

# POLITICAL EXPENDITURE CYCLE AT THE MUNICIPAL GOVERNMENT LEVEL IN SLOVAKIA

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## Abstract

The idea of the political budget cycle impact on the public expenditure volume and structure raises discussion related mainly to the national government level. Political decision-making at the sub-national government level emulates certain common tendencies. In the election time, the political incumbent might seek for re-election. In aim to increase its own chances, it might manipulate the budget (or fiscal) policy and makes changes in the field of expenditure categories. In this paper, the existence of political expenditure cycle at the municipal level of government in Slovakia is investigated. The dynamic panel data model using the Generalized Method of Moments (GMM) system estimator reveals the positive impact of election year variable on per capita municipal expenditure, while the additional pre-election year variable is insignificant.

Keywords: political cycle, local government, local expenditures, panel data, generalized method of moments

## INTRODUCTION

The existence of electorally motivated expenditure policy is broadly discussed and investigated, yet. Nordhaus (1975) introduces an initial idea of changes in the political incumbent behaviour in the time of elections is introduced by and uses a term of “political business cycle”. However, Downs (1957) described the reciprocal relationship between economic strategies and political choices much earlier. According to Bojar (2017), political business cycle is usually perceived as relationship between the regular use of fiscal instruments for re-election purposes by political incumbents. Following this idea, the political budget cycle could be defined as cyclical fluctuation

in fiscal policies induced by the timing of elections (Efthyvoulou, 2012). In literature, there are two main approaches to the political budget cycle question. First, the opportunistic approach, formulated by Nordhaus (1975) and mentioned hereinbefore, is characterized by the opportunistically motivated behaviour of a political incumbent in a field of fiscal policies selection to maximize their electoral support (Castro and Martins, 2015). Second, the partisan theory, introduced by Hibbs (1977), depends on the government ideological orientation. According to Bove *et al.* (2017: 582), left-wing governments will engage in more income re-distribution and more expansionary policies than right-wing governments during their time in office. According to Castro and Martins (2015), main difference

between these two theories consist in the time of generating the policy effect, while opportunistic model generates policy effects before elections, partisan model generates them after elections. As Cazals and Mandon (2016) mention, since Nordhaus (1975), a wide research focusing on political budget cycles was realized. However, the main research scope mirrors its existence at the national government level e.g. Efthyvoulou (2012), Enkelman and Leibrecht (2013), Bojar (2015), Klein and Sakurai (2015), Castro and Martins (2017) etc. The profile of new democratized (post-communist) countries is considers a research of Štiková (2007). Vergne (2009) analyses the political budget cycle in developing countries. At the local government level, the political budget cycle is investigated in several countries, e.g. an analysis is provided on a sample of municipalities of Columbia (Drazen and Eslava, 2010), Israel (Baskaran, 2015), Spain (Balaguer-Coll *et al.*, 2015), Czech Republic (Šťastná, 2015), Greece (Chortareas *et al.*, 2016), Denmark (Aaskoven, 2017), districts in Indonesia (Sjahrir *et al.* 2013), cities in Western Germany (Furdas *et al.*, 2015), Russian regions (Sidorkin and Vorobyev, 2017), etc.

In the case of Slovakia, Dudáš-Pajerská (2012) analyses the impact of business cycle atypical rundown on political cycle at the national level. Šikulová and Frank (2013) investigate simultaneously the impact of political cycle and development of main macroeconomic indicators on the Slovak Republic transition to the market economy. Morvay *et al.* (2016:71) provides the evaluation of the political cycle at the national level in connection with business cycle. However, the lack of sufficient research in this area both at the national and especially at local government level is notable. This has motivated the genesis of presented research. In the context of recent implementation of the fiscal decentralization (in aim to fortify the position of sub-national government in accordance with the theory of fiscal federalism principles) the research is concerning on the sub-national level of government in Slovakia, which is here presented by municipalities. The aim of the paper is searching for political budget cycle at the municipal government level. Paper seeks for the positive relation between the time of municipal election and municipal government expenditure. For this purpose, the dynamic panel data models based on the GMM system estimator are estimated. The paper has a following structure. After an introduction, the literature review is presented. Chapter focusing on data and

methods follows it. Main findings are included in the chapter presenting results and discussion. The paper ends with conclusion and list of references.

