

# New Challenges in Accounting and Finance

2021(6)16–30



## Reflections of the Consistency of the Public Sector's Financial Statements in the Performance of Fiscal Management

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Received 21 December 2020

Accepted 11 April 2021

### ABSTRACT

*The main aim of this research is to identify the relation between the level of consistency of public sector accounting information and the fiscal management performance of Rondônia's municipalities in the period between 2011 and 2015. Referring to the methodology, it was a quantitative research, considering that the object of analysis involves numeric calculations, related to consistency tests of accounting information and the performance of fiscal management, using statistics and having as instrument of data collection the application of ten accounting consistence rules with data extracted directly from the TCE-RO SIGAP system. The results showed that the level of consistency of accounting information was not statistically significant to explain the performance of fiscal management. However, by adopting a subset of more homogeneous consistency rules, it was very close to a reasonable degree of significance for the alternative hypothesis to be safely confirmed.*

**Keywords:** Accounting Public Sector, Consistence of Accounting Information, Fiscal Management Performance, Municipalities of the State of Rondônia

### Introduction

Public management has undergone changes, requiring greater performance, efficiency and effectiveness (Sano & Abrucio, 2008; Furtado, Fortunato & Teixeira, 2011). Regulatory requirements impose more responsibility in conducting the budget, in the compliance with fiscal targets, risk mitigation and the practice of better transparency (LRF, 2000); Aucoin & Heintzman, 2000; Wescott, 2009; Mihau, Opreana & Cristescu, 2010). Although the fiscal balance must be maintained, it can be seen that this does not always happen, considering the known indebtedness of many entities (Tiruneh, 2004; Zavras, Tsiantou et al., 2013; Vadoros, Hessel et al., 2013; De mello & Slomski, 2009).

In this context, the information expressed in the public sector financial statements, with the convergence to the international standard, take on special importance to inform and influence management performance (Chan, 2010; Soares & Scarpin, 2010; Mihau, Opreana

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Doi: 10.32038/NCAF.2021.06.02



& Cristescu, 2010; Secretaria do Tesouro Nacional, 2012). However, there are still flaws in this information, which compromises its ability to guide anyone who wants to use it (Wernke & Borna, 2001; Hall, 2011).

According to Feieset al. (2013) and Jabir (2013), the accounting information disclosed in the financial statements and reports, according to the degree of reliability, help managers achieve their goals more efficiently and effectively. Consequently, they allow the provision of quality public services to the population. In the same sense, research carried out in the business area by Affès and Chabchoub (2007) proves that the use of quality accounting information potentially contributes to the better financial performance of the organization.

For Santos & Souza (2010), the consistency of accounting information is an instrument to guarantee the accuracy and reliability of data, and thus better guides management in the good use of resources. In its turn, Engel et al. (2003) emphasize that accounting information is given greater weight in decisions on turnover when accounting measures are more accurate.

Braga & Bezerra Filho (2015) analyzed the degree of consistency of the information presented in the financial statements of the municipalities pernambucanos in 2014, in addition to the research implemented to verify the convergence level of the new accounting applied to the public sector. The researcher used the accounting equations proposed by the Brazilian Public Sector Accounting and Tax Information System (SICONFI), concluding that 92.4% of the municipalities in Pernambuco partially met the criterion of consistency of the accounting information disclosed in the balance sheets and only 7.06% were totally inconsistent (Braga & Bezerra Filho, 2015).

In view of this situation, and considering the need for a more efficient and effective management, especially regarding the allocations and expenditure of resources, an attempt was made to find an answer to the following research question: What is the relationship between the level of consistency of the financial statements and the performance of fiscal management in the municipalities of Rondônia? In view of the aforementioned questioning, the objective of the present study was to identify the relationship between the level of consistency of the public sector financial statements and the performance of fiscal management in the municipalities of Rondônia, in the period between 2011 and 2015.

To meet the object of the research, regarding the analysis of the consistency of the financial statements, the accounting equations proposed by the Accounting and Tax Information System of the Brazilian Public Sector were used (SICONFI), with some adaptations. With regard to assessing the performance of tax management, the FIRJAN Tax Management Index, released by the Federation of Industries of the State of Rio de Janeiro, was used.

