Do Public Banks Give Politicians an Electoral Advantage? Evidence from German elections.

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Abstract

The costly bank bailout programmes of enormous size during the recent financial crisis suggest that political ties can help banks in times of crisis while induce considerable economic costs for the society and political costs for incumbent politicians. The rationale for politicians to maintain close connections to banks is, therefore, not readily obvious; this paper sheds light on the benefits of politically connected banks for incumbent politicians by looking at the German *Sparkassen* (public savings banks). We estimate the effect of board membership in German public savings banks on parties' performance in local elections and speculate that mayors extract political rents from their board membership, thus, improving their electoral chances. We exploit the fact that not all locally elected mayors in Germany are board members in savings banks and compare the electoral performance of politicians with and without participation in savings banks supervisory boards. In this paper, we present preliminary findings for more than 2,000 elections in almost 1,000 municipalities in three federal states (Bavaria, Hesse, and Rhineland-Palatinate) and find a consistently statistically significant positive effect of board membership on the re-election chance of the incumbent party of 5-8%.

1 Introduction

The recent global financial crisis of 2007-9 and its repercussions left multiple private and public banks shattered; many banks turned to national policy-makers and obtained enormous public financial support (e.g. Ireland 2009 or Spain 2012). This, once again, demonstrated the benefits of close political connections for banks in times of banking crises. At the same time, those ties

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generate extraordinarily high economic costs for the public sector[1] and political costs for incumbent politicians who are on the hook for using taxpayers' money for expensive bank bailouts. In light of these detrimental political effects, politicians' motivation to uphold ties with banks are much less clear. In this paper we shed light upon the questions if and how politicians benefit from politically connected banks, especially in institutional contexts where insider lending and outright corruption are strictly monitored and sanctioned.

In order to find answers to those questions, the paper analyzes the role of German public savings banks (*Sparkassen*) in local politics and estimates the effect of board membership in German public savings banks on mayors' success in local elections. We speculate that local mayors in Germany extract political rents from their by board membership. As *Sparkassen* are owned by German counties and municipalities, local politicians often sit on supervisory boards and the credit committee of those banks, which allows them to influence strategic decisions of savings banks that might affect reelection chances.

Evidence shows that public banks' activities are subject to political electoral cycles: lending of savings banks can be influenced by politicians and, indeed, follows the political business cycles of elections (Haselmann et al., 2016; Gropp and Saadi, 2015; Vins, 2008; Englmaier and Stowasser, 2016; Sapienza, 2004; Dinc, 2005; Baum et al., 2010; Illueca and Lavezzolo, 2016; Infante and Piazza, 2014); however, it remains unclear whether these lending activities have an effect on incumbents re-election chances. To investigate whether this is the case, we consider if bank board membership of incumbents can help explain the incumbency advantage that German mayors appear to enjoy (Freier, 2015). To test our claim, we exploit the fact that not all locally elected political leaders in Germany are board members in Sparkassen and compare the electoral performance of politicians with and without participation in the supervisory boards of Sparkassen; we expect board membership to be one of the mechanisms through which incumbent mayors improve their electoral chances. To test this claim, we build a unique hand-collected panel dataset on the boardroom composition of German savings banks of more than 200 savings banks in five key

[1]The bailout programmes in Ireland and Spain partly caused public debt-to-GDP levels to leap up from pre-crisis levels of 23% and 40% for Ireland and Spain respectively to 120% and 100%.

German states covering more than 5,000 municipalities over the period from 2006 to 2015[2].

We find an economically substantial and statistically significant positive effect of board membership on the re-election chance of incumbent parties of 5-8%. We estimate Ordinary Least Square (OLS) models with robust standard errors and test its robustness to model specification and the use of alternative statistical models: we, moreover, estimate probit models and interpret the marginal effects with the average-case as well as observed-value approach; finally, we conduct Entropy Balancing in order to analyze if our finding is driven by pre-treatment differences in control and treatment group. The effect is largely robust to different model specifications and statistical models used.

The paper is structured as follows: In Section 2, the relevant existing literature is reviewed. Following this, the institutional setting is described (section 3). Section 4 outlines the main hypothesis of the paper; subsequently, datasets and findings are presented and robustness checks are conducted (section 5). Section 6 concludes.

2 Literature Review

Academic scholars often speculate about the political use of banks, for instance arguing that banking crises occur because governments build banking systems that are 'fragile by design': governments regulate banks, but also use them as a source of finance; they bail out banks, while requesting votes from taxpayers that pay the bailout bill (Calomiris and Haber, 2014). The recent financial crisis has, once again, revealed the high economic costs of close one-on-one relationships between policy-makers and bank management in form of economically costly bailouts of banks; banks benefit from close political connections, often avoid painful tight restructuring measures, and are more likely to obtain (larger) bailouts than non-connected banks (Grossman and Woll, 2014; Culpepper and Reinke, 2014; Faccio et al., 2006). At the same time, close ties between politicians and banks can become politically costly for incumbent politicians when banks run

[2]The states are Baden Wurttemberg, Bavaria, Hesse, North Rhine-Westphalia, and Rhineland Paletinate. The work-in-progress paper provides a preliminary analysis of data for three federal states - Bavaria, Hesse, and Rhineland Paletinate).

into trouble and their survival depends on taxpayers' money as voter preferences clash with bank bailouts; in those cases, the institutional framework and the degree of democratic accountability plays a crucial role for policy-makers' responses to banking crises (Keefer, 2007; Rosas, 2009; Funke et al.). Hence, while politically connected banks enjoy obvious benefits in times of crises, elected politicians have to deal with enormous economic and political costs emerging from their close relationships to banks; the literature is, however, much less specific about what politicians obtain in return from those ties. In this paper we analyze one potential benefit for politicians: their electoral performance.

