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ABSTRACT

Given the dependence of municipalities on tax distribution originating from other subnational entities, this study aimed to evaluate the effects of tax incentive policies, applied simultaneously on IPI, ICMS export, PIS and COFINS, on the budgetary balance of Brazilian municipalities were evaluated. The sample considered was 5,570 Brazilian municipalities. Secondary data with temporal amplitude was used, delimited by data availability, between the years 1999 and 2017. Econometric models were estimated for panel data in stages. To instrument the estimation of the models, the stationarity of the time series was tested, and to verify the existence or not of endogeneity, the consistency test of the Durbin-Wu-Hausman estimators was applied. The study advances and innovates, by analyzing the fiscal balance of public finances in Brazilian municipalities in a scenario of multiple tax exemption policies adopted simultaneously. The main results indicated that in general, tax incentive policies did not favor the fiscal balance of the finances of Brazilian municipalities, especially small ones. As for the implications, within the scope of public policy makers, the results showed that these political actors are unaware of how sensitive municipalities are to political and fiscal maneuvers at higher levels of government.

Keywords: Tax incentives. Budget balance. Municipal finances.

RESUMO

Em face da dependência dos municípios na repartição tributária originária de outros entes subnacionais, este estudo teve como objetivo avaliar os efeitos das políticas de incentivos fiscais, aplicadas simultaneamente sobre o IPI, ICMS exportação, PIS e COFINS, no equilíbrio orçamentário dos municípios brasileiros. A amostra considerada foi de 5.570 municípios brasileiros. Usaram-se dados secundários com amplitude temporal, delimitada pela disponibilidade dos dados, entre os anos de 1999 e 2017. Foram estimados modelos econométricos para dados em painel em etapas. Para instrumentalizar a estimação dos modelos, testou-se a estacionariedade da série temporal, e, para verificar a existência ou não de endogeneidade, aplicou-se o teste de consistência dos estimadores de Durbin-Wu-Hausman. O estudo avança e inova ao analisar o equilíbrio fiscal das finanças públicas dos municípios brasileiros em um cenário de múltiplas políticas de isenções fiscais adotadas simultaneamente. Os principais resultados indicaram que, em geral, as políticas de incentivos fiscais não favoreceram o equilíbrio fiscal das finanças dos municípios brasileiros, principalmente os de pequeno porte. Quanto às implicações, no âmbito dos formuladores de políticas públicas, os resultados apontaram que esses atores políticos não têm conhecimento de quão sensíveis os municípios são diante das manobras políticas e fiscais nos níveis superiores do governo.

Palavras-chave: Incentivos fiscais. Equilíbrio orçamentário. Finanças municipais.

INTRODUCTION

In the proposed federative pact established by the 1988 Federal Constitution, municipalities, upon being elevated to the status of federated entities with political, administrative, and financial autonomy, had their functions expanded in various social areas, such as education, health, and housing. However, they were weakened in matters related to the composition of their revenues, as there was no proportional expansion of municipal fiscal autonomy, maintaining only the tax share originating from the other two spheres of government, the Union and the states.

Given municipalities' dependence on the distribution of taxes from other subnational entities, decisions regarding changes or proposals for new fiscal policies can affect municipal budgets and, in turn, the development of their public policies (Lima; Zenha; Diniz Filho, 2018; Rodrigues; Silva, 2020; Wakim; Wakim Lima, 2018). In the realm of fiscal policies, in developing countries like Brazil, these decisions by the central government often involve the extensive use of expansionary policies through tax incentives aimed not only at achieving macroeconomic stability but also at sustaining a healthy economy, maintaining employment and income levels, and encouraging economic growth.

For Jia, Ding, and Liu (2020), the creation of these policies can have repercussions in situations involving a lack of subnational tax autonomy, dependence on government transfers, local fiscal indiscipline, excessive local spending, and reduced local fiscal effort. These repercussions are more widespread, particularly in small municipalities, due to the challenges of balancing revenues and expenses while maintaining balanced public finances.

In this context, it is essential to recognize that municipal fiscal balance extends beyond budget matters and is closely tied to regional development. The ability of municipalities to keep a balanced budget is crucial for funding infrastructure, healthcare, education, and other public services that drive local socioeconomic growth. Therefore, weakening municipal finances through tax incentive policies can undermine the delivery of goods and services, which in turn can limit growth potential and increase regional disparities.

From a regional development perspective, analyzing the effects of fiscal policies gains particular relevance, as it highlights how decisions made at the central level impact territories with different institutional and fiscal capacities in an unequal manner. Smaller municipalities that are more dependent on intergovernmental transfers tend to suffer more severe impacts, which increases asymmetries and can hinder the promotion of regional cohesion policies.

In this scenario, which involves the autonomy of all levels of government, fiscal policies, resource transfers, taxing powers, and the not-always-cooperative relationship between entities, the Economic Theory of Fiscal Decentralization emerges as a theoretical basis for understanding this phenomenon. From a fiscal perspective, according to Musgrave (1959) and Oates (1972), these policies, if well-organized, can have an impact on the functions of the State by contributing to the development of the government management model.

However, they may also contradict the premises that underpin the use of a decentralized system over a centralized one. These principles generally encompass greater efficiency in the provision of goods and services, improved population well-being, and a more tailored provision of public goods and services to regional preferences (Boadway; Cuff, 2017; Catarino; Abraham, 2018; Ewetan et al., 2020; Vande, 2021).

In Brazil, tax incentives, as an economic policy instrument, have been applied through exemptions, tax benefits, and special purposes, among others, to various taxes that fund the transfer of resources to municipalities. The incidence of these taxes on consumption, such as the incentive policies applied to the Tax on Industrialized Products (IPI), Tax on the Circulation of Goods and Services (ICMS) for export, or on the Social Integration Program (PIS) and the Contribution for the Financing of Social Security (COFINS), may result in a decline in revenue if there is no growth in economic activity and offset by an increase in income tax collection.

This study assumes that tax incentive policies increase negative externalities in public finances, affecting the distribution of intergovernmental transfers, especially in smaller municipalities. Based on this premise and considering the fiscal policies implemented simultaneously on the IPI (Tax on Public Prosecution of Products), ICMS (Export Tax), and PIS/COFINS (Tax on Investment in Social Security) and their macroeconomic effects, the question is: What are the effects of tax incentive policies, considering their combined impact on multiple taxes, on the public finances of Brazilian municipalities? The general objective is to evaluate the effects of tax incentive policies, applied jointly on the IPI (Tax on Public Prosecution of Products), ICMS (Export Tax on Investment in Social Security), PIS, and COFINS (Tax on Investment in Social Security), on the budgetary balance of Brazilian municipalities.

It is argued that in smaller municipalities, these effects may be even more severe and exacerbated by the economic and structural contrasts between them, considering that the structure and economic power of Brazilian municipalities are directly linked to their size and population. Small municipalities in more economically vulnerable regions rely almost solely on revenue from government transfers (Leroy et al., 2017; Revorêdo et al., 2021).