## Literature Review

Certain part of research focusing on political budget cycle seeks for its presence at the country level. Efthyvoulou (2012) investigates the existence of the political budget cycle on the sample of 27 EU countries in period of 1997–2008 employing the GMM estimation. Here the incumbent pointing to political budget cycle occurrence is obvious in the case of the Eurozone countries. Enkelman and Leibrecht (2013) search for political “expenditure” cycle in 32 countries from 1990 to 2010 including post-communist countries located in the Eastern Europe. They conclude that election cycles in total expenditures and in specific expenditure, sub-categories (following the COFOG classification) mainly exist in newly democratized Eastern European countries. Bojar (2015) reflects on the relationship between political budget cycle and political fragmentation. Results of a panel data model of the EU countries point to the fiscal electioneering connection with single-party government. Later, on a sample of world 28 countries (mainly from the EU), Bojar (2017) provides a micro-level analysis modelling an individual-level heterogeneity impact on electoral calculus of individual voters following fiscal changes. According to his analysis based on voter’s social status, he confirms a hypothesis, that “low-status individuals are, *ceteribus paribus*, more sensitive to changes in pre- electoral fiscal policy, especially to its spending-side components, compared to higher status citizens” (Bojar, 2017: 38). Klein and Sakurai (2015) analyse a situation in the question in Brazil. Obtained results are consistent with the political business cycle hypothesis, that political incumbents change the expenditure composition in electoral years in the aim to maximizing their aiming at maximizing their re-election chances. Bove *et al.* (2017) investigate theoretically and empirically the impact of political cycle on the trade-off between expenditure in the social and military area. Their main finding is that governments are oriented to the social area in the election times.

At the sub-national (local or municipal) government level, Drazen and Eslava (2010) provide an analytical solution of the impact of political cycle on the government spending behaviour, where government change the budget

expenditure composition in aim to influence voters. They try to identify, which spending areas are mostly targeted to voters in the time of elections. Their analytical findings are confirmed empirically on the sample of Columbian municipalities representing the local government level. Sjahrir *et al.* (2013) search for political budget cycle on the sample of Indonesian districts in period of 2001–2009. Result of panel estimation shows presence of political budget cycles in case of direct elections. Baskaran *et al.* (2015) give other view. The impact of revenue decentralization and intergovernmental transfer relations on political budget cycles at the local government level is investigated using a panel of Israeli municipalities during the period 1999–2009. Their findings present expectations of the political incumbent in the field of covering a part of expanded pre-election costs by central government in the next period. According to them, political budget cycles can result from fiscal institutions, which create soft budget constraints. Šťastná (2015) analyses the local political budget cycle at the sample of Czech municipalities. The results of the GMM estimation covering the period from 1997 to 2013 show an increase of municipal capital expenditure (containing basically the field of infrastructure, housing and leisure activities) contrary to decrease of current municipal expenditure concerning on administration. Furdas *et al.* (2015) investigate for the local political cycle in case of German cities located in its western part during a period from 1975 to 2007. They reach similar findings as provides Šťastná (2015). An increase in building investments before elections is observed. Additionally, it is accompanied by increase of inter-governmental transfers and stop of the local tax rates increase. Mild pre-election fiscal manipulation with the local budget occurs both at the municipal and state level of government. Köppl-Turyna *et al.* (2015) seek for the fiscal decentralization impact on the strength of local political budget cycle in the case of Polish municipalities, which heavily rely on the block grants allocated by the central budget (Köppl-Turyna *et al.*, 2015: 1). Similarly to results of Šťastná (2015) or Furdas *et al.* (2015), changes in municipal expenditure focusing on infrastructure and social area confirm the political budget cycle presence. Balaguer-Coll *et al.* (2015) use Bayesian techniques to analyse the impact of local expenditure on the re-election probability in Spanish municipalities in period from 2000 to 2007. Here, an increase of municipal spending enhances the election outcomes.

