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## It takes two to Tango: Lobbies and the political business cycle

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# IT TAKES TWO TO TANGO: LOBBIES AND THE POLITICAL BUSINESS CYCLE

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## **IT TAKES TWO TO TANGO: LOBBIES AND THE POLITICAL BUSINESS CYCLE**

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### *Zusammenfassung/ Abstract*

With interest groups significantly affecting economic performance (according to Mancur Olson) and a vital interest of governments in economic growth and low unemployment in order to win elections, there should be a link between political business cycles and the evolution of lobbies over time which has totally been ignored in the literature up to now. In modeling this link in a theoretical and empirical way we try to answer two questions: Is it possible to interpret Olson's Law of Interest Groups not only as a long run phenomenon but also in a short-run perspective, integrating it into the theory of political business cycles? And: is there any empirical evidence that a typical pattern of lobby behavior and macroeconomic status exists which is consistent over a couple of election periods? In order to investigate these issues, we first analyze some literature that is usually ignored in the more technical contributions evaluating Olson's law, but proves to be highly important as background for answering the above mentioned questions. We then illustrate how a model consisting of Olson's interest-groups theory and the endeavors of governments to win the majority of votes in elections could look like, before we perform a time-series-analysis based on the lobby-list of the German Bundestag in order to gain some more insights into the relationships between lobbies, governments and voters. As a result we discover a consistent behavior of the lobbies over the cycle that boils down to some kind of non-aggression pact between the lobbies and the governments irrespective of their political alignments.

**JEL-Klassifikation / JEL-Classification:** D72, D78

**Schlagworte / Keywords:** interest groups, political business cycles, growth, unemployment, inflation

## 1. Introduction

Mancur Olson's grand theme in his scientific life was the study of interest groups, their formation, behavior and impact. His both books from 1965 (*Logic*) and 1982 (*Rise and Decline*) provided some totally new insights and motivated a huge number of economists to follow his steps and to develop his theory further. Since the vast amount of literature that accumulated since was recently evaluated in an excellent way by Heckelman (2007) on the occasion of a Symposium dedicated to 25 years of „Rise and Decline of Nations“, we will cut the story short here. Olson's main thesis is that special interest groups set off a process of institutional sclerosis and tend to damage efficiency and income growth by removing dynamic forces from the economy and the social system. This process will be more pronounced the longer a society lives free of shocks, which is an excellent condition for new interest groups to form and thus, to lower the growth rate even further. In terms of a long run perspective, this main content of “Olson's Law” relates the number of interest groups to the growth rate of an economy.

In a recent contribution we cast a short look at the empirical studies, showing that contributions investigating numbers of interest groups in different countries were regularly not as successful as studies examining theory-based proxies, as e.g. the years elapsed from the last war, crisis or turmoil – exceptions prove the rule as in Heckelman (2000) or Coates and Heckelman (2003a, 2003b) for sub-sets of OECD-countries. All these studies followed a cross-section approach due to a lack of lobby-data as the key independent variable. Fortunately, the administration of the German Bundestag has listed the number of lobbies since 1973, and it provided us with the data to run the first longitudinal analysis of Olson's Law. The results clearly support Olson's Law for Germany: as a tendency, the growth rate varies inversely with the number of interest groups whereas the inflation rate is positively correlated with this number in a highly significant way. (cf. Horgos and Zimmermann, 2009)

With interest groups significantly affecting economic performance, and an assumed strong interest of the political authority in economic growth and low unemployment in order to win elections, there should be a link between political business cycles and the evolution of lobbies over time. The core idea is that lobby groups and the governing parties should have incentives for cooperation in order to (i) give some properly timed impulses for growth (the political perspective) and (ii) build networks to better influence political decisions (the interest group perspective). This link between interest group performance and the political business cycle has not been assessed in the economic literature so far. Having access to the unique German

“lobby-list”, it goes without saying that we have taken up the opportunity to exploit this dataset a little further in order to fill this gap. Therefore, we try to combine two strands of research in this contribution: The one outlined above focusing on the long-run impact of the number of interest groups on macroeconomic performance, and the other one providing evidence of the political business cycle as developed by Downs (1957), Nordhaus (1975) and Frey (1977).

The primary question is therefore: Is it possible to interpret Olson’s Law not only as a long run phenomenon but also in a short-run perspective, considering effects occurring with the existence of political election cycles? And: is there any empirical evidence that a typical pattern of lobby behavior and macroeconomic status exists consistent over a couple of election periods? In order to investigate these issues, the remainder of the paper is structured as follows: In Section 2, we first shed some light on a kind of literature that is usually ignored in the more technical contributions evaluating Olson’s law, and we will analyze four philosophical, political and economic positions which seem to be relevant as a background for answering the above mentioned questions. In Section 3, we then illustrate how a model consisting of Olson’s interest-groups theory and the endeavors of governments to win the majority of votes in the up-coming election could look like. Section 4 describes the data and provides the empirical analysis in order to gain some more insights into the relationships between lobbies, government and voters. As results will show, there is significant evidence of cooperation between government and interest groups. Towards an upcoming election year, interest groups decrease activity and therefore, while fostering economic growth, support reelection. Applying several estimations, we gain additional insight into the behavior of governments and lobby groups, with all patterns running into the same conclusion: There is intensive interplay between government and lobby groups. In order to perform well on the “stage of elections”, it takes two to tango. Section 5 concludes by summarizing the major findings and providing some possible research lines to follow.

## 2. The Tragedy of Politics in Four Acts

In his “Politics as Tragedy in Several Acts” *James Buchanan* defines and measures tragedy as the “shortfall between that which we might achieve, as human beings, individually or collectively, and that which we do, in fact, achieve” (Buchanan 2003, 181). He recurs to James Madison who once said that if all men were angels, no government, no politics would be necessary. But Buchanan adds two more points: since political authority offers power and money,

people will compete for these jobs, which - as this is costly - may increase this shortfall; additionally, if there will be multiple authorities this shortfall may also grow due to multiplied political exploitation. The benchmark to distinguish more real societies, therefore, is a society of angels which makes governance and control unnecessary. Departing from the Hobbesian state where the difference to the benchmark ideal may be maximum, the benefits of specialization and exchange can only be reaped by the installment of a political authority in the form of a government which directs individual behavior by incentives and coercion (minimal state). This move out of the Hobbesian state reveals a first part of the tragedy since the enforcement of order affords resources which have to be gained by taxing the people; taxing people, however, leads them to produce less value even if they accept that those resources are used wisely for protective services. A second part of the tragedy evolves from the fact that people in charge of a political authority will tend to widen their scope of governance beyond these protective services; they have the incentive to extract resources from the economy and to spend the money for transfers to “themselves and to favored groups” (Buchanan 2003, 183). Moreover, they will enlarge the supply of public goods inefficiently to a level that meets the preferences of the ruling political class.<sup>1</sup>

What happens if this political authority will be contestable? If we focus on democratically legitimized political authority, there will be an enormous increase in (costly) efforts to gain monopoly rents in the political office: At the end and under perfect contestability the shortfall in total value compared to the ideal state would be identical to the sum of the monopoly profit and the excess burden – they have “tragically” vanished into a “black hole” (Buchanan 2003, 186). But this is an extreme case, and in more real cases the extraction of value will be lower since there will be parties promising lower tax rates and the revenue-maximizing tax rate will not come into effect; but the total impact of contestability remains unclear: competition may restrict exploitation, but investments in such competition means rent-seeking and is a cost of politics. Additionally, if there are constitutional restrictions on the size of the tax rate, the taxpayers will keep more of the social surplus so that rent-seeking will be reduced; the same will hold if there is competition among potential majority coalitions since the benefitting groups

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<sup>1</sup>For Buchanan this social surplus alias the newly installed order is a common “open access” resource whose tragedy can only be prevented by the founding of property rights. In the political sphere this means that there is a permanent single sovereign or an autocrat along the lines of Olson (1993) and McGuire and Olson (1996). Because this autocrat tries to maximize tax revenues but cannot discriminate perfectly due to a lack of knowledge or administrative difficulties, a uniform tax has to be levied and the autocrat behaves like a monopolist – he can only extract the monopoly profit in form of taxes but has to face an excess burden leading to a total value lower than in the maximum case but with all people better off than in the Hobbesian anarchy.

are large in contrast to a situation where only a narrow majority will be in office which is a main point of our next author.

