The Politics of Strategic Budgeteering

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Preliminary Draft: Do not circulate. Comments welcome.

Abstract:

This paper analyzes how opportunistic governments choose between alternative fiscal policies in order to increases their chances of re-election. To increase the provision of public goods shortly before elections – and thus, to generate a fiscal political business cycles – governments may either increase deficits or redistribute governmental resources from long-term efficient sources to short-term efficient public programs. We argue that incumbents who face highly competed elections principally have an incentive to spend more on public goods even though these investments are not efficient in the long term. In principal, they would do so by increasing the deficits (with re-balancing the budget after the election). However, our model demonstrates that incumbents would even electioneer at the cost of long-term investments if the extent of fiscal transparency does not allow them to finance the provision of public goods with higher deficits. In other words, if elections are close and voters may observe the governmental deficit, then governments tend to increase the provision of public goods – and consequently, their electoral prospects – by a redistribution of budget resources from long-term efficient investment to a short-term provision of public goods.

* Equal authorship. We gratefully acknowledge financial support of the German Research Foundation.

Introduction

Everything else being equal, politicians prefer winning elections to losing them. For this very reason, candidates and parties would implement policies that improve their political support in the short run even at the expense of long term costs. The easiest way to improve electoral chances is by using monetary policy or deficit spending to create a political business cycle – that is: a short economic boom before election, which after the election generates economic costs such as higher inflation. Everything else being equal, voters prefer not to be fooled. They tend to support political candidates who promise to implement political institutions which prevent the government from manipulating the economy for electoral purposes. Increasing central bank independence, fixing the exchange rate to a monetary anchor within relatively narrow bands, and institutions which improve fiscal transparency all serve to impede governments from creating a political business cycle.

We contend that these reforms leave governments with one policy instrument which can under certain conditions create political cycles: the restructuring of the budget, an instrument that we refer to as budgeteering. Strategic budgeteering occurs when governments shift resources from budget items which are efficient in the long run to budget items which improve political support in the short run. Strategic budgeteering is a policy instrument of last resort: it is politically attractive, but it is less attractive than the misuse of monetary policy or deficit spending. Our main argument holds that strategic budgeteering is more likely when the incumbent cannot use monetary policy and when fiscal transparency is high so that deficit spending becomes politically costly.

We derive these results in a two-period model in which incumbents have two policy options: deficit spending and budgeteering from public investment to public good provision. We assume that public investment is efficient only in the long run. Investment leads to economic growth which improves voters' private consumption in the second period. The provision of public goods, however, directly enters the voters' utility in the first, the pre-election period.

Governments have an incentive to improve the provision of public goods the more, the closer they get to an election. If incumbents decide to run deficit to provide more public goods, voters will increase their political support for the incumbent because of the improvements in public good provision. At the same time, they will however reduce their support for the incumbent because expected consumption in the second period enters the utility calculation of the voters and voters adjust this expectation when incumbents reduce public investment. However, whether voters can observe the government's deficit spending immediately or only with a delay depends on the transparency of fiscal institutions. Accordingly, if fiscal transparency is high, then governments abstain from deficit spending. In this setting, strategic budgeteering is the only instrument to increase political support before elections.

Our theoretical model draws heavily on the research on political business cycles in fiscal policies in order to develop an integrated fiscal theory of strategic electioneering. Departing from these insights, we do not only show which instruments governments can use to increase their chances of re-election and the conditions under which these instruments are effective. Most importantly, we shed light on how governments choose between alternative fiscal instruments in the pre-election period. Contrary to claims that political cycles in fiscal policies do not exist under certain conditions, we show that incumbents always provide more public goods before elections, but the way they finance these varies. The more intransparent public budgets are, the larger the share of pre-electoral overinvestment in public goods which is financed by deficits; the more transparent public budgets are, the larger the share of pre-electoral overinvestment in public goods which is financed by strategic budgeteering.

When Do Monetary and Fiscal Political Business Cycles Occur?

Low or declining unemployment rates, sufficiently high economic growth rates and inflation rates at bay are usually preferred to more stormy weathers. Clearly, these bullish economic conditions promise rising wages and increasing purchasing power. Voters like positive

expectations. Support for the incumbent government thus tends to co-vary with changes in the standards of living. Governing parties thus have a significantly higher chance for winning elections during boom cycles.

This simple logic provides incumbents with ample incentives to stimulate the economy shortly before elections even at the expense of the long-term detrimental effect. If governments act purely opportunistic and if either voters' memory does not last forever or voters consider current conditions more than previous conditions (Wright 1974, Tufte 1978, Frey and Schneider 1978a,b, Golden and Poterba 1980, Schultz 1995, Price 1998), then the incumbent is tempted to use all available policy instruments to create a business cycle hike before elections at the cost of worsening economic conditions shortly after the elections.[1]

This section reviews the main theoretical arguments about the political business cycle and broadly distinguishes between monetary and fiscal explanations. We argue that both types of explanations are convincing if (but only if) certain institutional conditions apply. Therefore, a richer understanding of political business cycles requires that scholars analyze the choice of monetary and fiscal policy instruments in conjunction and take the specific constraints governments face fully and simultaneously into account. We thus discuss the literature with a focus on the conditions under which the choice of a particular instrument is more likely. In the theoretical section, we will then more fully explore the interrelatedness of the choice of different fiscal instruments when governments are (partly) opportunistic.

Monetary Policy and the Political Business Cycle

Early works on the political business cycle were largely motivated by NAIRU-augmented version of the 'Philips curve'. Philips (1958) suggested that when unemployment is high inflation is low and vice versa. He thought of this relation as menu of choice: governments may use lax monetary policies to raise employment at the expense of additional inflation. The NAIRU (non-accelerating inflationary rate of unemployment) revolution argued that a

[1] This idea can be traced back at least to Schumpeter (1939), Kalecki (1943), Nordhaus (1975), Hibbs (1977, 1978) and Tufte (1978).

