Communal fees and election cycles: Evidence from German municipalities

Manuela Krause

Communal fees and election cycles: Evidence from German municipalities*

Abstract

The political business cycle theories describe that election-motivated politicians manipulate economic policy-making. Election cycles occur in many fiscal variables, for example tax rates. I examine whether electoral motives influence communal fees in Germany. Fees have to be paid for the use of many public services, for example waste management or sewerage provisions. Fees should be equivalent to the costs of a public service and thus correspond to the benefit principle in public finance. The German municipalities, however, have a leeway to determine fees. I use revenue data for around 7,000 West German municipalities from seven states over the period 1992–2006. The results show that municipalities increase communal fees in election years to a smaller extent than in the middle of the legislative period, while they increase fees more directly after elections. Fees increase in election years by 0.94 euro per capita less and directly after elections by 1.74 euro per capita more than in the middle of the legislative period. The results thus corroborate the predictions of the political business cycle theories.

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1. Introduction

The political business cycle theories describe that politicians would like to increase their reelection chances by pursuing expansionary policies before elections (Nordhaus 1975). The early literature has focused on macroeconomic outcome variables such as unemployment and inflation to investigate election cycles. More recent studies have examined political business cycles in variables such as public debt, expenditures or revenues of governments. Evidence on election cycles is however mixed (see, for example, Alesina and Roubini 1992 or de Haan and Klomp 2013).

Most studies examining election cycles in revenues focus on taxes. I investigate whether election cycles occur in (communal) fees. Investigating effects of political economic variables on fees is innovative. In public finance, fees are a prime example for the benefit principle (Wicksell 1896, Lindahl 1919). The benefit principle describes that people have to pay for public services they receive from the government, directly to the extent they use these services. Fees should thus amount to the cost of a public service, which constraints leviathan governments.[1]

In many countries, local jurisdictions charge fees for public services. I focus on German municipalities, which provide public services, such as waste management, sewerage provisions or child care. According to the principles to generate revenues, municipalities should first acquire revenues from fees or other duties than from taxes. Fees are thus an important source of revenue for municipalities. In German municipalities, fees accounted on average for 12 percent of overall revenues of the municipalities in 2015.[2] For most fees, municipalities can decide discretionarily and independently of other governmental tiers on the level of fees.[3] Municipalities have leeway because they can decide which costs they take into account to calculate fees.

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[1] In contrast to that, the ability-to-pay principle describes that public burdens should be allocated according to the individual abilities to pay. The ability-to-pay principle hence aims to ensure horizontal and vertical equity. Many tax systems are implemented according to the ability-to-pay principle.

[2] Statistisches Bundesamt (2015).

[3] Fees thus represent also a key characteristic of federal public finance as they ensure in a broader sense the fiscal autonomy of local governments (Zimmermann 2009).

As fees are levied for many public services, nearly every citizen in a municipality has to pay fees. Citizens may thus be more sensitive towards changes in fees than for example towards changes in local business tax rates. Note that fees are, in contrast to taxes, regressive. With election cycles in fees politicians are likely to manipulate low-income voters more than with election cycles in taxes. Every citizen receives on an annual base a notification of the amount of fees he or she has to pay for a specific public service. Citizens are thus informed about changes in fees. Anecdotal evidence also shows that fees are discussed controversially in the public. Especially increases in fees cause indignation.[4]

Studies provide evidence that fees for the usage of the same public service differ considerably between municipalities. Some differences are due to geographical and structural constraints. A substantial part of the differences, however, cannot be explained (IW Cologne 2017). Fees differ both between municipalities and within municipalities over time. To some extent, differences over time can be explained by increased or decreased costs for providing public services. It is also conceivable that municipalities are under fiscal stress because expenditures are growing in general and thus try to increase their revenues by increasing fees.

I examine whether election cycles occur in communal fees of German municipalities. I add to the literature on election cycles at the local level. In Germany, only a few studies have so far shown electoral cycles in fiscal variables at the local level (Foremny and Riedel 2014, Furdas et al. 2015, Englmaier et al. 2017, Garmann 2017, Foremny et al. 2018). Municipalities have discretionary power to decide on their fees. I compiled a panel data set of around 7,000 West German municipalities from seven states for the period 1992–2006. The results show that municipalities increase communal fees in election years to a smaller extent than in the middle of the legislative period. Municipalities increase fees more after elections. My results corroborate the predictions of the political business cycle theories.

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[4] Articles in regional newspapers often inform in detail about changes in fees and how people complain about increases (*e.g.*, Badische Zeitung, see http://www.badische-zeitung.de/schwanau/hoehere-gebuehren-fuers-abwasser-x1x--148792684.html; Sächsische Zeitung, see https://www.sz-online.de/nachrichten/widerstand-gegen-gebuehrenerhoehung-3861094.html).

2. Related literature

The political business cycle theories describe that incumbent politicians – motivated by re-election concerns – pursue expansionary policies before elections to influence in the short run the level of economic activity. Election-motivated politicians may, for example, increase public expenditures or decrease taxes. The first contributions to this literature by Nordhaus (1975) and MacRae (1977) proposed theoretical models based on a Phillips curve tradeoff between inflation and unemployment.[5] Other studies extended these models with rational voter expectations (Rogoff and Sibert 1988, Rogoff 1990). A plethora of empirical literature has explored the theory of political business cycles. While early contributions have focused on macroeconomic outcome variables such as unemployment or inflation (see Alesina et al. 1997 for an overview), more recent studies have examined political business cycles in variables such as debt, expenditures or revenues of governments (*e.g.*, Schuknecht 2000, Brender and Drazen 2005, Katsimi and Sarantides 2012).[6] The literature has mainly examined election cycles at the federal or the state level, mostly focusing on fiscal variables.[7] Only more recently, the literature on political business cycles also focused on the municipal level. Studies investigate mostly election cycles in expenditures by focusing on specific categories (Baleiras and da Silva Costa 2004, Foucault et al. 2008, Aidt et al. 2011, Cioffi et al. 2012, Sjahrir et al. 2013). Another strand of literature focuses also on the composition of expenditures (*e.g.*, Akhmedov and Zhuravskaya 2004, Drazen and Eslava 2010). Some studies investigate election cycles in revenues of local governments by focusing especially on taxes (Kneebone and McKenzie 2001, Binet and Pentecôte 2004, Ashworth et al. 2006, Veiga and Veiga 2007, Benito et al. 2013).[8] There is quite some evidence for election cycles at the local level in Germany. For the local business tax in West German municipalities, it is shown that

