


## Analysis of public debt management in the five best cities to live in Paraná

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### ABSTRACT

This study aims to analyze the evolution of public indebtedness of the best cities to live in Paraná, during the period from 2017 to 2021, as well as to investigate the level of commitment of each municipality to the government budget, considering the prerogatives imposed by the Fiscal Responsibility Law. To carry out this analysis, data were collected from the Fiscal Management Report (RGF), available at the Court of Auditors of the State of Paraná. The data analyzed comprise Consolidated Net Revenue (RCL), Consolidated Debt (DC) and Net Consolidated Debt (DCL). By means of these data, the parametric calculation of the degree of indebtedness of each municipality was performed. By verifying the results obtained, it was possible to determine that the municipalities of Maringá, Curitiba, Londrina and São José dos Pinhais had a decreasing variation in the degree of indebtedness, while the municipality of Cascavel was the only one to present an increasing variation in terms of public indebtedness. However, when it comes to compliance with the rules imposed by the LRF, the municipalities presented different scenarios, and Maringá, Curitiba, and Cascavel complied with the prerogatives imposed by the LRF at different times, while in the case of the city of Londrina it was possible to analyze that in none of the exercises there was compliance with such standards, another very different scenario was presented by the municipality of São José dos Pinhais, which was the only one to comply with the guidelines imposed by the LRF during the 5 periods analyzed, and this one presented a negative degree of indebtedness in all the years verified.

**Keywords:** Public Indebtedness, Degree of indebtedness, Fiscal Responsibility Law.

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## INTRODUCTION

The purpose of public administration is to establish and execute government debt management strategies, and these tools are essential to raise the necessary resources and thus finance its public expenditures (Rocha, 2009). In this context, due to the importance of the management and knowledge of the public debt, it is essential to be aware of the process of evolution from the colonial and imperial periods to the present day, since there are several challenges in the history of the Brazilian public debt, however, the search for an efficient management of public debt is still a source of a growing debate in today's society. Functionally, quality management can immunize a country's monetary and fiscal policies, thus avoiding future financial shocks (Rocha, 2009).

The growing search for the efficient development of public debt management led institutions such as the World Bank and the International Monetary Fund (IMF) to formulate a set of guidelines aimed at government debts, which was published in March 2001, a document entitled "*Guidelines for public debt management*". The purpose of this publication is to encourage the most diverse countries, regardless of their level of development, using the reform program aimed at improving public debt management (Rocha, 2009).

In this context, given the unsustainable levels that the public debt was reaching in recent times and fearing a nascent systemic crisis, the Fiscal Responsibility Law (LRF) was enacted in May 2002, with the objective of rationalizing and containing the escalation of the public debt (Assoni Filho, 2007). Based on the Annual Financing Plan (PAD), it is estimated that in 2022 the Federal Public Debt Stock (DPF) should close between R\$ 6 trillion and R\$ 6.4 trillion, which is one of the highest levels of average issuance cost in 5 years. With regard to the domestic Public Securities Debt (DPMFi), there was an increase of 2.18%, reaching an incredible R\$ 5.595 trillion in June 2022, in the case of the external Federal Public Debt (DPFe) there was an increase of 10.56% reaching R\$ 250.17 billion also in June 2022, however the failure of the policies applied by the government is visible, raising questions about the ability to manage public resources.

The search for control and quality management of public debt is necessary through efficient internal administration, as well as the execution of debt management strategies to achieve the long-awaited administrative efficiency of public debts. However, there is an urgent need to monitor public indebtedness in all Brazilian municipalities, as this is an important act for the containment of public indebtedness, so that the planning, transparency, control and responsibility desired by the Fiscal Responsibility Law would in fact be present in public administration. Controlling, in an orderly and regulated manner, directing the management of public debt to the path of efficiency will not be an easy task. With the passage of time and the actions taken to improve government management regarding public indebtedness, it is possible to verify a great evolution, however, the desired balance



has not yet been found, which makes it noticeable how difficult it is to be face to face with the problem of public debt.

In view of this, the present study aims to investigate the evolution of public indebtedness in Paraná cities in the period from 2017 to 2021, in addition to verifying the level of commitment of each city to the budget allocated to the payment of public debts, in view of the limits imposed by the Fiscal Responsibility Law (LRF). To choose the sample, we took into account the analysis carried out by the Brazilian consulting entity MacroPlan (2021), which used health, education, safety and basic sanitation indicators, and through these factors presented the top 5 of the best cities to live in the state of Paraná, these being the city of Maringá, Curitiba, Cascavel, Londrina and São José dos Pinhais.

In view of the above, it is considered that the present study contributes considerably to the academic community that seeks information related to the public indebtedness of the best cities to live in the state of Paraná, as well as assists the administration with regard to the public debt, in order to convey quality information of paramount relevance to those interested.

## LITERATURE REVIEW

### PUBLIC FINANCE

Public finances in Brazil are ordered, especially, by the Fiscal Responsibility Law, together with the Federal Constitution of 1988, which, according to Veríssimo Sobrinho (2021), is the responsibility for managing public revenues and expenditures, with the purpose of achieving economic stability. As their main concern is the control of financial resources, as well as their obtainment, distribution, and use, Almeida, Raupp, Sacramento, and Menezes (2021, p.15), state that "it should be noted that a country's public finances are oriented towards the management of operations related to revenue, expenditure, budget, and public credit".

