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# Electoral Cycles in Fiscal Policy: Zooming in

## Political Budget Cycle Composition and Issue Salience in the European Union

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Academic year 2016-2017

In order to obtain the Double Degree  
**Master 120 en Sciences économiques, Orientation générale, Finalité spécialisée** (UCL/UNamur)  
**and**  
**Master of Science in Economic Studies** (Maastricht University)

## **Abstract**

This thesis builds on the literature on Political Budget Cycles by analyzing the composition of such cycles. I propose the degree of salience of issue domains as the theoretical explanation for the choice of fiscal policy instruments being targeted by incumbent governments. The underlying reasoning is that voters are most responsive to public policy changes regarding salient issues and will therefore adjust their vote choice when they observe such changes. I conduct both fixed effects and GMM regressions on a sample of all 28 EU countries for the time period from 1995 to 2015. In these regressions ten different fiscal policy instruments are used as dependent variables as opposed to the aggregate fiscal budget, which is examined in most existing literature on the topic. The results show some evidence of electoral cycles in different policy instruments, but no coherent robust relation with issue salience. I find some evidence that incumbent governments target fiscal policy instruments in which changes in public spending are easily visible to the electorate. These instruments, however, do not appear to be consistently the same as those that are important or salient to Europeans.

## **Acknowledgements**

I want to thank my supervisor Kaj Thomsson for providing valuable guidance and feedback for this thesis and Guilhem Cassan for this time and effort as co-supervisor. Furthermore, I want to thank Mara Klöpperpieper, Carolin Thol, Marius Schrade and Elena Salmaso for reviewing and discussing working versions of this thesis. Lastly, I want to thank my parents for their support and trust throughout my studies and beyond.

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## 1. Introduction

Member States of the European Union agree to subject themselves to a vast array of rules and regulations as part of this union, among those also extensive fiscal rules. While the European Union is far from being a fiscal union at this point, its members are nevertheless subjected to guidelines that govern their fiscal behavior. For example, the Stability and Growth Pact<sup>1</sup> requires the member states to keep their government deficit below three percent of GDP and their government debt below 60 percent of GDP. Sanctions are in place to discourage the breach of these rules. Nevertheless, breaches are observed frequently. At the point of writing, the European Commission was conducting Excessive Deficit Procedures against six countries, namely Croatia, Portugal, France, Spain, Greece and the United Kingdom (European Commission, Stability and Growth Pact, 2017). Almost all member states have been under investigation for breaching the rules of the SGP at one point or another. One is left wondering why these breaches are so commonplace, given that they result in sanctions. As Marco Buti, now Director-General of the European Commission's directorate for economic and financial affairs, states in an earlier work of his: "sticking to the rules of the SGP may not pay politically" (Buti & van den Noord, 2003, p. 6).

Incumbent governments who try to meet the requirements of the Stability and Growth Pact to avoid sanctions might have to implement fiscal austerity measures, if their deficit or debt levels are above the required thresholds. Such measures are commonly not well received by the electorate, potentially leading to a loss of votes for the incumbent when an election is coming up. Instead, if a government is flexible in using fiscal policy, it can introduce electoral cycles into policy instruments and thus ultimately into primary budgets. The aim of such Political Budget Cycles<sup>2</sup> is to maximize the probability of re-election, by signaling competence to voters before an election takes place<sup>3</sup>. Competence is here signaled through relatively good macroeconomic performance which is achieved by, for example, an increase in government spending or a cut in taxes. Good macroeconomic performance is well received

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<sup>1</sup> SGP hereafter

<sup>2</sup> PBCs hereafter

<sup>3</sup> The abbreviation PBC is used in many textbooks and in the literature for either Political Budget Cycles or Political Business Cycles. There is a crucial difference between these two concepts. Nordhaus (1975) was the first to introduce the idea of the Political Business Cycle, describing a formal model of electoral cycles in policies regarding inflation and unemployment. His focus lay primarily on issues of monetary policy. Allan Drazen provides more formal definitions of the two concepts in the "The New Palgrave Dictionary of Economics". "Political business cycles are cycles in macroeconomic variables – output, unemployment, inflation – induced by the electoral cycle." (Drazen, Political Business Cycles, 2008). "Political budget cycles are cycles in some component of the government budget induced by the electoral cycle. More specifically, the term most often refers to increases in government spending or the deficit or decreases in taxes (including changes relative to long-term trends) in an election year which are perceived as motivated by the incumbent's desire for re-election for himself or his party." (Drazen, Political Budget Cycles, 2008). Going forward in this thesis, Political Budget Cycles are the focal point and are therefore meant by the abbreviation PBC. The term "electoral cycle" is used interchangeably.

by the electorate and theoretically then translates into votes for the incumbent government when an election takes place.

This idea of election-motivated cycles in fiscal policy has existed for quite some time, yet the welfare effect of an electoral cycle in fiscal policy has not been determined conclusively. Since academic literature in economics is usually positive instead of normative, the question is often left unanswered. Drazen argues that voters should be opposed to Political Budget Cycles since they imply a non-smooth path of fiscal policy, which is seemingly costly (Drazen, *Political Budget Cycles*, 2008). Furthermore, the signal sent through good macroeconomic performance might get the incumbent politician reelected, but the fiscal manipulation is potentially ineffective, bringing with it a sustained increase in debt that might be hard to eliminate. The ideal voter as imagined in economic models, who is both rational and well-informed, should thus be opposed to anyone who conducts fiscal manipulations. When first discussing PBCs in 1987, Rogoff allowed for the possibility of a social benefit to fiscal manipulation. In his argumentation, that benefit would materialize through the information provided to voters through the competence signal. He warns that trying to abolish electoral cycles might even be inefficient, since governments would then attempt to signal their competence to voters through more costlier means (Rogoff, 1987).

The argument that well-informed voters should oppose electoral cycles in fiscal policy largely coincides with findings of where PBCs do exist. Most empirical evidence shows the existence of PBCs in developing countries and new democracies. This is due to mature governments usually being much more constrained than new democracies are; there is a higher degree of press freedom, more transparency and less corruption, so that voters are ultimately better informed. Gonzalez (2000) argues that with higher transparency, voters can learn about the competence of politicians costlessly, meaning that fiscal manipulation is less necessary to signal competence. Furthermore, with a higher degree of democracy, the cost of removing an incumbent politician from office is lower. In developing countries, on the other hand, the checks and balances that constrain governments are often weaker, leading to more flexibility over monetary and fiscal policy for the incumbent politician (Schuknecht, 1996). Supporting these arguments, Shi and Svensson (2002, 2006) show that PBCs are relatively larger and statistically more robust in countries with only few institutional constraints on politicians' behavior, which often is the case in developing countries. Similarly, Brender and Drazen (2005) search for PBCs in a large cross-section of countries and find that there is significantly more evidence for electoral cycles in so-called "new democracies" for the years 1975 to 1995.

Despite their theoretically lower probability, there is evidence for the existence of PBCs in Europe, as will be shown more extensively in the literature review. Given that the welfare effect of their occurrence is unclear, why should we care about PBCs in Europe? Over the last two decades, a vast array of macro

policies has been introduced aimed at yielding stable and sustainable budgets in member states, so that a single market with symmetric economies according to the criteria for an optimum currency area can exist, and maybe even to ultimately facilitate a political union. According to the theory on optimum currency areas, a monetary union such as the Eurozone can ultimately sustain if there is firstly full mobility of labor, secondly full mobility of capital including flexible prices and wages, and thirdly an automated risk-sharing system, for example in terms of fiscal transfers. Ultimately these conditions imply that countries participating in a currency union should experience similar business cycles (Gärtner, 2009). If there are still significant electoral cycles in fiscal policy in the European Union, this puts the monitoring and enforcement of fiscal rules into question and thus their usefulness.

Mink and De Haan (2006) and Buti and van den Noord (2003) have in fact shown that PBCs do occur in the European Union, despite the existence of the Stability and Growth Pact. This supports the idea that incumbent governments have little political incentive to stick to its rules. There are, however, important shortcomings in the existing literature that covers European countries. Most of the literature examines only very short panels. Additionally, there is a lack of studies looking at recent years and the time since the sovereign debt crisis. Furthermore, the literature looks mostly at the aggregate fiscal budget balance as measure of fiscal policy, as opposed to the composites of the primary budget. As such, there is, to my knowledge, no study yet that zooms into the primary budget to analyze electoral cycles in different fiscal policy instruments.

Given the relatively high amount of institutional constraints on member states' governments, the importance of symmetric and stable primary budgets across members, and the mixed evidence of the existence of PBCs in the EU, there are plenty reasons to dig deeper into the issue. The question that poses itself is whether governments have found ways to push PBCs in individual fiscal policy instruments, so that they maximize their chances of re-election, while still meeting the requirements of nominal fiscal rules imposed on them. Have politicians become able to target specific policies leading up to an election while circumventing the institutional constraints of the SGP? Consequently, the research question this thesis tries to answer is whether electoral cycles exist and differ systematically across different fiscal policy instruments<sup>4</sup> in EU countries. The logical continuation of this question is then which instruments are being targeted and why these specific instruments are chosen to be targeted. This thesis thus tackles the political economy issue of PBCs and draws a connection to political science questions such as policy choice and issue salience.

In this thesis, I propose the degree of salience of different issue domains as the theoretical explanation for the choice of fiscal policy instruments being targeted by incumbent governments. Salience shall be

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<sup>4</sup> Fiscal policy instrument here means any specific function of public spending, or to put it differently, government spending on any specific issue.

defined here as “the fact of being important to or connected with what is happening or being discussed”, following the definition of the Cambridge Advanced Learner’s Dictionary (Cambridge University Press, 2008). The underlying argumentation is that voters are responsive to policy changes regarding issues that are salient and will therefore adjust their vote choice when they observe such changes. I conduct both fixed effects and GMM regressions on a sample of all 28 EU countries for the time period from 1995 to 2015. In these regressions ten different fiscal policy instruments are used as dependent variables as opposed to the aggregate fiscal budget, which is the dependent variable in most existing literature on the topic. The results show some evidence of electoral cycles in different policy instruments, but no coherent robust relation with issue salience. I find some evidence that incumbent governments target those fiscal policy instruments in which changes in public spending yield easily visible effects to the electorate. These instruments, however, do not appear to be consistently the same as those that are important or salient to Europeans.

Section two of this thesis presents an overview of the literature on PBCs, their occurrence in the European context, and some theoretical considerations in the academic literature about the potential composition of PBCs. In section three I develop a theoretical framework on the relation between the salience or visibility of fiscal policy tools and electoral cycles in these tools. I also present and justify a ranking of fiscal policy issues in terms of salience. Section four presents the data used for the empirical analysis, followed by section five, which outlines the baseline empirical specification and how it is implemented. Section six presents the results of the empirical analysis, which are then discussed and evaluated in section seven. Lastly, section eight concludes.

## **2. Literature Review**

### *2.1. General Theory on Political Budget Cycles*

The theory on political budget cycles has developed strongly over the last four decades. Shi and Svensson (2003) provide a thorough overview of the literature on this topic and its development. Three generations of models can be distinguished.

The first one starts with the work of Nordhaus (1975). He assumes retrospective voting behavior by the electorate. Voters judge the incumbent by the country’s past macroeconomic performance, attributing any booms or busts to the incumbent politician. The opportunistic incumbent policy-maker in this model wants to maximize the probability of being re-elected. Voters form adaptive expectations, which are thus not rational in Nordhaus’ initial model. They are not forward-looking and thus do not anticipate the future costs of expansionary policies. The prediction of these first-generation PBC models is that governments will implement expansionary fiscal policy before elections to stimulate the economy and

thus signal competence, independent of their ideological preferences. The second generation of PBC models was initiated by Rogoff and Sibert (1988), who model the situation as an adverse selection problem. In their model, there are temporary information asymmetries regarding the politician's competence level. While the incumbent knows his type, the voters are dependent on a signal. Signaling is therefore the driving force behind electoral cycles in fiscal policy, with the politician trying to send a signal that maximizes his vote-share. Voters form rational expectations before casting their vote based on observable economic performance. In these second-generation, as well as in the third-generation models, cycles can arise despite the electorate being rational, due to informational asymmetries. The third generation of PBC models originated in the work of Persson and Tabellini (2000) and was refined by Shi and Svensson (2002). This type of models incorporates the notion of moral hazard to the concept. In third-generation models neither voters nor the politician know the politician's competence level. Voters again form rational expectations from past economic performance, with the aim of voting for the most competent candidate. The incumbent government can exert a hidden effort, that is, use a policy instrument that is unobservable to the public and is a substitute for competence. The incumbent then increases his effort prior to an election. In the equilibrium of this type of model there is always an excess of effort, leading to the occurrence of PBCs. Drazen (2001) presents a detailed overview of the developments of the theory over time and of empirical tests of said theories. His focus is on the United States, where he synthesizes that most empirical studies find strong evidence of PBCs for the years prior to 1980.

