


INFLUENCE OF INTERNAL CONTROL ON THE EFFECTIVENESS OF PUBLIC GOVERNANCE IN PARANÁ MUNICIPALITIES

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ABSTRACT

This study aims to verify whether the internal control of the municipalities in Paraná is effective in promoting municipal public governance. The theme's relevance justifies the study because the internal control system and good governance practices in the public sector make obtaining more accurate information about resource allocation possible since they are based on the principles of public administration and compliance with laws. Public governance can be understood as the ability of governments to assess, direct, and monitor the management of public policies and services to effectively meet citizens' demands (Tribunal de Contas da União [TCU], 2014). This research seeks to contribute to a more comprehensive debate about the effectiveness of internal control as an instrument of public governance among municipalities in Paraná. Also, the study can help municipal agents defend initiatives to improve the internal control systems of their municipalities and, thus, help the control of processes by stimulating the continuous improvement of structures, contributing to the achievement of society's interest. The research was conducted with 102 municipalities in the state of Paraná. It is a descriptive study with a quantitative approach with linear regressions, with independent (internal control) and dependent (public governance) variables. The results showed internal control exerts a certain influence on the governance of the municipalities in the sample. The following variables stand out in this analysis: Monitoring Activity, positively explaining approximately 4% of the IGM variations; the Control Activity variable, negatively explaining, and Control Environment, positively explaining approximately 5% of the RNT variations; the QACI Index variable, positively explaining approximately 7% of the IEGM variations; and the Risk Assessment variable, positively explaining 7% of the IEGM variations.

Keywords: Internal Control. Public Governance. Effectiveness. Municipalities of Paraná.

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1 INTRODUCTION

The various and constant challenges, changes, and legal impositions linked to Public Administration decisively stimulate changes in managing public resources. Thus, for public managers to achieve their objectives, changes must be made, and their administrations must be restructured (Daher et al., 2017).

In 2007, the Court of Auditors of the State of Paraná (TCE-PR) began to require the implementation of the internal control system in the municipalities of the state, noting that an active internal control contributes to the achievement of effectiveness in the provision of public services (Travaglia & César, 2016). As an alternative way to adapt to this reality, some managers have seen the creation of a Controllership unit in municipalities as a way to achieve the new changes that occurred by management policies and new structures of the functioning of municipal public administrations (Daher et al., 2017).

The functions of a Controllership go through multivariate dimensions, highlighting its role in articulating with planning, subsidizing the management process, assessing organizational results and verifying deviations, and suggesting corrections (Cavalcante & Luca, 2013). In that vein, the *International Federation of Accountants* (IFAC, 2001) states that control must act as one of the dimensions of governance in the public sector. Besides, it must adopt practices that involve the following areas: Risk Management, Internal Audit, Audit Committee, Internal Controls, Budget, Financial Administration, and Training.

Thus, public governance corresponds to the processes through which social players interact to establish social coordination standards, responsible for the social cooperation structures necessary to solve the complex public problems of the State (Vieira & Barreto, 2019). As Bergamini Júnior (2005) explains, there is evidence that proves the existence of a strong relationship between good governance standards and good risk management; however, this harmony is only possible if there are adequate internal controls. According to the same author, the absence of governance practices compromises the accountability process of the administrator to the resource owner and the degree of transparency regarding the provision of relevant information to stakeholders.

Based on this concept, the Agent and the Principal are faced with divergences of interests. After all, how do we define the term “information relevant to the interest of the majority” more objectively? Thus, there is a conflict of the Principal versus the Agent, arising from the Agency Theory, consisting of the involvement of two basic types in the relations of control and delegation of action: the first is the Agent, and the second is the Principal (Ribeiro Filho & Valadares, 2017).

The stimulus for developing this research comprises the study and discussion in the scientific field of practices related to governance and controllership in the public sector. The reports on the high rates of inefficiency in public services, deviations, and fraud show that the Brazilian public administration, at all levels, is vulnerable, thus showing its fragility (TCU, 2012). The cause of this may be the insecurity of controls, their inexistence, or ineffectiveness in preventing the risks to which public assets are exposed (Silva, 2017).

Therefore, government controllership assists public managers by providing information on the efficiency of public administration, making it an essential element in managing the quality of spending and extrapolating the notably formal and bureaucratic aspects existing in managing public resources (Azevedo, 2016). In the follow-up search and in order to determine progress in the process, the non-profit entity called the *National Commission on Fraudulent Financial Reporting* (COSO) established in its study the factors that can lead to fraud in reports and developed guides on corporate risk management, internal controls, and fraud deterrence (COSO, 2013).