Recent academic research confirms the existence of *electoral cycles* in public banks' lending and other business activities, such as bank consolidation. Interestingly, this effect is ubiquitous: Scholars find it in developing as well as in advanced market economies. It occurs in countries known for their close ties between politicians and banks, such as Southern and Eastern European countries (Baum et al., 2010; Dinc, 2005; Sapienza, 2004; Illueca and Lavezzolo, 2016; Jackowicz et al., 2012; La Porta et al., 2002), but was found in established democracies with strong institutional checks and balances like Germany too, where one would expect to see less politicization of bank activity. German savings banks have been shown to lend more in years in which elections take place at the county level (Englmaier and Stowasser, 2016; Gropp and Saadi, 2015); moreover, it has been demonstrated that *Sparkassen* are less likely to lay off employees and to merge with neighboring savings banks in the year preceeding county elections (Vins, 2008). Thus, the existence of *electoral lending cycles* is well established in the literature. The Economics literature on public banks, however, largely focuses on the behavior of banks and its detrimental implications for banks' performance, thereby, ignoring an important aspect, namely how politicians benefit from politically connected banks. This paper contributes to this strand of literature by examining the electoral effect of politicians' board membership in German *Sparkassen*, hence, analyzing whether political tinkering with savings banks actually increases incumbents' chances for re-election.

This paper, furthermore, contributes to the broad literature on the *incumbency advantage* in established democracies[3]. Incumbent parties and candidates seem to derive an advantage from holding political office during re-election campaigns, an effect first identified by Erikson (1971) for US Congressional Elections. Previous research in the German context has demonstrated that also German politicians at the state, federal, and municipal political level enjoy partisan incumbency advantages[4] (Ade et al., 2014; Freier, 2015; Hainmueller and Kern, 2008). These studies, however, have not provided exhaustive explanations for the causal relation and the mediating factors between incumbency and re-election chance for politicians[5]. By analyzing the electoral effect of board membership for incumbent mayors in Germany, this paper analyzes a potential causal mechanism that mediates the party incumbency advantage.

3 Institutional Setting

3.1 German Public Banks

The German three-pillar banking system consists of a small number of large commercial banks, about 1,100 cooperative banks, and 409 publicly owned *Sparkassen* as well as eight public *Landesbanken*. Today, public banks account for 34% of total assets and 44% of lending to non-financial institutions in Germany (Deutsche Bundesbank, 2015) (see Appendix A). Besides their significant share in overall assets and lending, they are important actors for the local economy in Germany: Like for many other public banks, their mandate obliges them to not only maximize profits, but support regional economic and social development[6]. *Sparkassen* foster local economic development by providing credit to small and medium-sized enterprises[7] as well as to local governments and subsidize the generation of local public goods, such as access to finance in rural areas through an

[3]Interestingly, in young democracies, such as Mexico, scholars find the opposite effect (*incumbency curse*): incumbents seem to get punished in the following election (Lucardi and Rosas, 2016).

[4]The incumbency advantage literature analyzes legislator as well as partisan incumbency effects. Following the majority of the incumbency research, this paper looks at the partisan incumbency effects; in doing so, the sample is not restricted by retirement cases and issues such as systematic strategic retirement are avoided.

[5]A first attempt to decompose the sources of the advantage for incumbents was conducted by Levitt and Wolfram (1997), who argued that incumbents are able to deter high-quality competitors.

[6]*Sparkassen*, for instance, are major contributors of local sports clubs or cultural events through generous donations.

[7]Small and medium-sized enterprises are the backbone of the German economy. Usually, access to finance is more difficult for smaller firms. The specific nature of the German banking system with the prominent role of *Sparkassen*, however, facilitates access to credit for smaller companies.

extensive branch system.

Sparkassen's business areas areas are, by law, restricted, so that savings banks do not compete against one another, but have a strong regional component in their activities; in any given municipality, only a single savings bank is established, hence, savings banks do not compete against each other for customers (regional principle, see Appendix B [in German]). While in many other countries, such as Spain, the regional principle for public banks was abandoned and banks expanded their branch network geographically, Germany belongs to the last advanced market economies that retained the regional principle.

Most of the 409 *Sparkassen* are owned by the counties and municipalities in which they operate[8]; for this reason, many local politicians from the county and municipal level, in particular county commissioners (*Landräte*) and mayors, are members of the supervisory board (*Verwaltungsrat*) and the credit committee of their local *Sparkasse*[9]. The board seat provides politicians with statutory leverage over strategic decisions of banks and opens the door for political tinkering and rent-seeking behaviour of politicians with a board seat in their local savings bank.

3.2 German Political System: Municipalities and Mayors in Germany

The German federal political system consists of four government layers: The central government (federal level), 16 states (state level), 399 counties and 107 county-free cities (county level), and 11,192 municipalities (municipal level). Each municipality is jointly governed by its municipal council and its directly elected mayor[10], who are elected in separate elections. While the majority of mayors belongs to the two dominant political parties in Germany - Social Democrats (SPD) and Conservatives (CDU/CSU) - some mayors are from smaller parties or independent candidates. Election rules depend on federal law and the mayoral tenure varies across federal states between five and eight years. In most federal states, mayors stand out in local politics as the only full-time

[8]Only five savings banks are politically independent and not owned by a political entity.

[9]The credit committee has to approve loans exceeding a pre-defined threshold. The members of the supervisory boards decide on the use of profits of the bank (payout politics), donations of banks, and branch openings and closures.