## *2.2. Evidence of Political Budget Cycles in Europe*

As argued above, there are ample reasons why PBCs are generally stronger in developing countries. There are, however, some papers that show the existence of PBCs, even though on a smaller scale, in developed countries. Alesina, Roubini and Cohen (1997) perform various panel regressions on thirteen OECD countries for the period from 1961 to 1993 and find that the government budget deficit is 0.6 percent of GDP higher in election years. Franzese (2000) confirms this by reporting evidence for electoral manipulation of fiscal policy in a sample of 20 OECD countries. More recently, Shi and Svensson (2002, 2006) also argue that even though cycles are stronger in developing countries, there is still evidence of PBCs in developed countries and mature democracies.

Applications to European countries are generally more recent. Mink and De Haan (2006) use data from 1999 to 2004 and find strong and robust evidence of fiscal policy manipulation in election years. What is especially noteworthy about their findings is that they prove the existence of PBCs in the EU during the initial period of the Stability and Growth Pact, suggesting that governments have indeed been able to circumvent the rules posed by the SGP. Buti and van den Noord (2003) use data from a very short time period only, namely the years 1999 to 2002, which allows them to focus on the early years of the Economic and Monetary Union. They find an expansionary bias and a discretionary boost in fiscal

policies corresponding to an electoral cycle. They argue that this supports an earlier criticism of the SGP, which claimed that its asymmetric nature and the weak mechanisms to prevent politically-motivated fiscal policies would increase the temptation for governments to run expansionary policies. For the years 1998 to 2002, thus looking at almost the same period as Buti and van den Noord, Von Hagen (2003) finds evidence of PBCs in EU member countries. He shows that the unweighted average fiscal impulse in a pre-election year is significantly higher than in other years. Efthyvoulou (2012) conducts a similar analysis looking at the years from 1997 to 2008. His focus is, however, more on the partisan nature of those cycles and their relation to voting behavior. An important finding of his with respect to this thesis is that PBCs are more consistently found in Eurozone countries as opposed to non-euro countries. Most recently, Alt, Dreyer, Lassen and Wehner (2014) show that the least transparent countries of Europe have frequently used fiscal gimmickry in the sense of creative accounting and other malpractices to create electoral cycles. To summarize, these authors emphasize the question whether the development of European-level oversight over national budgets, in the form of the SGP has constrained governments in using fiscal policy manipulation to increase their chance of re-election. They find that national governments of Euro Area countries did indeed pursue expansionary fiscal policies when heading towards an election, despite the introduction of the SGP.

This evidence is, however, not conclusive. Andrikopoulos, Loizides and Prodromidis (2004) use different econometric filtering methods to look for electoral and partisan cycles in fiscal policy instruments. Their panel consists of data from 1970 to 1998 for fourteen EU member states. They do not find evidence of any significant cycles. Similarly, De Haan and Sturm (1994), who examine fiscal policy in the EU in the 1980s, find no support for PBCs. It is furthermore interesting to notice that papers focusing on more recent years find PBCs in the EU, while those focused on more remote time periods do not find them.

### *2.3. Institutional developments and fiscal rules in the EU*

The observation that there is more empirical evidence of PBCs in Europe in recent years comes as a surprise, given that the rules and institutions that limit national governments' freedom to manipulate fiscal policy have strongly increased in the last decade. This would suggest, based on the literature cited above, that there should be less opportunity for governments to create Political Budget Cycles. Especially the last ten years have seen a strong increase in EU-level rules for member states' fiscal policy. A short timeline of these institutional developments will give an overview of the constraints that governments face in manipulating fiscal instruments.

In February of 1992, the Treaty of Maastricht introduced the euro as a common currency. Article 104 of the Treaty of the Functioning of the European Union constrains the member states of the euro area to limit their government deficits to three percent of GDP and their public debt levels to 60 percent of

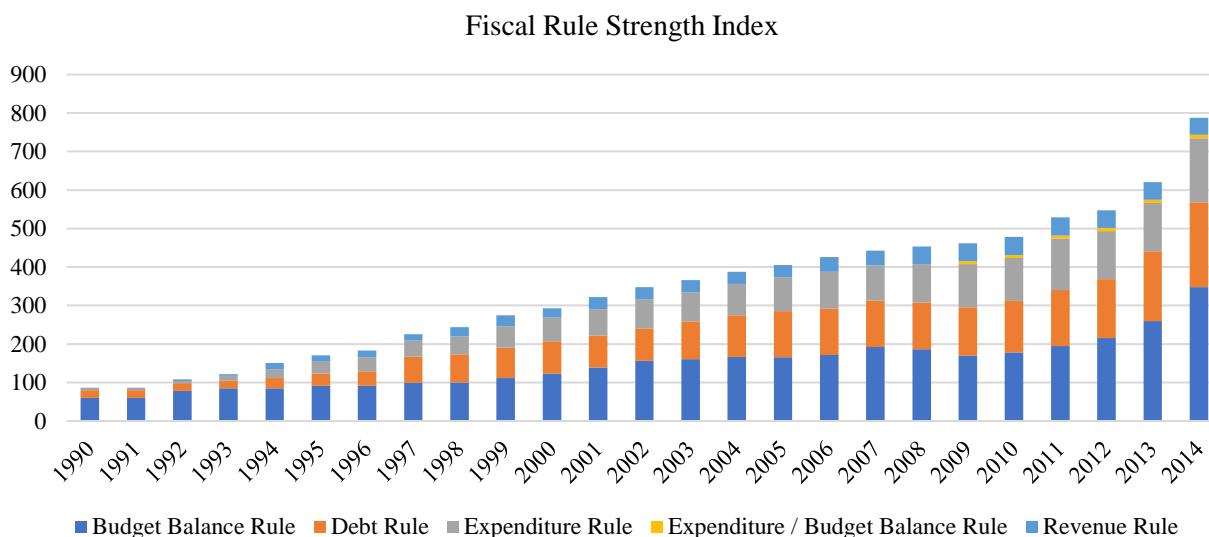
GDP. In 1998, the Stability and Growth Pact was signed, which cements the Maastricht convergence criteria and requires countries who fail to meet these criteria to adjust to the thresholds with a satisfactory pace each year. 1999 saw the entry into force of the so-called preventive arm of the SGP. It establishes budgetary targets for all member states, known as Medium-Term Budgetary Objectives (MTO). The countries are given a benchmark rate of adjustment in their structural budget of 0.5 percent of GDP per year towards the structural budget objectives stated in their MTOs, if they fail to meet the set requirements. Under pressures of France and Germany, who found it hard to meet the strict requirements, the SGP was reformed in 2005 and made more flexible. The so-called corrective arm entered into force. It makes sure that member states implement policies to correct any failures to meet the MTO targets. This is achieved through the Excessive Deficit Procedure. As a consequence of the sovereign debt crisis, the rules of the SGP were made stricter again in 2011 through a package of amendments called the Euro Plus Pact. The Macroeconomic Imbalance Procedure, aimed at identifying and preventing macroeconomic imbalances, entails the potential for extensive budgetary surveillance of member states that fail to meet their targets and even the possibility of strict sanctions. 2011 also saw the establishment of the EFSF to administer these procedures. In 2013, the “Six Pack” of amendments led the SGP to be even more comprehensive, including further details on the implementation of oversight and sanctions. Monitoring and coordination of the rules was then further strengthened in 2014 through the “Two Pack” amendments. Additional strengthening of macroeconomic oversight most recently came through the Fiscal Compact in 2014. These recent changes after the sovereign debt crisis can be summarized as increases in surveillance and the severity of sanctions. Consequently, it has become much more difficult for incumbent governments to manipulate the primary budget deficit, theoretically increasing the need to target specific policy instruments for PBCs (European Commission, Timeline: The Evolution of EU Economic Governance, 2017).

The fiscal rules introduced at the European level through the outlined institutional and legal changes are translated into national legislation by EU countries. They are aimed at harmonizing fiscal rules across member states. Often, they are also supplemented by further national fiscal rules. Over the course of the last decade, the number of fiscal rules on the national level has thus increased significantly. This can be seen in the database of Numerical Fiscal Rules that is published by the European Commission (European Commission, Numerical Fiscal Rules in EU member countries, 2017). The EC has collected information on domestic fiscal rules in force directly from the EU member states. The dataset, called the Numerical Fiscal Rules Index<sup>5</sup> covers all types of numerical fiscal rules (budget balance, debt, expenditure, and revenue rules) at all levels of government (central, regional, and local, general government, and social security). The collected information includes the description and definition of the fiscal rule and its coverage, its statutory base, monitoring and enforcement mechanisms, as well as any experience with the respect of the rule. This information is, in a first step synthesized in an index of the strength of fiscal

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<sup>5</sup> NFRI hereafter

rules<sup>6</sup>. Figure 1 below shows the evolution of the overall number of numerical fiscal rules in the European Union: It clearly shows a marked increase in the strength of balanced budget rules and debt rules, which results from the outlined institutional developments in the EU.



**Figure 1.** Development of the Fiscal Rule Strength Index (FRSI) from 1990 to 2014. Source: (European Commission, Numerical Fiscal Rules in EU member countries, 2017).

Through all the above mentioned institutional and legal changes, not only has the room for fiscal policy maneuver decreased for EU governments, but also monitoring of primary budgets has increased drastically. Consequently, transparency has increased, reducing the incentive for politicians to signal their competence through pre-election expansionary policies.

#### 2.4. Political Budget Cycle Composition – Cycles in Different Policy Instruments

The papers that focus on the European dimension of PBCs lack a more thorough evaluation of the composition of electoral cycles in terms of the use of different fiscal policy instruments. Such an analysis has been conducted for the US and for Canada, but not for the EU. Andrikopoulos et al. (2004) look at different fiscal policy instruments when searching for electoral cycles, but lack a thorough theoretical basis for why cycles might differ across instruments. They do not find consistent significant cycles in government spending, transfer payments, total direct and indirect taxes. However, they find significant results for some individual countries in different instruments. Contrary to these results, earlier studies using different country samples and time periods have detected evidence for electoral cycles in different policy instruments. In particular, Tufte (1980), using 1961 to 1972 data for the US, finds that government transfer payments increased significantly prior to presidential elections. He also found that tax increases were more probable in post- than pre-election years. Schuknecht (2000) finds that incumbent

<sup>6</sup> Details can be found under [https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/fiscal-governance-eu-member-states/numerical-fiscal-rules-eu-member-countries\\_en](https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/fiscal-governance-eu-member-states/numerical-fiscal-rules-eu-member-countries_en)

governments tend to increase public investment rather than lower taxes prior to elections. These results come from a sample of 24 developing countries for the 1973 to 1992 period. Therefore, they are not directly extendable to developed countries.

As a consequence of the outlined institutional developments one would expect to see less evidence of PBCs in Europe in the current decade. Since the empirical literature has observed some evidence of PBCs around the turn of the century, it is possible that incumbent governments have found ways to circumvent the targets of the SGP, by targeting specific fiscal policy instruments with electoral cycles, in order to still be able to signal competence to voters. The dependent variable in most of the empirical research on PBCs is the fiscal budget balance, as opposed to its components, however. It is, therefore, necessary to zoom into the fiscal budget balance to examine its components.

In which areas of fiscal policy electoral cycles will be observed is likely to depend on the long-established notion that “policy causes politics”, which gives room for a role of public preferences (Lowi, 1964). The relationship between public preferences and public policies has been studied extensively in political studies, but, to my knowledge, has not been linked to the literature on PBCs in a thorough analytical way yet. Peters (2002, p. 553) states the main dynamics between public preferences and policy, saying “Policy instruments are not politically neutral, and the selection of one instrument or another for a policy intervention will generate political activity, and have political consequences.” He thus argues that there is reverse causality between the two, with preferences shaping policies significantly. To analyze which types of policies are useful for vote-maximizing politicians to manipulate before an election, it is necessary to first provide some form of categorization or classification of fiscal policy instruments. Some classifications of public policies exist even though they vary greatly in the dimensions used to differentiate policies. Salamon provides a thorough evaluation and collection of research on what he calls “the tools of government” in his 2002 book. He presents different political influences on policy choice and, supplemented by Peters (2002), also a classification of policy tools along four dimensions that aims to build an understanding of when and why specific policies are being used.

The categories brought forward by Peters and Salamon are visibility, directness, automaticity and coercion. In this thesis, the focus lies on visibility, which Peters defines as “the extent to which the cost of the instrument being used is apparent to the public, whether that is the public in general or the more attentive public” (Peters, 2002, p. 560). Coming hand in hand with the dimension of visibility is that of directness, which Peters defines as “the extent to which they (policy instruments) operate directly on their intended targets.” Salamon defines directness more specifically as “the extent to which the entity authorizing, financing, or inaugurating a public activity is involved in carrying it out. A direct tool is one in which authorization, funding, and execution are all carried out by essentially the same entity”

(Salamon, 2002, p. 29). A more direct tool according to this definition is arguably also more visible to the public than one in which it is unclear who has authority about it. The dimension of visibility is likely to be most important in determining which fiscal policies are targeted with electoral cycles, as it is in line with what theory dictates as the incumbent politicians' goal of signaling competence to voters. In order to notice the signal, voters have to be aware of a policy change. Policy visibility can therefore easily be described as a form of issue salience. Franklin and Wlezien (1997) provide an introductory overview of the literature on issue salience in politics. They argue that salient issues are politically important and therefore likely to influence policy, because voters hold opinions and actively care about these issues. In salient issue domains, voters can reasonably be expected to take note of politicians' actions. In turn, politicians have the power to identify salient issues and influence policies on these issues in a way that maximizes their vote-share.

