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Political tax cycles: Cyclicality of the tax burden in election periods

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ABSTRACT
The article discusses changes in the tax burden in election and post-election years in countries with different levels of economic and political development. The study uses the data on 121 countries for the period between 1991 and 2019 to test two hypotheses: 1) in election years, governments tend to boost spending while in post-election years government expenditures decline, which determines a similar dynamic of the tax burden; 2) in election years the tax burden decreases and in post-election years it either increases or decreases at a slower rate than in election periods. Methodologically, the study relies on multi-factor regression analysis of panel data. As a result, the first hypothesis is confirmed for high-income countries where the governments increase their spending to ensure the incumbent's re-election and cut their expenditures after the election. In developed countries, in election years, the government's spending was 0.4% higher than in other periods. In developed countries, governments were motivated to raise rather than reduce the tax burden in order to compensate for their increased expenditures. No common pattern of declining tax burden in election periods was detected for all observed countries, for groups of countries by income level (high-income, middle- or low-income) or for groups of countries by political regime type (democratic and non-democratic – hybrid or authoritarian). However, the analysis of the annual data on taxes has shown that the decline in the tax burden can occur in countries with developing economic and political systems as was the case with Armenia, Russia and Ukraine in 1992–2019. In general, the findings demonstrate that the governments are more prone to using monetary and fiscal rather than tax instruments in election periods.

KEYWORDS
tax burden, tax policy, political business cycles, election, political economy

JEL H22, E32, O50, P16

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Политические налоговые циклы: цикличность налоговой нагрузки в электоральные периоды

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АННОТАЦИЯ
Статья посвящена исследованию изменений налоговой нагрузки в электоральные периоды. Ее целью является подтверждение или опровержение существования политических налоговых циклов (то есть изменений налоговой нагрузки в годы выборов и после выборов) с выявлением специфики в группах стран

с разным уровнем экономического и политического развития. На примере 121 страны за период с 1991 по 2019 г. протестированы две гипотезы: 1) о росте бюджетных расходов в год выборов и их снижении в год после выборов, что служит стимулом для аналогичной динамики и налоговой нагрузки во избежание бюджетного дефицита; 2) о снижении налоговой нагрузки в электоральный год и ее повышении или снижении меньшим темпом в постэлекторальный год. С помощью многофакторного регрессионного анализа панельных данных была подтверждена первая гипотеза о наличии политического бюджетного цикла в группе стран с высоким уровнем экономического развития: власти этих стран в год выборов повышали бюджетные расходы, а в год после выборов снижали бюджетные расходы. В развитых странах рост бюджетных расходов в электоральный год был на 0,4% выше, чем в иные периоды. В развитых странах в электоральные годы у властей наблюдались стимулы повышения, а не снижение налоговой нагрузки для финансирования роста бюджетных расходов. Общего правила о снижении налоговой нагрузки в электоральные периоды выявлено не было как для всех рассматриваемых стран, так и для групп стран с высоким, невысоким (средним, низким) уровнями экономического развития, а также для групп стран с демократическими и недемократическими (гибридными, авторитарными) режимами. При этом отмечена возможность снижения налоговой нагрузки в рамках электоральных циклов в группах стран с развивающимися экономическими и политическими системами, что было подтверждено на годовых данных налоговой нагрузки в Армении, России и Украине за период с 1992 по 2019 г. В целом результаты демонстрируют предпочтения властей использовать преимущественно монетарные и бюджетные, а не налоговые инструменты в электоральные периоды.

КЛЮЧЕВЫЕ СЛОВА
Налоговая нагрузка, налоговая политика, политические циклы деловой активности, выборы, политическая экономия

1. Introduction

Elections are always a test for incumbent governments. To maximize their chances of successful re-election, policymakers want to appear competent in the eyes of the voters and employ a variety of instruments, including economic ones. After the election, this impulse recedes and the economic policy gets back to normal.

This article places a special accent on the observations in electoral and post-electoral years, because such observations are more likely to shed light on the phenomenon of political business cycles (PBCs). The latter are commonly understood as political processes shaping the economic policies of governments in electoral periods. Therefore, while focusing on this or that economic instrument, one should always remember that it plays a secondary role and keep an eye on the general political and economic context.