Current literature related to the problem of political budget cycles offers a wide scope of related researches. Political budget cycle is investigated in connection with a corruption in a study of Sidorkin and Vorobyev (2017). Focusing on Russian regions, they observe increasing perception of the corruption activities by firms operating in various regions of Russia in period closer to the end of a regional governor's term in office. Aaskoven (2017) documents a local sector reform leading to amalgamation of Danish municipalities. One of his research questions is role of the municipality age in the political budget cycle at the local level. His findings mirror the appearance of political budget cycles rather in old municipalities than in new amalgamated (as he writes—quasi—experimental) units. Veiga *et al.* (2017) examine the role of a media freedom using a panel data of 70 countries. Here, the mitigation of the political budget cycles is caused by the reduction of the information asymmetries between policy-makers and the electorate. Garmann (2017) analyses the influence of voter's fiscal conservatism. He confirms the hypothesis that the presence of fiscally conservative voters may lead to the spending reduction in the election time. Hoolari and Omran (2017) investigate the use of government debt to increase the chance to re-election. Labonne (2016) observes robust political employment cycles on the sample of Philippine municipalities. In Slovak scientific literature, Sičáková-Beblavá and Beblavý (2009) search for the impact of political budget cycle on public procurement realized by Slovak municipalities.

## MATERIALS AND METHODS

Annual data cover period since 2000 to 2016. They are collected from the DataCentrum database at the base of Freedom of Information Act (Act No. 211/2000 Coll. on Free Access to Information and Amendments of Some Acts). DataCentrum collects municipal data following the budget approach. Data are aggregated respecting the area territorially bounded by the area of region. To the applier, they are on the disposal in the form of “Recapitulation of the municipal revenue and expenditure according to the economic classification” and “Recapitulation of municipal expenditure according to the government functions classification”. The second is known as COFOG classification abbreviated from the Classification of the functions of government (Eurostat Glossary, 2017) classifying the purposes of government activities into ten divisions. These two data resources contain

municipal data for each region separately. That is the reason why the paper focuses on econometric estimation for panel data. The panel includes eight cross-sectional units (it corresponds to eight regions at the NUTS 3 level, thereafter BA stands for area of Bratislava region, TT – Trnava region, TN – Trenčín region, NR – Nitra region, ZA – Žilina region, BB – Banská Bystrica region, PO – Prešov region and KE – Košice region) and time-series of length 17 years. Data completing the view on municipal socio-economic conditions are collected from the Eurostat database (various years) using the regional statistics at the NUTS 3 level.

For the paper purpose, dynamic panel data model is estimated using the Generalized Method of Moments (thereinafter GMM) framework including equations in level (based on the GMM system estimator, thereafter mentioned as GMM – sys, introduced by Blundell and Bond (1998) as extension of the first difference estimator of Arellano and Bond (1991)). The GMM-sys is employed also in many other studies in this field e.g. Shi and Svensson (2006), Drazen and Eslava (2010) or Efthyvoulou (2012). Presented research follows the formula used in Štátná (2015) or Chortareas *et al.* (2016):

$$y_{it} = \sum_{j=1}^p \alpha_j y_{it-1} + \sum_{k=1}^L \beta_k X_{kit} + \gamma \cdot Election + v_i + \varepsilon_{it}$$

where  $y_{it}$  is a dependent variable of cross-sectional unit  $i$  at the time  $t$ ,  $y_{it-1}$  is lagged dependent variable,  $X_{kit}$  is a vector of control variables, *Election* is an independent explanatory variable capturing the election effect,  $v_i$  presents an unobserved specific effects and  $\varepsilon_{it}$  is an error term. Dynamic model is estimated to capture the persistence in fiscal variables (Chortareas *et al.*, 2016). For small or moderate length of time series, the GMM – sys estimator is adopted in order to avoid problems of unobserved country-specific effects and the bias caused by the lagged dependent variable (Shi and Svensson, 2006). As mentions Efthyvoulou (2012), the consistency of the GMM-sys estimator depends on the condition of no second-order serial correlation and on validity of instruments.