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[5] Other important early contributions on election cycles were made by Lindbeck (1976) and Tufte (1978). Another strand of literature focuses on partisan cycles (Hibbs 1977, Alesina 1987) by describing electoral cycles with shifts in political ideology. For a survey on partisan politics in OECD panel studies, see Potrafke (2017).

[6] For evidence for a broader set of countries, see, for example, Persson and Tabellini (2003), Shi and Svensson (2006), and Potrafke (2012a).

[7] On empirical studies for Germany at the federal level, see, *e.g.*, Matschke (2003), Berger and Woitek (1997) or Potrafke (2012b). On election cycles at the state level in Germany, see, *e.g.*, Galli and Rossi (2002), Tepe and Vanhuysse (2009, 2013, 2014), Schneider (2010), Mechtel and Potrafke (2013) or Kauder et al. (2017). No evidence on election cycles, however, was found in increases in salaries of German state Members of Parliament (Kauder et al. 2018).

[8] Electoral incentives also depend on term limits; see, for example, Klein and Sakurai (2015) or Dalle Nogare and Kauder (2017).

the growth in tax rates is reduced significantly in election and pre-election years but increased after local elections (Foremny and Riedel 2014). For 604 large West German municipalities, revenues and expenditures are shown to decrease before local elections, while building investments and intergovernmental grants for investment purposes increase (Furdas et al. 2015). Another study provides evidence that electricity prices, which can be influenced by municipality-level politicians, are systematically decreased before elections compared to prices of privatized providers (Englmaier et al. 2017).[9] For municipalities in the German state Hesse, the number of building licenses has been shown to increase significantly in election years (Garmann 2017). For municipalities of two West German states, Bavaria and Baden-Wuerttemberg, election effects are shown in municipal expenditures both before elections in the legislative (local council) and before executive (local mayor) elections (Foremny et al. 2018).

The study most closely related to mine is the study of Foremny and Riedel (2014), who investigate electoral cycles in taxes (ability-to-pay principle). I focus on fees as a prime example for the benefit principle in public finance. Politicians are likely to decrease fees before elections and to postpone increases in fees until after elections.

3. Institutional backdrop

3.1   German municipalities

The federal system in Germany consists of three governmental tiers: the federal level, the (16) states, and the (around 11,000) municipalities. The German constitution guarantees the municipalities the right to regulate their affairs on their own responsibility (Article 28 German constitution (*Grundgesetz*)). In some areas, however, federal and state laws limit the right of local self-government.[10]

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[9] Some studies investigate the determinants of contracting-out public services and point to the importance of ideological or political motives, *e.g.*, Picazo-Tadeo et al. (2012) or Petersen et al. (2015).

[10] For a detailed introduction into the institutional details, see Zimmermann (2009). For a short introduction, see Blesse and Baskaran (2016).

Municipal tasks can be divided into three categories: voluntary tasks (*freiwillige Selbstver-waltungsaufgaben*), own compulsory tasks (*pflichtige Selbstverwaltungsaufgaben*), and trans-ferred compulsory tasks (*übertragene Selbstverwaltungsaufgaben*).[11] The municipalities' de-gree of discretion varies over these tasks. Transferred and own compulsory tasks include tasks that were assigned to the municipalities by the federal and state governments. In the case of transferred compulsory tasks, municipalities have to fulfill the tasks and can also not decide discretionarily on how to fulfill them. This holds especially true for basic administra-tion tasks, which are mostly identical across all states. Own compulsory tasks can, by con-trast, vary over states and municipalities. To be sure, municipalities have to fulfill these tasks, but they have discretion about how to fulfill them (tasks including child care, school building or waste management). For most of these own compulsory tasks, minimum standards of quality are required. Municipalities are however free to expand these minimum standards of quality. Voluntary tasks of municipalities include, for example, the promotion of culture or sport facilities. Municipalities can decide independently on whether to fulfill these tasks or not.

The right of self-government of the German municipalities includes also their fiscal auton-omy. The municipalities are in general responsible for financing their tasks because the ad-ministrative and financial responsibility are linked according to the constitution. To finance their tasks, municipalities have various revenue sources. A large part of municipal revenues consists of revenues from shared taxes including the income tax and the value added tax (VAT). These taxes are shared among the federal, the state and the municipality level. The municipalities have no discretion over the corresponding tax rates. In addition, municipali-ties levy own local taxes. The German municipalities decide on the tax multipliers (*Hebesätze*) of three tax instruments: the local business tax (*Gewerbesteuer*) and two local property taxes A and B (*Grundsteuer*). To fulfill their responsibilities, municipalities also receive financial contributions from the federal or state level for supplying certain public services, for example for the improvement of school buildings, local public transport or for specific social services. Equalization grants – mainly financed through state revenues – are another source of income. The grants help to equalize funds available for the municipalities

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[11] At the local level, responsibilities for different tasks are sometimes divided between counties (*Landkreise*) and independent cities (*kreisfreie Städte*), districts (*Regierungsbezirke*) and the municipalities itself.

and to finance public services.[12] Another important source for the municipalities are revenues from duties and especially fees.