PBCs depend on the level of democratic development in a given country. In democratic countries, during election periods, economic instruments are mostly oriented towards winning the support of the electorate, and in non-democratic countries, towards the system of public administration. Thus, for democratic countries, there are significant differences between presidential and parliamentary elections. In presidential countries, government tends to employ economic instruments more actively when preparing for presidential elections than for parliamentary elections. In parliamentary republics, the situation is the opposite, and government focuses on parliamentary elections.

In non-democratic countries, governments are pursuing different goals, for example, they seek to maintain political stability, which is why, regardless of the type of political system, presidential and parliamentary elections are taken equally seriously. The research evidence indicates that elections are necessary for non-democratic countries to test their political systems, redistribute power within the elites, collect information about the local problems [1], and test the loyalty of regional authorities [2; 3].

This research covers the countries with different political systems – presidential and parliamentary – and with different levels of democratic development (democratic and non-democratic countries with hybrid and authoritarian regimes).

PBCs are classified depending on the economic goals and instruments used in election periods. For example, the most general PBC is observed when governments are trying to manipulate macroeconomic indicators, such as economic growth, unemployment and the balance of payments [4]. For instance, governments may try to adjust the business cycle in order to stimulate economic growth and increase employment in the election year. Yet another example is the monetary cycle, which means that the government concentrates on inflation, the money supply, interest rate, volume of lending, and the exchange rate [5]. In this case, governments may lower the interest rate, increase lending by state-owned banks in order to raise wages in the state sector or use monetary instruments to curb inflation, and ensure exchange rate stability in the election year in order to boost real disposable income in the country.

The main focus of this study is made on political budget cycles, which means that fiscal instruments are used more actively than usual in election periods. This includes increased public spending, with some of the funds being targeted at specific voters' groups – people dependent on budget transfers (civil servants, students, pensioners, and the 'core electorate'). A political budget cycle may also be implemented in the form of tax cuts in election periods [6]. This aspect – the tax burden – will be considered further in more detail. The vision of a political tax cycle is the government using taxes more actively in the election year and less actively in the post-election period.

Specific characteristics of political tax cycles may be determined by the level of economic development in this or that country – its economic structure, the government's spending power, budget policy priorities and priorities of the economic policy in general, the level of the government's expertise, and the electoral effects of other economic instruments. There is a number of studies that demonstrates that the governments of high-income countries tend to rely on fiscal instruments more [6] while those of developing countries sometimes give preference to tax tools [7–9]. The study of former European communist countries has shown that after they entered the EU, their governments started actively using fiscal expansion instruments in election years [10].

This study of political tax cycles relies on the data for countries with different levels of economic development, including some emerging countries such as members of the Eurasian Economic Union (EAEU) and Ukraine. This paper aims to test the hypotheses about the existence of political tax cycles (changes in the tax burden in election and post-election years) and to shed light on the corresponding characteristics of countries with different levels of economic and political development.

This article comprises several sections. The first, introductory section is followed by a review of the research literature on PBCs and the role taxes play in these processes. In the third section, the hypotheses are formulated and the methodology for their testing is described. The hypotheses are tested on the data of 121 countries for the period of 1991–2019. The fourth section discusses the results of the analysis while the fifth section summarizes the key findings.

2. Literature review

The first highly cited seminal researches on PBCs were published in the 1970s [11]. These included the studies of Ray C. Fair, who analyzed the data on US presidential elections between 1916 and 1976 to show that successful economic performance influences voters' preferences – a 1% economic growth will bring the incumbent about 1% of extra votes [12].

The 1970s, which saw a surge of scholarly interest in PBCs, was a time when, after a long period of economic stability, the world entered the economic turmoil resulting from the 1973 oil price shock, the end of the gold-dollar standard and the switch to floating exchange rates and the resulting rise in inflation. Governments could no longer count on favorable conditions in raw materials markets and had to go to great lengths to show the results of their proactive economic policies to voters during election periods. Looking for ways to 'pump up' the economy and to show the electorates their efficiency in the short term, governments increased their debt levels, which led to a series of major debt crises in the 1980s and 1990s. In the 2000s and 2010s, politicians came to be perceived as meritocratic economists, they were expected to deliver specific economic targets (economic growth, low inflation and low unemployment) [4] rather than defend certain political values, pursue justice and fulfil their pre-election pledges [13]. In his recent book Michael Sandel describes the situation of the 'tyranny of merit', where the 'meritocratic hubris' of professional and political élites made them look down on their less fortunate fellow citizens and feel unaccountable to them [14]. As a result, electors start feeling cut off from any economic decision-making and experience enormous resentment against the elites, which leads them to vote for populist demagogues instead of liberal meritocrats. Economic populism has turned out to be simpler, more understandable and inspiring for voters. Importantly, more often than not, populists do not take the trouble of giving detailed accounts about the economic outcomes of their policies to voters in pre-election periods [15].

