How Politics influence State-owned Banks - the Case of German Savings Banks

Abstract

This paper is one of the first to analyse political influence on state-owned savings banks in a developed country with an established financial market: Germany. Combining a large dataset with financial and operating figures of all 457 German savings banks from 1994 to 2006 and information on over 1,250 local elections during this period we investigate the change in business behavior around elections. We find strong indications for political influence: the probability that savings banks close branches, lay-off employees or engage in merger activities is significantly reduced around elections. At the same time they tend to increase their extraordinary spendings, which include support for social and cultural events in the area, on average by over 15%. Finally, we find that savings banks extend significantly more loans to their corporate and private customers in the run-up to an election. In further analyses, we show that the magnitude of political influence depends on bank specific, economical and political circumstances in the city or county: political influence seems to be facilitated by weak political majorities and profitable banks. Banks in weak areas seem to be less prone to political influence.

Key words: savings banks, political influence, government-owned banks, corporate governance, political economy, state-owned enterprises, electoral cycle
JEL: D72, D78, G21, G28, H70

1 Introduction

Government ownership of banks is still very common around the world as La Porta et al. (2002) show. According to their findings on average over 40% of the equity of the 10 largest banks in a country is owned by the government. Thus, it is of great interest to understand how state-owned banks act differently from private banks. Insofar, Germany presents an excellent market to study state-owned banks as approximately 50% of the banking market with regard to both loan volume and total assets are controlled by the government.[1] This is one of the highest share of state-owned banks among developed countries. La Porta et al. (2002) distinguish two main objectives of government ownership, the "development" and the "political" view. Whereas the former argues that state-owned banks help to foster the local economy and stabilize the financial system (see also Gerschenkron (1962)), the latter sees state-owned banks rather as an instrument for politicians to fulfill their own political agenda.

This paper focuses on the political view and tries to answer the question, whether savings banks are prone to being influenced from the representatives of their government owner - the local politicians - with regard to their political agenda. We combine detailed financial and operating data for all German savings banks from 1994 to 2006 with information on local elections on city/county level and analyse how the highly political event of an election influences the behavior of the local savings bank.

Despite numerous evidence in the academic literature on the negative relationship between government ownership of banks and efficiency, economic growth and the likelihood of bank crises, there is only little documented evidence on politically influenced behavior of banks. One of the only few articles to this regard is Dinc (2005) that shows an increase in lending activities associated with elections. However, Dinc (2005) finds such evidence only for state-owned banks in transition economies. This paper aims to provide - for the first time - evidence for politically motivated behavior of banks in a developed country with an established strong financial system.

Political influence is not negative per se. To the contrary, although German savings banks are profit-oriented, i.e. they are expected to earn a decent profit at the end of the day, they specifically do not aim to maximize their profits. They rather follow a dual mission under which they have a public duty to

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[1] Total market includes the big commercial banks, savings banks, "Landesbanken", cooperative banks and the central institutions of the cooperative banks. The focus of this paper are savings banks only, which posses a market share of approximately 30%. Market share of savings banks based on number of customers is likely to be significantly higher as their customer focus is on small and medium enterprises.

fulfill, i.e. they are mandated to foster the local economy and support the government in fulfilling their political, social, cultural and economic agenda for the city or county, which is in line with the "development" view. However, certain politically motivated actions have to be scrutinized carefully to fully understand whether these actions are benefiting the public or rather the respective politicians in their ambition to be reelected ("political" view). As savings banks are owned by the local cities or counties potential inefficiencies or misallocations due to political influence are costly to the public as a whole.

In the vain of Dinc (2005) we argue that elections are major political events that could lead local politicians to implicitly or explicitly exert influence on state-owned banks to act in a certain way that is assumed to increase the probability of their (re-)election. In this paper we analyse whether savings banks tend to behave differently in the context of local elections. Based on a unique data set that includes more than 1,250 observed elections between 1994 and 2006 we find evidence for such a change in behavior in the context of local elections, thus providing strong indications for political influence. Specifically, we show that German savings banks are less likely to close branches, lay-off employees and engage in mergers around elections. Furthermore, during these periods, savings banks tend to spend more money on extraordinary activities and grant more loans to both corporate and private customers. To derive policy implications it is of great importance to understand whether all savings banks are influenced by politics alike or whether some are more prone to being influenced than others. To shed light on this question we conduct further analyses to understand more of the circumstances facilitating political influence. We find that political influence tends to be higher if political majorities in the particular city or county are tight and the banks are more profitable. Surprisingly, it seems to be lower in economically weak areas.

The main contribution of this paper to the literature of politically motivated influence on banks is twofold: firstly, to our knowledge this is the first research to document political influence on banks for a developed country with a strong legal system. Secondly, our detailed proprietary data set allows us not only to show the impact on lending activities (as in Dinc (2005)) more carefully but also to investigate other behavioral changes than lending activities: number of employees, branch closures, merger activities or extraordinary spendings. Political influence on these dimensions is even more intuitive as its impact with voters is more direct but also more difficult to investigate due to data availability.

Furthermore, a relatively large sample size over a longer time period of 13 years - including on average three elections in the same electoral district - provides more observations than other papers in this area and, thus, a more reliable

base for such an analysis.[2] As all observations stem from one country, they are all based on the same election system and the same legal and regulatory background. Thus, they are highly comparable and the potential problem of omitted variables is significantly smaller than in cross-country studies.

The paper proceeds as follows: section 2 provides a short overview of the relevant literature. section 3 continues with some background information on the German savings bank sector for readers that are less familiar with the German banking market. Section 4 lays down the methodological approach taken and section 5 introduces the used dataset. Section 6 provides the results of the main analyses conducted, which are augmented by further analyses in section 7. Section 8 concludes the paper.

2   Literature Overview

More recent work on state-owned enterprises includes La Porta et al. (2002), Shleifer (1998), and Shleifer and Vishny (1994).[3] These papers contrast the "development" and the "political" view of government ownership. The "development" view states that state-owned enterprises help to overcome market failures, especially in cases where social benefits (external effects) make certain otherwise unprofitable or risky projects desirable for the society as a whole. State-owned banks, for example, might help to foster the local economy by granting loans to risky startups that would not be able to obtain a loan from a private bank. In contrast, the "political" view suggests that politicians are primarily focused on achieving their own personal objectives rather than maximizing social welfare. In this regard, arguably the most important single goal of a politician is to maintain voting support (Sapienza, 2004). As a result politicians might influence state-owned enterprises in their realm to act in ways that are in the politicians' own interest, i.e. that increases their voting support at upcoming elections (Stiglitz and Atkinson, 1980; Boycko et al., 1996). Current research primarily points into the direction of the "political" view. La Porta et al. (2002), for example, who study explicitly the consequences of government ownership on banks in a cross-country study find that a higher degree of government ownership is associated with slower economic and finan-

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[2] The observation period of Dinc (2005), e.g., is only half as long (1994-2000) and includes less than half the number of electoral districts (in their case countries), which results in only 2,058 observations compared to over 5,400 for the analyses presented in this paper.
[3] There is a wide range of further literature on the effects of state-owned banks, which we cannot discuss in this context, e.g. Berger et al. (2005), An et al. (2007), Iannotta et al. (2007) or Altunbas et al. (2001).

cial development in the respective country.[4] So far, however, evidence for the "political" view of state-ownership is mainly indirect and based on lower efficiencies of state-owned enterprises or a less favorable economic and financial development in countries with a higher share of state-owned enterprises.