This analysis is justified, given that both international and national studies have found conflicting results regarding the effects of tax incentives on public finances (Almeida; Pereira, 2019; Griebeler; Silva; Allebrandt, 2020; Pfeiffer; Roeger; Vogel, 2021; Simonova et al., 2021; Sovilla; López; Sánchez, 2018; Vieira; Ávila; Lopes, 2021). One of the reasons for these divergent results may lie in the tax base used, considering that the studies, for the most part, analyzed isolated policies (and/or their effects) on a single tax, in addition to analyzing specific economic sectors.

Thus, this study advances by analyzing the effects of tax incentive policies on the budgetary balance of Brazilian municipalities across different economic sectors and population groups in a scenario where multiple tax exemption policies are adopted simultaneously; this can be considered a first and innovative approach in fiscal policy studies.

Theoretical and empirical studies generally show that tax exemption policies, when implemented together, do not improve the financial balance of Brazilian municipalities, especially those with fewer than 50,000 residents. The findings were even more pronounced for the industrial and agricultural sectors.

FISCAL POLICY

Fiscal policies are considered key elements in discussions about public finances and their complex task of balancing revenues and expenditures. Sometimes, there is debate about how much the government should increase spending relative to revenues to avoid harming social well-being (Oliveira et al., 2023; Silva, M.; Nascimento; Silva, J., 2021).

Conceptually, modern economic theory owes its first assumptions for the use of fiscal policy as a means to stimulate the economy to Keynes's seminal study (1936). During periods of instability, the government's use of fiscal policies can increase business expectations, thereby contributing to increased investment and the maintenance of employment and income, which is particularly relevant to public finances (Keynes, 1996).

Since Keynes (1936), fiscal policies have sparked several controversial discussions about their effects on the economy. Haavelmo (1945) opposes the idea that fiscal policies need to be expansionary, as maintaining employment can be achieved with a balanced budget and financed by previously collected taxes. Barro (1974) argues that fiscal policies are inefficient because people expect tax increases to offset fiscal expenditures.

However, in its pursuit of economic growth and the maintenance of employment and income, the central government employs fiscal incentive policies within the scope of fiscal policy. However, these policies can produce externalities in public finances, especially from a federalist perspective, in which, despite having autonomy, subnational entities depend on financial resources from the State to fulfill their obligations to their populations.

Brown (1962) argues that most tax incentive policies have a positive impact on income and consumption because they can boost the investment component of overall demand. Therefore, tax incentives, when combined with good infrastructure and a skilled workforce, give a country a competitive edge (Kraal, 2019).

In contrast, Kraal (2019) also argues that, in practice, tax incentives are unsatisfactory because they are ineffective and can negatively impact the tax base. Moreover, these incentives can create reverse causality. Instead of high tax rates leading to the implementation of tax incentives, it is the excessive use of these policies that can cause local governments to raise their taxes (Drucker et al., 2020).

Regarding the effects of tax incentives on the public finance balance, the literature generally shows mixed results. Some studies argue that tax incentives do not harm municipal fiscal health and can increase municipal revenue (Griebeler, Silva, and Allebrandt, 2020; Barbosa et al., 2020; Makreshanska-Mladenovska & Petrevski, 2020). However, other studies suggest that tax incentive policies weaken federal autonomy and negatively affect the finances of subnational entities (Berset; Schelker, 2020; Campos; Cunha, 2021).

In summary, the literature on the effects of tax incentives on public finance balance is divergent. One reason for this divergence may be related to the tax base under analysis, as most of these studies have analyzed tax incentives from the perspective of a single tax across specific economic sectors, which can lead to inconclusive conclusions about the effects of these policies on public finances.

PUBLIC FINANCES UNDER THE AEGIS OF THE ECONOMIC THEORY OF FISCAL DECENTRALIZATION

In the challenge of understanding the sometimes non-cooperative relationship between a nation's entities, the Economic Theory of Fiscal Decentralization serves as the key theoretical foundation supporting discussions about public finances. The theoretical backing for fiscal decentralization is provided by the seminal studies of Hayek (1945), Samuelson (1954), Tiebout (1956), Musgrave (1959), and Oates (1972), who introduced the concepts, fiscal functions, and fiscal control mechanisms shared among different levels of government, all coordinated by the central government. Based on these theoretical concepts, the international empirical literature explores the effects of fiscal decentralization on public finances across various topics, including public budgets, intergovernmental transfers, capital expenditures, revenues, and public spending (Bisaro et al., 2020; Chiades et al., 2019; Joanis, 2016; Kim, 2018; Smith; Revell, 2016).

Notably, Jia, Ding, and Liu (2020), Makreshanska-Mladenovska and Petrevski (2020), and Sovilla, López, and Sánchez (2018) found evidence of the harmful relationship between decentralization and public finances. Specifically, they identified a negative impact on the budget deficits of European countries, harmful interference with local governments' public finances in China due to reduced tax collection, and the indebtedness of local governments in Mexico.

In the national literature, in general, studies such as those by Lima and Leite (2021), Luna, Silva and Silva Filho (2017), Santana et al. (2019), argue that fiscal decentralization has a negative influence on public finances, generates a considerable increase in expenses related to the functioning of the public sector, increases municipal debt and increases dependence on intergovernmental transfers.

National literature has also demonstrated that municipal fiscal sustainability is a determining factor in achieving broader regional development objectives. Oliveira et al. (2023) propose an assessment model for fiscal balance in small municipalities, emphasizing that financial fragility directly compromises these entities' ability to implement public policies aimed at collective well-being. Therefore, measuring budgetary soundness should be viewed as a planning tool, enabling municipalities to act as drivers of development in their territories.

In a similar vein, Teixeira, Ferreira, and Rodrigues (2024), analyzing the financial resilience of municipalities in Minas Gerais during periods of economic instability and financial decline, demonstrated that fiscal vulnerability and a lack of capacity to anticipate external shocks increase social and economic risks, especially in locations more dependent on intergovernmental transfers. The authors emphasize that fiscal soundness is not merely an accounting requirement but a strategic element for mitigating regional inequalities and ensuring the continuity of essential public policies.

Furthermore, Cavalcante (2018) demonstrates that, when estimating the costs of regional development policies in Brazil between 2009 and 2013, a substantial portion of these expenditures was allocated to tax breaks and subsidies, with significant implications for the public budget. This result reinforces the need to link the analysis of tax incentives to the fiscal sustainability of subnational entities, since the costs of these policies can compromise the capacity to plan and implement local development strategies.

Conversely, territorial analyses, such as those by Cima et al. (2022) on western Paraná, show that regional development patterns are closely linked to the spatial distribution of economic activities and municipal fiscal conditions. The authors' research, which utilizes indicators such as the Fiscal Additional Value (VAF) per capita, demonstrates that the ability to collect and manage resources directly impacts productive integration and regional growth opportunities. Therefore, the connection between municipal budgets and regional development is not just about accounting but has a structural nature, influencing trajectories of inclusion and territorial cohesion.

