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Economic and financial factors and characteristics that influence the timeliness of public-sector accounting information in municipalities in Minas Gerais

ABSTRACT

Objective: The present study identifies the elements that can influence the timeliness of public sector accounting information, using as proxy the approval of the Summary Reports of Budget Execution (RREO).

Method: Financial, demographic, and internet access data were collected for all 853 municipalities in the state of Minas Gerais for 2019. The data were treated through count data regression using the negative binomial model.

Originality/Relevance: While timeliness allows making informed data available in time to influence decision-making, the literature is still scarce in unveiling the aspects that can influence public-sector timeliness.

Results: Results show that current revenues and public spending in personnel, education, health, and security can positively influence the timeliness of RREO approval.

Theoretical/Methodological contributions: Accounting is not widely used as an object of analysis by stakeholder theory, even though stakeholders are frequently addressed in accounting publications. The literature still lacks more in-depth investigations on the topic, especially in municipal contexts.

Social/Management contributions: This study provides evidence on how higher investments in education, health, and security, as well as current revenue and personnel spending, tend to influence increased timeliness.

Keywords: Timeliness, Summary Reports of Budget Execution, Stakeholders, Public Accounting.

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1 INTRODUCTION

The public sector plays a key role in ensuring the quality of life of its citizens, supporting their rights and citizenship through the provision of goods and services. Citizens maintain the government machinery and demand a more efficient/effective management of public resources and assets, making it necessary for the public sector to communicate how it has acted (Aboukhadeer et al., 2023).

Higher levels of public information disclosure tend to be valued by society, the market, and other governments (Trocz et al., 2022). Public bodies are required to be transparent and accountable to citizens, providing the necessary information for control, evaluation, and accountability (Abu Bakar & Saleh, 2011). It is also necessary that the information disclosed meets quality criteria, thus allowing local authority performance to be evaluated (Gomes et al., 2020).

Accounting is a science that is critical for disclosing information about the government (García-Tabuyo et al., 2017). Its primary goal is to inform and assist in the decision-making process of all stakeholders. These are defined as the parties that affect or are affected by an entity's actions (Freeman & Reed, 1983). As regards public actions, stakeholders can be any individual or organization, such as citizens, civil society organizations, companies, government at diverse levels, among others (Riege & Lindsay, 2006).

In this study, the concept of accounting information quality refers to information that can meet its stakeholders' needs, allowing accurate decision-making (Batistella et al., 2021; Dewi et al., 2019; Tran et al., 2021). According to the Accounting Pronouncements Committee (CPC 00, 2019), to be useful, financial information must possess qualitative characteristics. These characteristics can help improve the quality of the accounting information that is made

available, minimizing the informational asymmetry between the government and the other stakeholders (Sandria et al., 2021).

Among the qualitative characteristics of accounting information is timeliness, an attribute concerned with making information available in a timely manner, so that the data that are provided can assist stakeholders in their decision-making process. The lack of this qualitative characteristic results in stakeholders being given access to outdated information or no information, resulting in informational asymmetry and/or mistaken decision-making (Ahamed, 2020; Alashi, 2020; Dwyer & Wilson, 1989; Sandria et al., 2021; Suadiye, 2019; Alkhatib & Marjib, 2012; Türel, 2009; Abdullah, 2006).

According to Edmonds and other authors (2017), one of the main concerns of the public sector should be the provision of accounting reports in a timely manner. Given its importance for legitimacy in the eye of stakeholders and for more assertive decision-making, timeliness was addressed by studies that analyzed the subject in the private sphere (Ologun et al, 2020; Suadiye, 2019; Gulec, 2017; Firth et al., 2009). In summary, these studies examined the factors that influenced the timeliness of reports or statements.

In the Brazilian context, it is worth mentioning the studies by Salgado and Souza (2021), Silva, Souza, and Klann (2016), Altoé, Ribeiro, and Colauto (2015), and Dalmácio and Rezende (2008), which analyzed, respectively, accounting information timeliness in companies listed on B3, in family businesses, in the Brazilian stock market and its relationship with corporate governance mechanisms in the stock market. Both national and international studies have demonstrated the importance of timeliness for minimizing informational asymmetry and allowing information to be communicated in time to influence decision-making.

In the public sector, it is worth mentioning the studies by Dwyer and Wilson (1989) and Edmonds and others (2017), which emphasize the need to reduce the time for publication of

accounting data in American municipalities. In addition, both highlight the need for research and discussions on the topic.