Moreover, COSO’s technical guidelines aim to consider the factors influencing the preparation of internal control reports and, at the same time, verify the control actions taken, which can transmit a basis for the findings in the reports to be reported (COSO, 2013). In this context,

analyzing the controls practiced means not only affirming the existence of corrective actions in their internal control systems, but also the quality of the internal control system as a governance instrument in these municipalities.

Therefore, the problem that led the research is: Can internal control influence the promotion of municipal public governance to minimize agency conflict? To answer this research problem, the objective of verifying the influence of internal control on promoting municipal public governance was defined.

Thus, this research seeks to contribute to a more comprehensive debate about the effectiveness of internal control as an instrument of public governance among municipalities in Paraná. Also, the study can help municipal agents defend initiatives to improve the internal control systems of their municipalities and, thus, help the control of processes by stimulating the continuous improvement of structures, contributing to the achievement of society's interest.

2 THEORETICAL BACKGROUND

2.1 Agency Theory

Agency Theory suggests that public governance mechanisms can mitigate agency conflicts (Cichoski et al., 2019). However, the agency theory can be demonstrated through a relationship of various meanings, in which the principal delegates the work to the agent, and the agent, in turn, performs the work delegated to him. Still, the theory exposes the situation by comparing a contract (Jensen & Meckling, 1976).

Jensen and Meckling (1976, p. 310) disclosed the Agency Theory as “a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”. Thus, the agent is the individual who, motivated by his interests, undertakes certain tasks for the principal. Nevertheless, no individual should intend to underestimate a role that is not their own, so the environment of agency conflict arises.

The Agency Theory, in its prescriptive aspect, advises the principal to use monitoring and control instruments as a way to reduce the information asymmetry and, mainly, the possibilities of the agent's opportunistic behavior (Fontes Filho & Balassiano, 2005). In the public sector, the agency problem is related to the Civil Society (principal) and the State (agent), represented by the Executive Branch (Martins et al., 2016).

In addition, public managers have been concerned with increasing the disclosure and transparency of their information, reducing information asymmetry to achieve greater community trust. Thus, the effective publication of information is essential to ensure society can better understand managers' performance (Mello, 2009). Slomski (2005) comments that existing conflicts may come from communication problems between the principal and the agent, as the public manager usually has information that society cannot always follow. The Agency Theory is the theoretical basis that aims to expose the relationship between these participants (agent and principal), in which control and ownership are designated by different people, which can result in conflicts of interest between them (Arruda et al., 2008).

Based on this conflict, the agency problem arises based on providing incomplete (asymmetric) information (Bairral et al., 2015). Given the above, Queiroz et al. (2013) emphasize that Governance aims to minimize information asymmetry by being able to reduce agency problems. However, Governance comprises the mechanisms of leadership, strategy, and control intending to assess, direct, and monitor the management performance of public entities, aiming at the conduct of government policies and the provision of public services of interest to society (TCU, 2014).

2.2 Public Governance

Public management must be continuously improved to achieve its purposes, such as reducing poverty, improving education, and stimulating the economy's competitiveness to encourage the conservation of natural resources, among others (Cichoski et al., 2019). The Public Sector Committee (PSC) of the International Federation of Accountants (IFAC) developed a study on governance for the public context, discussing the governance principles that should be present in public organizations in four dimensions, two of which refer to the control and availability of external reports of the International Federation of Accountants - IFAC (2001) (Cavalcante & Luca, 2013).

Thus, the presence of control as a governance dimension in the public sector is explained in the IFAC recommendations (2001), which conceives that function as a support to senior management to enable the achievement of organizational objectives in the efficiency and effectiveness of operations, in the reliability of internal and external reports, and compliance with law and regulation enforcements (Cavalcante & Luca, 2013). Along this same line of reasoning, the authors highlight that the principles of "transparency" and "accountability," as well as the dimensions of control, are permanent presences in the recommendations of good governance practices for the private and public sectors (Cavalcante & Luca, 2013).

Nonetheless, Governance in the public sector refers to assessment, direction, and monitoring mechanisms; and to the interactions between structures, processes, and traditions, which determine how citizens and other stakeholders are heard, how decisions are made, and how power and responsibilities are exercised (TCU, 2014). To this end, governance is related to communication processes; analysis and assessment; leadership, decision-making and direction; control, monitoring, and accountability (Lima et al., 2022).

Thus, agency conflict arises when the Principal has a lower degree of Information than the Agent, and the Agent may make decisions different from the interest of the Principal (Quintana et al., 2015). According to the authors, one of the biggest problems to be faced nowadays is the information asymmetry between State and Society, and there should be a constant improvement of mechanisms that minimize such asymmetry.