[10]While municipal mayors in Bavaria and Baden Wurttemberg are elected directly by voters since World War II, most German federal states introduced direct elections on the municipal level only in the 1990s.

politician at the municipal level with a strong and independent position[11] (Freier, 2015).

German municipalities provide a variety of local public goods and services: They are responsible for administrating spending received from higher government tiers, oversee local public firms, and provide a variety of direct responsibilities such as cultural expenditures, childcare provision, or local infrastructure. While most tasks provided by municipalities are determined by law, local politicians have some room for manoeuvre as they can take on additional responsibilities and deliver voluntary services. Moreover, municipalities have a some degree of freedom in designing tax policy by determining municipal taxes (local business tax and property tax) (Fritz and Feld, 2015). At the same time, local politicians get access to formal or informal local networks, amongst others the boards of their local *Sparkassen.* Many mayors (in Bavaria about 25%) have a seat at their local savings bank. Hence, municipal elections are important events for the population in the voting district[12] and for the political candidates running in the election.

4 Hypotheses and Predictions

In this paper, we examine the hypothesis that incumbent parties whose mayors have a board seat in their local *Sparkasse* are more likely to be re-elected compared to incumbent parties without a mayor at a *Sparkasssen* board. To estimate the effect of board membership on election outcomes, we exploit the fact that not all locally elected mayors in Germany are board members in a savings bank and compare the electoral performance of politicians with and without board representation in their local savings bank.

There a multiple channels through which board membership might affect incumbents' electoral performance: Mayors with a board seat have access to supervisory tasks and strategic decision-making of the *Sparkasse*; the chairmen of the savings bank, usually mayors or county commissioners, even have access to the credit committee. Loans that exceed a certain volume need to be

[11]Not all mayors are full-time politicians. By law, municipalities with more than 5,000 inhabitants should have a full-time mayor; however, this threshold is fuzzy in reality. Generally, full-time mayors govern larger municipalities than part-time mayors.

[12]The perceived importance of municipal elections in Germany is reflected in the comparatively high voter turnout: In our sample the average voters' turnout is 63%, which is significantly higher than for European or county elections.

approved by the credit committee; mayors with a seat in this committee, thus, have a opportunity to influence the credit volume und direction of lending. In this way, board representatives can direct credit to certain enterprises, projects, or industries, and increase credit volume in the run-up of an election; this potentially provides a powerful financial instrument for fiscally constrained municipalities[13]. Secondly, the members of the supervisory board monitor the bank management and decides on the opening and closure of bank branches as well as merger activities, the use of bank profits[14], has to approve the annual report of the bank, and decides on the remuneration of supervisory board and management. Hence, a seat on the supervisory board is not only attractive due to generous allowances, but board members can delay consolidation (closure of branches) or mergers with other savings banks until after the election; moreover, they can shift costly branches closures to other municipalities which have no representation on the board. Finally, *Sparkassen* are important donors for cultural, social, or even academic local initiatives. They sponsor local sports teams or cultural activities in the region. Local mayors who sit on the board of the savings bank can claim credit for supporting the local society and appear in public to ceremonially hand-over donations or inaugurate sponsored events or buildings. The board seat, thus, also helps those mayors to increase local visibility. For these reasons, we hypothesize that mayors with a board seat in their local savings bank are able to extract political rents from their seat making re-election more likely.

A key question arising from the design is what determines the assignment of board posts? The German *Sparkassen* law[15] formally requires sufficient expertise to understand the economic and legal procedures in a bank (Sparkassengesetz, ğ12). In practice, however, board members are rarely chosen based on the qualification and exhibit a considerable lack of expertise (Böhm et al., 2012; Hau and Thum, 2009). Clear-cut assignment rules that would enable a Regression Discontinuity Design (RDD) do not exist. In semi-structured interviews with members of the

[13]Unfortunately, the information who sits on the credit committee of a savings bank is not publicly available. The *Sparkassen* law, however, states that the chairman of the supervisory board is default member of the committee.

[14]The determinants of *Sparkassen* payouts are analyzed in Kleff and Weber (2010); Rathgeber and Wallmeier (2011).

[15]The precise definition of the Sparkassen law is left to the federal states; in practice, however, differences across federal states are neglectable.

DSGV (Deutscher Sparkassen- und Giroverband), the German association of savings banks, as well as with a former savings bank chairman and a current board member we obtained a more fine-grained understanding of the selection process: Personal characteristics such as popularity, party affiliation, and political experience, but also structural characteristics of the municipality such as size play an important role. Mayors from some larger cities have a board seat by default[16].

5 Data

A unique, largely hand-collected dataset is compiled that combines information from various sources. The unit of analysis is mayor-election combinations. Data on mayors' electoral performance is matched with data on board compositions of German savings banks. Overall, the final sample includes 7,350 municipalities and 340 savings banks in five German states (Baden-Wuerttemberg, Bavaria, Hesse, North Rhine-Westphalia, Rhineland-Palatinate) over the years 2006-2015[17]. The current sample used for the analysis in this work-in-progress paper includes three federal states and almost 130 savings banks.

5.1 Bank Board Data

We hand-collect a unique panel dataset on the composition of the supervisory boards in German *Sparkassen*. The dataset includes bank-level variables, such as number of employees, size of the board, and total assets, as well as detailed profiles of banks board members such as name, gender, and occupation of board members and the position within the board (normal board member, chairman, or vice chairman). These variables enable us to identify mayors on bank boards and to estimate the financial literacy and party affiliation of board members. However, the dataset only allows us to identify professional mayors as non-professional mayors pursue professions outside the political sphere and the mayoral status cannot be observed the occupation variable.