The stakeholder theory holds that organizations have a duty to create value for stakeholders (Freeman, 2010; Freeman & Reed, 1983; Lee & Raschke, 2023; Pertiwi & Wibowo, 2023). This implies aligning with the diverse interests of these stakeholders in search of creating mutual interests while considering conflicting ones, all based on ethical principles and with a view to value creation (Lee & Raschke, 2023). However, organizations tend to perform acts not only in their own interest, but also for the benefit of stakeholders (Pertiwi & Wibowo, 2023). Organizations are built around a specific purpose (Lee & Raschke, 2023), whereas the public sector's purpose is to provide public services and goods to society, rather than to reap profits (Meijer, 2014).

In this context, according to Dahan, Doh, and Raelin (2015), the lens of stakeholder theory is suitable for understanding the role of government vis-à-vis citizens' pressure for guaranteeing their rights. Publishing quality accounting information with an emphasis on timeliness is intrinsically related to the government's search to legitimize itself in relation to its multiple stakeholders. Thus, timeliness is necessary in both the public and private sectors. Some studies note that, unlike other fields, accounting is not widely used as an object of analysis by stakeholder theory, even though stakeholders are often addressed in accounting publications (Ahamed, 2020; Freeman, 2010; Lee & Raschke, 2023). In spite of this, according to Lee and Raschke (2023), it is evident that considering stakeholders in accounting research is both necessary and potentially beneficial.

Thus, the timeliness of public-sector accounting information emerges as a necessary topic, especially considering the complex relationships that characterize the public sphere. This is because it is fundamental to foster trust (or credibility) and legitimacy as regards public actions, as stakeholders are affected by government officials' choices. Thus, the government's

ability to provide timely information not only demonstrates transparency, but is intrinsically related both to the legitimacy relationship between government and society and to the provision of timely information to support successful actions.

Nevertheless, the literature still lacks more in-depth investigations on the factors that affect the timeliness of public-sector accounting information, especially in municipal contexts, which highlights the need for research that explores the characteristics of this dimension from the perspective of stakeholders. After all, timeliness as a qualitative characteristic of accounting information tends to minimize informational asymmetry and assist in the control of public managers' actions.

In Brazil, one of the tools created to increase transparency and accountability in public management is the Brazilian Public Sector Accounting and Tax Information System (SICONFI). This system includes the Summary Reports of Budget Execution (RREO). The RREO address issues related to expenses and revenues, and are released by the executive branch bimonthly, which makes them an instrument of management transparency. Since 2015, the RREO for the states and Federal District have been published online. This procedure is founded on the Fiscal Responsibility Law (LRF) and intended to make public management more transparent.

Thus, this study builds on stakeholder theory to help understand the timeliness of accounting information in the Brazilian public sector, as well as the factors that influence its occurrence. To that end, the study identifies the elements that can influence public-sector accounting information timeliness in municipalities, using as proxy the approval of the RREO, i.e., the moment in which the reports issued by municipalities were validated.

This study advances by showing the relationship between economic variables and the timeliness in municipalities, in addition to stressing the relevance of analyzing timeliness in the

public sector. These findings have significant implications for the effectiveness of local public management, as informed decision-making is critical to meeting the needs of society.

After this introduction, the study includes a section on accounting information timeliness and its relationship with stakeholder theory, and the study hypotheses are discussed in this topic. Subsequently, the methodological procedures are outlined, followed by the study results and the discussions about them in light of the second section. Finally, section 5 presents the conclusions.

2 TIMELINESS OF ACCOUNTING INFORMATION AND STAKEHOLDERS

The main product of accounting is accounting information, and it is therefore essential for that information to meet quality standards in order to become useful (Abu Bakar & Saleh, 2011). To that end, the information must have attributes that expand its usefulness for stakeholders, called qualitative characteristics (Ijeoma, 2014; Rudzioniene & Juozapaviciute, 2013).

Timeliness is an enhancement qualitative characteristic (CPC 00, 2019) and requires that accounting information is made available in a timely manner in order to be useful (Ahamed, 2020; Alashi, 2020; Dwyer & Wilson, 1989; Sandria et al., 2021; Suadiye, 2019). This ensures that in addition to the quality of the provided content, it is also speedily approved (Alashi, 2020; Türel, 2009). Thus, access to adequate information as soon as possible increases the influence of data on decision-making. Conversely, access delay can jeopardize decision-making (Ha et al., 2018).