There is only a small and relatively recent strand of literature providing direct evidence for the link between political motivation and business behavior of state-owned enterprises, in particular banks. It is the purpose of our paper to contribute to this literature by providing further indications of concrete political influence. One of the major papers in this area is Dinc (2005). He analyses the impact of the electoral cycle on the lending behavior of state-owned versus privately owned banks in a cross-country study among the ten largest banks of each of 43 countries between 1994 and 2000. Controlling for macroeconomic and bank specific effects he finds strong support for the hypothesis that state-owned banks grant additional loans before upcoming elections. A closer look at this effect, however, reveals that the finding holds only for emerging market countries in the sample and remains insignificant for developed economies. Closely related, Cole (2007) demonstrates that agricultural lending in India is extented by an additional 10% in election years. He further finds that political influence is particularly strong in regions where political majorities are weak. In another cross-country study among emerging market economies Brown and Dinc (2005) analyse the impact of the electoral cycle on the probability of government interventions in connection with bank failures. They find that a potentially costly government intervention, i.e. a public takeover or revoking the banking license, is significantly less likely to happen in the 12 months before an election. Other recent studies provide more evidence for political influence on banks in developing countries. For example, Micco et al. (2007) find that the performance of state-owned banks in developing countries is significantly lower than that of private and foreign banks in these countries. A main contribution of their research is evidence that this performance gap widens considerably during election years. In a similar vain Khwaja and Mian (2005) and Leuz and Oberholzer-Gee (2006) show that politically connected firms obtain more and riskier financing from state-owned banks in Pakistan and Indonesia, respectively, whereas they do not receive any such benefits from private banks.

To the best of our knowledge there are only three papers that provide evidence for political influence on the business behavior of state-owned banks among mature banking markets: Sapienza (2004), Illueca et al. (2008) and Memmel and Stein (2005). Sapienza (2004) analyses the lending behavior of Italian state-owned banks and finds that stated-owned banks charge lower interest

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[4] Despite some effort researchs regularly fail to provide evidence of a positive effect of state-ownership on the financial and economic development (Barth et al., 2000, 2004; Berger et al., 2004; Beck et al., 2004).

rates than their private counterparts. Introducing local electoral results into her analysis, she finds strong evidence for the "political" view: the stronger the political party in the particular area, the lower the average interest rates. Illueca et al. (2008) analyse the impact of political influence on the lending behavior of Spanish savings banks during the nationwide expansion phase from 1996 to 2004 that followed the deregulation of local branching restrictions in 1988. Based on a large data set including individual loans they show that savings banks with regional politicians on their board of directors tend to expand faster outside their local market than their peers that have only local politicians on their board. They provide further evidence for politically motivated influence by showing that the probability of granting loans and the share of loans granted in other regions outside the home market decreases if the political parties in power of the two regions differ, i.e. savings banks tend to expand foremost into regions where the "political distance" is small. Based on individual loan data Illueca et al. (2008) further show that savings banks with regional politicians on their board tend to grant ex ante riskier loans to firms outside their home markets but within their region than their peers. This hints that some of the loans are rather politically than economically motivated.

The only paper to our knowledge investigating political influence on state-owned banks particularly in Germany is Memmel and Stein (2005).[5] The authors reveal the differences in lending behavior with regard to corporate loans between private and state-owned banks, specifically the state-owned "Landesbanken". In line with the explicit public duty of these banks they find that state-owned banks grant loans to corporates with lower creditworthiness than their private counterparts. Furthermore they find that the probability of granting a loan increases with the local unemployment rate and if the borrower is headquartered in the same state as the bank. Both results provide evidence that these banks fulfill their objective to support the local economy. In a second analysis, however, Memmel and Stein (2005) also find evidence for direct political influence. The likelihood of granting a loan increases significantly the longer the state government has held power but decreases if the state-owned bank is owned by more than one state.

A further theoretical paper that should be mentioned in the context of political influence on banks is Hainz and Hakenes (2007). The authors develop an extensive theoretical model to compare the efficiency of different options a politician has to subsidize local firms. They find that using state-owned banks is more efficient than other ways like direct subsidies, for example. This work

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[5] Another paper in this context is Kleff and Weber (2007) who reveal a positive relation between the amount of dividends paid out by a savings bank and the indebtness of its government owner. Although, this is evidence of behavior influenced by politics it is most likely not motivated by the personal political agenda of the local politicians but rather by the interest of the community or city as a whole.

provides a thorough theoretical explanation why state-owned banks are prone to politcally motivated influence.

Closely related there is some work on the political influence on corporates in general. For example, Goldman et al. (2006) show for the US that the announcement of a politically connected new board member yields abnormal returns for the shares of the respective firm. Furthermore, shares of firms with predominantly Republican members generated abnormal returns follwing the 2000 election victory of the Rebublican party in the USA. Betrand et al. (2004) show that politically connetced corporates in France tend to employ more people and discard less during election years. They find this effect to be particularly pronounced in highly contested elections.[6]

Besides Illueca et al. (2008), who also look into branch expansion, there is - to the best of our knowledge - no literature analyzing politically motivated influence on bank businesses other than lending activities such as closing branches, reducing the number of employees and spending money in extraordinary activities.

3   Overview of the German savings bank sector

Germany's financial system is characterized by a universal banking system where banks are allowed to pursue all types of financial activities (Hackethal, 2004).[7] As a result, no clear specialization among banks has emerged and all banks and savings banks offer the complete range of financial services. The market comprises of three main types of banks: cooperative banks, savings banks and private commercial banks. Roughly 20% of the banks belong to the savings bank sector. In terms of business volume the state-owned savings bank sector controls nearly half of the market. As table 1 shows, by the end of 2006 over 47% of total loans where granted by savings banks and 49% of total deposits collected by them. Thus, they play a dominant role in providing the economy and the society as a whole with loans and banking services. It is important to note that savings banks do not pursue strictly profit maximizing objectives as they also aim to support the welfare of their region[8]

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[6] Other research so far merely shows the value of political connections in countries with weak legal systems, e.g. Fisman (2001), Faccio (2006), Faccio et al. (2006).

[7] A comprehensive overview of the German banking system and its peculiarities can be found in Krahnen and Schmidt (2004).

[8] The savings bank law of the state of Baden-Württemberg, for example, states that it is the objective of savings banks to provide the local economy and its inhabitants with loans and other financial services. Furthermore they are expected to support the local government with regard to its economical, social and cultural plans for the area.

Table 1

Market shares in Germany by bank type

Total loan volume, total deposit volume and total business volume denoted in EUR billions. *Savings banks group* includes savings banks and state banks ("Landesbanken"), *Cooperative banks group* includes cooperative banks and their two central financial institutions, *Commercial banks* includes the five nation wide operating commercial banks, private regional banks and branches of foreign banks.