Furthermore, it is worth noting that in Brazil, the stabilizing function of fiscal decentralization, in pursuit of macroeconomic balance, is often utilized by the central government through tax incentive policies. However, by granting subsidies to specific sectors of the economy, the federal government can directly interfere with one of the fundamental principles of decentralization: the autonomy of subnational entities. Such policies can interfere with the transfers of financial resources and the public finances of these entities, which can influence their ability to allocate services to the population.

Thus, within the framework of fiscal decentralization, this study assumes that the tax incentive policies adopted in Brazil after the 1988 Federal Constitution are among the factors affecting the balance of public finances in Brazilian municipalities. Given the fluctuations in central government tax revenues due to tax exemptions on ICMS (export tax), IPI (property tax), which are the revenue bases for the main intergovernmental transfers, and PIS (taxes on social security contributions), and COFINS (property and investment in social security contributions), over which municipalities have no control, the balance of public finances is unsustainable.

Therefore, from the perspective of the Economic Theory of Fiscal Decentralization, this study seeks to analyze the effects of tax incentive policies on the public finances of Brazilian municipalities. To this end, the following hypothesis is established:

H_1: The combined effects of tax incentive policies tend to undermine municipal budgetary balance, particularly in small municipalities.

Smaller municipalities, which in the Brazilian case refer to those with smaller populations, in which the higher-level entities act as tax collection agents for local entities, sharing their tax revenues or offsetting losses in revenue resulting from rules that encourage production and exports (Gerigk; Ribeiro; Lepchak, 2019; Marenco; Strohschoen; Joner, 2017). According to Silva, Quintela, and Vieira (2018), in these municipalities, despite the country's tax revenue share increasing in recent years, a growing dependence on intergovernmental transfers is observed to cover their expenses.

Thus, limited capacity for self-funding and high dependence on transfers from other federal entities, combined with a lack of participation in the formulation of tax incentive policies, can compromise municipal public finances. According to Aleksandrova-Zlatanska (2019), these factors impact the stability and financial sustainability of smaller municipalities, as they affect their finances and the autonomy of local governments, which hinders the fulfillment of their delegated obligations.

METHODOLOGY

A sample of 5,570 Brazilian municipalities was analyzed. Due to data availability limitations, the time period ranged from 1999 to 2017.

To conduct the analyses, a proxy was used as the dependent variable to measure the fiscal balance of each Brazilian municipality's public finances. This proxy was determined by the Fiscal Balance Quotient (FBQ), as defined by Kohama (2015), which is the ratio of the total current revenue to total current expenditures. According to Akin, Bulut-Cevik, and Neyapti (2016), Kyriacou, Muinelo-Gallo, and Roca-Sagalés (2017), Neyapti (2013), and Marconato, Parré, and Coelho (2021), the revenue-to-expenditure ratio is one of the best ways to measure the fiscal balance of municipalities, because analyzing the effects of fiscal policies on subnational public finances must consider these elements.

The occurrence of simultaneously applied tax incentive policies was measured using an explanatory variable called exemption (deson), represented by a dummy variable. To create this variable, a dummy was first assigned to indicate the presence of tax incentives related to the IPI (Brazilian Institute of Industrial Property), with a value of 1 for years when IPI tax incentives were in effect and 0 for years without such incentives. Likewise, two additional dummies were created: one for tax incentives on export ICMS and another for incentives on PIS/COFINS. In each case, a value of 1 denoted years when exemptions for the respective tax were active, and 0 indicated otherwise. The valid periods of each of these tax incentives were determined using the Planalto Legislation Portal.

Next, the dummy representing the simultaneous occurrence of tax incentives was constructed by multiplying the dummy variables that individually captured the years in which the incentives for each tax occurred separately. A value of 1 was obtained for years in which the policies were implemented simultaneously, and zero for years in which they did not coincide. The analysis of the effects of these policies, according to Jorge and Martins (2013) and Rumina, Balandina, and Bannova (2015), is justified because they can be inefficient and have effects on aggregate demand through various channels: taxes, current expenditures and transfers, public investment, expenditures, and revenues, in addition to the multiplier effect on private consumption and investment.

Gross Value Added (GVA) was also used as an explanatory variable to measure the behavior of economic activity in each of its three economic sectors: industrial, services, and agriculture. Suri et al. (2011) and Todaro and Smith (2012) describe how, since it comprises GDP, GVA reflects the increase in a country's real production, serving as an important driver of economic growth due to its relationship with employment and population income.

Control variables were also used to capture the effect of economic development, political issues, and fiscal management on the balance of public finances in Brazilian municipalities. For economic growth, a proxy called admission (Adm) was used, which was calculated by the ratio of the number of formal admissions to the number of formal dismissals in each of the three economic sectors separately.

According to Aglietta (1979) and Todaro and Smith (2012), the behavior of formal admissions is a good macroeconomic indicator because it not only reflects economic growth but also significantly interacts with socioeconomic development. Albertini et al. (2021) and Challe (2020) explain how, specifically in the industrial sector, the risk of formal layoffs influences fiscal policies. In challenging conditions, workers tend to increase their savings and reduce their consumption, which can have an adverse impact on public finances.

The influence of fiscal decentralization on municipal finances was measured using a named dummy (Party), which sought to capture how political relations between the municipal and federal levels of government impact the balance of municipal finances. This dummy is represented by 1 when the municipal manager's party is the same as the president's and zero otherwise. Sakurai and Menezes-Filho (2011), Veloso and Bornhold (2016), Balaguer-Coll et al. (2015), and Chortareas, Logothetis, and Papandreou (2016) argue that such an analysis can reveal additional insights into how political factors affect public finances and whether these factors can influence budgetary issues.

The Firjan Fiscal Management Index (IFGF) was used as a control variable focused on economic regulation. Cruz and Afonso (2018) and Silva et al. (2020) describe the IFGF's goal as promoting a culture of administrative responsibility, which enables better municipal fiscal management, as the lack of regulation acts as a disincentive for more accurate budgeting. Moreover, excellent management is crucial for a territory's quality budget outcomes, highlighting its importance in modeling, as this variable includes aspects beyond the dependent variable, such as autonomy, personnel expenses, investments, and liquidity. Additionally, the endogeneity test was negative for this variable and the dependent variable. Table 1 shows these variables.