The disclosure of accounting information is directly related to its quality, and the lower the evidence, the lower the usability of accounting information, and the easier it is to manipulate it (Ramos & Klann, 2019). This is therefore an important element for ensuring the quality of

information (Ahamed, 2020) and protecting stakeholders from outdated content (Akadakpo & Mgbame, 2018).

Stakeholders are groups of individuals who are impacted by, or can impact an entity's actions (Bryson, 1988; Donaldson & Preston, 1995; Freeman, 2010; Freeman & Reed, 1983; Gomes et al., 2020) or policies (Brugha & Varvasovszky, 2000). The definition points to a two-way impact relationship between organizations and stakeholders (Kaur & Lodhia, 2019). Stakeholder theory is based on the proposition that an entity's decisions should be made with a view to balancing and satisfying the interests of its stakeholders, since these individuals or groups are fundamental (Freeman, 2010). Therefore, it is directed towards understanding the relationships between a private- or public-sector organization and its environment (Gomes et al., 2010).

The study by Gomes et al. (2010) identified three stakeholder categories in Brazilian municipalities: actors with voting power, actors with economic power, and actors with political power. Public-sector stakeholders are individuals who create and consume accounting information. Thus, timeliness, as well as the other qualitative accounting characteristics, tend to be influenced by these actors because they are part of the environment in which it is produced and used; thus political, economic, and social scenarios interfere with the process of issuing accounting information (Araújo & Callado, 2020).

With the Federal Constitution of 1988, Brazilian municipalities began to have greater political and administrative autonomy (Mendes et al., 2018). Thus, they began to play a prominent role due to the proximity between citizens and authorities, conducting heterogeneous public management practices within legal limits (Castro, 2003). Because it is the government level closest to the population and its demands, municipal governments may come under increased pressure to implement actions and issue quality information in order to communicate with their stakeholders.

The municipal public sector is an organization that aims to have its actions legitimized before its stakeholders in order to maintain its legitimacy and permanence in power. This legitimacy can be pragmatic or social, the former dealing with the provision of benefits to stakeholders while bringing maximum performance to them. Social legitimacy, on the other hand, refers to appropriate actions by a social actor in terms of culture, current social norms, local values and beliefs (Wang et al., 2014).

For example, movements to combat corruption, improve the management of public resources and public policies, promote quality of life, and hold officials accountable for their acts and omissions, have aroused in society the interest in participating and inquiring about the acts of public administration. (Silva, 2017). Importantly, it is not only a matter of knowing how much the government invests in the provision of goods and services, but also the result generated and whether it could have been achieved at lower costs, which are part of the management of government levels (Rezende et al., 2010).

According to Sandria et al. (2021) and Dwyer and Wilson (1989), the financial information of municipalities signals characteristics of municipal management that are useful for understanding timeliness, as well as the quality of accounting information as a whole (Bashir & Amir, 2020). Among municipalities' financial data are the funds spent¹ in personnel.

According to Sandria et al. (2021), funds spent in personnel are one of the most important organizational components, as they tend to reflect professionals that are more specialized, or even a greater number of these. Bairral et al. (2015) also show that public entities with higher personnel expenditures tend to have better practices of voluntary disclosure of information as a form of legitimacy before society. Thus, with regard to municipal finance, the following hypothesis is presented:

H1 The higher the expenditure on personnel, the greater the tendency for timeliness.

Another element that portrays municipal public finance is net current revenue, an indicator used as a parameter to examine the limits imposed by the LRF (Rodrigues, 2008). Mata (2022) found that the municipalities in the state of Espírito Santo with the highest level of budget revenues also presented a higher level of disclosure, which can be explained by the fact that timely public information disclosure also requires sufficient funds to cover implementation costs. In view of the importance of this element for municipal management, the following hypothesis is considered:

H2: The higher the net current revenue, the greater the tendency for timeliness.

Another aspect related to public management refers to the size of municipalities, given that larger municipalities tend to have a greater number of social movements and/or public demonstrations that aim to monitor public-sector actions, according to Silva (2017). In this respect, the study by Edmonds et al. (2017) identified that municipalities with larger populations issue their accounting information with greater timeliness.