A public administration will only achieve efficiency by knowing its expenses and revenues, together with the compatibility of these budgets and the amounts of the present variables. In order to meet social needs, the public budget is structured in order to group expenses according to the determined criteria, that is, public expenditure is an enabling tool, thus requiring legal authorization for its realization. It is worth noting that, by law, some expenses are considered mandatory, which the government cannot fail to pay, an example being constitutional transfers to states and municipalities, as well as social security and assistance benefits (Gadelha, 2017).

It is worth remembering that, in addition to mandatory and discretionary expenses, there is another very important category of budgetary expenses, one of them being primary expenditure and financial or non-primary expenses, with primary expenditure being used in the promotion of public goods and services, such as health, education, highway construction and maintenance of the public



machine. Financial expenses, on the other hand, result from payments of debts or loans taken by the government (Gadelha, 2017).

## PUBLIC DEBT

In general, public debt consists of the accumulation of expenses from previous years, which is not an exclusive problem of the state, but of companies and households (Pereira, 2016). The definition of public debt corresponds to borrowing and issuing public securities, which have not been amortized by public administration organizations. In this context, the revenues that are associated with public indebtedness are recognized as non-effective, since in the present it is a revenue, but they are sources of origin of future liabilities, which fall not only in the form of interest payment, but also in the return of these resources. Some situations have similar effects when it comes to public debt, however, they are not considered as debt, a great example is the transfer of pension funds that were previously owned by private institutions and that now becomes public domain, in which case a revenue arises, which will give rise to future liabilities, however, in this case it is not considered an increase in public debt (Pereira, 2016).

When the expenses incurred become greater than the funds collected, the indebtedness with third parties takes on greater proportions, in these cases the interest and amortizations become unsustainable, since there is not enough income to pay them, that is, the superiority of expenses compared to revenues, as well as the weak prospect of increasing future revenues, generate in turn, the accumulation of deficits, and consequently the increase in public debt (Pereira, 2016). As a result, the solutions taken usually involve the sale of assets, such as bonds issued by the government, which will for a certain moment generate an increase in resources, but will also generate future expenses, since they will be collected in the near future (Pereira, 2016). In this sense, and with the aim of limiting public indebtedness, Brazil adopts the Fiscal Responsibility Law (LRF).

## FISCAL RESPONSIBILITY LAW

Between the 1980s and 1990s it was concluded that there was a significant interest in conducting scientific studies of public governance, in order to formulate and implement inspection rules, thus seeking a fiscal balance, this was due to the deficiency that the transparency of public information had been suffering in this period, as well as the growing need to understand the deficit mechanisms. which stimulated the entry of several countries into a debt crisis (Cialdini, 2022). As a result, several researches and studies emerged that were interested in the formulation of fiscal regulations, as well as the effects suffered in the public policies of the countries, and it is in this context that the Fiscal Responsibility Law (LRF) emerges. Also known as the Complementary Law, it



was delegated on May 4, 2000, with the purpose of serving public finances, with public credit and public debt control as a priority (Assoni Filho, 2007).

From its application, it was up to the public bodies of the state administration to meet several goals, with the purpose of controlling expenses, such as the search for financial health that until now had been put at risk (Andrade, 2021). Thus, Brazilian public management ceases to be intuitive and starts to have a technical character, thus generating several changes in the public accounting of Brazilian municipalities, and also reaching other governmental spheres. The Fiscal Responsibility Law brought to light issues such as the limits on personnel expenses, establishing that for each period, the maximum personnel expenses in the municipalities may not exceed 60% of the current net revenue (Brasil, 2000).

Therefore, the Complementary Law significantly influenced public accounting, generating needs that did not exist in public management before, such as the minimization of expenses and the transparency of public actions, as a result of this advance, managers both at the municipal level and at other governmental spheres began to spend more consciously (Silva & Bonacim, 2010). Andrade (2021), states that it is possible to say that compliance with the determinations present in the Fiscal Responsibility Law acts positively in the municipalities, this fact happens since the aforementioned law imposes the adoption of a conscious fiscal management by public managers, leading to greater control of resources and consequent balance in public accounts.

The proposal established by the Fiscal Responsibility Law, concerning sustainable financial management, can be adapted in many Brazilian municipalities, but for this to occur, and become in fact viable, permanent supervision is necessary, and this task falls to the courts of accounts (Ribeiro, Karuzo, Pavão & Mattiello, 2022). In addition, there is an urgent need to carry out evaluative studies, both on the part of the executive and legislative branches, so that the law can be adjusted and consequently adapted to the present social context (Silva & Bonacim, 2010).

## PREVIOUS STUDIES

The balance of public accounts is always the subject of studies and analyses by the academic and public spheres. In this sense, some studies have already been published on this extremely important theme in this sector.

Dias (2018), aimed in his study to identify the reflexes defined by the public debt, both in the implementation of actions and in the development process of the municipalities of Paraná, using data present in the Court of Auditors of the State of Paraná, as well as other data, collected from the Federation of Industries of the State of Rio de Janeiro (FIRJAN) and IRB - Instituto Rui Barbosa. It is concluded that the results originating from the public debt were not generating reflections in the service to the population, and for this reason, they are not justified, it was still found that areas such



as health would be receiving negative effects from the public debt, however it was observed that in the area of education positive reflections were obtained, these resulting from the investments that arose through public debt.

