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POLITICAL BUDGET CYCLE AND FINANCIAL PERFORMANCE OF LOCAL GOVERNMENT: AN INTERNATIONAL PERSPECTIVE

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Purpose: The purpose of this article is to identify an influence of the political budget cycle (PBC) on the financial performance of local government sector in OECD countries against the background of socio-economic and institutional conditions.
Design/methodology/approach: The literature on the subject was studied to present the specific effect of the election cycle on the financial condition of local government. Then, longitudinal data models were estimated, i.e. fixed effects models, random effects models, panel quantile regressions with fixed effects using the method of moments, based on data on the local government sector in 28 OECD countries for the period 2007-2022.
Findings: The study shows that local government elections affect the financial performance of the local government sector in OECD countries, i.e. both the revenue and expenditure side of the budget, as well as the deterioration of the fiscal balance. However, in the post-election year this balance improves. This is an expression of opportunistically motivated fiscal policies at the sub-national level.
Research limitations/implications: Theoretically, the paper advances understanding of an impact of the socio-economic and institutional circumstances, as well as the potential interactions of certain factors, on the fiscal sustainability. Although the study did not find a statistically significant effect of the level of democracy on fiscal balance, its higher level mitigates the negative impact of local elections on the fiscal sustainability of the local government sector.
Practical implications: The PBC phenomenon in the local government sector intensified in economies with less sustainable local public finances. Practically, the study identifies areas of policymakers' activities that can be supervised in order to maintain sound public budgets.
Social implications: It is crucial to strengthen the principles of democracy, especially the aspects of free and fair elections, the greater scope of which does not restrain the authorities to raise local taxes during elections.
Originality/value: There is a dearth of surveys studying an impact of the election cycle on the financial performance of the local government sectors from the international perspective due to the scholars concentrate on the national context.
Keywords: political budget cycle, local government, fiscal balance, elections, democracy.
Category of the paper: Research paper.

1. Introduction

The notion on an influence of politicians on the voting behavior through the economic instruments was proposed by Nordhaus (1975, pp. 169-189). According to his concept, incumbent politicians seeking re-election would behave opportunistically by promoting expansionary economic policies prior to elections (Klein, Sakurai, 2015, p. 21). Therefore, their decisions are biased against future generation. This mechanism is studied within the political budget cycle (PBC) theory, which emphasizes sphere of fiscal instruments (Filipiak, Kluza, 2022, p. 1058). This concept assumes that before the elections there is a greater probability of a decrease in the tax burden (lower budget revenues) and an increase in public spending, which results in a deterioration of fiscal balance (e.g. larger budget deficit) and greater debt (Swianiewicz et al., 2019, p. 464). Therefore, the policy of the incumbent, who might have an incentive to use fiscal instruments during election years to increase chances for reelection, adversely affects fiscal sustainability. Simultaneously, this sustainability should be restored after the elections (Ebeke, Ölçer, 2017, pp. 63-72). Nevertheless, it has been empirically proven that the appearance of the PBC may depend on numerous factors, i.e.: economic development, level of democracy, government transparency (Kang, 2025, p. 141), political system (Köppl-Turyna et al., 2015, p. 790), government's ideology (the partisan cycle model) (Klein, Sakurai, 2015, p. 22) or the case of single-party in comparison to coalition governments (Benito et al., 2013, pp. 6-29). Thus, democracy, seen in Schumpeter's approach as an institutional arrangement determining political decision-making (Schumpeter, 2003, p. 269; Elliott, 1994, p. 290), together with the features of the electoral system, may affect the PBC phenomenon. Therefore, the scholars indicate that the PBC does not vanish in countries with more mature democracies and more experienced behavior of voters (Furdas et al., 2015, pp. 2-26), although democracy may lead to an increase of the public spending (Ferraz et al., 2015, pp. 750). Guo (2009, p. 630) adds that in China local leaders also have an incentive and capacities to manipulate public expenditures during their tenure to improve the chances for political advancement. Furthermore, the level of transparency moderates the magnitude of PBC over time and across economies, and this relationship is stronger for advanced than for developing countries (Herzog, 2017, p. 683). This phenomenon may appear in every institutional and political system and is a part of the research on fiscal federalism (Köppl-Turyna, 2016, p. 177; Trzeciakowski et al., pp. 1-3). Besides, there is a strict relationship between democracy and fiscal rules (Beyala, Owoundi, 2025), the relaxation of which affects the financial performance of local governments in the election cycle (Giacobbe, Ordine, Rose, 2024). As a result, democracy and fiscal rules are substitutes to achieve fiscal discipline (Beyala, Owoundi, 2025).

However, the scholars indicate that the number of findings on the political cycle related to local public finances is still very modest compared to studies referring to the national level (Swianiewicz et al., 2019, p. 465). There is also a dearth of surveys examining the impact of the election cycle on the performance of the local government sectors from an international perspective. This could reveal the similarity of the PBC mechanism for individual countries to the trend in the entire local government sector and help introduce policies aimed at increasing the rationality of fiscal decisions. It results from the fact that the PBC determines instability in the sphere of public finance, which leads to inefficiencies in the allocation of resources. This, in turn, may require imposing additional fiscal rules on the management of municipal finances (Veiga, Veiga, 2007, p. 63) to decrease the impact of the PBC (Bonfatti, Forni, 2019, p. 1). Therefore, the purpose of this article is to identify the influence of the political budget cycle on the financial performance of local government sector in OECD countries against the background of socio-economic and institutional conditions. The research hypothesis assumes that the election cycle determines tax revenues and capital expenditures and then the fiscal balance of the local government sector. Thus, the novelty of the article is the examination of the PBC in an international perspective and the consideration of the impact of socio-economic and institutional aspects on the financial outcomes of the local government and potential interactions within certain explanatory variables, using longitudinal models. The originality of the study also lies in revealing the mechanism of the impact of the level of democracy or certain features of the election system on the fiscal sustainability of the local government sector in context of the existence of the PBC. In turn, the application of the panel quantile regressions allowed the estimation of the PBC across the distribution of the fiscal sustainability of the local government sector.

2. The importance of the political budget cycle for local government budgets

In the subject literature, there is a view about the impact of the election cycle on the fiscal situation of the public sector. Therefore, in the miscellaneous studies the scholars develop the concept of political budget cycle (PBC), within which majority of the findings concerns the national perspective (Budzeń, Wiśniewski, 2024, p. 181). These research studies reveal that politicians might influence the voting behaviours at the local level through the financial policy in the sphere of revenues and expenditures and by means of shaping the fiscal balance or debt.

As far as the revenue side of the local budgets is concerned there are certain findings of the PBC in this field. Analysing Brazilian municipalities Sakurai & Menezes-Filho (2011, p. 242-245) found a decline of local tax revenues in election years, whereas in German and Canadian local governments the authorities are reluctant to increase tax rates before elections (Furdas et al., 2015, p. 26; Kneebone, Mckenzie, 2001, p. 771). Similarly, Alesina, Paradisi (2017, pp. 157-174) proved that in the Italian local governments, the closer to a new election, the lower the tax rates were chosen in these units. In the other study on Italian local governments, it was verified that revenues from the property tax and user fees and charges significantly decreased just before elections (Ferraresi, 2021, p. 1150). Moreover, Bracco et al. (2024, p. 339) also revealed a decrease of municipal solid waste fee revenues and property tax revenues in pre-election years in Italian municipalities. In turn, Swianiewicz & Kurniewicz (2015, pp. 70-75) confirmed the existence of this cycle in service charges in Poland, mainly in the case of public transport ticket prices, and less in municipal housing rents.