Table 1 | Variables used in the estimated models *

Variables	Description	Source **	Literature
FBQ	Fiscal Balance Quotient	FINBRA	Kohama (2015); Marconato, Parré e Coelho (2021); Neyapti (2013); Akin, Bulut-Cevik e Neyapti (2016), Kyriacou, Muinelo-Gallo, Roca-Sagalés (2017)
VABind *VABserv* *VABagro*	Industrial Gross Added Value Gross Added Value Services Gross Agricultural Added Value	IBGE	Suri et al. (2011); Todaro e Smith (2012)
Party	dummy for party alignment, assumes 1 if the mayor's party is the same as the president's and zero otherwise	TSE	Sakurai e Menezes-Filho (2011); Veloso e Bornhold (2016); Balaguer-Coll et al. (2015); Chortareas, Logothetis e Papandreou (2016)
IFGF	Firjan Fiscal Management Index	FIRJAN	Silva et al. (2020); Cruz e Afonso (2018)
Admind	Ratio between the number of formal admissions and formal dismissals in the industrial sector	CAGED	Aglietta (1979); Todaro e Smith (2012); Albertini et al. (2021); Challe (2020)
Admserv	Ratio between the number of formal admissions and formal dismissals in the service sector		
Admagro	Ratio between the number of formal admissions and formal dismissals in the agricultural sector		
deson	*Dummy to indicate simultaneous exemptions from IPI, ICMS export, and PIS/COFINS.*	Planalto Legislation Portal	Jorge e Martins (2013); Rumina, Balandina e Bannova (2015)

Source: Prepared by the author.

*Monetary values were adjusted by the General Price Index (IGP-DI), from the Getúlio Vargas Foundation (FGV), on December 31, 2017, in thousands of reais and weighted by population (per capita).
** Finance Brazil (FINBRA); Federation of Industries of Rio de Janeiro (FIRJAN); Brazilian Institute of Geography and Statistics (IBGE); Superior Electoral Court (TSE); General Registry of Employed and Unemployed Persons (CAGED); Planalto Legislation Portal.

Therefore, econometric models were estimated for panel data stratified by municipal population for each of the three economic sectors. To ensure consistency and robustness of the results, the models were estimated in four stages, differentiated by the inclusion of variables. First, the effects of the explanatory variables alone were estimated, and then the control variables were gradually included. Equation 1 presents the general form of the estimated model.

$$FIN_{it} = \alpha_{it} + \beta_1 lnVABs_{it} + \beta_2 (deson\ x\ VABs)_{it} + \xi X_{kit} + e_{it} \quad (1)$$

As shown in Table 1, FIN_{it} represents the Fiscal Balance Quotient (FBQ); deson and $VABs_{it}$ are the explanatory variables; X_{kit} is a vector of *k* control variables; α_{it} is the intercept to be estimated; e_{it} is the random error of the model. i refers to each of the Brazilian municipalities, and t represents each year considered in the model.

It is worth noting that the estimate of the effects of tax exemptions on the public finances of Brazilian municipalities is given by the sum of the coefficients of the variables GVA_s and $desonxVAB_s$, since the $desnxVAB_s$ variable was constructed by multiplying GVA by the dummy corresponding to the tax exemption policies implemented simultaneously. Gujarati and Porter (2011) and Wooldridge (2011) describe how the estimate is obtained by summing the coefficients. When two variables are multiplied, all observations are combined, which changes the regression structure, potentially modifying the intercept, the slope, or both. In this type of regression, since the dummy variable represents different periods in time, we have a differential intercept and a differential slope.

It is worth noting that the econometric model used in this study is grounded in the assumptions of panel data analysis, including the absence of severe multicollinearity among the explanatory variables, the exogeneity of the regressors, and the stationarity of the time series. These assumptions are fundamental to ensuring consistency and the absence of bias in the estimators. However, in practice, they may be partially relaxed due to limitations inherent in the data used.

The interpretation of the results was guided by the Economic Theory of Fiscal Decentralization, which provides the theoretical framework for understanding the effects of tax incentives on municipal budgetary balance. It should be noted, however, that relying on secondary data and using proxies, although methodologically justifiable, may limit the capture of more qualitative dimensions of the phenomenon under analysis.

Furthermore, to implement the model estimation, we first tested the stationarity of the time series, which spanned from 1999 to 2017, using the unit root test for panel data. The Fischer-type unit root test was selected because it can be applied to both balanced and unbalanced panels. Then, we used the Durbin-Wu-Hausman estimator consistency test to verify the presence of endogeneity between the dependent variable and the explanatory variable (Janot; Vandanjon; Gautier, 2016).

Finally, in addition to log-transforming the dependent and monetary variables, the data for the other variables in the model were handled using Winsorizing to create a more robust data set.

RESULTS AND DISCUSSION

Before presenting the estimates of the effects of tax exemptions on municipal public finances, Table 2 shows the results of the Fischer unit root test for data stationarity from 1999 to 2017. The results indicate that the dependent and explanatory variables are trendless, seasonally independent, and stationary. Additionally, the Durbin-Wu-Hausman endogeneity test was not significant for the variables of interest.

Table 2 | Results of the Fischer-type unit root test for the dependent variable and explanatory variables

Probability distribution	Variables			
	FBQ	VAB ind	VAB serv	VAB agro
Inverse chi-squared (p)	0,0000*	0,0000*	0,0000*	0,0000*
Inverse standard (Z)	0,0000*	0,0000*	0,0000*	0,0000*
Inverse logit (L)	0,0000*	0,0000*	0,0000*	0,0000*
Modified inv. chi-squared (Pm)	0,0000*	0,0000*	0,0000*	0,0000*

* p-value: Significant at 5%
Source: Survey data.

Therefore, Table 3 presents the results of the estimates of the effects of tax incentive policies applied simultaneously to IPI, ICMS export, and PIS/COFINS on the balance of public finances in Brazilian municipalities by population stratum.

Table 3 | Effects of tax incentives on IPI, ICMS export, and PIS/COFINS on the balance of public finances of Brazilian municipalities by population stratum

Variables	Population stratum[1]			
	0 |-- 20	**20 |-- 50**	**50 |-- 100**	**100 |--**
Industrial Sector				
lnVABind	-0,0028***	-0,0244*	-0,0494*	-0,0441*
desonxVABind	0,00000751*	0,00000143*	0,00000194*	0,00000329*
Party	0,0335*	0,0082***	-0,0170***	-0,0118***
Adm ind	0,0025*	0,0052*	0,0386*	0,1559*
IFGF	0,2513*	0,2780*	0,3032*	0,3597*
number of obs	39.505	11.009	3.645	3.159
F Test	0,0000*	0,0000*	0,0000*	0,0000*
Setor Agropecuário				
lnVABagro	-0,0139*	-0,0104**	-0,0369*	-0,0286*
desonxVABagro	0,00000129*	0,00000193*	0,00000516**	0,0000274*
Party	0,0337*	0,0084***	-0,0198***	-0,0058***
Adm agro	0,0021*	0,0060*	-0,0010***	0,0065***
IFGF	0,2521*	0,2814*	0,3173*	0,4054*
number of obs	39.496	11.014	3.346	3.137
F test	0,0000*	0,0000*	0,0000*	0,0000*
Setor Serviços				
lnVABserv	0,2603*	0,0108***	-0,0833*	-0,1279*
desonxVABserv	0,00000018*	0,00000145*	0,00000182*	0,00000283*
Party	0,0351*	0,0081***	-0,0182***	-0,0079***
Adm serv	0,0006***	0,0035**	0,0279*	0,1242*
IFGF	0,2437*	0,2760*	0,2923*	0,3539*
number of obs	39.512	11.014	3.346	3.161
F test	0,0000*	0,0000*	0,0000*	0,0000*

* Significant at a 5% probability level; ** Significant at a 10% probability level.
*** Not Significant; [1] In thousands of inhabitants

Source: Survey results.