Also in this context, Lazarin, Mello and Bezerra (2014) analyzed the relationship between the public debt of Paraná and the economic development of municipalities, between the period of 2002 and 2010. The authors used tools such as the indicator, which shows the ratio between Net Consolidated Debt and Net Current Revenue, and the Iparades Municipal Development Index (IPDM). Thus, the results indicated that the explanatory variables of indebtedness, with a significance level of 10% were: sanitation, urbanism, environmental management and culture. In addition, the results showed that there is a positive relationship between DCL/RCL and IPDM, i.e., the higher the municipal indebtedness, the higher the value of the IPDM indicator, thus having a significant impact on the improvement of living conditions and the well-being of the population. The authors also presented that both urbanism and environmental management interfere positively in the indebtedness of municipalities, however, culture and sanitation negatively impact indebtedness, thus, the greater the investment in the areas mentioned, the lower the indebtedness of the municipalities in the state of Paraná.

For a better understanding of the level of indebtedness, as well as the socioeconomic and political characteristics of the municipalities of Paraná, Rosa, Vieira, Lopes and Meurer (2020), made a thorough analysis of the public finances of the municipalities of Paraná, taking into account the guidelines sanctioned by the Fiscal Responsibility Law (LRF), thus aiming not to exceed the limits imposed by the LRF. Aware of this scenario, the investigation aimed to identify the present differences, as well as the associations of indebtedness in contrast to socioeconomic and political characteristics. The study used 383 municipalities in Paraná, and through this population non-parametric Kruskal-Wallis tests were applied, thus verifying the differences in the middle of groups registered in inhabitants, Gross Domestic Product (GDP), government base, reelection, demographic region and Human Development Index - HDI. The authors identified that the demographic region of the municipalities of Paraná plays an important role in the change in indebtedness, reaching a level of 10% of significance. On the other hand, the other variables did not present sufficient significance, and for this reason, they are presented in a way that is contrary to the constructed literature, thus leaving a gap for further investigations. In addition, the correlation pointed to a negative and significant association between municipal indebtedness and GDP.

## **METHODOLOGICAL PROCEDURES**

It is necessary in a scientific research to describe the methodologies used as a way to present the robustness of the study. The present research aims to verify, in the period from 2017 to 2021, the



data related to the public indebtedness of the municipalities of Paraná with the highest quality of life, thus seeking to analyze the evolution of indebtedness in the present municipalities. In addition, the study aims to investigate the level of commitment of each municipality to the government budget, which is intended for the payment of public debts, based on the limits imposed by the Fiscal Responsibility Law.

For the choice of municipalities, the 5 best cities to live in the state of Paraná were delimited, according to the Ranking of the Municipal Management Development Index (IDGM), presented by the research institution Macroplan (2021) which took into account synthetic indexes, which bring together 15 indicators in 4 areas, namely, the area of education, health, safety and sanitation. They are the cities of Maringá, Curitiba, Cascavel, Londrina and São José dos Pinhais.

To carry out this work, a descriptive research methodology was adopted, which aims to describe, analyze and interpret data related to a population, phenomenon or experience, portraying with other eyes a reality already known in society. Triviños (1987) describes that the descriptive study aims at the exact description of the facts and phenomena of the reality present in the current society. However, it is worth noting that, when it comes to the nature of research, the study has a basic or pure character as it is also known, with the purpose of generating new knowledge, which occurs without foreseen practical application, thus involving universal truths and interests (Silveira & Córdova, 2009).

The research uses a quantitative approach, which consists of the analysis of data arranged in graphs or tables, thus aiming at a greater understanding of the public debt of each municipality. For Fonseca (2002), quantitative research has objectivity as its central purpose, which uses mathematical language to describe the facts that led to the occurrence of a certain phenomenon. As for the research approach, the deductive method was used, which, according to Garcia (2022), does not produce new knowledge, since its formulation arises from existing ideas, in addition, this type of methodology works analytically, which observes information and consequently generates results.

The data analyzed in this study were taken from the Court of Auditors of the State of Paraná, which are organized in tables and arranged in PDF format. In order to meet the purposes proposed by this study, data processing was carried out in order to calculate indebtedness parameters, this parameter being the degree of indebtedness, which implies the demonstration of the payment of the public debt in return for the government's operational collection (Gomes, 2022).

## **PRESENTATION AND ANALYSIS OF RESULTS**

The degree of indebtedness of the cities of Maringá, Curitiba, Cascavel, Londrina and São José dos Pinhais was obtained by combining the net consolidated debt (DCL) and the net current revenue (RCL), and by means of this, demonstrate whether there is a commitment to the operating



collection in return for the payment of the public debt, in addition to this metric also allows the pointing out of the magnitude of the public sector indebtedness. Table 1 shows the Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 for the city of Maringá.

Table 1 - Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 of Maringá.

