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Do elections influence taxation?

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Abstract

This paper focuses on electoral cycles in the Walloon region of Belgium. More specifically, this research analyzes how election years impact fiscal revenues using theoretical frameworks relative to political budget and political fiscal cycles. The object of this research is to show if different results can be observed based on the data of all the municipalities of an area and if these well-known political budget and fiscal cycles can be identified both before and after the election year. Drawing on a panel dataset of 262 Belgian Walloon municipalities from 2001 to 2017, our results indicate that the analysis of all 262 municipalities show similar patterns to previous studies. Notwithstanding, this research also establishes the significant impact of elections on fiscal revenues with a preliminary decrease followed by an increase of tax rates.

1 Introduction

It is hard to dispute that public expenditures and revenues, both at a local level and at other levels of government, tend to fluctuate over time (Monnier and Tinel 2006; Barro 1974; Cotis et al. 1998; Auerbach and Gorodnichenko 2013; Montes and Acar 2018; Jargowsky 1996; Madden 2001). While numerous studies identify various reasons for these variations, few of them focus on how public expenditures and revenues vary over time and follow a specific cycle.

Several scholars have tried to answer this open question as election time being the explanatory factor. Theories of political budget cycles (P.B.C.) (Rogoff and Sibert 1988; Nordhaus 1975) stress the impact of elections on expenditures and revenues in the financial management of a municipality. Other related studies which could be named political fiscal cycle (P.F.C.) also investigate the effect of elections on the fiscal policy of municipalities (Alesina, Roubini, and Cohen 1997; Kneebone and Mckenzie 2001). This stream of research posits that elections affect different elements, in particular fiscal revenues, expenses or taxation rates of a given municipality (Bee and Moulton 2015; Garcia-Sanchez, Prado-Lorenzo, and Cuadrado-Ballesteros 2011).

If P.B.C. and P.F.C. theories clarify reasons for theses variations on the eve of an election, some questions remain unclear regarding these theories. Firstly, if it is a well-proven fact that these cycles may exist during election years (Bee and Moulton 2015; Ferreira and Gyourko 2009), questions could emerge with regards to other intermediate years. Indeed, preliminary and posteriorly variations could arise to compensate a strong variation during an election year. No evidence of research has been found on this topic. Secondly, in previous analyses, it was difficult to obtain good and full statistical data relative to economic analysis. Previous researchers in this field were faced with incomplete data (Chortareas, Logothetis, and Papandreou 2016; Binet and Pentecôte 2004; Rosenberg 1992).

The purpose of this paper is consequently to invalidate or confirm the existence of these political fiscal cycles (P.F.C.) in Wallonia and to further examine these cycles. This research therefore allows for an analysis of all Walloon municipalities over a sixteen-year period, which is quite uncommon compared to previous researches that only focused on election years and on fewer municipalities or entities (Rosenberg 1992; Bee and Moulton 2015). This broader analysis which considers not only political fiscal cycles supported by a preliminary and posteriorly variant but also the same cycles observed on a smaller scale (Cuadrado-Ballesteros, García-Sánchez, and Prado-Lorenzo 2013; Bee and Moulton 2015) which can be generalized across a given region. This paper aims to analyze the impact of elections on the fiscal policies of municipalities.

To address this question, our study relies on a sample of 262 Walloon municipalities over a period ranging from 2001 to 2017. Our focus on Wallonia, the southern part of Belgium, is relevant for several reasons. First of all, as specified above, it is feasible to analyze all the municipalities of a given area. Secondly, the analysis is based on a homogeneous area where elections are organized on a regular basis (every six years). Thirdly, data used in this research are analyzed and provided by the competent authorities. The data can be regarded as reliable.

The paper is organized as follows. The second section presents theoretical literature linking the political budget cycle to fiscal taxation. Section 3 presents our datasets and hypotheses. Section 4 describes the research methodology with a presentation of the research context, measurement and research instrument as well as data collection and sample investigation. Lastly, Section 5 presents our theoretical and practical contribution as described above, and the Section 6 is the final conclusion.

2 Literature Review

2.1. Monetary cycle, political budget cycle and political fiscal cycle

Researching the impact of political choices in elections is not a new area in the field of public management. Seminal works of Downs (1957), Key (1966) and Kramer (1971) laid the foundations of electoral political cycle theory. From that perspective, the electoral political cycle is defined as a

periodic fluctuation of government policy, punctuated by mandates being renewed by voters (Binet and Pentecôte 2006).

