using formal and informal controls is important to obtain positive levels of organizational performance, with formal control being the basis for informal control to play a decisive role in performance. Thus, the alignment of individual behavior with organizational objectives and understanding these objectives are consequences that can be obtained through informal controls and their positive impact on organizational performance. In this context, the first hypothesis to be tested in this research assumes that:

H₁: *There is a positive influence of cultural controls (H_{1a}) and personnel controls (H_{1b}) on organizational performance.*

2.2 Informal Controls and Organizational Commitment

Informal controls are considered less tangible and make it difficult to modify social phenomena (Franco-Santos & Otley, 2018). However, they play an essential role in increasing

organizational commitment, as they promote individual autonomy and create an environment where employees understand the importance of organizational objectives (Altintas et al., 2017; Goebel & Weißenberger, 2017). Organizations can influence employee behavior through informal control to promote the understanding of objectives and minimize unequal personal trends in organizations, positively impacting commitment (Chenhall, 2003).

Thus, informal control through aligning the organization's culture and values with employees can develop a greater commitment to organizational objectives (Kleine & Weißenberger, 2014). Kleine and Weißenberger (2014) observed that informal controls are essential, as they can influence the collective commitment of individuals in the organization.

Studies by Goebel and Weißenberger (2017) and Altintas et al. (2017) have shown that informal controls positively impact organizational commitment. They concluded that the informal mechanisms of management controls contribute significantly to increasing affective commitment. This is because informal controls, such as an integrative corporate culture based on shared values and beliefs, affect employee perceptions and actions.

Yao et al. (2019) found that organizational commitment develops mainly through informal interactions between individuals in organizations, suggesting a relationship of trust and commitment among employees. Boff et al. (2021) analyzed the influence of formal and informal controls on organizational commitment mediated by organizational trust. The results indicated that both formal and informal controls influence organizational commitment, and organizational trust plays an indirect role in this relationship.

Monteiro and Lunkes (2021) analyzed the impacts of informal controls and organizational identification on affective commitment in family businesses. The results revealed that informal controls exert a positive influence on both organizational identification and affective commitment. It is generally accepted that one of the main purposes of management control is the alignment of individual and organizational objectives (Malmi & Brown, 2008).

Thus, it is justified that informal controls, integrated with personnel and cultural controls, motivate commitment in the work environment (Kleine & Weißenberger, 2014). Therefore, the second hypothesis to be tested in this research considers that:

H₂: *There is a positive influence of cultural controls (H_{2a}) and personnel controls (H_{2b}) on organizational commitment.*

2.3 Organizational Commitment and Organizational Performance

The relationship between employees' attitudinal responses, such as organizational commitment and organizational performance, has aroused constant interest from researchers and managers (Pinho et al., 2014). Several studies have been dedicated to examining this relationship individually (Kaveski et al., 2021). However, more research is still needed to understand this dynamic in the organizational context better.

Employees' commitment to the organization is expected to impact organizational performance positively. This is because employees with high levels of organizational commitment demonstrate significant loyalty to the organization and a congruence between individual values and the organization's values (Goebel & Weißenberger, 2017). This relationship between organizational commitment and organizational performance results in benefits such as greater customer satisfaction, higher quality service delivery, greater agility in service delivery, and a more creative and innovative team (López-Nicolás & Meroño-Cerdán, 2011).

Also, it is essential to note that highly committed employees have a greater predisposition to engage in high-standard behaviors, which are essential to the organization's success. These work-related attitudes are crucial to organizational performance (Goebel & Weißenberger, 2017; Pinho et al., 2014).

The literature supports the idea of a positive relationship between the level of organizational commitment and organizational performance. Pinho et al. (2014) support this perspective, highlighting that in Portuguese non-profit organizations, specifically in the health area, an association was observed between a higher level of organizational commitment and higher organizational performance. Given the recognition of the importance and scarcity of research in this area, the study aims to fill this gap. Based on this context, the following hypothesis is proposed:

H₃: *There is a positive influence of organizational commitment on organizational performance.*

2.4 Informal Controls, Organizational Commitment, and Organizational Performance

According to Chenhall (2003), in a systematic literature review on Management Control Systems (MCS), it is suggested that studies can identify backgrounds that influence MCS or demonstrate how the relationship between MCS and results is explained by intervening variables.