Dependent variable is measured as municipal total expenditure in per capita terms. In Klein and Sakurai (2015), Furdas *et al.* (2015) or Sjahrir *et al.* (2013), the per capita variable is involved to the estimation to make the variable more homogenous across municipalities. Related research of political budget cycles contemplates also others dependent variables. E.g. Furdas *et al.* (2015), regard on the impact of political budget

cycle on local tax rates or administrative grants. Klein and Sakurai (2015) present tax revenues as dependent variable. Paper seeks for the electorally motivated expenditure policy. For this purpose, the municipal expenditure variable is chosen.

Explanatory variable, the political budget cycle variable (or election variable) is constructed as dummy variable reaching binary values; 1 if the considered year is a year of municipal elections, otherwise 0, as mention e.g. Klein and Sakurai (2015) or Štátná (2015). Additional investigation of the relationship between municipal political cycle and municipal expenditure introduces also a dummy variable based on the year before municipal elections following the idea of Sjahrir *et al.* (2013: 343) or Štátná (2015). They introduce a dummy variable for two pre-election years and for the election year. Beside the pre-election year, Furdas *et al.* (2015: 12) state the inclusion of post-election year indicator to capture the cycle in expenditure items “that are realized more sluggishly”. Elections at the municipal government level in Slovakia during the monitored period were held in 2002, 2006, 2010 and 2014.

To control for the municipal total expenditure, additional variables are involved to the GMM-sys dynamic panel estimation. The choice of control variables is inspired by the available empirical research. Sjahrir *et al.* (2013) use the revenue variable (using a variable of total revenue) to control for total expenditure (at the local level). They find a positive impact on government spending. In case of Slovakia, respecting the budget rules adopted by law (based on the Act No. 583/2004 Coll. on Budget Rules of the Regional Self-Administration and of Change and Amendment of Particular Acts), municipalities must construct balanced or surplus budget. Consequently, the total revenue approximately emulates the total expenditure. That is the reason of using an alternative variable defined as a municipal own revenue as a part of total municipal revenue containing tax and non-tax revenues. Expected impact of per capita municipal own revenue on total municipal expenditure is positive. Influence of tax rates on municipal expenditure is investigated in Chortareas *et al.* (2016) finding its negative but insignificant impact. The effect of the transfer fiscal category is positive in Balaguer-Coll *et al.* (2015) and positive but insignificant in Chortareas *et al.* (2016). Impact of municipal debt on municipal expenditure is investigated in Balaguer-Coll *et al.* (2015). They obtain a positive effect what influenced the expectation of its impact on municipal

expenditure in the case of Slovak municipalities. All fiscal control variables are expressed in per capita terms. Economic variable of real GDP per capita variable is involved to the estimation provided by Sjahrir *et al.* (2013) finding its positive impact on municipal expenditure contrary to findings of Furdas *et al.* (2015). Beside it, Furdas *et al.* (2015) find a positive effect using a GDP per capita growth variable. The variable of unemployment is used in Furdas *et al.* (2015). They observe its positive impact on local expenditure. In this research, the growth of GDP per capita is under the consideration. Population size and population density are demographical variables usually involved to this type of estimation. Sjahrir *et al.* (2013) and Chortareas *et al.* (2016) find negative relationship between the population size and municipal expenditure. Klein and Sakurai (2015) find this relation insignificant. Šťastná (2015) uses a population density variable and similarly to Klein and Sakurai (2015) uses the division of population according to age to elderly and young without clear and significant results. Sjahrir *et al.* (2013) consider an influence of the area, urbanization rate and literacy rate. In this paper the log of population size is involved to the estimations.