These electoral cycles are generally caused by information asymmetries and represent a particular case of the principal-agent problem of asymmetric information (Rogoff and Sibert 1988; Bee and Moulton 2015; Cassette et al. 2011). The agent is imperfectly informed on the principal's interests (Grossman and Hart 1983). This theory contemplates the interactions between these actors and their impact and as a result, how these interactions may be biased. If this theory has been developed in an economic context, it appears to be a political problem too. This principal-agent problem of asymmetric information is thus a problem for most democracies. It refers to a situation in which the actions of an actor, the principal, depend on the actions of another actor, the agent. Indeed, researchers consider that this asymmetric information could make it difficult for voters to choose their representatives (Cassette et al. 2011; Rogoff and Sibert 1988). This model seeks to incorporate strategic interactions between rational politicians and voters (Bee and Moulton 2015).

The electoral cycle is designed to analyze how elections affect the conduct of economic policies. Hence, two models are frequently acknowledged: the monetary cycle (Nordhaus 1975; Macrae 1977) and the political budget cycle (Rogoff and Sibert 1988; Rogoff 1990).

The monetary cycle assumes that an elected government has sufficient technical ability to alter macroeconomic conditions in a given territory (Macrae 1977; Dubois 2016; Nordhaus 1975). If this model offers interesting insights on national developments, some researchers have tried to apply this model unsuccessfully on a larger scale as it only allows for a local analysis. As a matter of fact, a local government does not have enough power to influence macroeconomic situation. (Drazen 2000; Binet and Pentecôte 2006).

The second model, the political budget cycle (P.B.C.) refers to Rogoff and Sibert's (1988) seminal works. It can be seen as a derivative of the first model. This model presupposes that politicians try to adapt their policy to voters' expectations with a view to being re-elected. Candidates can prove their competence to voters by "*engaging in expansionary fiscal policy and increasing the budget deficit in election years*" (Bee and Moulton 2015). The model suggests that voters hold politicians accountable for the past and present situation (Binet and Pentecôte 2006; Cassette et al. 2011). The accountability of politicians is wielded through elections where voters will not vote for a candidate with unacceptable fiscal or budgetary performances (Cassette et al. 2011). According to Rogoff and Sibert 1988, political parties are differentiated depending on how well they manage the economy in the eyes of the public (Cassette et al. 2011). However, if political parties are unable to deliver satisfactory performances, they may, in a setting of rational voters, adopt an opportunistic approach as in the political budget cycle. Although the political budget cycle was initially designed with a view to analyzing key aspects of public expenditure on a national level (Rogoff and Sibert 1988), it has simultaneously developed in two directions.

The first development is to take into consideration other factors which could influence these cycles. For instance, some studies explore how the political budget cycle affects taxes and spending. Specifically, they investigate how a decrease or an increase in taxes or spending may be justified by the proximity of an election year (Drazen and Eslava 2010; Strate, Wolman, and Melchior 1993). In the same vein, other researches have focused on the variation of crime rate in the lead up to an election (Levitt 1997; Meloni 2018; Ferreira and Gyourko 2009). Research on functional decentralization has also been carried out with this theoretical approach (Cuadrado-Ballesteros, García-Sánchez, and Prado-Lorenzo 2013).

A second development has led to other works which investigate whether the political budget cycle also applies to lower levels of power. Indeed, if the political budget cycle theory was initially set up in the context of the two-party presidential system in the United States: "*atomistic voters choose between two political parties,* [Republican and Democrat]" (Rogoff and Sibert, 1988), this theory has also evolved. This analysis can also be applied to other levels of power such as cities (Rosenberg

1992; Strate, Wolman, and Melchior 1993; Levitt 1997; Nuno Baleiras 1997) and allows for some transnational comparisons (Brender and Drazen 2005b, 2005a). This electoral cycle will prompt an opportunistic increase in public spending during an election period (Binet and Pentecôte 2006). Adapting this concept to local governance is an emerging line of scientific inquiry which was overlooked in former research.

These two P.B.C. developments are generally accepted by scholars; however, a third advancement may also be presented (Alesina, Roubini, and Cohen 1997; Kneebone and Mckenzie 2001). This third evolution is a little particular as the first scholars to research it defined this model as being a new fiscal cycle altogether. However, many researchers have since attempted to define theoretical foundations for this cycle (Kneebone and Mckenzie 2001) but some consider this model as deriving from the political budget cycle theory (Garcia-Sanchez, Prado-Lorenzo, and Cuadrado-Ballesteros 2011). This third evolution cycle can be viewed as an evolution of the P.B.C. with some specificity. To link these two cycles, this cycle could simply be referred to as the political fiscal cycle (P.F.C.).