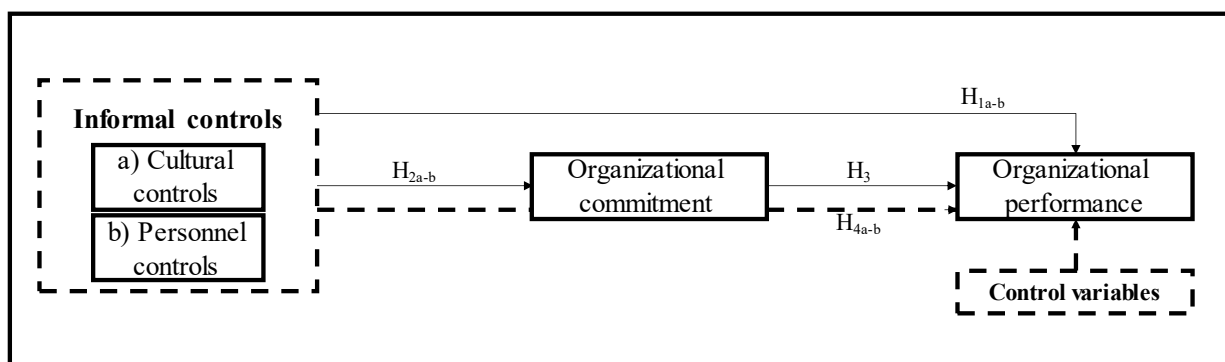
Although no studies have been found in the literature that specifically investigated the mediation effect of organizational commitment on the relationship of informal controls with organizational performance, evidence suggests a positive relationship between these elements. The study by Kaveski et al. (2021) revealed that organizational commitment plays a total mediation role in the relationship between using the budget control system and managerial performance.

Moreover, previous studies indicate a positive influence of the direct effects of informal controls on organizational commitment (Boff et al., 2021; Kleine & Weißenberger, 2014; Monteiro & Lunkes, 2021) and of the latter with organizational performance (Pinho et al., 2014). Thus, this study assumes a mediation effect of organizational commitment in the relationship of informal controls with organizational performance. From this, the fourth research hypothesis was formulated:

H₄: *Organizational commitment mediates the relationship between cultural controls (H_{4a}) and personnel controls (H_{4b}) with organizational performance.*

With the definition of the hypotheses to be tested, Figure 1 presents the theoretical model of analysis that guides the research.

Figure 1
Theoretical model



Note. The control variables are Company size and Time in the market.

In addition to the proposed theoretical model, the control variables - company size and time in the market - were observed relative to organizational performance.

3 RESEARCH METHODOLOGY

This section aims to describe in detail the methodological procedures adopted in this study to provide a clear view of the steps taken. Once the objective of this research, which aims to analyze the influence of personnel and cultural controls on the organizational commitment and performance of accounting services firms, was determined, the methodological procedures listed below were conducted. The research has a descriptive nature and a quantitative approach and was operationalized through a survey.

3.1 Population and Sample

Quantitative research was conducted by surveying accounting service providers in the Northern Region of Brazil. The choice of this sector was motivated by its relevance for economic development since these professionals play a fundamental role in providing services to companies.

Messages were sent via WhatsApp to professionals from 1,500 accounting firms. After consenting to participate in the survey, the questionnaire link (Google Docs) was provided. Data collection was conducted cross-sectionally, covering the period from October 28, 2022, to January 26, 2023. The final survey sample consisted of 204 valid responses (one respondent per firm holding a managerial position was selected), corresponding to 13.6% of the target population.

The sample used in this study was obtained intentionally and not probabilistically using the accessibility method. In this method, participants were selected based on ease of access and availability to participate in the research.