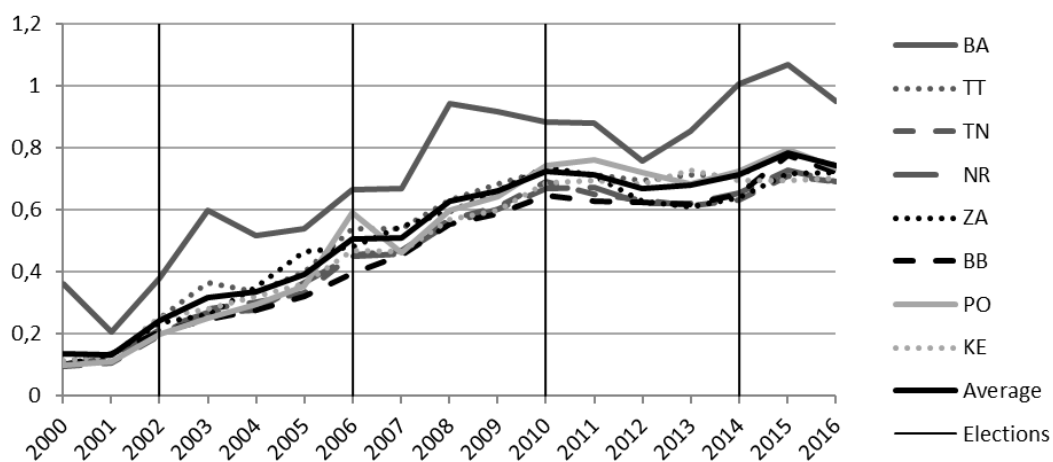
The paper does not investigate, whether the electoral fiscal manipulation is affected by ideology and political variables are not involved to the estimation (left/right wing partisan alignment as mentions Šťastná, 2015; Balaguer-Coll *et al.*, 2015 or Furdas *et al.*, 2015 etc.). Dataset nature does not allow investigating the partisan alignment of political incumbent, but covers the expenditure categories of all municipalities in Slovakia.

## RESULTS AND DISCUSSION

As the Fig. 1 illustrates, increasing trend in the per capita total municipal expenditure evolution is common for all cross-section units in sample. A prevalent part of them emulates the average value (with certain derogation e.g. as it is in case of PO in 2006). Outstanding is the level of per capita municipal expenditure in the BA region, where it is superior to those of the rest regions. It might be caused by the influence of the capital city, by the highest per capita GDP and the lowest population size in this region.

Continuous increase of per capita total municipal expenditure in the monitored period might reflect on certain key factors which had influenced the economic development in Slovakia during that time. In connection with the fiscal decentralization implementation, a stepwise shift of a wide scope of competences from central government to sub-national governments since 2002 is mirrored in the volume of their expenditure (Maličká, 2016). Since 2005, the shift of power to tax, new tax arrangements and adoption of budgetary principles for sub-national governments by related legislative framework simultaneously with the period of economic expansion in Slovakia had fortified sub-national revenue with correspondent answer on the expenditure side of sub-national budgets.

This situation with quasi idyllic conditions was interrupted by the financial crisis (in 2008) having negative impact on local sector with some delay due to the assignment of the shared tax system (observable decrease and stagnation of revenues and thus expenditure after 2010).



1: Per capita municipal expenditure in SR regions (in M Eur)

Note: Vertical lines express municipal elections.

Source: own computation



Mentioned observed increase shades the potential positive perception of the relationship between the variable of election year and per capita total municipal expenditure. However, the estimation results reveal positive and statistically significant relationship between them (see Tab. I, model (1)), although the value of coefficient (0.0277) refers on moderate (even soft) relationship. Technically, this result confirms the expectation of changing fiscal behaviour in the election time at the municipal government level in Slovakia. Similar results are findable in research of Klein (2014), Štašná (2015), Furdas *et al.* (2015), Balaguer-Coll *et al.* (2015) or Chortareas *et al.* (2016). The want of re-election and the closeness of municipal political incumbent to citizens tempt them to use available, even fiscal instruments to achieve higher popularity. Consequently, manipulation with the expenditure volume and structure leads to changes in socio-economic conditions in their jurisdiction. Enhancement felt by citizens might be temporary. It is constrained by the election time, election results and municipal budget limits in the terms of indebtedness. This is the main menace of described tendentious political and fiscal behaviour.