The difference between the political budget cycle (P.B.C.) and the political fiscal cycle (P.F.C.) is the use of fiscal indicators by the latter. There are two types of models investigating political influences on fiscal policy (Alesina, Roubini, and Cohen 1997; Kneebone and Mckenzie 2001; Sakurai and Menezes-Filho 2011; Garcia-Sanchez, Prado-Lorenzo, and Cuadrado-Ballesteros 2011). The first model is the partisan model which suggests that any differences in fiscal policy are related to differences in political ideology (Sakurai and Menezes-Filho 2011). This political ideology question is difficult to apprehend in a local context because it implies sharp differences between differing political ideologies (Garcia-Sanchez, Prado-Lorenzo, and Cuadrado-Ballesteros 2011). In contrast, opportunistic models suggest that governments behave opportunistically as a means of being re-elected (Kneebone and Mckenzie 2001). The basic assumption of opportunistic models is that the fiscal cycle is only correlated to how close an upcoming election might be with no other consideration for political variables.

2.2. Analytical perspective

Given this study focuses on a local level of power, the political budget cycle theory seems more to the point than the monetary cycle theory. Indeed, prior studies point out how at a local level, political leaders are more inclined to adopt a fiscal policy rather than a monetary policy (Binet and Pentecôte 2006). This is mainly due to the difficulties for local politicians who govern a sparsely populated area to develop an ambitious monetary policy (Binet and Pentecôte 2006).

Moreover, providing the fiscal political cycle is opportunistic, our assumption is that if a fiscal advantage may be observed in an election, it will be in all municipalities regardless of the political party.

However, in these theories, no heed is paid to years preceding and following an election year. Indeed, researchers always analyze the election year itself or possibly the pre-election year (Bee and Moulton 2015; Rogoff and Sibert 1988; Drazen and Eslava 2010; Binet and Pentecôte 2004). Such a limited analysis does not seem compelling. If a political budget cycle does exist, it does not only apply the year before and after an election.

Furthermore, political cycle researches are generally based on incomplete sampling. Table I, partially drawn up by Foucault and François (2005) with additional comments from the authors clearly shows this state of research.

Table I Review of empirical works

Authors	Methods	Data	Results
(Strate, Wolman, and Melchior 1993)	Estimating a cycle of tax revenues vs. expenditure (time series and cross-section)	92 American cities of + 100,000 inhabitants between 1978 and 1985 (368 observations)	More opportunism in revenue than expenditure
(Rosenberg 1992)	Estimating how an expenditure cycle impacts reelection chances (panel data)	10 Israeli cities between 1964 and 1982 (170 observations)	In opposition to this theory, candidates seeking reelection are less likely to spend more the year of an election than candidates who do not run for reelection.
(Binet and Pentecôte 2004)	Estimating (in panel data) an opportunistic spending cycle	883 French cities of + 10,000 inhabitants (applying a regional average) between 1988–1999	Significant investment expenditure cycle along with the associated debt cycle
(Ferreira and Gyourko 2009)	Estimating an electoral cycle based on local government size, local public expenditure allocation, or crime rate.	400 U.S. cities between 1950 and 2000	In opposition to this theory, there is no partisan impact on the policy outcomes observed at the local level.
(Cuadrado-Ballesteros, García-Sánchez, and Prado-Lorenzo 2013)	Identifying the variables behind a political strategy of decentralization.	153 local governments This sample includes all provincial capitals and most municipalities with a population of over 50,000 between 1999 and 2007.	Variables that represent the public debt, the direct fiscal pressure, the political ideology (left or right ideology) of the ruling party, the population and the GDP have a positive effect on the dependent variable (the debt practice).
(Bee and Moulton 2015)	Estimating a cycle based on taxes, spending, and employment for a panel (time series and panel)	Taxes, spending, and employment data for 268 U.S. cities over a period ranging from1970 to 2004	Election years do not have any effect on total expenditures or taxes. Nonetheless, researchers have found that total municipal employment increases by 0.7% , including a rise in police, education, and cleaning employment.
(Chortareas, Logothetis, and Papandreou 2016)	Estimating a cycle through taxes, spending, and employment for a panel (time series and panel)	Dynamic panel data of 109 municipalities which make up for half of Greece's population	Rising spending and disproportionate borrowing are found in the lead up to an election with a view to being re-elected