There are two types of fees: administrative fees and utilization fees. Administrative fees include, for example, fees for issuing a passport. Utilization fees are levied for the effective use of a public service, for example waste disposal. For some fees, especially for administrative fees, municipalities are limited by federal or state law. Municipalities can, however, decide autonomously on fees for most public services. Fees are thus part of municipalities' fiscal autonomy. Fees are set for at least one year and have to be equivalent to the (expected) costs of a public service, which corresponds to the benefit principle in public finance. State-specific laws for local rates (*Kommunalabgabengesetze*) describe this so-called cost-covering principle (*Kostendeckungsprinzip*), which holds for all municipalities. These laws define the general calculation base – especially which (expected) costs have to be taken into account to calculate the fees. The municipalities can nevertheless decide discretionarily which costs they take into account and thus have a leeway to calculate the fees.[13] For the most important fees, citizens receive yearly a notification describing the amount to pay. Voters are thus aware of changes in fees.

3.2   Municipal elections

Elections at the municipal level are typically held every five years. An exception is Bavaria, where elections are held every six years.[14] Important for the empirical analysis is that election dates are regulated by state law and are thus outside the control of individual municipalities. Municipal election dates are the same within a state but differ across states. I thus disentangle election effects from common time trends.

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[12] Equalization grants include in general unconditional formula-based grants, conditional grants, general levies and other grants.

[13] An indicator for differences in fees within and between municipalities are also the diverse cost-covering grades for specific public services, see, *e.g.*, Brümmerhoff und Büttner (2015), p. 623.

[14] Further exceptions include Bremen and Hamburg, where elections are held every four years. I do, however, not include these city states in my sample.

At local elections, the local council is elected. The local council represents the municipality. Major tasks include the local legislation[15] and the supervision of the administration. Municipalities also have a mayor, who is sometimes elected at a separate election. The administrative discretion between the mayor and the council varies between the states. In all states, the local councils are by law responsible for preparing the local budget, which also includes setting (the exact rates for) fees.[16] In most municipalities, the local councils are elected according to the (personalized) proportional representation system, where voters vote on open or closed party lists.[17]

4. Data and methodology

4.1 Data sources

I employ data from German municipalities for the period from 1992 to 2006.[18] The data set includes municipalities of seven West German states. I exclude the city states of Hamburg and Bremen because state and municipality budgets are not easily separable within these states and also the state of Schleswig-Holstein because of data availability. I do also not include municipalities in East German states because most of those municipalities were subject to mergers and local government reforms in the time period I consider. I exclude also West German municipalities that were subject to a merger. The sample covers over 7,000 municipalities in Germany. I use data on revenues from utilization fees from the annual budgetary statistics (*Jahresrechnungsstatistiken*). Data on fees can be differentiated between administrative and utilization fees and between the different tasks of the municipalities. It is thus possible to consider different outcome variables. Data on local elections and the results

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[15] In a legal sense, municipalities are not part of the legislative body as laws can only be enacted by the federal or state governments in Germany. Municipalities can nevertheless issue statutes, for example to determine fees.

[16] Mayors have veto power if they consider calculations of fees not to be in line with the law. Mayors, however, hardly ever use their veto power.

[17] Some small municipalities vote according to the plurality voting system, where voters vote on individual candidates rather than on party lists. For those municipalities, it is thus not possible to calculate the vote and seat shares for individual parties.

[18] Using more recent years than 2006 is not feasible, because comparable data is not available for all municipalities as the budgetary accounting of the municipalities has been reformed since 2006.

of the elections are obtained from the state election offices (*Landeswahlleiter*) and the statistical offices of each state. Information on the population, the population structure and further fiscal variables are also obtained from the statistical offices of the states.

Table 1 shows descriptive statistics for the main variables. Table 2 shows correlations between the dependent variable and the main explanatory variables: first differences in fees per capita and the election variables are significantly but only weakly correlated. The correlation between the first differences in fees per capita and the election year dummy variable is negative. The correlations between first differences in fees per capita and the pre- and post-election year variables are positive. Table 3 shows the election dates in the municipalities of the seven West German states between 1992 and 2006.[19]

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[19] Note that I also include election dates of the years 1991 and 2007 to account for the fact that the first and last year of my sample period could be pre- or post-election years.

Table 1: Descriptive statistics

	Obs.	Mean	Std. Dev.	Min	Max
Fees per capita	108,463	80.78	85.01	0	1319
Δ Fees per capita	101,199	0.163	20.95	-907.2	458.2
Pre-election year	101,199	0.194	0.395	0	1
Election year	101,199	0.198	0.399	0	1
Post-election year	101,199	0.185	0.388	0	1
Population (t-1)	108,519	8.189	32.52	0.006	1,295
Δ Population (t-1)	86,159	0.017	0.253	-19.89	34.93
Young (t-1)	108,513	0.193	0.035	0.019	0.56
Δ Young (t-1)	86,159	-0.002	0.008	-0.227	0.169
Old (t-1)	108,510	0.182	0.052	0.003	0.536
Δ Old (t-1)	86,159	0.003	0.008	-0.204	0.284
Debt per capita (t-1)	100,725	422.9	405.0	0	12,003
Δ Debt per capita (t-1)	86,159	-0.157	114.7	-2,392	5,771
Property tax B	105,216	304.5	45.17	0	900
Δ Property tax B	86,159	3.265	11.03	-280	280
Business tax	105,216	332.3	30.20	116	900
Δ Business tax	86,159	1.640	7.215	-346	214
Vote share SPD	86,159	0.183	0.190	0	1
Vote share CDU	86,159	0.244	0.232	0	1
Vote share FDP	86,159	0.012	0.032	0	0.578
Vote share Greens	86,159	0.016	0.036	0	0.313
Vote share Others	86,159	0.353	0.360	0	1

Note: Descriptive statistics are calculated for the observations used in the individual regressions. Variables in levels include all observations that are used to calculate the first differences, which are used in the regressions. I define variables in Section 4.2.