	Savings banks group	Cooperative banks group	Commercial banks	Total
Number of banks	458	1,234	260	1,952
Market share	*23.5%*	*63.2%*	*13.3%*	*100.0%*
Total loan volume	1,132,836	402,338	858,041	2,393,215
Market share	*47.3%*	*16.8%*	*35.9%*	*100.0%*
Total deposits non-banks	647,153	304,279	370,001	1,321,433
Market share	*49.0%*	*23.0%*	*28.0%*	*100.0%*
Total business volume	2,632,161	894,935	2,257,813	5,784,909
Market share	*45.5%*	*15.5%*	*39.0%*	*100.0%*

Source: Deutsche Bundesbank

All savings banks are members of one of the 12 regional savings banks associations, which represent their interests on a regional and national level, and act as auditors for the banks in their realm. They are furthermore member of the German Savings Banks Association ("DSGV"), which is the main representative on a national and supranational level. These associations foster the savings banks network and help to setup centralized services, e.g. IT. Note, however, that all banks are own legal entities, which are absolutely free in their business decisions.

The governance structure of savings banks consists of three main entities [9]: the managing board running the day-to-day business, the supervisory board (so called "Verwaltungsrat") controlling the management and deciding on key personnel and major strategic matters as well as the credit committee approving individual loans exceeding a certain volume. Two thirds of the members of the supervisory board are representatives of the bank's government owner, e.g. the local county or city. In most cases these are politicians of the respective local parliaments. By law, the chair of the supervisory board is held by the head of the local government, i.e. the mayor or the head of the county. As the supervisory board not only controls but also appoints the management, there is a very close link between politics and the bank's management. Further important duties of the supervisory board in the context of this paper are approving openings and closures of branches, deciding on the distribution of profits and approving potential mergers with other savings banks. The credit committee is a further channel of political influence as it is mainly formed by

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[9] The legal basis is provided by the savings bank law, which sets the general framework for founding and operating a savings bank. These laws are state-laws but do not differ substantially among states.

members of the supervisory board, i.e. local politicians. The chair of the credit committee is held by the chair of the supervisory board, i.e. the head of the local government. (skl, 2005; Hackethal, 2004)

Besides these two institutional ways of political influence anecdotal evidence suggests that there are strong informal ways of influence as well. As both, the CEO of the savings bank as well as the mayor or head of the county, are important representatives of the local public life, they frequently meet each other at other occaions as well, e.g. cultural events, sport events, social clubs or party meetings if they are member of the same political party [10]. Furthermore, at the time of an election they have been knowing each other for at least 5 years, one legislative period - most likely for much longer through their party affiliation and their former roles within the city or county. These strong personal relationships between the main local politicians and the management of the savings bank might occasionally be even more powerful than the formally established links.

It is important to note that savings banks follow a self-imposed demarcation of their business areas: they conduct business only with customers from their local area and, thus, do not compete with other savings banks. [11] Their area of business is the same as the electoral district of the respective local politicians sitting on the supervisory board.

4 Methodology

There are two main methodological challenges associated when aiming to demonstrate political influence (Dinc, 2005): firstly, one has to find a way to single out politically motivated changes in bank behavior. To do so, we follow Dinc (2005) and focus on local elections. Elections are probably the most important political events in the career of politicians as they are the key to political power. Thus, changes in the behavior of local savings banks that can be attributed to upcoming elections are clear evidence for politically motivated influence. Secondly, we have to make sure that observed changes around elections are not triggered by any other events that coincide with the elections. We do so by including an extensive set of explanatory variables to control for changes within the bank and the city or county. Furthermore, the panel structure of our data set allows to control for bank and time specific fixed effects. The robustness of the analysis is further strengthend by the fact

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[10] Which is very likely as the supervisory board appoints the CEO.
[11] Some competition might arise over customers living on the boarder of two different business areas, commuters between regions or bigger businesses with operations in several cities or counties. However, this can be neglected in practice.

that elections are held in different years in different cities or counties. This also eliminates the potential impact of year specific country wide effects.

Ideally, we would compare the business behavior of savings banks with the behavior of private banks in the area. Unfortunately, there are almost no local private banks in Germany and data from the big nation wide operating commercial banks is not available on a local (branch) level. However, there is no reasonable argument why private banks should behave differently during election years on a local level as all private banks follow centralized guidelines from their headquarters and as local politicians have no formal influence on the business of private banks.

We investigate the impact of political influence on five different dependent variables and use two different methodologies depending on the nature of the variable to be explained: to determine the impact of elections on branch closures, change in the number of employees and merger activities we use a fixed effect probit model to find out whether the probability of these actions significantly deviates during an election year from other years. The dependent variables are dummies indicating whether branch closures, an increase or decrease in the number of employees or mergers have taken place in the particular year. For the two other dependent variables of interest, the amount of extraordinary spendings and the growth in loan volumes, we use OLS fixed effect regression.[12] These five dependent variables are the major five varibles in our data set which are of great public interest, and thus prone to political influence. There might be further variables of political interest for which we do not posses the necessary data and, thus, leave their investigation to further research. We estimate the following equation:

$$y_{it} = \alpha + \beta * Election_{it} + \gamma * x_{it} + \theta_t + u_i + \epsilon_{it} \tag{1}$$

Where y_{it} denotes the respective dependent variable, $Election_{it}$ is a dummy variable indicating whether the particular year is an election year, x_{it} is a vector with control variables, θ_t a year dummy, u_i the bank specific fixed effect, α the constant and ϵ_{it} the error term. We use robust standard errors for our OLS fixed effect regressions.

In general, we define the election year $Election_{it}$ as the calendar year of the election if the election is held in the second half of the year and as the calendar year prior to the election if the election is held in the first half (Dinc, 2005). In

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[12] We also used pooled probit and OLS models for robustness and find qualitatively the same results. Dinc (2005) points out that with regard to the growth in loan volume some of the variables are only sequentially exogenous as a change in credit volume influences the bank specific explanatory variables as the equity ratio or bank size. As these changes are relatively small we neglect this potential bias here.

the case of changes in the number of employees we include also the calendar year after the adjusted election year as redundancies can take up to 9 to 12 month until they are reflected in the official records. Similarly, mergers take normally a year between announcement and until the official complettion of the transaction. Thus, we only include the year after the adjusted election year in this analysis.

We first run the regressions on the whole sample to show the different behavior of savings banks during election years. In section 7 we split the sample with regard to political, bank specific and local characteristics to understand more about the circumstances that facilitate political influence.