'choice' exists only in the short run. In the longer run, however, unemployment returns to its 'natural rate' while inflation stays higher then before the period of monetary stimulation. Apparently, the NAIRU-augmented version of the Philips curve idea does not allow governments to determine the average unemployment rate. It, however, allows government to manipulate the business cycle because short term reductions in the unemployment rate are possible.

This literature also suffered from the shared assumption that voters' expectations are not fully rational. Rational voters should expect that governments manipulate the economy. They therefore adjust their inflation expectations when governments change their monetary policy and not just when higher inflation rates become measurable and will be publicly discussed. Subsequent explanations of the political business cycle thus replaced the assumption of adaptive, retrospective voters and assumed forward-looking voters with rational expectations (Alesina 1987, 1988; Rogoff and Sibert 1988; Persson and Tabellini 1990). Forward-looking individuals vote for candidates who are most competent in handling the economy. Under this assumption, governments may still manipulate the business cycle, but rather than doing so to fool the voters they do so to signal their competence. The government in these models engages in some sort of brinkmanship: by willingly worsening the budget situation they create a situation which can only be handled by a competent government. Since the voters prefer ceteris paribus competent to incompetent governments, but cannot observe the candidates' skills independently of their actions in a crisis situation, the government's behavior is rational and helps winning elections.

Yet, all these models of monetary policy induced political business cycles depend on the crucial assumption that governments indeed command over monetary policy. The rapid increase in central bank independence on the one hand and European monetary integration on the other hand made explanations of the business cycle which were exclusively based on monetary policy less and less convincing over the last decades. Why should independent

central bankers help the government signaling its competence? Why do voters believe that the government is competent if the independent central bank solves macroeconomic tensions by choosing an optimal monetary policy?

Fiscal Policies and the Political Business Cycle

The monetary policy version of the political business cycle literature was complemented by a fiscal sibling. Again, this literature comes in two variants. The first variant explains political business cycles by pre-election deficit spending of the government. The second argues that governments reshuffle financial resources away from spending which is efficient in the long run into budgets which attract votes in the short run.

Both versions are based on the premise of rational and forward-looking voter. Voters prefer candidates who are able to provide more public goods for given levels of taxation and private consumption (e.g. Rogoff and Sibert 1988; Rogoff 1990; Shi and Svensson 2002; Alt and Lassen 2006a, b). The difference between the two versions is the amount of information voters have. In the literature on cycles in deficit spending voters are not informed about the candidates' ability to handle the economy (e.g. Shi and Svensson 2002; Persson and Tabellini 2002). Additionally, they do not observe the current levels of debt. Governments thus try to appear competent by temporarily raising economic growth or improving the welfare of large numbers of citizens before an election by providing more public goods.[2] They are thereby tempted to finance these policies with higher deficits because voters cannot observe (and thus would not punish) such a strategy even if it is distorting in the long-run.

Incomplete information puts an important restriction to those models: Cycles in deficits only exist if voters are not able to observe changes in budget deficits. Empirical research shows that voters reduce support if they observe governments to increase deficits before elections.[3] The argument that governments 'signal competence' remains unconvincing in this case, since

[2] Partisan theories to political business cycles argue that parties have different affinities for example to increase spending on different policy fields (Hibbs 1977; Alesina 1989; Cusack 1997; Boix 2000).

[3] E.g. Alesina, Perotti and Tavares 1998; Brender 2003; Brender and Drazen 2005; Drazen and Eslava 2005; Peltzman 1992; Schneider 2007.

no competence is needed to run deficits. Indeed, a competent government would provide benefits to voters without increasing deficits. (Drazen 2000b: 101). In other words, if voters observe fiscal policy then they will punish the incumbent during elections. The amount of information the voter receives about the incumbent's actions in democratic countries depends on the transparency of fiscal institutions within a country (Alt and Lassen 2006a, b; Shi and Svensson 2006).[4] "Where institutions are less transparent, the cycle in fiscal balance appears, while we find no such electorally related movements in higher-transparency countries" (Alt and Lassen 2006a: 530).[5]

However, incumbents are not restricted to use higher deficits in order to attract additional votes. Electoral manipulation in democratic countries could easily take the form of cycles in the *composition* of public spending. Specifically, governments face a trade off when voters who dislike high government expenditure and deficits observe fiscal policy. On one hand, they aim to achieve a balanced budget before elections to demonstrate their economic competence. On the other hand, they have an incentive to provide more public goods in order to gain political support. Since voters value some public goods more than others, governments could easily increase spending on these items – which Brender and Drazen (2005) call targeted spending – while, at the same time, they decrease non-targeted spending, thus allowing the overall level of spending – and therefore also the deficit – to remain unchanged (Drazen and Eslava 2005, 2006).

Discussion

"Both rational- and adaptive-expectations political-cycle studies typically underemphasized crucial variation in the "(a) international and domestic, (b) political-economic, and (c)

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[4] Others argue that macro-political budget cycles are restricted to weak and/or new democracies because in those countries voters are less able to monitor and evaluate the fiscal policy process (e.g., Akhmedov and Zhuravskaya 2004; Hallerberg, de Souza and Clark 2002; Persson and Tabellini 2002b, 2003; Shi and Svensson 2000, 2002, 2006; Brender and Drazen 2005).

[5] Milesi-Feretti (2004) and Rose (2006) examine the impact of fiscal rules on the scope for political business cycles in fiscal policies. Ferejohn (1999) shows that state-enforced media reinforces the effect of low transparency.