Table 2: Correlation between the main variables

	Δ Fees per capita	Pre-election year	Election year	Post-election year
Δ Fees per capita	1			
Pre-election year	0.008**	1		
Election year	-0.012***	-0.244***	1	
Post-election year	0.006*	-0.234***	-0.237***	1

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. I define variables in Section 4.2.

Table 3: Local election dates

Baden-Wuerttemberg	12-06-1994	24-10-1999	13-06-2004	
Bavaria	10-03-1996	03-03-2002		
Hesse	07-03-1993	02-03-1997	18-03-2001	26-03-2006
Lower Saxony	15-09-1996	09-09-2001	10-09-2006	
North Rhine-Westphalia	16-10-1994	12-09-1999	26-09-2004	
Rhineland-Palatinate	12-06-1994	13-06-1999	13-06-2004	
Saarland	12-06-1994	13-06-1999	13-06-2004	

Note: Election dates are listed in DD-MM-YYYY.

Figure 1 shows the development of average per-capita fees in all municipalities over the period from 1992 to 2006. The development does not show any clear trend over time. Per-capita fees fluctuate between 75 and 85 euro with a slight overall decrease since 1998. Figure 2 shows the average change in per-capita fees for different years within the legislative period. Per-capita fees increase on average by 0.49 euro in the year before an election, but decrease by 0.35 euro per capita in election years. In post-election years, per-capita fees increase on average by 0.42 euro and in other years of the legislative period by 0.14 euro per capita. Per-capita fees thus seem to decrease especially in election years.

Figure 1: Average revenues from utilization fees in per-capita terms, 1992–2006
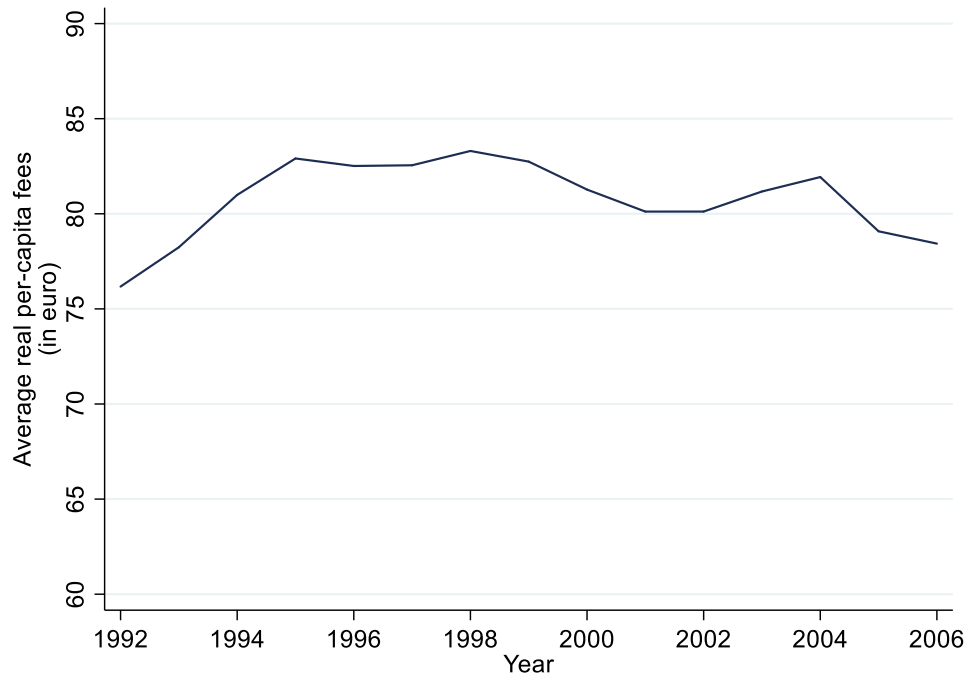
Source: own illustration.

Figure 2: Average change in per-capita fees by election year variables
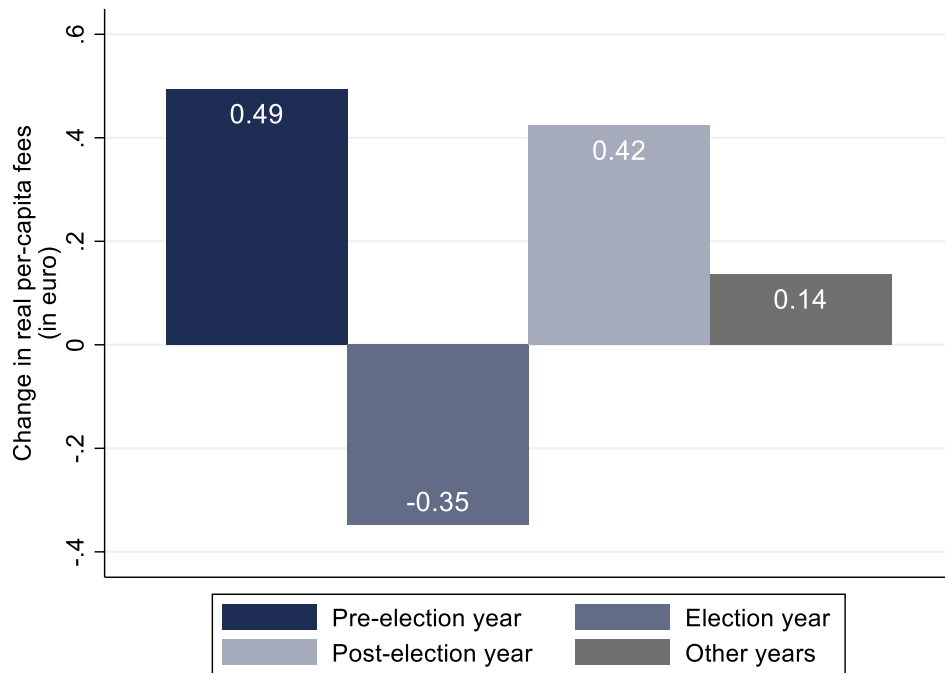
Source: own illustration.