The phenomenon of PBC also appears in the expenditures side of local public budgets. Rosenberg (1992, p. 79) found that in pre-election periods, expenditure on the development of local governments deviates significantly from normal levels. Simultaneously, incumbents who did not run for re-election were found to deviate significantly more from their pre-election discretionary spending than incumbents who ran for re-election. The findings of Nazir et al. (2022, p. 364) show that at the sub-national level in Pakistan expenditures are systematically reduced in post-election years and then increase gradually. This mainly stems from increased capital expenditures (Olejnik, 2022, p. 496), especially on construction (Furdas et al., 2015, p. 26) and infrastructure investments (Veiga, Veiga, 2007, pp. 60-63), which are very visible to the electorate and signal greater competences in pre-election periods. Since investments tend to materialize in election years, this is evidence of political rent-seeking and a general argument for term limits in local governments (Filipiak, Kluza, 2022, p. 1076). Moreover, researchers also examine the PBC in some spending categories, including education, culture and transport, waste management, public safety (Swianiewicz et al., 2019, p. 465) or wages (Olejnik, 2019, p. 198). Incumbents also tend to increase discretionary spending ahead of elections, which include grant spending, social assistance, financial assistance expenditures. Hence, the opportunistic motive to win the election is underlined (Darmastuti, Setyaningrum, 2021, pp. 378-388). In consequence local authorities may change their budget composition by reducing current expenditures and increasing capital investments (Klein, Sakurai, 2015, p. 34).

As a result of modifications in revenue and expenditure policy, the size of the budget balance and debt is also affected by the election cycle. Działo et al. (2019, p. 1050) displayed that in Poland the municipal authorities strategically use the deficit and the debt to influence voting behaviours. Moreover, Budzeń & Wiśniewski (2024, p. 190) estimated that, in Poland at the local level, both in the election year and in pre-election year, the value of financial liabilities to total assets increased. Similarly, Mourão et al. (2023, p. 30) display the presence of PBC in Croatian local government debt, arguing that in pre-election and election years, this debt is higher and enables politicians to increase the quantity and quality of local services. Hence, the factor affecting the growth of debt is the desire to complete the investment before the elections in the context of impressing the voters, as indicated by Brusca et al. (2015, pp. 475-481) in connection with the research on Valencia's local governments in Spain. This increase of indebtedness may change the level and composition of local revenues. In Spain, municipalities with greater debt level collect less revenue from fines (Benito et al., 2021, p. 8). The study of Setiawan & Rizkiah (2017, p. 543) on Indonesian local government also shows an increase in local budget deficit in election years, resulted from an increase of total expenditures. Similarly, Rakhman & Saudagaran (2023, p. 518) found that at the local level in Indonesia both lower budget surplus and cash holdings occurred due to higher spending in the run-up to the elections. In addition, a negative impact of the election year on the budget balance in the local government sector in Poland was presented by Galiński (2021, p. 3962). Sakurai & Menezes-Filho (2011, p. 234) also revealed a growth of Brazilian municipal deficits resulted from an increase of total and current expenditures and a fall of local tax revenues. Referring to the impact of fiscal rules on debt and deficit, Vicente et al. (2013, p. 52) show that after the introduction of these instruments in Spain in Budgetary Stability Law, local governments ceased manipulating debt as a mechanism to increase their chances of staying in power. However, this did not reduce the size of the deficit cycle due to the lack of penalization. So, politically more polarized and fiscally less transparent countries record cycles in budget balance in the election years (Mačkić, 2014, p. 11). On the other hand, legal requirements regarding the use of budget funds in election campaigns may be violated (Crispim et al., 2021, p. 137).

Summarizing the above findings, it is clear that researchers focus on identifying the relationships between PBC and specific budget indicators. However, the election cycle influences other qualitative circumstances of the functioning of local government, which may lead to modifications in the budget structure. Moreover, the budgetary impact of PBC may also result from the institutional status in the area of democracy. Therefore, there is a research gap to consider other institutional factors along with PBC to verify the actual relationship between these factors.

3. Methodology and Data

The aim of the empirical study is to determine the impact of the local election cycle, and a set of certain economic, financial, and institutional ratios, on specific indicators characterizing the financial performance of the local government sector in the OECD countries (table 1, figure 1). Taking into account the availability of data for the period 2007-2022 and the specificity of the institutional system, the variables were extracted from the databases of: the OECD, the World Bank as well as the V-Dem and Economist Intelligence Unit, processed by Our World in Data, and other resources concerning the local election cycle in the countries.

Because of the purpose of empirical study and data, panel models were applied. The simplest estimator for this kind of data is the pooled OLS (Ordinary Least Square) model, which assumes that all coefficients in the model are the same across all units and periods. However, relaxing this restriction leads to a fixed effects model (FEM) (1) (Brooks, 2019, pp. 491-493):

$$Y_{it} = \alpha + X'_{it}\beta + u_i + v_{it}, \tag{1}$$

where:

Y_{it} is the dependent variable for the country i in the period t,

α represents the intercept term,

X_{it} is a $k \times 1$ vector of explanatory variables observed for the studied OECD country i in the period t,

β is a $k \times 1$ vector of the parameters to be estimated on the explanatory variables (table 1),

u_i is an individual specific effect,

v_{it}, is the 'remainder disturbance'.

In turn, the random effects model (REM) (2) takes a form (Brooks, 2019, p. 500):

$$Y_{it} = \alpha + X'_{it}\beta + \varepsilon_i + v_{it}, \tag{2}$$

in which the new cross-sectional error term, ε_i, has zero mean, is independent of the individual observation error term (v_{it}), has constant variance φ_ε^2 and is independent of the explanatory variables (X_{it}) (table 1).

The application of the certain type of the longitudinal model resulted from the Wald test, the Breusch-Pagan Lagrange Multiplier test and the Hausman test (the choice between FEM and REM). In the model estimation the problems of the heteroscedasticity (Breusch-Pagan test) and the serial correlation (Breusch-Godfrey test) were also verified. Therefore, clustered standard errors were applied (Croissant, Millo, 2018, pp. 94-101; Gehrke, 2019, pp. 101-118; Verbeek, 2022, pp. 19-51; Cottrell, Lucchetti, 2024, pp. 219-224; Galiński, 2023c, p. 119).

Due to the aim of the study and the verification of the stability of the results, a panel quantile regression with fixed effects using the method of moments, i.e., method of moments-quantile regression, (MM-QR) (Machado, Santos Silva, 2019, pp. 145-173; Rios-Avila, 2020), was applied. In this type of the longitudinal model, it is estimated the conditional τ-th quantiles $Q_Y(\tau|X)$ for location-scale model, which takes a formula (Machado, Santos Silva, 2019, pp. 146-148):

$$Y_{it} = \alpha_i + X'_{it}\beta + (\delta_i + Z'_{it}\zeta)U_{it}, \tag{3}$$

with $P\{\delta_i + Z'_{it}\zeta > 0\} = 1$. In the model (3) the parameters (α_i, δ_i), $i = 1, \ldots, n$, capture the individual i fixed effects; U is an unobserved random variable; in turn Z is a $k \times 1$ vector of known differentiable (with probability 1) transformations of the components of X with element l given by $Z_l = Z_l(X)$, $l = 1, \ldots, k$; ζ *is a* $k \times 1$ vector of additional parameters. Simultaneously, the Wald test was estimated to check the significance of the MM-QR (Koengkan et al., 2023, pp. 263-265; Galinski, 2024, pp. 88-89).