In all regressions we use a set of standard control variables and augment this set with further controls specific to the different analyses. General bank specifics include the logarithm of total assets to control for bank size[13], the year-on-year growth of total assets to take the banks general tracectory into account, operating expenses over total assets to control for efficiency, loan loss reserves over total assets to control for the riskiness of the loan portfolio, return on assets as measure for profitability. The local market structure is proxied by the Hirschman-Herfindahl-index based on the number of branches in each county or city.[14] To account for macroeconomic differences across counties and cities we include a dummy variable *Weak area*, which indicates that the county or city belongs to the lowest quartile with regard to its GDP per capita.[15] Similarly, we include a dummy variable *Rural area* indicating the lowest quartile regarding the population density. Furthermore, we add GDP growth[16] to control for the general trend of the local economy. The appendix contains a list describing all explanatory variables in detail as well as a correlation matrix resolving any concerns about multicollinearity among explanatory variables.

In total, Germany comprises 313 counties and 116 independent cities, which do not belong to any county but have similar rights and tasks as counties. If a savings bank operates in more than one city or county, we include only the city or county where the particular bank is headquartered.[17]

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[13] E.g. Dinc (2005).

[14] More accurate concentration measures such as the HHI over loan volumes cannot be calculated as such data is not available for the local branches of the nation wide operating commercial banks.

[15] E.g. Dinc (2005) also uses GDP per capita to control for the economic situation in the county or city.

[16] E.g. Dinc (2005) uses GDP growth as well to test for robustness of the resutls.

[17] This does not pose a problem as all counties/cities in one state hold elections on the same day and no savings banks operate in more than one state.

5 Data

To analyze whether savings banks change their business behavior in the context of local elections, we combine four main data sets: one with detailed financial and operating data for all savings banks, one containing information on the timing and outcome of all local elections, one with local macroeconomic data and a fourth one including information on all mergers during the observation period from 1994 to 2006. The data set includes all 457 savings banks resulting in a total of 5,941 observations.

The data with financial and operational figures of the banks is a proprietary data set obtained from the German Savings Banks Association's ("DSGV") annual Bank Performance Comparison. Balance sheet data is calculated as annual averages of monthly data to permit the combination with annual profit and loss account data to calculate according ratios. The panel is balanced since the DSGV integrated backwards financial accounts of savings banks that merged during the observation period. [18] To rule out any potential survivorship effects on our regression results, we conducted all analyses excluding merged banks and find results unchanged. The sample contains all 457 incumbent savings banks in Germany at year-end 2006.

To obtain the necessary information on elections we manually compiled a unique data set of all election data in over 440 counties and cities for the period since 1994. The raw data was provided by the 16 state bureaus of statistics. As table 2 shows 1,264 local elections were held during the observation period from 1994 to 2006. This reflects the average legislative period of 5 years for local parliaments and results in more than three election per savings bank on average. [19] Note that we define election years as the calendar year prior to the election if the election takes place in the first half of the calendar year. Although there are elections being held in every year, they are not evenly distributed over the years, because local elections are often held at the same time as state or federal elections.

The local macroeconomic data was also provided by the statistical bureaus of the states and is available also on county and city level, respectively. [20]

Descriptive statistics for the main variables are provided in table 3. Although

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[18] E.g. if savings bank A absorbed bank B in 2000 the accounts of the two single institutions A and B before 2000 are added up in the data set and reported as accounts of bank A.

[19] Some small states still had a legislative period of only 4 years at the beginning of the obervation period.

[20] As data on local GDP and population was only available until 2004, we extrapolated the time series to obtain figures for 2005 and 2006.

Table 2

Overview of elections on county/city level during observation period 1994-2006

Elections is the number of elections on county or city level held. It is defined as the calendar year of the election if the election was held in the second half of the year and as the calendar year prior to the election year if the election was held in the first half of the year. *Strong majority* is the number of elections where either one of the two major parties (CDU or SPD) obtained more than 50% of the votes (absolute majority). *Weak majority* is the number of elections where the difference in votes between the two major parties was less than 15%.

Year	Elections	Strong majority			Weak majority
		Total	CDU	SPD	
1994	267	42	23	19	64
1995	78	5	5	0	8
1996	74	8	3	5	32
1997	27	0	0	0	19
1998	11	0	0	0	1
1999	269	68	65	3	50
2000	28	7	1	6	14
2001	129	27	27	0	23
2002	21	16	16	0	0
2003	14	0	0	0	4
2004	266	42	41	1	39
2005	28	2	1	1	13
2006	52	2	1	1	16
Total	1264	219	183	36	283

all savings banks follow the same basic operating model, offer similar products and cater to the same general type of customers, the size of the institutions differs significantly from small local banks with only a few hundred millions in total assets to sizeable regional banks with total assets exceeding ten billion Euros. The same holds true with regard to profitability with the highest quartile being more than twice as profitable as the lowest quartile as measured by the return on total assets. More than 40% difference between the GDP per capita in the lowest and the highest quartile reveals a similar diversity between cities and counties.

Table 3
Descriptive statistics variables 1994-2006

Variable	Mean	Median	Min	Max	SD	N
Bank specifics						
Total assets	1,958	1,202	84	33,799	2,658	5941
Growth total assets	3.41	3.13	-31.03	102.54	4.12	5484
Operating expenses / total assets	2.05	2.06	0.78	3.37	0.27	5941
Loan loss reserves / total assets	3.47	3.36	0.03	9.82	1.38	5941
Return on assets incl. extraord. exp.	0.59	0.56	-3.97	2.90	0.35	5935
Return on assets excl. extraord. exp	0.78	0.75	-3.73	3.12	0.38	5930
Equity ratio	4.36	4.25	1.98	9.13	0.95	5941
Deposit-to-loan ratio	133.95	116.87	43.21	595.87	59.78	5022
Employees / branch	13.07	11.79	2.31	52.40	6.02	5927
Total assets / branch	57	48	8	321	33	5927
Accounts / employees	644	636	33	1,099	97	4911
Growth total loans*	2.67	2.27	-52.89	81.63	5.53	4554
Growth corporate loans*	1.63	1.13	-79.08	83.68	9.57	4554
Growth private loans*	4.20	3.68	-69.82	96.55	8.34	4554
Extraord. spendings / total assets*	0.19	0.15	-0.02	2.25	0.16	5936
Market structure						
Market concentration (HHI)	0.20	0.19	0.09	0.53	0.06	5941
Macroeconomics						
GDP / inhabitant	24,116	22,200	9,538	77,146	9,168	5939
GDP growth	2.08	2.05	-15.98	25.48	2.96	5482
Population density	0.54	0.24	0.04	4.13	0.66	5863
Interest rates	3.60	3.50	2.26	5.40	0.94	5941

Note: Asterix denotes dependent variables.