The studies on PBCs mainly describe the two types of economic tools used by governments: monetary and fiscal tools. The studies that focus on monetary instruments usually deal with the changes in the money supply and inflation [16], in the exchange rate [17], interest rate, volume of lending, especially by state-owned banks [18] or non-bank lending institutions [19]. The studies on fiscal instruments examine the changes in government spending and budget deficit [6], budget transfers and public consumption [20], and the external debt [21].

Supposedly, if a country's central bank is independent and in control of the monetary policy, monetary instruments become less accessible to the political government. Sometimes, however, governments of developed countries resort to monetary instruments although this does not always help them boost macroeconomic indicators for the elections. The study of a sample including 18 OECD countries did not find any evidence of enhanced economic growth in election periods, but it did detect an expansionary monetary policy in election years as well as an inflationary effect arising after the elections [5; 16].

A significant body of research focuses on taxes as one of the major instruments of fiscal policy in the context of PBCs [9; 20; 22–28]. Fines can also be considered as a kind of a tax instrument: as the case of Italian municipalities has shown, fines are also exhibiting cyclical behavior – less fines are handed out and less fines are collected in percentage of fines issued in election years in comparison with other periods [29]. Unfortunately, in the researches no consensus has been reached concerning the influence of electoral periods on fiscal policies, tax burden (nominal and real), tax rates, and tax legislation. There is evidence that in economically and politically developed countries, governments tend to increase public expenditure instead of lowering tax rates during the elections [26]. There is another study that used panel data for the post-war period and did not confirm that in election years governments reduced tax rates [30]. Similarly, no evidence was found for tax changes induced by elections in the EU between 1965 and 1997 [28] and in 13 Western European countries between 1985 and 2005 [31]. The study of political cycles in Italian municipalities (mayor elections) has shown the cyclicality of the personal income tax but failed to detect a similar impact of the electoral cycle on the property tax rates [32]. Moreover, there is research evidence showing the existence of political tax cycles in some developing countries, for example, in Russia [9], Turkey [7; 33], and the Czech Republic [8].

To summarize this literature review, there are several major highlights that should be pointed out. First, the initial outburst of researches on the use of economic instruments in electoral periods was prompted by the reform of the global monetary system in the 1970s, high world inflation, including raw material prices, and voters' expectations concerning the governments' responses to these new economic challenges. In the public opinion, the politicians were regarded as economists advocating meritocracy. Economic populism gained ground in many countries and held it for recent decade.

Second, there is sufficient evidence showing that, in the run-up to elections, governments seek to deliver specific economic targets (economic growth, low inflation, and low unemployment) to gain voters support, which is achieved by manipulating monetary and fiscal tools. In developed countries, the use of these tools affects the growth in inflation and budget deficit in post-election years but does not always bring about economic growth or a decline in unemployment in election years.

Third, tax instruments are also used in election periods but this cannot be regarded as a common pattern and neither has the academic community reached any consensus about their effect. There are, however, cases of developed countries where tax tools were used in municipal elections and cases of governments in emerging countries doing the same.

3. Hypotheses and methodology

This paper is going to discuss and test two hypotheses about the cyclical behavior of governments' expenditures and tax burden in electoral periods.

*Hypothesis H*1: in election years, the government increases its expenditures and after the election, the expenditures either grow more slowly or start to decline. An increase in spending prompts the government to raise the tax burden to restore the budget balance and prevent a budget deficit in the election year.

*Hypothesis H*2: in election years, the tax burden decreases and in post-election periods, it increases or decreases at a slower rate. This happens because in election years, governments tend to be more politically motivated to stimulate economic growth by reducing the tax burden and increasing it in the post-election year once their political priorities change.