To identify the factors (a local election cycle and other socio-economic and institutional characteristics) influencing the financial performance of the local government sector in the analysed countries (figure 1), a set of variables was used (table 1). There were applied three dependent variables (table 1), i.e.: 1) local government tax revenues as percentage of GDP (*TAXES*), 2) local government investment spending as percentage of local government total expenditures (*INVEST*), 3) net lending/net borrowing of local government as percentage of GDP (*BALANCE*), which represent the revenue and expenditure side of the local budget and the fiscal balance. In turn, a set of independent variables (table 1) includes:

- election year (*ELECT*), pre-election year (*PRE-ELECT*), post-election year (*POST-ELECT*) to identify the phenomenon of the political budget cycle;
- control variables: (a) GDP growth, % (*GDPGR*); (b) inflation, % (*INFL*); (c) unemployment rate, % (*UNEMPL*); (d) demographic situation: population ages 0-14 as % of total population (*PRE-WORK*), or population ages 65 and above as % of total population *(POST-WORK*) to take into account the impact of socio-economic conditions on the financial performance of the local government sector;
- decentralization, which is decomposed as: (a) fiscal decentralization in the sphere of the revenues (*REVDEC*), (b) institutional (political) decentralization through the use of strong elected local governments index (*SLG*) as a measure of the strength of local government. In addition, an interaction (*REVDEC×SLG*) between the revenue decentralization and the strength of local government is examined;
- free and fair elections index (*FAIRELECT*);
- democracy index (*DEM*) and an interaction between the local election year and the democracy index (*ELECT×DEM*).

Table 1.
Characteristics of variables used in the regressions and codes for the OECD countries studied

Variable (definition)	Label	Argumentation for application and specificity	Source
Dependent variables			
Local government tax revenues as % of GDP	*TAXES*	It shows the tax inflows in relation to the size of the economy and reveals the general direction of local government tax policy (Dahal, 2020, p. 81).	OECD (2024a, 2024b)
Local government investment spending as % of local government total expenditures	*INVEST*	The principal measure of the local government investment activity (Siwińska-Gorzelak et al., 2020, p. 663).	OECD (2024c)
Net lending/net borrowing of local government as % of GDP	*BALANCE*	This ratio is used as a dependent variable to identify factors influencing the fiscal balance of local government. Moreover, a fiscal balance is perceived as a measure of fiscal sustainability (Galiński, 2023b, pp. 40-46).	OECD (2024)
Independent variables			
Election year/ pre-election year/ post-election year	*ELECT/ PRE-ELECT/ POST-ELECT*	These variables represent the typical way to identify an impact of the election cycle on the explanatory variable. In each regression only one dummy variable was applied, which took the value 1 if election/pre-election/post-election year at the local government level appears, or the value 0 if not. These variables are included in the research studies on investment spending (Ryu et al., 2022, p. 352; Vicente et al., 2013, p. 50; Filipiak, Kluza, 2022, p. 1069), fiscal balance (Galiński, 2023b, p. 50) and the PBC is considered within the tax revenues (Swianiewicz et al., 2019, pp. 464-465).	Other
GDP growth, %	*GDPGR*	The economic growth in the country determines the fiscal categories in the field of tax revenues in general (Đurović Todorović et al., 2024, p. 6.), local investment spending (Ryu et al., 2022, p. 352; Siwińska-Gorzelak et al., 2020, p. 651), and then the fiscal balance of the local government (Galiński, 2023b, p. 48).	World Bank (2024)

Cont. table 1.

Inflation, %	*INFL*	An inflation has an impact on the financial situation of local government (Martell, 2024, p. 235; Galiński, 2023b, pp. 49-55).	World Bank (2024)
Unemployment rate, %	*UNEMPL*	Due to the specific nature of local budgetary inflows and tasks, the unemployment rate may affect both tax revenues (Benabdellah, Fahim, 2024, pp. 1036-1037), and investment expenditures (Vicente et al., 2013, pp. 49-50) at the subnational level.	World Bank (2024)
Population ages 0-14 as % of total population/population ages 65 and above as % of total population	*PRE-WORK/ POST-WORK*	The demographic structure and its changes may affect the tax revenues in general due to an impact on the economic activity and tax bases (Dougherty at al., 2022, p. 27), as well as the local government investment spending (Ryu et al., 2022, p. 352, Siwińska-Gorzelak et al., 2020, p. 651).	World Bank (2024)
Local government revenues as % of total general government revenues	*REVDEC*	This ratio shows the extent of the fiscal decentralization (Schneider, 2003, p. 41) in the country, which might affect the fiscal position of the local government in the field revenues (Benabdellah, Fahim, 2024, pp. 1036-1037), expenditures, and fiscal balance (Sow, Razafimahefa, 2017).	OECD (2024)
Strong elected local governments index	*SLG*	This index displays information on the extent to which citizens elect local governments which are free from the influence of unelected local actors except for courts. This ranges from 0 to 1 (strongest extent). This shows the institutional scope of decentralization.	V-Dem. (2024)
Local government revenues as % of total general government revenues × Strong elected local governments index	*REVDEC× SLG*	This represents an interaction between the revenue decentralization and the strength of local government. Kyriacou & Roca-Sagalés (2011, p. 210) considered an interaction between fiscal and political decentralization.	OECD (2024) V-Dem. (2024)
Free and fair elections index	*FAIRELECT*	Good governance mechanisms, such as accountability instruments that include free and fair elections, are essential to counteract corruption (Chen, Ganapati, 2023, p. 260) determining the fiscal balance at the local government level (Galiński, 2023b, p. 61). This index, from 0 to 1 (most free and fair), informs about the extent to which election violence, government intimidation, fraud, large irregularities, and vote buying are absent.	V-Dem. (2024)
Democracy index	*DEM*	There is an ongoing debate on the relationship between democracy and PBC (Furdas et al., 2015, pp. 1-26) or democracy and fiscal sustainability (Ferraz et al., 2015, p. 750). Beyala & Owoundi (2025) found that democracy and the fiscal rules are substitutes in the process of attaining fiscal discipline. In this way, democracy creates institutional principles that allow for the adjustment of some legal solutions to protect fiscal sustainability. This measure of the level of democracy, which ranges from 0 to 10 (most democratic), combines information on the extent to which citizens can choose their political leaders resulted from free and fair elections, enjoy civil liberties, prefer democracy over other political systems, can and do participate in politics, and have a functioning government that acts on their behalf. The index for 2007 and 2009 was not published, so the method of the mean of nearby points was applied to fill the missing values (George, Mallery, 2020, p. 64).	EIU (2025)
Election year × Democracy index	*ELECT×DEM*	This represents the interaction between the local government election year and the democracy indicator to estimate the potential moderating effect of democracy in an election year on the financial situation of local government.	EIU (2025) Other
Codes for the 28 OECD countries			
BEL, CHL, CRI, CZE, DNK, EST, FIN, FRA, GRC, HUN, ISL, IRL, ISR, JPN, KOR, LTU, LVA, LUX, NLD, NZL, NOR, POL, PRT, SVK, SVN, ESP, SWE, TUR			

Source: own elaboration.