6 Results

In the following section we will present the results of our primary analyses that provide evidence of how savings banks change their business behavior in the context of upcoming elections in their city or county. We try to address all business decisions that have a plausible political component, i.e. which are of interest for the public and, thus, might be a relevant topic in the political discussions surrounding an election campaign. First, we look into branch closures. Savings banks have significantly consolidated their branch network during the observation period. From 1994 to 2006 the number of total branches declined by over 25% from 18,851 to 13,766, reducing the average number of branches per bank from 41 to 30 (adjusted by merger related effects) resulting in on average significantly larger branches. However, anecdotal evidence suggests that branch closures are unpopular with both, employees and customers alike. Thus, we expect to find less branch closures during election years. Second, in their effort to reduce cost, savings banks started to follow their private

peers and released some of their staff. During the observation period total staff employed fell by some 10%. As savings banks are often an important local employer providing many highly qualified and well paid jobs, redundancies become part of the public debate quickly. Here, we also expect less redundancies during election years than in other years. We even expect a higher probability of additional jobs created during an election year and test for this. Third, there has been an unprecedented merger wave among German savings banks during the last decade: our sample includes 206 mergers since 1994 leaving only 457 banks per end of 2006. Again, planned mergers can be of political concern. Especially the city or county with the smaller bank might loose some of its influence and mergers in general go along with branch closures and job losses. For this reason we do expect less bank mergers around elections. Fourth, savings banks spend a significant amount annually on supporting local cultural and societal activities and institutions. [21] All these spendings are subsumed under "extraordinary expenses". If local politicians were able to influence the behavior of "their" savings bank, we should observe an increase in these spendings during election years. Fifth, savings banks are the main provider of loans to both private and corporate customers. As a healthy economy is one of the most crucial topics in an election campaign, we expect that politicians will push for a generous provision of capital to both private individuals and corporates to make sure that local investment projects can be undertaken, which further the local economy and potentially create jobs. Keep in mind that due to the restricted business areas all business and, hence, all lending is conducted only within the city or county, which controls the savings bank. Thus, growth in loan volumes should be higher around elections in these cities and counties than in other years.

6.1 Dynamics

Figure 1 depicts the development of the four variables of interest excluding merger activities over time and compares the respective values for banks that are in an election year with these that are not in an election year. Overall one can see that the solid line, which represents banks in an election year, is above the dashed line in most of the observations. This indicates that savings banks act differently during election years as predicted in the previous paragraph. In the aftermath of the financial crises in 2001 we observe some disruption to this pattern in all four graphs. Although the graphical univariate representation of the relationship between election years and key business indicators is not clear cut it provides a good first impression of political influence.

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[21] Note that it is a specific objective of savings banks (laid down in their charter) to support the government in fulfilling the economic, cultural and social agenda for the local area.

Figure 1. Comparing election years and non-election years
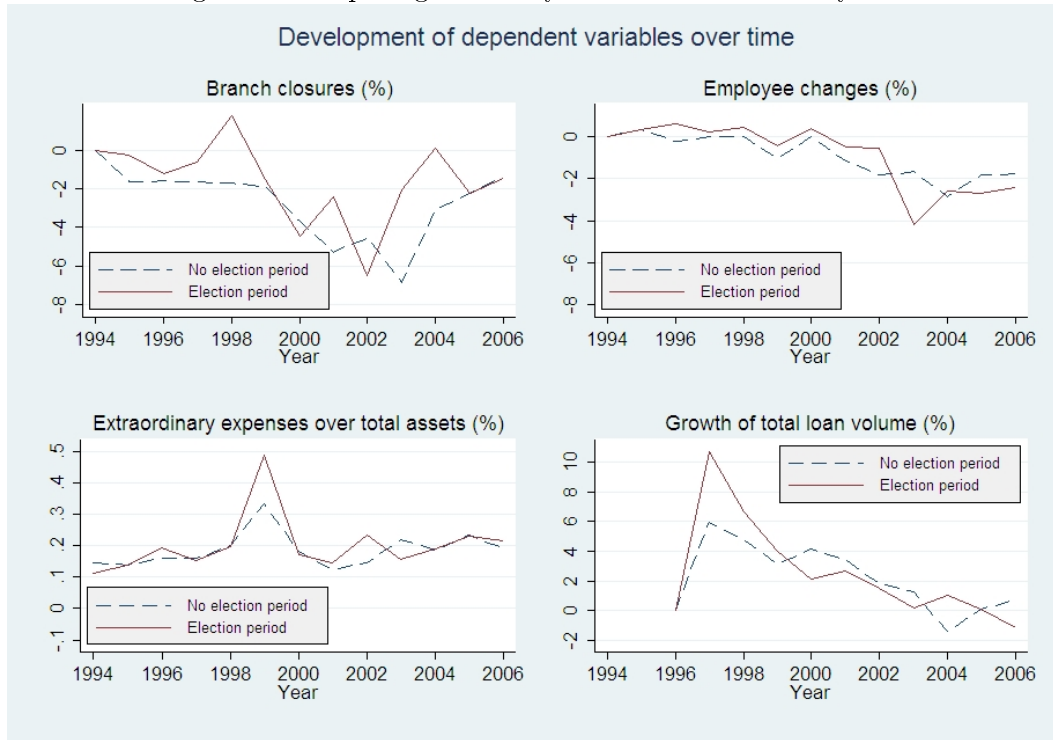
The graph in the upper left corner shows that branches have been reduced throughout the observation period with especially strong cuts of approximately 6% during the years of recession from 2001 to 2003. Besides 2000 and 2002, banks associated with ongoing elections always closed less branches than their peers. The upper right graph reveals that the majority of job cuts during the observation period took place after 2001. Only in 2003 banks in an election year cut more jobs than others. Extraordinary expenses as percentage of total assets nearly doubled from 1994 to 2006 (bottom left graph). In only three years the spending is lower for banks in election year. Finally, the bottom right graph shows a strong drop in loan volume growth with even negative numbers in 2004. Evidence for political influence is less clear here as growth of loan volume of banks in election years has been below the rates of the other banks in half of the observations.

However, this univariate look might be misleading as it cannot capture the potential interaction between bank behavior, elections, other bank characteristics and local characteristics that might have cumulative or alleviative effects. The next subsection sheds some more light on political influence by controlling for these effects in proper multivariate regression analyses.

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6.2 Determinants

Branch closures

As discussed in section 4 we use a fixed effect probit model to evaluate in more detail whether the likelihood of branch closures is lower during election years.[22] The dependent variable is a dummy indicating whether the number of branches for the particular bank is lower than in the previous year. Thus, we only observe net changes in the number of branches.[23] Table 4 contains our results.

Column (1) depicts the core relationship between elections and the probability of branch closures. As expected the sign is negative and highly significant, i.e. the probability of a branch closure is significantly lower around elections than during other years. Calculating the associated probabilities yields that the likelihood of a branch closure decreases by approximately 18%. As we add more control variables the sign remains negative and significant.

In column (2) we add bank specific controls. Signs of all coefficients are as expected. We find that bigger banks are more likely to close branches than smaller banks. However, faster growing banks are closing fewer branches. Intuitively, banks with higher operating cost relative to total assets are more likely to close branches. This goes along with a negative relationship between profitability and branch closures. In sum, more profitable and efficient banks are less likely to close further branches, which could merely reflect that they thinned out their branch network already in previous years. Furthermore, we specifically check for the average size of the branch as one might argue in line with Benston (1965) that savings banks with many small branches might be able to reap greater economies of scale from branch closures and, thus, are more likely to close branches than banks with bigger branches.[24] Two different measures - "total assets/branch" (column (3)) and "employees/branch" (column (4)) - are applied. Interestingly enough, none of them is significant. There is a slight positive relation with market concentration indicating that savings banks more often close branches if they run a higher share of all branches in

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[22] As the number of branch openings is neglectable in our sample, we only consider branch closures in the analysis.