For Quintana et al. (2015, p. 189), in this context, "the government has presented ways to minimize this information asymmetry through greater transparency of government actions, with each citizen being responsible for the exercise of full citizenship through social control and active participation in the political life of the country." Public governance mechanisms are available to managers through regulations or practices to be incorporated into management (Travaglia & César, 2016). For the same authors, due to the challenges faced daily by citizens, often subjected to failures, administrative omissions, deviations, and misappropriation of public resources and money, good governance practices are an essential resource in combating bureaucratic administrative actions, inoperative and contrary to the public interest (Travaglia & César, 2016).

Seen in these terms, the highlight is adopting a public governance model that causes an increase in processes that seek the advantages of transparency in the possibility of achieving public responsibility (Ladeur, 2017). To quantitatively assess the effectiveness of public governance, a measurement model is proposed (Boivard & Löffler, 2009). Thus, several studies have already been conducted assessing the use of public governance indicators in Brazil (Ribeiro, 2020). The relevance assumed by public governance and the need to measure it also motivated research by Oliveira and Pisa (2015) on developing the public governance assessment index.

The study by Boivard and Löffler (2003) demonstrated widespread interest in measuring not only the quality of services, but also the improvement in people's quality of life and the governance processes involved. For Pacheco (2009), indicators can be sources of measurement and are necessary for establishing a process of monitoring and assessment of public projects. Therefore, indicators are representative measures of a snapshot of reality used to quantitatively

translate a social concept with meaning into a given theoretical-methodological context (Siedenberg, 2003).

To demonstrate to society how public resources are being used, it is extremely important to conduct a management assessment (Albuquerque et al., 2016). As a form of assistance, we have sought to develop instruments for assessing governance, efficiency, and management, with applicability in all spheres of government and institutional. In this study, the areas covered were the Governance Indicators: CFA Municipal Governance Index (IGM-CFA), National Transparency Ranking (RNT), Firjan Municipal Development Index (IFDM), Firjan Fiscal Management Index (IFGF), Municipal Management Effectiveness Index – IEGM (TCE/PR), and Public Administration Transparency Index – ITP (TCE-PR).

2.3 Internal Control

The constant challenges, changes, and legal impositions linked to public administration currently require changes in managing public resources (Daher et al., 2017). For the same author, control actions over operations of an accounting, budgetary, financial, operational, and equity nature are considered consistent and reliable tools that can subsidize public managers by current legislation and literature.

According to Cruz and Glock (2008, p. 129), the Internal Control System of the Municipality aims to ensure the Executive Branch “the accounting, financial, budgetary, operational, and equity inspection, regarding the legality, legitimacy, and economy in the management of resources and the assessment of the results obtained by the Administration”. In the view of the aforementioned authors, this system refers to “the set of control activities conducted at all levels and in all Powers and entities of the organizational structure of Direct and Indirect Administrations” (Cruz & Glock, 2008, p. 129). The International Organization of Supreme Audit Institutions - Intosai (2005, p. 19) defined an internal control system as:

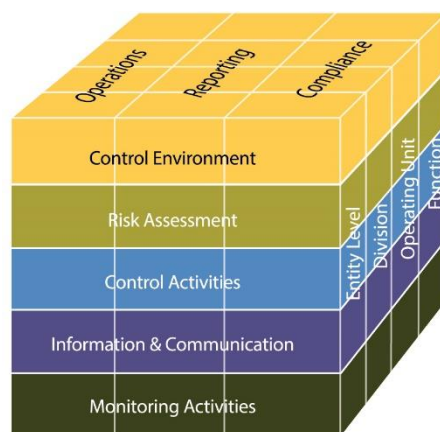
an integral process that is effected by an entity’s management and personnel and is designed to address risks and to provide reasonable assurance that in pursuit of the entity’s mission, the following general objectives are being achieved; executing orderly, ethical, economical, efficient and effective operations; fulfilling accountability obligations; complying with applicable laws and regulations; safeguarding resources against loss, misuse and damage.

According to Azevedo et al. (2010), a well-structured Internal Control should not be considered punitive, but rather as a system that plays an auxiliary, educational, and proactive role to assist in its functions. For the same authors, Internal Control seeks to complete the basic needs of internal users, their managers, directors, technicians, and other servants based on data collected and informed by the control provided to improve the execution of their work, and external users, such as the Court of Auditors, the Legislative Branch, the Public Prosecutor’s Office, society, among others who lack the data to control public accounts. In this perspective, internal control plays a relevant role in the context of organizations. Through it, managers establish actions to monitor the entity’s activities to ensure its objectives can be achieved (Vieira & Barreto, 2019).