Source : Foucault and François, 2005; Bee and Moulton, 2015; Binet and Pentecôte, 2004; Chortareas et al., 2016; Cuadrado-Ballesteros et al., 2013; Ferreira and Gyourko, 2009; Rosenberg, 1992; Strate et al., 1993

In Table 1, it can be observed that research in political cycles only focuses on incomplete datasets that do not cover a whole region which may induce bias. Indeed, it seems difficult to suggest the existence of political cycle in a state or a given region without having a full dataset. This situation may lead to some inaccurate conclusions (Chortareas, Logothetis, and Papandreou 2016; Bee and Moulton 2015). To overcome this issue, this study proposes to use a dataset that covers a whole region, i. e. Wallonia. As a result, all regional and local characteristics are included in the model.

3 Research Methodology

3.1.Research Context

Belgium is a federal state with four levels of power. The Belgian municipalities represent the lowest level of power in the country. They can be under the tutelage of different federated entities (Wallonia, Flanders or Brussels) depending on their location. In this research, we have analyzed Walloon municipalities which are ruled by the regional Walloon government. They act as local political institutions with municipal competences. In order to do that, they have legislative and executive powers.

As local political institutions, Walloon municipalities are financed through direct local taxation. Some required revenues derive from taxation (personal income taxes and property taxes) making up for 49% of their revenues. They are referred to as additional percentages because they are calculated on the basis of the amount paid to the State in personal income tax and to the Region in property tax. Part of the external funding is called "the municipal fund", which is financed by the Walloon region on a yearly basis (24%). There are also subsidies (15%), profits (8%), financial products (3%) and functional levies (1%) which finance municipalities (Pagano, Vandernoot, and Van Hove 2015; Pagano 2013; Husson 2009, 2008).

3.2.Sample and Data Collection

Our analysis is based on three pre-existing datasets:

- **Political Dataset;** The local election data used in this paper were collected from public databases made available by the Walloon administration[1]. Moreover, some academic analyses on municipal elections were used to consolidate the database (Faniel 2001, 2007; Blaise, de Coorebyter, and Faniel 2015). A specific screening was also carried out for any missing municipal data.

- **Fiscal Dataset**; The fiscal data used in this paper were collected from public databases made available by the Walloon administration [2].

- **Local Public Finance Dataset**; The local public finance data used in this paper are provided by Belfius bank, which is the main institution providing funding to the public sector. Therefore, it has developed its own local research center which analyzes the public finances of most municipalities on a yearly basis. This center has accepted to provide us some public financial data. However, these data must remain confidential and researchers cannot communicate the findings for a given municipality but only on an aggregated basis.

These previous datasets enable us to build a sample of 262 Walloon municipalities over the period 2001-2017, representing a total of 3144 observations.

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[1] These information can be found on the website : http://electionslocales.wallonie.be/2006/ for 2000 and 2006 elections and on the website: http://electionslocales.wallonie.be/2012/fr/com/results/results_start.html for 2006 and 2012 elections. These databases are made by the Walloon administration for the Walloon government. They are mandatory by the Belgian constitution.

[2] These data are available on the following website: https://pouvoirslocaux.wallonie.be/jahia/Jahia/site/dgpl/accueil/pid/1208

3.3. Research model and variable description

Analysis on political budget cycle is based on a quite common correlation. Such analysis has already been carried out by different authors (Veiga and Veiga 2007; Shi and Svensson 2003; Levitt 1997; Chortareas, Logothetis, and Papandreou 2016; Meloni 2018).

Our research is based on Bee and Moulton's (2015) model using the following formula:

(1) $\ln(\frac{y_{ct}}{pop_{ct}}) - \ln\left(\frac{y_{ct-1}}{pop_{ct-1}}\right) = \beta_0 + \beta_1 ELECTION_{ct} + \varepsilon_{ct}$

Where y_{ct} is the fiscal revenue in municipality "c" at time "t" and pop_{ct} is the population in municipality "c" at time "t".

As described previously, based on city-year level, we would like to test whether there is a systematic change in the growth of personal income rates (Bee and Moulton 2015).

In our model, LTB_{ct} represents local per capita tax burden in city c and year t. This dependent variable is extracted from the fiscal dataset. This dependent variable is calculated as property tax revenues plus personal income tax revenues divided by population based on the amounts allocated by the federal government[3]. In this paper, we have considered the difference between the year in question and the previous year.