[23] From anecdotal evidence we know that branch closures in one area and an opening in another is very rare and can be neglected.

[24] Benston (1965) analyses regional banks in New England and finds that banks of similar size but more branches incur higher operating cost that are not compensated by additional revenues. Berger et al. (1997) further research the trade off between increasing efficiency and loosing revenues which goes along with the consolidations of branch networks. Obviously, the size of a branch plays an important factor in this trade off.

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the city or county. As expected less branches are given up in the immediate year of merger activities - management capacity in these years is probably bound on integration tasks. Furthermore, anecdotal evidence suggests that merger agreements often contain explicit agreements that the branch network is kept unchanged for the coming years.

In column (3) we add further controls for the economic characteristics of the city our county. In economically weak areas, savings banks tend to close less branches. This is worth mentioning as one might expect exactly the opposite behavior as branches in weak areas are of less value to attract good customers. This might be a clear sign of the "public duty" of savings banks to support their city or county. Rural areas are more affected by closures, which might reflect the ongoing trend of young and educated people migrating to the cities. This result is confirmed when the proxy for rural areas is substituted by the population density in column (5).

Change in the number of employees

Next we try to understand how the probability of redundancies or new hires, i.e. changes in the number of employees, is affected. Again, we run a probit model where the dependent variable indicates a positive or negative change in the number of employees of more than one percent from one year to another.[25] Columns (1) and (4) in table 5 show the core relationships for a reduction and an increase in employees, respectively. As expected the sign for a reduction is negative whereas the sign for an increase is positive. Both coefficients are highly significant different from zero. Looking at probabilities, elections decrease the probability of employee reductions by 17% and increase the likelihood of new hires by nearly 25% for an average savings bank, ceteris paribus. Both values indicate the economic significance of the findings.

In column (2) and (5) we add controls for bank specifics and the macroeconomic environment. Sign and magnitude of the coefficient for our variable of interest - *election* - do not change. Bank size matters only in the case of employee increases. Interestingly, the negative sign indicates that smaller banks are more likely to hire new employees than their bigger peers. Coefficients for operating efficiency *Operating expenses/total assets* and profitability measured as *return on assets* are in line with our previous findings for branch closures: the more cost efficient and the more profitable a bank is the lower the need to reduce the number of people and the higher the possibility even to hire new employees. This is a very important finding as it suggests that profitability as well as efficiency and social objectives (as caring for employees) rather facilitate than hinder each other - a point often neglected in the political discussion. The coefficient for loan loss reserves reflects this finding as well: the stronger

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[25] We set a minimum threshold of 1% to exclude natural fluctuations. Other thresholds, e.g. 5% do not change the results.

Table 4
The impact of election years, market structure and other bank characteristics on the
probability of branch closures

Probit estimation with bank and time specific fixed effects. Dependent variable is a dummy indicating
a reduction in the number of branches year-to-year. *Election* is a dummy indicating an election year.
If the election is held in the second half of the year the same calendar year is defined as election
year. If the election is held in the first half of the year the previous year is defined as election year.
Total assets is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year
growth of total assets in percent. *Operating expenses/total assets, Loan loss reserves/total assets,
Return on assets* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Total
assets/branch* in EUR millions. *Employees/branch* is the number of employees divided by number of
branches. *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in
the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Weak area* is
a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita.
Rural area indicates that the city/county belongs to the lowest quartile with regard to population
density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP
growth* is the year-to-year growth of GDP denoted in percent. *Prob(EP=0)* is the probability of
an average bank to be involved in a merger if there is no election year; *Prob(EP=1)* indicates the
probability in case of an election year.

	(1)	(2)	(3)	(4)	(5)
Election	-0.1257**	-0.1188**	-0.1224**	-0.1227**	-0.1020*
Total assets		0.4442***	0.4505***	0.4487***	0.5536***
Growth total assets		-0.0125**	-0.0117*	-0.0119*	-0.0096
Operating expenses / total assets		0.1422	0.1821*	0.2106**	0.3098***
Loan loss reserves / total assets		0.0102	0.0181	0.0191	0.0216
Return on assets		-0.3789***	-0.3730***	-0.3728***	-0.3638***
Total assets / branch		0.0000	0.0000		0.0000
Employees / branch				-0.0045	
Market concentration (HHI)		0.7715**	0.7813*	0.7997*	0.5333
Merger activity		-0.2827***	-0.2768***	-0.2764***	-0.3416***
Weak area			-0.0940*	-0.0940*	-0.1181**
GDP growth			0.0080	0.0081	0.0098
Population density					-0.2997***
Rural area			0.1257**	0.1268**	
Constant	-0.4771***	-2.5463***	-3.2320***	-3.2700***	-3.8560***
Observations	5,484	5,466	5,464	5,464	5,408
Number of bank	457	457	457	457	457
Chi2	220.28	496.73	504.64	504.93	537.09
p(Chi2)	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo-R2	0.03	0.07	0.08	0.08	0.09
Prob(EP=0)	0.3260	0.3251	0.3251	0.3252	0.3229
Prob(EP=1)	0.2676	0.2680	0.2677	0.2678	0.2669

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

the loan portfolio of a bank, the smaller the pressure on employees. To control for the operating efficiency of the branch and the employees we include *total assets/branch* and *accounts/employee* (columns (3) and (6)). Whereas the former is not significant the latter shows a positive and highly significant sign with regard to employee reductions and a negative sign with regard

to employee increases. It seems as if banks with high employee productivity according to this measure are more likely to further reduce employees if necessary. The role of market concentration is noteworthy: the higher the market concentration the higher the probability of layoffs and the lower the likelihood of new hires. The interpretation remains ambigous without further analysis. Merger activities and all additional variables concerning the local economic situation are not significant. Again, although not significant, savings banks in weak areas tend to lay off less people.

Table 5

The impact of election years, market structure and other bank characteristics on the probability of changes in the number of employees

Probit estimation with bank and time specific fixed effects. Dependent variables: *Employee reduction* and *Employee increase* are two dummies indicating a reduction or increase in the number of employees year-to-year by more than one percent. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year growth of total assets in percent. *Operating expenses/total assets*, *Loan loss reserves/total assets*, *Return on assets* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Total assets/branch* in EUR millions. *Accounts/employees* is the number of accounts divided by the number of employees (FTE). *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. *Rural area* indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. *Prob(EP=0)* is the probability of an average bank to be involved in a merger if there is no election year; *Prob(EP=1)* indicates the probability in case of an election year.