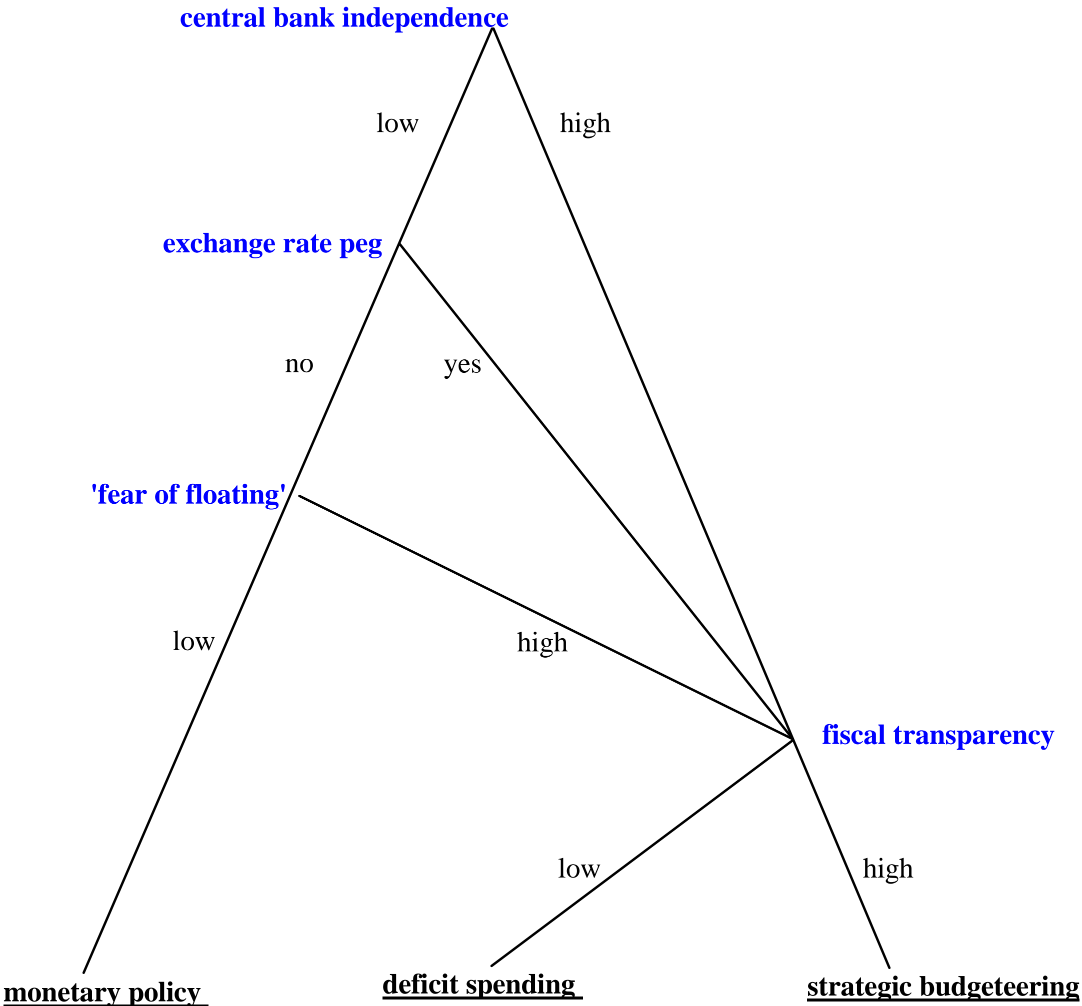
institutional, structural, and strategic contexts in which elected, partisan incumbents make policy. (…) The magnitude, regularity, and content of electoral and partisan cycles will vary with the contexts reflected in differing combinations of conditions (a), (b), and (c)" (Franzese 2002a: 370). Recently, scholars have addressed these problems by analyzing the conditions and the context under which cycles in monetary and fiscal policies are possible. Alt and Lassen, for example, have developed a model that explains under which conditions incumbents can increase deficits to increase political support in the pre-electoral period (Alt/Lassen 2006a, b). However, monetary and fiscal instruments have been analyzed largely in isolation and without sufficiently unifying the different conditions under which opportunistic political strategies emerge and evolve. Unrestricted governments command over monetary and fiscal policies and may use both policies either simultaneously or complimentary. If governments lack monetary policy autonomy, the use of fiscal instruments opportunistically becomes more likely. At the same time, fiscal political cycles can be caused either by deficit spending or by 'opportunistic strategic budgeteering'.

Institutionally constraint governments lack full control over at least one of these instruments. However, this does not imply that electoral engineering becomes impossible. Indeed, governments may always find a way to opportunistically attract voters unless monetary policy is fully controlled by an independent central bank, changes in budget deficits are immediately observed by voters, and opportunistic budgeteering is impossible. It is not very likely that these three conditions apply simultaneously.

Figure 1 gives account of the unified theory of the political business cycle taking into account the various insights from the literature.[6] The figure simplifies since all determinants of the governments choices (blue) should be treated as continuum rather than as dichotomy. As a result, our model does not predict that governments face a either-or choice. Rather, the

[6] We are not the first to suggest a unified model of the political business cycle, see Clark and Hallerberg 2000. Flexible exchange rates limit the effectiveness of fiscal policies and thereby the scope of incumbents to increase political support via deficit spending. Central Bank Independence (CBI) and the European Monetary Union (EMU) may also have effects on the existence and scope of electoral cycles.

options are complementary and partly rivalry, but not mutually exclusive. In the next section, we discuss a formal a model that shows exactly this for fiscal strategies in the pre-election period.[7]



We take the different fiscal strategies which where discussed in the literature into account and analyze them in an integrated theoretical framework. Consequentially, we can derive the conditions under which we should either see no pre-electoral manipulation of fiscal policies, deficit spending, or shifts in the composition of spending. Most importantly, our model finds that incumbents principally have an incentive to spend more on public goods if elections are

[7] The baseline model focuses on the choice between fiscal instruments. We will extent this model to incorporate monetary policies as well.

close even though these short-term investments are not efficient in the long term. And while they would do so by increasing the deficits (with re-balancing the budget after the election), they would even choose this strategy at the cost of long-term investments if the extent of fiscal transparency does not allow them to finance the provision of public goods with higher deficits. In other words, if elections are close and the governmental deficit is visible to voters, then governments tend to increase the provision of public goods – and consequently, their electoral prospects – by a redistribution of budget resources from long-term efficient investment to a short-term provision of public goods. The next section formalizes this intuition and provides a theoretical argument of strategic budgeteering.