The research initiative is justified by the fact that the new public sector financial statements, with the convergence to international standards, have gained quality in the accounting information expressed by them (STN, 2012), reason why they have greater consistency to supply managers with accurate information for a good performance of the management of public resources (Soares & Scarpin, 2010; Jabir, 2013).

Thus, the present research certainly contributes as an incentive to the academy to deepen the analysis about the consistency of the financial statements in the performance of public management, being able to adopt even other parameters of evaluation. In doing so, it will

contribute to the improvement of government accounting and management. Furthermore, it will serve for the public administration to strengthen its controls, especially the accounting, allowing the identification and correction of deficiencies so that management can be supported by reliable information for better management performance. The result of the research also aims to contribute to external control so that, in planning their audits, include as a checkpoint the tests of consistency of the information presented in the public balance sheets and, determine its correction and prevention, if inconsistencies are confirmed.

In addition, it will allow society to view, in the disclosure of public sector financial statements, better quality information, free of errors and other imperfections, thus being able to carry out the necessary social control of public management.

### **Theoretical framework**

Public management has undergone changes, resulting from its rise from bureaucratic administration to the phase known as management administration (Andrews & Kouzmin, 1998). It is necessary to seek a better performance of its actions in face of social needs, at a time when there is a scarcity of resources and everincreasing demands (Sano & Abrucio, 2008; Furtado, Fortunato & Teixeira, 2011).

Regulatory requirements, especially arising from the Fiscal Responsibility Law (Complementary Law n. 101/2000), require greater responsibility in conducting the budget, effort in collecting revenues, imposing spending limits, compliance with fiscal targets, risk mitigation, control of public debt and practice of broad transparency (LRF, 2000; Aucoin & Heintzman, 2000; Wescott, 2009; Mihau, Opreana & Cristescu, 2010; Bezerra Filho & Feijó, 2012).

In this context, accounting information becomes useful and relevant in view of its ability to inform all interested parties about the entity's real economic situation and predict its future, which allows action to be taken to change course, in case of the need for corrections (Padoveze et al., 2004; Valente & Fujino, 2016).

According to Chan (2010), with the convergence to the international standard, the accounting information expressed in the balance sheets of the public sector takes on special importance to improve the performance of financial management and, thus, be able to directly impact a nation's socioeconomic development and even contribute to poverty reduction. However, it should be noted that this information is not always reliable and free of errors to the point of being used for this purpose safely (Wernke & Bornia, 2001; Hall, 2011).

On the other hand, normative changes as a result of the convergence to the international accounting standard seek to promote the dissemination of information in a universal language, which allows for better symmetry, considering the scope of accounting data by several stakeholders. In short, the aim is mainly to improve the quality of this information (Wynne, 2008; Moussa, 2010; Soares & Scarpin, 2010).

In the view of the Federal Accounting Council (2016), manifested through the publication of the NBC TSP 2016 standard, which provides for the Conceptual Framework for the Preparation and Disclosure of General Purpose Accounting Information by Public Sector Entities, the information generated by government accounting systems must be able to serve its users as needed.

For Santos and Souza (2010), the consistency of the accounting information is an instrument to guarantee the accuracy and reliability of the data, providing better guidance to management in the good use of resources. In turn, Engel *et al.* (2003) point out that accounting information is given greater weight in decisions on turnover when accounting measures are more accurate, understanding which is in line with the positioning established by Moraes, Vicente and Neto (2012), who mention that consistency measures must be pursued by any accounting system in order to have accurate information about the economic and financial situation of an entity.

Despite the fact that few researches were found in the governmental area that assessed the influence of the quality of accounting information on the performance of public management, some studies in the business area indicate that there is a certain causal relationship between both. Affes and Chabchoub (2007), Hall (2011) and Meiryani (2015) are examples of research that converge to the same result. In summary, these researchers came to the conclusion that accounting information systems, the more resistant to imperfections and since used by managers, the more they contribute to the financial performance of firms and the achievement of their purposes (Affès & Chabchoub, 2007; Hall, 2011; Meiryani, 2015).

In the same sense, Feies *et al.* (2013) conducted research on the influence of accounting information on the performance of a public service company in Romania. In effect, they concluded that the accounting information content disclosed in the financial statements and reports, surrounded by quality characteristics, significantly help managers to perform their tasks more efficiently and effectively. Consequently, they even allow the provision of better public services to the population (Feies *et al.* 2013).

