The Political Business cycle:

A search in the OECD
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Chapter 1: Introduction

What motivates politicians? Although we would like to think that they are all in it for the greater good, we must consider the fact that morality might not be the only drive of a typical politician. When elected, a party could be reluctant to lay down power and influence without putting up a fight. Besides being able to implement preferred party politics, being elected also provides status and money to the politicians leading the party. Temptations could therefore arise and politician might use their influence to increase their chances at a next election.

To investigate whether this takes place, a closer look at political business cycles is needed. The political business cycle was first formalized by Nordhaus in 1975. It assumes that politicians currently in the government are keen to stay in power. To achieve this, they are tempted to manipulate economic policy instruments for electoral gains. A lot has been written concerning the political business cycle since Nordhaus first publicized his paper. The literature can be divided into opportunistic theories and partisan theories. In opportunistic theories the probability of reelection is maximized by the current government. Getting reelected is a politician’s only goal. This isn’t the case in partisan theories. Here political parties form different priorities on ideology and are therefore more attractive to different groups. Although getting reelected is important, it is no longer the only goal for a government. Main goal of this paper is to answer the following question:

*What is a political business cycle? and, Using the main fiscal policy parameters, can a political business cycle be detected in nations of the OECD?*

The first step in answering these questions lies at the different electoral systems and detecting the center of power. To look whether this power was wrongfully used, data about the prior elections and fiscal policy parameters are needed. In specific, data concerning the different election dates and the cyclical-adjusted government balance. Also a short history of the political business cycle is presented. Sufficient knowledge is needed of the political business cycle to be able to detect it. Also it should indicate where to look. The third chapter explains the different tools of fiscal policy and how to detect them.

Using current data of the main fiscal indicators, a search for the political business cycle is conducted with data from the selected OECD-nations in chapter 4. Here the development of the main fiscal policy parameters will be compared with the election cycle. Key is to detect a political business cycle, not to explain its existence. This paper ends with a conclusion.
Chapter 2: The Model

2.1) The Electoral cycle

In the search for a political business cycle, it is preferable that the analyzed data contains sufficient samples at which the electoral system can be regarded as a constant. Only with a stable system, a recurring political business cycle can originate. For that reason this paper will concentrate on a selection of OECD member states. Discarded are member states that haven’t organized sufficient democratic elections since 1960.

The remaining states are parliamentary republics, presidential republics and constitutional monarchies. The key difference between these government systems is the location of accountability in the executive branch of government. With parliamentary republics and constitutional monarchies the government has constitutional accountability to the parliament. In presidential republics governments are selected and dismissed by a head of state (president). Table 1 consists of the selected OECD member states that are parliamentary republics and constitutional monarchies, differentiated by the ability to call for early elections and the term a government remains into office.

Table 1.

<table>
<thead>
<tr>
<th>Parliamentary republics and Constitutional monarchies.</th>
<th>Norway</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 year Fixed-term Election.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 5 years, but free to call an election at any time</td>
<td>Austria</td>
<td>Canada</td>
</tr>
<tr>
<td></td>
<td>Ireland</td>
<td>Italy</td>
</tr>
<tr>
<td></td>
<td>Luxembourg</td>
<td>Portugal</td>
</tr>
<tr>
<td></td>
<td>Portugal</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Max 4 years, but free to call an election at any time</td>
<td>Belgium</td>
<td>Denmark</td>
</tr>
<tr>
<td></td>
<td>Finland</td>
<td>Germany</td>
</tr>
<tr>
<td></td>
<td>Greece</td>
<td>Iceland</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td>South Korea</td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>Sweden</td>
</tr>
<tr>
<td>Max 3 year term, but free to call an election at any time.</td>
<td>Australia</td>
<td>New Zealand</td>
</tr>
</tbody>
</table>

The table shows that both Norway and Switzerland have a special election system. Elections are held every four years on a fixed date. This provides the politicians with a clear target at which they would want to maximize their support to increase the change of getting re-elected. Detecting opportunistic behavior in these countries should be very possible.