In addition to the size of the municipality, a higher population density increases the responsibility of public management, since budgets also tend to be larger (Berry; Gersen, 2009). Places with a higher population density also concentrate citizens with a higher level of education, which increases the need for accountability in the public sector, gives rise to a higher level of transparency, and can contribute to the reduction of corruption in the public sector (Ifeanyi & Chukwuma, 2015). Thus, we have the hypothesis:

H3: The higher the population density, the greater the tendency for timeliness.

The role of the public sector is to provide goods and services to citizens. Therefore, studies have noted the need to ensure quality of life for the population (Aboukhadeer et al., 2023; Meijer, 2014). Human development is a factor that impacts stakeholders' reality and actions (Gomes et al., 2010). In order to legitimize themselves as good government, managers must provide public services, which according to stakeholder theory will be carried out in line

with stakeholders' expectations (Pertiwi & Wibowo, 2023). Therefore, this it also tends to influence how financial information is operationalized (Carmeli, 2008), which founds the fourth hypothesis of this study.

H4: The greater the human development, the greater the tendency for timeliness.

Furthermore, Carmeli (2008) demonstrates that stakeholders with a better social condition tend to demand more from authorities, influencing the quality of accounting information. It is believed that investments in social areas which benefit human development, such as education, basic sanitation, health, and security (Fernandes et al., 2018; Costa et al., 2015), can influence demands for timely accounting information. Consequently, the following hypotheses are presented:

H5: The greater the investment in education, the greater the tendency for timeliness.

H6: The greater the investment in basic sanitation, the greater the tendency for timeliness.

H7: The greater the investment in health, the greater the trend of timeliness.

H8: The greater the investment in security, the greater the tendency for timeliness.

The study carried out by Carmeli (2008) in Israel found that locations where the socioeconomic status of residents is higher have a greater participation of the population in operationalizing financial information. Edmonds et al. (2017) propose that municipalities with wealthier populations are more oppressive on government duties. Thus, we hypothesize as follows:

H9: The higher the gross domestic product (GDP), the greater the tendency for timeliness.

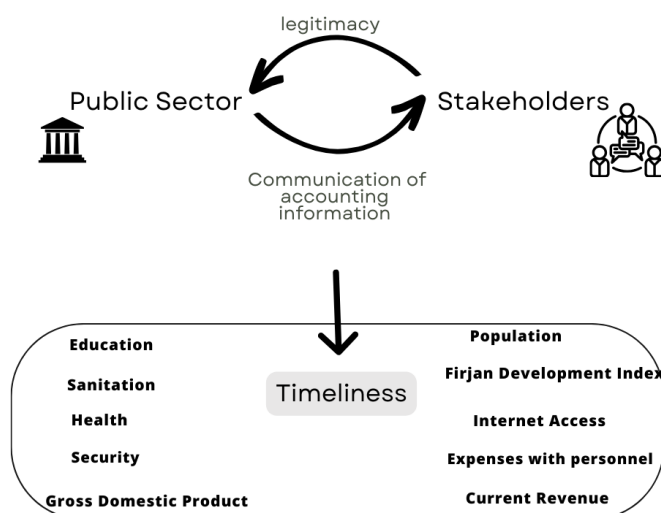
The public sector is aimed at providing public services to society (Gomes et al., 2020). However, even in the public sector, organizations have to deal with a large number of stakeholders which are mostly heterogeneous (Kaur & Lodhia, 2019). A major problem in the

relationships between entities and their stakeholders is information asymmetry (Carvalho, 2021). An important factor in mitigating asymmetry is internet use. The internet has changed the way public-sector information is shared with stakeholders (Duan et al., 2023; Yuen et al., 2023). According to Sandria, Elfiswandi, and Yamasitha (2021), the use of the internet can influence the timeliness of financial reports. In addition, the internet has promoted greater participation of stakeholders in management control (Carmeli, 2008; Meijer, 2007). The last hypothesis of this study is presented:

H10: The greater people’s access to the internet, the greater the tendency for timeliness.

Figure 1

Analytical Model



In this context, Figure 1 below shows the analytical model with the factors that tend to influence the timeliness of accounting information. It should be noted that because accounting science is an applied social science, society’s actions can impact it, corroborating stakeholder theory, which assumes that elements of the organizational environment and the characteristics of stakeholders can have a strong influence on the relationship between organizations and stakeholders. It is inferred that municipalities’ timeliness in publishing accounting information

is influenced by the actions of managers regarding public administration and public actions, as well as by society itself.