Adopting the methodology for analyzing the consistency of the Accounting and Tax Information System of the Brazilian Public Sector (SICONFI), Braga (2015) analyzed the level of convergence to NBCASP and MCASP based on the financial statements of Pernambuco municipalities published in 2014. One of the points of his research was to verify the degree of consistency of the information presented in the financial statements using accounting equations proposed by SICONFI. As a result, it concluded that 92.4% of the municipalities in Pernambuco partially met the criterion of consistency in the accounting information disclosed in the balance sheets and only 7.06% were totally inconsistent. (Braga & Bezerra Filho, 2015).

Thus, based on the aforementioned studies, an attempt was made to find an answer to the following hypothesis:

*H1:* Municipalities with higher levels of consistency of accounting information perform better in their fiscal management.

### **Methodological procedures**

The data related to the variables of consistency tests of the financial statements and the performance of the fiscal management of the 52 municipalities of the State of Rondônia were collected directly from the database of the Court of Auditors of this state, more precisely from the Public Audit and Management System - SIGAP, for the years 2011 to 2015, already analyzed by the referred Court of Auditors, as well as the FIRJAN website.

The implementation of consistency tests, based on the method of the Accounting and Tax Information System of the Brazilian Public Sector (SICONFI), was carried out in the following consolidated financial statements: Balance Sheet; Financial Statement; Budget Balance Sheet; Statement of Equity Variations and Statement of Cash Flows. Such statements are now required by the Brazilian Accounting Standard Applied to the Public Sector NBC T 16.6 (Res. CFC n. 1.333/2008), Such statements are now required by the Brazilian Accounting Standard Applied to the Public Sector (Decree STN n. 733/2014).

The analysis was developed as a parameter in the years 2011 to 2015, whose information is contained in the electronic database of the Court of Accounts of the State of Rondônia, making 260 observations. However, during the survey of results, 5 observations were discarded due to the non-disclosure of the FIRJAN Tax Management Index (IFGF) of some years, which in the end totaled only 255 observations.

For each consistency rule a binary variable (dummy) was used, which takes the value 1 (one) when it is consistent, that is, when the value found in the December balance sheet of each year surveyed, whose information appears in the SIGAP/TCE-RO, is similar to that recorded in the accountability account presented by the municipality, and 0 (zero) when it is inconsistent, that is, when it is different from the record in the evaluated accounting piece. It should be noted that all calculations of the accounting consistency rules were done manually, due to the fact that there is no exclusive electronic data processing for this purpose.

The equations that tested the consistency of the financial statements were based on SICONFI accounting rules, with some adaptations, and in the methodology used by Braga (2015) in his research work that evaluated the consistency of the financial statements of the municipalities of Pernambuco. Thus, we have the following equations based on SICONFI and the Braga model (2015):

*Table 1. Accounting Equations*

1	Consistency in checking Balance sheet balances - Equation: $\Sigma$ of controlled accounts = $\Sigma$ of controlling accounts.	1= Consistent 0=Inconsistent
2	Consistency in checking value balances in banks Equation: Cash and cash equivalent balance from previous year (BS) = Cash and cash equivalents (previous balance of current trial balance).	1= Consistent 0=Inconsistent
3	Consistency in checking the balances of SCE with BS - Equation: Equity Result (SCE) = income statement (BS).	1= Consistent 0=Inconsistent
4	Consistency in the balance transposition check - Equation: NI from the previous year (BS) + Statement of Income (SCE) = current NI (BS).	1= Consistent 0=Inconsistent
5	Consistency in checking the balance of all accounts, which must have a balance greater than or equal to zero, but never with a negative balance, except the asset and liability reduction accounts.	1= Consistent 0=Inconsistent
6	Consistency of the consolidated debt balance in the 6th Quarter RREO Consolidated Debt Statement with the Balance Sheet Consolidated Debt balance.	1= Consistent 0=Inconsistent
7	Consistency in the balance of unpaid liabilities processed from the 6th quarter RREO with the balance on the balance sheet, entered in Current Liabilities.	1= Consistent 0=Inconsistent
8	Consistency in the following verification: Debt Balances (Asset Accounts – Category 1+ VPD accounts – Category 3) = Credit Balances (Liabilities Accounts – Category 2 + VPA accounts – Category 4).	1= Consistent 0=Inconsistent
9	Consistency in the total collected from the revenue recorded in the Budget Balance Sheet of the 6th bimester, with the revenue collected constant in the balance sheet of December.	1= Consistent 0=Inconsistent
10	Consistency in the conference in the sum of the reducing revenue accounts, whose total cannot be higher than the total current revenue.	1= Consistent 0=Inconsistent

Source: Braga (2015), with adaptations by the author.