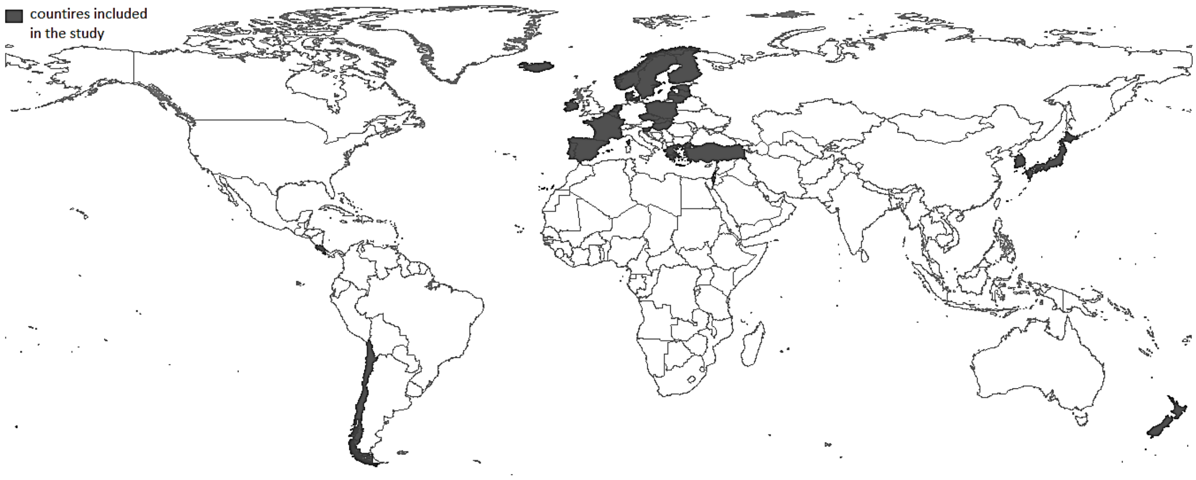

Figure 1. Map showing OECD countries included in the empirical study.

Source: own elaboration based on the map retrieved from (Opendatasoft, 2024).

During the estimation process, only statistically significant coefficients were included in the final models. Therefore, the pre-election year was not presented in the regressions, and the models consist of a different set of variables.

The empirical study was conducted on a sample of 28 OECD countries (figure 1, table 1). The application of these states was based on the availability of comparable data and the specifics of the local government elections (local election cycle) that can be coded using a dummy variable in the longitudinal regressions. Therefore, the use of these 28 OECD countries (figure 1, table 1) allows for the identification of the occurrence of the political budget cycle in the local government sector and its impact on the financial results of the public sector under study.

4. Results and Discussion

The descriptive statistics show that the 28 OECD countries studied differ in the field of local government budget performance, economic and demographic condition, and the scope of fiscal decentralization between 2007 and 2022 (table 2). There are significant differences in the fiscal balance, as a principal measure of fiscal sustainability (Galiński, 2023b, p. 39), and disparities in the extent to which citizens elect local authorities which are independent in policy decisions.

Table 2.
Summary statistics for the analysed OECD countries for the period 2007-2022

No.	Variable	Obs	Mean	SD	Min	Max
1	*TAXES*	448	3.8717	3.7510	0.1953	15.7063
2	*INVEST*	438	18.7498	8.3002	3.5694	51.0511
3	*BALANCE*	441	-0.0181	0.6058	-1.7972	3.2228
4	*GDPGR*	448	2.1242	3.9212	-14.8386	24.4753
5	*INFL*	448	2.9638	4.7046	-4.4781	72.3088
6	*UNEMPL*	448	7.8594	4.4053	2.0150	27.6860
7	*PRE-WORK*	448	17.3518	3.5890	11.5716	28.2973
8	*POST-WORK*	448	16.4454	4.3144	6.0421	29.9246
9	*REVDEC*	414	12.7298	8.2128	2.4900	33.9400
10	*SLG*	448	0.9574	0.0474	0.6730	0.9970
11	*REVDEC×SLG*	414	12.2714	8.0938	2.2996	33.6673
12	*FAIRELECT*	448	0.9291	0.0880	0.3480	0.9760
13	*DEM*	448	8.1086	1.0165	4.0900	9.9300
14	*ELECT×DEM*	448	1.8579	3.4599	0	9.9300

Source: own elaboration in STATA 17.0 based on OECD (2024a, 2024b, 2024c) – No. 1-3, 9; World Bank (2024) – No. 4-8; V-Dem. (2024) – No. 10-12; EIU (2025) – No. 13-14.

Table 3.
Diagnostic tests for the regressions

Test/Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Wald test	2 448.99 [<0.01]	2 534.34 [<0.01]	61.71 [<0.01]	32.48 [<0.01]	30.58 [<0.01]	26.81 [<0.01]
Breusch-Pagan Lagrange Multiplier test	3 185.54 [<0.01]	3 292.89 [<0.01]	1 924.61 [<0.01]	920.28 [<0.01]	857.73 [<0.01]	936.55 [<0.01]
Hausman test	2.61 [0.63]	1.74 [0.78]	2.41 [0.49]	31.44 [<0.01]	35.91 [<0.01]	20.05 [<0.01]
Breusch-Pagan test for Heteroskedasticity	305.77 [<0.01]	298.23 [<0.01]	340.28 [<0.01]	206.53 [<0.01]	210.64 [<0.01]	283.39 [<0.01]
Breusch-Godfrey test for serial correlation	148.02 [<0.01]	147.07 [<0.01]	142.07 [<0.01]	72.43 [<0.01]	76.20 [<0.01]	83.08 [<0.01]

Note: 1) under the level of the statistics there are p-values in brackets […].

Source: own elaboration in STATA 17.0 and RStudio.

According to the characterized methodology, based on the diagnostic tests (table 3), firstly six models with different sets of variables were estimated (table 4), i.e. three random-effects models (model 1, model 2, model 3) and three fixed-effects models (model 4, model 5, model 6), which include only statistically significant predictors. In turn, tests for heteroskedasticity (Breusch-Pagan test) and autocorrelation (Breusch-Godfrey test) (table 3) resulted in the use of clustered standard errors in the final estimations (table 4).

Table 4.
Estimation results for the longitudinal data models

Independent variable	Model 1 (REM)	Model 2 (REM)	Model 3 (REM)	Model 4 (FEM)	Model 5 (FEM)	Model 6 (FEM)
	Dependent variable					
	TAXES	*TAXES*	*INVEST*	*BALANCE*	*BALANCE*	*BALANCE*
ELECT	-0.0283^{*} (0.0142)	-0.0282^{**} (0.0140)	0.7612^{**} (0.2970)	-0.1630^{***} (0.0334)	-0.7401^{**} (0.3223)	-
POST-ELECT	-	-	-	-	-	0.0591^{*} (0.0331)

Cont. table 4.

GDPGR	-	-	-	0.0195^{***} (0.0040)	0.0190^{***} (0.0038)	0.0140^{**} (0.0057)
INFL	-0.0125^{***} (0.0044)	-0.0118^{**} (0.0050)	-	-0.0190^{**} (0.0077)	-0.0191^{**} (0.0078)	-0.0222^{***} (0.0067)
UNEMPL	0.0146^{*} (0.0087)	-	-0.3486^{***} (0.1164)	-	-	-
POST-WORK	-		-0.7461 $(0.2495)^{***}$	0.0934^{***} (0.0238)	0.0957^{***} (0.0241)	0.0786^{***} (0.0230)
PRE-WORK	-0.1278^{*} (0.0453)	-0.1413^{***} (0.0450)	-	-	-	-
REVDEC	-	-	-	0.6495^{**} (0.3152)	0.6597^{*} (0.3353)	-
SLG	-	-	-	4.1507^{*} (2.1115)	3.9059^{*} (2.0984)	-
REVDEC×SLG	-	-	-	-0.5983^{*} (0.3212)	-0.6090^{*} (0.3454)	-
FAIRELECT	-	0.9457^{*} (0.5166)	-	-	-	-
DEM	-	-	-	-	0.0408 (0.1284)	-
ELECT×DEM	-	-	-	-	0.0710^{*} (0.0396)	-
Intercept	6.0186^{***} (1.2925)	5.4854^{***} (1.2595)	33.7284^{***} (5.1158)	-6.3863^{***} (2.1661)	-6.5189^{**} (2.8451)	-1.2988^{***} (0.3736)
Obs	448	448	438	410	410	441
Within R^2	0.1595	0.1593	0.1294	0.2509	0.2580	0.1450
F/Wald test	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]

Note: 1) ***, ** and * denotes statistical significance at 1%, 5% and 10% levels respectively; 2) cluster standard errors in parentheses (…); 3) p-value in brackets […].