[16]German savings bank can be owned by a single city (usually organized at the county level; *Stadtsparkasse*), by a county (*Kreissparkasse*), and by multiple entities (*Zweckverbandssparkasse*). In particular in banks owned by multiple entities, the board assignments are driven by political negotiations and only few seats are allotted by default.

[17]The sample period could be extended to 1998-2015 as argued below.

For Germany, board member data for public savings banks is available from *Bundesanzeiger*, where companies publish their annual reports. Reports are available for the period from 2006-2015[18]. The dataset on boardroom composition constitutes the first comprehensive and systematic investigation of German savings banks' corporate governance.

The dataset used in our analysis contains around 18,000 board member/year observations for 128 Sparkassen over the period from 2006-15. The dataset contains unique individual profils for 3,500 board members of which 600 are professional mayors. Mayors predominantly hold top positions (chairman or vice chairman): Almost 40% of mayors are in top positions (and have, thus, access to the credit committee). This affirms our notion that mayors have access to key positions in the corporate governance of German savings banks.

5.2 Election Data

A centralized database on German mayoral elections does not exist. We, therefore, collect data for mayoral elections from the German state statistical offices. The difficulty of accessing this data[19] restricts our sample to five key German states (*Länder*): Baden Wurttemberg, Bavaria, Hesse, North Rhine-Westphalia, and Rhineland Palatinate. In this work-in-progress paper we analyze election data for three states: Bavaria, Hesse, and Rhineland Palatinate. The dataset for mayoral elections contains information on the election date, the number of eligible voters in the voting district, the voter turnout, and name, gender, partisan affiliation and number of votes for all candidates.

The database comprises the electoral results of 3,196 elections since 2006 in 1,780 municipalities[20]. Matching the dataset for board composition and for mayoral elections allows to identify mayors with board seats in their local savings bank and to comparatively analyze the electoral success of mayors with and without board membership in a *Sparkasse* in subsequent elections.

[18]The timeframe can be potentially extended back to 1998 with micro-fiche versions of annual reports from Bureau van Djiks *Bankscope* database.

[19]Data availability and quality varies enormously across German states. Often, state statistical offices themselves have no digitalized, harmonized data on historical mayoral elections and it usually requires major data cleaning.

[20]We analyze less municipalities and elections because we only include full-time mayor elections. Only professional mayors can be identified in savings banks' annual reports. Empirically, only very few non-professional mayors are member of a *Sparkassen* board.

5.3 Sample Selection and Descriptive Statistics

This paper focuses on the partisan incumbency advantage. By analyzing the party level instead of the individual level, we avoid the complex issue of strategic retirement and extraordinarily high re-election rates on the municipal level; moreover, we build on the vast majority of the incumbency literature that also looks at the party incumbency effects. We, thus, use observations for the two main parties in Germany - center-right (CDU/CSU) and center-left (SPD) - ; only the electoral effect of bank board membership of professional center-left and center-right incumbents is analyzed. Election data for other parties are not considered[21]. This restricts the sample to 2,007 elections in 831 municipalities. For each municipality we have information on 1-3 election rounds. Mayoral candidates can be supported by multiple parties; in those cases, we used the candidate's primary party affiliation. When elections required a run-off election (no candidate obtained more than 50%), the result of the run-off election was used.

Table 1: Summary statistics

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Re-Election	0.70	0.46	0	1	2007
Board Membership	0.26	0.437	0	1	2007
Municipality Size	7217	6573	175	64505	2007
Winning Margin	0.41	0.27	0.001	0.99	2007
Terms of Legislator Legislator	1.8	1.1	1	7	1996
Terms of Party	3.3	2.5	1	10	2007
Incumbent Party SPD	0.36	0.48	0	1	2007
Female Incumbent	0.05	0.22	0	1	2007

Table 1 illustrates the scope of the dataset. The re-election rate of incumbent parties in mayoral elections is 70%, one-fourth of mayors are board members in a local *Sparkasse*, and incumbent legislators serve on average 1.9 terms as a mayor with some mayors serving up to seven terms in a row. Incumbent parties stay in office on average for 3.3 terms, and control in some municipalities mayors' office ten terms in a row. 36% of incumbent mayors in our sample belong the the social-democratic party SPD, 64% to the conservative party, and only 5% are female. The mean victory

[21] Following Freier (2015), we exclude smaller parties such as the Greens (Die Grünen) and the liberal party (FDP) as they rarely win mayor's office. Independent parties (e.g. Freie Wähler) are particularly strong in Bavaria, however, local party identity is often not fix over time and such party groups sometimes only form to support a candidate.

margin is 41%[22] and the mean size of municipalities in the sample is 7,217 eligible voters; the distribution of municipality sizes is strongly positively skewed: The smallest municipality has only 175 eligible voters[23] while the largest municipality has more than 60,000 voters.