Political budget and tax cycles are expected to differ in countries with different levels of political and economic development.

This study tests the above-described hypotheses by using the data on 121 countries from 1991 to 2019. All the countries were divided into parliamentary and presidential, and the data were analyzed for election and post-election periods. For parliamentary countries, the dates of parliamentary elections were used and for presidential countries, the dates of presidential elections.

The data were analyzed by applying the methodology described in [34] for 1991–2017 [35] and 2018–2019[1]. To examine the cyclicality of the tax burden in different countries, the countries in the sample were divided into several groups. First, the countries were divided by the level of income into high-income countries (according to the classification of the World Bank in 2019, these are the countries with a gross national income per capita of US$12,300 or more, calculated using the Atlas method) and low- and middle-income countries (gross national income below US$12,300). In terms of their political development, the countries were divided into democracies (those whose EIU Democracy Index of 2019[2] was above 6)

[1] EG (2021). Election Guide. Democracy Assistance and Election News. Available at: https://www.electionguide.org/. Date of access: 10.03.2021

[2] Democracy Index 2019. A Year of Democratic Setbacks and Popular Protest. A Report by The Economist Intelligence Unit. 2020. Available at: https://www.in.gr/wp-content/uploads/2020/01/Democracy-Index-2019.pdf

and hybrid and authoritarian regimes (the Democracy Index below 6).

The political indicators were adopted from the methodology of the Economist Intelligence Unit[3] and the economic indicators, from the World Bank's data[4]. Due to the lack of data, for the analysis of countries with different levels of democratic development, 12-year periods were used instead of 29-year periods, like for other groups of countries: 2006, 2008, 2010–2019.

This study follows the methodological approach adopted in other studies of PBCs [6; 36]: to test the hypotheses, the method of multi-factor linear regression analysis of panel data was used. The analysis was conducted with the help of SPSS Statistics software.

Two dependent variables were analyzed – government spending to GDP and the tax burden, that is, tax to GDP. In the analysis of the first dependent variable of government spending, the second (tax burden), in addition to other indicators, was used as an independent variable.

$$Y_{it} = \beta_0 + \beta_1 \cdot X_{1it} + \ldots \beta_k \cdot X_{kit} + \varepsilon_{it}$$

$i = 1, \ldots, 121$ for all countries;

$i = 1, \ldots, 46$ for high-income countries;

$i = 1, \ldots, 77$ for low- and middle-income countries ;

$i = 1, \ldots, 66$ for democratic countries;

$i = 1, \ldots, 40$ for countries with hybrid and authoritarian regimes;

$t = 1, \ldots, 29$ (1991, 2019) for all countries with different levels of economic development;

$t = 1, \ldots, 12$ (2006, 2008, 2010, 2019) for countries with different political regimes;

$k = 1, \ldots, 7$;

Y_{1it} = Expens – government spending to GDP;

Y_{2it} = Tax – tax revenue to GDP ratio;

X_{1it} = log GDP per capita – the logarithm of GDP based on PPP per capita in current international dollars;

X_{2it} = Tr – sum of exports and imports as percentage of GDP;

X_{3it} = Pp15 – demographic indicator characterizing the ratio of under-15-year-olds to the working-age population (people aged 15–64);

X_{4it} = Pp65 – demographic indicator characterizing the ratio of the elderly population aged 65 and over to the working-age population (people aged 15–64);

X_{5it} = GDP_HP – cyclical component in the dynamics of real GDP calculated as the difference between the common logarithm of GDP based on PPP in current international dollars and the same indicator filtered through the Hodrick–Prescott filter;

X_{6it} = ElecY – Boolean variable assigned value 1 in the presidential election year in presidential countries and in the parliamentary election year in parliamentary countries, and value 0 in other years;

X_{7it} = Elec(Y + 1) – Boolean variable assigned value 1 in the year following the presidential election in presidential countries and the year following the parliamentary election in parliamentary countries, and value 0 in other years.

4. Results

Testing of Hypothesis 1. The multi-factor linear regression analysis of government spending, whose statistical model also included independent predictor *Tax* (tax revenue in percentage of GDP), has brought the following results (see Table 1).

For countries with hybrid and authoritarian regimes, the statistical results were insignificant with a low coefficient of determination (adjusted R^2). For other countries, a relatively high coefficient of determination was obtained, which was close to 0.7.