According to Table 1, the ten consistency rules that have been raised lead to a maximum number of 10 (ten) points to be achieved by each municipality in each year, this being the maximum consistency index, that is, the information expressed in the financial statements is 100% consistent for those municipalities whose result of the equation is 1 (one) in each rule. In this way, each municipality had its score raised based on that parameter and represented by the following equation proposed by Braga (2015), with adaptations:

Formula 1: Sum of points obtained by each municipality

$$S = \sum_{I=i}^{10} Q_{j,m,t}$$

Where:

**S**: score obtained by each municipality in each item.

**i**: number of requirement of the issues to be verified.

**10**: maximum score number to be obtained.

**Q**: sum of the score obtained.

**m**: municipality.

**t**: year.

**j**: item.

Having made the sum of the scores obtained by each one, the level of consistency achieved was sought, using the equation also proposed by Braga (2015), which is:

Formula 2: Calculation of the level of consistency

$$CL = \frac{S}{T} \times 100$$

Where:

**CL**: Consistency Level.

**S**: Score obtained by the municipality.

**T**: Maximum score.

The analysis of the fiscal management performance of the 52 municipalities in Rondônia was carried out based on the IFGF and were collected directly from the FIRJAN website, also using a five-year series, from 2011 to 2015.

The IFGF is built based on information from the National Treasury Secretariat (STN - *Secretaria do Tesouro Nacional*) and is composed of five indicators: own income, personnel expenses, investments, liquidity and cost of debt. Weights are established for each indicator. The first four account for 22.5% of the aggregate result; the Cost of Debt has a weight of 10%. The score ranges from 0 to 1 (the same as from 0 to 100%), the closer to 1, the better the fiscal management of the municipality in the corresponding year (Firjan, 2016). Reference values are also established that allow comparisons between municipalities (Firjan, 2016):

- Concept A (Excellence Management) = results greater than 0.8 points.

- Concept B (Good Management) = results between 0.6 and 0.8 points.
- Concept C (Management in Difficulty) = results between 0.4 and 0.6 points.
- Concept D (Critical Management) = results below 0.4 points.

We also used the control variables, population, Municipal Human Development Index, manager's level of education and per capita budget, to identify their influences on independent and dependent variables. Marconi and Lakatos (2000) explain that the control variables can be part of the experimental context in which the independent variable/dependent variable relationship occurs.

Thus, the empirical model is described as follows:

$$Perform\_Managf_{it} = \beta_0 + \beta_1 Lv\_Constst_{it} + \sum_{n=2}^N \beta_n Controls_{it} + a_{it}$$

In which:

Fiscal Management Performance (*Perform\_Managf*) is a dependent variable (to be explained) that was launched according to the score obtained by the municipality in the FIRJAN tax management index in each year, which varies from 0 to 1.

Consistency of accounting information (*Lv\_Constst*) is an independent (explanatory) variable and was calculated using the set of variables specified in Table 1.

The control variables are: the MHD, the population (both collected at IBGE and UNDP/Brazil), the educational level of the manager (collected on the website of the Regional Electoral Court - TRE), and the per capita budget (collected in TCE-RO). For the manager's education level, a binary variable (dummy) was used, which assumes a value of 1 when the manager has a college degree and 0 when he does not have such a level of education.

Table 2 provides more information about the model variables.

Table 2. Description of Variables

Variables				
Fiscal Management Performance	<i>Perform_Managf</i>	Dependent	Federation of Industries of the State of Rio de Janeiro (FIRJAN)	LIMA <i>et al.</i> (2014) MINALEZI (2016)
Consistency of Accounting Information	<i>Lv_Constst</i>	Independent	Rondônia State Court of Accounts	BRAGA (2015)
Municipal Human Development Index	<i>mhdit</i>	Control	United Nations Development Program – PNUD/Brazil	BRAGA (2015)
Manager's Education Level	<i>LvEduc_M</i>	Control	Regional Electoral Court – (TER - <i>Tribunal Regional Eleitoral</i> )	VELTEN (2015) MINALEZI (2016)
Population	<i>In_pop</i>	Control	Brazilian Institute of Geography and Statistics - IBGE	VELTEN (2015) FRANÇA (2016)
Budget per capita	<i>bud_pe</i>	Control	Rondônia State Court of Accounts	FRANÇA (2016)

Source: Author's own elaboration.