For all the selected member states data is gathered regarding free democratic elections from 1960 until 2009. The data is summarized in appendix 1 and contains election and non-election years. Also the month at which the election was held is
mentioned. As Portugal, Spain and Greece had non-democratic periods in their recent history, no democratic elections were held. That accounts for the lack of data for these periods in those countries. Data for Germany prior to 1990, reflects the Federal Republic of Germany.

Table 2 shows the different presidential systems. Although there are only three member states that fit that description, they appear to be much more stable than the parliamentary republics and constitutional monarchies. Looking at the election dates in both the United States and Mexico, there is no reason for any uncertainty about an upcoming election. They are fixed at every four or six years.

Table 2.

<table>
<thead>
<tr>
<th>Semi-Presidential system</th>
<th>Presidential system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max 5 year term</td>
<td>France</td>
</tr>
<tr>
<td>4 year term</td>
<td>United States</td>
</tr>
<tr>
<td>6 year term</td>
<td>Mexico</td>
</tr>
</tbody>
</table>

In France there is a semi-presidential system, which introduces more uncertainty about an upcoming election. This because parliament shares executive power with the president. When parliaments are elected for a longer term, it increases the chance for governments to display discretionary fiscal policy. A stable government is also helpful, since early elections might interfere with opportunistically behavior needed to achieve a political business cycle.

It is also possible that political parties are only likely to behave opportunistically when their chance of getting reelected is considered small. This can account for the lack of empirical evidence in support of opportunistic behavior, since opportunistic policy manipulations should be observed only when popularity of the current government is low.

This theory is tested, although only on transfer payments around British elections, by Schultz (1995). In ‘The Politics of the Political Business Cycle’ he looks explicitly at a politician’s benefits and costs from manipulating elections and the impact of public opinion polls on their behavior. Schultz states that by creating a boom before elections, governments display irresponsible and opportunistic behavior. Problem is that governments will have to display this short-sighted behavior if a positive outcome in the next election is unsure.

Key to his paper is the following statement: ‘The degree to which the government manipulates the economy prior to an election will be negatively correlated with its lead in public opinion polls at the time’. When he tested the statement, a significant negative correlation between growth of real transfers and the pre-election poll lead of the current government was found. The size of the
opportunistic political business cycle can vary due to changing incentives from different government.¹

Testing the validity of this theory would require data on opinion polls for the selected member states over the last fifty years. Since this is impossible to acquire, it plays no role in the empirical study presented in this paper. However, because Schultz found a significant negative correlation, the notion that opinion polls affect the need for opportunistically behavior could be valid and could explain the lack of empirical evidence. Also no further study of the different systems of government will be presented. I will try to find evidence whether certain systems produce different results in opportunistic behavior.

But before I continue with the search for opportunistically behavior, it is important to define a political business cycle and how it has been perceived throughout time. In the next section of this chapter I will look at the literary development of the political business cycle and the relevance to this paper.

2.2) The Political Business Cycle

A business cycle probably was first mentioned by Kalecki in 1943. In his paper 'The political aspects of full employment', governments aim at achieving full employment and intervene with government spending to realize that goal. Although the benefits of full employment are clear, a state of full employment isn’t reached. Kalecki observed great opposition against increased government spending. He names the following reasons: 1) ‘dislike of government interference in the problem of employment as such’, 2) ‘dislike of the direction of government spending’, 3) ‘dislike of the social and political changes resulting from the maintenance of full employment.’²

According to Kalecki, the political business cycle arises in recessions and when unemployment is present. In Kalecki’s model business leaders and capitalists have complete control of the government. The government is acting on behalf of capitalist interest. A political business cycle is created to restore the power of business leaders and capitalist over the workers. Full employment would increase the bargaining power of workers and reduce the power of business leaders. Therefore achieving a situation at which the economy is at full employment isn’t in their advantage.