According to *Karl Popper* (1988, 27) Winston Churchill once said that „democracy is the worst form of government – with the exception of all other known forms of government“. But it should be noticed that Churchill (as well as Popper who agrees with this statement) had the typical Anglo-American two-party-system in mind and not the systems of proportional representation as they are in effect on the European continent. Popper dismisses old theories along the line that democracy were the rule of the people, by the people and for the people as missing the point; one should not ask: Who should rule? but: “how is the state to be constituted so that bad rulers can be got rid off without bloodshed, without violence?” (Popper 1988, 26). The solution is, of course, the principle that the government can be dismissed by a majority vote according to which all modern democracies are being designed.<sup>2</sup> But democratic governments are formed with and by parties – “and it must be admitted that we have not yet found a way of doing without parties” (Popper 1988, 27).<sup>3</sup> Here, Popper is a dedicated proponent of a two-party system like that in the UK or in the U.S.A. and very hostile towards proportional representation (PR) as in Germany<sup>4</sup> (the reason to discuss it here) which consequences he denotes as “devastating”. It may look a little far-fetched here,<sup>5</sup> but it is worthwhile to look at the reasons for that. First, proportional representation attributes parties a constitutional rank and an importance not to be found in other systems. The voter can only choose a party, and the candidates are chosen by the party. Therefore, the representative has to be loyal to his party and its ideology and not to the people so that the system robs him of personal responsibility. Second, the number of parties will inevitably be higher in a PR system which only at first glance means more choice and opportunity; a closer look reveals the necessity to form coalitions for building a government which may be difficult and a la longue unstable. Third, small parties in the government can exert disproportionate power because they decide on the stability of a coalition. Fourth, coalitions mean a decay of responsibility for all partners

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<sup>2</sup> Answering to Popper’s question is obviously logically impossible if democracy would mean “rule of the people, by the people and for the people”. If the rule by the people would be bad and they dismiss themselves as bad rulers, who should reign?

<sup>3</sup> In a German version of the *Economist*’ article (Popper 1988, 54) he accentuates his skeptical position to parties: ”Aber politische Parteien sind keine allzu erfreulichen Erscheinungen” (but political parties are not too pleasing phenomena).

<sup>4</sup> To be honest, the German system is a mixture of majority-rule and PR but the latter is dominating. The seats of the Bundestag are basically distributed according to the relative percentages the parties achieved in the election. If, as has been the rule, more candidates than this percentage got a majority in the electoral districts, they can keep their seats as so-called “Überhangmandate” (excess mandates). But the Federal Constitutional Court has ruled out this procedure and it shall be replaced by another system till 2011.

<sup>5</sup> Because we only have data for Germany available and cannot compare empirically with two-party systems at the moment.



in the government. That all may have decisive impacts on Popper's problem to get rid of bad governments by voting: If the people do not expect an absolute majority for a certain party, they will not vote against any of the parties so that "on election day none of the parties is dismissed, none is convicted" (Popper 1988, 28), and the election day will not be a Day of Judgment. In the long run, the people will get grown accustomed to the idea that none of the parties can be made responsible for their decisions. And that may result in the fact that even if a party with a parliamentary majority loses a mass of votes in the election it will not be thrown out of government if it can form a coalition with a smaller party with its disproportionate power which means that it definitely will not represent "the will of the people". So, the practice of PR gets into a basic conflict with its central idea: that the influence of a party should correspond to the number of votes.

In 1995 *Richard Katz and Peter Mair* published an article which brought some of the dynamics within party systems to the point by inventing the concept of "cartel parties". According to their analysis political competition between parties – some kind of invisible hand in the Schumpeter/Downs Economic Theory of Democracy coming close to the public interest, at least theoretically – is no longer existent in an increasing number of political arenas. The reason for that is a growing degree of political patronage and the public financing of political parties out of tax revenues. The modern development within party politics reveals a tendency among politicians to organize their political work as a full-time job, and that inevitably implies that the costs of losing an election have to be reduced. Since this way of thinking is common among all political parties, one can speak of a "political class" doing all it can to secure and improve its existence. So, even members of the opposing party can enjoy public money, and often even in governmental authorities jobs are given to politicians of the opposition by mutual agreement. Government and opposition increasingly agree in that the availability of public resources should not depend anymore from the results of elections. This tendency, however, has the devastating effect that politicians do not need to be anxious to get kicked out of their jobs by an election, and, therefore, their incentive will shrink to do their political work according to the preferences of the citizens and voters. So the relationship as described in the constitution will get reversed: Controlling the politicians via elections, "to get rid of them without bloodshed" to cite Popper again, will increasingly be impossible, and a situation emerges where at the extreme the reigned are controlled by the reigning which also means that the democratic bottom-up process will mutate to top-down. According to Katz and Mair these collusionary practices to lever out party competition will a la longue also change the character of parties: they become "semi-state agencies" (1995, 16) or said in another way:

”it is the parties in power that are the state” (1995, 22). All these processes are on their way, but Katz and Mair think that Germany is among the countries at the forefront of this development.

This should be kept in mind when we come to the end of our somewhat different literature review and *Bruno Frey's* contribution to this discussion focusing on direct democracy. Frey starts from the notion of cartel parties or politicians and sees direct democracy as an instrument “to break the cartel of politicians directed against voters and taxpayers” (1994, 338). That is the most explicit formulation we have found in our literature review. Frey argues comparable to Katz and Mair in saying that Schumpeter and Downs pronouncing the blessings of political competition are wrong today, but he deviates from Katz and Mair in saying that at least at election time there is a considerable competition between parties which the former deny. His main point is that between the elections the politicians have enormous room for discretion because the voters forget things very easy, and even if they don't, they have hardly any possibility to punish them for exploiting their discretionary room which is an argument along the lines of Katz and Mair. Thus, according to Frey, the Schumpeter-Downs model should get enriched by a model “in which (between elections) a coalition of all (established) politicians and parties stands against the voters and taxpayers” (Frey 1994, 340). The “political class” is defined here as in Katz and Mair, and it also includes politicians from the opposition which is a broader concept than that in Brennan and Buchanan (1980) where only the government is exploitative. But this kind of reasoning has some good points on its side: politicians become members of this coalition when they are elected to parliament, and this small group of relatively homogenous members forms a special interest group a la Olson and jointly tries to maximize rents from the political office as in Buchanan (2003). This is not too difficult because they experience the same parliamentary socialization in all sorts of life in parliament; outsiders will have no chance against this coalition, and there are a lot of rules to aggravate the life of an outsider: the seniority principle, party discipline, the impossibility to become a member of influential committees and the difficulty to speak in parliament as well as the withholding of public money to secure reelection are just some examples so that a rational politician will always become a member of that coalition. And this coalition is largely uncontestable since the courts use to restrict its discretion only rarely if they have the constitutional right to do so after all. After painting such a black picture of the current political system, Frey realizes only one chance to break this cartel of politicians: institutions of direct democracy like initiatives and referenda are capable of regaining control over politicians by re-shifting agenda setting power to the electorate; special features of direct democratic systems

(Just and Zimmermann, 2000) are that the outcome (public goods) will be closer to the preferences of the people and governments share of GDP will be lower implying lower tax rates and higher disposable income. And as we know from Buchanan (2003) this also constrains free-riding and rent-seeking.

Summing up, we have to say first that Buchanan touches on an extremely important point: the rent-seeking efforts of the political class. The installment of an order and of the rule of law produces a social surplus, but if the political authority is contestable, there will be a dramatic increase of efforts in striving for monopoly rents in political office, and in the extreme case the monopoly profit and the excess burden will have vanished into a black hole - if there will not be any constitutional restrictions to constrain tax rates and, therefore, the reaping of rents from political office. Popper's case is different in taking a deeper look on institutions and processes inside democracy, and his main point is that a system of proportional representation has some major flaws: The parties, not the elected politicians are the main actors; the higher number of parties under PR makes coalitions necessary and the smaller party exerts a disproportionate power; coalitions mean a decay of responsibility leading to a state of "organized irresponsibility" and to a strongly reduced capacity of voters to get rid of politicians and parties they dislike in election. What does that mean for special interest groups? It's favorable for them since if there's no Day of Judgment the networks to the political sphere will not be damaged, and as we know from Olson, interest groups need a stable environment to flourish.