### **3. Theoretical Framework**

Franklin and Wlezien (1997) do not only speak about issue salience in qualitative terms, they also supplemented their argumentation with a theoretical model. With that, they were among the first to model the importance of the salience of issue domains in influencing policy-making. They built a theoretical model that looks at the feedback between public preferences and policy outputs and apply this model to the domain of preferences for European integration. Wlezien (1995) continuously uses the metaphor of a thermostat to describe the public's preferences for policies in his works. In his metaphor, people have a preference for a specific policy temperature. A divergence from this preferred temperature then causes a signal that should ultimately lead to an adjustment of the policy by the government. Once the optimal temperature is reached again, the signal stops. Wlezien shows empirically that policy-making works along these lines in the US in some policy domains, most importantly in defense expenditure (Wlezien, 1996). He argues, however, that the thermostat analogy does not hold in all policy domains. In the domains of spending on space exploration or foreign aid, for example, the thermometer seems to be turned off. He justifies this observation by saying that issue salience in the public eye is what distinguishes the policy domains for which the thermostat is switched on and those for which it is turned off. Franklin and Wlezien summarize this line of thinking by saying "For the public to be responsive to policy, after all, people must acquire and process reasonably accurate information about what policymakers do, and this is most likely in policy domains that people consider important" (Franklin & Wlezien, 1997, p. 5). Thus, some issues are just not deemed to be of enough importance by the public to actively notice or care about policies on the issue. On issues that are salient, though, the public adjusts its relative policy preferences upwards or downwards when the policy changes.

This idea of issues being noticed or unnoticed by the public can easily be aligned with Peters' (2002) and Salamon's (2002) classification of policy tools according to their level of what they define as the visibility dimension. Issues that are more visible according to their definition are also more salient to the public. If the cost of a policy is not at all visible to the public, be it in absolute terms or relative to other policies, people are unlikely to place much importance on the issue when it comes to electing a politician with an announced policy platform.

The established relationship of issue salience as intermediary between public responsiveness and policies has important implications for the existence of electorally motivated fiscal manipulation. It shows that public preferences are indeed meaningful signals that policy-makers react to. Politicians who choose to ignore the public's signals face the risk of repercussions at the ballot. On the other hand, when elections approach, incumbent governments can manipulate policies in those domains for which the public's thermostat is active in a way that positively resonates with voters, to maximize the incumbent's vote share. Voters, at least those part of the "less attentive public", are unlikely to react significantly or to even notice a change in an instrument that is not easily visible to them. For example, voters are often affected themselves or talk to affected people and consequently are likely to recognize a change in public sector wages more easily than a slight change in R&D expenditures. The payoff to manipulating fiscal expenditure is thus lower for the incumbent government when expenditure is manipulated on an issue that is only marginally visible as opposed to one that is highly salient. In the classic theory of PBCs, incumbent governments would use economic performance as a signaling device for their level of competence, and adjust economic performance before elections using expansionary fiscal policy. I argue, however, that externally imposed fiscal constraints would force governments to target more specific fiscal policy instruments. They are too constraint to broadly affect the fiscal balance, but will instead manipulate those fiscal policy instruments that are most salient to the public. This makes sure that voters do actually notice the signal that is being sent and adjust their vote intention accordingly. In alignment with this theory I formulate the following hypotheses:

**Hypothesis 1:** The more salient a fiscal policy instrument is, the more likely it is to observe an electoral cycle in that instrument.

In order to see whether governments are actually being forced to target specific policies, I will also test an additional hypothesis, as a preliminary insight into the current situation in Europe.

**Hypothesis 1b:** The higher the number of fiscal rules imposed on governments, the harder it is to impose Political Budget Cycles.

### *3.1. Which policy issues are salient?*

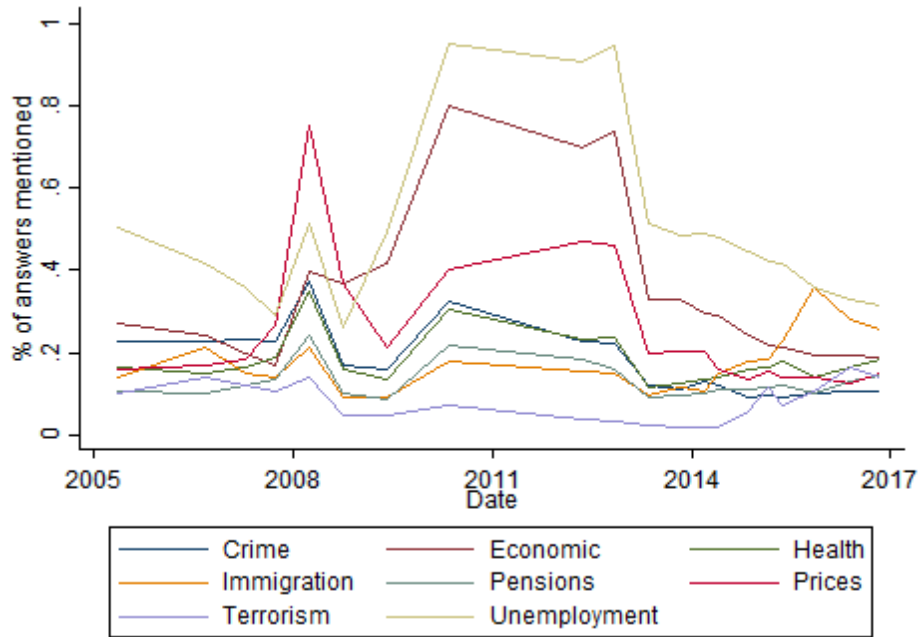
The main difficulty in putting this theory to an empirical test lies in determining which fiscal policy instruments are salient. There is a lack of academic literature that provides a sound approach to determining the salience of different policy tools. In order to attempt an objective ranking, I focus on the different socio-economic functions of government expenditure as a categorization of policy instruments. Expenditures are divided into ten categories in the Classification of the Functions of Government<sup>7</sup>, which was developed by the OECD in 1999. The categories are the following: general public services, defense, public order and safety, economic affairs, environment protection, housing and community amenities, health, recreation, culture and religion, education, and social protection<sup>8</sup>. I focus on the COFOG categories as categories of policy instruments, since it is more feasible to rank them according to salience, as compared to the more commonly used breakdown of total general government expenditure into six categories on the revenue side and the expenditure side each.

I employ the Eurobarometer, the European Commission's biannual public opinion poll, to get objective insights into how these policy instruments can be ranked in terms of their salience. One question that belongs to a fixed set of the survey questions presented in each wave, is the following: "What do you think are the two most important issues facing (our country) at the moment?". Respondents can choose a maximum of two out of 18 possible answers. The answers to this question show the main concerns of Europeans and thus also which issues they care about most. This is a reasonable approximation of a measure of salience. Trend data on these answers is available from the European Commission solely for the years 2005 to 2016. A visualization, in terms of the average frequency of answers given by Europeans (in percent of all answers given), can be seen in Figure 2 below. Since subjects can give two answers to this question, the percentage shares logically do not add up to 100 percent in each survey wave. For clarity, the graph shows only those categories which are mentioned most throughout time.

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<sup>7</sup> COFOG hereafter

<sup>8</sup> A detailed breakdown of the types of expenditures that are included in the ten different COFOG categories can be found in Table A1 in the Appendix.



**Figure 2.** EU-Average of answers to the question “What do you think are the two most important issues facing (our country) at the moment (Maximum 2 answers)” in % of all answers given. Data retrieved from (European Commission, Public Opinion, 2017).

Evaluating the information visualized in Figure 2 more thoroughly reveals that among the issues named to be most important, the following come up consistently high throughout the period from 2005 to 2016: unemployment, prices, immigration, the economic situation, and crime. Naturally, which issues are present in the public discourse and thus likely to be important in the public’s eye changes over time and might vary across countries. The salience of issue domains and policies is a dynamic variable. Nevertheless, from the time series representation of the EU-average of answers to the above-mentioned question, I can derive an approximate ranking of issue salience. The relative position of issues stays roughly constant over time. Ranking the frequency of answers given in each survey wave in that time period allows me to see which issues consistently rank among the most important ones for Europeans. In the following, the 18 possible answers given to the Eurobarometer question are ranked in this way and matched to the ten expenditure functions in the COFOG classification as closely as possible.

**Table 1.** Ranking of policy instruments according to their salience as proxied by Eurobarometer survey responses.

Rank	Eurobarometer Issue	Matched COFOG Category
1)	Unemployment	GF04 Economic affairs
2)	Economic situation	GF04 Economic affairs
3)	Prices	GF04 Economic affairs
4)	Health and social security	GF07 Health, GF10 Social protection
5)	Immigration	GF03 Public order and safety
6)	Crime	GF03 Public order and safety
7)	Pensions	GF10 Social protection
8)	Taxation	GF01 General public services
9)	Education	GF09 Education
10)	Terrorism	GF03 Public order and safety
11)	Housing	GF06 Housing and community amenities
12)	Government debt	GF01 General public services
13)	Environment	GF05 Environment protection
14)	Energy	GF05 Environment protection
15)	Defense	GF02 Defense
16)	Public finances	GF01 General public services
17)	External influence	GF04 Economic affairs
18)	Public transport	GF01 General public services

*Note.* Issues were ranked after constructing an index of issue salience, where  $Index_{EBissue} = \sum_i rank_i * \#mentioned$ , with  $i \in \{1,18\}$  and the lowest value in the index representing the most salient issue. Table A2 in the appendix shows the detailed rankings in the Eurobarometer over time. The matching of Eurobarometer answers to COFOG categories attempts to generate the biggest overlap of included fields as detailed in Table A1.

Relating this ranking back to the hypotheses formulated above, I expect on the one hand to find evidence of electoral manipulation and thus of PBCs in government expenditure on the highly-ranked issues. On the other hand, there is unlikely to be evidence of an electoral cycle in the expenditure functions that are matched with less salient issue domains.

#### 4. Data

In order to test the above made predictions empirically, I analyze panel data from all 28 current EU member states for the years 1995 to 2015. The empirical analysis looks at all ten government expenditure functions as dependent variables in turn. Data on the government expenditures by function are taken from table gov\_10a\_exp of Eurostat. A detailed breakdown of the expenditures included in the ten different functions of expenditures can be found in Table A1 in the Appendix. Data are taken for the general government sector and measured in percentage of each country's GDP, following Brender and Drazen (2005), Shi and Svensson (2006), and Efthyvoulou (2012). This allows for better comparison between countries and takes the size of the countries' economy into account. The length of the series varies slightly for the countries in the sample. For Croatia, Cyprus and Poland, data is missing for the years 1995 to 2001. For Slovenia, the years 1995 to 1998 are missing and for Bulgaria the years 1995 to 1997.

Data on elections come from the World Bank's Database of Political Institutions (Beck, Clarke, Groff, Keefer, & Walsh, 2001). This database, however, only offers data up to 2012. Therefore, dates of elections held after 2012 and the exact days that elections were held are added from the International Foundation for Electoral Systems (2016). I construct two different types of election variables to be used in the empirical analysis. First and foremost, I will use an election dummy; a binary variable that takes the value one in an election year, and zero otherwise, no matter when during the year the election occurred. The same kind of dummy is used in large parts of the PBC literature, for example famously by Persson and Tabellini (2000). In order to take only those elections into account for which the incumbent government truly must try to convince voters of its ability, I include only legislative elections for countries with parliamentary political systems and executive elections for countries with presidential systems. The Database of Political Institutions offers a third type of political system, namely "assembly-elected president". I order observations with this type of political system into the category of parliamentary political system, since the incumbent government has to manipulate fiscal policy towards the legislative election in those cases. Only Bulgaria up to 2001 and Estonia fall into this category in the sample used here. Poland, Lithuania, Cyprus and Croatia up to 2000 are the only countries in the sample that have a presidential system, while all other countries have a parliamentary system. In later robustness tests, I also include a second dummy that is equal to one in the pre-election year and zero otherwise. Ultimately the sample contains 153 eligible elections, where the number of elections per country varies between four and seven in the time period from 1995 to 2015. An election takes place on average in seven countries each year in the sample.