## Results

Based on the descriptive analysis in Table 1, the comment of the two main research variables is prioritized. We denote by means of the result of the dependent variable *Perform\_Managf*, that the municipalities of Rondônia obtained, in average, a percentage of 57% of their fiscal management performance, according to the FIRJAN Tax Management Index, which ranges from 0 to 1 (or from 0 to 100%), with a minimum

percentage of up to 25%, constant in the first percentile, and maximum above 81%, constant in the last percentile. In turn, the median, which corresponds to the 50th percentile, consisted of 59%.

#### *Descriptive statistics of variables*

As can be seen in the table 3, the mean of 0.57 scored by the municipalities of Rondônia in the FIRJAN Tax Management Index makes them reach only the C concept, corresponding to a management in difficulty, since the results are between 0.4 and 0.6 points (Firjan, 2016). The results also point out, regarding the level of accounting consistency, which varies from 1 to 10 points, presented through the independent variable *Lv\_Constst*, that the average number of correct answers by the municipalities of Rondônia in relation to the ten accounting rules applied was only 6.14. As a result, the minimum score of 3, constant in the first percentile, and the maximum of 9 correct answers, presented in the last percentile, with a median of 6.

*Table 3.* Descriptive Statistics

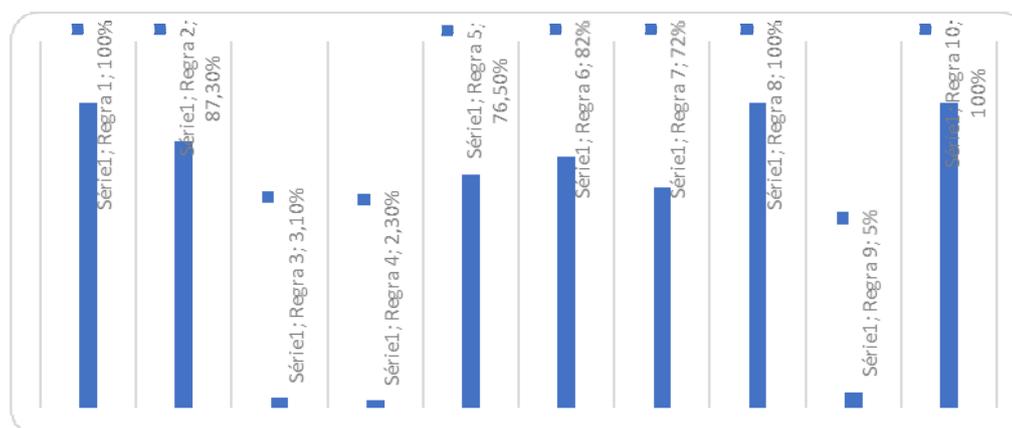
<i>Variables</i>	<i>Mean</i>	<i>1st Perc.</i>	<i>25th Perc.</i>	<i>Median</i>	<i>75th Perc.</i>	<i>99th Perc.</i>	<i>Standard Deviation</i>	<i>N° of Obs</i>
<i>Perform_Managf</i>	0.57	0.25	0.51	0.59	0.66	0.81	0.11	255
<i>Lv_Constst</i>	6.14	3.00	5.00	6.00	7.00	9.00	1.11	255
<i>Mhdt</i>	0.64	0.58	0.61	0.64	0.67	0.74	0.04	255
<i>Ex_Elcv_M</i>	0.34	0.00	0.00	0.00	1.00	1.00	0.47	255
<i>ln_pop</i>	9.73	7.73	9.07	9.67	10.28	13.13	1.01	255
<i>Bud_pc</i>	1990.00	959.44	1541.81	1762.81	2237.14	6451.07	745.90	255

*Source:* Author's own elaboration.

In effect, the result of the average consistency of the accounting information of the municipalities of Rondônia (6.14) resembles the findings by Braga (2015) in his research, when he concluded that practically all municipalities in Pernambuco (92.4%) only partially met the criterion of consistency of accounting information disclosed in the balance sheets.