The factors presented in the analytical model (Figure 1) reflect particular characteristics of each municipality, which tends to help understanding the occurrence of this qualitative characteristic—or the lack thereof. It should be noted that municipalities, as well as other government levels, face demands for greater transparency and accountability. Due to the importance of accounting information quality in reports and other accounting data provided by the public sector, as well as all the qualitative characteristics that compose it, particularly timeliness, laws and mechanisms have been created to ensure the practical application of these elements, improving transparency and data quality in order to communicate useful information to stakeholders.

3 METHODS

3.1 Units of analysis and variables

The study's units of analysis are the 853 municipalities in the state of Minas Gerais, which is located in the Southeast region of Brazil. This selection is justified due to the fact that Minas Gerais is the Brazilian state with the largest number of municipalities, besides occupying a large geographic area that contains diverse municipal profiles in terms of demographic, social, and economic characteristics (Costa et al., 2015; Fernandes et al., 2018).

The analyzed information pertains to 2019, which is justified by the atypical nature of 2020 and 2021 due to the Covid-19 pandemic, with possible repercussions for 2022. During this period, timeliness may have been affected by several factors related to the pandemic. The study by Bryson (1988) points out that organizations are influenced by several factors, such as economic changes, sociocultural factors, and situations that challenge management. It is therefore believed that Covid-19 has affected public management.

Indeed, Syahputra, and Saraswati (2020) found that the Covid-19 pandemic significantly affected the quality of public financial reporting in Indonesia. Therefore, 2019 is considered the most recent typical year, providing a more accurate representation of municipal timeliness.

The approval of RREO was chosen as a proxy for public-sector timeliness because this is public accounting information intended for rapid and frequent disclosure. Thus, when examining whether a municipality was timely in each of the six bimesters of 2019, the frequency and speed of RREO approval is analyzed.

The Federal Constitution of 1988, as well as Complementary Law No. 101 of 2000, and National Treasury Secretariat Ordinances Nos. 702 of 2014, 743 of 2015, 841 of 2016, and 896 of 2017, establish that the RREO must be issued within thirty days of the bimester's end; if the established deadline is not met, the entity can be penalized. There is therefore a constitutional influence for timeliness to occur.

In this study, timeliness is measured through the frequency and speed (Alashi, 2020) of RREO approval in the SICONFI public database. The data were obtained through the information published on the agency's website regarding whether a municipality was timely or not, as municipalities can rectify their RREO on the SICONFI website, thus changing the approval date. Table 1 describes variables used, as well as the theoretical framework, expected relationship, and sources. To identify whether or not a municipality was timely, different times were considered, as municipalities can be timely or not each bimester of the year. A municipality is found not to be timely when it issues its RREO after 30 days of a bimester's end. Thus, the variable has value 0 (zero) when the municipality was timely in zero bimester, 1 (one) when it was timely in 1 bimester, 2 (two) when it was timely in 2 bimesters, and so on until 6 (six), when the municipality was timely in all six bimesters.

Table 1

Variables

Hypothesis	Variable	Description	Theoretical Framework	Source	Year	Expected Ratio
-	TIMELI_MULTI	Number of bimesters in which the municipality was timely, ranging from 0 to 6.	-	SICONFI	2019	Dependent variable
H1	expn_pers	Personnel expenditures in relation to net current revenue, in percentage values (in BRL).	Sandria; Elfiswandi; Yamashita (2021); Bashir and Amir (2020)	TCE-MG	2019	+
H2	cur_rev	Net current revenue per capita. It corresponds to the municipal administration's budget revenue amount, minus credit operations, in current reais, per inhabitant (in BRL).	Sandria; Elfiswandi; Yamashita (2021); Bashir and Amir (2020); Rodrigues (2008).	TCE-MG	2019	+
H3	pop_den	Ratio between the number of inhabitants and the total area (in inhabitants/km ²).	Edmonds et al (2017); Gülec (2017)	IBGE	2019	+
H4	Firjandevol	Firjan Municipal Development Index, which annually monitors socioeconomic development in three areas: employment & income, education, and health.	Gomes, Liddle and Gomes (2010); Carmeli (2008)	FIRJAN	2019	+
H5	expn_edu	Per capita expenditure on education (in BRL).	Carmeli (2008)	TCE-MG	2019	+
H6	expn_san	Per capita expenditure on basic sanitation (in BRL).	Carmeli (2008)	TCE-MG	2019	+
H7	expn_hlth	Per capita expenditure on health activities (in BRL).	Carmeli (2008)	TCE-MG	2019	+
H8	expn_sec	Per capita expenditure on security activities (in BRL).	Carmeli (2008)	TCE-MG	2019	+
H9	GDP	Gross Domestic Product (GDP) per capita, at current prices (BRL 1.00).	Carmeli (2008)	IBGE	2019	+
H10	Internet	Total number of fixed internet accesses (SCM) in service per inhabitant.	Carmeli (2008); Meijer (2007)	Ministry of Communications	2010	+