It is noteworthy that with effective internal control, the Public Administration guarantees to society that public resources are being applied efficiently and under the terms provided for in laws and regulations, in addition to improving the partnership with the Court of Auditors in the exercise of its institutional mission (TCE-PR, 2017). In the same line of thought, the authors Pértile et al. (2014) state that the better the controls, the lower the chances of something contrary to what was planned to occur and, in the face of the occurrence, the easier it is to verify what happened in terms of non-compliance, who were involved, and define corrective and preventive actions.

Concerning internal control objectives, the framework (COSO, 2013) presents three categories of objectives: operational, disclosure, and compliance; which allow organizations to focus on different aspects of internal control. The internal control provision of COSO (2013) addresses five connected elements: control environment, risk assessment, control activities, information and communication, and monitoring activities. A set of principles was constituted for each component that helps to understand its content and guides the component’s development efforts. COSO (2013) establishes a relationship between the objectives, internal control components, and the entity’s organizational structure, as shown in Figure 1.

Figure 1
COSO Cube – Relationship between Components, Objectives, and Organizational Structure



Source: COSO (2013, p. 15).

The Cube relates the eight risk management components to the categories of objectives to be achieved by the entity. It directly influences risks and management areas, representing the environment where risks can be performed. The assessment model for internal controls developed in the COSO (2013) methodology seeks to cooperate with auditors and managers to qualify the internal control structures, allowing a comparison between the structures of different municipalities and exposing their evolution to give direction on the directions that must be followed to reach an ideal level of maturity (Silva, 2017).

In this sense, it is observed that the five components operate together integrally. “Operate together” refers to determining that all five components together reduce the risk of not achieving the goal to an acceptable level. Components should not be considered separately, as they operate together as an integrated system (COSO, 2013). For the real effectiveness of the internal control system, each of the five components of the control system must be present and functioning properly in relation to each of the three business objectives: economy and efficiency of operations, veracity of financial statements, and compliance with local rules and legislation (Moraes, 2003).

3 METHODOLOGY

This research is characterized as a quantitative approach since it worked with numerical indicators and sought, through regression analysis, to demonstrate the influence between the independent and dependent variables selected for this study. For Knechtel (2014), quantitative research is considered material that acts on human and/or social problems, based on the test of a theory, and composed of variables quantified in numbers.

The study was conducted with those responsible for the Internal Control Systems of 102 municipalities in the state of Paraná, between August and November 2022. The 102 responsible

parties for the Internal Control System were willing to collaborate with the study, answering the questionnaire through the *Google Forms* platform to survey the internal control assessment index. Thus, the research on the assessment of the internal control system, an independent variable, is based on the Internal Control Assessment (QACI) model of the COSO Methodology – (Internal Control – Integrated Structure) of the Committee of Sponsoring Organizations, which was presented in the context and adapted based on the work of Silva (2017) to assess the internal control system. Thus, it was possible to identify the internal control index, obtain its relationship with the municipal governance indexes, and compare it with representative indicators of municipal governance.

The public governance of municipalities, a dependent variable, was represented by the CFA Municipal Governance Index (IGM-CFA), the National Transparency Ranking (RNT), the Firjan Municipal Development Index (IFDM), the Municipal Management Effectiveness Index (IEGM), the Firjan Fiscal Management Index (IFGF), and the Public Administration Transparency Index (ITP).

With the independent (internal control) and dependent (public governance) variables, correlations and single and multiple regressions were performed. Simple regressions were performed with the independent variable INDEX_QACI and the dependent variables IGM, RNT, IFDM, IFGF, IEGM, and ITP, and multiple regressions with the components of internal control (control environment, risk assessment, control activities, information and communication, and monitoring activities) and the governance dependent variables.

4 PRESENTATION AND ANALYSIS OF RESULTS

To develop the results, simple regression was performed with the independent variable INDEX_QACI and the dependent variable IGM. As a result, a significance level (Sig.) of 0.135 was obtained, greater than 5%, not being considered statistically significant. Therefore, INDEX_QACI does not explain IGM variations. Subsequently, multiple regression was performed considering the five components of the INDEX_QACI to explain the IGM variations. It was observed that all Internal Control variables are not statistically significant at the 5% level, as the Sig. are higher. Thus, a regression cannot be considered, and a new regression should be performed to verify if any variable becomes significant. When performing the regression excluding statistically non-significant variables at the 5% level, given possible correlations between them, the model became significant with MONITORING_ACTIVITY, according to Tables 1 and 2.

Table 1 shows the ANOVA (explanatory power of the model) of the variable ACTIVITY_MONITORING to explain the IGM variation. Because it is a simple regression, the model's explanatory power is R-squared (R²), with approximately 4%. Anova, with a Sig. of 0.049, less than 5%, allows accepting that the model is significant.