Source: own elaboration in STATA 17.0.

The outcomes of the empirical models (table 4) show that the election year (*ELECT*) determines the financial performance of the local government sector in the OECD countries. Firstly, it influences a decrease in the share of local government tax revenues in GDP (*TAXES*, model 1). During the elections, the public authorities are not willing to increase the tax burden. Secondly, it affects an increase in the local government investment spending in total expenditures (*INVEST*, model 3). Since the local governments have high control over capital expenditures, they are opportunistically managed. Thus, this extends the studies of Filipiak & Kluza (2022, p. 1076), Olejnik (2022, p. 508) or Andonoska (2022, pp. 381-386) who found this relationship in the specific countries. Simultaneously, these findings are consistent with the view that voters prefer candidates who incur higher spending or provide tax reductions prior to elections because this indicates their high managerial competencies (Działo et al., 2019, p. 1036). Finally, in the election year the fiscal balance deteriorates (*BALANCE*, model 4, model 5), whilst in the post-election year this category improves (model 6). In the second case, the expiry of the fiscal relaxation occurs after elections in order to restore fiscal sustainability, which was also empirically proven by Ebeke & D. Ölçer (2017, p. 72) at the central level. The election year therefore affects the loosening of fiscal policy, whereas fiscal tightening is resumed in the next budgetary year. In this way, the fiscal balance is used in opportunistically motivated local fiscal policies aimed at promoting expansionary policies during the period of the local voting. As a consequence, this may encourage the use of off-budget instruments (Kluza et al., 2024).

As far as the economic and institutional issues are concerned, they also determine the financial performance of the local government sector. An increase of inflation influences a decrease of local government tax revenues in GDP (model 1), and deteriorates a fiscal balance (model 4, model 5, model 6). In addition, the higher the unemployment rate (*UNEMPL*) and the share of post-working age population (*POST-WORK*) the lower the share of the capital spendings in the total expenditures. Therefore, an increase in the share of the population ages 65 and above affects the fiscal balance improvement (model 4, model 5, model 6). Regarding the share of the pre-working age population, its growth affects a decrease of the share of local tax revenues in GDP.

The empirical study (table 4) also shows that an increase in revenue decentralization (*REVDEC*) and strong elected local governments index (*SLG*) affect an improvement in the fiscal balance. The model 4 and the model 5 also reveal a statistically significant impact of the interaction between revenue decentralization and strong elected local governments index (*REVDEC×SLG*) on the level of the fiscal balance. In consequence, an increase in fiscal decentralization improves the fiscal balance, but this impact is smaller the greater the *SLG* in the country. This indicates that the positive impact of fiscal decentralization on the fiscal balance is larger at the beginning of the decentralization process. Therefore, it is crucial to prepare the appropriate foundations for the devolution of financial competences. This applies to the principle of adequacy of financial resources in the process of delegating tasks. It results from the fact that without adequate funds local authorities cannot exercise their right to local self-governing (Boggero, 2018, p. 298). Hence, the lack of sufficient revenues to meet the expectations of local communities contributes to the growth of deficit and risk of loss of fiscal sustainability. In addition an improvement of the 'free and fair elections' (*FAIRELECT*) contributed to an increase of the local government tax revenues as % of GDP (model 2), maintaining fiscal sustainability. As far as the level of the democracy is concerned, it affected the fiscal balance by mitigating the negative impact of local elections (*ELECT×DEM*, model 5). The study did not find that democracy (*DEM,* model 5) itself had a statistically significant impact on the balance. However, in countries with a higher democracy index, the negative impact of the election year on the fiscal balance was therefore smaller. Therefore, strengthening democracy, which has a direct relationship with fiscal rules (Beyala, Owoundi, 2025), leads to a reduction in actions easing fiscal discipline in the election cycle.

Table 5.
Estimation results for MM-QR models

Variable/ Test	Quantiles			Quantiles			Quantiles		
	25th	50th	75th	25th	50th	75th	25th	50th	75th
	Model 7MM-QR Independent variable: *BALANCE*			Model 8MM-QR Independent variable: *BALANCE*			Model 9MM-QR Independent variable: *BALANCE*		
ELECT	-0.1816*** (0.0367)	-0.1615*** (0.0324)	-0.1442*** (0.0409)	-0.8103*** (0.2708)	-0.7331** (0.3206)	-0.6719 (0.4111)	-	-	-
POST-ELECT	-	-	-	-	-	-	0.0882** (0.0382)	0.0558* (0.0315)	0.0294 (0.0346)
GDPGR	0.0168*** (0.0059)	0.0197*** (0.0037)	0.0222*** (0.0036)	0.0162*** (0.0058)	0.0193*** (0.0035)	0.0216*** (0.0036)	0.0135* (0.0072)	0.0141** (0.0055)	0.0145** (0.0060)
INFL	-0.0257*** (0.0073)	-0.0184** (0.0076)	-0.0121 (0.0087)	-0.0263*** (0.0073)	-0.0184** (0.0079)	-0.0122 (0.0090)	-0.0267*** (0.0058)	-0.0217*** (0.0069)	-0.0175** (0.0081)
POST-WORK	0.1028*** (0.0266)	0.0926*** (0.0227)	0.0838*** (0.0206)	0.1073*** (0.0255)	0.0945*** (0.0230)	0.0844*** (0.0227)	0.0882*** (0.0255)	0.0775*** (0.0220)	0.0688*** (0.0203)
REVDEC	0.5765 (0.3796)	0.6554** (0.3028)	0.7236*** (0.2554)	0.5960 (0.3905)	0.6660* (0.3208)	0.7215** (0.2859)	-	-	-
SLG	3.4430 (2.6352)	4.2079** (2.0260)	4.8694*** (1.6027)	3.3448 (2.5325)	3.9615** (2.0032)	4.4511*** (1.6850)	-	-	-
REVDEC ×SLG	-0.5255 (0.3919)	-0.6042** (0.3080)	-0.6722*** (0.2545)	-0.5460 (0.4059)	-0.6153* (0.3299)	-0.6703** (0.2900)	-	-	-
DEM	-	-	-	0.0719 (0.1396)	0.0377 (0.1238)	0.0105 (0.1290)	-	-	-
ELECT× DEM	-	-	-	0.0777** (0.0324)	0.0704* (0.0394)	0.0645 (0.0512)	-	-	-
Wald test	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]	[<0.01]

Note: 1) ***, ** and * denotes statistical significance at 1%, 5% and 10% levels respectively; 2) clustered standard errors in parentheses (…); 3) *p*-value in brackets […].

Source: own elaboration in STATA 17.0.

On the other hand, public spending discipline and continued budget deficit reduction are justified as necessary to return the government to a better implementation of its policy priorities, considering the principle of intergenerational fairness (Dyson, 2004, p. 191). Deficits and rising public debt can transfer the tax burden to future generations and threaten the sustainability of public finances (Catrina, 2013, p. 171). Simultaneously, incumbents tend to increase capital expenditure, especially through additional debt, which is consistent with findings of Crispim et al. (2021, pp. 136-137). This relationship also determines the risk of lack of the financial liquidity and then the fiscal distress (Galiński, 2023a, p. 70), which undermine sustainable development.