There is a set of control variables that is routinely used in the literature on PBCs, which is adopted here. Firstly, the logarithm of real GDP per capita is included as a proxy for countries' development and economic prosperity, following Brender and Drazen (2005), Shi and Svensson (2006), Mink and De Haan (2006), and Efthyvoulou (2012). Data on real GDP per capita is taken from the table `nama_10_pc` from Eurostat. It is measured as chain linked volumes with 2010 being the reference value. Secondly, the growth rate of real GDP is used as a control variable with data from the same source. Third, the fraction of the countries' population that is aged 15 to 64 and that is aged over 65 respectively is controlled for as a proxy for the proportion of eligible voters in the population. This is done following Brender and Drazen (2005), and Efthyvoulou (2012). Data on these age distributions is taken from the table `demo_pjanbroad` from Eurostat. Next, I control for euro-area membership using a dummy variable that takes the value one if the country is a member of the Eurozone and zero otherwise. The dummy is time-varying. It thus takes the time of euro-adoption into account to check for the effect of having to adhere to stricter budgetary rules, such as the Maastricht convergence criteria even before using the Euro as currency. Lastly, I control for the output gap, which provides an important proxy for the business cycle. This allows me to filter automatic stabilization effects from the effects of the fiscal policy measure (Mink & De Haan, 2006). The output gap is proxied by the log-difference between real GDP and its

country-specific trend, where the latter is obtained using the Hodrick-Prescott filter, following the methodology used in Brender and Drazen (2005). The necessary data is taken from the table `nama_10_gdp` from Eurostat.

An empirical test of hypothesis 1b will be implemented with the help of the already introduced Numerical Fiscal Rules Index of the European Commission. The comprehensive time-varying fiscal rule index for each member state is constructed by summing up all values of the constructed fiscal rule strength indices in force in each country weighted by the coverage of general government finances of the respective rule. In the presence of more than one rule covering the same government sub-sector, the second, third and fourth rules obtain weights  $\frac{1}{2}$ ,  $\frac{1}{3}$ , and  $\frac{1}{4}$ , to reflect the decreasing marginal benefit of multiple rules applying to the same sub-sector. The assigned weights are mainly determined by the fiscal strength of the rule and its coverage (European Commission, Numerical Fiscal Rules in EU member countries, 2017). Since EU regulations are translated into national laws, the index also takes EU-wide fiscal rules, such as those in the Stability and Growth Pact into account. The latest available data points in this index are for the year 2014, leading to a slight decrease in sample size.

**Table 2.** Descriptive Statistics of Dependent Variables

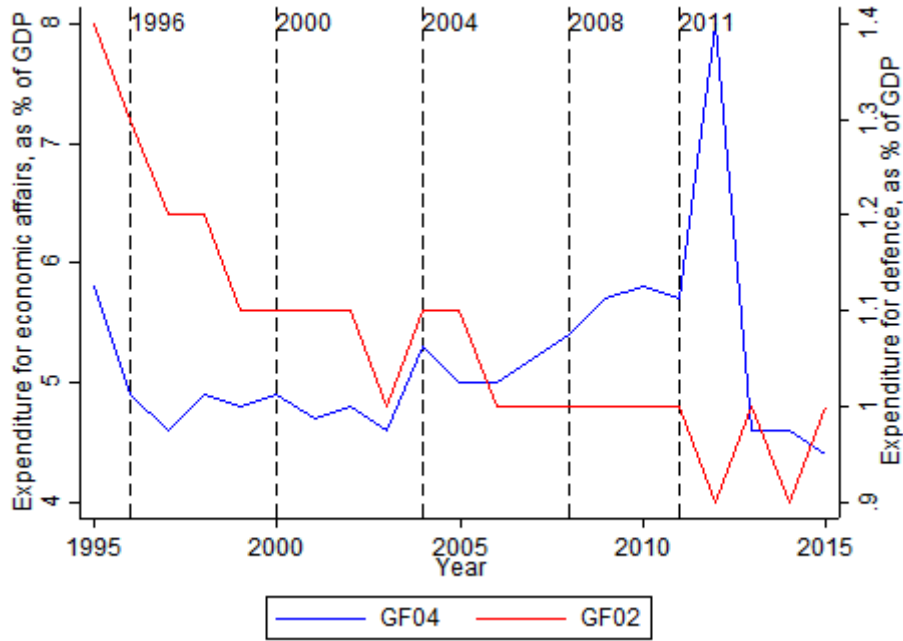
	Count	Mean	SD	Min	Max
Net lending/borrowing	582	-2.915	3.567	-32.100	6.900
GF01	561	6.912	2.399	2.800	17.600
GF02	561	1.363	0.577	0.200	3.600
GF03	561	1.782	0.472	0.500	3.800
GF04	561	5.166	1.881	1.300	25.300
GF05	561	0.734	0.359	-0.300	2.000
GF06	561	0.853	0.502	0.000	5.400
GF07	561	5.869	1.386	1.900	8.900
GF08	561	1.159	0.384	0.400	2.300
GF09	561	5.262	1.008	2.800	8.000
GF10	561	15.970	4.130	7.300	25.600

*Note.* GF01 to GF10 represent the ten COFOG categories. All dependent variables are measured in percentage of GDP.

Table 2 shows descriptive statistics for the main dependent variables used in the empirical analysis<sup>9</sup>. The table shows that the amount of variation in these government expenditure measures varies significantly. Expenditure on the social protection category (GF10) is consistently highest, since it includes pensions, unemployment benefits and other social benefits. Expenditure on environment protection (GF05), on the other hand exhibits the lowest share of GDP consistently. Figure 3 **Figure 3** below shows the development of expenditure on economic affairs (GF04), the category that has been

<sup>9</sup> The data used in this thesis was downloaded in December of 2016 and January 2017. Since many of the data sources are regularly updated, it is possible that data on some years and for some countries might have been added or revised since then. This is especially the case for the Eurostat datasets. For this reason, it is possible that some of the descriptive statistics and coefficients derived here are subject to change if the data is updated. The quantitative results are unlikely to change in any significant way, and the qualitative results naturally remain valid if this is the case.

shown in Table 1 to be the most salient, as percentage of GDP in Spain. This provides an example of how expenditure on this category evolves over time. The dashed lines mark those years in which a legislative election took place. Apart from the 2008 election, where fiscal manipulation was likely unwanted due to the glooming financial crisis which affected Spain largely, fiscal expenditure changes abruptly in all election years, suggesting that some level of manipulation indeed took place. On the contrary, expenditure for the less salient category of defense (GF02) does not align that neatly with abrupt changes in election years.



**Figure 3.** Government expenditure on economic affairs (GF04) and defense (GF02) as % of GDP. Vertical lines mark years in which legislative elections took place in Spain.

The empirical analysis that follows provides a more thorough insight into whether salient fiscal policy issues were manipulated in EU countries with Political Budget Cycles.

## 5. Empirical Strategy

### 5.1. The Baseline Model

To test hypothesis 1 formulated above empirically, I implement the following baseline model:

$$F_{i,t}^z = \sum_k \beta_k F_{i,t-k}^z + \beta_2 E_{i,t} + \beta_3 X_{i,t} + \mu_i + \theta_t + \varepsilon_{i,t} \quad (1)$$

In this model,  $F_{i,t}^z$  is government expenditure on a fiscal policy variable from the vector  $z \in \{\text{net lending/net borrowing, GF01, GF02, GF03, GF04, GF05, GF06, GF07, GF08, GF09, GF10}\}$  in

country  $i$  at time  $t$ , measured in percentage of GDP<sup>10</sup>.  $E_{i,t}$  is the binary election dummy variable. In later robustness tests it is replaced by  $Et_{i,t}$ , which is the election variable that takes the timing of elections into account.  $X_{i,t}$  is a vector of control variables and includes the log of real GDP per capita, the growth rate of real GDP, the fraction of the population aged 15 to 64, the fraction of the population aged 65 or older, a measure of the output gap and a dummy variable for Eurozone membership.  $\mu_i$  are country fixed effects and  $\theta_t$  are year fixed effects. These are necessary here due to systematic differences across countries and large exogenous shocks in some years, such as the global financial crisis in 2008 or the sovereign debt crisis. Lastly,  $\varepsilon_{i,t}$  is the idiosyncratic error term. Since fiscal policy naturally needs some time to be implemented and adjusted, I also include a one-period lag of the dependent variable in the fixed effects estimation of this baseline model. The parameter  $k$  in the baseline equation therefore takes the value one in all fixed effects regressions.

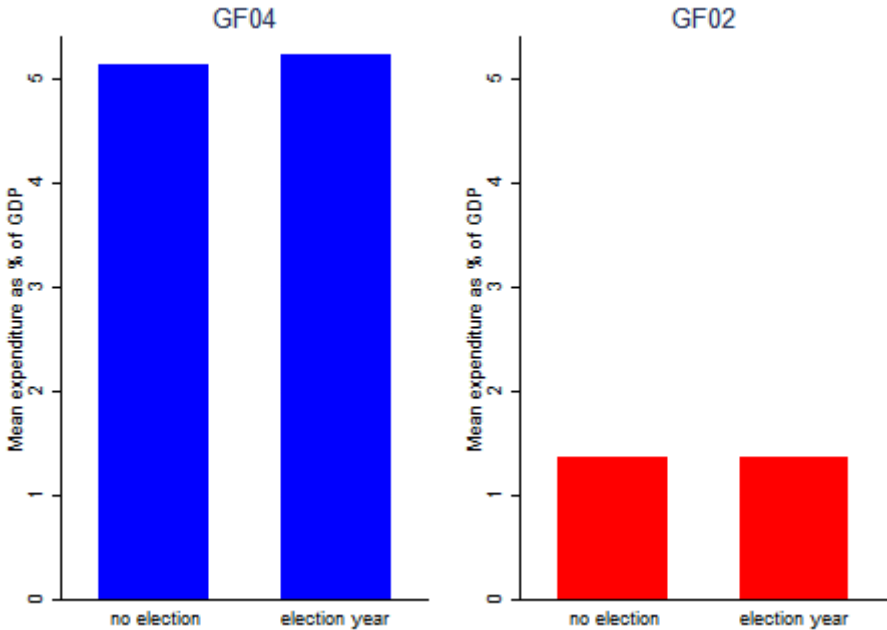
The empirical analysis provides support for hypothesis 1 if it shows a significant coefficient  $\beta_2$  on the election dummy. The hypothesis predicts that  $\beta_2$  should be significant in the panel regression for those variables from the vector  $z$  that rank high in terms of salience, such as economic affairs, or public order and safety. It is less clear-cut to argue which sign the coefficient should have to support the hypothesis. If  $F_{i,t}^z = F_{i,t}^{net\ lending/borrowing}$ , I expect the coefficient of the election variable to be significant and negative. This is because the classical PBC theory dictates that incumbent governments will increase spending before an election, to signal competence. An increase in government spending implies an increase in the government deficit and thus a decrease in the ratio of net lending to net borrowing. As an extension of this, the theoretical framework here makes it less straight-forward to predict the ideal course of action for an incumbent government. An example shall illustrate this point. COFOG category two focuses on government expenditure on defense and related issues. If the issue domain of defense is salient, it does not necessarily mean that the government should increase spending in this category before an election to attract voters. Defense might be salient for multiple reasons. If it is in the public eye due to an inherent military threat that is close by, as might be the case for some of the Eastern European member states who border Ukraine and critically follow the conflict between Ukraine and Russia, then the incumbent might be best off increasing spending in this category and we would expect a positive coefficient  $\beta_2$ . Alternatively, though, if the issue of defense is salient, because voters feel like their government is spending excessive sums on defense and thus unnecessarily wasting tax payer money without any inherent threat, the government would be best off decreasing spending in this category before an election, leading to an expected negative coefficient  $\beta_2$ . The net effect of these possibilities across countries is unclear. While it is beyond the scope of this thesis to determine the reason for which

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<sup>10</sup> GF01 to GF10 represent the ten COFOG categories.

each issue is salient in each member state, the relative ranking of issues seems to be roughly similar across countries over time<sup>11</sup>.

Figure 4 below visualizes this with an example. One can observe an increase in expenditure on the salient category GF04 when moving from a non-election to an election year on average in the 28 EU countries. For the non-salient category GF02, there is no clearly observable increase. I expect the increase in the salient category to be statistically significant.



**Figure 4.** Comparison of election and non-election year mean expenditure on the salient category GF04 and the non-salient category GF02.

Regarding the vector of control variables, the following predictions can be made. I expect a negative coefficient on the dummy variable of Eurozone membership in a regression on the net fiscal balance, since countries that use the euro as currency are more constrained in their fiscal behavior due to the SGP. While I expect them to be forced to target specific categories of fiscal policy more directly, meaning that the elections dummy should be bigger for those countries in regressions on the individual COFOG categories, euro area countries generally do not differ systematically from non-euro area countries in their relative fiscal expenditure choices. I expect countries with a higher GDP not to differ systematically from countries with a lower GDP in terms of the relative fiscal expenditure attributed to certain socio-economic functions. When looking at the aggregate of these components in the existing literature, both real GDP and GDP growth do have a positive effect on the primary budget balance, suggesting that countries with a higher GDP are able to have less primary deficits (Shi & Svensson, 2006). I expect a negative coefficient on the output gap control variable. This is because governments

<sup>11</sup> For a proposal on how to tackle this issue see section 7.1 Limitations.

of countries who are experiencing a high-volatility period of GDP growth are less likely to manipulate fiscal policy extensively for election purposes to a degree that goes beyond any stabilization efforts (Brender & Drazen, 2005). The fractions of the population aged 15 to 64, and 65 and older should have a significant effect at least in those regressions on social spending categories (GF07, GF08, GF10). This follows from literature on the determinants of social spending, which identifies the age distribution of a society as a decisive factor in cross-country analyses (Lindert, 1996).