In the terms of the pre-election year explanatory variable (see Tab. I model (2)), the expectation of statistically significant positive effect of political cycle on per capita total municipal expenditure is not confirmed. Contrary, negative and statistically

insignificant relationship between pre-election year and per capita total municipal expenditure is observed. It might be explained in two manners. First, the political expenditure cycle in the pre-election year is not present or; second, it is not obvious, because the political incumbent does not generate any pressure to municipal expenditure in advance. It is active in the time immediate to elections to increase its own popularity without giving the space to make a retrospective evaluation to citizens. Additionally, it might reduce per capita total municipal expenditure (negative sign of coefficient) to make funds with future use. The impact of the rest of statistically significant control variables on per capita total municipal expenditure could be explained similarly to the case of model (1).

Beside it, positive and significant is relation between received transfers or grants and total municipal expenditure variable. Similarly, it is observed also in Balaguer-Coll *et al.* (2015), Furdas *et al.* (2015) or Chortareas *et al.* (2016). The increase in the transfer fiscal categories influences the increase in total municipal expenditure. Prevalent part of municipal transfers and grants in Slovakia are earmarked grants, which can only be used for a specific purpose usually during the same fiscal year. This might be the reason of its positive impact on municipal expenditure.

I: Results of GMM-sys dynamic panel data estimations ( $17 \times 8$ ) for dependent variable expressed as municipal total expenditure per capita, explanatory variable political cycle is expressed as election year (model (1)) and pre-election year (model (2))

	Election year Total Expenditure pc Model (1)		Pre-election year Total Expenditure pc Model (2)	
	Coeff.	Signif.	Coeff.	Signif.
<b>Dep.variable t-1</b>	0.3517	*	0.3420	**
<b>Grants pc</b>	0.9488	**	0.8356	**
<b>Own Revenue pc</b>	0.5997	**	0.5869	**
<b>Debt pc</b>	0.5764		0.8305	
<b>l_population</b>	-0.0017		0.0007	
<b>Political cycle</b>	0.0277	***	-0.0077	
<b>p-values of:</b>				
<b>Test for AR(1) errors</b>	0.0717		0.1122	
<b>Test for AR(2) errors</b>	0.8998		0.3174	
<b>Sargan test</b>	1.0000		1.0000	
<b>Wald (joint) test</b>	0.0000		0.0000	

Note: \*\*\* denotes significance at 0.01 level, \*\* at 0.05 level and \* at 0.1 level. Preliminary tests for a panel unit root according to Im *et al.* (2003) rejected a null hypothesis that the panel contains a unit root. Tests for serial correlation (test for AR (1) and (2) errors) confirm that models do not suffer from serial correlation. Sargan over-identification test declines the endogeneity problem. Wald test confirms model validity.

Source: own computation

Expectation of positive and significant relationship between per capita municipal own revenues and per capita municipal total expenditure (based on the results of Sjahrir *et al.*, 2013) is supported by obtained results. Increase of per capita own municipal revenue creates additional financial resources and municipal authorities are free of using it on its own purpose, contrary to earmarked grants, although grants also raise municipal revenue. Generally, the opinion of underdimensioned financing of Slovak municipalities persists and dominates. However, municipalities achieving higher own revenues create a budget surplus exceptionally. Rather they spend these sources to cover actual local needs, thus increasing the municipal expenditure.

Positive but insignificant is impact of the variable of per capita municipal indebtedness on the per capita total municipal expenditure. Negative but again insignificant is relationship between population size variable and per capita total municipal expenditure, what approximately emulates the results of estimations provided by Klein and Sakurai (2015) finding it insignificant and Chortareas *et al.* (2016) or Sjahrir *et al.* (2013) observing negative sign of the population size variable coefficient. Preliminary investigation excluded the per capita real GDP growth variable

from the further and final estimation due to near or exact collinearity.