#### *Consistency levels of accounting information: percentage of correctness*

With regard to the percentage of correctness answers for each consistency rule, specified in Table 1, by the municipalities of Rondônia, Graph 1 shows that there were rules with a 100% accuracy level, as is the case with rules 1, 8 and 10. Others presented the percentage above 70% (rules 2, 5, 6 and 7).



Graph 1. Percentage of Consistency Level by Rule

**Rule 1:** consistency in checking Balance sheet balances - Equation:  $\Sigma$  of controlled accounts =  $\Sigma$  of controlling accounts. **Rule 2:** consistency in checking value balances in banks Equation: Cash balance and cash equivalents from previous year (BS) = Cash and cash equivalents (previous balance from the current trial balance). **Rule 3:** consistency in checking the SCE balances with BS - Equation: Equity Result (SCE) = Income Statement (BS). **Rule 4:** consistency in checking balances – Equation: NI from the previous year (BS) + Income Statement (SCE) = current NI (BS). **Rule 5:** consistency in checking the balance of all accounts, which must have a balance greater than or equal to zero, but never with a negative balance, except the asset and liability reducing accounts. **Rule 6:** consistency in the balance of the consolidated debt in the Consolidated Debt Statement of the 6th quarter RREO with the balance of the Consolidated Debt in the Balance Sheet. **Rule 7:** consistency in the balance of unpaid liabilities processed from the 6th quarter RREO with the balance on the balance sheet, entered in Current Liabilities. **Rule 8:** consistency in the following verification: Debt Balances (Asset Accounts – Category 1+ VPD accounts – Category 3) = Credit Balances (Liabilities Accounts – Category 2 + VPA accounts – Category 4). **Rule 9:** consistency in the total collected from the revenue recorded in the Budget Balance Sheet of the 6th bimester, with the revenue collected constant in the balance sheet of December. **Rule 10:** consistency at the conference in the sum of the revenue reducing accounts, whose total cannot be higher than the total current revenue.

Source: Research data elaborated by the author.

#### Correlations of variables

In addition to the descriptive statistics of the variables, it is opportune to analyze the correlations between them, showing the degree of association between two variables. Better known as Pearson's linear correlation coefficient, it measures the strength of the linear relationship between the paired quantitative values  $x$  and  $y$  of a sample, which can vary between -1 and 1 (Lira, 2004; Lira & Neto, 2006; Figueiredo Filho & Silva Junior, 2009).

Table 4. Correlation Matrix

	<i>Perform_Managf</i>	<i>Lv_Constst</i>	<i>Mhdit</i>	<i>LvEdiv_M</i>	<i>ln_pop</i>	<i>Bud_pr</i>
<i>Perform_Managf</i>	1					
<i>Lv_Constst</i>	-0.10	1				
<i>Mhdit</i>	0.13	-0.10	1			
<i>LvEdiv_M</i>	0.20	0.02	0.24	1		
<i>ln_pop</i>	0.16	-0.17	0.55	0.17	1	
<i>Bud_pr</i>	0.00	0.08	-0.01	0.12	-0.51	1

Source: Author's own elaboration.

Table 4 shows the degree of relationship between the variables that are part of the researched empirical model. It is observed that the correlation coefficient of variable  $x$  that represents the level of consistency of accounting information (*Lv\_Constst*) in relation to the performance of fiscal management (*Perform\_Managf*) variable is -0.10, therefore, negative, despite being within the correlation range (-1 to 1), and being very close to zero. In this case, when the index is very close to 0, it is concluded that there is no significant linear correlation between  $x$  and  $y$  (Lira, 2004; Lira & Neto, 2006; Figueiredo Filho & Silva Junior, 2009).

This result is contrary to what was intended to be found in this research: that municipalities with higher levels of consistency of accounting information perform better in their fiscal management.

Otherwise, the correlation coefficients of the control variables Municipal Human Development Index (*Mhdt*), manager's education level (*LvEduc\_M*) and population (*ln\_pop*) present slight positive linear correlations in relation to the performance of fiscal management.

Although the correlation test did not show the expected result, it is important to emphasize that only with the significance test will it be possible to prove whether or not there is a significant linear relationship between two variables (Lima et al., 2014). According to Lira and Neto (2006) and Lima et al. (2014), relationship between x and y is possible even when there is no linear correlation between both.