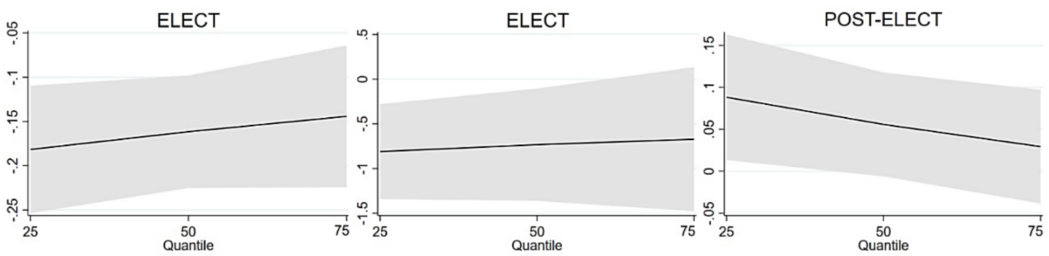

Figure 2. PBC coefficients (black lines) at the background of 95% confidence intervals (grey areas) in the Models: 7MM-QR (ELECT), 8MM-QR (ELECT), 9MM-QR (POST-ELECT) across quantiles.

Source: own elaboration.

The panel quantile regressions with fixed effects (MM-QR models: model 7MM-QR, model 8MM-QR and model 9MM-QR; table 5), estimated for the set of variables of FEM (i.e. model 4, 5 and 6; table 4), also show an impact of the PBC on the fiscal balance against the background of socio-economic and institutional conditions. Simultaneously, the results on 25th, 50th and 75th quantile regressions (table 5) represent the distribution of OECD countries with low, median and high fiscal sustainability path respectively. In consequence, the PBC phenomenon in the local government sector intensified in economies with less sustainable local public finances. The higher the fiscal balance the lower implication of the election (negative impact; model 7MM-QR and model 8MM-QR) and post-election (positive impact; model 9MM-QR) years on the fiscal balance (table 5; fig 2). Furthermore, the sound fiscal situation of the local government sector protects these units from the deterioration of the socio-economic and institutional conditions. Thus, rising inflation poses greater risks to local government sector with larger deficits, while more unbalanced local government finances benefit less from improved economic growth in the process of enhancing the fiscal sustainability (table 5).

5. Conclusions

The financial performance of the local government sector is determined by various factors in terms of socio-economic, institutional and political conditions. In the latter case, the phenomenon of the political budget cycle (PBC) is indicated. This study also reveals that the local elections affect the financial performance of the local government sector in the OECD countries. It concerns both the revenue and expenditure side of the budget. Therefore, there is both the election-motivated decrease of the local tax revenues and increase of the capital spendings, which result in the deterioration of the fiscal balance. This balance is then improved in the post-election year. Hence, the research hypothesis was positively verified.

The findings are consistent with the classical PBC view that elections see a decline in tax revenues and an increase in capital expenditure, leading to a deterioration in the fiscal balance (Klein, Sakurai, 2015, p. 26). This is an expression of opportunistically motivated local fiscal policies, which are aimed at increasing the chances for the re-election. Simultaneously, the study research confirms the notion that office-oriented politicians may use their local budgeting competences to pursue their own agenda (Köppl-Turyna, 2016, p. 177) to enhance the appearance in the eyes of voters. This creates a pressure to ease fiscal policy in the upcoming election campaign. On the one hand, it is justified to introduce specific fiscal rules or institutional arrangements, including number of terms in office, to protect fiscal sustainability of the local government sector and the intergenerational fairness. On the other hand, politically motivated actions are consistent with assumptions of the sustainable development. Nevertheless, the introduced fiscal rules ought to be in practice accompanied by regulations concerning their non-compliance due to the growing likelihood of resistance to specific norms in election years.

However, the level of tax burden and capital spending of the local government sector is also determined by the economic and demographic condition in the country. This also applies to the fiscal balance, which is additionally influenced by the degree of decentralization. The study proved that an increase of fiscal decentralization and institutional strength of local government affected an improvement of the fiscal balance. In this context, it is important to maintain the principle of financial adequacy in the division of public tasks between central and local governments. Incumbents tend to increase capital spending during election periods, despite the growing risk of the reduced fiscal sustainability. Politically motivated financial decisions (especially capital spendings) may result in an unfavourable expenditure structure, e.g. through a strong increase in current expenditures because of the use of a newly created investment. This in turn may disrupt financial liquidity of the local government and increase an exposure on the fiscal distress. It is therefore important to develop investments that support revenue generation to reduce this risk, not undermine intergenerational equity, or excessive use of off-balance instruments that may reduce the transparency of the local public finance. In addition, some fiscal anchors on the expenditure side of the budget could prevent the build-up of imbalances. Researchers may seek to establish ceilings on expenditure increase that do not threaten stability.

The study also extends the remarks of Furdas et al. (2015) in the sphere of the impact of the level of the democracy and the fairness of the elections on the fiscal sustainability. Mechanisms that increase transparency of elections contribute to improving the fiscal balance, while higher level of the democracy mitigates the negative effect of the PBC on the local finances. Hence, the increase in voter awareness results from access to information about budget decisions made during local government elections and, together with the improvement of democracy institutions, may influence the better financial performance of local government sector even in more mature democracies. As a result, strengthening civil society institutions in practice may limit the PBC. It is therefore justified to support watchdog institutions in the field of financial audit. Hence, there is space to study the impact of these issues on the budget and to formulate new theoretical conclusions. To sum up, the sound fiscal situation of the local government results from economic, political and institutional issues and an improvement of the fiscal sustainability strengthens resistance to the effects of the PBC.

References

1. Alesina, A., Paradisi, M. (2017). Political budget cycles: Evidence from Italian cities. *Economics and Politics, 29(2)*, 157-177. https://doi.org/10.1111/ecpo.12091
2. Andonoska, L. (2022). Pre-electoral fiscal policies and opportunistic spending: the case of the recently decentralised Macedonian local governments. *East European Politics, 39(3)*, 369-390. https://doi.org/10.1080/21599165.2022.2122043
3. Benabdellah, L., Fahim, O. (2024). Local Tax Determinants an Unbalanced Panel Data Analysis: Evidence in Moroccan. *Theoretical Economics Letters, 14*, 1035-1045. https://doi.org/10.4236/tel.2024.143053
4. Benito, B., Bastida, F., Vicente, C. (2013). Municipal elections and cultural expenditure. *Journal of Cultural Economics, 37*, 3-32. https://doi.org/10.1007/s10824-012-9175-5
5. Benito, B., Guillamón, M.-D., Ríos, A.-M. (2021). Political Budget Cycles in Public Revenues: Evidence From Fines. *Sage Open, 11(4)*, 1-13. https://doi.org/10.1177/21582440211059169
6. Beyala, B.C.N., Owoundi, J.P.F. (2025). The effects of fiscal rules on budget deficit: Does democracy matter? *Journal of Comparative Economics*, https://doi.org/10.1016/j.jce.2025.01.005.
7. Boggero, G. (2018). *Constitutional Principles of Local Self-Government in Europe*. Brill.
8. Bonfatti, A., Forni, L. (2019). Fiscal rules to tame the political budget cycle: Evidence from Italian municipalities. *European Journal of Political Economy, 60*, 1-20. https://doi.org/10.1016/j.ejpoleco.2019.06.001
9. Bracco, E., De Benedetto, M.A., Lisciandra, M. (2024). Manipulating municipal budgets: unveiling opportunistic behavior of Italian mayors. *Public Choice, 198*, 317-342. https://doi.org/10.1007/s11127-023-01131-3
10. Brooks, Ch. (2019). *Introductory Econometrics for Finance, 4th Edition*. Cambridge University Press
11. Brusca, I., Labrador, M., Montesinos, V. (2015). Influencia de las elecciones en la gestión de los gobiernos locales. *Análisis empírico en la región española de Valencia. Gestión y Política Pública, XXIV(2)*, 459-489. https://doi.org/10.29265/gypp.v24i2.110
12. Budzeń, D., Wiśniewski, M. (2024). The political budget cycle in local government finance: a balance sheet approach on the example of cities with poviat rights. *Journal of Management and Financial Sciences, 50*, 179-194. https://doi.org/10.33119/JMFS.2023.50.10
13. Catrina, I.L. (2013). Intergenerational Equity of Public Debt. *European Journal of Science and Theology, 9(2)*, 167-174.