Before data collection, participants were provided with detailed information about ethical procedures, ensuring their right to choose whether or not to participate in the research. This information included: i) informed consent, ensuring that the participants were aware of the purpose of the research and the procedures involved; ii) the concern not to cause any harm to the entity and the people involved; iii) the guarantee of anonymity of the participants and the entity, with free access to all information and additional clarifications about the study and its consequences, before, during, and after participating; and iv) the use of the data collected exclusively for this research, with the possibility of publishing the results, always respecting the privacy of the participants. Furthermore, participants were informed that they had the right to withdraw from the survey at any time, without any penalty, and without losing the benefits to which they were entitled.

3.2 Research Constructs

All research constructs are based on previous literature, and the items were measured on a five-point Likert scale. The questions addressed the themes of informal controls, organizational commitment, and organizational performance, totaling 26 questions, in addition to the variables related to the profile of respondents and companies.

In the first block, informal controls (cultural and personnel controls) were included, adapted from Goebel and Weißenberger (2017). The cultural controls consisted of six statements evaluating the respondents' degree of agreement, ranging from 1 (Not applicable at all) to 5 (Completely applicable). The statements explored topics such as emphasizing sharing informal codes of conduct in the organization. The personnel controls had five statements evaluating the respondents' degree of agreement, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The statements addressed aspects related to carefully selecting employees following the organization's values and standards.

In the second block, five statements related to organizational commitment were presented, also adapted from Goebel and Weißenberger (2017). Respondents rated their degree of agreement with each statement, using a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The

statements addressed topics such as the additional effort of employees to contribute to the organization's success.

The third block consisted of 10 statements related to organizational performance, extracted from López-Nicolás and Meroño-Cerdán (2011). Respondents rated their degree of agreement with each statement, using a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The statements addressed topics such as the search for greater customer satisfaction.

This research adopted the size of the company and the time in the market as control variables. The size of the company was measured as a continuous variable, according to the number of employees that the company has, as conducted in Bedford's research (2015). The time in the market was measured as a continuous variable by the time (in years) that the company conducts its activities. This information was collected through questions open to respondents, presented in the block intended to characterize the respondent and the company.

It is important to note that all studies used in formulating the statements have already been used in national research, such as Boff et al. (2021) and Giustina et al. (2020). Moreover, the research instrument was subjected to a pre-test conducted with professionals in the area and researchers from a Graduate Program in Accounting before being applied to professionals in accounting firms.

All data were collected by a single method, and the respondents filled in all variables (dependent and independent), which can trigger common method bias problems (Common Method Bias – CMB) (Podsakoff et al., 2003). To reduce this problem, a presentation form was included with detailed instructions on the research proposal and a guarantee of anonymity and clear disclosure of the scale items.

3.3 Data Analysis Procedures

The study's hypotheses were tested by analyzing partial structural equations (PLS-SEM) using the SmartPLS 4 software (Ringle et al., 2022). PLS-SEM is widely used in management and business research (Hair et al., 2019) due to its ability to allow complex modeling and to be suitable for small samples (Hair et al., 2017). Applying this technique goes through two main evaluation stages: i) measurement model; and ii) structural model (Hair et al., 2017; 2019).

To evaluate the statistical adequacy for n (204), the sample power test was performed in the G* Power 3 software, in which, considering the total effect of three predictor variables (cultural controls, personnel controls, and organizational commitment) on the dependent variable (organizational performance), at the significance level of 5%, a statistical power of 0.95, a minimum sample of 119 valid responses is required (Faul et al., 2009).

4 DATA ANALYSIS AND DISCUSSION

4.1 Sample Profile

The section begins with a description of the respondent's profile. It is observed that 64.2% of the participants are female. As for age, respondents ranged from 23 to 73 years, with a sample mean of 40 years. Regarding education, most respondents have a specialization and/or MBA, totaling 57.4%. Concerning the role performed, it is noteworthy that approximately 11% of the participants are owners of accounting firms, about 20% hold associate positions, and most respondents, approximately 35%, act as accountants.