² Detailed examinations to the government expansion policy are given on pag 350 and 351. Kalecki (1943), the political aspects of full employment.
Since capitalist have complete control over the government, a pattern of economic policies arises which create the business cycles.

The pattern of a typical political business cycle is described as follows. To reach full employment in a democratic system the stimulation of private investment alone isn’t sufficient, alternative measures have to be taken ‘under pressure of the masses’. Kalecki gives two alternatives: 1) a sharp reduction of the interest rate and/or income tax in the crash, followed by increasing them in case of a boom, 2) a sharp reduction of the interest rate and/or income tax in the crash and keeping them static in case of a boom. The problem which arises is that, to maintain full employment, the rate of interest has to become negative in the near future. Permanent full employment is therefore unlikely. This eventually results in a government which returns to the policy of cutting down the budget deficit.

Unlike the model by Kalecki, the modern political economic models focus on the macroeconomic implications of political behavior. The political business cycle relates to political behavior during the electoral cycle. Politicians behave in such fashion that reelection by voters is likely. To get reelected, politicians signal the voters. An important factor in the evaluation of politicians by voters is how successful they have been in achieving certain desirable economic goals. Hence economic conditions influence election results and the incentive to get elected directly influences the choice and use of macroeconomic policies. This correlation between desirable economic conditions and elections will be the focus of the empirical study presented in this paper.

2.3) Modern Opportunistic Political Business Models

The modern political business models started with contributions of William Nordhaus in the 1970s. He produces several models which have tried to integrate the consideration that politicians use policies to maximize their chance of re-election. In this section the opportunistic model of Nordhaus is explained. He was the first to formalize and explain the idea of an opportunistic political business cycle in his paper ‘The political business cycle’ (1974).

In the opportunistic electoral model of Nordhaus (1975), economic policies are chosen to maximize its votes at the upcoming election. The macro-economic framework behind the model consists of a constraint, faced by the government, in the form of a trade-off between inflation and unemployment (illustrated by the Phillips Curve). To illustrate the trade-off he describes the following connections considering an economy with a low level of unemployment. Low unemployment gives a high demand for labor and workers are therefore only prepared to settle for a higher than average wage. These higher wages are the cause of higher prices (inflation). The short-term effect of this trade-off is
assumed to be bigger than the long-term effect. Higher level of inflation also leads to higher expectations of inflation. This is an important point, since in this model individual voting behavior is based on comparing the past with the future.

Nordhaus assumes that inflation is the control variable for policy-makers and that it can be set at any desired level. The unemployment rate is considered to be the best single indicator of cyclical conditions, as it is tangible for a large portion of the electorate. A lowering of the rate of unemployment at the upcoming elections would increase the number of votes for the government. His macro-economic framework is summarized by the functions below. It shows the relationship between inflation ($\pi$) and unemployment ($u$).

$$ x_2 = f(u_2) + \lambda u_2 $$

$$ v_2 = \gamma (u_2 - v_2) $$

He assumes that potential voters have preference functions that are made up of the aggregate unemployment and inflation levels and that they prefer constant prices and low unemployment levels to higher inflation and unemployment levels. Potential voters are also assumed to be unaware of the macro-economic trade-off, which make them rely on past experiences in their political decision making. Voters choose between alternative political parties at periodic periods.

Since voters form expectations of what is regarded as normal behavior of political parties, these expectations are based on past behavior. If economic conditions have deteriorated relative to expectations, this leads to votes against the incumbent. Voters form individual preferences that look like this:

$$ z = (z_1, z_2, ..., z_M) $$

Here each variable that explains $z$ becomes an economic indicator, like inflation, unemployment or wages. The development of each indicator contributes to the overall economic condition $z$.

Each voter compares the economic performance of the authorities during the previous electoral period at a specific time: $z_o$, with the voter’s subjective standard for performance: $z_s$. If the performance was better than the standard, the individual votes for the authorities. If the performance was actually poorer than the standard, his vote goes to the opposition.