The results, in general, indicated that tax exemptions, when applied simultaneously (and dependently) to IPI, ICMS exports, and PIS/COFINS, harmed the budgetary balance of Brazilian municipalities in practically all population strata. However, in municipalities with fewer than 50,000 inhabitants, the estimates were more significant for the industrial and agricultural sectors; in larger municipalities, the effects were adverse for all sectors of the economy. It is worth noting again that this estimate is given by the sum of the coefficients of the variables *lnVAB* and *desonxVAB*, since the *desnxVAB* variable was constructed through the product of the dummy for tax exemptions and the GVA.

The adverse effects of tax incentive policies, when implemented simultaneously, may be more damaging to the financial stability of smaller municipalities due to their limited economic capacity. As Gerigk, Ribeiro, and Lepchak (2019) and Rossini and Rotta (2018) point out, because they rely heavily on intergovernmental transfers, tax exemptions cause greater harm to these municipalities' finances.

By shedding light on the population size of municipalities, the results also indicate that the Brazilian government's indiscriminate use of physical incentive policies contradicts a key principle of the Theory of Fiscal Decentralization: the allocative autonomy of subnational entities in providing public goods and services to their populations. This issue can be more pronounced in smaller municipalities, where the proximity of municipal administration to residents, as described by Oates (1972), may enable public authorities to understand local preferences better. Additionally, Correia (2014) argues that when designing public policies such as tax exemptions, the central government must be careful not to weaken the stabilizing, redistributive, and allocative functions intended for the public entity.

Thus, by analyzing tax incentives through multiple taxes simultaneously, and considering various population strata, the results of this study become more comprehensive. Regarding the effects of tax incentive policies adopted by the federal government on the IPI (Tax on Industrial Property), ICMS (Export Tax), and PIS/COFINS (Tax on Sales of Goods and Services), estimates of the variables of interest indicated that when these policies were implemented simultaneously—between 2009 and 2013—their effects were generally adverse for the public finances of Brazilian municipalities.

Specifically regarding the effects on smaller municipalities, based on the Theory of Fiscal Decentralization, which advocates state intervention through tax incentive policies to achieve economic stability, these results confirm the hypothesis of this work, that tax incentive policies, multiple and dependent on each other, tend to be unfavorable to municipal budgetary balance, especially in the smallest Brazilian municipalities.

In this context, the literature has emphasized the importance of the relationship between local public finances and regional development. Barros Teixeira, Ferreira, and Rodrigues (2024) and Caitano and Morales (2022) found that factors like fiscal vulnerability and anticipatory capacity are essential for budgetary sustainability and, consequently, for reducing regional inequalities. This aligns with the results presented here, which show that fiscal shocks, such as those caused by simultaneous tax incentives, can differently threaten municipal fiscal stability across regions.

Similarly, Leite Filho and Fialho (2015) show that when comparing public management indicators (IFGF) and municipal development indicators (IFDM), the quality of local financial management is linked to socioeconomic performance. This highlights the importance of aligning tax incentives with effective governance and control mechanisms to enhance their impact on regional development.

In turn, Guimarães Neto, Porsse, and Porsse (2023) analyze decentralization and municipal finance management from a regional perspective, concluding that municipalities in the North and Northeast regions remain more reliant on intergovernmental transfers, making them more susceptible to changes in national fiscal policy. These results align with this research, which shows that tax incentives granted at the central level have an uneven impact across territories, reinforcing historical regional disparities and requiring greater federal coordination to prevent the deepening of inequalities.

Regarding the results for the control variables, across all analyzed economic sectors, the variable “Party,” which refers to the partisan alignment between the municipal manager and the federal government, was significant and positive only for municipalities with fewer than 20,000 inhabitants. One reason may be related to these municipalities’ high dependence on intergovernmental transfers. According to Bugarin and Marciniuk (2019), these municipalities expect to receive more resources due to their partisan alignment with the federal executive branch because they typically have higher revenues from voluntary transfers. As Gerigk and Ribeiro (2019) note, this also occurs because, in small municipalities, direct or indirect political ties with the federal government favor municipal finances; this phenomenon becomes even more evident during election periods.

Martins et al. (2020) also state that political influences favor the finances of small municipalities, including in their accountability, a behavior that, within the scope of the Theory of Economic Regulation, can reinforce the discussion regarding the manner in which external control is exercised in Brazil. For Silva (2018), this is worrying because, in the field of public finances, the measures established by the Fiscal Responsibility Law (LRF) would need to be sufficient to, among other things, protect the public budgets of municipalities equally, regardless of their political affiliations.

Regarding the control variable, which measures the effect of formal admissions on the balance of municipal public finances, the results showed that it is positive across nearly all population groups, including smaller municipalities. However, for the agricultural sector, the data indicated that the admission rate was only positive and significant for municipalities with fewer than 50,000 residents. One reason, according to Fuzinatto et al. (2019), is that approximately 40% of Brazil's territory is used for agricultural activities, which are often concentrated in small municipalities.

Armange and Mello (2014) describe a direct and positive relationship between job creation and municipal revenues, which has a positive effect on municipal public finances. As Jensen (2019) points out, the increase in formal admissions has a direct impact on tax revenues, as it enhances tax collection, which is beneficial for public finances.

The IFGF variable was significant and positively influenced the public finance balance of Brazilian municipalities across all population groups analyzed. It is notable that smaller municipalities with fewer than 50,000 residents, especially those with fewer than 20,000, also experienced positive effects. According to Medeiros, Santos, and Andre (2018), these positive outcomes for smaller municipalities are linked to their better fiscal management indices.

Furthermore, at the core of Fiscal Decentralization Theory, strong fiscal management indicators can help municipalities better allocate public resources for the benefit of the population, since local entities are geographically closer to residents. As Silva and Crisóstomo (2019) note, good fiscal management is not only built through technical managerial actions but also through political actions that profoundly influence residents' lives and directly affect collective well-being. However, despite being positive for Marconato, Parré, and Coelho (2021), these effects remain limited, especially in smaller municipalities, as only about 12.0% of all Brazilian municipalities demonstrate good fiscal management.

FINAL CONSIDERATIONS

The results generally showed that tax exemption policies, when implemented together, did not help improve the budget balance of Brazilian municipalities, especially those with fewer than 50,000 residents. The findings were even more pronounced for the industrial and agricultural sectors.