Table 1
Anova MONITORING_ACTIVITY and IGM

Model	Sum of Squares	df	Mean Square	Z	Sig.
1 Regression	3.853	1	3.853	3.966	0.049
Residual	97.147	100	0.971		
Total	101.000	101			

a. Dependent Variable: Zscore (IGM)

b. Predictors: (Constant), Zscore (MONITORING_ACTIVITY)

Source: Research Data (2022).

Next (Table 2) is the simple regression, in which the variable “ACTIVITY_MONITORING” presents a Sig. of 0.49, less than 5%, considering it statistically significant to explain the IGM variations. It is also observed that the explanatory effect is positive since the Beta is 0.195. It is known that the “MONITORING_ACTIVITY” seeks continuous

monitoring of the performance of normal operations and a continuous nature of the organization, encompassing all components of the internal control structure (Silva, 2017). The study by Silva et al. (2019) reaffirms that the results showed the importance of policymakers intensifying their monitoring actions and consequent sanctions, intending to establish a permanent audit firm in the Brazilian context effectively. Thus, it can be seen that the significance of the variable to explain the IGM only confirms its objective, which is to promote the debate on the importance of management for promoting municipal development, used to recognize, record, and disseminate good Brazilian management practices (CFA, 2022).

Table 2
Regression of “MONITORING ACTIVITY” and IGM

Model	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Standard Error	Beta		
1 (Constant)	-1.442E-15	0.098		0.000	1.000
Zscore (MONITORING_ACTIVITY)	0.195	0.098	0.195	1.991	0.049

a. Dependent Variable: Zscore (IGM)
Source: Research Data (2022).

However, for the regression to be valid, it is necessary to meet the assumptions of normality, absence of serial autocorrelation, homoscedasticity, and multicollinearity; the latter only for multiple regression. The assumption of normality was verified through the *Kolmogorov-Smirnov* test, used to determine whether a sample follows a normal distribution and can consider the normal distribution when the values of a variable are distributed as expected (Corrar *et al.*, 2007), confirming the normal distribution at the level of 5%.

Subsequently, the absence of serial autocorrelation was verified through the *Durbin-Watson* test, based on the calculation of tabulated measures for critical values according to the chosen confidence level (Corrar *et al.*, 2007). In this case, the DW statistic close to 2% demonstrated the absence of serial autocorrelation. Next, homoscedasticity was verified through the *Pesarán-Pesarán* test, given by the variance of the residuals, and remains constant throughout the spectrum of the independent variables (Corrar *et al.*, 2007). The test presented a Sig. greater than 5%, not rejecting the null hypothesis of homoscedasticity and confirming that the assumption was met.

After performing the tests and analyses of Internal Control and IGM, regression was performed with the independent variable INDEX_QACI and the dependent variable RNT. To explain the RNT variations, simple regression presented a significance level (Sig.) of 0.287, greater than 5%, not being considered statistically significant. Therefore, INDEX_QACI does not explain RNT variations. Thus, multiple regression was performed considering the five components of the INDEX_QACI to explain the RNT variations.

As a result, it was observed that only the variable CONTROL_ENVIRONMENT is statistically significant because the Sig. 0.018 is less than 5%. Therefore, a regression cannot be considered, and a new regression should be performed to exclude non-significant variables. When performing the regression excluding statistically non-significant variables, it was noticed that CONTROL_ACTIVITY and CONTROL_ENVIRONMENT are statistically significant at the 10% level, making the model significant, according to Tables 3 and 4.

Table 3 shows the ANOVA (explanatory power of the model) of the variables CONTROL_ACTIVITY and CONTROL_ENVIRONMENT to explain the RNT variation. In the case of multiple regression, the model’s explanatory power is the adjusted R-squared, with approximately 5%. Anova, with a Sig. of 0.038, less than 5%, allows accepting that the model is significant.

Table 3

Anova with CONTROL_ACTIVITY and CONTROL_ENVIRONMENT and RNT

Model	Sum of Squares	df	Mean Square	Z	Sig.
1 Regression	6.465	2	3.233	3.385	0.038
Residual	94.535	99	0.955		
Total	101.000	101			

a. Dependent Variable: Zscore (RNT)
 b. Predictors: (Constant), Zscore (CONTROL_ENVIRONMENT), Zscore (CONTROL_ACTIVITY)
 Source: Research Data (2022).

Table 4 shows the coefficients of the variables ACTIVITY_CONTROL and ENVIRONMENT_CONTROL to explain the variations in NTR.