The variables were organized using Microsoft Excel® software. In turn, the statistics and tests were performed using Stata® version 15.0 software.

3.2 Data analysis techniques

First, the descriptive statistics technique was used for an exploratory analysis of data, highlighting information on mean, standard deviation, and maximum and minimum values. The response variable (the model's dependent variable) is the number of times a given event occurs, assuming, therefore, only integer and non-negative values. Therefore, the regression technique used was count data regression.

The most common count data models, which consist of nonlinear regression models, are Poisson and negative binomial. Although it does not require the dependent variable to have a Poisson distribution, the Poisson model assumes an equidispersion of data, i.e., that the conditional variance and the mean are equal. If this condition is not met, t-statistics may be overestimated, and conclusions may be overly optimistic about the significance of the regressors. Therefore, in this case, using the negative binomial model is recommended as an alternative (Cameron & Trivedi, 1998). To decide between the models, goodness-of-fit tests are performed, as will be discussed in the results section.

4 RESULTS AND DISCUSSIONS

4.1 Description of the characteristics of municipalities in Minas Gerais

The exploration of data (Table 2) shows that there are still municipalities that were not timely, despite being obliged to approve their RREO within 30 days of the bimester's end. Therefore, advances are necessary in public actions that strengthen and expand understanding

of the need to make this information available in a timely manner, given that there are penalties for municipalities that fail to comply with the LRF.

It should be noted that failure to approve the RREO within 30 days of the bimester's end prevents a municipality from entering credit agreements and receiving voluntary transfers until regularization, except for those directed to education, health, and social work. It should be noted that while the lack of timely RREO approval is sanctioned, it is remarkable that this has not yet achieved the expected goal.

Table 2

Descriptive statistics of the variables

Variable	Observations	Average	Standard deviation	Minimum	Maximum
timeli_multi	853	2.00	1.84	0.00	6.00
expn_pers (%)	847	49.96	4.54	22.02	66.86
rec_corr (in BRL, per capita)	847	3,485.25	1,733.32	1,336.84	23,947.14
den_pop	853	71.53	339.57	1.32	7,607.03
Firjandesen	842	0.67	0.06	0.45	0.85
expn_edu (in BRL, per capita)	847	22.27	3.28	11.77	35.61
expn_san (in BRL, per capita)	686	69.99	98.67	0.01	986.76
expn_hlth (in BRL, per capita)	847	807.98	344.08	227.93	4,497.47
expn_sec (in BRL, per capita)	683	9.48	12.34	0.06	166.47
GDP (in BRL, per capita)	853	21,386.14	24,512.45	5,984.22	313,035.00
Internet	853	0.06	0.08	0.00	1.63

As for the independent variables, there is a significant amplitude between the variables' minimum and maximum values, emphasizing the heterogeneity between municipalities in Minas Gerais, which corroborates the literature (Costa et al., 2015; Fernandes et al., 2018). The territory of the state of Minas Gerais is marked by the presence of small municipalities, evidenced by their low population density, including the Brazilian municipality with the smallest population. However, the state also has 33 municipalities with more than 100,000 inhabitants, with different economic, financial, and social realities, which is shown by the results obtained in line with previous studies (Costa et al., 2015; Fernandes et al., 2018).

Initially, it should be noted that there is at least one municipality that invests in personnel expenditures an amount higher than that mandated by the LRF, as the maximum determined is

60%, and the maximum found is 66.86%, i.e., there is 11.43% increase. As for current revenue, the average is high compared to the minimum value, highlighting the state's heterogeneity. According to Mendes et al. (2018, p. 931), revenue generally is a "fundamental element for improving human development".