	(1)	(2)	(3)	(4)	(5)	(6)
Election	-0.1521***	-0.1616***	-0.1755***	0.1426***	0.1469***	0.1295***
Total assets		0.0085	0.0155		-0.1916***	-0.1964***
Growth total assets		-0.0491***	-0.0507***		0.0473***	0.0467***
Operating expenses / total assets		0.1743	0.1463		-0.3627***	-0.4187***
Loan loss reserves / total assets		0.0788***	0.0408**		-0.0496***	-0.0247
Return on assets		-0.3595***	-0.4761***		0.0930	0.1412*
Total assets / branch		0.0000			0.0000	
Accounts / employees			0.0019***			-0.0012***
Market concentration (HHI)		1.1157***	1.1778***		-0.4370	-0.6897
Merger activity		0.1290	0.0300		0.0733	0.1312
Weak area		0.0141	-0.0216		-0.0735	-0.0582
GDP growth		0.0052	0.0058		0.0007	-0.0012
Rural area		-0.0064	0.0229		-0.0291	-0.0407
Constant	-0.7546***	3.7089***	3.7825***	-0.2151***	-2.9030***	-2.8843***
Observations	5,484	5,476	4,905	5,484	5,476	4,905
Number of bank	457	457	457	457	457	457
Chi2	615.25	735.06	645.71	440.22	578.93	492.79
p(Chi2)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo-R2	0.09	0.12	0.20	0.07	0.10	0.22
Prob(EP=0)	0.4246	0.4362	0.4478	0.2328	0.2245	0.2165
Prob(EP=1)	0.3523	0.3750	0.4180	0.2887	0.2690	0.2282

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

Merger activities

The dependent variable in this analysis is a dummy indicating whether the particular bank is involved in a merger in the observed year, either as a target or an acquirer. Column (1) and (2) in table 6 show the results for the whole sample. The insignificant coefficients for our explanatory variable *election* suggest that an election does not effect the timing of merger activities. From interviews with represantatives of the German Savings Bank Association ("DSGV") we know, however, that a lot of mergers in Eastern Germany are due to adjustments of the demarcation of the counties and cities.[26] These changes in demarcation are very common during the nineties in Eastern Germany as a consequence of the reunification but are very rare in Western Germany. Thus, we reran the analysis with a subsample of savings banks from West Germany only. For this subsample, the coefficient of *election* is negative and significant as expected (columns (3) and (4)). Obviously, the significant number of "forced" mergers in Eastern Germany distorts the picture. In a third analysis we further eliminate these observations where the profitability (return on assets) of the bank in the particular year was among the lowest quintile as these banks might be in financial distress and, thus, be forced into a merger to avoid bankruptcy. In these cases politicians have only limited possibilities to avoid mergers. Column (5) and (6) show that the probability of a merger around an election for the banks in the remaining sample in even lower.

The coefficients for operating expenses over total assets and profitability confirm findings by other authors on the determinants of mergers, e.g. Koetter et al. (2007) or Elsas (2004): especially inefficient and less profitable banks engage in mergers, most likely as the target that is bought by the stronger neighbouring bank.[27] Macroeconomic characteristics do not seem to play a major role with the exception that savings banks in rural areas seem to be much more likely to be involved in mergers. One reason could again be a timing issue: potentially the bigger banks in the urban centers started the merger wave and now we see the more rural banks following.

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[26] E.g. if two counties merge the two associated savings banks have to merge as well.
[27] Note, however, that we cannot differentiate between target and buyer in our data. Very often this is also not fully transparent to the public as most mergers are officially executed as mergers among equal banks.

Table 6

The impact of election years, market structure and other bank characteristics on the probability of merger activities

Probit estimation with bank and time specific fixed effects. Dependent variable is a dummy indicating that the particular bank was involved in a merger in year t. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year growth of total assets in percent. *Operating expenses/total assets*, *Loan loss reserves/total assets*, *Return on assets*, *Equity ratio* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Equity ratio* is total equity divided by total assets. *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. *Rural area* indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. *Prob(EP=0)* is the probability of an average bank to be involved in a merger if there is no election year; *Prob(EP=1)* indicates the probability in case of an election year.

	(1)	(2)	(3)	(4)	(5)	(6)
Election	-0.0773	-0.0656	-0.2873**	-0.2689**	-0.2849**	-0.2668**
Total assets		0.5123***		0.5186***		0.5345***
Growth total assets		0.0051		0.0051		0.0087
Operating expenses / total assets		0.5421***		0.6742***		0.6841***
Loan loss reserves / total assets		-0.0543		-0.0522		-0.0925**
Return on assets		-0.8665***		-0.6885***		-0.6973***
Equity ratio		0.0162		0.0858		0.0586
Market concentration (HHI)		1.0127		-0.2366		-0.1696
Weak area		0.0794		-0.0064		0.0211
GDP growth		0.0272**		0.0107		0.0094
Rural area		0.1258		0.2409**		0.1898*
Constant	-1.9368***	-6.6227***	-2.0647***	-8.2610***	-1.9024***	-8.1672***
Observations	5,941	5,476	4,953	4,567	4,465	4,166
Number of bank	457	457	381	381	379	379
Chi2	57.60	180.96	50.06	125.11	48.00	138.02
p(Chi2)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo-R2	0.04	0.28	0.05	0.23	0.05	0.24
Prob(EP=0)	0.0232	0.0146	0.0189	0.0132	0.0197	0.0126
Prob(EP=1)	0.0228	0.0154	0.0079	0.0048	0.0088	0.0050

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

Extraordinary expenses

The whole savings banks sector in Germany [28] spends a significant amount of money each year in sponsoring societal avtivities, like sponsoring local sport teams, funding exhibitions or giving money to charity groups. As pointed out in section 3 these benevolent activities are an integral part of the corporate mission of savings banks, which is laid down in the savings bank laws of the states. As these payments are a very easy and direct way to support local interest groups, it is of special interest to see whether this channel is used in a political context. Since the expenses for these activities are not published separatly in the profit and loss accounts we analyse the change in extraordinary expenses, which include these spendings, with regard to election years. [29] For this analysis we run a fixed-effect regression with extraordinary expenses scaled by total assets as dependent variable.

Again we start looking at the core relationship in column (1) of table 7 and find a highly significant positive relationship. In other words, savings banks tend to spend a higher amount on extraordinary activities in election years than in other years: on average they spend 0.03 percentage points more with regard to their total assets. This amounts to approximately 560 thousand Euros on average of extra spendings during election years. Comparing this amount to an average net profit of EUR 4.5 millions highlights the economic significance.

As we add further controls in column (2), the coefficient of interest does not change in direction or magnitude. Taking a closer look at our control variables we find that larger banks spend relatively more as well as more profitable banks do. Interesting is the fact that operating expenses and the size of the loan loss reserves are positively related with extraordinary expenses. Potentially, that finding reflects the diverging attitude of bank managers with regard to their dual objective of profitability and social responsibility. Management of some savings banks might put in general less emphasis on profitability and focuses instead slightly more on the social objectives. As a direct result they might grant more risky loans, employ some more people than required from a pure economical point of view, and spend more on supporting local social activities.

Weaker banks with a lower equity ratio spend slightly less, which is as expected as retained earnings is the only way for savings banks to built equity. Thus, savings banks with a low equity ratio might be forced to retain more of their earnings to strenghten their capital base. With regard to the market structure, banks in more concentrated markets seem to spend also less. As social

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[28] This also includes the state-owned "Landesbanken" as well as other associated financial institutions like the mutual fund management company "DEKA".