If the Katz and Mair notion of "cartel parties" describes the situation well especially in systems of PR, then the Schumpeter/Downs theory breaks down instantaneously. If there is a "political class" and if the availability of public resources should not be bound to winning elections, then politicians do not lose much if they lose, and there is no incentive to behave according to the preferences of the voters. This means the abdication of the voter as the sovereign and broadly opens the field for the special interest groups who find an ideal environment in such a system. But one does not need to be as radical as Katz and Mair and find a compromise as Frey does. If one sticks to the Schumpeter/Downs model with its extension to macro-economic variables as in the Nordhaus/Frey model (be true to your school!), it would appear that the appropriate solution along these lines would be a combination according to the election cycle: Nordhaus/Frey would apply in the election year and governments will try to reach favorable macro conditions at the election day, and the rest of the legislature Olson's Law would apply which means that this period will wholly belong to the interest groups. Frey's

remedy against this is genuinely Swiss and straightforward: to make the existing cartels contestable by direct democratic procedures.<sup>6</sup>

### 3. Interest Groups and Governments in the Election Cycle: Sketching a Model

If we stick to the vote maximization model, we know that the parties in government try to generate favorable conditions in the election year in order to get re-elected. However, if we believe Popper in saying that in a PR system with coalition building the probability of voters getting rid of bad rulers is strongly reduced, then we must recognize that in a Katz/Mair world with pure cartel parties this chance will tend to nil. Consequently, in this world one has to ask why at all governments should spend money to reduce the unemployment rate in the election year. This would be senseless because with cartel parties nothing would change in the aggregate: Since all members of the political class will keep their jobs or at least will get equivalent ones, there wouldn't be any incentive for the parties in government to maximize votes unless there will be an outsider challenging their position. But according to Frey every politician entering the parliament will (rationally) join the political class so that even new parties and their politicians will get members of the club in the longer run. Therefore, Frey seems to be a little inconsistent in his argument claiming that there is competition between parties at least in the election year. On the other hand, the experience in countries with PR systems is that there are indeed sometimes fierce campaigns short before the election day to persuade or convince the citizens to vote for one or the other party. So, the Katz/Mair world is seemingly a little too extreme, and we should accept that there may be the possibility for an election cycle generated by the government in office.

If this is taken for granted, it should be asked what really happens in the years without elections. Frey emphasizes the "discretionary power" (Frey 1994, 340) of parties and politicians during these years and mentions: "Picturing politicians as forming a coalition against taxpayers and voters seems to be an apt illustration of representative democracy between elections" (Frey 1994, 340). Thus, a model for this period would be an excellent candidate to complement the Schumpeter/Downs model being valid in the election year. But how could such a model look like? Frey only mentions discretionary room but does not say by what this dark

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<sup>6</sup> Which is wishful thinking in the German case: At the federal level there is only one possibility for the direct participation of the people – a territorial re-shaping of the Laender (states). Otherwise the constitution must be revised which affords a 2/3 majority of the Bundestag. And that the cartel parties as incumbents voluntarily allow entry to their highly protected market, seems more than absurd.

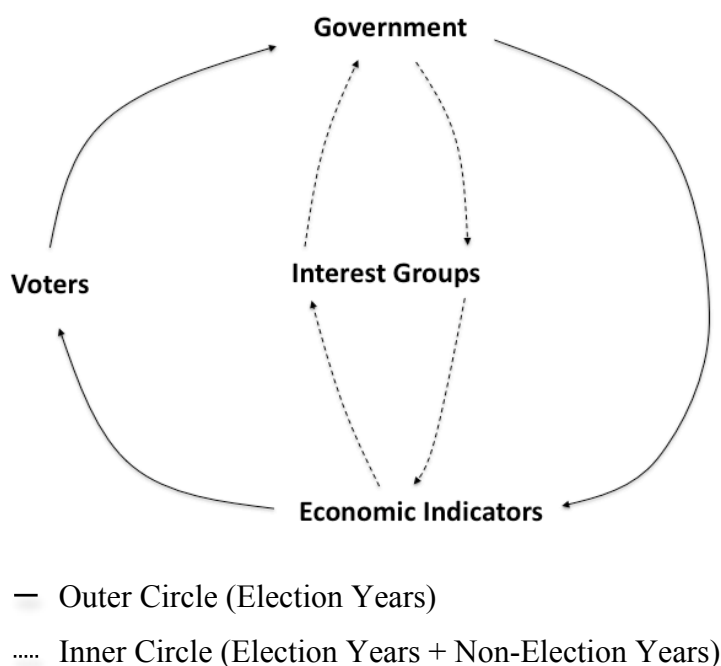
room could be filled and what “discretionary” is concretely related to. Our proposal here is to fill this room by integrating the economics of interest groups as developed by Mancur Olson, in order to gain some new insights into the mechanics of the election cycle. But let us have a short look at the traditional Nordhaus/Frey model first: If we model the government as exogenous, the most decisive macro-indicator for winning the election will be the unemployment rate – the inflation rate is important too, but second in this respect. The unemployment rate itself may be dependent on i.a. the figure of net-investment and the size of wages, but centrally on government expenditures which is the most important variable in control of the government. The size of the latter variable will be significantly different if there are election years or not: Near to the election year the government will increase expenditures to care for a larger growth rate of the economy which will reduce the unemployment rate in the following. According to the Phillips-curve a higher inflation rate has to be accepted which is only of minor importance for winning the election (cf. Schneider, 1978). Usually it is assumed that after the election the inflationary pressure has to be broken, which presupposes that at first the new government follows recessive policies. Around the middle of the election period there will be a relatively autonomous sub-period left for – to cite Frey again - “discretionary power” until the next election year approaches and the whole story will be repeated. Obviously, there are business cycles in real life but these here are initiated politically for catching votes in elections.<sup>7</sup>

To explain economic policy purely with unemployment and inflation would be misleading when considering the interdependencies between politics and the economy (the central topic of the New Political Economy). According to this point of view the political activity of governments is essentially determined by the wishes/preferences of voters which again are influenced by the overall economic situation. When enriching the game with interest group activities, we are able to complete the picture and shed some light into the non-electoral years of the business cycle. As can be seen in Figure 1, an electoral cycle is relevant only in election years; for non-election years voters do not play any decisive role, instead, special interest groups have taken over their part: the dark room of the discretionary power of governments is lit up and crowded by interest groups.

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<sup>7</sup> It is needless to say that there are a couple of variants and alternatives to this model, incorporating rational expectations or maximizing ideology instead of votes to mention just two of them, but this is not our topic here. The only thing we have to keep in mind is that, varying between countries and the kind of party systems, this cycle sketched above seems to be typical for the majority of democratic countries (Tufte, 1978).

Figure 1: Inner and outer circles acc. to years of the election cycle



If the government will only be interested in the goodwill of the voters in election years, and is the culprit or victim in relation to the interest groups all over the cycle, the inner circle alone will be valid in three of four years (as in many Western democracies election takes place each fourth year), and both circles will be in effect only in the election year. As we know from Olson and the empirical studies to his “Rise and Decline”, rent-seeking by interest groups (getting money or cash value services from the government by lobbying directed to transfers or protection) tends among others to lower the growth rate and to increase the inflation rate of the economy. Therefore, we are able to characterize the inner and outer circle of the election period.

**Proposition 1: The Inner and the Outer Circle**

*Since interest group activities dominate three quarters of a legislature, there will be an immanent tendency to lower the growth rate leading to an increasing unemployment rate. In the fourth year, the election year, the voters are coming back into the game, and the government tries to lower the unemployment rate to get re-elected.*

However, it can be expected that the economy reacts increasingly ponderous to a fiscal stimulus so that the government may succeed in reducing unemployment but the levels of former

election years cannot be realized any more from cycle to cycle.<sup>8</sup> An ever increasing inflation rate buys the same absolute decrease in unemployment. Note that this result is not identical to an alternative model which employs a vertical Phillips- or aggregate supply-curve: The result may be similar but the mechanism is different.