MARINGÁ					
YEAR	DEBT CONSOLIDATED (DC)	CONSOLIDATED DEBT NET (DCL)	CURRENT REVENUE NET (RCL)	DC/RCL	CL/RCL
2017	R\$ 309.600.873,88	R\$ 47.477.696,64	R\$ 1.187.933.424,38	26,06%	4,00%
2018	R\$ 405.391.781,43	R\$ 82.601.007,31	R\$ 1.307.299.476,54	31,01%	6,32%
2019	R\$ 416.836.360,18	R\$ 72.991.584,18	R\$ 1.414.333.502,91	29,47%	5,16%
2020	R\$ 421.007.485,30	-R\$ 64.912.043,69	R\$ 1.602.612.068,67	26,27%	- 4,05%
2021	R\$ 523.420.219,62	-R\$ 36.458.643,86	R\$ 1.789.815.203,31	29,24%	-2,04%

When analyzing the relationship between DCL and RCL in the municipality of Maringá, presented in Table 1, it is observed that in the period of 2018 the municipality of Maringá obtained a degree of indebtedness of approximately 6.32%, which is the highest among the periods analyzed, on the other hand, the year 2020 presented the lowest percentage compared to the other periods analyzed, This is approximately -4.05%. Table 2 shows the Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 for the city of Curitiba.

Table 2 - Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 in Curitiba.

CURITIBA					
YEAR	DEBT CONSOLIDATED (DC)	CONSOLIDATED DEBT NET (DCL)	CURRENT REVENUE NET (RCL)	DC/RCL	DCL/RCL
2017	R\$ 1.566.610.659,64	R\$ 343.878.195,64	R\$ 6.665.454.954,03	23,50%	5,16%
2018	R\$ 1.388.440.486,08	-R\$ 384.500.195,85	R\$ 7.121.443.547,15	19,50%	-5,40%
2019	R\$ 1.335.892.657,37	-R\$ 907.511.426,26	R\$ 7.756.227.839,94	17,22%	-11,70%
2020	R\$ 1.431.165.753,06	-R\$ 1.211.319.096,17	R\$ 7.653.034.117,87	18,70%	-15,83%
2021	R\$ 1.383.947.234,13	-R\$ 2.013.513.453,79	R\$ 8.703.222.844,89	15,90%	-23,14%





When analyzing the second place in the Ranking of the 5 best cities to live in Paraná, it is observed that in 2017 the municipality of Curitiba obtained its highest degree of indebtedness, approximately 5.16%, while in the period of 2021 the degree of indebtedness of the present municipality reached approximately -23.14%, which is the lowest degree of indebtedness recorded during the five periods analyzed. In addition, it can be seen that the municipality of Curitiba obtained during the years 2018, 2019 and 2020 lower percentages compared to 2017, that is, in these periods the degree of indebtedness was lower than in 2017. Table 3 shows the Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 for the city of Cascavel.

Table 3 - Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 of Cascavel.

<b>RATTLESNAKE</b>					
<b>YEAR</b>	<b>DEBT CONSOLIDATED (DC)</b>	<b>DEBT CONSOLIDATED NET (DCL)</b>	<b>CURRENT REVENUE NET (RCL)</b>	<b>DC/RCL</b>	<b>DCL/RCL</b>
2017	R\$ 114.513.113,49	-R\$ 56.976.174,89	R\$ 745.203.895,51	15,37%	-7,65%
2018	R\$ 143.457.410,01	-R\$ 22.224.879,55	R\$ 787.086.177,60	18,23%	-2,82%
2019	R\$ 180.704.118,95	R\$ 1.587.461,82	R\$ 837.332.496,87	21,58%	0,19%
2020	R\$ 303.511.876,25	R\$ 77.368.174,52	R\$ 934.692.401,80	32,47%	8,28%
2021	R\$ 316.780.681,67	R\$ 60.806.768,35	R\$ 1.062.623.187,34	29,81%	5,72%

When analyzing the data shown in Table 3, it is observed that the municipality of Cascavel reached a public debt level of approximately 8.28% in 2020, which is the highest percentage between the periods analyzed, however, in the 2017 and 2018 fiscal years, a negative degree of indebtedness was found in both periods, with the lowest percentage occurring in 2017, reaching approximately -7.65%. In 2019, it can be seen that the municipality has a lower percentage compared to 2020 and 2021, that is, the period in question has a low degree of indebtedness, but on the other hand, the following years presented higher degrees, reaching 8.28% in 2020, which is the highest degree of indebtedness during the years analyzed. Table 4 shows the Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021, for the city of Londrina.

Table 4 - Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 of Londrina.

LONDRINA					
YEAR	CONSOLIDATED DEBT (DC)	CONSOLIDATED DEBT NET (DCL)	CONSOLIDATED REVENUE NET (RCL)	DC/RCL	DCL/RCL
2017	R\$ 572.080.961,89	R\$ 293.812.975,28	R\$ 1.534.096.037,82	37,29%	19,15%
2018	R\$ 562.462.457,04	R\$ 284.306.702,19	R\$ 1.690.365.732,77	33,27%	16,82%
2019	R\$ 497.534.004,72	R\$ 171.785.498,11	R\$ 1.825.956.154,10	27,25%	9,41%
2020	R\$ 635.404.234,17	R\$ 188.411.098,81	R\$ 2.060.158.225,24	30,84%	9,15%
2021	R\$ 521.533.110,13	R\$ 9.361.772,53	R\$ 2.150.633.441,47	24,25%	0,44%

During the period of 2017, 2018, 2019 and 2020, the municipality of Londrina presented high percentages of indebtedness, reaching approximately 19.15% in the year 2017, which is the highest degree of indebtedness during the 5 years analyzed. In addition, it can be seen that the lowest degree of indebtedness that the municipality reached was in 2021, reaching 0.44%, which is a low percentage of indebtedness compared to previous years, therefore, when analyzing the data presented in Table 4, it is possible to notice a growing increase in the percentages over the years. Table 5 shows the Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 for the city of Cascavel.