### 5.2. Empirical Implementation

I conduct a first analysis to explore which estimation technique is most appropriate to implement the baseline model. Poolability tests, such as the Breusch-Pagan Lagrange Multiplier test with the null hypothesis of zero variance in the country effect, show that there are indeed country fixed effects in the regression estimation. Consequently, the pooled OLS estimates are biased. The use of the fixed effects estimator is furthermore supported by the Hausman test. It shows that there is a systematic difference between fixed effects and random effects estimates, making the former more consistent.<sup>12</sup>

The inclusion of the lagged dependent variable in the fixed effects regression, however, introduces an endogeneity issue, called the Nickell bias in dynamic panels. When lagged dependent variables are included, the assumption of strict exogeneity, which is required for the fixed effects (FE) and random effects (RE) estimates to be consistent, is violated. In the dynamic model, the lagged dependent variable is an explanatory variable and is, by construction, correlated with the idiosyncratic error term (Söderbom, Teal, Eberhardt, Quinn, & Zeitlin, 2015). The size of the bias depends on both  $N$ , the number of cross-section units (countries in this case), and  $T$ , the number of time periods (years in this case), included in the panel. When using the fixed effects estimator, the size of the bias is limited to roughly  $-(1+\beta_k)/(T-1)$  as  $N$  tends towards infinity. With a low  $T$ , this bias can be relatively large. To tackle this endogeneity problem, some instrumental variable methods have been developed, which use further lags as instruments for the lagged dependent variable. These methods are the so-called general method of moments (GMM) estimators. They solve the endogeneity problem by taking first differences of the original model, which eliminates any individual fixed effects, and thus allows us to use lags of the dependent variable, in either differenced or lagged levels form, as instruments for the lagged dependent variable. The Arellano-Bond Difference GMM estimator provides an improvement over the initially developed Anderson-Hsiao estimator by enabling the use of more instruments, thus using more of the available information in the data (Söderbom, Teal, Eberhardt, Quinn, & Zeitlin, 2015). The estimator is consistent and efficient in the presence of heteroskedasticity, which the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity shows to exist in the estimation. The Blundell-Bond System GMM estimator tackles the problem of Arellano-Bond that the variables in levels are likely to be weakly correlated with

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<sup>12</sup> Table A3 in the appendix shows the results of these tests, proving that the fixed effects estimator is indeed the most appropriate here.

future differences if the series are close to a unit root. It does so by using lagged values of the first-differenced dependent variable as instrumental variables in the level equation for period  $t$  and vice versa. The Arellano-Bond estimator is the preferred method used in most PBC literature and will therefore be employed here whenever GMM estimates are reported.<sup>13</sup> It is valid only if there is no serial correlation in the idiosyncratic error term and the instruments being used are valid.<sup>14</sup>

It is, however, not a clear-cut decision to prefer GMM estimates over simple fixed effects estimates. Due to the use of instrumental variables, the former are less efficient than the latter. Since the relative bias of the GMM is rather small here, as can be seen from the small difference between the size of the fixed effect estimates in Table 4 and the GMM estimates in Table A4 in the Appendix, I will primarily report fixed effects estimates in the following parts. GMM estimates are reported for completeness in the Appendix.

## 6. Results

### *6.1. PBCs and Fiscal Rules in the EU*

The empirical evaluation of the hypotheses formulated above begins with an effort to see whether the data leading up to more recent years, and thus extending the sample period used in previous literature, yields support for the findings of Mink and De Haan (2006) and Buti and van den Noord (2003). Column one in Table 3 below reports the results of a fixed effects estimation for the entire sample. The dependent variable here is net lending or alternatively net borrowing by the general government as percentage of GDP and thus coincides with most of the literature on PBCs. Since heteroskedasticity and first-order autocorrelation in the error term are econometric problems in this analysis, the standard errors presented in this and the following tables are adjusted for both issues. Table 3 also reports the p-values of an F-test of the joint significance of dummies for all years included in the sample period in each specification respectively. These F-tests are highly significant in all model specifications not only in Table 3 but also in the specifications and robustness tests that follow. The p-values of the F-tests are omitted in the tables that follow. These year effects pick up the influence of exogenous shocks that occur throughout the sample period, such as the sovereign debt crisis from approximately 2010 to 2012. The coefficients of these year dummies are also omitted for brevity.

The election dummy in column one of Table 3 is insignificant and is thus in line with the findings of Andrikopoulos et al. (2004) and De Haan and Sturm (1994), who do not find consistent support for the existence of PBCs in the European Union. While the coefficient is not significant, it does indeed have

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<sup>13</sup> See for example Brender and Drazen (2005) and Shi and Svensson (2002, 2006).

<sup>14</sup> Tests for both conditions are provided with the results on GMM estimation.

the expected sign, meaning that one can observe a higher budget deficit in election years. The results suggest that when moving from a non-election to an election year, net lending on average decreases by 0.311 percentage points, all else being equal. Contrary to what was expected, I do find a consistent positive and significant coefficient on the relationship between real GDP growth and the primary budget balance, meaning that countries that go through a phase of high economic growth use this additional wealth to decrease their budget deficits. GDP growth here proves to be a strong and robust predictor of net lending.

The second column of Table 3 provides a test of hypothesis 1b which says that the higher the number of fiscal rules imposed on governments, the harder it is to impose Political Budget Cycles. This hypothesis is implemented through an interaction of the election dummy variable with the Numerical Fiscal Rules Index. A positive significant coefficient on this interaction term would yield support for the hypothesis. This support can, however, not be found in the empirical analysis. Instead, the interaction term shows a coefficient of the opposite sign and is insignificant. This suggests that the increasing number of fiscal rules that are being imposed on member states do not significantly constrain incumbent governments from fiscal manipulation through electoral cycles. Before completely dismissing hypothesis 1b though it is important to notice that there is a positive and significant coefficient on the NFRI. This shows that the increasing number of fiscal rules does indeed coincide with lower fiscal deficits in the member states. While these rules thus do not seem to constrain PBCs, they do seem to successfully yield fiscal conservatism in terms of lower budget deficits in the European Union.

Columns three and four of Table 3 replicate columns one and two respectively, but omit the dummy variable for Eurozone membership from the vector of control variables. This is done to avoid a potential bias in the estimates due to collinearity between what this dummy variable measures and the NFRI. One can reasonably expect that the Eurozone dummy already accounts for the stronger budgetary surveillance and rules that Eurozone member states are subject to, while the NFRI also accounts for those rules that are being translated into national laws. The signs and significance levels of the coefficients are largely robust to this change, with only minor changes in the size of the coefficients.

**Table 3.** Fixed effects estimation of the baseline model, using net lending as dependent variable.

	(1)	(2)	(3)	(4)
Elections	-0.311 (0.192)	-0.178 (0.272)	-0.295 (0.196)	-0.155 (0.278)
Elections*NFRI		-0.349 (0.302)		-0.358 (0.308)
NFRI		0.435* (0.166)		0.431* (0.167)
Budget Balance (-1)	0.461*** (0.056)	0.464*** (0.055)	0.468*** (0.055)	0.471*** (0.054)
Ln Real GDP pc	1.136 (0.953)	1.251 (1.195)	0.936 (0.958)	0.996 (1.168)
Real GDP growth	0.181*** (0.040)	0.181*** (0.044)	0.174*** (0.039)	0.175*** (0.044)
Population 15-64	0.269* (0.125)	0.211 (0.140)	0.271* (0.126)	0.214 (0.138)
Population 65+	0.390 (0.259)	0.440 (0.268)	0.416 (0.258)	0.464 (0.265)
Eurozone	0.438 (0.314)	0.393 (0.335)		
Output gap	-15.250 (7.530)	-14.217 (7.247)	-13.482 (7.600)	-12.543 (7.183)
Constant	-36.091** (11.357)	-33.860* (12.548)	-34.622** (11.319)	-31.912* (12.143)
<i>N</i>	540	512	540	512
<i>R</i> <sup>2</sup>	0.590	0.593	0.611	0.614
Year Effects <sup>1</sup>	0.000	0.000	0.000	0.000

*Note.* Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . 1.) P-value of F-test for the joint significance of year dummies

Table A3 in the appendix shows a comparison between the coefficients of the model specification in column one above when derived with fixed effects, random effects or GMM estimation. The signs and significance of the results are roughly robust across specifications. A Hausman test shows that the fixed effects estimates are more consistent than the random effects estimates. The GMM results show a significant election dummy. They are, however, to be taken with a grain of salt, since they are highly sensitive to the choice of instruments, the sample length and the number of lags taken as instruments for the lagged dependent variable. The Hansen test for overidentifying assumptions on the instruments proves to be over-confident.

## 6.2. PBC Composition

The results of the empirical implementation of hypothesis 1 can be seen in Table 4 below. The standard errors of the presented estimates are again robust for the observed heteroskedasticity and first-order autocorrelation. It can be seen, that significant electoral cycles are observed in only three of the ten COFOG categories. While the coefficients are small in size, the election dummy is significant at the five percent level in the categories of public order and safety (GF03), housing and community amenities (GF06) and education (GF09). The coefficients in all three of these categories are positive, suggesting that expenditure on these issues is increased in election years.

In economic terms the effect sizes of the significant coefficients for election years are indeed relatively large. According to column three, in election years, one can on average observe an increase in government expenditure on public order and safety of 0.029 percentage points, corresponding to a 1.63 percent increase from the mean in expenditure on this issue, all else being equal. The observed coefficient thus entails an economic significance which is likely to be noticed by voters. Incumbent governments appear to increase expenditure on public order and safety in an electoral cycle. In column six one can see that expenditure on housing increases by 0.026 percentage points on average in election years, *ceteris paribus*. This implies an increase of 3.05 percent from the mean expenditure on this category. Column nine shows that expenditure on education increases by 0.046 percentage points on average in election years, *ceteris paribus*, corresponding to an increase in expenditure of 0.87 percent from the mean. These changes are likely to be strongly visible in the government accounting process. It is interesting to observe that the analysis of electoral cycles in the composites of the government budget balance renders the vector of control variables to be largely insignificant.

From the ranking of policy instruments' salience in Table 1, the theory outlined in this paper yielded the expectation that there are significant electoral cycles in the categories of economic affairs (GF01), public order and safety (GF03), health (GF07), general public services (GF01) and social protection (GF10), as the most important issues to Europeans. While I do indeed observe evidence of a political budget cycle in expenditure category GF03, the coefficient on the most salient category GF04 is not statistically significant. It thus does not yield evidence for a significant electoral cycle. The coefficient here suggests that, when moving from non-election to election years, government expenditure on this category on average increases by 0.022 percentage points, all else being equal. This change implies a 0.43 percent increase from the mean expenditure on economic affairs in the sample and is thus economically not very large. The coefficients on categories GF07 and GF10 can be said to be both statistically and economically insignificant. The coefficient on category GF01 is statistically insignificant, but implies an economically rather large increase in expenditure of 2.32 percent from the mean, all else being equal. These results suggest that the thermometer analogy of Franklin and Wlezien (1997) does not seem to hold true for these issue domains.

Table A4 in the appendix shows the results from the GMM estimation of the same baseline model, using the Arellano-Bond estimator. It is reassuring that the size, sign and significance of the coefficients is largely robust to this different type of estimation. I still observe significant electoral cycles on the same three socio-economic expenditure functions. It should be repeated though that these GMM results are largely sensitive to the choice of instruments and therefore not very robust.