4.2 Empirical strategy

The baseline panel-data model has the following form:

$$\Delta \, Fees_{i,t} = \beta \, \textit{Election-year}_{i,t} + \gamma \, \textit{Pre-election year}_{i,t} + \delta \, \textit{Post-election year}_{i,t}$$

$$+ \, \varepsilon X_{i,t} + \eta_i + \tau_t + u_{i,t}$$

$$\text{with } i = 1,\ldots,7235; \, t = 1,\ldots,15$$

where $\Delta \, Fees_{i,t}$ measures the first difference of (positive) revenues from local fees per capita in municipality i in year t. The data are deflated by using the national consumer price index; negative revenues are excluded. I use fees in per-capita terms to make the data comparable between municipalities. I apply first differences to ensure a stationary time series. In my first specifications, I use the sum of utilization fees of all categories as the dependent variable. In alternative specifications, I also use task-specific revenues from fees. To capture election cycles, the dummy variable *Election year*$_{i,t}$ assumes the value 1 if a local election takes place in municipality i in year t and 0 otherwise. The variables *Pre-election year*$_{i,t}$ and *Post-election year*$_{i,t}$ take on the value 1 for the year before and the year after a local election in municipality i and 0 otherwise. Concerns about potential endogeneity of the election variables include reverse causality and omitted variable bias. The election variables are not prone to reverse causality because the states decide on the dates for municipal elections. Individual munici-palities thus cannot influence the timing of elections. To limit the risk of omitted variable bias, I include a set of control variables ($X_{i,t}$) that are likely to be correlated with revenues from fees and/or the election variables.

I control for economic and socio-economic characteristics of the municipalities. I include the first difference of the total number of inhabitants of a municipality (in 1,000) to control for the growth of a municipality. To capture the demographic structure of a municipality, I include the first difference of the share of inhabitants below the age of 15 and the first difference of the share of inhabitants above the age of 65.[20] To control for the economic

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[20] In Rhineland-Palatinate, I use the age of 20 and the age of 60 because of data availability.

situation of a municipality, I include the first difference of per-capita debt of each munici-pality.[21] I include all these control variables with a lag of one because data on these variables are typically available with a delay of one year. I also include the tax rates of the two most important local taxes (Property tax B and Business tax). I do not use lags here because mu-nicipalities can decide discretionarily on the tax rates.

To control for the political ideology of the local council, I use the vote shares of the most important political parties in Germany. The four main parties include the right-wing CDU/CSU[22], the left-wing SPD, and the much smaller FDP and Greens. I aggregate the votes of the other remaining parties, which mainly represent local parties, into a further category (Others).[23] η_i describes a fixed municipality effect; τ_t is a fixed time effect; $u_{i,t}$ is the error term.

I estimate the model with robust standard errors clustered on the municipality level (Hu-ber/White/sandwich standard errors; see Huber 1967, White 1980).

5. Regression results

5.1 Baseline results

Table 4 provides regression results for the sum of utilization fees per capita. The first spec-ification only includes the election dummies and does not include fixed time effects. The results show that in the pre- and the post-election years fees per capita increase more than in other years of the legislative period. Both coefficients are positive and significant at the 1 percent level. The coefficient for the election year dummy variable is negative but does not turn out to be statistically significant. In Column (2), I include fixed time effects. The post- and pre-election year dummy variables still show positive and significant coefficients. The

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[21] Debt includes credit market debt and debt on the public level. In Lower Saxony, data on debt were only available at the level of municipal unions. I therefore assume that each municipality in such a union is indebted according to its population share in the entire union. Data on debt in Baden-Württemberg were available only from 1998 onwards, in North Rhine-Westphalia from 1995 onwards.

[22] In Bavaria, the conservatives are represented by a sister party of the CDU, the Christian-Social Union (CSU).

[23] In some small municipalities members of the local council are elected according to a plurality voting system. For these municipalities, official data do not include individual party vote and seat shares. I thus code vote and seat shares for individual parties as zero. In some states, local voters' associations or common nominations from different parties are also possible. I consider votes and seats for these associations as belonging to *other* political parties.

coefficient for the election year variable is negative and statistically significant at the 1 percent level. The specification in Column (3) includes controls for socio-demographic and economic characteristics of the municipalities. The sample size declines with these controls added, because data on debt for municipalities in Baden-Wuerttemberg and North Rhine-Westphalia were only available for a shorter time period. Focusing on the election cycle dummies, inferences do not change. In Column (4), I include also political control variables. The results corroborate that the pre- and post-election year coefficients are positive and statistically significant. The coefficient of the election year dummy variable is negative and statistically significant at the 1 percent level. This indicates that conditional on the other control variables fees per capita increase less (or decrease more) in election years compared to other periods in the middle of the legislative period. Fees increase in election years by 0.94 euro per capita less than in the middle of the legislative period. In contrast to that, fees increase more directly after an election – by about 1.74 euro per capita more than in the middle of the legislative period. This means that fees increase by about 8 percent of a standard deviation more in post-election years than in the middle of the legislative period. Local councils thus increase fees most when the time gap to the next election is maximized. Interestingly, the coefficient for the pre-election year variable is also positive and statistically significant at the 1 percent level. Two explanations come to mind. As the exact election dates vary between March and September within a year, a pre-election year dummy might include two up to 21 months before an election. It thus might capture also months essentially in the middle of the legislative period, where local councils increase fees rather than to decrease them. The average election date in my sample lies in the mid of June and thus supports this hypothesis partially. An alternative explanation could be that local councils increase fees in the pre-election period to decrease them even more in the election year.