6 Model

We observe electoral outcomes of mayoral elections within each municipality as binary response variables and denote them as y_t^p, where the superscript p refers to the party identity (center-left or center-right) and t to to the time of the election. The outcome variable takes on the value 1 if the margin of victory v_t^p of the incumbent party, defined as the the distance in vote share of the party to the best opponent, is positive in t.

$$y_t^p = 1[VictoryMargin_t^p > 0 \wedge VictoryMargin_{t-1}^p > 0] \tag{1}$$

The independent variable - board membership - is denoted with the dummy variable α_{t-1}^p, being 1 if the incumbent party's mayor had a board seat in the term preceding the observed election (i.e., $t-1$). Our model regresses the binary re-election dummy on the board membership variable along with a set of controls. All control variables are pre-treatment or time-invariant. The concern of the paper can be expressed as:

$$Pr(y_t^p = 1|X, \alpha_{t-1}^p = 1) - Pr(y_t^p = 1|X, \alpha_{t-1}^p = 0) \tag{2}$$

where X represents a set of covariates. The binary re-election variable is defined by equation (1). The estimated model can be stated as:

$$y_t^p = \beta_0 + \alpha_i + \beta_1\alpha_{t-1}^p + \beta_2 X_1 + \beta_3 X_{2_{t-1}} + \varepsilon_t \tag{3}$$

[22] The winning margin is calculated as the percentage difference between the winning candidate and the best loser. In cases of only one candidate, we use the "no" votes to calculate the victory margin (i.e. $Voteshare = Voteshare - (1 - Voteshare)$).

[23] The small municipality is an outlier that had a professional mayor only temporarily for one tenure. The second smallest municipality in the sample has 878 eligible voters.

where X_1 denotes to the time-invariant control variables and $X_{2_{t-1}}$ to the time-varying controls. α_i is the time-invariant state fixed effect. ε_t is the unobserved error term with mean zero.

We approximate the effect of board membership in a *Sparkasse* on the re-election chances by calculating multiple different specifications: In the first step, a simple ordinary least square (OLS) regression model with robust standard errors is estimated (although we have a limited dependent variable). Subsequently, we use a logistic regression model in order to account for binary nature of our response variable: For interpreting the marginal effects and estimating the size of the effect of board membership, we follow Hanmer and Kalkan (2013) and compare two different ways to generate predictions: The average case approach and the preferable observed-value approach. Finally, we use entropy balancing as a matching technique (Hainmueller, 2012; Hainmueller and Xu, 2013) to preprocess the covariates and generate covariate balance for treatment (*Sparkassen* board membership = 1) and control group (*Sparkassen* board membership = 0).

6.1 Control Variables

The paper controls for a number of potential confounders that might correlate with re-election chances as well as the probability of obtaining a board seat in a local *Sparkasse*. The controls can be classified as personal and party characteristics and properties of the municipality.

Legislator and Party Characteristics: The popularity and personal network of the mayor and his party in the voting district has supposedly a strongly positive effect on the re-election chances of the party; at the same time, a more popular and better connected mayor might be more likely to get a seat in the local savings bank as it improves the mayor's standing. Three variables - victory margin in previous election, $VictoryMargin_{t-1}$, as well as number of terms in office for legislator ($LegislatorTenure_{t-1}$) and on the party level ($PartyTenure_{t-1}$) are proxies for the popularity and political experience of the incumbent party and legislator. Parties with higher popularity had probably a larger margin of victory in the previous election and control the mayor's office for more terms than less popular parties/candidates. We also control for the effect of gender of the incumbent mayor on re-election chances ($LegislatorGender_{t-1}$); although women are less likely to be mayors (only 5% of mayors in the sample), there is no a priori reason to believe that mayor's gender affect the re-election chances. Finally, the model controls for the party identity - CDU or SPD ($PartyIdentity_{t-1}$); the CDU holds a disproportionate share of mayoral offices in our sample, but we have no priors about the party-specific effect on re-election prospects.

Municipality Properties: We include time-invariant municipal-level control variables. The size of a municipality is presumably a strong predictor for board membership in a *Sparkasse*, its effect for the re-election chances of mayors is less clear: Levitt and Wolfram (1997) argue that larger municipalities have access to more resources that can be used to regain the mayor's post; on the other hand, mayoral seats in smaller municipalities are less attractive and elections might be less contested (less candidates; less qualified candidates). We, therefore, include the number of eligible voters in a municipality in our model as a proxy for municipality size ($MunicipalitySize(ln)$). We take the logarithmic form because the distribution of values is strongly positively skewed (most municipalities in the sample are small)[24].

6.2 Results

We find a consistently significant, moderate positive effect of board membership in a German *Sparkasse* on the re-election chances of incumbent parties. Incumbent parties whose mayor serves as a board member of a local savings bank are 5-8% more likely to regain political office than mayors without a seat at the supervisory board of a *Sparkasse*.

We estimate four OLS models (see Table 2). For all four models, the coefficient of board membership of the mayor is positive, statistically significant and rather stable ranging between .062 and .077 at the 1% level of statistical significance. Hence, board membership in a *Sparkasse* increases the re-election probability of the incumbent party by 6.2-7.7 percentage points[25]. This effect if stable across different model specifications.

The OLS model enables us to quantify the effect of the other control variables: As expected,

[24] Other papers (e.g. Freier and Thomasius, 2016) have shown that economic variables also play a role. In order to test the *economic voting hypothesis* that suggests that voting decisions are contingent on past economic performance (Lewis-Beck and Paldam, 2000), we will include municipal debt and deficit as controls at a later stage.

[25] OLS models assume the effect to be constant over units of analysis.