In general, it was found that the governments increased their spending in election years in comparison with other years. The same happened in post-election periods although to a lesser extent. It is remarkable that the governments in highly developed countries increased their expenditures more in election years than in post-election years while in low- and middle-income countries, on the

[3] Democracy Index 2019. A Year of Democratic Setbacks and Popular Protest. A Report by The Economist Intelligence Unit. 2020. Available at: https://www.in.gr/wp-content/uploads/2020/01/Democracy-Index-2019.pdf

[4] WB. (2021). The World Bank Open Data. https://data.worldbank.org/

contrary, the governments spent more in post-election years than in election years. In the 12-year period of observation, governments in democratic countries spent less in election years.

The statistically significant results show that the maximum difference between the growth in government spending to GDP in election years and the growth in post-election years was characteristic of high-income countries. In these countries, in election years, the governments' expenditures grew almost 0.4% faster than in other years. If to compare these results with those of previous research based on similar statistical methods, it could be seen that this indicator increased over time. For example, Brender and Drazen used 1,638 observations in 68 countries over the period of 1960–2001 to show that governmental expenditures to GDP grew by 0.07% in election periods in comparison with other periods [6].

Thus, the hypothesis about the existence of political budget cycles was confirmed for all groups of countries (except for non-democratic ones), that is, government expenditures rose in election years and declined or grew more slowly after the elections. This might point to the fact that the governments were economically motivated to increase the tax burden to prevent a budget deficit in election years due to increased spending.

Testing of Hypothesis 2. The multi-factor regression analysis of dependent variable *Tax* (tax revenue in percentage of GDP)) has not brought any statistically significant results with a sufficiently high coefficient of determination of adjusted R^2 (see Table 2). The comparison of different groups of countries has shown that low- and middle-income countries and countries with hybrid and authoritarian regimes have the highest determination coefficient and correlation coefficients.

Table 1

Results of multi-factor regression analysis of the dependent variable of government spending

Expens[1]	All countries		High-income countries		Low- and middle-income countries		Democracies		Hybrid and authoritarian regimes	
	ElecY	ElecY+1	ElecY*	ElecY+1*	ElecY	ElecY+1	ElecY*	ElecY+1*	ElecY*	ElecY+1*
Coefficient B	0.243	0.157	0.396	0.076	0.077	0.202	–0.222	–0.288	1.092	1.193
T-statistic	0.704	0.453	0.674	1.3	0.193	0.502	–0.466	–0.601	1.357	1.456
Adjusted R^2	0.642	0.642	0.605	0.605	0.608	0.608	0.690	0.690	0.261	0.261
F-statistic	498.082	497.966	183.361	183.201	244.999	245.078	197.482	197.549	19.221	19.276
DW statistic	0.313	0.312	0.353	0.352	0.458	0.459	0.511	0.516	0.403	0.414
Number of countries	107	107	46	46	77	77	66	66	40	40
Number of observations	1945	1945	834	834	1101	1101	618	618	363	363
Observation period, years	29	29	29	29	29	29	12	12	12	12

Note: [1] *Expens* is a dependent variable; independent variables are *Tax, Lgdp_pc, Tr, Pp15, Pp65, GDP_HP, ElecY* (or *ElecY*+1).

* Significant at the level of 1%.

Source: author's calculations

Table 2

Results of multi-factor regression analysis of the dependent variable of the tax burden

Tax[1]	All countries		High-income countries		Low and middle-income countries		Democracies		Hybrid and authoritarian regimes	
	ElecY*	ElecY + 1*	ElecY*	ElecY + 1*	ElecY*	ElecY + 1*	ElecY*	ElecY + 1*	ElecY*	ElecY + 1*
Coefficient B	–0.274	–0.113	–0.438	–0.360	0.051	0.167	0.031	0.375	–0.114	–0.468
T-statistic	–0.850	–0.007	–0.747	–0.616	0.152	0.494	0.057	0.691	–0.197	–0.791
Adjusted R^2	0.299	0.298	0.238	0.237	0.310	0.310	0.237	0.238	0.354	0.355
F-statistic	141.492	141.348	44.538	44.499	85.495	85.549	33.231	33.336	34.480	34.634
DW statistic	0.182	0.182	0.219	0.219	0.378	0.378	0.456	0.459	0.424	0.429
Number of countries	108	108	47	47	83	83	61	61	44	44
Number of observations	1980	1980	839	839	1131	1131	622	622	367	367
Observation period, years	29	29	29	29	29	29	12	12	12	12

Note: [1] *Tax* is a dependent variable; independent variables are *Lgdp_pc, Tr, Pp15, Pp65, GDP_HP, ElecY* (or *ElecY* + 1).