Table 4: OLS regression results

	(1)	(2)	(3)	(4)
Pre-election year	0.679***	0.565**	0.929***	0.925***
	(0.178)	(0.233)	(0.267)	(0.267)
Election year	-0.133	-0.913***	-0.945***	-0.940***
	(0.173)	(0.200)	(0.196)	(0.196)
Post-election year	0.577***	1.641***	1.728***	1.740***
	(0.191)	(0.271)	(0.282)	(0.282)
Δ Population (t-1)			0.435	0.429
			(0.684)	(0.681)
Δ Young (t-1)			19.53*	19.69*
			(10.34)	(10.35)
Δ Old (t-1)			13.58	13.85
			(9.454)	(9.453)
Δ Debt per capita (t-1)			0.00647***	0.00646***
			(0.00183)	(0.00183)
Δ Property tax B			0.0125	0.0122
			(0.00802)	(0.00802)
Δ Business tax			0.00814	0.00811
			(0.0105)	(0.0105)
Vote share CDU				-1.753
				(1.144)
Vote share FDP				-9.944*
				(5.507)
Vote share Greens				-9.454*
				(5.345)
Vote share Others				-1.031**
				(0.435)
Time-fixed effects	-	Yes	Yes	Yes
Observations	101,199	101,199	86,159	86,159
Groups	7,235	7,235	7,235	7,235
R^2 within	0.000257	0.00594	0.00698	0.00707
R^2 between	0.0253	0.00592	0.0471	0.0382
R^2 overall	0.000150	0.00562	0.00765	0.00850

Dependent variable: Real fees per capita (first differences). Fixed-effects model with robust standard errors clustered at municipality level in parentheses. All specifications include municipality-fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Focusing on the set of control variables, five variables are statistically significant. Fees per capita increase when the share of people under 15 years increases. When the share of young people under 15 years increases by one percentage point, fees increase on average by additional 0.20 euro per capita. This might be because younger people demand more public services that are paid by fees. Fees per capita also increase when per-capita debt increases. This is intuitive since local municipalities use increases in different revenue sources when they are indebted. The coefficient is however rather small. Fees per capita increase less when the vote share of the FDP increases at the expense of the SPD. The same result holds for the vote shares of the Greens and the other remaining parties. All coefficients are negative and statistically significant at the 10 or 5 percent level. When the vote share of the FDP increases by one percentage point at the expense of the SPD vote share, per-capita fees increase by 0.10 euro less. The effect for the Greens is of similar size. I conjecture that the FDP as a market-oriented party prefers a small size of government. The Greens, by contrast, may prefer financing public services using taxes (ability-to-pay principle) rather than fees (benefit principle). The coefficient for the vote share of the CDU is also negative but lacks statistical significance at conventional levels.

I also run the regressions for task-specific revenues from fees. I include the most important categories, *i.e.*, those categories with the highest average amount of fees per capita. I constrained the results to those categories with a sufficient amount of observations to guarantee that the categories are important for the majority of municipalities. I consider fees from sewerage provision, waste management and child care facilities. These tasks belong to the own compulsory tasks. Municipalities have to fulfill the tasks, but can decide discretionarily on how to fulfill them. These tasks are thus especially suitable for the analysis of election cycles. I only include those municipalities that received revenues from fees for the respective category for the entire time period that I consider. The sample size is thus reduced compared to the previous estimations. Table 5 shows the results for the estimations including all control variables and fixed time effects. Column (1) presents the results for fees from waste management. The results show that per-capita fees from waste management increase less in election years than in years in the middle of the legislative period. The coefficient is negative and statistically significant at the 1 percent level. Fees increase by about 0.56 euro per capita less in election years than in years in the middle of the legislative period. Per-capita fees from

waste management decrease also when the population increases – indicating economies of scale – and when per-capita debt increases. Per-capita fees increase less when the vote share of the FDP increases (at the expense of the SPD). Focusing on fees from sewerage provision, the results show again that per-capita fees increase less in election years, but increase more in the year after an election compared to the middle of the legislative period. Both coefficients are significant at the 1 percent level. Fees increase by about 1.28 euro per capita less in election years than in the middle of the legislative period. Focusing on the control variables, per-capita fees from sewerage provision increase when per-capita debt increases, but increase less when the vote shares of the CDU or other parties increase at the expense of the SPD vote share. As the last subcategory, I also consider per-capita revenues from fees from child care facilities. Within this category, per-capita fees increase more before and after elections. The coefficient of the post-election year variable is positive and statistically significant at the 1 percent level, while the coefficient of the pre-election variable is positive and statistically significant at the 10 percent level. The coefficient for the election year variable is negative but lacks statistical significance. Per-capita fees from child care facilities increase when the population, the share of young inhabitants or the property tax rate increases. By contrast, per-capita fees increase less when the vote share of the Greens increases at the expense of the SPD. The results from the sub-categories thus confirm the results for the sum of per-capita revenues from fees.

Table 5: OLS regression results for subcategories

	(1)	(2)	(3)
	Waste	Sewerage	Child care facilities
Pre-election year	-0.357	0.343	0.0981*
	(0.231)	(0.321)	(0.0532)
Election year	-0.556***	-1.275***	-0.0507
	(0.181)	(0.282)	(0.0619)
Post-election year	0.107	0.875***	0.187***
	(0.223)	(0.291)	(0.0494)
Δ Population (t-1)	-0.546**	0.837	0.0374**
	(0.259)	(0.656)	(0.0173)
Δ Young (t-1)	15.72	34.48	27.54***
	(13.98)	(26.34)	(4.724)
Δ Old (t-1)	-0.388	7.957	9.019
	(17.51)	(35.77)	(6.270)
Δ Debt per capita (t-1)	-0.000798*	0.00586***	0.000223
	(0.000436)	(0.00106)	(0.000144)
Δ Property tax B	-0.000962	0.00836	0.00377***
	(0.00534)	(0.00971)	(0.00146)
Δ Business tax	-0.00206	0.00231	0.000513
	(0.00958)	(0.0171)	(0.00253)
Vote share CDU	-1.639	-2.766**	-0.105
	(1.313)	(1.363)	(0.580)
Vote share FDP	-21.46***	-9.166	-0.0575
	(7.371)	(9.311)	(1.440)
Vote share Greens	-1.397	-7.378	-1.665*
	(5.639)	(5.252)	(0.945)
Vote share Others	-0.436	-2.911***	-0.262
	(0.915)	(1.023)	(0.460)
Time-fixed effects	Yes	Yes	Yes
Observations	18,983	38,672	21,451
Groups	1,717	3,419	1,682
R² within	0.0104	0.0189	0.0298
R² between	0.00585	0.0115	0.0436
R² overall	0.00343	0.0179	0.0305

Dependent variable: Real fees per capita (first differences). Fixed-effects model with robust standard errors clustered at municipality level in parentheses. All specifications include municipality-fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.2 Robustness tests

I run several robustness tests. None of these tests shows any severe fragility of my results focusing on the sum of fees.