After designing this system with two feed-backs, we have to go a little further and consider the behavior of interest groups within the cycle. It's plausible to assume that interest groups may be on the left or right wing of the political spectrum. Thus, a "quasi-natural" alliance should exist with the consequence that left interest groups should assist left governments to be re-elected et vice versa. How this can be done? One could think of a lot of actions the interest groups could undertake but unfortunately we have only one parameter of action available: interest group activity as the number and dynamic of interest groups. So, if there is a strong negative correlation between this number and the growth rate, the "club of interest groups" could decrease its number (what sounds unrealistic) or it could take care that the number of new interest groups in the game will not increase "too much" (the more realistic case). All this assumes that there is a near real-time transformation from the variable number of interest groups into the outcome growth rate. However, we do not believe in this kind of partisan interest groups politics: The reason is that the interest groups will not care about the political color of a government since they are mainly interested in securing their lobby capital which they could accumulate in the past legislature. It has taken a lot of time, money and effort to install good contacts to the government and the representatives of the governing parties in parliament so that a new government – even if it has the same political color as the interest group - definitely implies a strong devaluation of the lobby capital which will always occur due to the re-shuffling of the political personnel. Moreover, preparatory and operational decisions are usually made at the ministerial level, and the employees are civil servants and mostly unaffected by a change in government so that the relationships between the lobbies and the ministries will remain stable. Thus, the target of interest group activities is to support reelection, with partisan tendencies only of minor importance.

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<sup>8</sup> Such an outcome is not as theoretical as one may think: voter participation in elections especially in Germany is on a downward trend and the level of "Politikverdrossenheit" (disenchantment with politics) is on the rise. The regime satisfaction gets lower and lower, and increasingly the people think of democracy as a bad form of government.

## **Proposition 2: Interest Groups Support Reelection**

*Interest groups will be mainly concerned about stable environments to secure their lobby capital. This implies that, in the aggregate, interest groups will show a tendency to back up any existing government irrespective of the political color in the election to come.*

We have used the notion “club of interest groups” before and it certainly is an appealing idea to think that there is a club-manager coordinating the actions of the members of the club – in the sense of our hypothesis above: lowering the increase in the number of interest groups before elections. But, having about 2000 interest groups on the lobby-list in Germany, this would surely collide with Olson’s “Logic”: The club would be too big to organize at reasonable costs and the members would be too heterogeneous to be powerful and assertive as a group, or said in another way: the club of special interest groups itself would not have the characteristics of a special interest group. If this is agreed upon, then we have to answer the question, how such a result could come about. If we first distinguish between old (the stock) and new interest groups (the flow or change in the number) and assume that usually the number of interest groups grows in time, then we have to develop hypotheses concerning the dynamics in the formation of new interest groups during the election cycle. When Heckelman (2007, p. 20) writes that “since it takes time for even small groups to overcome their collective action problems, over time more special interest groups are expected to form and engage in redistributive activities”, then he is certainly on the right path but does not include the election cycle into his consideration. Let us put ourselves in the position of the prospective manager of an upcoming special interest group (according to Olson someone with a net-benefit in forming a group): first he has to identify and collect his lambs which requires resources and time – that’s Heckelman’s point. Then he is confronted with the fact that the result of an election is always uncertain which implies that he does not know who the leading and influential politicians after the election will be. That should not disturb him much if he plans to engage in “low” politics with the ministerial level which will stay largely untouched by the electoral result but it will be of great importance if he is interested in influencing “high” politics, meaning strategic decisions of the new government. Let’s assume the second alternative were at issue: At the beginning of a legislature he is fully informed about the new government and its plans. Even if the formation of the interest group takes some time – say 1 year – it will be time enough left to lobby for his and the group’s goals. If there will be a delay in forming the group due to any reason or the idea of forming the group came up a little belated, the same will hold.



But, if there will be serious difficulties in forming the group (or again: the idea grew up very lately) so that the third year of the cycle would be the first year of the interest group for lobbying action, then it could be worthwhile to postpone its official appearance on the scene to the time after the election: there may not be sufficient time left before the election to install all the necessary contacts to receive significant goodies from the government (the timing-problem), and it may be seen as economical to wait whether there will be a new government after election which would prove all the costs of lobbying before the election as sunk (the uncertainty-problem). Note that this calculation can only be valid if the Katz/Mair hypothesis of cartel parties does not hold: if it would hold the question who's in charge of the new government would not be relevant since the political sphere would not be organized according to differing parties but to the concept of the political class, in short: there won't be much change. In the latter case, the electoral cycle would not influence the forming and appearance of interest groups on the stage, and there would be a continuous increase in its number. But as we said earlier: we are not fully convinced of this hypothesis and certainly belong to Frey's camp.

### **Proposition 3: The Political Lobby Cycle (Dynamics of Interest Group Activities)**

*In order to assess the dynamics, the number of interest groups should resemble an inverted u-curve: at the beginning of the electoral period its growth rates should be low but increasing to the middle of the period; after reaching its peak the growth rate should decrease strongly and level out near the year of the next election.*

Note that this rational mechanics of interest group formation leads to the same result as if there would be a grand chief of the whole interest group community negotiating and settling a non-aggression pact with the present government, at least near the election year, to guarantee a stable environment to his tribe members.

If all this will be taken for granted one could ask some additional specific questions concerning the interplay of interest groups and the political business cycle. Germany does not seem to be a typical example for a policy a la Nordhaus/Frey, at least with respect to the classic early figures from Tufte (1978), but let us assume that the governments would have behaved like that, at least at the end of the legislatures. Thus, there should have been higher growth rates and lower unemployment. If our theoretical considerations above are correct, this may result from two processes: Government could have realized an expansionary fiscal policy to get re-elected which implies that public debt at the federal level should have increased in a significant way (the outer circle), or the mechanics of interest group formation and the leveling out

of its growth rate at the end of the legislature have induced this result (the inner circle) or both effects have occurred in combination. It goes without saying that ex ante this question cannot be answered since it genuinely is an empirical one. According to the Phillips-curve higher growth rates of the economy and lower unemployment should be accompanied by rising inflation rates (occurring with the outer circle). But, as we have shown in Horgos and Zimmermann (2009), decreasing growth rates of interest groups at the end of the legislatures also imply decreasing inflation rates, at least in Germany (a result of the inner circle). Since the effects of both circles are counter-directed concerning the inflation rate, there could be growth and a lower unemployment in the election year without any Phillips-curve effect on inflation. On the other hand, both circles are uni-directed concerning growth so that the chance to win the election for the incumbent government may be maximized.<sup>9</sup>

**Proposition 4: How the Political Lobby Cycle Affects Macroeconomic Indicators (A Philips-Curve-Paradoxon)**

*Due to a decrease in interest group activities towards the end of a legislature period, growth rates are expected to increase whereas inflation rates should decrease (the inner circle perspective); on the other hand, one would expect a significant increase in GDP in the election year due to additional governmental expenditures, but the inflation rate should rise (the outer circle perspective). In sum, higher growth and lower unemployment may be possible without a significant inflationary pressure.*

A last point should be mentioned: From time to time it happens due to important political reasons that elections are pulled forward and take place earlier than normal. In this case it does not matter when the election will be held as long as it will be in the second half of the cycle. In years of unexpected elections, the growth rates of interest groups will always be larger than at the end of an expected legislature. Additionally, assuming that interest groups decrease GDP-growth and increase unemployment, the chances to be reelected will deteriorate. And it must be added that in these cases the opportunities for an expansionary fiscal policy will be low since just this kind of policy is characterized by significant time-lags. Therefore, any

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<sup>9</sup> This is a more than interesting point: As a whole the experiences with Keynesian-type stabilization policy have been rather disenchanting. There are a lot of reasons for that but we may be able to add one here, especially to the “overshooting” problem of stabilization policy: Usually, overshooting is associated with the time-lag problem meaning that a fiscal stimulus comes into effect not until the economy is on the recovery anyhow. But there may be another channel responsible for overshooting: If these fiscal stimuli are set at the end of the legislatures (as they usually were and everybody knows why), then the formation of new interest groups should be low and growth should increase anyway. If this Olsonian effect will not be taken into account, overshooting could be the consequence, and an optimal fiscal stimulus should have to be lower.

government pulling forward the regular election should usually be defeated which of course will be hard to prove statistically since these events are rather rare.