These results suggest that the tax incentive policies implemented by Brazilian governments after the 1988 Constitution did not improve the balance of municipal public finances. In a context of fiscal decentralization that grants autonomy to subnational entities and involves resource transfers, the simultaneous implementation of multiple interdependent tax exemption policies to support specific sectors of the economy can create imbalances in municipal finances and hinder these entities' ability to provide goods and services to their populations.

This suggests that these measures are often used mainly for political gain, aiming for approval and maintaining power through populist strategies. From this perspective, it is advisable that the government stop frequently using expansionary economic policies and instead adopt more responsible fiscal policies, so that, in addition to promoting economic stability, it also avoids risking the financial balance of subnational entities.

In this sense, it is crucial to highlight that municipal budget balance is not just a matter of fiscal management but is directly connected to regional development. Municipalities that can better maintain a balanced revenue and expenditure are more capable of planning and implementing public policies steadily, thus supporting investments in infrastructure, education, healthcare, and essential services. This condition enhances the potential for attracting productive activities and diminishes territorial inequalities, serving as a mechanism to promote regional growth. Conversely, when tax incentives weaken municipal budgets, they also restrict the ability of local governments to fulfill this strategic role, jeopardizing not only their financial sustainability but also regional cohesion within the country.

Regarding the consequences of these results, it is first important to note that tax incentives contradict the theoretical principles of fiscal decentralization that support the case for using a decentralized system instead of a centralized one. These principles generally state that decentralization leads to greater efficiency in providing goods and services, improves the well-being of the population, and allows for a larger supply of public goods and services tailored to regional preferences. Tax incentive policies are likely to conflict with these principles for two reasons: first, because the incentives can interfere with transfers and further hinder municipalities— which mostly rely on these resources— from providing goods and services, thereby impacting their ability to allocate resources effectively; second, because there is no requirement for municipalities to provide any counterparty for these transfers.

Regarding the implications for public policymakers, who typically create these fiscal policies from a top-down approach, this study suggests that these political actors may be unaware of how vulnerable municipalities, especially smaller ones, are to political and fiscal tactics at higher levels of government. Therefore, public policymakers need to develop mechanisms—beyond those already required by law, such as population proportionality—that tie these resource transfers to corresponding contributions from municipalities.

In this context, several measures could be implemented to enhance both theoretical and empirical knowledge. First, a standardized and detailed information system could be established at the municipal level, allowing the central government to monitor the delivery of goods and services by municipalities to their populations. Second, an index could be created to determine a rate for distributing goods and services provided by these municipalities, and the receipt of central government resource transfers could be conditioned on a quantitative measure set by this index. These measures could, for example, help to partially reduce the influence of political issues, such as partisan collusion and electoral maneuvering, on municipalities' resource acquisition. Furthermore, this index could serve as a quantitative measure of municipal allocative efficiency.

Given the complexity of the topic, the limitations of the method, and the importance of better understanding the effects of national fiscal policies, we recommend that future studies include variables related to municipal expenditures on basic education and primary health care and develop clusters based on the hierarchical allocative capacity of these municipalities.

REFERENCES

AGLIETTA, M. **A Theory of Capitalist Regulation: The US experience.** New York: Verso, 1979.

AKIN, Z.; BULUT-CEVIK, Z. B.; NEYAPTI, B. Does Fiscal Decentralization Promote Fiscal Discipline? **Emerging Markets Finance and Trade**, v. 52, n. 3, p. 690–705, 2016.

ALBERTINI, J. et al. Taking off into the wind: Unemployment risk and state-Dependent government spending multipliers. **Journal of Monetary Economics**, v. 117, p. 990–1007, 2021.

ALEKSANDROVA-ZLATANSKA, S. K. Evaluating the Factors for Fiscal Stability of Rural Municipalities : the Case of Bulgaria. **Zagadnienia Ekonomiki Rolnej**, v. 360, n. 3, p. 156–170, 2019.

ALMEIDA, D. M.; PEREIRA, I. M. Representatividade dos incentivos fiscais da Lei de Informática no resultado econômico de indústrias catarinenses. **Revista Ambiente Contábil** , v. 11, n. 2, p. 152–174, 2019.

ARMANGE, M. W.; MELLO, G. R. DE. ICMS and the generation of jobs: comparing the states of the Northeast and South regions of Brazil. **Revista Capital Científico - Eletrônica**, v. 12, n. 3, 2014.

BALAGUER-COLL, M. T. et al. Local governments' reelection and its determinants: New evidence based on a Bayesian approach. **European Journal of Political Economy**, v. 39, p. 94–108, 2015.

BARBOSA, L. T. et al. Política de desoneração do IPI e sua implicação na arrecadação própria dos municípios brasileiros. **Advances in Scientific and Applied Accounting**, v. 13, n. 1, p. 143–164, 2020.

BARRO, R. J. Are Government Bonds Net Wealth? **Journal of Political Economy**, v. 82, n. 6, p. 1095–1117, 22 out. 1974.

BERSET, S.; SCHELKER, M. Fiscal windfall curse. **European Economic Review**, v. 130, p. 103592, November 1. 2020.

BISARO, A. et al. Multilevel governance of coastal flood risk reduction: A public finance perspective. **Environmental Science & Policy**, vol. 112, pp. 203–212, October 1 2020.

BOADWAY, R.; CUFF, K. The impressive contribution of Canadian economists to fiscal federalism theory and policy. **Canadian Journal of Economics**, v. 50, n. 5, p. 1348–1380, 2017.

BROWN, E. C. Tax Incentives for Investment. **The American Economic Review**, v. 52, n. 2, p. 335–345, 1962.

BUGARIN, M.; MARCINIUK, F. Strategic Partisan Transfers in a Fiscal Federation: Evidence from a New Brazilian Database. **Journal of Applied Economics**, v. 20, n. 2, p. 211–239, 2019.

CAITANO, T. B. S.; MORALES, G. P. Potencial dos Royalties Minerais na Promoção do Desenvolvimento Socioeconômico de Municípios do Estado do Pará, Brasil. **Revista Brasileira de Gestão e Desenvolvimento Regional**, v. 18, n. 3, p. 89–103, 2022.

CAMPOS, P. A. C.; CUNHA, C. R. Federalismo fiscal e Fundo de Participação dos Municípios . **Revista Tributária e de Finanças Públicas**, v. 148, p. 195–216, 2021.

CATARINO, J. R.; ABRAHAM, M. O federalismo fiscal no Brasil e na União Europeia. **Revista Estudos Institucionais**, v. 4, n. 1, p. 186–210, 2018.

CAVALCANTE, L. R. Políticas de Desenvolvimento Regional no Brasil: Uma Estimativa de Custos. **Revista Brasileira de Gestão e Desenvolvimento Regional**, v. 14, n. 3, p. 147–171, 2018.

CHALLE, E. Uninsured Unemployment Risk and Optimal Monetary Policy in a Zero-Liquidity Economy. **American Economic Journal: Macroeconomics**, v. 12, n. 2, p. 241–83, 2020.