Table 5 - Ratio between Consolidated Debt and Net Consolidated Revenue for the period from 2017 to 2021 of São José dos Pinhais.

SÃO JOSÉ DOS PINHAIS					
YEAR	CONSOLIDATED EXPENDITURE (DC)	CONSOLIDATED EXPENDITURE NET (DCL)	CONSOLIDATED REVENUE NET (RCL)	DC/RCL	DCL/RCL
2017	R\$ 31.105.689,97	-R\$ 213.854.997,29	R\$ 924.945.399,65	3,36%	-23,12%
2018	R\$ 27.737.467,48	-R\$ 283.534.323,33	R\$ 947.271.994,86	2,93%	-29,93%
2019	R\$ 44.651.517,81	-R\$ 298.295.546,34	R\$ 1.008.605.488,21	4,43%	-29,58%
2020	R\$ 65.567.091,32	-R\$ 323.215.757,17	R\$ 1.067.502.499,59	6,14%	-30,28%
2021	R\$ 82.142.247,51	-R\$ 456.443.818,58	R\$ 1.203.356.243,27	6,83%	-37,93%

It should be noted that the municipality of São José dos Pinhais had a negative degree of indebtedness in all the periods analyzed, with -37.93% being the lowest percentage of the analyzed years, which occurred in 2021, as shown in Table 5.



It is desired that the degree of indebtedness of the public sector should always be as low as possible, since when negative, that is, when the percentage of indebtedness is less than zero, this means that the available financial resources are more than sufficient to pay the net consolidated debt. In the case of the degree of indebtedness being equal to 0, this means that the available financial resources are only sufficient to supply the debt, moreover, when the net consolidated debt becomes greater than the available resources, the percentage of indebtedness is represented positively (Santana, 2017).

In Santana's (2017) conception, municipalities can be typified as to the degree of indebtedness, in this case, when the indebtedness rate is less than zero ( $GE < 0$ ) the municipality will be classified as non-indebted, while in case the percentage is between 0 and 0.30 ( $0 \leq GE \leq 0.30$ ), the degree of indebtedness will be classified as low, In addition, the degree of indebtedness can also be classified between medium and high, and the classification of medium indebtedness occurs when the percentage of indebtedness is greater than 0.30 and less than 0.80 ( $0.30 < GE < 0.80$ ), and finally, the classification of high degree of indebtedness occurs when the percentage is greater than 0.80 ( $GE > 0.80$ ). Therefore, it is of paramount importance that the ratio between net consolidated debt and net current revenue is the lowest whenever possible, since the higher the degree of indebtedness, the greater the restriction of future indebtedness in case of need (Gomes, 2022)

When analyzing the indebtedness degree indicator, it was noticed that the municipality of Maringá presented a high degree of indebtedness in the first three years, however, this scenario changed from 2020, starting to be classified as non-indebted, which continued during the 2021 period. The city of Curitiba, on the other hand, presented a different scenario, which showed a high percentage of indebtedness only in the first period analyzed, while in the other periods the degree of indebtedness decreased and, consequently, the classification of non-indebtedness was obtained.

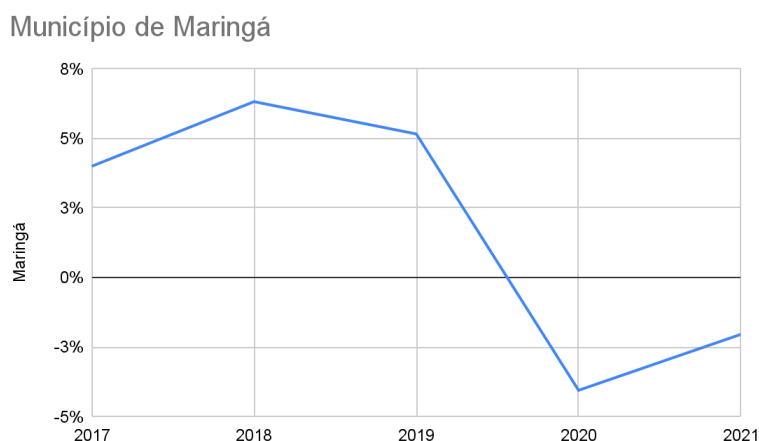
On the other hand, the municipality of Cascavel portrayed in its first two years a percentage of indebtedness below zero, that is, in 2017 and 2018 the municipality presented a non-indebted scenario, however, this scenario changed from 2019, when it suffered an increase in the degree of indebtedness, starting to be classified as having a high degree of indebtedness. Another different scenario was presented by the city of Londrina, which portrayed a high degree of indebtedness in most of the periods, starting to have an average percentage of indebtedness only in 2021. Finally, in the case of the municipality of São José dos Pinhais, the classification was given as non-indebted in all the periods analyzed, taking into account that the percentage of indebtedness was below zero in all years.

With this, it can be seen that when it comes to public indebtedness, each municipality presents a different scenario, and Maringá, Curitiba and São José dos Pinhais have presented in recent years percentages of indebtedness below zero, that is, they were classified as non-indebted, while in the

case of Cascavel the degree of indebtedness increased in the last 3 years, which consequently provided it with a high percentage of indebtedness, and finally, Londrina was the only municipality to have an average degree of indebtedness.