**Table 4.** Fixed Effects estimation of the baseline model, using all COFOG categories as dependent variables in turn.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GF01	GF02	GF03	GF04	GF05	GF06	GF07	GF08	GF09	GF10
Elections	0.160 (0.124)	-0.006 (0.014)	0.029* (0.014)	0.022 (0.120)	0.010 (0.013)	0.026* (0.011)	-0.002 (0.036)	0.015 (0.011)	0.046* (0.018)	0.026 (0.039)
COFOG(-1) <sup>1</sup>	0.478** (0.164)	0.679*** (0.052)	0.733*** (0.034)	0.194*** (0.048)	0.673*** (0.066)	0.368 (0.201)	0.751*** (0.061)	0.727*** (0.043)	0.657*** (0.050)	0.791*** (0.026)
Ln Real GDP pc	-0.955 (1.060)	-0.065 (0.168)	-0.126 (0.122)	-0.548 (1.200)	0.006 (0.123)	0.338 (0.342)	0.206 (0.283)	0.183 (0.114)	-0.086 (0.178)	-1.072* (0.450)
Real GDP growth	-0.032 (0.025)	-0.000 (0.005)	-0.003 (0.005)	-0.077 (0.039)	-0.004 (0.005)	-0.003 (0.007)	-0.023 (0.015)	-0.005 (0.003)	-0.027** (0.009)	-0.155*** (0.014)
Population 15-64	0.022 (0.081)	-0.001 (0.011)	-0.021 (0.013)	-0.165 (0.188)	0.006 (0.013)	-0.030 (0.036)	-0.050 (0.032)	-0.012 (0.013)	0.014 (0.017)	-0.036 (0.038)
Population 65+	0.083 (0.106)	0.008 (0.014)	-0.015 (0.013)	-0.185 (0.133)	0.016 (0.018)	-0.042 (0.041)	-0.071 (0.034)	-0.005 (0.017)	-0.015 (0.028)	-0.050 (0.078)
Eurozone	0.022 (0.117)	0.034 (0.032)	-0.028 (0.042)	-0.213 (0.233)	-0.002 (0.019)	0.092 (0.059)	0.012 (0.042)	0.015 (0.033)	-0.050 (0.046)	-0.150 (0.100)
Output gap	-2.085 (2.738)	0.728* (0.339)	0.784 (0.842)	6.389 (9.229)	1.314 (0.966)	0.169 (1.003)	-0.150 (1.320)	0.464 (0.475)	1.548 (1.098)	7.841* (2.869)
Constant	11.019 (8.054)	1.076 (1.328)	3.297*** (0.780)	23.268 (12.921)	-0.426 (1.107)	0.017 (1.708)	3.892 (2.684)	-0.573 (0.724)	1.905 (1.565)	17.050*** (4.273)
<i>N</i>	520	520	520	520	520	520	520	520	520	520
R2	0.597	0.880	0.897	0.205	0.814	0.133	0.917	0.710	0.916	0.932

*Note.* Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

1. COFOG(-1) shows the estimate of the lagged dependent variable in each column respectively.

### 6.3. Robustness Checks

In order to check the robustness of the results found above, I conduct several extensions and re-specifications of the baseline model. As a first robustness check, I check whether the electoral manipulation by the incumbent government occurs already in the year before the election takes place, instead of only in the election year. This might be the case if the incumbent needs to make sure that there is enough time for voters to see the signal of competence that is being sent out and to correctly attribute it to the government. Depending on the degree of visibility of the expenditure on the different socio-economic functions, it is likely that increasing expenditure in the election year only might not be timely enough for voters to observe these changes. This robustness check furthermore allows to identify electoral cycles in case that the electorate takes into account the consequences of a fiscal policy change, instead of its implementation, when making a vote decision. The consequences of a policy change might only be fully visible in a period after the implementation, so that a policy change at time  $t$  would influence an election at time  $t+1$ . I implement this by replacing the election dummy with a dummy variable for the pre-election year,  $pE_{i,t}$ .

$$F_{i,t}^Z = \sum_k \beta_k F_{i,t-k}^Z + \beta_2 pE_{i,t} + \beta_3 X_{i,t} + \mu_i + \theta_t + \varepsilon_{i,t} \quad (2)$$

The results of this check can be seen in Table 5 below. Looking at the pre-election instead of the election year renders the dummy variable insignificant in the categories where a significant cycle was observed before. An electoral cycle is now observed only in the government expenditure on environment protection (GF05), a category that has not been seen to be especially salient over the sample period. These results do not entirely reject that there are any electoral cycles on the composites of the government budget. Instead, they suggest that fiscal manipulation by the incumbent government only needs to take place in the election year and not in the pre-election year already. This speaks for the idea that the incumbent is able to raise awareness among the electorate about changes in public spending. If changes in spending indeed occur as a reaction to issues that are salient to voters, as the theoretical framework of this thesis suggests, the electorate is likely to be attentive to changes in expenditure on these salient issues. The government, therefore, does not need to manipulate expenditure in the pre-election year, since the electorate recognizes the changes immediately, and can respond at the ballot.

Next, I investigate whether one has to take the timing of an election over the course of the year into account, following Mink and De Haan (2006). They use the following formula to build a variable that accounts for election timing:

$$Et = \left[ (M - 1) + \frac{d}{D} \right] / 12$$

for election years, where  $M$  is the month and  $d$  is the day when the election was held and  $D$  is the number of days in the month the election was held. In non-election years the variable takes the value zero. Taking the timing of an election into account might be especially important since governments have to adhere

to the fiscal year or might, in reverse logic, place snap elections at a time that allows them to have more time to manipulate fiscal policy.

$$F_{i,t}^Z = \sum_k \beta_k F_{i,t-k}^Z + \beta_2 E_{i,t} + \beta_3 X_{i,t} + \mu_i + \theta_t + \varepsilon_{i,t} \quad (3)$$

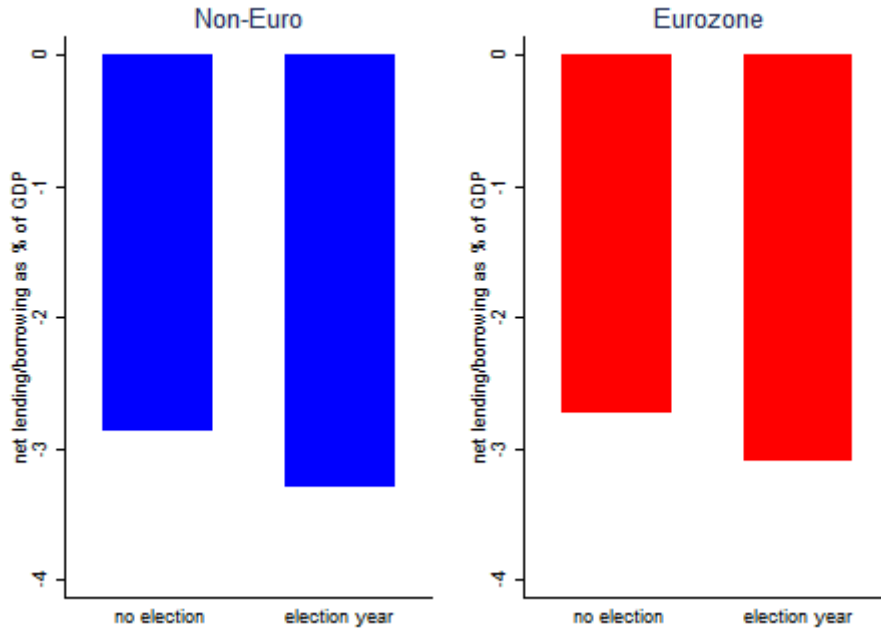
Table 6 shows that the timing of elections or the placement of snap elections is not an issue here. A significant electoral cycle is observed only in expenditure on housing and community amenities if one takes the timing of elections into account. This suggests that the electorate takes account of policies that have been implemented to date, but not necessarily of the effects, or are conscious that effects will take time to materialize. The fact that there is evidence of significant electoral cycles when looking at the binary election dummy, but not when adjusting for timing speaks for the fact that, while salience of different issue domains is likely to be time-varying, it does not change frequently or abruptly. Therefore, when during the year the election occurs, does not impact on the incumbent government's decision to change expenditure on a socio-economic function.

The results found in Table 4 could additionally be influenced by the composition of the sample that has been chosen. According to the Standard Eurobarometer of 2015, "The order in which national issues are ranked differs considerably in euro area and non-euro area countries" (European Commission, Standard Eurobarometer 84, 2015, p. 47). This could theoretically mean, that one would observe electoral cycles in different COFOG categories in Eurozone countries as compared to non-Eurozone countries. In order to take this into account, I interact the Eurozone dummy variable with the election dummy, while also adding it separately. The model then takes the following form:

$$F_{i,t}^Z = \sum_k \beta_k F_{i,t-k}^Z + \beta_2 E_{i,t} Euro_{i,t} + \beta_3 Euro_{i,t} + \beta_4 X'_{i,t} + \mu_i + \theta_t + \varepsilon_{i,t} \quad (4)$$

Where  $X'_{i,t}$  includes the same control variables as  $X_{i,t}$  in the baseline model, except of the Eurozone membership dummy. It can be seen in Table 7 that, at least for expenditure on public order and safety (GF03), there indeed is a significant electoral cycle, which is significantly smaller for Eurozone countries than for non-Eurozone countries. According to the coefficients in column three, when moving from a non-election to an election year, expenditure on this category decreases by 0.022 percentage points in Eurozone countries, but increases by 0.066 percentage points in non-Eurozone countries, all else being equal. For the other socio-economic expenditure functions, being a member of the Eurozone or not does not seem to influence the occurrence of PBCs significantly.

Another way to test for a difference between Eurozone and non-Eurozone countries is by running the baseline model only for the reduced sample of euro area countries. Figure 5 below shows that the change in net lending is on average smaller in Eurozone countries than in non-euro countries, when comparing election years and non-election years. This suggests that there might be a difference in PBC composition between those two groups of countries.



**Figure 5.** Comparison of mean values of net lending / net borrowing as % of GDP in election and non-election years in Eurozone and non-euro countries.

Supporting the findings in Table 7, Table 8 shows that there is indeed no evidence of an electoral cycle in expenditure on public order and safety when looking only at the sample of euro area countries. The coefficients on the election variable are, however, still statistically and economically significant and of similar size for the categories GF06 and GF09, supporting the baseline findings.

In order to check more thoroughly for the effect of institutional fiscal constraints, I interact the election dummy with the Numerical Fiscal Rules Index that has been introduced earlier. This index provides a more detailed way of accounting for fiscal constraints put on European and more specifically euro area countries than the Eurozone dummy.

$$F_{i,t}^Z = \sum_k \beta_k F_{i,t-k}^Z + \beta_2 E_{i,t} NFRI_{i,t} + \beta_3 NFRI_{i,t} + \beta_4 X'_{i,t} + \mu_i + \theta_t + \varepsilon_{i,t} \quad (5)$$

Table 9 shows the results of this model specification. As column 2 in Table 3 had already shown for the overall government budget, there is no significant effect of numerical fiscal rules on the occurrence of electoral cycles also in the components of the fiscal budget. This can be seen from the statistically insignificant interaction effect. The fact that the coefficient on the individual NFRI variable is also insignificant in all but one of the COFOG categories, suggests that indeed these fiscal rules do influence the aggregate fiscal balance, but not the expenditure on individual components of the fiscal balance. This suggests that the increased number of rules did not force incumbent governments to target spending on a level that is more decomposed than the ten socio-economic functions.

**Table 5.** Robustness test 1: Looking at Pre-Election Years.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GF01	GF02	GF03	GF04	GF05	GF06	GF07	GF08	GF09	GF10
Pre-Election Year	0.024 (0.070)	0.014 (0.023)	0.002 (0.013)	0.174 (0.216)	-0.036* (0.016)	0.014 (0.016)	-0.010 (0.030)	-0.010 (0.012)	0.004 (0.020)	0.030 (0.053)
COFOG(-1)	0.478** (0.167)	0.679*** (0.052)	0.731*** (0.035)	0.195*** (0.049)	0.671*** (0.066)	0.367 (0.202)	0.750*** (0.061)	0.726*** (0.043)	0.657*** (0.050)	0.791*** (0.026)
Ln Real GDP pc	-0.939 (1.051)	-0.069 (0.169)	-0.123 (0.121)	-0.582 (1.203)	0.015 (0.121)	0.338 (0.342)	0.208 (0.282)	0.187 (0.114)	-0.081 (0.179)	-1.075* (0.452)
Real GDP growth	-0.033 (0.024)	-0.000 (0.005)	-0.003 (0.006)	-0.078 (0.040)	-0.004 (0.005)	-0.003 (0.008)	-0.023 (0.015)	-0.005 (0.003)	-0.027** (0.009)	-0.155*** (0.014)
Population 15-64	0.022 (0.080)	-0.000 (0.011)	-0.021 (0.013)	-0.159 (0.189)	0.004 (0.013)	-0.030 (0.036)	-0.051 (0.031)	-0.012 (0.013)	0.014 (0.017)	-0.035 (0.038)
Population 65+	0.079 (0.105)	0.008 (0.014)	-0.016 (0.013)	-0.181 (0.130)	0.015 (0.017)	-0.042 (0.041)	-0.071* (0.034)	-0.006 (0.017)	-0.016 (0.028)	-0.050 (0.078)
Eurozone	0.040 (0.120)	0.033 (0.032)	-0.025 (0.042)	-0.210 (0.227)	-0.001 (0.018)	0.095 (0.059)	0.012 (0.043)	0.017 (0.033)	-0.045 (0.046)	-0.147 (0.098)
Output gap	-1.947 (2.725)	0.725 (0.354)	0.812 (0.825)	6.426 (9.013)	1.322 (0.964)	0.194 (1.006)	-0.154 (1.333)	0.475 (0.462)	1.586 (1.059)	7.869* (2.846)
Constant	10.958 (8.126)	1.065 (1.313)	3.309*** (0.803)	23.075 (12.972)	-0.397 (1.105)	-0.003 (1.716)	3.906 (2.670)	-0.567 (0.727)	1.892 (1.569)	17.013*** (4.229)
<i>N</i>	520	520	520	520	520	520	520	520	520	520
<i>R</i> <sup>2</sup>	0.507	0.630	0.674	0.135	0.545	0.387	0.790	0.595	0.584	0.906