Moreover, time variables must be considered. These variables enable us to analyze the impact of the election year on the dependent variable. Previous research considers only the year preceding an election. We assume other years could also influence the dependent variable. We have therefore introduced four binary variables: a before-election-year variable, an election-year variable and two after-election-year variables. $ELECTION_{ct}$ corresponds to four dummy variables (before the election year, the election year and after the election year [+1 and +2]) created to capture the effect of the elections. The estimate β1 may be seen as the log-average additional rate of growth in election years.

Due to the inclusion of fixed effects, it was unnecessary to introduce several control variables in order to address potential threats to the exogeneity of $ELECTION_{ct}$. A population variable is introduced to avoid a bias related to the size of municipalities. This variable enables us to analyze the impact of the municipality size on the electoral cycle. A debt variable is also introduced to avoid economic differences between municipalities. These data are numerical variables which enable us to consider the financial situation of the municipalities analyzed. For the sake of comparison, this variable is divided by the population. Moreover, a coalition variation is introduced. This datum comprises a binary variable which indicates if the ruling coalition has altered. This variable is also used as a control variable. Finally, a full set of binary variables per district is also included to avoid any bias related to the location of municipalities.

This model can be written as follows:

(2) $LTB_{ct} - LTB_{ct-1} = \beta_0 + \beta_1 ELECTION_{ct} + POPULATION + DEBTS + DISTRICTS + \varepsilon_{ct}$

This model makes up for the variations in LTB over several years in different contexts.

Descriptive statistics are reported in Table II.

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[3] In Belgium, several levels of power coexist and can raise taxes. The federal government sets the personal income and property tax rates, but regions and municipalities also have the right to add respectively regional or municipal surcharges. Nonetheless, regional and municipal surcharges are collected by the federal government. Then, global allocations are paid to regions and municipalities based on distribution keys that take into consideration their contribution in terms of personal income and property tax revenues. In our database, we gathered the information regarding these allocations but not the amounts of regional and municipal surcharges to be paid. Therefore, we based our research on the amount of personal income and property tax revenues allocated to each municipality by the federal government to build our dependent variable.

Table II. *Descriptive Statistics (2000 – 2018)*

Variables	Observation	Mean	Standard deviation
Local Tax Burden	4978	7.606127	.861092
Before the election year	4978	.1578947	.3646789
The election year	4978	.2105263	.4077234
After the election year (+1)	4978	.1578947	.3646789
After the election year (+2)	4978	.1578947	.3646789
Debts	4978	5.555468	2.618656
Coalition variation	3406	.5704639	.4950826
Population	4716	13473.14	25571.92
Observation	37990		

4 Analysis and Results

This article aims to analyze if a fiscal electoral cycle can be observed at a local level in Wallonia. We first estimate equation (2) related to the existence of an electoral cycle related to LTB by generalized least square (GLS) panel data model with standard errors robust to heteroscedasticity and serial correlation. The regression analysis is reported in Table III. To determine whether fixed-effect or random-effect models should be used, the Hausman (Hausman 1978) specification test was run for all regressions and revealed that fixed-effect models are more appropriate than random-effect models.

Table III. *Electoral Cycle and Local Tax Burden (GLS estimate, 2001–2017)*

Dependent variable	Coefficient	Standards Errors	P-value
Before the election year	-.0295441	.0103337	.004
The election year	-.0297913	. 0102911	.004
After the election year (+1)	. 0242237	. 0103288	.019
After the election year (+2)	. 0580069	. 0103424	.000
Debts	.0007533	.0007341	.305
Coalition variation	-.0052936	.0076697	.490
Population	-6.50e-08	1.19e-07	.584
Other control variables [a]	YES		
R-square	.296		

[a]*Districts (Nivelles, Ath, Charleroi, Mons, Mouscron, Soignies, Thuin, Tournai, Huy, Liège, Verviers, Waremme, Arlon, Bastogne, Marche-en-Famenne, Neufchateau, Virton, Dinant, Namur, Philippeville) are included in the set as control variables.*

Table III above presents the results of the estimates related to equation 2. This analysis shows a decrease before and during an election and an equivalent increase after an election. A medium decrease can be observed before an election year of -.0296677 and a medium increase after an election year of .0411153. These variations will be detailed in part 5.

5 Discussion

The political budget cycle is a well-proven concept which assumes that expenditures or revenues may be impacted by the proximity of an election. As we have shown in the first part of this research, this hypothesis has already been acknowledged in various studies. The object of this paper was to investigate the impact of these cycles on local taxation. As we have shown in the literature review, models which include fiscal variation are less developed than models which analyze revenue or expenditure. However, some theoretical similarities can be found between fiscal models (such as the opportunistic or partisan model) and expenditure or revenue models.