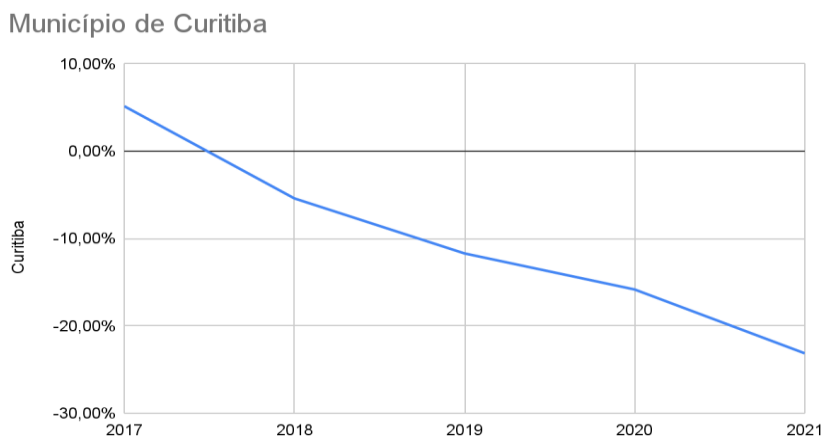
Thus, it can be seen that in recent years the municipalities of Maringá and Curitiba have the capacity to support future possible indebtedness, without compromising their finances, while the municipality of São José dos Pinhais presented during the five periods analyzed, the capacity to support future indebtedness if necessary, without compromising its financial resources. The city of Londrina portrayed in the vast majority of periods not having the capacity for future indebtedness if necessary, as of 2021 the present municipality only had the capacity to supply the net consolidated debt of the period in question, on the other hand, in recent years the municipality of Cascavel was the only one not to have the capacity to settle future indebtedness if necessary, since in most of the periods the net consolidated debt of the municipality was higher than the available resources. Figure 1 shows the graph showing the Oscillation of the Degree of Indebtedness during the period from 2017 to 2021 in the municipality of Maringá.

Figure 1 - Oscillation of the degree of indebtedness during the period from 2017 to 2021 in Maringá.



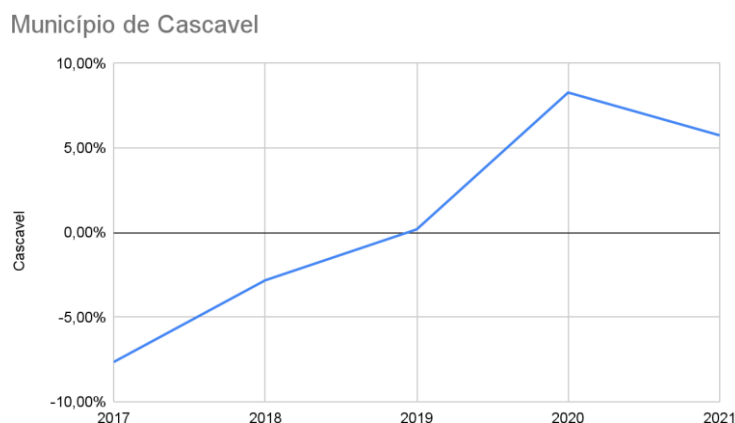
When analyzing Figure 1, it is possible to notice the oscillations suffered by the municipality of Maringá, it can be seen that during the first three years analyzed, the degree of indebtedness portrayed was categorically higher compared to the other periods analyzed, that is, this means that during the fiscal year 2017, 2018 and 2019 the municipality experienced a high degree of indebtedness, having achieved the highest percentage during the 2018 period. However, it is visible that from 2019 onwards there is a drop in the degree of indebtedness, reaching a negative percentage, and therefore, the city of Maringá no longer has a high degree of indebtedness and is classified as non-indebted, reaching the lowest degree of indebtedness during the period of 2020, and remaining non-indebted during the 2021 period. Figure 2 shows the graph with the Oscillation of the Degree of Indebtedness during the period from 2017 to 2021 in the municipality of Curitiba.

Figure 2 - Oscillation of the degree of indebtedness during the period from 2017 to 2021 in Curitiba.



The municipality of Curitiba, however, portrays a different scenario, there is a constant drop in the percentage of indebtedness, which starts with a high degree of indebtedness during the period of 2017, but falls significantly in the other periods analyzed, reaching a non-indebted state for the last 4 years, having reached its lowest degree of indebtedness in the period of 2021, therefore, it is identified that the municipality of Curitiba presented a decrease in the percentage of public debt in most of the fiscal years, as shown in Figure 2. Figure 3 shows the graph with the Oscillation of the Degree of Indebtedness during the period from 2017 to 2021 in the municipality of Cascavel.