Political Cycles and Strategic Budgeteering

Elections are costly. Not only for the losing party, but also for the incumbent who aims to provide more public goods in order to increase her chances to get re-elected. To improve the welfare of the electorate in the short-term she may choose between alternative fiscal strategies. Our model of strategic budgeteering is based on existing models of political business cycles in fiscal policies. Specifically, we draw from Alt and Lassen (2006a,b) and Drazen/Eslava (2005, 2006) who analyze different fiscal strategies (and their constraints) to increase public good provision before elections. From these insights, we develop an integrated formal theory of fiscal instruments in the pre-election period. Specifically, we assume that governments may pursue three alternative strategies. In order to increase the provision of public goods they can (a) abstain from pursuing opportunistic policies in the pre-electoral period, (b) increase deficit spending, and (c) redistribute spending from long-term efficient investments to the short-term provision of public goods.

In order to understand the conditions under which governments choose one or the other alternative, we develop a standard political economy model in which opportunistic governments choose between these fiscal strategies in order to maximize their chances to get

re-elected by rational and prospective voters (e.g. Romer 2001, Persson and Tabellini 2002).[8] Voters care about their expected well-being in the future and make their electoral choices based on their expected income in the time after the elections. Consequently, we have to compare the long-term implications of the alternative fiscal choices and consider a two period model where elections take place at the end of period 1.

In our baseline model, we simply assume that opportunistic governments try to maximize the utility of a representative voter over the two periods.[9] In the following, we thus first derive a voter utility function and then derive the government's optimal fiscal strategies before elections.

Fiscal Policies and Voter Welfare

Voters gain utility from two sources. They may gain from private consumption, C, (as a result of higher private income) and from publicly provided goods, G.[10] Thus, the voter's income is defined by

$$Y = C + G \tag{1}$$

For simplicity, and without any loss of generalizability, we define income in the first period to equal exactly 1, $y_t \equiv 1$.[11]

In the first period, government spending (G_t) is financed by a fixed lump-sum tax rate τ. Alternatively, incumbents can increase public spending by creating a deficit (D_t) in period 1. Hence, the budget constraint is given by

$$G_t = \tau Y_t + D_t, \tag{2}$$

[8] Our baseline model assumes a closed economy but extensions to the baseline model that allow for influences of capital mobility and exchange-rate policy are in principle possible and desirable.

[9] Further extensions to the baseline model will include policy makers with ideological preferences. Introducing ideology will allow for targeted partisan, sectoral and regional budgeteering.

[10] Since voters are only interested in consumption, we disregard all possibilities of private investment and saving. Adding these features to the model is possible but would not change the main conclusions.

[11] Alternatively, we may define a neoclassical or endogenous production function, $Y_t = AK^{\alpha}L^{1-\alpha}$, where Y is the Gross Domestic Product (GDP), A is Productivity, K is Capital, and L denotes Labor. This solution would be more elegant but it is much less parsimonious and does not provide additional information for our model.

and for private consumption it directly follows that

$$C_t = (1-\tau)Y_t. \tag{3}$$

Equation (3) shows that the voters' welfare declines in period 1 if the incumbent raises taxes to pursue expansionary fiscal policies in the period before elections. Consequently, incumbents are usually attracted to increase deficits in the pre-election period if possible because an increase in taxes in period 1 would result in declining political support during elections. Despite the relative attractiveness of deficits, we assume that the government has to balance the budget over the two periods. If governments decide to use deficit spending for public good provision in period 1, they have to increase revenues in the second period in order to balance the budget. Thus,

$$D_t = -D_{t+1} \Leftrightarrow D_t - D_{t+1} = 0, \tag{4}$$

where D_t denotes the budget deficit in period 1 and D_{t+1} is the budget deficit in period 2.

So far (and in line with most of the literature cited above), we simply assumed that governments have an incentive to increase spending before elections and that they either increase deficits or taxes to do so. However, we have not taken into account that incumbents typically have a choice between different spending items. Public budgets are divided into many different budget items (such as defense, social security, education, etc.) and governments may choose to increase or decrease spending on either of them. In the following, we thus assume that governments may principally raise expenditures on two different types of public goods – long-term efficient investment (L_t) and/or short-term efficient public goods (P_t):

$$G_t = L_t + P_t. \tag{5}$$

On one hand, they may increase long-term efficient investment (L_t). This does not have a direct positive effect in period 1 but it increases future (post-election) income by a growth parameter α :

$$Y_{t+1} = Y_t + \alpha L_t \tag{6}$$

Consequently, real private consumption also increases in the period after the election by long-term efficient government consumption. On the other hand, incumbents can increase expenditure on inefficient short-term public good provision (P_t) which is purely consumptive and only has an effect in period 1. Examples of such short-term policies are labor market programs, social security spending, or other social transfer payments. However, although long-term investments have a positive effect in the second period, only the provision of short-term public goods has an immediate effect before the election. In other words, voters generate utility in period 1 only from private consumption and short-term public goods, but not from public investment that generates growth in the long-run:

$$U_{it} = C_t + P_t \tag{7}$$

From this follows that governments can increase the voters' welfare directly before elections by providing more short-term efficient public goods in period 1. They have a strong incentive to do so since this increases their probability of being re-elected.

In her incentive to increase transfer payments before elections, however, the incumbent is restricted by her budget constraint. For example, the incumbent can increase the deficit to provide more public goods. Yet, the government budget has to be balanced over the two periods, and thus, the deficit incurred in period 1 has to be paid back fully in period 2 plus an interest of size r (r>0). This has important implications for future consumption:

$$C_{t+1} = (1-\tau) Y_t + \alpha L_t - (1+r) D_t \tag{8}$$

If incumbents electioneer in period 1, then consumption declines in the period after elections (period 2) because the government has to increase revenues in order to re-balance the budget. Given those negative effects, we assume that governments only create deficits in order to finance short-term public goods that help to increase the probability of re-election.