The novelty of this paper lies in an analysis based on a sample of 262 municipalities. These 262 municipalities represent the entire Walloon region and its population. This dataset enables us to determine if budget management is influenced by the political budget cycle. Moreover, this research sets out that election influences the political budget cycle, as presented in the table III. We have found clear evidence of an electorally motivated fiscal cycle.

Research on electoral cycles frequently shows a strong negative variation before an election followed by an equivalently strong positive variation after an election year (Meloni 2018). In this research, the fiscal cycle could be seen as smoothened. Indeed, the variation is observed over four years. It is negative the year before an election as well as the election year itself. These negative coefficients remain low with a -.029 average. It may be interesting in future research to analyze why there are such low coefficients. In addition, the variation is positive the years that follow an election. The first year after the election, it matches the previous variation (.024) and corresponds to a catch-up theorized in previous research (Bee and Moulton 2015; Meloni 2018; Binet and Pentecôte 2004). As a result, the second year, the positive variation is more significant (.061). The average variation of the cycle is thus positive (.058).

Besides, if the existence of an electorally motivated fiscal cycle is likely, the efficiency of this fiscal cycle in terms of reelection could be further investigated. In that sense, some researchers empirically investigate how political budget cycles affect reelection using advanced econometric techniques (Chortareas, Logothetis, and Papandreou 2016; Sakurai and Menezes-filho 2008; Brender and Drazen 2005a). In that sense, prior findings suggest that an increase in opportunistic expenditures has a positive impact on the probability of a reelection (Chortareas, Logothetis, and Papandreou 2016). Other studies show that increasing deficit is not an effective mechanism to ensure reelection (Brender and Drazen 2005a). To obtain a more accurate picture of the reelection mechanism, it might be interesting to explore this issue in a dynamic way by investigating how political fiscal cycles can influence the probability of a reelection. From a theoretical side, arguments derived from the organizational hypocrisy theory could be insightful to better understand how individuals, groups, parties and dominant majorities adopt conscious tactics to use fiscal cycles for reelections (Heurteux 2017; Berkowitz 2015; Brunsson and Geoffroy 2012; Brunsson 2002; Dumez, Gigout, and Journé 2013). We therefore call for future investigation in this area.

6 Concluding Remarks

With consistent findings from an original Belgian dataset of observations, this paper contributes to the fiscal electoral cycle literature in several ways.

First, by analyzing all municipalities from a specific region, this study addresses a recent call for more exhaustive and robust analyses in the field (Rogoff and Sibert 1988; Rogoff 1990). As a matter of fact, such an analysis is quite uncommon, as it is difficult for researchers to collect reliable and

complete data for an entire region. Prior works may have drawn conclusions which are not necessarily valid as larger cities or municipalities were not included in their sample. Our study overcomes this limitation by demonstrating the existence of an electoral cycle for the entire Walloon region. It would be interesting to analyze other areas in the same way to see if the results remain identical.

Secondly, investigating a whole cycle in this research was of interest. It is common to observe a strong negative variation during the year of an election. In our research, slight positive and negative variations were observed. The year before an election, there is a negative variation which remains the same the year of an election. However, a positive yet stronger variation can be observed the second year after an election. This observation is more exhaustive than in previous analyses. Previous researchers focused solely on the election year or the year before an election (Bee and Moulton 2015; Chortareas, Logothetis, and Papandreou 2016). In the same vein, applying the same analysis over several years to other regions of the country would be of compelling interest.

As this research is based only on Wallonia, it has its limitations. It would also be relevant to research Belgium as a whole. Wallonia is the poorest area in Belgium in terms of personal income. Some differences could be observed in other regions with a higher personal income per citizen.

References

Alesina, A., N. Roubini and G. D. Cohen (1997) *Political Cycles and the Macroeconomy*, MIT press: Cambridge, USA.

Auerbach, A. and Y. Gorodnichenko (2013) "Fiscal Multipliers in Recession and Expansion" in *Fiscal Policy after the Financial Crisis* by A. Alesina and F. Giavazzi, Eds., University of Chicago Press: Chicago, USA, 63–98.

Barro, R. J. (1974) "Are Government Bonds Net Wealth?" *Journal of Political Economy* **82**, 1095–1117.

Bee, C. A. and S. R. Moulton (2015) "Political Budget Cycles in U.S. Municipalities" *Economics of Governance* **16**, 379–403.