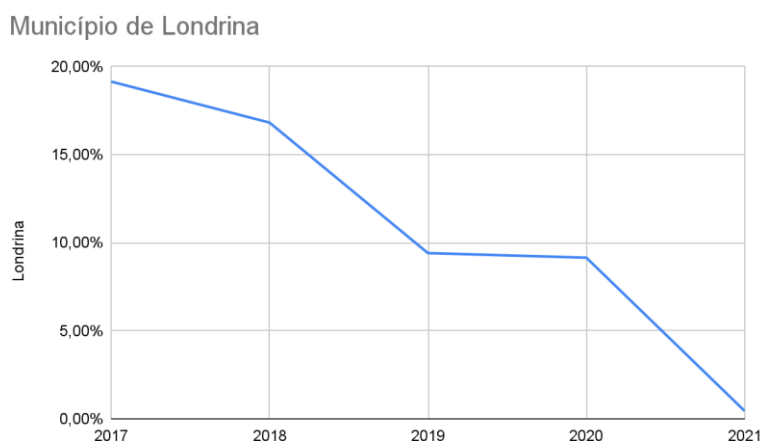
Figure 3 - Oscillation of the degree of indebtedness during the period from 2017 to 2021 in Cascavel.



In the case of the municipality of Cascavel, third place in the ranking of the best cities to live in the state of Paraná, it is possible to identify that at the beginning of the 2017 fiscal year its indebtedness percentage is below zero, that is, unlike the other municipalities analyzed so far, Cascavel is not indebted during the first fiscal year. reaching in this period the lowest degree of indebtedness in the last 5 years, which remains unindebted during the period of 2018.

However, from that moment on, when accurately visualizing Figure 3, it is noticeable that there is an increase in the public indebtedness of the present municipality, since in 2019 the municipality goes from non-indebtedness to a low degree of indebtedness, it is possible to see that the percentage of indebtedness in the 2019 fiscal year is between 0% and 0.30%, In addition, it was found that during the period there was a significant increase in indebtedness, which led to a high degree of public debt at the beginning of the 2020 period, which is the highest percentage of indebtedness in the last 5 years. Finally, it is still possible to analyze a small drop in indebtedness during the current fiscal year, which caused a decrease in the degree of indebtedness in the following fiscal year, however, such a decrease was not enough to change the scenario of high percentage of indebtedness that the municipality contracted during the 2020 fiscal year. Figure 4 shows the graph with the Oscillation of the Degree of Indebtedness during the period from 2017 to 2021 in the municipality of Londrina.

Figure 4 - Oscillation of the degree of indebtedness during the period from 2017 to 2021 in Londrina.



When investigating the evolution of the indebtedness of the municipality of Londrina, it is possible to verify that, during the first two years, the municipality suffered from large percentages of indebtedness, reaching almost 20% of indebtedness in the 2017 fiscal year. However, it is possible to see that there was a brief decrease in indebtedness during the current year, which culminated in a lower degree of indebtedness in the following period, in addition, it is verified that during the 2018 fiscal year the percentage of public debt continued to plummet, however, this scenario changes in the following year. It started to show a smaller drop in the percentage of indebtedness, however, it is possible to see a significant drop in indebtedness from the 2020 fiscal year, in addition, it is evident that during the last year analyzed the indebtedness decreased drastically, reaching its lowest degree during the last 5 years evaluated. It is worth noting that in this case, the municipality of Londrina did not present a negative degree of indebtedness at any time, which demonstrates that in most of the periods analyzed the municipality presented a high degree of indebtedness, which only changed

during the 2021 fiscal year, as shown in Figure 4. Figure 5 shows the graph with the Oscillation of the Degree of Indebtedness during the period from 2017 to 2021 in the municipality of São José dos Pinhais.

Figure 5 - Oscillation of the degree of indebtedness during the period from 2017 to 2021 of São José dos Pinhais.

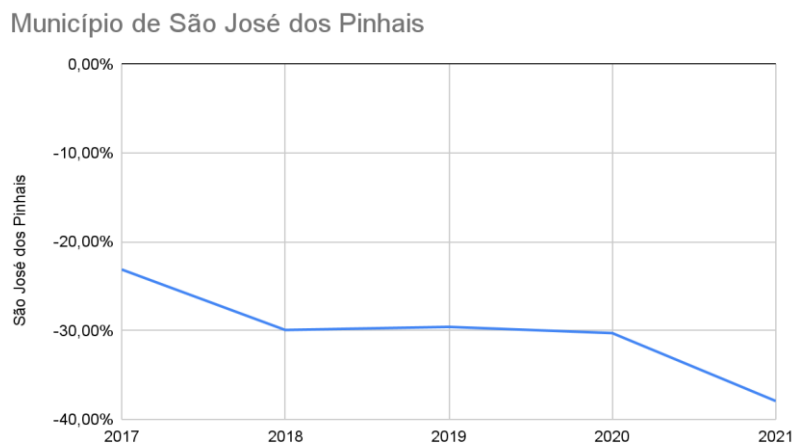


Figure 5 shows that the municipality of São José dos Pinhais presented a constant decrease in its percentage of indebtedness during the last 5 years, in addition, it is noticed that at no time did the present city present a low, medium or high degree of indebtedness, that is, during the 5 years analyzed the municipality was found to be non-indebted. In addition, it is possible to observe that during the periods of 2018, 2019 and 2020 there was a smaller oscillation in indebtedness, however, it is noticeable that from 2020 onwards there is a large drop in the percentage of public debt, as shown in Figure 5.

It is undeniable that the accumulation of public debt is a concern in the current context, since many governments seek to cover public deficits, and for this reason end up resorting to debt. Moreover, in order to continue financing their debts, it is necessary to raise their interest rates, which ends up generating uncertainties regarding the ability to pay these commitments (Giuberti, 2005).