As it is assumed that parties are only interested in positive election outcomes. Following a certain party ideology isn’t assumed to be important. As a result the same goals and policies are followed by any government. Because voting preferences are known, the government can choose economic policies during its time in office which maximize its votes at the upcoming election. Since $z$ is given,
the policy is simply to maximize votes with respect to $z_t$. Voters are assumed to not fully understand the relationship between economic policies and macroeconomic performance. The decision which party to vote is merely based on the performance of key economic variables at the time of the election.

Voting behavior is described by the following functions. The first function shows voting behavior for an individual voter. He will vote 1 if the economic conditions are better than expected and -1 if the economic conditions where worse. The sum of all the voters voting behaviour is shown in the second function:

$$V_i^t = \phi_t(z_t, \xi_t) = \begin{cases} 1 & \text{if } \frac{U_i^t(z_t)}{U_i^t(\xi_t)} > 1 \\ 0 & \text{if } \frac{U_i^t(z_t)}{U_i^t(\xi_t)} = 0 \\ -1 & \text{if } \frac{U_i^t(z_t)}{U_i^t(\xi_t)} < 1 \end{cases}$$

$$V_t = V(z_t, \xi_t) = \sum_i V_i^t = \phi_t(z_t, \xi_t)$$

As a vote for the authorities counts as 1, the aggregate voting function is positive if the authorities win and negative if the opposition wins the election. As parties are assumed to be interested only in election outcome, the authorities therefore chooses economic policies during its term to maximize the number of votes at the next election.

In the short-term two dimensions are added. Instead of a fixed policy a more realistic continuous model is introduced. Also added is the fact that voters are ‘myopic’. This makes the current economic conditions much more important than past performances. This changes the voting function to such a degree that a government, interested only in getting re-elected, will follow a certain political business cycle. Nordhaus describes the cycle as follows: ‘after an election the victor will raise unemployment to some high level to combat inflation. As elections approach, the unemployment rate will be lowered until, on election eve, the unemployment rate will be lowered to the purely myopic point.’

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3 $U_i^t(z_t)$ = the preference orderings of the ith voter. Here a vote for the authorities counts as 1, where a vote for the opposition counts as -1.

4 Here $V_t$ is the ‘aggregate voting function’.
The Nordhaus model thus gives clear predictions about the pattern of unemployment and inflation during the electoral cycle. In the first half of an electoral period unemployment should be rising and inflation falling. In the run-up to an election, the second half of the electoral period should be characterized by falling unemployment and rising inflation.

The price paid for this opportunistic macroeconomic strategy is the policies needed after an election period to bring inflation back under control. Since voters are myopic, the government can repeat this strategy at the next election. The long-term outcome associated with this strategy is an acceleration of the rate of inflation to a level which is higher than desirable. As a consequence policies gear to short-term political gain turn out to be non-optimal for the economy in the long run.

Nordhaus tested his hypothesis for nine countries over the period 1947-1972 and concluded that it was clear that a political business cycle is a significant factor in the operation of some capitalist economies. Although it generated much interest and other research, the model by Nordhaus became a victim of the rational expectations revolution. This because voters were repeatedly tricked in successive electoral cycles, as their expectations are formed on recently observed behavior. In the last section of this chapter I will explain the models that incorporated rational expectations.

2.4) Modern Rational Political Business Models

After the contributions of Nordhaus the political business cycle made little progress, because of the devastating effect of rational expectations. Rational expectations consists of the assumption that voters make an optimal forecast of the future with all available information and base their votes on this forecast. This clearly makes it more difficult for the policy-makers to manipulate real economic activity. Only with some element of imperfect information, a government has the opportunity to mislead voters in creating a temporary illusion in order to appear more successful.