14. Chen, C., Ganapati, S. (2023). Do transparency mechanisms reduce government corruption? A meta-analysis. *International Review of Administrative Sciences, 89(1)*, 257-272. https://doi.org/10.1177/00208523211033236
15. Cottrell, A., Lucchetti, R. (2024). *Gretl User's Guide: Gnu Regression, Econometrics and Time-Series Library*. July.
16. Crispim, G., Flach, L., Alberton, L., Ferreira, C.D. (2021). Political budget cycle: an analysis of Brazilian municipalities. *Advances in Scientific and Applied Accounting, 14(1)*, 106-124. https://doi.org/10.14392/asaa.2021140104
17. Croissant, Y., Millo, G. (2018). *Panel Data Econometrics with R*. John Wiley & Sons.
18. Dahal, A.K. (2020). Tax-to-GDP Ratio and the Relation of Tax Revenue with GDP: Nepalese Perspective. *Researcher: A Research Journal of Culture and Society, 4(1)*, 80-96. https://doi.org/10.3126/researcher.v4i1.33813
19. Darmastuti, D., Setyaningrum, D. (2021). The Use of Discretionary Spending as an Opportunistic Motive to Win the Election. In: W.A. Barnett, B.S. Sergi (Ed.), *Recent Developments in Asian Economics International Symposia in Economic Theory and Econometrics (International Symposia in Economic Theory and Econometrics, Vol. 28)* (pp. 377-395). Leeds: Emerald Publishing Limited, https://doi.org/10.1108/S1571-038620210000028022
20. Dougherty, S., de Biase, P., Lorenzoni, L. (2022). Funding the Future: The Impact of Population Ageing on Revenues across Levels of Government. *OECD Working Papers on Fiscal Federalism, 39*. https://doi.org/10.1787/22265848
21. Đurović Todorović, J., Đorđević, M., Mirović, V., Kalaš, B., Pavlović, N. (2024). Modeling Tax Revenue Determinants: The Case of Visegrad Group Countries. *Economies, 12(6)*, 1-15. https://doi.org/10.3390/economies12060131
22. Dyson, K. (eds.) (2004). *European States and the Euro: Europeanization, Variation, and Convergence*. Oxford University Press.
23. Działo, J., Guziejewska, B., Majdzińska, A., Żółtaszek, A. (2019). Determinants of local government deficit and debt: Evidence from Polish municipalities. *Lex Localis - Journal of Local Self-Government, 17(4)*, 1033-1056. https://doi.org/10.4335/17.4.1033-1056(2019)
24. Ebeke C., Ölçer, D. (2017). Fiscal policy over the election cycle in Low-Income Countries. In: V. Gaspar, S. Gupta, C. Mulas-Granados (eds.), *Fiscal Politics* (pp. 63-82). Washington, DC: International Monetary Fund, https://doi.org/10.5089/9781475547900.07
25. Economist Intelligence Unit (2006-2023), EIU (2025). https://ourworldindata.org/grapher/democracy-index-eiu, January 15, 2025.
26. Elliott, J.E. (1994). Joseph A. Schumpeter and The Theory of Democracy. *Review of Social Economy, 52(4)*, 280-300.
27. Ferraresi, M. (2021). Political Budget Cycle, Tax Collection, and Yardstick Competition. The B.E. *Journal of Economic Analysis & Policy, 21(3)*, 1149-1161, https://doi.org/10.1515/bejeap-2020-0380

28. Ferraz, R., Sarmento, J.M., Duarte, A.P. (2024). The Sustainability of Portuguese Fiscal Policy in Democracy, 1974-2020. *Journal of Quantitative Economics, 22*, 749-772. https://doi.org/10.1007/s40953-024-00402-0
29. Filipiak, B.Z., Kluza, K. (2022). Political Business Cycle in Local Governments in Transition and Developing Economies. Literature Review and Empirical Study for Poland. *Lex Localis - Journal of Local Self-Government, 20(4)*, 1057-1082. https://doi.org/10.4335/20.4.1057-1082
30. Furdas, M., Homolkova, K., Kis-Katos, K. (2015). Local Political Budget Cycles in a Federation: Evidence from West German Cities. *IZA Discussion Papers, 8798.* Bonn: Institute for the Study of Labor (IZA).
31. Galiński, P. (2021). Determinants of budget balance in local government in the process of achieving fiscal sustainability-evidence from Poland. In: S. Soliman Khalid (ed.), *Proceedings of the 38th International Business Information Management Association, 23-24 November 2021, Seville, Spain: Innovation management and sustainable economic development in the era of global pandemic* (pp. 3958-3965).
32. Galinski, P. (2023a). Determinants of Debt for Local Governments in Europe-Panel Data Research. *Forum Scientiae Oeconomia, 11(2)*, 69-86. https://doi.org/10.23762/FSO_VOL11_NO2_3
33. Galiński, P. (2023b). Fiscal Balance Factors of the Local Government: Panel Data Evidence from OECD Countries. *Ekonomia Międzynarodowa, 41*, 37-66. https://doi.org/10.18778/2082-4440.41.03
34. Galiński, P. (2023c). Impact of fiscal and non-fiscal factors on the municipal debt: the case of Wielkopolska region in Poland. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie, 175*, 111-136. http://dx.doi.org/10.29119/1641-3466.2023.175.8
35. Galinski, P. (2024). Tax Revenue Decentralisation and Corruption in the Context of Civil Liberties: A Cross-Country Study. *Forum Scientiae Oeconomia, 12(2)*, 84-98. https://doi.org/10.23762/F SO_VOL12_NO2_5
36. Gehrke, M. (2019). *Angewandte Empirische Methoden in Finance & Accounting*. Walter de Gruyter.
37. George, D., Mallery, P. (2020). *IBM SPSS Statistics 26 Step by Step. A Simple Guide and Reference*. Taylor and Francis.
38. Giacobbe, P., Ordine, P., Rose, G. (2024). The effects of relaxing fiscal rules on Political Budget Cycle: A difference-in-discontinuities analysis on Italian municipalities. *Electoral Studies, 88*, https://doi.org/10.1016/j.electstud.2024.102761.
39. Guo, G. (2009). China's Local Political Budget Cycles. *American Journal of Political Science, 53(3)*, 621-632. https://doi.org/10.1111/j.1540-5907.2009.00390.x
40. Herzog, B. (2017). Does transparency mitigate the political budget cycle? *Journal of Economic Studies, 44(5)*, 666-689. https://doi.org/10.1108/JES-07-2016-0132