Further decomposition of total municipal expenditure to current and capital categories and involving the per capita current and per capita capital municipal expenditure reveals certain derogation from the models presented in Tab. I. As the Tab. II shows, both political cycle variables are statistically significant in the case of per capita current municipal expenditure, while the coefficient is positive in the estimation involving the election year variable (model (3)), contrary to the pre-election year variable sign (model (5)). In estimations for capital expenditure, the political cycle variables are not significant and beside it, significance of other variables is reduced, too (see Tab. II model (4) and (6)). Observed results are in principle inconsistent with findings of other authors (respectively on research made on different sample). Klein (2014), Štašná (2015), Furdas *et al.* (2015), Balaguer-Coll *et al.* (2015) or Chortareas *et al.* (2016) found inverse relationship between election period and current expenditure, while the relation between elections and capital (investment) expenditure is positive. It indicates that in municipalities in question the opportunistic deviation during the election period is based on raise of expenditure to highly visible local public goods.

II: Results of GMM-sys dynamic panel data estimations ( $17 \times 8$ ), dependent variables are current and capital municipal expenditure per capita, explanatory variable political cycle is expressed as election year (models (3) and (4)) and pre-election year (models (5) and (6)).

	Election year				Pre-election year			
	Current Expenditure pc Model (3)		Capital Expenditure pc Model (4)		Current Expenditure pc Model (5)		Capital Expenditure pc Model (6)	
	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.
Dep. variable t-1	0.3767	*	-0.2801		0.2940		-0.3272	
Grants pc	0.2999	**	0.3477		0.3493	**	0.3556	**
Own Revenue pc	0.6270	***	0.1123		0.6364	***	0.1152	
Debt pc	-0.2263		0.6205		-0.0183		0.7055	
l_population	0.0004		0.0019	**	0.0016		0.0022	**
Political cycle	0.0081	**	0.0145		-0.0080	**	0.0020	
<b>p-values of</b>								
Test for AR(1) errors	0.4770		0.7804		0.4504		0.9261	
Test for AR(2) errors	0.0140		0.2755		0.0234		0.1715	
Sargan test	1.0000		1.0000		1.0000		1.0000	
Wald (joint) test	0.0000		0.0000		0.0000		0.0000	

Note: \*\*\* denotes significance at 0.01 level, \*\* at 0.05 level and \* at 0.1 level. Preliminary tests for a panel unit root according to Im *et al.* (2003) rejected a null hypothesis that the panel contains a unit root. The condition of AR (2) is not satisfied in models (3) and (5). Sargan over-identification test declines the endogeneity problem. Wald test confirms model validity.

Source: own computation

III: Correlation matrix of municipal political budget cycle and COFOG divisions and among COFOG divisions

	EL <sub>t</sub>	EL <sub>t-1</sub>	01	02	03	04	05	06	07	08	09	10
EL <sub>t</sub>	1	/	0.07	0.13	0.09	<b>0.25</b>	0.08	<b>0.21</b>	-0.02	<b>0.17</b>	-0.08	-0.13
EL <sub>t-1</sub>	/	1	-0.02	-0.04	-0.04	-0.07	-0.02	-0.05	-0.07	<b>0.10</b>	0.07	0.07
01			1	0.14	0.49	0.42	0.40	0.53	0.17	0.47	0.63	0.50
02				1	0.23	0.23	0.26	0.14	-0.03	0.19	0.18	0.23
03					1	0.12	0.46	0.61	0.29	0.68	0.78	0.50
04						1	0.24	0.10	-0.05	0.17	0.25	0.23
05							1	0.49	0.19	0.34	0.47	0.51
06								1	0.46	0.65	0.54	0.31
07									1	0.56	0.25	0.18
08										1	0.62	0.43
09											1	0.81
10												1

Note: EL<sub>t</sub> denominates municipal political cycle variable in the election year, EL<sub>t-1</sub> denominates variable of municipal political cycle based on the pre-election year. Areas highlighted by blue present positive correlation between municipal political cycle variable and corresponding COFOG divisions. Areas in bold show the highest values of positive correlation coefficients. COFOG divisions are: 01 General public services, 02 Defence, 03 Public order and safety, 04 Economic affairs, 05 Environmental protections, 06 Housing and community amenities, 07 Health, 08 Recreation, culture and religion, 09 Education, 10 Social protections.