Rational political business cycle models are characterized by governments who care about getting reelected. They also care about lowering unemployment, inflation and government spending. So, although reelecting isn’t there only goal, it is considered to be there main source of welfare. These models are further characterized by the assumption that different governments and parties have different abilities in providing services. It is also assumed that governments are better informed over their ability than the voters. Because asymmetric information exists in these models, the government has an incentive to give a signal that suggests a higher ability then its true ability by engaging in pre-electoral manipulations of policy instruments.
In the model presented by Rogoff and Sibert (1988), electoral cycles are created in policy variables such as government spending, taxes and monetary growth. As noted above, such cycles are possible due to temporary information asymmetries. Although voters aim to choose politicians who they believe can deliver the highest utility, they lack the necessary information on the true ability of the politicians in and out of power. In the remainder of this chapter the model by Rogoff and Sibert (1988) is explained.

Rogoff and Sibert created a model with two political parties (R and D) in which they distinguish governments by their ability. More skilled governments will need less revenue to provide the same level of service. The level of taxes, set by the government at the beginning of the period, is a signal to the voters of the ability to govern. This signal can get distorted by a government that relies heavily on seigniorage, the issuing of currency, since voters receive information on this in the next period. Each period the government is required to supply an observable level of services, noted as G:

\[ G = \varepsilon + \tau + \Delta \]  

All the voters are assumed to have identical indirect utility functions which depend on poll taxes, seigniorage and a partisan specific variable. Since seigniorage also causes distortions, social welfare is always higher when a government relies entirely on taxes compared to any situation in which a government relies, besides poll taxes, on seigniorage. These distortions can be seen in the function below that gives social welfare:

\[ \Omega_x = \bar{y} - \tau - \Delta - \omega(\Delta) + \eta_x \]  

Here social welfare is explained as exogenous output, plus a party specific shock, minus a non-distorting tax, a seigniorage tax and the distortions that are causes by seigniorage. The party specific shocks capture the factors unrelated to the ability of a government.

Since the signal can get distorted by the government before an election, voters are unable to trust that the government is telling the truth about the economic situation. Therefore they can’t base their voting behavior on the signal given by the government. They base their voting on the performance of the government in key economic indicators.

To influence these indicators, the government prior to elections engages in a ‘signaling process’ which aims to persuade voters that the politicians in power are capable. They are able to give a false

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5 \( \varepsilon \): government ability, \( \tau \): nondistorting tax, \( \Delta \): distortionary seigniorage tax.

6 \( \omega(\Delta) \) represents the additional distortion, \( \bar{y} \) = exogenous output.
signal, due to the fact that voters base the ability of the government on current period taxes, which in fact refer to prior period ability.

As voters base their vote on the performance of government in key economic indicators, they will vote for party R when it gives them higher expected utility during the upcoming period. This is reflected by a positive outcome in the following function positive:

$$E_1 [\Omega_1(t + 1)^{TR} + \Omega_1(t + 2)^{TR} - (\Omega_1(t + 1)^{TD} + \Omega_1(t + 2)^{TD})] \geq 0$$

All the public information is captured in the variable $E_1 [\Omega_1(t, t - 1), \Omega_1(t - 1)]$ and $\Omega_1$ gives the state of social welfare in period 1 and 2 from election party R and D. If electing party R gives higher social welfare than party D, $\Omega_1^R > \Omega_1^D$ and party R will win the election.

Since no party is assumed to use seignorage in the first year after an election and the voters have no information over the level of seignorage two years after the election at election time, it’s assumed to be independent of which party wins the elections. Therefore, the expected social welfare after the upcoming election is equal between parties in year 2 and it depends on the following function in the first year:

$$E_1 (\Omega_1^{R2} - \Omega_1^{D2}) = E_1 [(\xi_1^{R2} + \eta_1^{R2}) - (\xi_1^{D2} + \eta_1^{D2})]$$

This function shows that the difference between the two parties expected social welfare is dependent on their first year ability plus their party-specific unrelated factors. It shows the combined ability of related and unrelated party factors and compares that to the other party. A problem arises due to the fact that the opposition has no way to signal its ability to the voters. Voters will therefore have to take a mean of the possible abilities related to that party: $\mu_1$.