Table 4

Regression of CONTROL_ACTIVITY and CONTROL_ENVIRONMENT and RNT

Model	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Standard Error	Beta		
1 (Constant)	-1.218E-16	0.097		0.000	1.000
Zscore (CONTROL_ACTIVITY)	-0.285	0.161	-0.285	-1.773	0.079
Zscore (CONTROL_ENVIRONMENT)	0.413	0.161	0.413	2.563	0.012

a. Dependent Variable: Zscore(RNT)
 Source: Research Data (2022).

Table 4, analyzing the variables individually, showed that if the significance level of 5% was adopted, no variable would be significant by the degree of relationship between them, so we chose to use the significance of 10%. Adopting significance percentages of up to 10% is sometimes used to avoid making certain studies unfeasible and because it is not a prediction. For example, we can mention the study by Rosa Filho *et al.* (2020), which used a significance of 10% for the municipalities grouped in the good level of public governance between the levels of municipal governance and the credit rating. Thus, the variable CONTROL_ACTIVITY presented a Sig. of 0.079, and CONTROL_ENVIRONMENT presented a Sig. of 0.012, which can be considered statistically significant for the study.

Thus, both are significant in explaining the RNT variations. It is observed that the variable CONTROL_ACTIVITY has a negative B coefficient, -0.285, impacting negatively. In contrast, the variable CONTROL_ENVIRONMENT has a positive impact, with a B coefficient of 0.413. In this case, CONTROL_ENVIRONMENT, as it is considered a set of standards, processes, and structures that provide the basis for applying internal control throughout the organization (COSO, 2013), is impacting the RNT governance index, which seeks to provide citizens with greater transparency in the execution of municipal management, applying the set of respective standards to transparency in Brazil, completed with the edition of the Access to Information Law (Law No. 12.527/11) (RTN, 2022). This result follows the findings of Cavalcante (2011), who reveal that the aspects of the control environment indicate a good level of alignment with the recommendations of the agencies, providing conduct compatible with standards of good public governance. However, in the study by Luiz Gattringer and Vieira Marinho (2020), the Control Environment component for the municipalities of Santa Catarina is reasonably adopted and requires better actions to consolidate it.

However, the CONTROL_ACTIVITY, which includes policies and procedures that help ensure that management guidelines can mitigate risks to achieving objectives (COSO, 2013), is negatively impacting RNT. This can be explained when Silva (2017) presents, in his study, that

the lack of monitoring activities compromises the expectation of control that must exist in the managers and servants who conduct the various work processes. If this does not happen, the risks of misuse of resources, loss and diversion of assets, and non-execution of tasks, even the most routine ones, are increased.

After performing the tests and analyses of Internal Control and RNT, regression was performed with the independent variable INDEX_QACI and the dependent variable IFDM. Simple regression with the INDEX_QACI to explain the IFDM variations presented a significance level (Sig.) of 0.475, greater than 5%, not considered statistically significant. Therefore, INDEX_QACI does not explain IFDM variations. Subsequently, multiple regression was performed considering the five components of the INDEX_QACI to explain the IFDM variations. Therefore, it was observed that all Internal Control variables are not statistically significant at the 5% level, as the Sig. are higher. Thus, a regression cannot be considered, and a new regression should be performed to verify if any variable becomes significant. Regression was performed again, individually excluding statistically non-significant variables. But even so, no variable was significant. Consequently, the internal control variables do not explain the IFDM variations.

These results do not corroborate the findings of Brocco *et al.* (2018), as they found that the IFDM was statistically significant to the point of explaining the level of transparency of the municipalities due to the assumption that citizens with better health, education, and good employability are better able to exercise social control over municipal management. However, according to the study by Santos and Machado (2021), whose control variables generated divergent results, not demonstrating significance relative to the population level and Active Fiscal Transparency, it is understood that transparency in public administration is a tool used for control and verification. In other words, it is a way of knowing if what is being promised by public managers is being fulfilled (Costa & Souza, 2020).

Then, the regression was performed with the independent variable INDEX_QACI and the dependent variable IFGF. Simple regression with the INDEX_QACI to explain the IFGF variations presented a significance level (Sig.) of 0.277, greater than 5%, not considered statistically significant. Therefore, INDEX_QACI does not explain IFGF variations. Thus, multiple regression was performed considering the five components of the INDEX_QACI to explain the IFGF variations. It was observed that all Internal Control variables are not statistically significant at the 5% level, as the Sig. are higher. Thus, a regression cannot be considered, and a new regression should be performed to verify if any variable becomes significant.