*Note.* Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 6.** Robustness test 2: Taking the timing of elections into account.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GF01	GF02	GF03	GF04	GF05	GF06	GF07	GF08	GF09	GF10
Election timing	0.287 (0.204)	0.024 (0.030)	0.044* (0.017)	0.228 (0.338)	-0.034 (0.026)	0.027 (0.019)	0.013 (0.043)	0.023 (0.013)	0.056* (0.025)	0.032 (0.065)
COFOG(-1)	0.482** (0.161)	0.680*** (0.052)	0.735*** (0.034)	0.193*** (0.049)	0.670*** (0.066)	0.367 (0.201)	0.751*** (0.061)	0.727*** (0.043)	0.660*** (0.050)	0.791*** (0.026)
Ln Real GDP pc	-0.935 (1.038)	-0.066 (0.167)	-0.122 (0.121)	-0.553 (1.199)	0.009 (0.123)	0.340 (0.343)	0.206 (0.283)	0.184 (0.114)	-0.081 (0.179)	-1.070* (0.449)
Real GDP growth	-0.033 (0.024)	-0.000 (0.005)	-0.003 (0.005)	-0.078 (0.039)	-0.005 (0.005)	-0.003 (0.007)	-0.023 (0.015)	-0.005 (0.003)	-0.027** (0.009)	-0.155*** (0.014)
Population 15-64	0.023 (0.081)	-0.001 (0.011)	-0.020 (0.013)	-0.163 (0.189)	0.005 (0.013)	-0.030 (0.036)	-0.050 (0.031)	-0.011 (0.013)	0.014 (0.016)	-0.036 (0.038)
Population 65+	0.081 (0.105)	0.008 (0.014)	-0.015 (0.013)	-0.183 (0.131)	0.015 (0.018)	-0.042 (0.041)	-0.070 (0.035)	-0.005 (0.017)	-0.015 (0.028)	-0.050 (0.078)
Eurozone	0.029 (0.119)	0.032 (0.032)	-0.026 (0.042)	-0.221 (0.234)	0.000 (0.018)	0.094 (0.059)	0.011 (0.042)	0.016 (0.033)	-0.047 (0.045)	-0.149 (0.098)
Output gap	-2.402 (2.944)	0.685 (0.335)	0.732 (0.851)	6.056 (8.651)	1.382 (0.975)	0.148 (0.992)	-0.173 (1.317)	0.440 (0.475)	1.506 (1.081)	7.811* (2.886)
Constant	10.730 (7.944)	1.058 (1.308)	3.220*** (0.782)	23.124 (12.958)	-0.403 (1.125)	-0.010 (1.711)	3.881 (2.676)	-0.594 (0.725)	1.831 (1.563)	17.022*** (4.266)
<i>N</i>	520	520	520	520	520	520	520	520	520	520
R2	0.513	0.630	0.677	0.134	0.542	0.387	0.790	0.596	0.586	0.906

Note. Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 7.** Robustness test 3: Looking at differences between Eurozone and non-Eurozone countries.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GF01	GF02	GF03	GF04	GF05	GF06	GF07	GF08	GF09	GF10
Elections*Eurozone	-0.275 (0.223)	-0.034 (0.027)	-0.080** (0.026)	-0.293 (0.182)	-0.047 (0.024)	0.001 (0.025)	0.073 (0.071)	-0.027 (0.021)	0.003 (0.036)	-0.029 (0.090)
Elections	0.289 (0.222)	0.010 (0.023)	0.066** (0.019)	0.159 (0.147)	0.032 (0.019)	0.026 (0.019)	-0.037 (0.049)	0.028 (0.018)	0.045 (0.028)	0.040 (0.061)
COFOG(-1)	0.479** (0.163)	0.681*** (0.052)	0.737*** (0.034)	0.196*** (0.049)	0.678*** (0.066)	0.368 (0.202)	0.751*** (0.061)	0.730*** (0.044)	0.657*** (0.050)	0.791*** (0.026)
Ln Real GDP pc	-0.966 (1.067)	-0.066 (0.168)	-0.127 (0.122)	-0.561 (1.206)	0.004 (0.124)	0.338 (0.342)	0.210 (0.282)	0.180 (0.114)	-0.086 (0.179)	-1.072* (0.450)
Real GDP growth	-0.033 (0.025)	-0.000 (0.005)	-0.003 (0.005)	-0.077 (0.040)	-0.004 (0.005)	-0.003 (0.007)	-0.023 (0.015)	-0.005 (0.003)	-0.027** (0.009)	-0.155*** (0.014)
Population 15-64	0.021 (0.081)	-0.001 (0.011)	-0.020 (0.013)	-0.164 (0.188)	0.005 (0.013)	-0.030 (0.036)	-0.050 (0.031)	-0.011 (0.013)	0.014 (0.017)	-0.036 (0.039)
Population 65+	0.084 (0.106)	0.008 (0.014)	-0.015 (0.013)	-0.183 (0.132)	0.016 (0.017)	-0.042 (0.041)	-0.071* (0.034)	-0.005 (0.016)	-0.015 (0.028)	-0.050 (0.078)
Eurozone	0.090 (0.143)	0.042 (0.032)	-0.008 (0.043)	-0.140 (0.236)	0.010 (0.020)	0.092 (0.057)	-0.005 (0.043)	0.022 (0.032)	-0.051 (0.045)	-0.143 (0.096)
Output gap	-2.079 (2.699)	0.727* (0.337)	0.776 (0.835)	6.373 (9.271)	1.305 (0.942)	0.169 (1.004)	-0.150 (1.323)	0.466 (0.479)	1.548 (1.100)	7.845* (2.881)
Constant	11.075 (8.056)	1.078 (1.320)	3.254*** (0.783)	23.254 (12.916)	-0.416 (1.105)	0.017 (1.708)	3.862 (2.699)	-0.575 (0.722)	1.905 (1.567)	17.035*** (4.268)
<i>N</i>	520	520	520	520	520	520	520	520	520	520
<i>R</i> <sup>2</sup>	0.513	0.630	0.683	0.134	0.542	0.388	0.790	0.597	0.587	0.906

*Note.* Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 8.** Robustness test 4: Looking only at Eurozone countries.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GF01	GF02	GF03	GF04	GF05	GF06	GF07	GF08	GF09	GF10
Elections	0.010 (0.051)	-0.017 (0.010)	-0.009 (0.015)	-0.094 (0.132)	-0.021 (0.015)	0.024* (0.011)	0.069 (0.048)	0.008 (0.011)	0.060* (0.024)	0.011 (0.068)
COFOG(-1)	0.773*** (0.075)	0.422** (0.112)	0.638*** (0.045)	0.057 (0.078)	0.630*** (0.144)	0.705*** (0.068)	0.841*** (0.050)	0.707*** (0.086)	0.664*** (0.058)	0.781*** (0.065)
Ln Real GDP pc	1.748 (1.097)	0.323 (0.266)	-0.290 (0.336)	-8.414 (4.453)	-0.382 (0.356)	0.052 (0.319)	2.032** (0.608)	0.418 (0.291)	0.912 (0.639)	-0.519 (1.361)
Real GDP growth	-0.080*** (0.015)	0.003 (0.008)	-0.010* (0.004)	-0.064 (0.102)	-0.009 (0.007)	-0.001 (0.006)	-0.051** (0.016)	-0.010 (0.005)	-0.033** (0.011)	-0.165*** (0.011)
Population 15-64	-0.201** (0.068)	-0.010 (0.027)	0.012 (0.021)	0.136 (0.310)	0.008 (0.026)	0.016 (0.034)	0.056 (0.062)	-0.000 (0.020)	-0.008 (0.034)	-0.031 (0.092)
Population 65+	-0.087 (0.072)	-0.004 (0.020)	0.001 (0.017)	-0.195 (0.235)	0.008 (0.029)	0.013 (0.035)	0.049 (0.064)	0.013 (0.022)	-0.020 (0.042)	-0.034 (0.122)
Output gap	3.450 (3.536)	1.633 (1.212)	0.854 (0.436)	14.411 (20.239)	2.236 (1.351)	0.301 (1.198)	-2.173 (1.049)	0.061 (0.454)	-1.934* (0.815)	5.699 (3.344)
Constant	-1.033 (8.946)	-1.723 (3.030)	2.715 (2.648)	83.657 (44.720)	3.579 (3.611)	-1.596 (3.678)	-24.020** (7.195)	-4.036 (2.416)	-6.477 (5.565)	11.998 (13.911)
<i>N</i>	239	239	239	239	239	239	239	239	239	239
R2	0.732	0.478	0.692	0.138	0.545	0.644	0.888	0.588	0.698	0.949

*Note.* Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 9.** Robustness test 5: Looking at the influence of numerical fiscal rules.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GF01	GF02	GF03	GF04	GF05	GF06	GF07	GF08	GF09	GF10
Elections*NFRI	-0.141 (0.100)	0.028 (0.021)	-0.002 (0.010)	0.059 (0.147)	-0.009 (0.010)	0.037 (0.022)	0.054 (0.035)	0.014 (0.018)	0.028 (0.028)	0.041 (0.052)
NFRI	-0.075 (0.087)	-0.035 (0.020)	0.003 (0.008)	-0.228 (0.188)	-0.007 (0.010)	-0.041 (0.033)	-0.085** (0.028)	-0.010 (0.013)	-0.035 (0.024)	-0.037 (0.053)
Elections	0.202 (0.155)	-0.013 (0.017)	0.032 (0.016)	-0.019 (0.155)	0.015 (0.015)	0.024 (0.013)	-0.011 (0.039)	0.011 (0.013)	0.041 (0.022)	0.003 (0.045)
COFOG(-1)	0.448* (0.170)	0.664*** (0.047)	0.723*** (0.033)	0.198*** (0.049)	0.649*** (0.065)	0.339 (0.198)	0.735*** (0.060)	0.687*** (0.048)	0.648*** (0.054)	0.787*** (0.027)
Ln Real GDP pc	-1.227 (1.174)	-0.153 (0.193)	-0.119 (0.124)	-0.260 (1.386)	0.025 (0.141)	0.242 (0.357)	0.194 (0.238)	0.214 (0.109)	-0.092 (0.208)	-1.042 (0.539)
Real GDP growth	-0.035 (0.024)	0.000 (0.005)	0.000 (0.006)	-0.067 (0.036)	-0.004 (0.005)	-0.001 (0.006)	-0.013 (0.010)	-0.004 (0.003)	-0.023* (0.010)	-0.150*** (0.015)
Population 15-64	0.046 (0.097)	0.004 (0.013)	-0.028 (0.015)	-0.163 (0.212)	0.001 (0.014)	-0.025 (0.034)	-0.067** (0.019)	-0.019 (0.011)	0.012 (0.021)	-0.036 (0.047)
Population 65+	0.085 (0.126)	0.009 (0.016)	-0.018 (0.013)	-0.246 (0.162)	0.008 (0.019)	-0.040 (0.039)	-0.099** (0.033)	-0.014 (0.017)	-0.027 (0.031)	-0.061 (0.090)
Output gap	-2.051 (3.146)	0.963* (0.444)	0.775 (0.871)	4.268 (9.126)	1.279 (1.009)	0.726 (1.108)	0.277 (1.172)	0.487 (0.435)	1.486 (1.041)	7.289* (2.773)
Constant	12.131 (8.590)	1.635 (1.472)	3.765*** (0.810)	21.104 (13.846)	-0.210 (1.320)	0.538 (1.935)	5.540* (2.307)	-0.198 (0.745)	2.307 (1.491)	16.984*** (4.091)
<i>N</i>	492	492	492	492	492	492	492	492	492	492
<i>R</i> <sup>2</sup>	0.505	0.618	0.673	0.135	0.518	0.367	0.796	0.569	0.577	0.900

*Note.* Cluster robust standard errors in parentheses. p-value of tests \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Ultimately, these robustness tests show that there is some evidence of electoral cycles in general government expenditure on at least three socio-economic functions; GF03, GF06 and GF09. The size and significance of these effects are roughly robust. Incumbent governments appear to manipulate expenditure on these categories in a cyclical manner in election years, independent of the exact timing of the election. There appears to be some difference between the extent to which spending on GF03 is manipulated in Eurozone and non-Eurozone countries. Table A5 to Table A9 in the appendix show the GMM estimates of these robustness tests. The results do not differ in a consistent or meaningful way from the fixed effects estimates.

## **7. Discussion**

The results of the empirical analysis in Table 3 do not provide strong support for hypothesis 1b. According to the presented results, there is no evidence of PBCs in net lending in the EU for the time period from 1995 to 2015. Furthermore, it does not seem to be the case in the European Union, that a higher number of fiscal rules imposed on governments makes it harder for those governments to impose Political Budget Cycles. The results do, however, show some evidence that fiscal rules, as measured by the European Commission's Numerical Fiscal Rules Index, have an influence on the spending decisions of governments in EU countries. Therefore, the idea that the large amount of institutionalized constraints that incumbent governments face provides them with a need to target specific fiscal policy tools if they want to signal competence to maximize their chance of re-election, cannot be entirely rejected. Consequently, the results are in line with Andrikopoulos et al. (2004) and De Haan and Sturm (1994), who do not find evidence of PBCs in Europe. This result directly opposes the argument of Buti and van den Noord (2003) that the early SGP incentivized PBCs. It thus speaks, even though not strongly, for a success of the increased monitoring and sanctioning mechanisms that have been introduced since the early 2000s.