Most importantly, there is a discrepancy between municipalities regarding values for human development, such as the FIRJAN development index, and investments made in basic sanitation, health, and safety. The smallest amplitude in the amounts invested in human development is in education, and the 1988 Constitution determines that municipalities invest at least 25% of their revenues from taxes and transfers in maintaining and developing education. In addition, there are also voluntary transfers from the federal government, via the Ministry of Education (MEC) and the National Fund for Educational Development (FNDE), in order to boost basic education.

4.2 Timeliness and characteristics of municipalities in Minas Gerais

Initially, the variables were submitted to the Poisson model, and then the goodness-of-fit test was performed to see whether there was overdispersion of data. This test was significant at 1%, confirming the inadequacy of this model and making negative binomial the indicated model.

To avoid including explanatory variables that were highly correlated with each other, the variance inflation factor (VIF) test was used. It indicated that there was no multicollinearity in the model. Additionally, to understand whether results were being affected by the variables' outliers (values that differ significantly from the mean), winsorization was alternatively performed. It corroborated the results obtained earlier, both in terms of statistical significance of regressors and the option for the negative binomial model.

Table 3*Count data regression results using the negative binomial model*

Variable	Coefficient	Standard error	p-value
GDP (in ln)	0.968	0.086	0.720
cur_rev (in ln)	0.545	0.111	0.003
den_pop	1.000	0.000	0.675
Firjandavel	2.754	1.760	0.113
expn_pers (in ln)	0.166	0.081	0.000
expn_edu (in ln)	2.872	0.907	0.001
expn_san (in ln)	0.975	0.021	0.256
expn_hlth (in ln)	1.572	0.286	0.013
expn_sec (in ln)	0.931	0.039	0.093
Internet	2.371	2.039	0.315
constant	420.73	1012.648	0.012
Model information			
LR chi-squared (10): 36.01			
Prob > chi-squared: 0.000			
Number of observations: 542			
Pseudo R ² : 0.0178			

Source: survey results

Since the financial variables had a much higher scale than the others, which can influence regression results, their transformation was performed using the 'ln' function. The regression results for the negative binomial model are shown in Table 3. It is worth noting that the final model had 542 observations due to the lack of data for some variables.

Expenditures on personnel were significant and positive, indicating that the greater the investment in personnel, the greater the tendency to be timely, as well as net current revenue. Thus, the greater these items, the greater the tendency for municipalities to be timely. Thus, hypotheses H1 and H2 were not rejected.

This result demonstrates that greater investment in personnel can lead to more qualified employees being hired. Better compensation can make employees perform their roles in a timely manner, or there may be a greater number of people working, avoiding overload and providing greater dedication to RREO approval.

Municipal finance, represented in this study through personnel expenditures and net current revenue, shows the management of public resources, a fundamental element in the provision of public services and actions that meet civil society's needs (Mendes et al., 2018). Thus, it is inferred that the greater the public resource amounts managed, the greater the

tendency for timely RREO approval, thus corroborating the studies of Sandria et al. (2021), and Dwyer and Wilson (1989).

Regarding the size of the municipalities, the variable population density was not significant, refuting hypothesis H3. Edmonds et al (2017) and Gülec (2017) demonstrated that the size of private-sector organizations influences timeliness. However, the results of this study revealed that this influence may not be maintained in the public sector.

Regarding human development, the variables FIRJAN development index and basic sanitation expenditures were not significant, rejecting hypotheses H4 and H6. However, the variables related to expenditures on education, health, and public security were significant and positive, showing that investment in these three areas can influence whether or not a municipality is timely. Thus, hypotheses H5, H7, and H8 were not rejected. Therefore, it was found that factors related to human development can influence timely RREO approval and stakeholders' reality according to the literature (Gomes et al., 2010).

Another point that may explain why the FIRJAN development index was not significant for timeliness is the fact that the variable GDP, which represents financial status, was not significant, refuting hypothesis H9. In addition, internet use was not significant either, refuting hypothesis H10. Based on the results, it is inferred that the amounts invested in areas such as education, health, and security can influence timeliness, corroborating the studies by Sandria et al. (2021) and Carmeli (2008). It is inferred that this may be related to the fact that the public sector is aimed at providing services to society, rather than reaping profits (Ijeoma, 2014). Thus, municipal public management tends to focus on investments in areas that attract greater attention from stakeholders, such as health, education, and security, and create jobs in the public sector, since small cities' municipalities are the largest local employers. Politicians use these actions to obtain legitimacy in the eye of stakeholders, so as to remain in power.