As for the profile of the accounting firms, the following variables were analyzed: location of the company (city/state), time in the market, and current number of employees. The sample covers all seven states in the Northern Region. It is observed that the state of Pará (PA) has the highest number of respondents, followed by Amazonas (AM) and Tocantins (TO), which together represent 81.9% of the final sample.

The time in the market of the firms ranges from 1 to 50 years, with a mean of 13.18, which, in a way, demonstrates the consolidation of the firms. About the number of employees, they have from 1 to 125, with a mean of 5.93.

4.2 Variable Descriptive Statistics

In the descriptive analysis of the variables, it was possible to observe that, concerning the variable of **cultural controls**, the mean was 4.02, which indicates that, on average, the research participants perceived a high level of cultural controls in the accounting firms studied. The coefficient of variation of 28.80% reveals a certain variability in the participants' responses for this variable, indicating that some perceptions can vary considerably.

As for the variable **personnel controls**, the mean was 4.04, showing that, on average, participants perceived the presence of personnel controls at a relatively high level. The coefficient of variation of 27.14% suggests a moderate variability in participants' responses regarding this variable. With regard to **organizational commitment**, the mean was 4.00, which indicates that the participants presented a high level of commitment to the organizations. The coefficient of variation of 26.52% indicates a moderate variability in participants' responses regarding this variable.

Finally, the **organizational performance** variable presented a mean of 3.98. This suggests that, on average, participants perceived a good level of organizational performance in the organizations studied. The coefficient of variation of 25.04% indicates a moderate variability in participants' responses regarding this variable.

These results provide an overview of participants' perceptions of cultural controls, personnel controls, organizational commitment, and organizational performance. The variability observed in the responses indicates differences in participants' perceptions of these variables, which may reflect different organizational contexts or individual characteristics of the participants.

This information is relevant to understanding these constructs and can provide valuable insights for management and decision-making in the accounting firms studied. Another relevant aspect to be highlighted is that all variables investigated in the research were evaluated on a scale of 1 to 5. This means that participants were able to provide responses ranging from as little as possible (1) to as much as possible (5) for each variable.

4.3 PLS-SEM Analysis

The data were analyzed using structural equation modeling. The first step is evaluating the measurement model, confirming the reliability and validity of the constructs. The second is the structural model in which the study's hypotheses were tested (Hair et al., 2019). In the first stage of the measurement model, the Confirmatory Factor Analysis (CFA) is evaluated, in which no indicator needed to be excluded from the model because they presented satisfactory indexes (Hair et al., 2019). Table 1 shows data regarding the reliability of internal consistency, convergent validity, and discriminant validity (Hair et al., 2019).

The measurement model is adequate because the factor loadings are greater than or equal to 0.708, the internal consistency assumptions – Cronbach's alpha (α), rho_A, and Composite Reliability (CR) – have values greater than 0.70, the convergent validity – Average Variance Extracted (AVE) – has values above 0.50. The discriminant validity meets the Fornell-Larcker and Heterotrait-Monotrait ratio of correlations (HTMT) criteria (Hair et al., 2017). The Fornell-Larcker criterion establishes that the square root of the AVE must be higher than the correlations with the other constructs (Hair et al., 2017). In contrast, the HTMT criterion assumes values below 0.90 (Hair et al., 2019).

Table 1
Measurement model

Panel A. Internal consistency and convergent validity						
	α	rho a	CR	AVE		
Min. value Spec. (Hair et al., 2019)	>0.70	>0.70	>0.70	>0.50		
Cultural controls	0.923	0.933	0.940	0.726		
Personnel controls	0.893	0.909	0.921	0.701		
Organizational commitment	0.912	0.915	0.934	0.739		
Organizational performance	0.948	0.909	0.956	0.685		
Panel B. Discriminant validity: Fornell-Larcker/HTMT						
	1	2	3	4	5	6
1. Cultural controls	0.852	0.685	0.818	0.687	0.091	0.087
2. Organizational commitment	0.634	0.860	0.752	0.722	0.034	0.042
3. Personnel controls	0.749	0.692	0.837	0.667	0.095	0.083
4. Organizational performance	0.652	0.679	0.623	0.828	0.104	0.028
5. Company size	0.084	0.023	0.085	0.096	1.000	0.099
6. Time in the market	0.082	0.038	0.075	-0.008	0.099	1.000