#### 4. Empirical Analysis

After discussing some valuable background literature and presenting a theoretical sketch of the interplay between interest groups, the government, and the way how the political-lobby-cycle affects economic performance, we face the data and proceed with the empirical analysis in this section.

##### Data

The empirical analysis is based on data for the German economy, covering the years from 1970 to 2006. Fortunately, and typical for the German administration, interest groups need to be listed in a so called “lobby-list” if they want to be heard by parliament. With this information, provided by the Bundestag (Germany’s national parliament), we are able to assess the level (lobby) and the development (dlobby) of active interest groups in Germany. The lobby-list includes registered interest groups since 1973. In 2006, 1,969 lobby groups are considered as politically active. The number of interest groups in Germany increased strongly during the considered time period,<sup>10</sup> however, with some kind of downward displacement effect à la Peacock and Wiseman (1961) driven by Germany’s reunification in 1992 and to a lesser degree in 1995.<sup>11</sup>

In order to assess the interplay of interest groups with the government and the proceeding effects on economic performance, we enrich the data with several macro economic variables: We include the level (gdp) and the percentage change (dgd) of real GDP, private consumption (c and dc), gross investment (i and di), as well as public debt (g and dg). As we additionally consider the monetary side of the economy, we also include the consumer price index

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<sup>10</sup> For a more detailed description of the German “lobby list” see Horgos and Zimmermann (2009).

<sup>11</sup> In order to get the information on interest group activities into a consistent time series, we modified the data slightly. Within the process of German reunification, a large number of (former) East German interest groups were included, what led to an extraordinary increase. The number decreased roughly in 1992, when similar interest groups merged. Due to the low number of observations, as typical in macroeconomic time series, we replaced the number of lobby groups by the mean value in 1991 and 1992.

(cpi and dcpi). All the information is obtained from the German Federal Statistical Office.<sup>12</sup> In order to perform the econometrical analysis, we replaced the outliers in 1991 (caused by German reunification) with the respective mean values.

## Econometrical Methodology and Results

In order to investigate the causal links between lobby group activity and the political election cycle, we create a political lobby cycle while calculating the mean values of the number (and the growth rate) of lobby groups for the years of regular elections of the German parliament.<sup>13</sup> Similar, we calculate the means of lobby activities in the first, second, and third year following the regular election. To examine the importance of snap elections, the same exercise is additionally conducted for periods with unexpected elections.<sup>14</sup> Political cycles based on unexpected elections are of a certain interest in this respect, since lobby groups get surprised and thus, are not able to strategically organize their supporting activities for the governing party. Thus, we focus on two average political cycles of interest group performance, one for regular and another one for unexpected election-periods.

In a first set of econometrical estimations we investigate the variation of interest group activity within the political election cycle and thus, search for the empirical existence of a political lobby cycle. In order to assign interest group activities to the years of a political business cycle, we use a dummy variable approach in time series analysis. Therefore, dummy variables are created for the specific years of a political election cycle and included into the first set of estimations. We estimate

$$dlobby_t = \beta_0 + \beta_1 dgdpt + \beta_2 d\_pol_t + \beta_3 d\_de_t + \beta_4 \tau_t + \beta_5 d\_e1_t + \beta_6 d\_e2_t + \beta_7 d\_e3_t + \beta_8 d\_e3_t + \varepsilon_t \quad (1)$$

with  $dlobby_t$  as the percentage change of interest groups in Germany in year  $t$ ,  $dgdpt$  as the percentage change in GDP,  $d\_de$  and  $d\_pol$  as dummy variables indicating German reunification ( $d\_de$ : 1 after the year 1990) as well as partisan tendency of the government ( $d\_pol$ : 1 for right-wing coalitions).

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<sup>12</sup> In order to get access to the data, visit [www.destatis.de](http://www.destatis.de).

<sup>13</sup> In Germany, regular elections (that were carried out regularly every fourth year) took place in 1972, 1976, 1980, 1987, 1994, 1998, 2002, and 2005.

<sup>14</sup> In Germany, years with unexpected elections (taking place before the end of the 4-year election cycle) were 1983, 1990, and 2005.

Table 1: Formation of Interest Groups: The Political Lobby Cycle

	political lobby cycle		
	(1)	normal elections (2)	unexpected elections (3)
dgdp(l)	0.4088** (2.15)	0.3181* (1.77)	0.4631** (2.20)
d_pol	-0.8478 (-1.46)	-0.7729 (-1.39)	-0.5719 (-0.85)
d_de	-1.5106 (-1.22)	-1.1838 (-1.09)	-1.1163 (-0.83)
$\tau$	-0.0142 (-0.17)	-0.0419 (-0.54)	-0.0292 (-0.31)
d_e	-	-0.1449 (-0.15)	.9243 (.69)
d_e1	-	-2.0522** (-2.23)	-1.4104 (-0.90)
d_e2	-	1.6017* (1.83)	-1.3365 (-0.86)
d_e3	-	0.3443 (0.38)	0.1272 (0.08)
Cons.	3.2256 (1.52)	4.0614* (1.74)	3.0083 (1.31)
Observations	33	33	33
Adj. R-squared	0.5098	.6518	.5074
DW-statistic	1.79	1.73	1.80

Endogenous variable: dlobby

t-Statistics in Parentheses; \* / \*\* / \*\*\* denoting significance at the 1 / 5 / 10 percent level

Even if the time series got already detrended by calculating percentage changes, we additionally include a time variable  $\tau$  securing stationarity. In order to focus on the process of interest group formation we include four dummy variables capturing the years of a political election cycle (d\_e: year of election; d\_e1 / d\_e2 / d\_e3: one / two / three year(s) after election). As regression procedure we use the Prais-Winstone method. The Prais-Winstone method estimates the parameter values with generalized least squares (GLS) and is recommended in particular for small samples. The method assumes estimation errors to be serially correlated, specifically following a first-order autoregressive process and, thus, results are similar to parameter estimations with an ARMA model and an autoregressive lag of 1. Since interest group performance (dlobby) also affects economic growth, one would assume the change in GDP as endogenous. Thus, we perform the Durbin-Wu-Hausman test (as suggested in Davidson and

McKinnon, 1993) to proof the consistence of the estimation results. Since the use of *dgdp* as exogenous variable could significantly bias results, we run instrumental variable approaches, using the lag of *dgdp* (*dgdp(l)*) as instruments. The estimation results of interest group formation are presented in Table 1.

As the table shows, examining the determinants of interest group formation (column 1), an increase of GDP (measured with the lag of one period) is strongly correlated with an increase of interest groups.<sup>15</sup> The effect is statistically significant at the five percent level. During the legislative period of right wing coalitions, there is a decreasing tendency of interest group activities, however, with a t-value of -1.46, slightly outside a common level of statistical significance. Concerning German reunification, there is also an insignificant negative tendency obvious. The results concerning the time trend  $\tau$  show that the time series got already detrended.<sup>16</sup> The Durbin-Watson statistic near to 1.8 secures that the error term is not characterized by autocorrelation. With an adjusted R-square of around .5, quite a big fraction of the variance driving interest group formation can be explained with this regression.