The diverging long-term effects of the two different policies – long versus short term spending – create a new opportunity for the government. Even if incumbents could not rely on deficit spending in period 1 for whatever reason, they may reduce long-term efficient investment (L_t) in order to provide more public goods (P_t). In other words, allowing for different types of goods creates an environment in which incumbents may choose between three policy instruments to increase their chances of re-election: they can either (a) do nothing, (b) increase deficit spending (D_t) in order to provide more public goods (P_t) in period 1, or (c) increase short-term provision of public goods (P_t) by redistributing resources from long-term efficient investments (L_t).[12]

Rational, prospective voters aim to take this into account when calculating their utility (u_i) before elections. Most importantly, their utility from voting for the incumbent depends on their utility in period 1 (which is just the sum of private consumption and public goods) and the expected utility in period 2. While they can directly observe utility in period 1, consumption in period 2 is discounted by a factor δ, $0 \leq \delta \leq 1$, and not fully anticipated by voters, but only expected:

$$U_{it,t+1} = C_t + P_t + \delta E\left(C_{t+1}\right), \tag{9}$$

where E stands for the expectation term. We take the logarithm of the contemporary and future consumption. This ensures a positive but decreasing utility function without generating a loss of generality (see Romer 2001, pp. 177-78). Accordingly, equation (9) simply turns into

[12] Recall, they could also raise taxes. As discussed above, however, governments are less attracted to this fiscal policy instrument since voters observe a direct decline in their welfare and would punish the incumbent during elections.

$$U_{it,t+1} = ln\left(C_t + P_t\right) + \delta\, ln\left(E\left(C_{t+1}\right)\right). \tag{10}$$

Whether expected consumption in period 2 approaches actual consumption in period 1 depends on two factors. First, voters expect a higher future well-being the higher the growth rate α ($0<\alpha<1$) which determines the effect of long-term government investment on future consumption.

At the same time, they expect lower future well-being the higher the public deficit incurred by the government in period 1. However, voters cannot always observe distortive policies of the government. How well voters can observe debt-creation by the government depends on how transparent the fiscal system is (e.g. Alt/Lassen 2006a, b).[13] Fiscal transparency is defined as "public openness about the structure and functions of government, fiscal policy intentions, public sector accounts, and projections. It involves ready access to reliable, comprehensive, timely, understandable, and internationally comparable information on government activities (…) so that the electorate and financial markets can accurately assess the government's financial position and the true costs and benefits of government activities, including their present and future economic and social implications" (Kopits and Craig 1998, 1).

In other words, fiscal transparency determines the visibility of debt-creation by the government and indicates the need to re-balance the budget in the period after elections. If deficit-creation is perfectly visible, voters know that the full amount of deficit generated in the first period must be compensated for in the second period and fully decreases consumption in the second period. If deficit spending is not observable, then governments can use deficits to finance short-term public goods since this does not enter voters' utility calculation.

Note, fiscal transparency mainly has an impact on whether voters can observe deficit spending by the government. Accordingly, fiscal transparency has a larger impact on the

[13] Note, since we assume that our incumbents are elected, we do not need to take into account the quality of democratic institutions to measure the visibility of governmental fiscal policies (e.g. Shi and Svensson 2000, 2002, 2006). However, both – fiscal transparency and democratic quality – have the same notion as they measure the extent to which governmental debt-creation is visible.

relationship between deficit spending and the voters' expected welfare in the second period than on the relationship between strategic budgeteering and voter welfare. This assumption finds support in the fact that e.g. the media and opposition parties mainly use deficit-creation of the incumbent government to point out her incompetence in the political competition. Empirical research shows that voters perceive large deficits as signal that the economy is not doing well and tend to punish the incumbent for bad economic policy outcomes (see FN 3). The same pattern has not been observed for incumbents who increase short-term transfers in the year before elections. Finally note, however, that the voters' utility at least implicitly decreases if governments refer to strategic budgeteering because this decreases the expected consumption in period 2.

Both factors, the growth rate (α) and fiscal transparency (κ, $0<\kappa\leq 1$) have an important effect on the voter's expected utility from voting for the incumbent government. Including them, the expected consumption in period 2 is

$$E\left(C_{t+1}\right)=\left(1-\tau\right)Y_t+\alpha L_t-\kappa(1+r)D_t\,. \tag{11}$$

Over two periods, a representative individual then maximizes expected utility such that

$$max\,u_{t,t+1}=ln\left(\left(1-\tau\right)Y_t+P_t\right)+\delta\,ln\left(\left(1-\tau\right)Y_t+\alpha L_t-\kappa(1+r)D_t\right). \tag{12}$$

Recall, above we assumed that the government faces two budget constraints. On one hand the policy maker can use tax revenue to finance both long-term efficient and short-term inefficient public goods. On the other hand governments also can create deficits to provide short-term public goods before elections. However, since the budget must be balanced over the two periods, it doesn't make sense for the government to use deficit spending on long-term investment. Introducing fiscal transparency changes the incentives for governments to create deficits as well:

$$\tau Y_t=L_t+\kappa P_t \tag{13}$$

$$D_t = (1-\kappa) P_t \tag{14}$$

The two budget constraints show that inefficient public goods (P_t) which only serve opportunistic goals are mainly financed by deficits if transparency is low (e.g., if $\kappa = 0$). If transparency is high (e.g., if $\kappa = 1$), only tax revenue can be used to provide these types of public goods. Alternatively, governments can decrease spending in long-term efficient policies in order to increase short-term provision of public goods (see equation 13). As above, we can assume that governments are more likely attracted to the latter since taxes cause a direct decline in the voters' welfare before elections.