Berkowitz, H. (2015) "Comment Une Idée Abstraite Devient Un Dispositif de Gestion: Le Cas Du Développement Durable" *Annales Des Mines- Gérer & Comprendre* **3,** 41–50.

Binet, M-E. and J-S Pentecôte (2004) "Tax Degression and the Political Budget Cycle in French Municipalities" *Applied Economics Letters* **11,** 905–908.

Binet, M-E. and J-S Pentecôte (2006) "Structure de l'impôt et Cycle Électoral Au Plan Municipal" *Economie et Prévision* **174**, 113–27.

Blaise, P., V. de Coorebyter and J. Faniel (2015) "La Préparation Des Élections Communales et Provinciales Du 14 Octobre 2012" *Courrier Hebdomadaire Du CRISP* **25-26,** 1–138.

Brender, Adi and Allan Drazen (2005a) "How Do Budget Deficits And Economic Growth Affect Reelection Prospects ? Evidence From A Large Cross-Section Of Countries" NBER Working paper number 11862.

Brender, A. and A. Drazen (2005b) "Political Budget Cycles in New versus Established Democracies" *Journal of Monetary Economics* **52,** 1271–1295.

Brunsson, N. (2002) *The Organization of Hypocrisy,* John Wiley & Sons: Chichester, UK.

Brunsson, N. and F. Geoffroy (2012) "Quand l'hypocrisie Managériale Protège l'organisation" *Revue Internationale de Psychosociologie et de Gestion Des Comportements Organisationnels* **18,** 301–315.

Cassette, A., E. Farvaque, J. Héricourt and N. Jean (2011) "Dépenses 'Visibles' et Perspectives de Réélection Dans Un Scrutin à Deux Tours : Le Cas Des Élections Municipales Françaises" *Revue d'Économie Politique* **121**, 435–486.

Chortareas, G., V. Logothetis and A. A. Papandreou (2016) "Political Budget Cycles and Reelection Prospects in Greece's Municipalities" *European Journal of Political Economy* **43**, 1–13.

Cotis, J-P., B. Crépon, Y. L'Horty, R. Méary and B. Méary (1998) "Les Stabilisateurs Automatiques Sont-Ils Encore Efficaces ? Le Cas de La France Dans Les Années Quatre-Vingt-Dix" *Revue d'Économie Financière* **45**, 95–118.

Cuadrado-Ballesteros, B., I. M. Garcia-Sánchez and J. M. Prado-Lorenzo (2013) "Les Déterminants de La Décentralisation Fonctionnelle et Leur Rapport à La Dette : Données Empiriques Basées Sur l'analyse Des Municipalités Espagnoles" *Revue Internationale Des Sciences Administratives* **79**, 753–777.

Downs, A. (1957) "An Economic Theory of Political Action in a Democracy" *Journal of Political Economy* **65**, 135–150.

Drazen, A. (2000) "*The Political Business Cycle After 25 Years*" *NBER Macroeconomics Annual 2000* **15**, 75–117.

Drazen, A. and M. Eslava (2010) "Electoral Manipulation via Voter-Friendly Spending: Theory and Evidence" *Journal of Development Economics* **92**, 39–52.

Dubois, E. (2016) "Political Business Cycles 40 Years after Nordhaus" *Public Choice* **166,** 235–259.

Dumez, H., E. Gigout and B. Journé (2013) "La Visée Externe et Interne Des Dispositifs d'accountability: Une Étude de Cas" *Revue Française de Gestion* **39**, 171–180.

Faniel, J. (2001) "Les Résultats Des Élections Communales Du 8 Octobre 2000 En Wallonie" in *Courrier Hebdomadaire Du CRISP* **37**, 5–90.

Faniel, J. (2007) "Les Résultats Des Élections Communales Du 8 Octobre 2006 En Wallonie" in

Courrier Hebdomadaire Du CRISP **1**, 5–84.

Ferreira, F. and J. Gyourko (2009) "Do Political Parties Matter? Evidence from US Cities" *The Quarterly Journal of Economics* **124,** 399–422.

Foucault, M. and A. François (2005) "La Politique Influence-t-Elle Les Décisions Publiques Locales ? Analyse Empirique Des Budgets Communaux de 1977 à 2001" *Politiques et Management Public* **23**, 79–100.

Garcia-Sánchez, I. M., J. M. Prado-Lorenzo and B. Cuadrado-Ballesteros (2011) "Do Progressive Goverments Undertake Different Debt Burdens? Partisan vs. Electoral Cycles" *Revista de Contabilidad* **14**, 29–57.