Note. In Panel B, the values in bold on the diagonal are the square root of the Average Variance Extracted (AVE), the values on the diagonal below are the corrections according to the Fornell-Larcker criterion and the values on the diagonal above are the Heterotrait-Monotrait ratio of correlations (HTMT) values. CR = Composite Reliability; SD = Standard Deviation.

Moreover, we used the analysis of Harman’s single-factor test conducted to investigate possible problems regarding the *Common Method Bias* (CMB) resulting from the application of self-administered questionnaires (Podsakoff et al., 2003). This test resulted in five factors that account for 78.55% of the total variance of the model. The first factor represents 48.99% of the total variance and thus does not represent a problem because it is below 50%. After establishing a measurement model with acceptable indices, we moved on to the structural model.

The structural model evaluates the hypotheses through path analysis. Five thousand (5,000) subsamples were adopted, as Hair et al. (2017) recommended. The bootstrapping technique was processed with corrected and accelerated bias according to the confidence interval. The structural model was evaluated for possible multicollinearity between independent variables, explained variance of endogenous variables, and predictive accuracy (Hair et al., 2019). Table 2 presents the results of the structural model.

Table 2
Structural model

Panel A. Path analysis					
Relationship	Beta (β)	t-statistic	p-value	Decision	
Direct Effects					
CC -> OP	0.316	2.801	0.005***	H _{1a} accepted	
PC -> OP	0.105	0.963	0.336	H _{1b} rejected	
CC -> OC	0.263	2.790	0.005***	H _{2a} accepted	
PC -> OC	0.494	4.903	0.000***	H _{2b} accepted	
OC -> OP	0.408	5.149	0.000***	H ₃ accepted	
Indirect Effects					
CC -> OC -> OP	0.107	2.247	0.025**	H _{4a} accepted	Partial
PC -> OC -> OP	0.202	3.812	0.000***	H _{4b} accepted	Total
Control Variables					
Company size -> OP	0.058	1.479	0.139		
Time in the market -> OP	-0.063	1.212	0.226		

Panel B. Quality criteria

	Max. VIF	R ²
OC	2.277	0.509
OP	2.427	0.555

Note. CC = Cultural Controls; PC = Personnel Controls; OC = Organizational Commitment; OP = Organizational Performance; VIF = Variance Inflation Factor.

*** $p > 0.01$; ** $p > 0.05$.

The statistical analysis in Table 2 supports accepting six hypotheses (H_{1a} , H_{2a} , H_{2b} , H_3 , H_{4a} , and H_{4b}) and rejecting one study hypothesis (H_{1b}). No control variable was significant. For mediation analysis, it is observed that the direct path (CC \rightarrow OP) was significant, as well as the indirect relationship is significant (H_{4a}). Thus, it is configured as partial mediation (Bido & Silva, 2019). In the other mediation, it is observed that the direct relationship (PC \rightarrow OP) does not show significance, and the indirect relationship is significant (H_{4b}). Thus, it is configured as a total mediation case (Bido & Silva, 2019).

The first hypothesis suggested that informal controls (cultural and personnel) positively influence organizational performance (H_{1a} and H_{1b}). The results indicate the positive and significant relationship of Hypothesis H_{1a} ($\beta = 0.316$; $p < 0.01$) and rejection in H_{1b} . It is inferred that only cultural controls interfere with the work environment, leading to increased organizational performance. The second hypothesis predicted that informal controls (cultural and personnel) positively influence organizational commitment (H_{2a} and H_{2b}). Statistical findings show that at the 1% level, cultural and personnel controls are positively associated with organizational commitment ($\beta = 0.263$; $p < 0.01$, $\beta = 0.494$; $p < 0.01$).