Regression was performed again, individually excluding statistically non-significant variables. But even so, no variable was significant. Consequently, the internal control variables do not explain the IFGF variations. These results disagree with the studies by Leite Filho *et al.* (2018), who noted that municipal transparency, Municipal Development Index, population, gross budget revenue per capita, as well as size, productivity, and collection influence the quality indicator of municipal fiscal management in Brazil; by Silva *et al.* (2020), who found in their study that the location of Brazilian municipalities, the level of human development (IDHM) and fiscal management (IFGF) have a positive relationship with the transparency of Brazilian municipalities; and by Rosa *et al.* (2021), who demonstrate that the balance of fiscal management, measured by the ability to invest, cost of debt, personnel expenses, liquidity, and own revenue, results in a positive impact on municipal performance.

After performing the tests and analyses of Internal Control and IFGF, regression was performed with the independent variable INDEX_QACI and the dependent variable IEGM. The ANOVA (explanatory power of the model) of the variable INDEX_QACI to explain the IEGM variation is approximately 7%. Anova, with a Sig. of 0.009, less than 5%, allows accepting that the model is significant. Therefore, INDEX_QACI can explain IEGM variations.

As shown in Table 5, the General Internal Control Assessment Index explains approximately 7% of the IEGM variations, which is a positive explanation, with a B coefficient of 0.258. Therefore, it is clear that the INDEX_QACI has some influence on the IEGM.

Table 5
Simple regression with INDEX_QACI and IEGM

Model	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Standard Error	Beta		
1 (Constant)	-1.306E-15	.096		.000	1.000
Zscore (INDEX_QACI)	.258	.097	.258	2.676	.009

a. Dependent Variable: Zscore (IEGM)

Source: Research Data (2022).

The INDEX_QACI corresponds to the set of components CONTROL_ENVIRONMENT, RISK_ASSESSMENT, CONTROL_ACTIVITY, INFORMATION_COMMUNICATION, and MONITORING_ACTIVITY, which is partially related to the variations in the IEGM (Municipal Management Effectiveness Index). This search provides public management interpretations for seven dimensions of public budget execution, namely: Education; Health; Planning; Fiscal Management; Environment; Protected Cities and Governance in Information Technology (TCE-PR, 2022). The Court of Auditors of the State of Paraná instituted the Internal Control System in the Executive and Legislative branches in 2007 as a form of assistance in the execution of the inspection of municipal management. This may be a possible explanation for the findings of this work, also corroborated by Pinho and Brasil (2021), who state, in their study, that control over public management has gained notoriety, showing signs that society has a great interest in government spending, demanding a better application of public resources and that the acts of public agents are conducted with greater transparency and responsibility. However, the study by Silva *et al.* (2020) highlighted in its observation among municipalities in the state of Pará and through the Municipal Management Effectiveness Index (IEGM), the classification of this index as the worst range (C), demonstrating serious problems in all dimensions assessed, with negative emphasis on institutional aspects such as planning.

Subsequently, multiple regression was performed considering the five components of the INDEX_QACI to explain the IEGM variations. It was observed that all Internal Control variables are not statistically significant at the 5% level, as the Sig. are higher. Thus, a regression cannot be considered, and a new regression should be performed to verify if any variable becomes significant. When performing the regression excluding statistically non-significant variables at the 5% level, given possible correlations between them, the model became significant with RISK_ASSESSMENT, according to Table 6.

Table 6
Simple regression with RISK_ASSESSMENT and IEGM

Model	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Standard Error	Beta		
1 (Constant)	-1.167E-15	.096		.000	1.000
Zscore (RISK_ASSESSMENT)	.267	.096	.267	2.767	.007

a. Dependent Variable: Zscore (IEGM)

Source: Research Data (2022).

Table 6 shows that the variable RISK_ASSESSMENT is presented with a Sig. of 0.007, less than 5%, considered statistically significant to explain the IEGM variations. It is also observed that the explanatory effect is positive since the Beta is 0.267. Analyzing the variable

RISK_ASSESSMENT, it can be seen that it has some influence on the IEGM governance index, which measures the quality of municipal spending and assesses the public policies and activities of the municipal manager. Thus, exposing that the strategic vision and objectives of the municipalities are being effectively achieved (TCE-PR, 2022), this evidence, even after a decade, corroborates the study by Cavalcante (2011), which showed there is a low performance of internal controls in the involvement of risk management activities.

Then, the regression was performed with the independent variable INDEX_QACI and the dependent variable ITP. Simple regression with the INDEX_QACI to explain the ITP variations presented a significance level (Sig.) of 0.136, greater than 5%, not considered statistically significant. Therefore, INDEX_QACI does not explain ITP variations. Subsequently, multiple regression was performed considering the five components of the INDEX_QACI to explain the ITP variations. It was observed that all Internal Control variables are not statistically significant at the 5% level, as the Sig. are higher. Thus, a regression cannot be considered, and a new regression should be performed to verify if any variable becomes significant. Regression was performed again, excluding statistically non-significant variables individually, but no variables were significant. Therefore, regression of internal control components to explain ITP variations cannot be used, thus not influencing ITP.