In order to investigate the existence of a political lobby cycle, results are even more interesting when extending the time series with the four dummy variables representing the different years of an election cycle (Columns 2 and 3). Considering first expected elections in Column 2. Thereby, *d\_e* is set 1 for the years of expected elections (the outer circle),<sup>17</sup> *d\_e1* to *d\_e3* identify years 1 to 3 after expected elections (the inner circle). Results clearly support the existence of a political lobby cycle in Germany for expected election periods: The main boost of interest groups occurs in the middle year of the election cycle. After a reducing tendency in the first year after election, year 2 shows an increasing effect of lobby group formation with an estimated coefficient of 1.60 which is statistically significant at the 10 percent level. Towards the year of the forthcoming election, interest group formation slows down resulting in an insignificant decreasing effect in the year of election. With an adjusted R-square of around .65, the political election process can account for roughly 15 percent of the total variance of interest group formation. Thus, concerning regular election periods, empirical results significantly support the existence of a political lobby cycle, as mentioned in Proposition 3: Interest

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<sup>15</sup> This is in line with the cross-sectional results from Bischoff (2003) showing that it's not the time elapsed from the last crisis or turmoil but the state of development of a country which determines lobby formation.

<sup>16</sup> When running the regressions without the time trend, the core results do not change. However, the control variable *d\_de*, capturing years after German reunification, gets significant since it captures a part of the time trend that still characterizes the data.

<sup>17</sup> In this context, an expected election occurs after a regular four year period of government. When the legislation period was shortened with a snap election, we classify the following period as „unexpected“ period of legislation.

groups support the governing party in organizing the boost of lobbying activities after the party received parliamentary power and thus, in hope of reelection, reducing their rigidifying activities before the forthcoming year of election. This also shows that for interest group formation there should be more than two years to build influential networks with the governing party. Otherwise, when getting active shortly before election, investment in lobby activities could be nothing else than sunk costs.<sup>18</sup> In addition, these results also support Proposition 2: In the aggregate, there is a tendency of interest groups supporting reelection, without distinguishing between left or right wing governments.

By contrast to these results, in the case of unexpected elections (Column 3), there is no such tendency obvious. The shortening of a political cycle with snap elections confuses interest groups and exacerbates the organization of political influence. However, the other determinants like the change in GDP or the political and the German reunification variables do not change significantly, what supports the robustness of the model.

With the next regressions we investigate the implication of the political lobby cycle on the economy's performance (as described in Proposition 4), first on GDP. The analysis is separated into two parts, one conducting a level analysis, the other one estimating the implications on economic growth. Therefore,

$$gdp_t = \beta_0 + \beta_1 dc_t + \beta_2 di_t + \beta_3 d\_pol_t + \beta_4 d\_de_t + \beta_5 \tau_t + \beta_6 i\_e\_lobby_t + \beta_7 i\_e1\_lobby_t + \beta_8 i\_e2\_lobby_t + \beta_9 i\_e3\_lobby_t + \varepsilon_t \quad (2)$$

and

$$dgdgdp_t = \beta_0 + \beta_1 dc_t + \beta_2 di_t + \beta_3 d\_pol_t + \beta_4 d\_de_t + \beta_5 \tau_t + \beta_6 i\_e\_dlobby_t + \beta_7 i\_e1\_dlobby_t + \beta_8 i\_e2\_dlobby_t + \beta_9 i\_e3\_dlobby_t + \varepsilon_t \quad (3)$$

are estimated with  $gdp_t$  ( $dgdgdp_t$ ) as the level (percentage change) of German GDP in year  $t$ . Again, due to possible endogeneity, the percentage change of consumption ( $dc$ ) as well as investment ( $di$ ) are lagged by one period. In order to secure stationarity of the time series, we include the time variable  $\tau$ . Additionally, to focus on the effects induced by the political lobby cycle, four interaction dummies are generated. For the level analysis, we interact the dummies denoting the specific years of an election cycle ( $d\_e$ : year of election to  $d\_e3$ : third year after election) with the number of interest groups listed in the German "lobby-list" ( $lobby$ ). When

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<sup>18</sup> When studying the raw data, one interesting outlier appears. In 1998, the regular election year that ended the long era of chancellor Helmut Kohl, interest group activity did not decline toward the date of election. Did interest groups anticipate the end of the Kohl-era and made an effort to foster it?

estimating the implications on growth, we replace the level of interest groups with their percentage change (dlobby). The results are presented in Table 2.

Table 2: Implications of Lobbying on GDP: a Political Business Cycle's Perspective

	Level		percentage change	
	normal Elections (1)	Unexpected Elections (2)	normal Elections (3)	Unexpected elections (4)
dc(l)	5.2107 (1.64)	5.1285* (1.69)	.5417*** (2.89)	.4837** (2.28)
di(l)	.5367 (.52)	.6669 (-.69)	.0877 (1.31)	.0723 (1.06)
d_pol	3.92 (.30)	14.2967* (1.69)	.4066 (.74)	.3444 (.57)
d_de	185.79*** (7.48)	324.58*** (17.76)	-2.5424** (-2.22)	-2.2201* (-1.78)
$\tau$	51.7926*** (22.66)	47.2160*** (36.59)	.0792 (.98)	.0369 (.43)
i_e_lobby (level) / i_e_dlobby (change)	.0078 (.97)	.0028 (.32)	.0222 (.10)	.0773 (.33)
i_e_lobby (level) / i_e_dlobby (change)	.0094 (1.03)	-.0577*** (-4.66)	-.0907 (-.32)	.1912 (.52)
i_e_lobby (level) / i_e_dlobby (change)	.0107 (1.28)	-.0290** (-2.45)	.0706 (.57)	.0821 (.21)
i_e_lobby (level) / i_e_dlobby (change)	.0159* (1.81)	-.0227** (-2.05)	.1416 (.83)	-.2095 (-.79)
Cons	191.53*** (3.19)	225.00*** (7.09)	.8202 (.38)	2.0794 (.96)
Number of obs.	34	34	33	33
Prob> F	.0000	.0000	.0000	.0000
Adj R-squared	.9096	.9992	.6899	.6709
DW-statistic	1.74	1.97	2.01	1.99

Endogenous variables: gdp (level) and dgdp (percentage change)

t-Statistics in Parentheses; \* / \*\* / \*\*\* denoting significance at the 1 / 5 / 10 percent level

As the results show, the lagged controls for the change in consumption and investment increase the level of GDP as well as economic growth. The effect of consumption is much more significant, with t-Statistics above 2 for the growth analysis. Controlling for German reunification leads to some additional, very interesting results. After reunification, German GDP



reaches a higher level (Columns 1 and 2). The effect is highly significant, however, with a convex shape when considering economic growth (Columns 3 and 4). Thus, after reunification, the level of GDP increased, however, with declining growth rates. The dummy variable controlling for partisan tendencies (*d\_pol*) increases the level as well as the change of GDP. However, the effect is mostly not at a common level of statistical significance. As expected, the level analysis is characterized by a time trend. When investigating the implications on growth, the time series got stationary by calculating the percentage changes of GDP. In order to control for the effects of the political lobby cycle, the four interaction dummies are in the main focus of these regressions. Considering the level analysis first, lobby activities interacted with the (regular) political election cycle continuously increase GDP over the years, leading to the strongest effect (.0159) at a statistically significant level of 10 percent in the third year of the cycle (one year before election). Remembering the result of Table 1, interest groups reduced activity towards the forthcoming year of election, however, still exhibit positive growth rates. Nonetheless, in terms of a short run perspective, the interplay of lobbies and the political authority significantly increases GDP.<sup>19</sup> Considering unexpected elections, there is no such tendency obvious. By contrast, the interplay between interest groups and the government even decrease the level of GDP at a statistically significant level in most of the years.<sup>20</sup> Turning to the effects of interest group activities on the percentage growth of GDP, similar results occur, even when not achieving the common levels of statistical significance. During an expected election cycle, the interplay of lobby groups and the political authority increases growth rates, leading to the strongest increase (.1416) in the third year of the cycle. Again, when considering unexpected cycles launched by snap elections, we are not able to find such a tendency.

These results support the hypothesis, that there may be a cooperation of lobby groups and the governing parties in the sense that interest group activities are strategically organized in a way that GDP reaches the highest levels just before a regular election year to increase the chance for being reelected. There seems to be a political business cycle à la Nordhaus/Frey, where

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<sup>19</sup> With respect to the results in Horgos and Zimmermann (2009), where interest group activities significantly decreased growth rates, the findings presented in this regression seem to be contradicting at first sight. This is not the case when considering the estimation method and the focus of the analysis in greater detail. In Horgos and Zimmermann (2009) we adopted a long run perspective without considering short run effects in terms of the election cycle. Additionally, the interaction variables used here combine lobby-activities with the political authority (represented by the political election cycle), instead of focusing solely on the effects of interest groups.