Optimal Fiscal Strategies in the Pre-election Period

The incumbent (who maximizes voter support) has to maximize the aggregated utility of individuals under its own budget constraints. We assume, however, that governments have a higher incentive to invest in inefficient short-term public goods if elections are much contested and the ex ante – perceived by the incumbent – probability to win the election is relatively low. The Lagrangian then is:

$$\begin{aligned} \mathcal{L} = & \, ln\big((1-\tau)Y_t + (1-\pi)P_t\big) + \delta \, ln\big((1-\tau)Y_t + \alpha\pi L_t - \kappa(1+r)D_t\big) \\ & + \lambda\big(\tau Y_t - L_t - \kappa P_t\big) + \mu\big(D_t - (1-\kappa)P_t\big) \end{aligned}, \tag{15}$$

where π measures the ex-ante probability of winning the election ($0<\pi<1$). λ and μ are the Lagrange multipliers and describe the budget constraints under which the government has to maximize voter utility over the two periods.

From the above equations we can derive the first order conditions for optimal deficit spending, long-term government investment and short-term public good provision.

$$\frac{\partial \mathcal{L}}{\partial P_t} = \frac{1-\pi}{P_t(1-\pi) + (1-\tau)Y_t} + (\kappa - 1)\mu - \kappa\lambda = 0 \tag{16}$$

$$\frac{\partial \mathcal{L}}{\partial L_t} = \frac{\pi\alpha\delta}{-D_t\kappa(1+r) + (1-\tau)Y_t + \pi\alpha L_t} - \lambda = 0 \tag{17}$$

$$\frac{\partial \mathcal{L}}{\partial D_t} = \mu - \frac{\kappa\delta(1+r)}{-D_t\kappa(1+r)+(1-\tau)Y_t + \pi\alpha L_t} = 0 \tag{18}$$

To solve this system of equations, we can use the partial derivations for the budget constraints λ and μ:

$$\frac{\partial \mathcal{L}}{\partial \mu} = D_t - (1-\kappa)P_t = 0 \tag{19}$$

$$\frac{\partial \mathcal{L}}{\partial \lambda} = \tau Y_t - L_t - \kappa P_t = 0 \tag{20}$$

Successively solving the above equations gives us the optimal deficit spending (D_t^{opt}), short-term public good provision (P_t^{opt}) and long-term government investment (L_t^{opt}) dependent only on the theoretically interesting parameters:

$$D_t^{opt} = \frac{\left[(\kappa-1)Y_t\left(\pi^2\tau\alpha + (\tau-1)\begin{pmatrix}1-\kappa\delta(1+r)+\kappa^2\delta(1+r)\\ -\pi\left(-1-\kappa\alpha\delta+\tau(1+\alpha+\kappa\alpha\delta)\right)\end{pmatrix}\right)\right]}{\left[(\pi-1)\left(1+r-\kappa(1+r)+\pi\alpha\right)(1+\delta)\right]} \tag{21}$$

$$L_t^{opt} = \frac{\left[Y_t\begin{pmatrix}1-\kappa\delta+\kappa^2\delta-\kappa r\delta+\kappa^2 r\delta+\pi^2\tau\alpha\delta-\tau\left(2+r+\delta+r\delta+\kappa^2\delta(1+r)-\kappa(1+r)(1+2\delta)\right)\\ -\pi\left(1+\kappa\alpha\delta+\tau\left(-2-r-\delta-r\delta+\alpha\delta+\kappa(1+r+\delta+r\delta-\beta\delta)\right)\right)\end{pmatrix}\right]}{\left[(\pi-1)\left(1+r-\kappa(1+r)+\pi\alpha\right)(1+\delta)\right]} \tag{22}$$

$$P_t^{opt} = \frac{\left[-\left(Y_t\begin{pmatrix}\pi^2\tau\alpha+(\tau-1)\left(1-\kappa\delta(1+r)+\kappa^2\delta(1+r)\right)\\ -\pi\left(-1-\kappa\alpha\delta+\tau(1+\alpha+\kappa\alpha\delta)\right)\end{pmatrix}\right)\right]}{\left[\kappa(\pi-1)\left(-1-r+\kappa+\kappa r-\pi\alpha\right)(1+\delta)\right]} \tag{23}$$

These equations for optimal policy choices of deficit, short-term public good provision and long-term government investment do note only show the conditions under which each single strategy is optimal but also indicate how governments choose between alternative fiscal instruments. Unfortunately, equations (21)-(23) are hardly interpretable since all interesting

parameters appear both in the numerator and denominator of the equations. To examine the effect of our variables of main interest – fiscal transparency, closeness of elections, interest rate, and growth rate – we therefore simulate the optimal outcomes with respect to different parameter settings.

Table 1 depicts the values of the parameters we do not change systematically in the simulations. In the following, we systematically change interest rates (r) and transparency (κ) for optimal deficit whereas the closeness of elections (π) and transparency is systematically changed for optimal long-term investment and short-term public good provision. We fix all other parameters at empirically reasonable values.

Table 1: Chosen Values for Fixed Parameters

Parameter	**Value**
Tax Rate (τ)	0.4
Income (Y)	1
Growth Rate (α)	0.3
Discount Factor (δ)	0.7
Closeness of Elections (π)	0.3
Interest Rate (r)	0.05

1) Optimal Deficit Spending

First, we are interested in the conditions under which governments are attracted to use deficit spending in order to provide more public goods to the electorate before elections. We therefore simulate the optimal level of deficit spending for a government (based on equation 21) given changing levels of both, fiscal transparency and interest rates. The results are depicted in table 2.