Grossman, S. J. and O. D. Hart (1983) "An Analysis of the Principal-Agent Problem Author(S)" *Econometrica* **51**, 7–45.

Hausman, J. A. (1978) "Specification Tests in Econometrics" *Econometrica* **46**, 1251–1271.

Heurteux, A. (2017) "Le Développement Durable : Vers Un Nouveau Mode de Pilotage Des Politiques Territoriales ? Le Cas de La Métropole Nice Côte d'Azur" *Gestion et Management Public* **5**, 27–42.

Husson, J-F. (2008) "Le Modèle Belge de Concertation Budgétaire et Les Pouvoirs Locaux" *Reflets et Perspectives de La Vie Économique* **47,** 33–48.

Husson, J-F. (2009) "La Réforme Du Fonds Des Communes En Région Wallonne" *Courrier Hebdomadaire Du CRISP* **21**, 5–71.

Jargowsky, P. A. (1996) "Take the Money and Run: Economic Segregation in US Metropolitan Areas" *American Sociological Review* **61**, 984–998.

Key, V. O. (1966) *The Responsible Electorate*, Harvard University Press: Cambridge, USA.

Kneebone, R. D. and K. J. McKenzie (2001) "Electoral and Partisan Cycles in Fiscal Policy: An Examination of Canadian Provinces" *International Tax and Public Finance* **8**, 753–774.

Kramer, G. H. (1971) "Short-Term Fluctuations in US Voting Behavior, 1896–1964" *American Political Science Review* **65**, 131–143.

Levitt, S. D. (1997) "Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime" *The American Economic Review* **87**, 270–290.

Macrae, C. D. (1977) "A Political Model of the Business Cycle" *Journal of Political Economy* **85**, 239–263.

Madden, J. (2001) "Do racial composition and segregation affect economic outcomes in metropolitan areas" in *Problem of the Century: Racial Stratification in the United States* by E. Anderson and D. Massey*,* Eds, Russel Sage: New York, USA, 290–316.

Meloni, O. (2018) "Is There an Electorally-Motivated Crime Rate Cycle ? Evidence from Argentina" *Economics Bulletin* **38**, 1102–1110.

Monnier, J-M and B. Tinel. (2006) "Endettement Public et Redistribution En France de 1980 à 2004" *Cahier de La Maison Des Sciences Economiques* **06**, 1–23.

Montes, G. C. and T. Acar (2018) "Fiscal Credibility and Disagreement in Expectations about Inflation : Evidence for Brazil" *Economics Bulletin* **38**, 826–843.

Nordhaus, W. D. (1975) "The Political Business Cycle" *The Review of Economic Studies* **42,** 169–190.

Nuno Baleiras, R. (1997) "Electoral Defeats and Local Political Expenditure Cycles" *Economics Letters* **56**, 201–207.

Pagano, G. (2013) "Le Décret Du 15 Juillet 2008 (*) et La Réforme Du Fonds Wallon Des Communes" Federale Overheidsdienst Financiën - België Documentatieblad, **73**, 163–200.

Pagano, G., J. Vandernoot and C. Van Hove. (2015) "Les Mécanismes de Solidarité Dans Les Régions Belges et Le Fonds Des Communes Wallonnes" *Revue Bancaire et Financière* **2**, 94–99.

Rogoff, K. (1990) "Equilibrium Political Budget Cycles" *American Economic Review* **80**, 21–36

Rogoff, K. and A. Sibert. (1988) "Elections and Macroeconomic Policy Cycles" *The Review of Economic Studies* **55**, 1–16.

Rosenberg, J. (1992) "Rationality and the Political Business Cycle: The Case of Local Government"

Public Choice **73**, 71–81.

Sakurai, S. N. and N. A. Menezes-Filho (2011) "Opportunistic and Partisan Election Cycles in Brazil: New Evidence at the Municipal Level" *Public Choice* **148**, 233–247.

Sakurai, S. N. and N. A. Menezes-Filho (2008) "Fiscal Policy and Reelection in Brazilian Municipalities" *Public Choice* **137**, 301–314.

Shi, M. and J. Svensson. (2003) "Political Budget Cycles: A Review of Recent Developments" *Nordic Journal of Political Economy* **29**, 67–76.

Strate, J., H. Wolman and A. Melchior (1993) "Are There Election-Driven Tax-And-Expenditure Cycles for Urban Governments" *Urban Affairs Quaterly* **28**, 462–497.

Veiga, L. G. and F. J. Veiga. (2007) "Political Business Cycles at the Municipal Level" *Public Choice* **131**, 45–64.