An upcoming election will be won by the government if:

$$E_1 (\xi_1^{R}) - \mu_1 + \eta_1^{R} \geq 0$$

Here $\eta_1^{R}$ reflects the difference in unrelated party factors; $\eta_1^{D} - \eta_1^{R}$. Since $\eta_1^{R}$ is equal between all voters, the winner of the election will be chosen with hundred percent of the vote. If the function stated above is greater than zero, it implies that party R has a higher overall ability than party D. Social welfare is expected to be higher and party R will win the election. As they are unaware of the preferences of the voters, they estimate that the probability that they will actually win is:

$$U^R = \text{Prob}[E_1 (\xi_1^{R}) - \mu_1 + \eta_1^{R} \geq 0]$$
The objective functions of the two political parties are identical and depend on their chance of getting elected and the social welfare cost. It is given by the following function, for party R:

$$\psi_R^* = E_x \left[ x \sum_{n \in S} \sum_{t=1}^T \beta^{T-t} \pi_t - \{1 - x\} \sum_{n \in S} \beta^{T-1} t \Delta_n \right]$$

The first part of the function shows their change of getting elected. The second part shows the cost involved to increase this chance. The variable x represents the importance of getting elected to the party. As each party aims to maximize this function, it is essential that x ≠ 1. In this case the party doesn’t care about social welfare and will therefore cause huge distortions to get a higher change of getting re-elected.

After the election the government imposes taxes and produces its level of services. If taxes where set to low, the pre-electoral deficits have to be monetized. The effects of this monetization on inflation and on an additional seigniorage tax are perceived by the voters only with a lag. So, although voters are rational in their voting behavior, they didn’t have all available information to correctly judge the government.

Furthermore, in this model different election cycles are independent of each other, because of the temporary information asymmetries and the random disturbances that occur. Governments can be formed by any of the two parties, depending on competency shocks and voter preference shifts.

In the Nordhaus model a regular inflation and unemployment cycle was generated. In contrast, the rational political business cycle theories expect a manipulation of several policy instruments before and after elections. The temptation of incumbents to cut taxes and increase spending before an election in order to appear competent clearly generates departures from optimality. Optimality can be achieved if voters and political parties value the future extremely high. In this unusual case a distorting seigniorage tax is never used.

In the empirical research that follows I will try to find evidence that policy instruments have been manipulated in the selected member states of the OECD. This opportunistic behavior by governments should generate cycles in a cyclical adjusted government balance. The political business cycle can be detected by comparing the government balance with the election dates. An ideal pattern would be a negative cyclical balance when an election is imminent, followed by a positive cyclical balance after the election. This will be explained further in the next chapter.
Chapter 3: Tools of Fiscal Policy

3.1) Tools available for Governments

As explained in the previous chapter, for the creation of a rational political business cycle discretionary fiscal policy in needed. In this chapter I will explain the tools available for governments to influence a business cycle and how this can be measured.

A government stabilizes the business cycle either through automatic stabilizers or with discretionary fiscal policy. Automatic stabilizers are considered structural features that smooth fluctuations in disposable income and consumption over the business cycle of government spending and taxation. They increase budget deficits during times of recessions without specific new legislation. Countercyclical policy is created without the lags associated with legislative policy changes. Automatic stabilizers arise from parts of the fiscal structure that naturally vary with changing economic activity. 7

Discretionary fiscal policy is the deliberate manipulation of acquisitions, taxation and transfers by the government. It involves policy changes that are actively undertaken for other reasons than stabilization. Due to lags in recognizing the need for changed fiscal policy and enacting the changed fiscal policy they are made more difficult. Implementing the modified fiscal policy usually requires legislative action, which takes a long time to implement. Fiscal policy does have an advantage over monetary policy in the sense that increased government spending leads to an immediate increase in aggregate demand. The effects of a tax cut may be more moderate and could contain a time lag as individuals may not immediately spend their increased income that resulted from the tax cut.