#### *Linear regression of the variables for the period 2011 to 2015*

In order to find an answer to the research question proposed in the present study, the multivariate linear regression model was used. This proposed model aimed to analyze the relationship of the independent variables presented in Table 2, especially the main variable regarding the level of consistency of accounting information, with the dependent variable performance of fiscal management.

Table 5. Multivariate Linear Regression

Independent Variables	Expect. Sign	Approval		
		Coefficient	z-stat	p-value
<i>Constant</i>				
<i>Lv_Constst</i>	+	+0.08	1.27	0.21
<i>Mhdt</i>	+	- 0.17	-0.83	0.41
<i>LvEduc_M</i>	+	+0.27	2.00	0.05**
<i>ln_pop</i>	+	+0.36	3.52	0.01***
<i>Bud_pc</i>	+	+0.01	3.15	0.01***
<i>Observações</i>		255		
<i>R<sup>2</sup></i>		0.20		

Regressions with \*\*\* are significant at 1% and with \*\* are significant at 5%. Source: Author's own elaboration.

The result of this regression, shown in Table 5, refers to the entire research period, that is, to the five years (2011 to 2015) where the research was applied. It can be seen that the regression explains about 20% of the variable y, performance of fiscal management, through linear regression between x and y, since the R<sup>2</sup> found is 0.20.

Responding to the research hypothesis, the regression shows that the independent variable *Lv\_Constst* (level of consistency of accounting information) was not significantly related to the dependent variable *Perfom\_Managf* (tax management performance), since its p-value consists of 0.21. A priori, with the use of the ten rules of consistency, the null hypothesis should not be rejected, contrary to the alternative hypothesis, object of the research, not statistically confirmed, which suggests that municipalities with higher levels of consistency of accounting information have better performance in their fiscal management.

It is reiterated that it composed the calculation of the independent variable *Lv\_Constst* the ten consistency rules shown in Table 1. However, Graph 1 shows that there were rules with a 100% correctness level by the municipalities, as is the case with rules 1, 8 and 10, and others, such as rules 3, 4 and 9, with a minimum percentage of correct answers of a maximum of 5%. Rules 2, 5, 6 and 7, on the other hand, had percentages of correct answers above 70% and below 90%, showing to be more homogeneous. This fact suggests a calibration to the studied model, prioritizing a subset of consistency rules that are more continuous or common, in this case rules 2, 5, 6 and 7, shown in Table 6.

Table 6. Subset of Accounting Consistency Rules

Rules	Accounting Equations	Dummy V.
2	Consistency in checking value balances in banks Equation: Cash and cash equivalents balance from previous year (BS) = Cash and cash equivalents (previous balance of current trial balance).	1= Consistent 0=Inconsistent
5	Consistency in checking the balance of all accounts, which must have a balance greater than or equal to zero, but never with a negative balance, except the asset and liability reduction accounts.	1= Consistent 0=Inconsistent
6	Consistency of the consolidated debt balance in the 6th Quarter RREO Consolidated Debt Statement with the Balance Sheet Consolidated Debt balance.	1= Consistent 0=Inconsistent
7	Consistency in the balance of unpaid liabilities processed from the 6th quarter RREO with the balance on the balance sheet, entered in Current Liabilities.	1= Consistent 0=Inconsistent

Source: Author's own elaboration.

According Carvalho et al. (2006) and Figueiredo Filho et al. (2011), it is good practice to calibrate the regression model with a view to better assessing its potential and analyzing values belonging to nearby locations, forming a subset, with similar dimensions for the correct specification of the model, avoiding inconsistent estimates.

Table 7. Adjusted Multivariate Linear Regression

Independent variables	Expect. Sign	Approval		
		Coefficient	z-stat	p-value
<i>Constant</i>				
<i>Lv_Constst</i>	+	+0.12	1.63	0.10*
<i>Mhdt</i>	+	- 0.16	-0.78	0.44
<i>LvEduc_M</i>	+	+0.03	2.00	0.05**
<i>ln_pcp</i>	+	+0.03	3.57	0.01***
<i>Bud_pc</i>	+	0.01	3.23	0.01***
<i>Observations</i>		255		
<i>R<sup>2</sup></i>		0.20		

Regressions with \*\*\* are significant at 1%, with \*\* are significant at 5% and with \* at 10%.Source: Author's own elaboration.