The stakeholder theory demonstrates organizational environment elements and stakeholder characteristics have a strong influence on the relationship between organization and stakeholders. According to Bryson (1988), the public sector, through the role played by government officials, implements or mitigates issues of greater interest to stakeholders. In this case, is it so that RREO approval timeliness draws stakeholders' attention? Is the search and demand for greater transparency, accountability, and quality of accounting information something that stakeholders demand and monitor? Or is it something that may be debated but is not demanded if not executed when it comes to stakeholders with the right to vote?

Timeliness is an essential characteristic for improving the quality of accounting information. However, despite the existence of some studies, it is still necessary to better understand what can cause municipalities to be timely or not. Advancing this understanding is necessary in order to ensure the emergence of mechanisms that can make this qualitative characteristic widely implemented in reports issued by all government levels.

Therefore, it is clear that municipalities in the state of Minas Gerais need to advance towards consolidating timeliness in RREO approval, as this is an important mechanism for stakeholders to be able to control and monitor public management. In addition, it is necessary to expand an understanding of timeliness as an indispensable characteristic in the information provided by the public sector.

5 FINAL CONSIDERATIONS

This study identified the factors that can influence accounting information timeliness in the public sector, using as proxy the approval of Summary Reports of Budget Execution (RREO). The results provide evidence on how significant investments in education, health, and security, as well as current revenue and personnel expenditure, tend to drive increased timeliness.

Regarding the study hypotheses, H3, H4, H6, H9, and H10 were rejected. Moreover, it was found to be necessary to advance the timeliness of RREO approval in municipalities in Minas Gerais, and to increase control regarding the lack of timeliness, in order to promote report availability as determined by the Federal Constitution of 1988 and the LRF.

This study contributes to academia by demonstrating the relationship between economic variables and municipalities' timeliness, besides stressing the relevance of analyzing timeliness in the public sector. Additionally, the study demonstrates the need to understand civil society as a stakeholder of public management, showing that its characteristics can influence the public sector. The results are also useful for managers and politicians, as they demonstrate the need for measures that increase municipalities' timeliness, as well as the relationship between economic data and timeliness.

In practical terms, understanding the factors associated with greater timeliness in the public sector can contribute to the implementation of actions that accelerate the production and dissemination of public information, improving transparency and accountability, and contributing to more assertive decision-making. The results of studies on the topic also contribute to the field of accounting, as they can suggest better accounting practices, in addition to updating routines and procedures for greater timeliness in the public sector. As suggestions for future research, a qualitative study is indicated for understanding the relationships between economic aspects that can influence timeliness.

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FOOTNOTES

- ¹ All expenses used in the study are related to payments from a cash perspective.

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Fatores econômicos, financeiros e características que influenciam a Tempestividade da Informação Contábil do setor público nos municípios de Minas Gerais

RESUMO

Objetivo: a presente pesquisa tem como objetivo identificar os elementos que influenciam a tempestividade da informação contábil do setor público, tomando como proxy a homologação dos Relatórios Resumidos de Execução Orçamentária (RREO).

Método: foram coletados dados financeiros, demográficos e de acesso à internet dos 853 municípios do estado de Minas Gerais, referentes ao ano de 2019. Os dados foram tratados através da regressão para dados de contagem utilizando o modelo Binomial Negativo.

Originalidade/Relevância: Embora a tempestividade possibilite que os dados informados sejam disponibilizados em tempo hábil para influenciarem na tomada de decisão, a literatura ainda é escassa ao desvelar os aspectos que influenciam na tempestividade do setor público.

Resultados: os resultados demonstram que as receitas correntes e os gastos públicos com pessoal, educação, saúde e segurança influenciam positivamente na tempestividade da homologação dos RREO.


Contribuições Teóricas/Metodológicas: A contabilidade não é muito empregada como objeto de análise pela Teoria dos Stakeholders, mesmo as partes interessadas sendo frequentemente abordadas nas publicações contábeis. A literatura ainda carece de investigações mais aprofundadas sobre o tema, especialmente em contextos municipais.

Contribuições Sociais/para a Gestão: Este estudo oferece evidências sobre como os maiores investimentos realizados em educação, saúde e segurança, bem como a receita corrente e o gasto com o pessoal tendem a influenciar para uma maior tempestividade.

Palavras-chave: Tempestividade, Relatórios Resumidos de Execução Orçamentária, Stakeholders, Contabilidade Pública.

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