Table 2: OLS Regression Table - Main Findings

	(1) $Re-Election_t$	(2) $Re-Election_t$	(3) $Re-Election_t$	(4) $Re-Election_t$
$BoardMembership_{t-1}$	0.070**	0.065**	0.077**	0.062**
	(0.024)	(0.024)	(0.024)	(0.024)
$MunicipalitySize(ln)$	-0.064***	-0.053***	-0.055***	-0.036*
	(0.014)	(0.014)	(0.014)	(0.016)
$VictoryMargin_{t-1}$		0.116**	0.191***	0.219***
		(0.038)	(0.040)	(0.040)
$LegislatorTenure_{t-1}$			-0.082***	-0.091***
			(0.011)	(0.011)
$PartyTenure_{t-1}$			0.011**	0.006
			(0.004)	(0.004)
$PartyIdentity_{t-1}$			-0.065**	-0.039
(SPD: E = 1)			(0.022)	(0.023)
$LegislatorGender_{t-1}$			-0.014	-0.018
(Female: E = 1)			(0.048)	(0.049)
Fixed Effects	no	no	no	yes
Constant	1.226***	1.088***	1.216***	1.099***
	(0.115)	(0.125)	(0.127)	(0.134)
N	2007	2007	1996	1996
r2	0.011	0.016	0.048	0.059

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

past margin of victory of the incumbent party has a strong positive effect on the re-election chances of the party: In model 4, the mean victory margin (41%) increases the re-election chances of the incumbent party in the subsequent election by 9 percentage points compared to an incumbent who won the previous elelction with a winning margin close to zero. Thus, popularity in the previous election helps incumbent parties to re-gain mayor's office. Municipality size has a consistently negative effect on re-election chances with varying significance levels, i.e. incumbent parties in larger municipalities are less likely to get re-elected. This effect can be potentially explained by the lower competitiveness of elections in smaller municipalities. Surprisingly, the duration of legislator and party in office have not the expected coefficient: While party tenure has no statistically significant effect on re-election chances, legislator tenure has even a negative effect on the probability for the party to regain mayors' office implying that political experience does not necessarily pay off[26]. Party identity and the gender of the incumbent mayor have no statistically significant effect on re-election chances; this is in line with our expectation. Interestingly, differences across federal states account for some variation: Including state fixed effects, removes statistical significance from the party identity and party tenure control variables.

6.3 Robustness

The OLS regression provides a rough indication for the direction and a benchmark for the size of the effect of *Sparkassen* board membership on the re-election chances of the incumbent party. To check the robustness of our finding and make the statistical analysis more sound, we estimate models for different subsamples (restricted victory margin; focus on contested elections) and find that the effect is robust to sample definition (see Appendix, Table 3). In regression models not reported, we included voter turnout and a dummy for contested elections (more than one candidate) for the previous election; both variables do not change the coefficient of interest substantively and are statistically insignificant. Furthermore, we estimated separate models for the three federal states: The direction of key coefficient does not change although its size varies slightly and, in particular

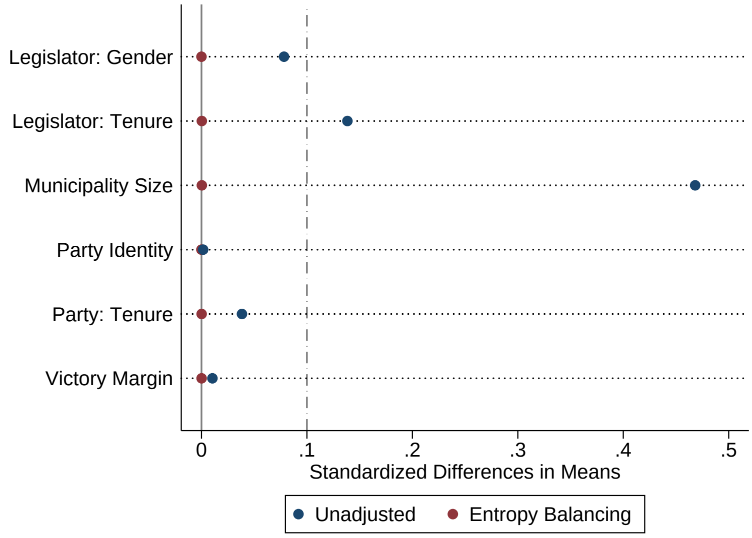
[26]This finding is counter-intuitive and requires closer examination in the further analysis

in Rhineland-Palatinate and Hesse, statistical significance decreases, which can ascribed to the lower sample size for those federal states.

The precise estimation of the effect is suspect as OLS regression models are of limited use to estimate limited dependent variable models. We, therefore, estimate a logistic regression model (probit model) and interpret the marginal effects of board membership using the *observed-value approach* (Hanmer and Kalkan, 2013): It predicts the probability for all cases and averages the predicted probabilities across all cases, thus, is robust to model specification and enables a thorough test of the theory compared to more common *average case approach* that sets all independent variables to their sample means (e.g. King, 1998). The average predicted probability using the *observed-value approach* is .061; incumbent parties whose mayor is member of the board are 6.1 percentage points more likely to get re-elected than parties without board representation. This confirms our findings from the OLS regression analysis. The more common *average case approach* predicts a very similar probability (.064).

In a final step, we conduct entropy balancing, a multivariate reweighting method to produce balanced samples, as suggested by Hainmueller (2012). Entropy balancing pre-processes data prior to the estimation of binary treatment effects and helps to reduce the model dependence by making the treatment variable (here: *Sparkassen* board membership) independent of the background characteristics. The covariates need to be exogenous pre-treatment characteristics. For interpreting the coefficient of interest as a causal effect, we need to assume that treatment status is random conditional on all observed covariates X (selection on observables assumption). This condition is not necessarily meet because other unobserved (and partly unobservable) factors might play a role, too. Nevertheless, entropy balancing provides a diagnostic tool for identifying disbalances in covariates and balances them. In Figure 1 we see that treatment and control group differ in particular regarding the municipality size (mayors in larger municipalities are more likely to have a board seat), but also in terms of experience of the incumbent mayor. The standardized means for other covariates do not differ significantly across treatment and control group. Estimating a probit model with balanced covariates decreases the size of the coefficient and the statistical significance of the finding: Board membership increases the probability of party re-election by 4.7 percentage points; this finding is statistically significant at the 10% level of statistical significance.