* Significant at the level of 1%.

Source: author's calculations

Thus, the second hypothesis about the existence of political tax cycles has not been confirmed. These results in general correspond to the findings of previous studies, which present a somewhat ambivalent picture.

Hypothesis testing leads to the following conclusions.

First, the main tool used by governments in pre-election and post-election periods is increased spending, which makes them more economically motivated to raise more taxes to avoid a budget deficit. The political budget cycle is mostly typical of high-income countries. In election years, the expenditures of governments in these countries grew 0.4% faster than in other periods while in post-election years, this figure was 0.07%. Therefore, in high-income countries, in pre-election periods, the tax burden is more likely to rise than to fall, demonstrating the same pattern as governments' expenditures.

Second, the study detected no statistically significant patterns of the tax burden's decline in election periods or its increase after the elections.

Third, the cyclicality of the tax burden in election periods has the highest statistical significance in low- and middle-income countries and in countries with hybrid and authoritarian regimes.

Therefore, it makes sense to look for the existence of political tax cycles in countries with low levels of economic and political development, which is why the focus was made on EAEU countries and Ukraine in 1992–2019. As a result of the above described statistical modelling procedure performed with the help of SPSS Statistics, no statistically significant results were found and, therefore, the cyclicality of the tax burden in election periods in Belarus, Kazakhstan and Kyrgyzstan cannot be confirmed. Political tax cycles were detected in Armenia, Russia and Ukraine. In Armenia, the tax to GDP ratio decreased in election years in comparison with other periods. This indicator grew faster in election than in post-election periods. After the elections the tax burden declined, but more slowly. The coefficient of determination (adjusted R^2) between the tax burden and election periods in Armenia was quite high – 0.965. In Russia and Ukraine, the tax burden decreased in election years in comparison with other periods and rose after the elections. This contrasts with the situation in Armenia, where in post-election years the tax burden declined but more slowly. Both Russia and Ukraine were found to have high determination coefficients (adjusted R^2) – 0.836 and 0.827 respectively. Thus, political tax cycles were detected in some of the countries with developing political and economic systems.

5. Discussion

To discover political tax cycles and shed light on the changes in the tax burden in election periods, two opposing hypotheses were formulated.

Hypothesis *H*1 stated that the main fiscal instrument used by governments in election periods is increased spending rather than tax revenue. This shapes the dynamics of the tax burden in election periods, that is, in election years, the tax burden was used to cover the cost of government spending, so in fact taxes played a role that was secondary to the government's expenditures and 'mirrored' them. Thus, according to this hypothesis, political tax cycles are associated with an increase in the tax burden in election years followed by its decline in post-election periods.

On the other hand, Hypothesis *H*2 stated that in order to stimulate economic growth and convince the electorate that their approach to economic management is effective, governments will reduce the tax burden in election years. In this case, the concept of political tax cycles implies a reduction in the tax burden in election years followed by its rise in post-election periods.

The first hypothesis was confirmed and the second refuted. In other words, the majority of political tax cycles are associated with increased tax burden in election years, rather than decreased one. In all likelihood, governments do not choose to reduce the tax burden because increased spending on social protection (pensions, disability benefits, etc.) and salaries has a more direct and tangible effect on the electorate in the short term.

This fact is supported by the available research evidence, especially from studies of developed countries where the main accent was placed on public spending and budget deficit rather than tax instruments [6]. Depending on the structure (the prevalence of business corporations among the taxpayers), an increase in the tax burden in election years to cover the government's overspending means that the government redistributes corporate financial resources via the state budget to gain voters loyalty. Moreover, as the tax burden increases in the election year, the government put more pressure on the economy, which in some cases impedes economic growth in the election period. The research evidence does not confirm the existence of PBCs related to economic growth in election periods [5; 15; 37].