The impact of a change in fiscal policy may not be felt until six to twelve months after the change has occurred. This creates the risk that fiscal stimulus will arrive just as the economy recovers from a recession. With fixed elections these problems disappear, since the timing of elections is known. Only government systems with flexible election dates the difficulty of proper timing can be a real problem. If the manipulation was intended to increase the chance of re-election, the risk exists that the stimulus arrives after the election was held.

Automatic stabilizers are measured using the change in the cyclical balances. The size of automatic stabilizers tends to be associated with the size of government, since they are usually by-products of other fiscal policy objectives. Although automatic stabilizers varies across countries, it is positively

related to both government size and output volatility. Government size is therefore considered to be good proxy for the size of automatic stabilizers.

Even if fiscal stimulus can be delivered quickly, this doesn’t necessarily justify the use of discretionary fiscal policy. For instance, fiscal policy can be much less effective in an open economy, since the stimulus could just leak out to neighboring countries. This reduces the ability of government to influence voting behavior and might make fiscal policies less attractive as a tool.

Although measuring an election is easy, measuring fiscal stimulus is more subjective. For measuring fiscal stimulus I have looked at the ‘World Economic Outlook, October 2008 – Chapter 5: Fiscal Policy as a Countercyclical Tool’. They start with the primary fiscal balance, which they define as the ‘difference between total general government revenues and expenditure net of interest payments on consolidated general government liabilities’. Government revenues and expenditures can change by a changing economic climate, or by changing fiscal policies. Therefore, to only capture the changing fiscal policies a cyclically adjusted primary balance is needed. Changes in the cyclically adjusted primary balance should show discretionary fiscal actions.

3.2) General Government Structural Balance

A cyclically-adjusted budget balance is also called the structural budget balance. Here the budget balance has been adjusted for nonstructural elements beyond the economic cycle. It then represents the observed government’s revenue and expenditure of an economy operating at its potential GDP. Potential GDP is the level of produced output when capital, labor and technology are at their respective trends. When evaluating fiscal policy the structural balance can be further corrected by adding back net interest payments. This creates the structural primary balance, which gives a better indicator for changes in discretionary fiscal policies since interest payments don’t represent discretionary spending.⁸

Annual changes in the structural balance can indicate expansionary, neutral or contractive changes of fiscal policy. When the structural balance is unchanged it represents a neutral path and suggests that domestic demand is not influenced by fiscal policy. If fiscal policy is expansionary, this is

characterized by a deteriorating structural balance. Contrariwise, a positive structural balance is said to represent a contractive fiscal policy that restrains demand.

Obtaining the necessary data containing the selected member-states of the OECD proved to be quite difficult. In the end, the most complete dataset was found in the World Economic Outlook Database, edition April 2010 from the IMF. It contains all but three of the selected member-states and contains data from 1980 until 2009 of the general government structural balance as percentage of potential GDP. It refers to `the general government cyclically adjusted balance adjusted for nonstructural elements beyond the economic cycle`.

While structural indicators represent a useful benchmark to evaluate the fiscal policy stance, especially in the absence of more detailed information on changes in legislation passed by parliaments, they are clearly subject to a number of limitations. These latter are notably related to the substantial uncertainty inherent in the cyclical adjustment procedure. Not modifying tax rates when faced with large changes in the tax base can be seen as discretionary as modifying them.  

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9 WEO data, displayed in appendix 2.

Chapter 4: Empirical view on OECD countries

In the empirical research that follows I will try to find evidence of discretionary fiscal policy with the goal of influencing elections in the selected member states of the OECD. Since rational political business cycle theories expect manipulation of fiscal policy before and after elections, I will look at the complete development of each member state general government structural balance. The development is shown in the graphs below. Added are data of the election dates. As an election gets imminent, the structural balance is expected to deteriorate. This continues until a new government is elected, at which the structural balance is expected to improve.