Figure 1: Covariate Balance - Unadjusted and Entropy Balance



6.4 Discussion

We find a moderate, consistent effect of board membership on re-election chances of incumbent parties that is robust to model specifications: Incumbents with a board seat in a local *Sparkasse* are 5-8 percentage points more likely to regain mayoral office.

Mayors potentially have potentially access to supervisory boards of different publicly owned companies, such as savings banks, local zoos, or public utility companies: Hence, we compare mayors with a board seat in a *Sparkasse* to mayors who potentially have seats in supervisory boards of other publicly ownd companies. Thus, the moderate size of the effect corresponds with our expectation: *Sparkassen* board membership helps incumbent parties to regain mayoral office, but is only one factor among others that explains the partisan incumbency advantage partly. Our interviewees confirmed that *Sparkassen* board membership belongs to the most attractive board posts for local politicians. Access to the governance of a savings bank might provide mayors with a channel to increase the re-election chances that is more effective compared to board seats in other public companies; however, there are other alternative channels of increasing re-election prospects. In particular for mayors from smaller municipalities that have no automatic entitlement to a board seat and that are less likely to sit on multiple supervisory boards, the board membership in *Sparkassen* might provide a powerful instrument to increase re-election chances.

7 Conclusion & Outlook

The work-in-progress paper purports to estimate the effect of board membership in German public savings banks (*Sparkassen*) on incumbent parties' electoral success. It compares the performance of incumbent parties with and without a board seat in mayoral elections in three German federal states covering more than 2,000 mayoral elections in 870 municipalities between 2006-2015. We find a moderate positive effect: board membership in a savings bank increases the re-election chances of the incumbent party by 5-8 percentage points; this effect is robust to model specification and sample selection. The finding shows that public ownership of a bank not only affects bank activities (e.g Englmaier and Stowasser, 2016), but also provides a tool for politicians to increase their chances of regaining political office; it, thus, adds knowledge on a largely ignored facet of close bank-politics connections, namely in what ways politicians benefit from politically connected banks. The dataset compiled as part of this paper project will enable future research to gain a more detailed understanding of the internal governance of publicly owned companies and the interaction between politics and finance in public banks.

For testing the robustness of the finding and to add variation, we will complement our dataset with board membership and electoral data for other federal states; in order to capture the cross-country dimension, we consider to extend the scope of our dataset to other European countries with significant public ownership in the banking sector, such as Spain and Switzerland. We aim to develop a better understanding of the determinants of board seat assignment in order to approximate causality in our research design. Finally, we will need to deploy more fine-grained statistical models for estimating the effect of interest[27].

[27] Comments on those aspects are particularly welcome.

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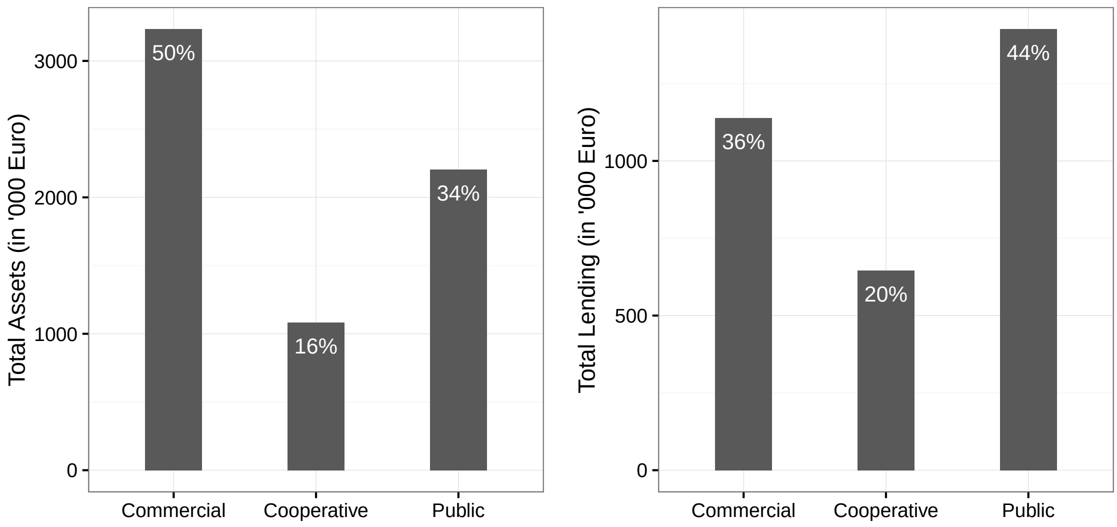
Appendix