In summary, it was found that internal control exerts a certain influence on the governance of the municipalities in the sample. It is noteworthy in this analysis that the variable Monitoring Activity, with a Beta coefficient of 0.195, explains approximately 4% of IGM variations; that the variable Control Activity, with a Beta coefficient of -0.285, and Control Environment, with a Beta coefficient of 0.413, explain approximately 5% of RNT variations; that the variable QACI Index, with a Beta coefficient of 0.258, explains approximately 7% of IEGM variations; and that the variable Risk Assessment, with a Beta coefficient of 0.267, explains 7% of IEGM variations.

The main aspect related to the justification of internal control over the influence on governance is associated with reducing management deficiencies and, consequently, mitigating agency conflicts. Management with adequate controls tends to increase the transparency of management acts towards stakeholders, ensuring that conflicts of interest do not interfere with the organizational capacity to obtain economic results (Cavalcante & De Luca, 2013).

Thus, the study shows some indications that the internal control of the municipalities in the sample has certain effectiveness in promoting municipal public governance, meaning the work that has been developed in the municipalities is associated with the reduction of management problems and, resulting in the reduction of agency conflicts, demonstrating that an organization with adequate controls provides better transparency of its management acts (Cavalcante & De Luca, 2013), improving the transparency of information disclosure and ensuring the achievement of the objectives previously established by the municipality, reducing information asymmetry since the effective disclosure of information is essential for society to understand the performance of managers better (Mello, 2009).

5 CONCLUSION

Internal control is a decisive factor for an organization to succeed. The control activity in public administration is linked to greater information transparency and reliability in managing public resources since the internal control system provides greater transparency, meeting the decision-making needs of public managers.

Therefore, management must consider all stakeholders to act efficiently and effectively and offer quality services to the population by strengthening the capacity to formulate and implement public policies (Mello, 2009). Thus, the existence of control as a dimension of governance in this sphere is demonstrated in the IFAC recommendations (2001), which include the function of supporting senior management to achieve the organization's objectives, seeking

the efficiency and effectiveness of operations, thus presenting reliability in internal and external statements and in accordance with legislation and regulations.

In this context, with regard to the influence of internal control on the promotion of municipal public governance, it was found that internal control exerts a certain influence on the governance of the municipalities in the sample. The variables stand out in this analysis: Monitoring Activity, positively explaining approximately 4% of the IGM variations; the Control Activity variable, negatively explaining, and Control Environment, positively explaining approximately 5% of the RNT variations; the QACI Index variable, positively explaining approximately 7% of the IEGM variations; and the Risk Assessment variable, positively explaining 7% of the IEGM variations.

The main aspect related to the justification of internal control over the influence on governance is associated with the reduction of management deficiencies and, consequently, mitigates agency conflicts, where an organization with adequate controls tends to increase its transparency of management acts before stakeholders, ensuring that conflicts of interest do not interfere with the organizational capacity to obtain economic results (Cavalcante & De Luca, 2013).

The importance of internal control mechanisms in public administration as a form of assistance for its managers is evident. Internal control aims to safeguard public management, providing the needs in accordance with the legislation and the fundamental principles presented in art. 37 of the Federal Constitution, impersonality, legality, morality, publicity, and efficiency. Thus, evidence can be found that the internal control of municipalities in Paraná has certain effectiveness in promoting municipal public governance from the perspective of the Agency Theory, as it suggests that public governance mechanisms can act as mitigators of agency conflicts (Cichoski *et al.*, 2019).

It can be admitted that some research limitations were noted during this study, whether operational or methodological. A possible limitation is regarding the methodology, as the various variables refer to different years, such as 2016, 2017, 2018, 2019, 2020, 2021, and 2022, but these are the updated ones available. Another limitation is having the support of those responsible for internal control systems, as many do not have time available, given the numerous activities in their daily lives, which they ended up not accepting or even giving up on completing the questionnaire. Also, the research population was limited to the municipalities of Paraná, and the responses totaled a sample of 102 respondents.

As an opportunity for future studies, it is suggested to expand the research sample to other regions of Brazil and compare it with this study. Other research possibilities involve the search for the use of other variables and the application of other multivariate statistical techniques. It would also be interesting to assess the efficiency of this disclosure and merge qualitative research to understand the motivation behind the determining factors of these results.

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