To illustrate this in the graphs below, the general government structural balance is turned red when movement is found similar to a rational political business cycle. A typical rational political business cycle shows a growing structural balance the first year after an election. Followed by a neutral structural balance the second year. In the year prior an election the structural balance should be deteriorating. The cycle ends with further deterioration of the structural balance in the election year. If the general government structural balance doesn’t move according to the expected rational political business cycle, the line remains blue.

*Graphs showing the development of the general government structural balance, % of potential GDP*
Although these graphs don’t give a clear image of a typical rational political business cycle, it is important to remember that a government is interested in signaling an improvement in economic conditions. Because of this the general government structural balance needn’t be positive in the year after the elected, an improved structural balance is sufficient to illustrate less need for discretionary fiscal policy.

Looking at the graphs, the selected member-states of the OECD show patterns in the development of their general government structural balance that are consistent with a rational political business cycle. Especially Austria, Finland, Greece and Ireland show behavior consistent with a rational political business cycle. To determine whether this is truly due to upcoming elections, and not just by chance, it is necessary to test the strength of the relationships.

The strength of a relationship is typically measured by the correlation coefficient. Although correlation doesn’t imply causation, it does describe tendencies. The values range from minus 1 for a perfect negative correlation, up to plus 1 for a perfect positive correlation. The correlation coefficient is calculated between the general government structural balance and the election cycle. The election cycle receives the following values; 1 (first year after election), 2 (second year after election), ... , n (year of a new election).

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria: 0.1</td>
</tr>
<tr>
<td>Belgium: 0.016</td>
</tr>
<tr>
<td>Canada: -0.13</td>
</tr>
<tr>
<td>Finland: -0.1</td>
</tr>
<tr>
<td>France: -0.04</td>
</tr>
<tr>
<td>Germany: 0.28</td>
</tr>
<tr>
<td>Greece: -0.04</td>
</tr>
<tr>
<td>Ireland: 0.01</td>
</tr>
<tr>
<td>Italy: -0.06</td>
</tr>
<tr>
<td>Japan: -0.03</td>
</tr>
<tr>
<td>Netherlands: -0.14</td>
</tr>
<tr>
<td>New Zlnd: 0.03</td>
</tr>
<tr>
<td>Norway: -0.015</td>
</tr>
<tr>
<td>Portugal: -0.21</td>
</tr>
<tr>
<td>Spain: 0.06</td>
</tr>
<tr>
<td>Sweden: 0.15</td>
</tr>
<tr>
<td>UK: -0.12</td>
</tr>
<tr>
<td>USA: -0.16</td>
</tr>
</tbody>
</table>
Looking at the coefficient levels, they all appear to be very weak. This can be explained by a characteristic of the election cycle in most selected states. As the election cycle isn’t fixed, elections can be held at any time. This influences the need for discretionary fiscal policy, which changes the structural balance. Also looking at the earlier graphs, no evidence is found for a continuing cycle. This could support the paper by Schultz (1995), which explains that the need for discretionary fiscal policy is correlated with the popularity of the government.

**Chapter 5: Conclusion**

There are several theories describing the political business cycle. It relates to political behavior during the electoral cycle. To get reelected, politicians signal the voters of their ability in achieving certain desirable economic goals. If their true ability isn’t sufficient, politicians have the option to manipulate economic condition and increase the chance of getting reelected.

The rational political business cycle theories expect a manipulation of several policy instruments before and after elections. The temptation of incumbents to cut taxes and increase spending before an election in order to appear competent clearly generates departures from optimality. Optimality can be achieved if voters and political parties value the future extremely high.

For the creation of a rational political business cycle discretionary fiscal policy is needed. Discretionary fiscal policy is best measured by the structural primary balance. By comparing the structural primary balance with the election cycle a rational political business cycle can be detected. This process has been performed in the empirical part of this paper and although a continuing relationship wasn’t found in the studied data, at least some evidence was found that suggests a rational political business cycle.
References