Support for the main hypothesis of this thesis, which followed from the considerations above, is consequently also mixed in the empirical results. Hypothesis 1 says that, the more salient a fiscal policy instrument is, the more likely incumbent governments are to target it with an electoral cycle. The analysis shows that, in line with Tufte (1980), statistically and economically significant electoral cycles do exist in some components of the fiscal budget balance. However, apart from the socio-economic expenditure function of public order and safety (GF03), none of the categories that show cyclicity related to elections has been found to be very salient among Europeans, as can be seen in the ranking in Table 1. The conclusion that can be drawn from these empirical findings is not necessarily clear-cut. There are two potential causes that could yield the results. On the one hand, it is possible that the approximation for issue salience that has been used here, namely the answers to the Eurobarometer

survey question: “What do you think are the two most important issues facing (our country) at the moment?”, is not a strong proxy for salience. This would mean that the ranking of issues in terms of their salience that has been derived in Table 1 is not accurate. The empirical results could then mean that those categories which do consistently show significant electoral cycles are actually salient issue domains, as opposed to those ranked highly in the theoretical framework. On the other hand, the empirical results could be an indication that issue salience ultimately does not predict which fiscal spending categories will be manipulated by incumbent governments for electoral cycles.

The first of those two options is likely to hold at least some level of truth, given the derivation of the salience ranking used here. The main point of discussion here is therefore a potential difference between salience and visibility of issue domains. In the theoretical framework it has been assumed that for those issue domains that are salient and therefore important to people, any changes in government spending on these issues are easily visible to voters, for the simple reason that voters care about them. The dichotomy between those categories that were hypothesized to show electoral cycles and those that showed actual evidence of electoral cycles in the empirical results found here, suggests that the subject might be more complex in reality.

Public expenditure on public order and safety has been shown here to exhibit electoral cycles. Public order and safety has also been an issue of high importance to Europeans according to the Eurobarometer for the last decade. Furthermore, changes in this expenditure category are highly visible to voters in an almost immediate time horizon. If the government decides to employ additional police forces or enact stricter security regiments at borders, this is noticed by the population straight away. It is thus an issue that incumbent governments can identify to be important to voters and influence in a way that the electorate can easily identify and attribute changes to the incumbent. A somewhat similar observation can be made about the issue of education which also showed significant electoral cycles in the empirical analysis. In the Eurobarometer survey, education is not an issue that is identified to be as important to Europeans as public order. It is likely to be salient not throughout time, but instead only temporarily, due to specific cases and events, such as the current controversy surrounding the Central European University in Budapest, Hungary, or the student protests against high tuition fees in South Africa in 2016, when looking beyond Europe. While education is not a salient issue to Europeans, the effects of changes in expenditure on it can be immediately identified and attributed by voters. The effects of higher spending on education can easily be seen by voters, for example, with more teachers in public schools or universities, or better equipment in these institutions. The category of housing and community amenities exhibits electoral cycles in public spending. While it is not seen to be important to Europeans, changes in spending can be easily seen by voters, for example in the form of construction of social housing or better street lighting.

Conversely, most categories that were highly ranked in terms of their salience as derived from the Eurobarometer (economic affairs, health, social protection, general public services) did not show statistically significant electoral cycles in public expenditure. A potential explanation for this might be that changes in the expenditure on these categories are unlikely to be easily and immediately visible to voters. This applies especially for the category of economic affairs. Participants mentioned unemployment, prices, and their country's economic situation as important issues in the survey. Changes in government spending on these issues, however, often do not yield immediate or highly visible results. The effects of changes in inflation are often only noticed over long time spans. For a fiscal policy measure to yield a sustained change in unemployment might also take quite a while, especially if it goes beyond an immediate response to an exogenous shock, such as the financial crisis in 2008.

The salience of issue domains, at least in the sense of how it can be derived from the Eurobarometer survey, thus does not seem to influence which spending categories are manipulated by incumbent governments in election-years in a consistent way. Due to the observations made here, the hypothesis is nevertheless not entirely dismissed, since there is robust evidence of electoral cycles in spending on public order and safety and on other categories in which the effects of a change in expenditure can be easily observed by voters. An important lesson from the empirical analysis is therefore that salience and visibility are not necessarily simultaneous mechanisms. The time-invariant ranking of issue domains is likely to be not detailed enough to pick up such intricacies. A more detailed look into issue salience could potentially provide more insights, and could potentially allow me to reject the second possibility, that salience does not influence PBC composition. However, a lack of data and theoretical groundwork on issue salience in public spending is the main limitation that constrains me from being able tackle this issue here.

### 7.1. Limitations

The strong limitation identified here comes from a lack of sources that rank fiscal policy instruments according to their salience in a coherent way and with a sufficient time horizon. Hypothesis 1 could potentially be analyzed in a more thorough way if such data would be available that would yield a time-varying and country-varying variable of policy salience,  $S_{i,t}^Z$ . With such data one could then see if the predictions of hypothesis 1 hold in a more consistent and robust way than the one observed here, when there is variance in the visibility of fiscal policy functions both over time and across countries. A time- and country-varying variable of salience is also likely to better capture what is meant here with salience, that is to say, which issues voters care about and are attentive about when it comes to government action. This could empirically be implemented by extending the baseline model of equation 1 in the following way:

$$F_{i,t}^Z = \sum_k \beta_k F_{i,t-k}^Z + \beta_2 E_{i,t} S_{i,t}^Z + \beta_3 S_{i,t}^Z + \beta_4 E_{i,t} + \beta_5 X_{i,t} + \mu_i + \theta_t + \varepsilon_{i,t} \quad (6)$$

In this specification, the election dummy is interacted with the salience variable that would take any value  $S_{i,t}^Z \in \{1,10\}$  if one would keep using the ten COFOG categories. In that case one would then, for example, have  $S_{i,t}^{GF01} = 3$  and  $S_{i,t}^{GF02} = 5$  for country  $i$  in year  $t$ , so that for each country  $i$  in year  $t$ , each value within  $\{1,10\}$  would be taken once. A significant coefficient  $\beta_2$  in such a model would yield much stronger support for hypothesis 1 than the analysis with the limited proxy for salience can yield here. A data source that includes a variable such as  $S_{i,t}^Z$  does either not exist at the time of analysis or is not publicly available to the best of my knowledge. A potential source could be a detailed evaluation of the individual level results of the Eurobarometer survey.

A second limitation lies in the observation that the Eurobarometer ranking shows only the mean voter salience. It is possible that the median voter is actually targeted by incumbent governments who try to signal their competence. This is due to the theoretical consideration that the median voter is decisive in the issue platforms presented by candidates in elections. The median voter, however, cannot be identified in the available dataset. This is another case in point for the need of a more detailed salience measure.

A further limitation of the empirical analysis in this thesis comes from the fact that analyzing macroeconomic developments of the most recent decade in Europe is complex, due to the turmoil that resulted from both the financial and the sovereign debt crisis. Usage of the more theoretically robust estimation techniques offered by the GMM estimators has been complicated by this. The estimation technique relies on the correct identification of the instruments used for the lagged dependent variable. When applying this technique to the sample period from 1995 to 2015 and thus including the recent years, the Hansen and Sargan tests of overidentifying restrictions signal that the instruments are not correctly identified. This renders any inference from the estimated coefficients flawed. Only when the time frame is reduced significantly, which drastically reduces the number of instruments available for estimation and the efficiency of the results, is the model correctly specified. Doing so does, however, mean that the recent decade would have to be excluded from the analysis and thus cannot be done to tackle the limitations in the existing literature.

## *7.2. Potential for Invisible PBCs*

While a more comprehensive data source on issue salience would certainly improve the external validity of the analysis made in this work, there are other potential factors that could explain the lack of coherent support or rejection of hypothesis 1. Franzese and Long Jusko (2006) provide a detailed look into the factors that can impact the strength and occurrence of PBCs. They review a large part of the literature and conclude that PBCs are largely context-conditional. The context in which EU member states aggregate and publish their statistical data is likely to be an influencing factor in the case at hand. Creative accounting by governments, which has been a proven problem in the European Union, can

impact the statistical data published by governments in a way that hides electorally motivated changes in fiscal policy. Alt, Dreyer, Lassen and Wehner (2014) find evidence of such fiscal gimmickry by governments in a sample of fourteen EU countries between 1990 and 2007. Looking at the stock-flow adjustment, which is a statistical residual used by Eurostat and other statistical offices to account for differences between changes in governments' debt and their budget deficit, they find electoral cycles in this proxy of fiscal gimmickry. The authors argue that this is evidence that the supra-national rules imposed by the EU on member states are counter-productive. According to them, said rules rely on statistical measures that are often interpreted differently by statistical offices across countries and can be manipulated and exploited for electoral purposes. The findings of Alt et al. (2014), therefore, suggest that the use of creative accounting gives room for governments to impose PBCs on fiscal policy without it showing up in official government statistics. The authors show this gimmickry in the budget deficit, but it is likely to also exist in the components of the primary budget and thus in the dependent variables used in the empirical analysis here. While it is almost impossible to prove the existence of such creative accounting, the insignificant coefficient of the election dummy in the analysis could be caused by the fact that governments have successfully hidden their efforts to create electoral cycles, in order to adhere to the fiscal rules imposed on them.

A further potential fallacy comes from an assumption underlying the theory formulated in this thesis. The analysis in this thesis assumes that changes in fiscal policies on issues that are salient to the electorate can be identified in data on the public expenditure on socio-economic categories. Relaxing this assumption gives rise to another potential explanation for the lack of coherent support for hypothesis 1. It is possible that incumbent governments are able to respond to salient concerns of voters with "cheap" policies, in the sense of not causing changes in public expenditure that would be easily identified. These cheap policies are not necessarily of a fiscal nature, but could instead be constitutional amendments, legal reforms, changes in office-holders, or other non-expensive measures. A concrete example of such a cheap policy would be same-sex legislation. Smith, DeSantis and Kassel (2006) and Lewis (2005) show that the 2004 presidential election in the US was significantly influenced by ideological concerns of voters. Anti-gay marriage initiatives were put on election ballots in eleven states, and according to the analysis of Smith et al. (2006), were successful in mobilizing conservative voters to reelect president George W. Bush, who opposed same-sex legislation. Policies of this type are a way for incumbent governments to respond to salient issues and affect the behavior of voters at the ballot, but would not be detectable in public expenditure data, as is analyzed in this thesis. They present a potential substitute to visible fiscal policy changes that is likely to be attractive to incumbent governments who seek to be reelected.

## 8. Conclusion

Marco Buti had pinned down the explanation given for the findings of Political Budget Cycles in Europe in the early 2000s with a poignant sentence in his paper: “sticking to the rules of the SGP may not pay politically” (Buti & van den Noord, 2003, p. 6). While him and his colleagues found electoral cycles in government spending for the early years of the Stability and Growth Pact, the evidence appears to be much less conclusive when looking not only at these early years, but extending the time frame to more recent years. I do not find robust and coherent support for the existence of cyclicity in net lending as percentage of GDP. While this could mean that it is actually positively rewarded by voters if their government sticks to the SGP rules imposed on them, contrary to Buti’s proposition, another possibility would be much more optimistic for the policy-makers of the European institutions. One would hope to find evidence of a negative relationship between an increase in the number of fiscal rules imposed on governments and the occurrence of PBCs. While I fail to find significant support for this, I do find evidence that European governments have become more fiscally conservative with the increase of fiscal rules. This finding provides some optimism on the effectiveness and usefulness of such rules.

The main addition to the existing literature provided by this thesis is a thorough evaluation of the composition of Political Budget Cycles in the European Union. I find that there is evidence of electoral cycles in public expenditure on public order and safety, housing and community amenities, and education. The hypothesis that governments target fiscal policy instruments that are salient to voters, is not strongly supported by these results, since only the first of these three categories can be shown to be of importance to Europeans. The empirical analysis does, however, show that incumbent governments seem to target expenditure categories in which changes are highly visible to the electorate. The welfare effects of these observations are unclear at this point in time. On the side of the EU member states, voters have to see whether the consequences of such electoral manipulations are positive, since they send useful signals about incumbents’ competence, or whether they lead to inefficiencies and waste of public resources. From the side of EU-level policy makers, it seems that the increased macroeconomic oversight and sanctioning mechanisms included in the SGP reforms of the last years have been successful. Since the welfare effects of electoral cycles are not clearly determined, it is unclear whether there is any need for further reforms of macro-level rules, or whether further regulation is ultimately overburdening governments. In the current tense political atmosphere, opinions on the appropriate degree of fiscal regulation are clearly divided.

The main limitation of this thesis is a lack of data and theoretical groundwork on which issues are salient to voters. In order to analyze the research question more thoroughly, one would need a time-varying and country-varying variable for issue salience. Future research in this field should therefore aim to construct such a variable. Future research should also provide explicit insights into the dichotomy between the

notion of salience and visibility in this context. These issues could be tackled either through the creation of appropriate surveys, or through an intricate analysis of the individual-level results of the European Commission's Eurobarometer survey. A main short-coming of this data source to date is that there is only limited time-series data that collects the results of the biannual survey for the entire available time frame. An immense effort in data-mining is needed to make full use of this data and with that eventually push research on the relation between issue salience and electoral cycles in Europe forward.

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