However, the possibility of reduced tax burden in election years followed by its increase after the elections cannot be entirely excluded, even if this hypothesis was not confirmed for the observed groups of countries. Relatively significant statistical results were obtained for low- and middle-income countries as well as for countries with hybrid and authoritarian regimes. There is sufficient research evidence to show that in some developing countries the tax burden was in fact declining in election periods [7–9; 33]. Governments in developing countries may have different political and economic motivations to reduce the tax burden in election periods: in the case of authoritarian governments, these may include subjective preferences of certain tax instruments; low competence of the economic governmental agencies and the use of a wide range of economic instruments, including those based on taxation, in the hope of not missing out opportunities; corporate lobby of taxpayers pushing to reduce the burden, and so on. Within the general picture, however, isolated cases of reduced tax burden in election periods appear to be more an exception than a rule. When political and economic systems emerge and start evolving, the tax burden in election periods may decrease but as the country develops politically and economically, the tax burden tends to grow in election years.

Regarding the role of the tax burden in PBCs, there is a number of studies showing that governments tend to prioritize monetary rather than fiscal tools [16–19] since the former produce faster and more visible short-term macro-economic results. To influence target electoral groups, preference should be given to fiscal instruments. In this matrix of political and economic instruments, those based on taxation play only a supporting role, providing funds to compensate for increased government spending.

Finally, it should be noted that in election periods, governments may use tax instruments that, as long as the same level of the tax burden is maintained, may contribute to the attainment of the government's political goals. These instruments may target not the electorate but the political opponents: the latter can be subjected to tax audits in search of the past or present non-compliance or to biased assessment of tax declarations and similar. Thus, in addition to their normal fiscal and stimulating functions, tax instruments start to be used to intimidate and harass members of the opposition.

6. Conclusions

*Hypothesis H*1 about the existence of political budget cycles was confirmed for all groups of countries (except for non-democracies). In election years, the governments of high-income countries often spent more and in post-election periods, on the contrary, made cuts to their spending. This might signify that in election years, governments are economically motivated to increase the tax burden to compensate for their overspending and to avoid running a budget deficit. Thus, if the tax burden does change in the election period, it tends to grow in the election year and decrease afterwards, 'mirroring' the changes in government expenditures.

*Hypothesis H*2 about the existence of political tax cycles in groups of countries with different levels of political and economic development was refuted.

From the above, the following conclusions can be reasonably drawn:

No substantial evidence was found indicating the existence of political tax cycles in the last decades. Within PBCs, fiscal policies were rarely used by governments to demonstrate their efficiency to the electorate. This might be explained by the fact that, although governments strive to gain voters support and stimulate economic growth through various instruments, they generally appear unwilling to use tax instruments for this purpose due to the lack of confidence in their efficiency. Governments of high-income countries tend to use increased budget spending rather than tax revenue as part of political budget cycles.

Political tax cycles were only observed in some developing countries, where the governments reduced the tax burden in election years. No common pattern was detected among the countries sharing certain political and economic characteristics; however, some evidence was found that in Armenia, Russia, Turkey, Ukraine and the Czech Republic, the tax burden declined in election periods. Governments in these countries tended to reduce the tax burden for political reasons in election years and in post-election periods either to raise it or reduce it at a lower rate.

Political tax cycles usually occur in developing countries when other instruments fail to produce the desired effect. For example, the government may decide to stick to fiscal and tax instruments and exclude monetary ones, thus keeping the monetary policy independent of political pressures. Nevertheless, due to budget constraints, the high lending interest rates, shortage of resources in the domestic financial market, and budget deficit, the government may have nothing else to do but to manipulate the tax burden in the election period by adjusting its level or the tax rates, tax exemptions and tax base.

The practical implications of this study are as follows. In general, in election periods, governments tend to manipulate the tax burden as an auxiliary tool to compensate for their overspending. This can be explained by the fact that the use of the tax burden for short-term purposes (in preparation for elections) may fail to produce the desired effect and instead have a long-term structural effect on the economy (whether the government wants it or not). Therefore, in order to maintain the effect of the tax burden on the economic growth and to ensure the manageability of short- and long-term tax reforms, it is important that political tax cycles should be determined by economic rather than political reasons. In practical terms, it means that political tax cycles should be taken into consideration in economic policy-making rather than in political economy.

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