Appendix A - Germany's Three-Pillar Banking System



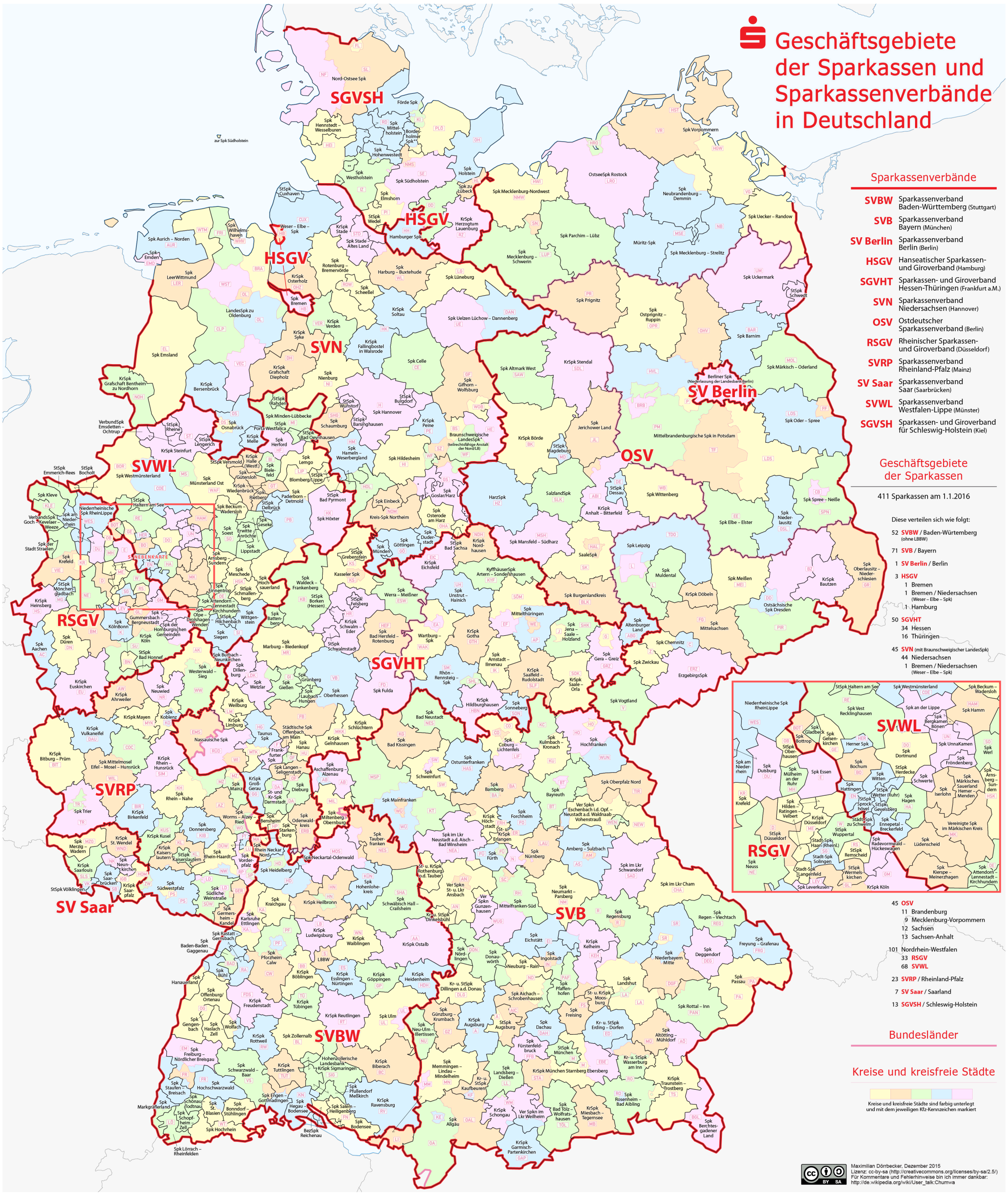
(a) Total Assets by Bank Type

(b) Total Lending by Bank Type

Appendix B: Total Assets and Lending (excl. Intra-Bank Lending) in the German Banking Sector

Source: Deutsche Bundesbank (2015)

Appendix B - Business Areas of German *Sparkassen*



Appendix C - Additional OLS Regressions

Table 3: OLS Regression Table: Sub-Samples

	(1) Full Sample	(2) <60% Victory Margin	(3) Contested Only
$BoardMembership_{t-1}$	0.062**	0.084**	0.062*
	(0.024)	(0.027)	(0.028)
$MunicipalitySize(ln)$	-0.036*	-0.034	0.023
	(0.016)	(0.018)	(0.019)
$VictoryMargin_{t-1}$	0.219***	0.271***	0.182***
	(0.040)	(0.077)	(0.052)
$LegislatorTenure_{t-1}$	-0.091***	-0.114***	-0.079***
	(0.011)	(0.014)	(0.014)
$PartyTenure_{t-1}$	0.006	0.009	-0.002
	(0.004)	(0.005)	(0.006)
$PartyIdentity_{t-1}$	-0.039	-0.021	-0.036
(SPD: E = 1)	(0.023)	(0.026)	(0.026)
$LegislatorGender_{t-1}$	-0.018	-0.033	-0.023
(Female: E = 1)	(0.049)	(0.051)	(0.055)
Fixed Effects	yes	yes	yes
Constant	1.099***	1.084***	0.563***
	(0.134)	(0.151)	(0.168)
N	1996	1478	1526
r2	0.059	0.067	0.051

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Model 1 in Table 3 uses the full sample (see Table 2, Model 4) and provides a baseline. Model 2 uses only a restricted sample consisting elections with a past victory margin of less than 60% ($VictoryMargin_{t-1} < .6$), i.e. only elections in which the incumbent party got elected with a victory margin smaller than 60%; as Freier (2015) argued, elections with higher winning margin might be substantively different. Model 3 focuses only on elections with at least two candidates as the re-election chance is very high if the election is not contested (94%, compared to 62% for contested elections). The coefficient of interest remains in the bandwidth of 6-8 percentage points and statistically significant. Revealingly, the coefficient for municipality size becomes insignificant once we use contested elections only; this demonstrates that the effect of municipality size (see Table 2) is mediated through the higher competitiveness of elections in larger municipalities.