The control of the public deficit at both the state and municipal levels is more difficult to control, and no matter how much the federal level is dedicated to achieving surpluses, if the states and municipalities do not use public funds responsibly, they can thus compromise the fiscal adjustment. A great example of the consequences suffered by excessive spending, as well as the lack of control of the Union over the states and municipalities, was the fiscal crisis of the 90s faced by the states.

On the other hand, with the enactment of the LRF, a counterweight emerged, since it promotes fiscal discipline through budget rules, and the Fiscal Responsibility Law is considered as a factor that seeks to discipline Brazil's public finances. As a result, two limits emerged in order to control public



spending, namely, the debt limit and the personnel spending limit, the latter being one of the main responsible for the fiscal crisis of the 90s. In addition, the LRF seeks to control all aspects of the budget, from its formulation to its execution, it also insists on the transparency of the facts, since it requires the publication of execution reports. The treatment of personnel expenses is the same for states and municipalities, which must comply with a limit of 60% of net current revenue (Giuberti, 2005).

When analyzing the municipalities with the best quality of life in the state of Paraná, it was possible to observe that the scenarios found regarding the degree of indebtedness presented numerous differences, which suggests that even though these cities are present in the same ranking, they do not have similar characteristics regarding public indebtedness, and consequently each municipality has its own management of the public administration budget. They are responsible for the fiscal result found in each municipality.

In this sense, when analyzing the oscillations regarding the degree of indebtedness, it is possible to verify that in recent years the vast majority of municipalities have complied with the LRF, with Maringá, Curitiba and São José dos Pinhais having a degree of indebtedness below zero, which means that there is a surplus of resources, however, two municipalities presented different scenarios at the end of 2021, Londrina had a medium degree of indebtedness and Cascavel had a high level of indebtedness, which means that expenses are higher than revenues and consequently there is no surplus of resources.

In addition, it was possible to analyze that the municipalities of Maringá, Curitiba and Londrina presented a high degree of indebtedness during the 2017 fiscal year, but that over the years this scenario presents different variations, which led to the decrease in the level of public debt of these municipalities. In addition, the municipality that presented a better management, for respecting the limits imposed by the LRF, was the city of São José dos Pinhais, which presented a surplus of resources in all the periods analyzed, on the other hand, Londrina was the only municipality not to respect the guidelines imposed by the LRF in any of the years analyzed, this being, the only municipality not to reach a degree of indebtedness below zero. However, the municipalities analyzed presented different variations of indebtedness, which may be linked to the different types of management, as well as the amount of public services that each municipality must provide, or even the location or natural resources that often affect the local economy and consequently the collection of municipal taxes.

## FINAL THOUGHTS

The then study aimed to verify, during the period from 2017 to 2021, the evolution of the public debt of the best cities to live in the state of Paraná, these being the cities of Maringá, Curitiba,





Cascavel, Londrina and São José dos Pinhais. For the purpose of carrying out the research, the commitment of each municipality to the government budget was analyzed, from the perspective of the Fiscal Responsibility Law, with data from the Court of Auditors of the State of Paraná, which discloses the reports of the net consolidated debt (DCL) and the net current revenue (RCL).

The data showed that the municipality of Maringá presented a decreasing evolution of indebtedness, which, initially in the first three years did not remain within the limits imposed by the LRF, but in the last two years presented a negative degree of indebtedness, thus changing the scenario of the first 3 years. a decreasing indebtedness variation, but differently from the first, it obtained in its last 4 years a negative degree of indebtedness and, therefore, was within the limits of the LRF in most of the years analyzed.

It was found that Cascavel presented a different scenario from the other cities, because when dealing with the evolution of indebtedness it was possible to verify that it occurred in an increasing way, that is, from the lowest degree of indebtedness to the highest, reaching a low degree of indebtedness during the period of 2019. In this way, the municipality was within the limits imposed by the LRF only in the first two years, while in 2019, it had the capacity only to supply the settlement of the public debt for the year, that is, there was no surplus of resources. Regarding Londrina, there is a decreasing evolution, as well as Maringá and Cascavel, but, on the other hand, it did not present in any of the 5 years verified that it was complying with the LRF, since at no time did it present a degree of indebtedness below zero, that is, in all years it presented a deficit in its final result.

When analyzing the data from the municipality of Curitiba, there was a drop in the percentage of indebtedness, starting from a high degree of indebtedness in 2017, but there was a reduction in the other periods, to the point of not being indebted in the last 4 years, therefore, there was a significant drop in the percentage of public debt. With regard to Londrina, there is a high level of indebtedness, of almost 20% of indebtedness in the 2017 fiscal year, however, in the following periods there was a gradual reduction, evidencing an adequate management of indebtedness. It is noteworthy that the municipality of Londrina did not present a negative degree of indebtedness at any time, which differs from the study sample.

The verification of the municipality of São José dos Pinhais presented a totally different scenario from the other municipalities, and the 5th place in the ranking, in addition to presenting a variation of decreasing indebtedness, was the only one to comply with the LRF guidelines in the 5 periods verified. All in all, it should be noted that the study was limited only to analyzing the parameter of degree of indebtedness, without detailing or judging its quality. Thus, it is suggested that future studies seek to analyze other parameters, which are directly related to the indebtedness of the public sector of the municipalities addressed in this study, increase the sample, establish criteria for judging the quality of indebtedness, among other possibilities.



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