<sup>20</sup> It is interesting to note that, consequently, if an election period got unexpectedly shortened by snap elections, the governing party lost the election, typically held in the third year of the regular period (e.g. 1983: Schmidt – Kohl or 2005: Schröder - Merkel); one exception is the election in 1990 where chancellor Kohl was reelected but that was an unusual election year as the first one in a re-united Germany with Kohl as the “chancellor of unity”.

government tries to increase GDP before election in order to get reelected. The force driving the increase in GDP could be (i) an expansive fiscal policy, that would consequently increase public debt, or (ii), due to the evidence that lobbying reduces GDP (as shown in Horgos and Zimmermann, 2009), a decrease in interest group activities.<sup>21</sup>

When investigating some descriptive numbers, a puzzle with respect to the Phillips-Curve emerges: There is an increase in GDP before election, however, not accompanied by an increase in inflation.<sup>22</sup> Drawing on our results in Horgos and Zimmermann (2009), this may be due to a strategic reduction in interest group activities that forces GDP to increase and the inflation rate to slow down. A tendency towards expansive fiscal policy may even have existed in these regular periods, however, the increasing effect on inflation got compensated by the decline in lobby group activities. As a side effect, government could even have the possibility to reduce fiscal spending before election, since interest groups behavior could fill the gap.

In order to investigate this Philips-Curve-puzzle, a third set of regressions is conducted estimating the implications of the political lobby cycle on inflation (as the percentage change of CPI). Thus,

$$dcpit = \beta_0 + \beta_1 g_t + \beta_2 d\_pol_t + \beta_3 d\_de_t + \beta_4 \tau_t + \beta_5 lobby_t + \beta_6 d\_e_t + \beta_7 d\_e1_t + \beta_8 d\_e2_t + \beta_9 d\_e3_t + \varepsilon_t \quad (4)$$

and

$$dcpit = \beta_0 + \beta_1 g_t + \beta_2 d\_pol_t + \beta_3 d\_de_t + \beta_4 \tau_t + \beta_5 i\_e\_lobby_t + \beta_6 i\_e1\_lobby_t + \beta_7 i\_e2\_lobby_t + \beta_8 i\_e3\_lobby_t + \varepsilon_t \quad (5)$$

are estimated with  $dcpit$  as inflation in year  $t$ ,  $g$  as German government spending, and  $d\_de$ ,  $d\_pol$ , as well as  $\tau$  as the control variables already explained above. The two equations differ in the form of modeling lobby group interaction with the government. In equation (4), lobby activities are considered separated from the dummies referring to the different years of the political election cycle. In equation (5), by contrast, the interaction of lobby group activities and the governing parties is considered by referring to the political lobby cycle (the interaction variables described above). The results are presented in Table 3.

<sup>21</sup> As shown in the Appendix, these results are supported also from the descriptive statistics, just when plotting some mean values: The decrease in interest group activities toward the forthcoming election (year three and four) increase GDP, however, with a time lag of one year (the trough of the election cycle of GDP-changes occurs one year after the peak of interest group formations).

<sup>22</sup> See again the descriptive figures provided in the Appendix.

As can be seen from the table, results directly support our hypothesis and can solve the Phillips-curve paradoxon stated above: The positive effect of public expenditures on inflation is slightly outside a common statistically significant range. The German reunification has an increasing effect on the change of CPI and the legislature periods of right wing coalitions a negative one.

Table 3: Implications of Lobbying on Inflation: a Political Business Cycle's Perspective

	normal years		unexpected elections	
	separated (1)	interaction (2)	separated (3)	interaction (4)
G	.0121 (1.05)	.0097 (.81)	.0131 (1.19)	.0108 (.89)
d_de	1.7420** (2.12)	1.3052 (1.47)	1.6715* (2.03)	.8265 (.85)
d_pol	-1.0100* (-1.82)	-.4945 (-1.03)	-1.0977** (-2.06)	-.3290 (.67)
$\tau$	-.5082** (-2.45)	-.1230** (-2.27)	-.5252*** (-2.70)	-.0991** (2.03)
Lobby	.0099* (1.92)	-	.0104** (2.17)	-
separated: d_e	.1801	.0001	.1219	-.0000
interaction: i_e_lobby	(.40)	(.32)	(.21)	(-.09)
separated: d_e1	.1451	-.0001	-.1488	.0000
interaction: i_e1_lobby	(.28)	(-.33)	(-.24)	(.05)
separated: d_e2	.3053	.0002	.2254	.0002
interaction: i_e2_lobby	(.60)	(.51)	(.39)	(.47)
separated: d_e3	.4168	.0003	-.5351	-.0003
interaction: i_e3_lobby	(.90)	(.94)	(1.02)	(-.78)
Cons	-1.8665 (-.65)	3.7364*** (4.89)	-1.9771 (-.78)	3.5056*** (4.53)
Number of obs.	32	32	32	32
Prob> F	.0345	.1007	.0204	.1602
Adj R-squared	.3125	.1967	.3541	.1472
DW-statistic	1.83	1.71	1.81	1.62

Endogenous variable: dcp\_i

t-statistics in Parentheses, \* / \*\* / \*\*\* denoting significance at the 1 / 5 / 10 percent level

Despite the focus on inflation as the percentage change of CPI, there is still a time trend obvious, that we consider by including the time variable  $\tau$ . Inflation significantly decreased over the considered time period. When examining the implications of interest group activities on inflation, we proceed by dividing the analysis into two different parts. In a first step, we include lobbying and the political business cycle years separated into the regression (Columns 1 and 3). As the results show, lobbying increases inflation statistically significant at the 10 percent level. Considering the separated political business cycle controls, results support the Phillips-Curve hypothesis. As GDP increases before election years, inflation increases in tandem, resulting in the highest estimated coefficient of .4168 in the third year of a political cycle. However, the effects occurring from the election cycle are not as significant as the direct effect induced by lobby group activities. As we already know from the analysis above, since interest groups reduce their activities towards the forthcoming expected election, this should decrease inflation. When estimating the second regressions, where lobby group activities are interacted with the political election cycle to focus on the combined effects (Columns 2 and 4), this decreasing tendency counter affects the increasing one induced solely by the political authority and thus, overall adds up nearly to zero. Even varying in tendency, the counter affecting implications also hold in unexpected years of election. Despite solving the Phillips-Curve puzzle, this result also supports our hypothesis of strategic interaction of interest groups and the governing party: The strategic decrease of lobby activities towards the end of a political business cycle significantly increases GDP and prevents an increase in inflation.

## 5. Conclusions

The aim of this article was to shed some light on a possible link between political business cycles and the evolution of lobbies over time which has totally been ignored in the literature so far. Since this is rather a new field of research, we initially discussed some literature on the nature and process of politics which is generally ignored in the more technical literature but offers many fruitful insights for the development of a testable theoretical model. This 'tragedy of politics' has four acts and starts with Buchanan touching on an extremely important point: the installment of an order and of the rule of law produce a social surplus, but if the political authority is contestable, there will be a dramatic increase of efforts in striving for monopoly rents in political office, and in the extreme case the monopoly rents and the excess burden will have vanished into a black hole. Popper takes a deeper look on institutions and processes in-

side democracy emphasizing that especially the systems of proportional representation have some major flaws: The parties, not the elected politicians are dominating, and the higher number of parties under PR makes coalitions necessary where the smaller party exerts a disproportionate power; coalitions mean a decay of responsibility leading to a strongly reduced capacity of voters to get rid of politicians and parties they dislike. If one takes the Katz and Mair notion of “cartel parties” seriously, then the Schumpeter/Downs theory breaks down instantaneously. If there is a “political class” and if the availability of public resources will not be bound to winning elections, then politicians do not lose much if they lose, and there is no incentive to behave according to the preferences of the voters which broadly opens an ideal field for special interest groups. But the cartel-party hypothesis seems a bit too radical, and a compromise is offered by Frey. If one sticks to the Schumpeter/Downs model with its extension to macroeconomic variables as in the Nordhaus/Frey model, the appropriate solution would be a combination: Nordhaus/Frey would apply in the election year and governments will try to reach favorable macro conditions at the election day, and for the total of the legislature Olson’s Law would apply which means that three years of the period will totally belong to the interest groups.