The third hypothesis proposes that organizational commitment positively influences organizational performance. Thus, it is possible to confirm H_3 since there was a positive relationship and significance at the level of 1% ($\beta = 0.408$; $p < 0.01$), suggesting that in the sample accounting firms, high levels of organizational commitment of employees are conditions for increased organizational performance.

Informal controls were also evaluated as a mediation variable. Therefore, it was noticed that organizational commitment mediates the relationship between cultural controls and organizational performance ($\beta = 0.107$; $p < 0.05$) in a partial way and between personnel controls and organizational performance ($\beta = 0.202$; $p < 0.01$) in a total way. When analyzing the influence of control variables (organization size and time in the market) for organizational performance, no statistical support was found to accept the proposed relationships.

Regarding the modeling quality, multicollinearity is absent. The coefficient of determination (R^2) shows that organizational commitment results in 50.9% and organizational performance in 55.5% of explained variance. Within the context of applied social sciences, it can be seen that both dependent variables have significant explanatory power (Cohen, 1988). Finally, the accuracy of the model is adequate, as the Q^2 values are greater than 0 (Hair et al., 2019).

Once the structural model has been measured, evaluated, and reported, the next subsection discusses these empirical findings with the literature.

4.4 Discussion of results

The implications of the surveys provided in the previous section and the results of the data analysis are discussed in this section by confronting the research hypotheses. As for hypothesis H_1 , suggesting the positive and significant existence of cultural (H_{1a}) and personnel (H_{1b}) controls on organizational performance, only the first statement was identified as positive and significant. Thus, cultural controls positively influence organizational performance.

According to Goebel and Weißenberger (2017), cultural controls generate identification with the organization, influence the mindset of employees, and are a strong control that generates

connection at the organizational level. Thus, it is easy to generate connections aimed at achieving goals, allowing the exchange of information in the daily routine of organizations, generating higher levels of results, such as organizational performance, than the focus on personnel control established since the beginning of the hiring process.

Thus, cultural controls influence the organizational performance of the surveyed sample. This result corroborates the research by Espinosa Sáez et al. (2022), who identified a strong relationship between informal controls and organizational performance, with the financial result being specific. For these authors, aligning employees with pre-established cultural controls facilitates achieving financial results, as it ensures the ease of communication and exchange of ideas between managers and employees. Generally, they are controls that are built and remain over the years, as they are aligned with the organization's culture.

In this context, the study by Monteiro et al. (2021) presents similar results but is related to informal controls in general (personnel and cultural). Corroborating in part the research conducted since the public to which it was applied is conservative (family businesses), different from the study by Frare et al. (2023). The research by Alves et al. (2022) also presents informal controls as an influencer of performance precisely because of the alignment of the organization's values and the ease of communication, which generates greater proximity between employees and what the organization wants.

Moreover, the context in which the research was applied deserves attention. For accounting professionals, organizational performance is achieved with employees committed to the organization's values, be it its vision, mission, and values. As an environment that generates high demands, employees must know what is expected of them and that they are closely monitored to achieve organizational objectives (Malmi & Brown, 2008).

As for hypothesis H₂, the research results reveal that the assumption that informal controls positively influence organizational commitment was accepted. These findings are in line with the studies by Kleine and Weißenberger (2014), Altıntaş et al. (2017), Goebel and Weißenberger (2017), Boff et al. (2021), Monteiro and Lunkes (2021), and Yao et al. (2019). This is because informal controls influence employee perceptions and actions, fostering an environment where individuals share the understanding and importance of organizational objectives (Chenhall, 2003; Merchant & Van der Stede, 2007; Franco-Santos & Otley, 2018).

Previous studies suggest that informal (personnel and cultural) controls are essential for promoting the alignment of individual and organizational objectives, motivating engagement, and creating a work environment conducive to employee engagement. Moreover, informal controls, such as corporate culture, alignment of values, and shared beliefs, significantly increase organizational commitment in the surveyed sample of accounting firms in the Northern Region.