The regression result, specified in Table 6, where the variable *Lv\_Constst* consists only of accounting consistency rules 2, 5, 6 and 7, representing a subset of more homogeneous consistency rules, excluding rules with 100% correct answers and those with answers below 5%, proved to be very close to reaching a reasonable degree of significance so that the alternative hypothesis could be safely confirmed, since its p-value, in relation to the dependent variable *Perform\_Managf*, consists of 0.10.

Indeed, it can be deduced as possible causes for the non-confirmation of the alternative hypothesis that the metrics used were not able to capture such result (Velten, 2015), as well

as that the number of observations used was also not enough to achieve the desired result. It should be noted that the survey was carried out in 52 municipalities in Rondônia, involving a period of 5 years, totaling only 260 observations. Obviously, being applied in other states with a larger number of municipalities and in a longer series of years the results may be different.

Based also on the results of the regression, we found that the population control variables (*In\_pop*) and per capita budget (*bud\_pc*) are positively significant at 1%, while the variable educational level of the manager (*LvEduc\_M*) is significant and also positive at 5%. The *Mhdt* variable was not significant besides its coefficient being negative. These results suggest, with 99% confidence, that municipalities with larger populations and per capita budgets have better performance in their fiscal management. Likewise, it can be seen, with 95% confidence, that the municipalities whose managers have higher levels of education tend to achieve greater performance in fiscal management.

## Conclusion

The aim of this study was to identify the relationship between the level of consistency of the public sector financial statements and the performance of fiscal management in the municipalities of Rondônia, in the period between 2011 and 2015.

The results indicate that the level of consistency was not significantly related to the performance of fiscal management, using the ten accounting information consistency rules. However, with the calculation of only the four consistency rules that represent a subset of more homogeneous rules, excluding the rules with 100% correct answers and those with answers below 5%, it was very close to reaching a reasonable degree of significance.

As possible causes for the non-confirmation of the alternative hypothesis, it is deduced that the metrics used were not able to capture such result, as well as the number of observations used to achieve the desired result was insufficient. It is likely that if the research is applied in other states with a larger number of municipalities and over a longer series of years, there may be a significant relationship.

On the other hand, we found that the variables of population control, per capita budget and educational level of the manager were significantly related to the performance of fiscal management. These results suggest that municipalities with larger populations and per capita budgets have better performance in their fiscal management. Likewise, municipalities whose managers have a higher education level also tend to achieve higher performance. Such a premise may arouse managers' interest in academic training with a view to improving the performance of their management. For society, it represents a bias in the choice of its representatives.

We also found that the municipalities of Rondônia obtained, on average, a percentage of 57% of their fiscal management performance, within the concept C of the FIRJAN Tax Management Index, corresponding to the management in difficulty. As for the level of accounting consistency, the average number of correct answers obtained by the municipalities of Rondônia, with respect to the ten accounting rules applied, was just 6.14. This result is certainly in line with the finding by Braga (2015), whose conclusion was that practically all municipalities in Pernambuco met only partially the criterion of consistency of accounting information disclosed in the balance sheets.

It should be noted that the present study suffered limitations due to the few studies found related to the topic that could better support the research, and it was made impossible to use some control variables whose indexes are not raised year by year, which impaired the intended number of observations.

This research will be relevant as an incentive to the academy in order to deepen the analysis about the consistency of the financial statements in the performance of public management, being able to adopt even other parameters of evaluation, to use a greater number of observations, as well as to apply it in other units of the Federation. In doing so, it will contribute to the improvement of government accounting and management.

Likewise, it will serve for the public administration to strengthen its controls, especially the accounting, allowing the identification and correction of deficiencies so that management can be supported by reliable information for better management performance. In addition, the result of the research aims to contribute to the Courts of Accounts for the purpose of improving their accounting and financial audits.

Finally, the result of this research will allow society to make public accounts more transparent, obtaining better quality information, free of errors and other imperfections. Under this perspective, it may even strengthen democratic relations between the State and society, as well as inhibiting the practice of corruption in public administration through effective social control.

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### Acknowledgments

Not applicable.

### Funding

Not applicable.

### Conflict of Interests

No, there are no conflicting interests.

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