As a first robustness test, I estimate a dynamic version of my baseline model. The dependent variable in my model is likely to be endogenous. In a dynamic panel data model with a relatively short observation period as in this case ($t = 15$), the common fixed effects estimator might be biased. I therefore use the generalized method of moments (GMM) estimator developed by Arellano and Bond (1991). I estimate the model using the system GMM approach developed by Arellano and Bover (1995) and Blundell and Bond (1998), which is preferred in case of a persistent endogenous variable and for "small T, large N" panels. Since fees are likely to be persistent, I apply a robust two-step estimator with Windmeijer's finite-sample correction. I collapse the instruments to avoid the problem of instrument proliferation (Roodman 2009). Table 6 shows the results and the specification tests of the model. The specification tests show that the model is well specified. The null hypothesis of no first-order autocorrelation is rejected, while the null hypothesis of no second-order autocorrelation cannot be rejected. Also, for the tests of over-identifying restrictions – the Hansen's J test and the Difference J test – the null hypotheses cannot be rejected. Inferences for the election year dummies do not change.[24] Important to note is that the coefficient of the lagged dependent variable is negative and statistically significant at the 1 percent level, indicating that first differences in per-capita fees in period t were small when first differences in per-capita fees in period t-1 were large. The results in Column (4) corroborate that fees per capita increase less in election years and increase more directly after elections compared to years in the middle of the legislative period.

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[24] When I include the lagged dependent variable in my fixed effects model, the results are similar to the GMM results.

Table 6: GMM results

	(1)	(2)	(3)	(4)
Lagged dependent variable	-0.174***	-0.177***	-0.192***	-0.192***
	(0.014)	(0.0141)	(0.0166)	(0.0166)
Pre-election year	0.379**	0.414*	0.316	0.405*
	(0.192)	(0.247)	(0.244)	(0.244)
Election year	-0.269	-1.012***	-1.160***	-1.074***
	(0.176)	(0.199)	(0.198)	(0.199)
Post-election year	0.194	0.929***	0.869***	0.925***
	(0.181)	(0.253)	(0.251)	(0.251)
Δ Population (t-1)			0.0447	0.242
			(0.660)	(0.710)
Δ Young (t-1)			15.21	17.32*
			(10.10)	(10.13)
Δ Old (t-1)			3.192	5.560
			(9.880)	(9.908)
Δ Debt per capita (t-1)			0.00469**	0.00458**
			(0.00221)	(0.00221)
Δ Property tax B			0.00572	0.00788
			(0.00811)	(0.00811)
Δ Business tax			-0.000346	0.000675
			(0.0108)	(0.0108)
Vote share CDU				-0.366
				(0.253)
Vote share FDP				-9.621***
				(2.213)
Vote share Greens				-21.51***
				(2.398)
Vote share Others				1.479***
				(0.156)
Time-fixed effects	-	Yes	Yes	Yes
Observations	93,935	93,935	86,125	86,125
Groups	7,235	7,235	7,235	7,235
Number of instruments	17	29	35	39
AR(1) test p-value	0.000	0.000	0.000	0.000
AR(2) test p-value	0.930	0.996	0.972	0.967
Hansen's J test p-value	0.102	0.092	0.116	0.117
Difference J test p-value	0.725	0.792	0.830	0.842

Dependent variable: Real fees per capita (first differences). System GMM model with two-step estimator with Windmeijer's finite-sample correction. Instruments are collapsed. Standard errors in parentheses. All specifications include municipality-fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

I also run the baseline model separately for independent cities and municipalities that belong to a county. Tasks differ between independent cities and municipalities because independent cities have to fulfill more tasks. When I consider only municipalities that belong to a county, inferences for the election year variables do not change. For the sample that only includes the independent cities, the coefficients of the election year variables do not turn out to be statistically significant. The results may however be driven by the smaller sample size since the sample only includes 82 independent cities.

I examine whether the results are driven by municipalities of one state. I exclude municipalities of an individual state, one at a time (jackknife test). The results show that inferences do not change when excluding municipalities of one state. Only when I exclude the municipalities of the state of Rhineland-Palatinate, the coefficient of the election year variable is negative but lacks statistical significance at conventional levels. This result may also be driven by the large reduction in the sample size since Rhineland-Palatinate has the largest number of municipalities of all German states. The municipalities in Rhineland-Palatinate also have a rather small population. The result thus may also indicate that small municipalities are more prone to election cycles compared to larger municipalities. To test this hypothesis, I also run separate regressions for municipalities with a population above the median municipality of my sample and below. Inferences do not change when I only include municipalities above the median value or below.