Table 2: Optimal Deficit Spending for different Values of Transparency and Interest Rate

		Fiscal Transparency (κ)								
		0.1	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**
Interest Rates (r)	**0.01**	3.053	1.384	0.848	0.595	0.452	0.364	0.302	0.25	0.182
	0.02	3.023	1.369	0.839	0.588	0.447	0.36	0.299	0.248	0.181
	0.03	2.993	1.355	0.829	0.581	0.442	0.356	0.296	0.245	0.18
	0.04	2.964	1.341	0.82	0.574	0.437	0.352	0.293	0.243	0.179
	0.05	2.936	1.327	0.811	0.568	0.432	0.348	0.29	0.241	0.178
	0.06	2.908	1.313	0.802	0.561	0.427	0.344	0.287	0.239	0.177
	0.07	2.88	1.3	0.793	0.555	0.422	0.34	0.284	0.237	0.176
	0.08	2.853	1.286	0.785	0.549	0.417	0.337	0.281	0.235	0.175
	0.09	2.826	1.273	0.776	0.543	0.413	0.333	0.279	0.233	0.174
	0.1	2.8	1.26	0.768	0.536	0.408	0.329	0.276	0.231	0.173

The simulation results for the optimal level of deficit spending show governments always have an incentive to increase deficits in the period before elections in order to provide more public goods to the electorate. At the same times, the optimal level of deficit spending declines with higher visibility and with higher interest rates. If voters can observe that governments increase deficits in order to finance short-term inefficient public goods they take this knowledge into account when they calculate their expected future consumption. Since expected future consumption declines when incumbents rely on deficit spending in the first period (recall, they need to balance the budget in period 2), voters would be less likely to vote for incumbents who increase deficits before elections. Consequently, even though governments have a strong incentive to increase the voters' welfare before elections in order to maximize voter support, they will abstain from high deficits when fiscal institutions are transparent.

In addition, higher interest rates decreases the voters' expected future consumption since the deficit created today must be paid back with higher interest tomorrow. Thus, even if fiscal transparency is low, table 2 indicates that the optimal level of opportunistic deficit spending decreases the higher the interest rate. Note, however, our model simplifies tremendously at this point because we assume that voters can fully observe future interest rate which is certainly unrealistic. In future versions of the model we will directly incorporate expectations about monetary policy and thus interest rates.

In an additional set of simulations (not shown here) we also varied the ex-ante probability of staying in office. The simulation results show that a higher probability of re-election decreases ceteris paribus the inclination of governments to create deficits since these deficits are exclusively used to provide short-term public goods.[14]

2) Optimal Long Term Public Investment and Public Good Provision

Before we can discuss the general implications of these results, we have to analyze the effect of fiscal transparency and the closeness of elections on the alternative instrument, the optimal level of public spending before elections. Table 3 presents the simulated optimal long-term investment for different values of transparency and perceived probability of winning the upcoming elections (simulations based on equation 22).

[14] Simulation results for changing pi can be obtained from the authors upon request.

Table 3: Optimal Long-term Investment for changing Transparency and Closeness of Election

Probability of Winning the Elections (π)		Fiscal Transparency (κ)								
		0.1	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**
	0.1	0.939	0.933	0.922	0.904	0.875	0.825	0.733	0.519	-0.482
	0.2	0.942	0.938	0.93	0.915	0.891	0.850	0.775	0.614	0.077
	0.3	0.946	0.944	0.938	0.927	0.908	0.875	0.815	0.692	0.352
	0.4	0.949	0.950	0.948	0.941	0.928	0.902	0.855	0.761	0.531
	0.5	0.954	0.959	0.961	0.959	0.951	0.933	0.898	0.829	0.669
	0.6	0.960	0.970	0.978	0.982	0.981	0.972	0.950	0.902	0.795
	0.7	0.969	0.987	1.004	1.016	1.025	1.028	1.020	0.995	0.932
	0.8	0.985	1.019	1.051	1.079	1.104	1.124	1.137	1.139	1.121
	0.9	1.032	1.107	1.177	1.242	1.302	1.357	1.409	1.455	1.495

The table illustrates that incumbents generally tend to invest in long-term efficient projects. The extent of those expenditures, however, largely depends on the closeness of elections and the transparency of fiscal institutions in this country. Long-term investment becomes more valuable for governments if the ex-ante probability of staying in office is high and the outcome of the election is not perceived to be close. In this case, the government does not need to increase short-term efficient public goods before elections but rather invests in long-term efficient budget projects because this increases future income constantly and is not only efficient before the election (see also table 4 for short-term public spending).

More importantly, however, optimal long-term investment generally tends to decline with increasing transparency of fiscal institutions.[15] Recall from table 2 that incumbents abstain from deficits if voters can observe deficit creation. Instead, they need to finance short-term public goods with tax revenue or a redistribution of long-term investments. Table 3 now

[15] Note, not all values are intuitively reasonable, this is because we did not bound investment to be positive.

indicates that, apparently, governments switch strategies depending on the level of fiscal transparency. If fiscal policies become more visible, then incumbents tend to redistribute from long-term efficient investment to short-term inefficient public goods (instead of creating large deficits). This tendency increases if the incumbent believes that the election outcome might be very close. The greater attractiveness of changing the composition of the budget to deficit spending lies in the fiscal conservatism of voters. The literature (see above) shows that voters generally tend to punish governments for higher deficits in the pre-election period. By changing the composition of the budget, the incumbent's re-election chances may still increase, however. At first, changes in the composition of the budget are less visible (and not as prominently discussed by the political opposition or the media). More importantly, however, even if voters observed this policy, they would only punish the government for redistributive policies if they belong to the losers of this redistribution (i.e. if they do not gain from labor market programs).

Table 4 which presents the simulated optimal choice of governments with respect to the provision of short-term inefficient public goods before elections (simulations are based on equation 23) illustrates this further.