But the precondition for such a combination would be to develop a model explaining the forming of interest groups over the election cycle. On this behalf we complemented the Nordhaus/Frey cycle which is valid only in the election year (outer circle) with an inner circle catching the effects of interest groups in all four years of the legislature but for each year in a different way. Since the last effect will be dominating, there will be an immanent tendency towards lower growth and increasing unemployment. In the fourth year, the election year, the voters are coming back into the game, and the government tries to lower the unemployment rate to get re-elected (Proposition 1). Concerning the behavior of interest groups vis a vis politically different governments we refused the partisan hypothesis and proposed the lobby-capital hypothesis instead: Interest groups will be mainly concerned about stable environments to secure their lobby capital. This implies that, as a tendency, they will back up any existing government irrespective of the political color in the election to come (Proposition 2). Additionally, some hypothesis were developed on the time-structure of forming new interest groups during the cycle, and rational interest group behavior predicts that the number of interest groups should resemble an inverted u-curve: at the beginning of the electoral period its growth rates should be low but increasing to the middle of the period; after reaching its peak the growth rate should decrease strongly and level out near the year of the next election (Proposition 3). So, near the election year (Proposition 4), it can be expected that growth rates

will go up whereas inflation rates should decrease (the inner circle perspective); on the other hand, one would expect a significant increase in GDP in the election year due to additional governmental expenditures, but the inflation rate should rise (the outer circle perspective). Since the effects of both circles are counter-directed concerning the inflation rate, there could be growth and lower unemployment in the election year without any Phillips-curve effect on inflation. On the other hand, both circles are uni-directed concerning growth so that the chance to win the election for the incumbent government may be maximized.

The empirical investigations prove these propositions to be valid as a whole. The first stage of analysis concentrates on the question which variables are able to explain the formation of lobbies in time. If we estimate the model concerning normal or unexpected election, in both cases the growth of GDP explains lobby formation in a significant way. Working with dummies for the years of the election period, we get significant evidence of a political lobby cycle following regular election years: In some sense, interest groups “support” the governing party in letting the boost of lobbying activities occur after the party received governmental power, and thus, securing their lobby-capital, reduce their growth-depressing activities before the forthcoming year of election. So, as part of a rational theory of lobby formation, it becomes obvious that for interest group formation there should at least be two years to build influential networks with the governing party. By contrast, in the case of unexpected elections, there is no such tendency: Obviously, the shortening of the electoral cycle with snap elections confuses the interest groups and exacerbates the organization of political influence.

In a second stage of regressions we estimate the implication of the political lobby cycle on the economy’s performance (as described in Proposition 4). Considering the GDP-level analysis first, lobby activities combined with the political authority continuously increase GDP over the years of a regular election period, leading to the strongest effect in the third year of the cycle (one year before election). With regard to periods with unexpected elections, the picture is reversed, and the political lobby cycle decreases the level of GDP in most of the years. Turning to the effects of interest group activities on the growth of GDP in regular election cycles, the results indicate the same tendency but without being as significant as before. Thus, the second set of analysis re-enforces the results of the first one: The behavior of interest groups comes down to supporting the re-election of the government in power, be it accounted for by lobby-specific rational formative behavior or conscious complicity.

The third stage of analysis is dedicated to a specific puzzle with respect to the Phillips-curve: The original data of regular cycles show that there is an increase in GDP before election,

which is, however, not accompanied by an increase in inflation. As a hypothesis, there may have been a tendency towards expansive fiscal policy, however, its increasing effect on inflation may have been compensated for by a decline in lobby group activities. This is just that what our empirics reveal: If estimating inflation using lobbying activities and the dummies for the regular election period in a separate way, the formation of lobbies clearly increases inflation, especially near to the election year. But, when integrating the interaction of lobby activities with the political business cycle, the joint effect of increasing inflation by Nordhaus/Frey mechanics and decreasing inflation by Olson's interest group effects adds up to nearly zero which also holds for the case of unexpected elections.

Summing up, after trespassing the early phase of research on macroeconomic lobby effects characterized by proxies and getting available of time-series data on lobby formation, a door is opened to more intense research in this field. Here we could show that the macro effects of lobbying are not only definitely existing but they are quantifiable also. That surely is a step forward towards the integration of these aspects into computable macroeconomic models.

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# Appendix: Descriptive Statistics

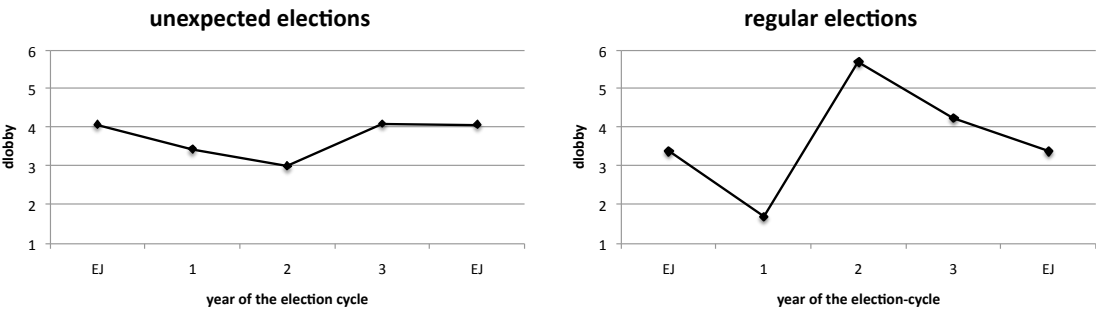


Figure A1: Average Change of Lobby Group Activity (Political Lobby Cycle)

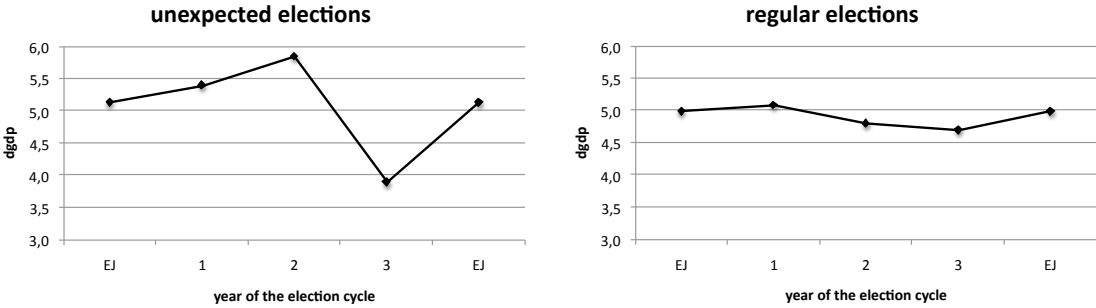


Figure A2: Average Change of GDP: A Political Business Cycle Perspective

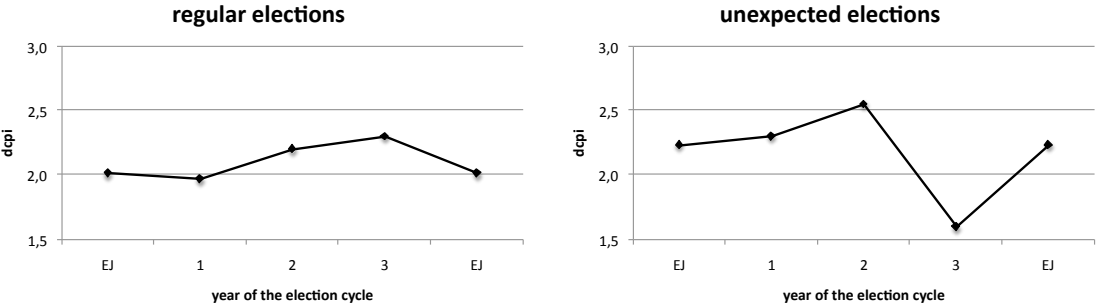


Figure A3: Average Change of CPI: A Political Business Cycle Perspective



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