Source: own computation

To elicit which municipal expenditure categories are in positive relationship with the political cycle variables, the correlation based on Pearson (product-moment) correlation coefficient is computed (see Tab. III). Public expenditure categories are in accordance with the COFOG classification. Row 2 of Tab. III presents correlation coefficients between the year of municipal level election in Slovakia and each COFOG division. Correlation coefficients are positive in prevalent part of divisions. The highest values are obtained for the division of Economic affairs, Housing and community amenities and Recreation, culture and religion. As the correlation coefficient values fall into an interval from 0.1 to 0.3, the positive correlation is considered as weak, what mirrors the volume of the political cycle variable coefficient presented in Tab. I and Tab. II. Findings about the positive correlation between the election year and expenditure categories partially correspond to those observed in Štastná (2015), Köppl-Turyna *et al.* (2015) or Drazen and Eslava (2010), where i.a. The expenditure manipulation is linked to housing and leisure. The positive

correlation in the case of the Economic affair division also indicates the raise in the municipal government activities in the election time. In the pre-election year (see Tab. II row 3), the major part of divisions is negatively correlated with the pre-election period, contrary to the results demonstrated in the Tab. III row 2, where the divisions are prevalently positively correlated with the election year. The correlation coefficients between pre-election year before and COFOG divisions are positive in case of Recreation, culture and religion, Education and Social protection. Except of division 08 (Recreation, culture and religion), row 2 and row 3 of Tab. III show antagonistic behaviour of municipal governments in the municipal elections year and in the pre-election year, what again corresponds to the sign of the pre-election variable coefficient (Tab. I model (2)). However, the predominant positive relation between municipal political cycle and COFOG divisions (the case of election year) might indicate the confirmation, validity of the political expenditure cycle hypothesis at the municipal level in Slovakia.



## CONCLUSION

Addressed fiscal changes made by the political incumbent before elections when seeking for re-election are known as political budget cycles. Such a fiscal manipulation might have negative impact on public good provisioning even on municipal level of government. Raise of municipal expenditure in more visible goods might not refer on fundamental local needs and might create a future pressure on municipal budget. Presented paper provides the investigation of the presence of political expenditure cycle at the municipal level in Slovakia. In this manner, in Slovak conditions, it tries to describe a situation, when municipal political incumbent behaves opportunistically in the election time and manipulates with the volume and structure of the municipal expenditure to increase own chances of re-election. Results of dynamic panel data estimations using the GMM framework based on the system estimator confirm the presence of the political cycle at the municipal government level in Slovakia in the case of the election year variable involved to the estimation, while the pre-election year is not significant. Beside it, positive significant relationship between certain control variables and per capita total municipal expenditure is observed. Increase of fiscal categories as transfers and grants or own revenues, creates additional financial resources. Municipalities spend them to provide actual or immediate needs, what directly increases the expenditure side of the municipal budget. Moreover, prevalent part of transfers and grants received by Slovak municipalities is earmarked, where the purpose is predetermined and attached to the current fiscal year. Unfortunately, further decomposition of the per capita total municipal expenditure to current and capital categories is not consistent with findings presented in related research. While in case of Slovakia the estimation reveals the positive relationship between the election year variable and per capita current expenditure, in other researches as Klein (2014), Štastná (2015), Furdas *et al.* (2015), Balaguer-Coll *et al.* (2015) or Chortareas *et al.* (2016) is this relationship negative. Negative significant coefficient of election variable is obtained in the case of pre-election year variable. In the case of per capita capital municipal expenditure, the political cycle in Slovakia is not present, contrary to results of hereinbefore researches, where the municipal political budget cycle tends to raise the expenditure in more visible areas. Investigating the correlation between both political cycle variables and expenditure COFOG divisions, the positive correlation dominates in the case of election year variable use and its relevant values are observed in the divisions of Economic affairs, Housing and community amenities and Recreation, culture and religion, similarly to results presented by Drazen and Eslava (2010), Štastná (2015), or Köppl-Turyna *et al.* (2015). However, even if presented results are not fully consistent with those of other authors, findings indicate the presence of the municipal political budget cycle. Analysis provided in the paper might extent the related current research and contributes to diminution of the existing gap in this research area in Slovakia.

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