Regarding Hypothesis H₃, the research findings corroborated the existing literature, which already indicated a positive relationship between employee commitment and organizational performance (Goebel & Weißenberger, 2017; Pinho et al., 2014). In the specific context of the sample of accounting firms, the results suggest that highly committed employees play a key role in achieving superior organizational performance. These employees have demonstrated significant loyalty to the organization and are aligned with the values and objectives of the accounting firm.

Committed employees are more inclined to invest additional efforts in their activities, culminating in a higher quality of services provided by sample accounting firms. They have demonstrated a dedication to understanding customer demands and strive to meet them accurately and efficiently. This approach results in higher customer satisfaction, higher quality services, and more satisfied employees, all of which are key drivers of higher organizational performance.

In the mediation hypothesis (H₄), both relationships between informal controls and organizational performance mediated by organizational commitment were accepted, highlighting the importance of organizational commitment in this relationship, according to the results obtained in the surveyed sample. These findings are consistent with previous studies that also used

organizational commitment as a mediation variable, such as the study by Kaveski et al. (2021). These results suggest that the sampled accounting firms perceive their employees' commitment as a key factor for organizational performance.

The findings of this research are important for the accounting firms included in the sample, as they indicate that implementing informal controls can lead to a higher level of employee commitment, as they are considered coercive environments. This commitment, in turn, has the potential for effective organizational performance. By recognizing the relationship between informal controls, organizational commitment, and performance, accounting firms can adopt strategies to strengthen informal controls. This may include creating a positive work environment, encouraging employee participation and engagement, and recognizing and valuing their work.

5 CONCLUSIONS

The research sought to verify the influence of personnel and cultural controls on accounting services firms' organizational commitment and performance. The results indicate that cultural control positively influences organizational performance, suggesting that organizational culture is a crucial factor for achieving better results in the studied context. Moreover, research has found that informal controls (both cultural and personnel) impact organizational commitment. These controls, often non-explicit, are significantly related to the level of employee commitment to the organization in the sample accounting firms. Also, the mediation of organizational commitment in the relationship between informal controls and organizational performance was accepted. This indicates that employees' level of commitment to the organization is important in how informal controls affect the performance of the accounting firms surveyed.

5.1 Implications of the Study

Theoretical implication: the study contributes to the existing literature by broadening the understanding of informal controls, expanding studies in accounting firms to other contexts, and introducing a new set of relevant variables. This helps strengthen academic knowledge on the topic and stimulates future research in this study area.

Management implication: The survey results highlight the importance of informal controls in promoting organizational commitment and performance in accounting firms. This suggests that managers should pay attention to informal aspects of the work environment, such as interpersonal relationships, informal communication, and social networks, in order to foster greater engagement and improve employee performance.

Social implication: contribution to SDG 8 - Decent work and economic growth. The research highlights the importance of organizational commitment and performance for accounting firms' economic growth and sustainable development. By understanding the factors that positively influence these results, organizations can adopt measures to improve working conditions, promote employee engagement, and boost productivity, thus contributing to the achievement of SDG 8.

5.2 Limitations and Recommendations for future research

It is important to mention some limitations of the research. First, the study was conducted in specific accounting firms, which limits the generalization of results to other sectors or organizational contexts. Furthermore, data were collected using self-reported methods, which may introduce bias or inaccuracies in participants' responses.

It is also possible that other factors not considered in this research may influence organizational commitment and performance. Also, the sample size can impact the representativeness of the results. A larger sample may increase the reliability of the results

obtained. Therefore, caution is required when interpreting results and extending conclusions to other situations.

Based on the results obtained and the limitations identified, it is suggested that future research may address the following aspects: replication of the study in different organizational contexts and sectors, in order to verify if the results are generalizable or if there are significant variations; exploration of other factors related to informal controls and their influence on organizational commitment and organizational performance, such as trust, communication, and interpersonal relationships; and conduct studies to examine the interaction between informal and formal controls within accounting firms, in order to understand how these two types of control may complement each other or conflict. This would allow for a more comprehensive view of how formal managerial controls and informal practices coexist and affect organizational commitment and performance.

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