CHIADES, P. et al. Fiscal consolidation by intergovernmental transfers cuts? The unpleasant effect on expenditure arrears.

Economic Modelling, v. 77, p. 266–275, March 1. 2019.

CHORTAREAS, G.; LOGOTHETIS, V.; PAPANDREOU, A. A. Political budget cycles and reelection prospects in Greece's municipalities. **European Journal of Political Economy**, v. 43, n. 1, p. 1–13, 2016.

CIMA, E. G. et al. Uma Análise Espacial do Oeste do Paraná: Cenários para o Desenvolvimento Regional. **Revista Brasileira de Gestão e Desenvolvimento Regional**, v. 17, n. 2, p. 151–164, 2021.

CORREIA, R. D. **Desafios do federalismo fiscal. Contributo para a compreensão do exercício partilhado do poder tributário no limiar do século XXI**. [s.l.] Universidade de Coimbra - Portugal, 2014.

CRUZ, C. F. DA; AFONSO, L. E. Gestão fiscal e pilares da Lei de Responsabilidade Fiscal: evidências em grandes municípios. **Revista de Administração Pública**, v. 52, n. 1, p. 126–148, 2018.

DRUCKER, J. et al. Do local governments use business tax incentives to compensate for high business property taxes? **Regional Science and Urban Economics**, v. 81, p. 103498, March 1. 2020.

EWETAN, O. O. et al. Fiscal federalism and accountability in Nigeria: an ARDL approach. **Journal of Money Laundering Control**, v. 24, n. 2, p. 359–371, 2020.

GERIGK, W.; RIBEIRO, F. Investimentos públicos e fatores políticos nos pequenos municípios brasileiros: o que é relevante? **Revista Universo Contábil**, v. 14, n. 4, p. 68–92, 2019.

GERIGK, W.; RIBEIRO, F.; LEPCHAK, A. Desempenho fiscal dos pequenos municípios brasileiros. **Revista Contabilidade e Controladoria**, v. 11, n. 1, p. 85–103, 15 out. 2019.

GRIEBELER, M. P. D.; SILVA, J. F. DA; ALLEBRANDT, S. L. Análise da política de incentivos fiscais municipal. **DRd - Desenvolvimento Regional em debate**, v. 10, p. 677–702, 19 jun. 2020.

GUIMARÃES NETO, L.; ALVES PORSSE, A.; PORSSE, M. DE C. S. Descentralização e Finanças Municipais no Brasil: Uma Análise Regional da Gestão dos Recursos. **Revista Econômica do Nordeste**, v. 30, n. Suplemento Especial, p. 652–666, 2023.

GUJARATI, D.; PORTER, D. **Econometria Básica**. 5º ed. São Paulo: AMGH, 2011.

HAAVELMO, T. Multiplier Effects of a Balanced Budget. **Econometrica**, v. 13, n. 4, p. 311, out. 1945.

HAYEK, F. A. The use of Knowledge in Society. **The American Economic Review**, v. 35, n. 4, p. 519–530, 1945.

JANOT, A.; VANDANJON, P. O.; GAUTIER, M. A revised Durbin-Wu-Hausman test for industrial robot identification. **Control Engineering Practice**, v. 48, p. 52–62, 2016.

JENSEN, A. Employment Structure and the Rise of the Modern Tax System. **American Economic Review,** v. 112, n. 1, p. 213–234, 2019.

JIA, J.; DING, S.; LIU, Y. Decentralization, incentives, and local tax enforcement. **Journal of Urban Economics**, v. 115, p. 103225, January 1, 2020.

JOANIS, M. The Politics of Checkbook Federalism: Can Electoral Considerations Affect Federal–Provincial Transfers? **Public Finance Review**, v. 46, n. 4, p. 665–691, 14 dez. 2016.

JORGE, C. T.; MARTINS, N. M. Política fiscal e a desaceleração da economia brasileira no governo Dilma (2010-2012). **Instituto de Economia UFRG. Texto para discussão 013**, 2013.

KEYNES, J. M. **A Teoria Geral do Emprego, do Juro e da Moeda**. São Paulo: Nova Cultural Ltda, 1996.

KIM, Y. Limits of fiscal federalism: How narratives of local government inefficiency facilitate scalar dumping in New York

State. **Public Finance Review**, v. 51, n. 3, p. 636–653, 29 ago. 2018.

KOHAMA, H. **Balanços Públicos: Teoria e Prática**. 3º ed. São Paulo: Atlas, 2015.

KRAAL, D. Petroleum industry tax incentives and energy policy implications: A comparison between Australia, Malaysia, Indonesia, and Papua New Guinea. **Energy Policy**, v. 126, p. 212–222, 2019.

KYRIACOU, A. P.; MUINELO-GALLO, L.; ROCA-SAGALÉS, O. Regional inequalities, fiscal decentralization and government quality. **Regional Studies**, v. 51, n. 6, p. 945–957, 2017.

LEITE FILHO, G. A.; FIALHO, T. M. M. Relationship between public administration indicators and the development of Brazilian municipalities. **Cadernos Gestão Pública e Cidadania**, v. 20, n. 67, p. 277–295, 2015.

LEROY, R. S. D. et al. Estrutura Arrecadatória e Desenvolvimento Socioeconômico dos Municípios Mineiros. **Desenvolvimento em Questão**, v. 15, n. 41, p. 164, 2017.

LIMA, A. L.; ZENHA, P.; DINIZ FILHO, J. W. DE F. Impacto da Carga Tributária sobre o Preço Final dos Produtos. **RAGC**, v. 6, n. 23, p. 128–143, 2018.

LIMA, R. C. E A.; LEITE, V. M. B. O efeito da emancipação de Municípios sobre as finanças públicas locais: Evidências para o Brasil. **Cadernos de Finanças Públicas**, v. 21, n. 1, 2021.

LUNA, T. B. DE; SILVA, W. G. E; SILVA FILHO, L. A. DA. Despesas municipais nordestinas: uma análise empírica a partir da Lei de Responsabilidade Fiscal (LRF). **Revista Econômica do Nordeste**, v. 48, n. 2, p. 101–110, 2017.

MAKRESHANSKA-MLADENOVSKA, S.; PETREVSKI, G. Decentralisation and fiscal performance in Central and Eastern Europe. **Post-Communist Economies**, v. 32, n. 8, p. 1–23, 2020.

MARCONATO, M.; PARRÉ, J. L.; COELHO, M. H. Financial dynamics of Brazilian municipalities. **Revista de Administracao Publica**, v. 55, n. 2, p. 378–394, 2021.

MARENCO, A.; STROHSCHOEN, M. T. B.; JONER, W. Capacidade estatal, burocracia e tributação nos municípios brasileiros. **Revista de Sociologia e Politica**, v. 25, n. 64, p. 3–21, 2017.