41. Kang, H. (2025). Can fiscal transparency mitigate political budget cycles? *Public Choice 202*, 141-166. https://doi.org/10.1007/s11127-024-01174-0
42. Klein, F.A., Sakurai S.N. (2015). Term limits and political budget cycles at the local level: evidence from a young democracy. *European Journal of Political Economy, 37*, 21-36. https://doi.org/10.1016/j.ejpoleco.2014.10.008.
43. Kluza, K., Czekaj, M., Filipiak, B. Z. (2024). The Electoral Cycle and Changes in the Off-Budget Debt of Municipalities. *Cities, 155, 105478*. https://doi.org/10.1016/j.cities.2024.105478
44. Kneebone, R.D., Mckenzie, K.J. (2001). Electoral and Partisan Cycles in Fiscal Policy: An Examination of Canadian Provinces. *International Tax and Public Finance, 8*, 753-774. https://doi.org/10.1023/A:1012895211073
45. Koengkan, M., Fuinhas. J.A., Tavares, A.I.P, Silva, N.M.B.G. (2023). *Obesity Epidemic and the Environment Latin America and the Caribbean Region*. London: Elsevier.
46. Köppl-Turyna, M., Kula, G., Balmas, A., Waclawska, K. (2016). The effects of fiscal decentralisation on the strength of political budget cycles in local expenditure. *Local Government Studies, 42(5)*, 785-820. https://doi.org/10.1080/03003930.2016.1181620
47. Köppl-Turyna, M. (2016). Opportunistic politicians and fiscal outcomes: the curious case of Vorarlberg. *Public Choice, 168*, 177-216. https://doi.org/10.1007/s11127-016-0355-2
48. Kyriacou, A.P., Roca-Sagalés, O. (2011). Fiscal and Political Decentralization and Government Quality. *Environment and Planning C: Government and Policy, 29(2)*, 204-223. https://doi.org/10.1068/c1016r
49. Machado, J.A.F., Santos Silva, J.M.C. (2019). Quantiles via Moments. *Journal of Econometrics, 213(1)*, pp. 145-173. https://doi.org/10.1016/j.jeconom.2019.04.009
50. Mačkić, V. (2014). Political budget cycles at the municipal level in Croatia. *Financial theory and practice, 38(1)*, 1-35. https://doi.org/10.3326/fintp.38.1.1
51. Martell, C.R. (2024). The impact of inflation on local government fiscal health. *Journal of Public Budgeting, Accounting & Financial Management, 36(2)*, 234-252. https://doi.org/10.1108/JPBAFM-09-2023-0171
52. Mourão, R., Bronić, M., Stanić, B. (2023). The Impact of Local Governments' Budget Transparency on Debt in Croatia. *South East European Journal of Economics & Business, 18(2), 21-33*. https://doi.org/10.2478/jeb-2023-0016
53. Nazir, R., Nasir, M., Khawaja, I. (2022). Political Budget Cycle: A Sub-National Evidence from Pakistan. *Journal of Business Cycle Research, 18*, 343-367. https://doi.org/10.1007/s41549-022-00078-6
54. Nordhaus, W. (1975). The political business cycle. *Review of Economic Studies, 42(2)*, 169-190.
55. OECD (2024b). *Revenue Statistics 2024: Health Taxes in OECD Countries.* Paris: OECD Publishing.

56. OECD (2024c), *Dataset: Government at a Glance - 2023 edition*, https://www.oecd.org/en/data.html, April 5, 2024.
57. OECD (2024a). https://www.oecd.org/en/data/datasets/oecd-fiscal-decentralisation-database.html, September 10, 2024.
58. Olejnik, Ł.W. (2019). Local political business cycles and administration spending in Polish local governments [Lokalne polityczne cykle koniunkturalne a wydatki administracyjne w polskich samorządach]. *Economic and Regional Studies, 12(2)*, 187-199. https://doi.org/10.2478/ers-2019-0017.
59. Olejnik, Ł.W. (2022). Cycles in a cycle: investment expenditures and their composition during the political budgetary cycle. *Local Government Studies, 48(3)*, 482-513. https://doi.org/10.1080/03003930.2020.1851207
60. Opendatasoft (2024). https://public.opendatasoft.com/explore/dataset/world-administrative-boundaries/export/, October 10, 2024.
61. Rakhman, F., Saudagaran, S. (2023). The effect of political budget cycle on local governments' financial statements in a young democracy. *Public Money & Management, 43(5)*, 512-520. https://doi.org/10.1080/09540962.2023.2173369
62. Rios-Avila, F. (2020). *MMQREG: Stata module to estimate quantile regressions via Method of Moments*. Boston College Department of Economics.
63. Rosenberg, J. (1992). Rationality and the Political Business Cycle: The Case of Local Government. *Public Choice, 73(1)*, 71-81. https://doi.org/10.1007/BF00142917
64. Ryu, S., Kim, Y., Kim, J. (2022) Determinants of capital spending in local governments of South Korea. *International Review of Public Administration, 27(4)*, 344-362, https://doi.org/10.1080/12294659.2022.2152570
65. Sakurai, S.N., Menezes-Filho, N. (2011). Opportunistic and partisan election cycles in Brazil: new evidence at the municipal level. *Public Choice, 148*, 233-247. https://doi.org/10.1007/s11127-010-9654-1
66. Schneider, A. (2003). Decentralization: Conceptualization and measurement. *Studies in Comparative International Development, 38*, 32–56. https://doi.org/10.1007/BF02686198
67. Schumpeter, J.A. (2003). *Capitalism, Socialism & Democracy*. Routledge.
68. Setiawan, D., Rizkiah, F. (2017). Political budget cycles in municipalities: Evidence from Indonesia. *International Journal of Business and Society, 18(3)*, 533-546.
69. Siwińska-Gorzelak, J., Bukowska, G., Wójcik, P. (2020), The impact of revenue autonomy on the composition of local public spending: evidence from Poland. *Local Government Studies, 46(4)*, 641-665. https://doi.org/10.1080/03003930.2019.1635017
70. Sow, M., Razafimahefa, I. (2017). Fiscal Decentralization and Fiscal Policy Performance. *IMF Working Paper, 64*.
71. Swianiewicz, P., Kurniewicz, A. (2018). Cykl polityczny w opłatach za lokalne usługi publiczne w Polsce. *Studia Regionalne i Lokalne, 2(72)*, 56-77.

72. Swianiewicz, P., Kurniewicz, A., Kalcheva, D. (2019). The Political Budget Cycle in Earmarked Taxes for Local Public Services: A Comparison of Poland and Bulgaria. *Journal of Comparative Policy Analysis: Research and Practice, 21(5)*, 463-480. https://doi.org/10.1080/13876988.2019.1594775
73. Trzeciakowski, R., Ciżkowicz, P., Rzońca, A. (2023). Fiscal decentralization in Poland: 2004-2019 municipal and city dataset. *Data in Brief, 48*, 1-13. https://doi.org/10.1016/j.dib.2023.109154
74. V-Dem (2024) – processed by Our World in Data. “Elected local governments – (best estimate)” [dataset]. V-Dem, “V-Dem Country-Year (Full + Others) v14” [original data]. Retrieved from: https://ourworldindata.org/grapher/strong-elected-local-governments-index, September 10, 2024.
75. Veiga, L.G., Veiga, F.J. (2007). Political Business Cycles at the Municipal Level. *Public Choice, 131(1/2)*, 45-64. https://doi.org/10.1007/s11127-006-9104-2
76. Verbeek, M. (2022). *Panel Methods for Finance*. Walter de Gruyter GmbH.
77. Vicente, C., Ríos, A-M., Guillamón, M-D. (2013). Voting behavior and budget stability. *Revista de Contabilidad, 16(1)*, 46–52. https://doi.org/10.1016/S1138-4891(13)70005-0
78. World Bank (2024). https://databank.worldbank.org, September 10, 2024.