The constitutional framework that describes the rights of a local council is similar across the states in Germany. Most states follow the so-called *Süddeutsche Ratsverfassung* since the 1990s. One exception is Hesse, that follows another framework (*unechte Magistratsverfassung*). In the past, even more different frameworks were implemented. The differences mainly affected the position of the mayor and the relationship between the council and the mayor.[25] Since in all municipalities the local council can decide on fees by law, a different constitutional framework should not influence the results. Additionally, my sample period covers the elections after the constitutional reforms in the 1990s and thus belongs to the

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[25] For more details, see Kost and Wehling (2010) or Egner et al. (2013).

period, when the states already had similar constitutional frameworks.[26] Excluding municipalities in Hesse – the only state with a different constitutional framework – does not change inferences.[27]

I disentangle effects for positive and negative first differences of per-capita fees. The number of positive and negative changes in per-capita fees nearly equals for the observed period. Inferences for the election year variables do not change when I only include positive changes in per-capita fees. When I only consider negative changes, the coefficient of the election year variable and the coefficients of the pre- and post-election year variables are positive and statistically significant. The result for the election year variable in the baseline specification is, thus, mainly driven by positive first differences of per-capita fees, *i.e.*, by increases in per-capita fees.

I include the dependent variable in levels instead of first differences. The results show that inferences for the election year variables do not change except for the fact that the coefficient of the pre-election year variable is negative and statistically significant at the 5 percent level in this case.

Using dummy variables as election indicators may be prone to measurement errors (Klomp and de Haan 2013). I employ an alternative definition of election variables suggested by Franzese (2000) and Klomp and de Haan (2013). I use a weighted election indicator that takes the timing of an election within a year into account. The idea is that election years where the election is late within a year should get a higher weight, since the local council has an incentive to reduce fees before elections and thus has more time to do this. The variable takes the value $M/12$ in an election year, were M is the month of the election. The pre-election year variable is calculated as $(12-M)/12$, while the post-election year variable is calculated as $(M-1)/12$, following the literature (Klomp and de Haan 2013, Garmann 2017).

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[26] The reforms took place 1993 in Hesse, 1994 in Saarland and Rhineland-Palatinate, 1996 in Lower Saxony and 1999 in North Rhine-Westphalia. In Bavaria and Baden-Wuerttemberg the *Süddeutsche Ratsverfassung* was already implemented in the 1950s (Burgi 2015).

[27] A main part of the reforms referred to the introduction of direct mayoral elections. In some states, *e.g.*, Bavaria, mayoral elections are aligned with council elections, in others not. It is conceivable that mayoral elections influence the setting of fees rather than local council elections since the mayor is often involved in preparing the drafts for new regulations for the fees. But even if mayoral elections also influence decision-making on fees, this finding only supports the result of this paper since it shows that local elections influence the setting of fees.

In all other years, the value is zero. The results show again that per-capita fees increase less in election years and increase more in post-election years than in the middle of the legislative period. Both coefficients are significant at the 1 percent level. The coefficient for the pre-election year is positive but lacks statistical significance.

I also control for nonlinear effects of population growth by including the first differences of the population variable squared. Inferences for the election variables do not change. The coefficient of the nonlinear effect of the population variable is negative but lacks statistical significance.

An alternative to using the vote share is to include the seat shares of the individual parties. Since data on seat shares are not available for municipalities in Lower Saxony, the sample size is reduced to 74,274 observations. Inferences do not change. Now, also the coefficient of the CDU seat share variable is negative and statistically significant at the 1 percent level. In another specification, I tested for the ideology of the council by including the share of left-wing parties (vote share of SPD and Greens) and the share of right-wing parties (vote share of CDU and FDP) in the estimations. Inferences for the election year variables do not change. The coefficient for the left-wing parties is positive, and the coefficient for the right-wing parties is negative. Both coefficients lack, however, statistical significance.

To further control for the economic situation of a municipality, I also include the lagged unemployment rate of each municipality (unemployed as a share of total population between 15 and 65).[28] The sample size with this control added reduces considerably to only 50,350 observations. Inferences for the pre- and post-election year variables do not change. The negative coefficient of the election year variable lacks statistical significance. Tests show that this result emerges because of the reduced sample size and not because of the inclusion of the unemployment rate. The coefficient of the unemployment rate, however, lacks statistical significance at conventional levels.

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[28] Data on unemployment is only available from 1998 onwards for all municipalities. I thus do not include this control variable in my baseline model.

I also checked my main results for the subcategories by running the same robustness tests as described above. None of these tests shows any severe fragility of the inferences of the election year variables.

6. Conclusion

I examine electoral cycles in revenues from fees of around 7,000 West German municipalities (1992–2006). In Germany, municipalities provide many public services, which are financed by fees. The local councils of municipalities are by law responsible for setting fees and have a large leeway to do so. By investigating local council elections and first differences in per-capita fees, the results show that per-capita fees increase less in election years than in the middle of the legislative period. Fees increase – conditional on the other explanatory variables – by about 0.94 euro per capita less in election years compared to the middle of the legislative period. Per-capita fees increase more directly after elections. This indicates that local councils seem to increase fees most when the time gap to the next election is maximized. The results for specific public service categories (waste management, sewerage provision and child care facilities) confirm these results.

The findings contribute to the literature on political business cycles and show that election-motivated incentives may well influence policies on the subnational level. In terms of taxation principles in public finance, this paper also shows that reelection motives of local governments influence beside taxes, which are levied according to the ability-to-pay principle, also fees, which are levied according to the benefit principle. This might be because nearly all voters are affected by fees and are thus more sensitive towards changes in fees than for example towards changes in local business tax rates. As fees are regressive, German municipalities also seem to manipulate low-income voters more than high-income voters. The evidence on election cycles in communal fees raises also concerns about the given leeway of local councils. Although municipalities should be restricted in setting fees by the cost-covering principle, the local councils have a large leeway to decide on fees. A possible solution to reduce this leeway and thus the emergence of election cycles in communal fees could be an enhanced transparency in the calculations of fees.

Future research might well consider whether also direct mayoral elections influence the setting of fees as the mayor may influence the decision-making process of fees. Another worthwhile endeavor is to investigate the enhanced privatization or out-sourcing of communal services in the past years, which provides an intriguing setup to compare developments in fees/prices of public and privatized utilities.

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