MARTINS, L. C. et al. Controle Externo das Contas Públicas: A Influência Política no Julgamento das Contas dos Prefeitos do Estado de Pernambuco . **Sociedade, Contabilidade e Gestão**, v. 15, n. 2, p. 162–176, 2020.

MEDEIROS, A. L.; SANTOS, L. B.; ANDRE, C. M. G. Desenvolvimento Municipal das Microrregiões do Estado do Tocantins: uma análise a partir do índice Firjan de desenvolvimento municipal. **Desenvolvimento em Questão**, v. 16, n. 45, p. 44–62, 2018.

MUSGRAVE, R. A. **The Theory of Public Finance: A Study in Public Economy.** New York: McGraw-Hill, 1959.

NEYAPTI, B. Fiscal Decentralization, Fiscal Rules and Fiscal Discipline. **Economics Letters**, v. 121, n. 3, p. 528–532, 2013.

OATES, W. E. **Fiscal Federalism**. New York: Harcourt Brace Jovanovich, 1972.

OLIVEIRA, C. L. DE et al. O Controle do Equilíbrio Fiscal: Proposta de um Modelo de Avaliação para Pequenos Municípios. **Revista Brasileira de Gestão e Desenvolvimento Regional**, v. 19, n. 3, p. 609–633, 2023.

PFEIFFER, P.; ROEGER, W.; VOGEL, L. Optimal fiscal policy with low interest rates for government debt. **Journal of Economic Dynamics and Control**, p. 104210, August 8, 2021.

REVORÊDO, C. R. DA S. C. et al. . Fatores Explicativos da Eficácia da Despesa Orçamentária dos Municípios Brasileiros. **Revista de Globalización, Competitividad y Gobernabilidad**, v. 15, n. 1, p. 71–87, 2021.

RODRIGUES, M.; SILVA, D. C. C. Concentração e dependência das transferências constitucionais nos municípios do Pará.

Cadernos Gestão Pública e Cidadania, v. 25, n. 80, p. 1–17, 1 fev. 2020.

ROSSINI, N.; ROTTA, E. **Receitas correntes dos municípios: dependência ou protagonismo?** I Simpósio Latino-Americano de Estudos de Desenvolvimento Regional. **Anais**...Ijuí: 2018

RUMINA, U. A.; BALANDINA, A. S.; BANNOVA, K. A. Evaluating the Effectiveness of Tax Incentives in Order to Create a Modern Tax Mechanism Innovation Development. **Procedia - Social and Behavioral Sciences**, v. 166, p. 156–160, 2015.

SAKURAI, S. N.; MENEZES-FILHO, N. Opportunistic and partisan election cycles in Brazil: new evidence at the municipal level. **Public Choice**, vol. 148, no. 1, pp. 233–247, 2011.

SAMUELSON, P. A. The Pure Theory of Public Expenditure. **The Review of Economics and Statistics**, v. 36, n. 4, p. 387–389, 1954.

SANTANA, M. DA S. et al. Endividamento Público em Municípios do Estado de Minas Gerais: Uma Análise de Dados em Painel. **Revista Universo Contábil**, v. 15, n. 2, p. 24–43, 2019.

SILVA, C. R. M. DA; CRISÓSTOMO, V. L. Gestão fiscal, eficiência da gestão pública e desenvolvimento socioeconômico dos municípios cearenses. **Revista de Administração Pública**, v. 53, n. 4, p. 791–801, 2019.

SILVA, M. C. DA; NASCIMENTO, J. C. H. B. DO; SILVA, J. D. G. DA. Fatores determinantes da política de execução orçamentária no Brasil (1980-2018). **Contabilidade Vista & Revista**, v. 32, n. 1, p. 104–131, 2021.

SILVA, F. A. G. H.; QUINTELA, M. C. A.; VIEIRA, N. S. Perfil Orçamentário de Pequenos Municípios: O Caso do Município de Ladainha � MG. **Revista de Administração, Sociedade e Inovação**, v. 4, n. 2, p. 160–182, 2018.

SILVA, L. R. O. Isenções tributárias e abuso do poder de legislar . **Revista Tributária e de Finanças Públicas**, v. 137, p. 165–184, 2018.

SILVA, M. C. et al. Fatores explicativos da gestão fiscal em municípios brasileiros. **Revista Contemporânea de Contabilidade**, v. 17, n. 42, p. 26–37, 2020.

SIMONOVA, N. et al. Effectiveness Assessment of Tax Incentives. **Society of Business and Management**, v. 27, n. 3, p. 2040–2046, 9 abr. 2021.

SMITH, H. J. M.; REVELL, K. D. Micro-Incentives and Municipal Behavior: Political Decentralization and Fiscal Federalism in Argentina and Mexico. **World Development**, v. 77, p. 231–248, January 1, 2016.

SOVILLA, B.; LÓPEZ, A. S.; SÁNCHEZ, E. M. Contradictions of Fiscal Decentralization in Mexico: The Case of Chiapas. **Gestión y política pública**, v. 27, n. 2, p. 397–429, 2018.

SURI, T. et al. Paths to Success: The Relationship Between Human Development and Economic Growth. **World Development**, v. 39, n. 4, p. 506–522, 2011.

TEIXEIRA, M. B.; FERREIRA, M. A. M.; RODRIGUES, A. X. Resiliência Financeira dos Municípios em Períodos de Instabilidade Econômica e de Declínio Financeiro. **Revista Brasileira de Gestão e Desenvolvimento Regional**, v. 20, n. 3, p. 32–56, 2024.

TIEBOUT, C. M. A Pure Theory of Local Expenditures. **The Journal of Political Economy**, v. 64, n. 5, p. 416–424, 1956.

TODARO, M. P.; SMITH, S. C. **Economic Development**. 12º ed. New York: Pearson, 2012.

VANDE, P. T. Fiscal federalism and the politics of revenue allocation in Nigeria. **Zamfara Journal of Politics and**

Development, v. 2, n. 1, p. 19–19, 2021.

VELOSO, G. DE O.; BORNHOLD, S. D. Averiguação empírica de ciclos políticos nos municípios gaúchos, entre 1995 e 2008. **Ensaios FEE**, v. 36, n. 4, p. 1069–1096, 2016.

VIEIRA, M. A.; ÁVILA, L. A. C. DE; LOPES, J. D. V. S. Desenvolvimento socioeconômico e eficiência tributária: uma análise dos municípios de Minas Gerais. **Revista Universo Contábil**, v. 16, n. 3, p. 160–179, 2021.

WAKIM, E. A. M.; WAKIM, V. R.; LIMA, J. E. Perfil de Arrecadação dos Municípios do Estado de Minas Gerais: análise antes e depois do advento da lei de responsabilidade fiscal. **Revista Contabilidade Vista & Revista**, v. 29, n. 3, p. 1–22, 2018.

WOOLDRIDGE, J. M. **Introdução a Econometria – Uma Abordagem Moderna**. 4ª ed. São Paulo: Cengage Learning, 2011.

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