Table 4: Optimal Short-term Public Good Provision for changing Transparency and Closeness of Election

		Fiscal Transparency (κ)								
		0.1	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**
Probability of Winning the Elections (π)	**0.1**	2.517	2.373	2.321	2.294	2.279	2.269	2.265	2.266	2.279
	0.2	2.511	2.366	2.313	2.286	2.269	2.258	2.25	2.244	2.24
	0.3	2.504	2.359	2.305	2.276	2.258	2.244	2.233	2.221	2.205
	0.4	2.495	2.35	2.295	2.265	2.244	2.228	2.213	2.195	2.168
	0.5	2.485	2.338	2.282	2.25	2.227	2.208	2.188	2.163	2.124
	0.6	2.471	2.322	2.263	2.228	2.202	2.178	2.152	2.119	2.064
	0.7	2.45	2.295	2.232	2.193	2.161	2.13	2.094	2.045	1.964
	0.8	2.408	2.243	2.171	2.122	2.078	2.031	1.972	1.886	1.74
	0.9	2.277	2.072	1.965	1.877	1.783	1.664	1.491	1.191	0.43

The high values (relative to optimal long-term investment spending in table 3) show that governments always have an incentive to manipulate the electoral business cycle and spend money on pre-election presents – which are inefficient in the long run – in order to please voters. From the results above, we can infer that governments heavily rely on deficit spending to finance short-term public good provision in the pre-election period if fiscal transparency is low. If fiscal institutions are transparent, they reshuffle from long-term efficient public spending to inefficient public goods.

Short-term public good provision overall decreases with higher fiscal visibility because deficit spending becomes less possible. However, the optimal level of public good provision declines at a much smaller rate than long-term investment because governments reshuffle the budget from the latter to finance pre-election presents when deficit spending can be observed by voters.

Moreover, if the ex-ante probability of winning the election is very small (see grey shaded areas in table 4), then strategic budgeteering even leads to an increase in short-term spending when visibility is very high. With this strategy, they hope to boost the odds of staying in office. Since governments abstain from deficit spending in fiscal transparent systems, this implies a redistribution of government resources from long-term efficient investment to short-term efficient public programmes.

Predictions of the Model and Extensions

We can derive several important predictions from the theoretical model. Most importantly, opportunistic governments have an incentive to increase the voters' welfare before elections in order to maximize their chances to get re-elected. In doing so, they aim to increase the short-term provision of public goods particularly if elections are close. These policies come at a prize, however. Incumbents need to increase the budget deficits before elections if they want to expand public expenditures to gain political support. However, fiscally conservative voters punish distortive policies and would withdraw their political support if deficits are visible. The model then predicts that deficit spending declines with higher fiscal transparency and higher interest rates.

Yet, incumbents still aim to electioneer – especially if the elections are close. The declining opportunity to use deficit spending thus increases the government's incentive to refer to other strategies such as a redistribution of government resources from long-term efficient investments towards short-term efficient public goods. Along these lines, the model predicts that long-term investment declines if the probability of re-election is small and fiscal institutions are transparent. At the same time, short-term public good provision also declines with transparency, but at a much lower rate than long-term investment.

In other words, the instrument of deficit spending seems to be the most valuable for governments if fiscal transparency is low as it allows the government to finance additional public goods without decreasing long-term efficient investments. Fiscal transparency reduces

the incumbent's incentive to pursue distortive policies. However, while she cannot provide as many public goods as in the case of fiscal non-transparency, the incumbent can redirect some budget resources from long-term efficient investments away to short-term efficient projects. Note, however, that this is less likely the more transparent the fiscal institutions. Thus, increases in public goods are always higher when fiscal transparency is low.

Conclusion

The literature on political business cycles in fiscal policies has come a long way. Most importantly, scholars have highlighted different fiscal strategies which are used by incumbents to increase the voters' well-being before elections. Additionally, they have investigated into the constraints governments face particularly when employing deficit spending in the pre-election period. They thereby elucidate the conditions under which deficit spending as a strategy to win re-election is effective.

Based on the insights of these models which analyze different strategies in isolation, this paper developed an integrated formal model of fiscal strategies in the pre-election period. Most importantly, we analyzed how opportunistic incumbents choose between different fiscal strategies, such as deficit spending and strategic budgeteering, to increase their electoral prospect in the period before the election takes place. One of our main departures from the literature was that we assumed that governments may either spend on long-term efficient investment or short-term efficient public good provision. They increase public good provision in the pre-election period by either raising deficits or by redirecting resources from long-term efficient investments to short-term efficient public goods.

We find that governments principally have an incentive to increase short-term public good provisions if they fear fierce electoral competition and small chances of getting re-elected. To finance these opportunistic policies, governments increase the deficit in the pre-election period. Deficit spending becomes less attractive if fiscal transparency is high (and

consequently, fiscally conservative voters would be able to observe the distortive policies of the government) and interest rates rise. The incumbent then faces a trade off between short-term public good provision and long-term efficient investment. Because they cannot use deficit spending under fiscal transparency, governments tend to change the composition of the budget if elections are close. Strategic budgeteering goes at the expense of long-term efficient investments. In other words, long-term efficient fiscal policies are less likely the higher fiscal transparency and the smaller the probability that the incumbent gets re-elected.

In a way of summarizing, the model presented here elucidates under which governments either rely on deficit spending or the redistribution of budget resources – what we call strategic budgeteering – in order to increase the voters' welfare in the period before elections. The model offers a parsimonious account of opportunistic governmental strategies. It thereby provides the basis for several important extensions. First of all, governments do not only face a trade off when choosing alternative fiscal policies. Under certain conditions – e.g. if exchange rates are flexible or central bank independence low – monetary policy instruments become effective leaving fiscal strategies ineffective. An important extension of our model would thus include the possibility to use monetary policies to generate political business cycles.

Additionally, we have neither considered partisan preferences nor different forms of strategic budgeteering in our baseline model. However, we expect that different political parties would serve different voters, and thus increase spending on different budget items or have different preferences of raising the deficit. This is directly linked to different forms of re-distributing the budget. While our baseline model simply assumes that governments choose between long-term efficient investment and short-term efficient public goods, redistribution could take several forms. In an extension to the baseline model, it would be thus important to distinguish between, for example, (a) functional, (b) sectoral, and (c) regional budgeteering.

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