[29] We are aware that the category extraordinary expenses includes a number of other expense categories. However, none of the other categories is of plausible political interest, such as losses incurred from discarding property.

spendings are also a marketing tool to some extent, this behavior is expected. If there are more competing banks in an area sponsoring different local events, savings banks have to spend more money to achieve the same public visibility. Higher spendings in a year of a merger could reflect two effects. First, banks might spend more to actively demonstrate their strong commitment to the local area. Second, that might to a certain extend be the statistical result of a contracting balance sheet as it is common in the aftermath of bank mergers. However, further analysis reveals that the absolute amount of spending significantly increases in the year of a merger supporting the former explanation. Noteworthy is also that spending seems to be significantly less in weak areas. At first glance that is contraintuitive to the objective of savings banks to support the local communities or cities. However, it might merely reflect fewer opportunities for the bank to engage in sponsoring because there might be less social activities and institutions in place in economically weak areas. The coefficients of the other macroeconomic controls are not significant.

To make sure that the results are not driven by just a few banks with abnormal high extraordinary expenses, we exclude the top 5% of the banks with the highest spendings in relation to their size and find results unchanged.

Loan growth

In the vain of Dinc (2005) our last channel of political influence deals with additional loans granted around elections. Dinc (2005) finds additional loan growth during election years only in transition economies.[30] Based on our more detailed loan data and the complete information on all 457 savings banks we aim to show a similar influence also for a developed market like Germany. To do so we run a fixed effect regression with year-to-year loan growth as a dependent variable. We look not only at the total loan volume to non-banks but also distinguish between corporate and private loans.

Column (1) and (2) in table 8 contain the results for the impact of elections on the percentage change of the total loan volume. Confirming the results of Dinc (2005), the sign of the coefficient is positive and highly significant. Ceteris paribus, loan growth is approximately 42 basis points higher in election periods compared to other years. With regard to the average annual loan growth rate of some 240 basis points during the observation period the result is also of great economic interest.

To understand whether these effects are driven by corporate or private loans, we rerun the regressions with respective subsamples and report the results in columns (3) to (6).[31] We find the same positive and highly significant coeffi-

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[30] One reason might be that he also only looks into the 10 biggest banks per country, i.e. neglecting state-owned savings banks in Germany alltogether.
[31] Note that the analysis for corporate loans excludes mortgage loans.

Table 7
The impact of election years, market structure and other bank characteristics on extraordinary expenses of savings banks

Fixed effect panel regression with bank and time specific fixed effects. Dependent variable is extraordinary expenses scaled by total assets. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year growth of total assets in percent. *Operating expenses/total assets*, *Loan loss reserves/total assets*, *Return on assets*, *Equity ratio* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Equity ratio* is total equity divided by total assets. *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. *Rural area* indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. *Prob(EP=0)* is the probability of an average bank to be involved in a merger if there is no election year; *Prob(EP=1)* indicates the probability in case of an election year.

	(1)	(2)
Election	0.0286***	0.0294***
Total assets		0.0124***
Growth total assets		-0.0009
Operating expenses / total assets		0.0490***
Loan loss reserves / total assets		0.0076***
Return on assets		0.2222***
Equity ratio		-0.0049*
Market concentration (HHI)		-0.1661***
Merger activity		0.0682***
Weak area		-0.0068
GDP growth		-0.0001
Rural area		0.0035
Constant	0.1993***	-0.0059
Observations	5,936	5,472
Number of bank	457	457
R2	0.25	0.42

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

cients suggesting that the findings are not driven by one particular segment. The magnitude of the change in growth is even higher for the two segments with growth rates increasing by approximately 110 basis points and 79bp respectively.

There is a highly significant negative relationship between loan growth and the riskiness of the loan portfolio. This result confirms recent findings by Foos et al. (2007), who analyse the impact of loan growth on the riskiness of banks. Potentially contrary to the findings of Foos et al. (2007), who show that loan

growth goes along with relatively lower interest rates our results suggest a positive relation between total loan growth and average interest rates. The negative relation with the equity ratio again confirms similar findings by Foos et al. (2007). [32] This is expected as savings banks cannot obtain outside equity, thus, the equity ratio has to drop if total assets rise due to loan growth.

Market concentration has only a partially negative impact on total loan growth. This is in line with research by Rhoades and Rutz (1982), who analyse the so-called "Quiet Life Hypothesis", i.e. the notion that banks in less competitive markets operate less efficient, on a sample of US banks. They find that banks in highly concentrated markets tend to take less credit risk into their portfolios.

In the long-run, loan growth should be positively related with GDP growth and negatively with interest rate levels as Calza et al. (2003) show for the Euro area. Thus, the strongly positive correlation between general interest rate levels and loan growth might merely reflect the continuous trend over the observation period of declining interest rates and loan growth rates. There is probably no direct causal link between these two variables as anecdotal evidence suggests that savings banks were willing to lend more during recent years but were unable to find suitable investment opportunities. [33] The lack of suitable investment opportunities might also be the explanation behind the lower growth rate in rural areas.

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[32] Dinc (2005) also uses the equity ratio in his analysis but finds opposite results. In developing countries banks with higher equity ratios seem to grow their loan portfolio more.

[33] Due to earnings on record levels an increasing number of corporates was able to finance investment projects with internal funds.

Table 8

The impact of election years, market structure and other bank characteristics on growth of loan volumes

Fixed effect panel regression with bank and time specific fixed effects. Dependent variables are year-to-year growth of total loan volume to non-banks, corporate loan volume excl. mortgages, private loan volume. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Operating expenses/total assets, Loan loss reserves/total assets, Return on assets, Equity ratio* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Equity ratio* is total equity divided by total assets. *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Interest rate* is the average 1y-EURIBOR for year t. *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. *Rural area* indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. *Prob(EP=0)* is the probability of an average bank to be involved in a merger if there is no election year; *Prob(EP=1)* indicates the probability in case of an election year.

	Total loans		Corporate loans		Private loans	
	(1)	(2)	(3)	(4)	(5)	(6)
Election period	0.4212**	0.4115**	1.0963***	1.1170***	0.7915**	0.7902**
Total assets	-0.1071	-0.1334	-0.2264	-0.2656	0.0892	0.0551
Operating expenses / total assets	-0.3066	-0.6379	-1.7111***	-1.6547***	0.2989	0.0165
Loan loss reserves / total assets	-0.4374***	-0.4024***	-0.5971***	-0.4261***	-0.1415	-0.0325
Return on assets	3.0183***	2.7339***	4.8533***	4.5198***	2.1922***	1.7547***
Equity ratio	-0.5339***		-0.5067***		-0.6654***	
Deposit-to-loan ratio		0.0029		-0.0116***		-0.0019
Market concentration (HHI)	-3.9557*	-3.5799	-13.2948***	-7.8233***	-4.4645	-2.1291
Merger activity	-0.0112	-0.0454	0.4544	0.3913	-0.6198	-0.6869
Interest rate	1.0059***	1.1164***	1.6117***	1.7319***	1.4005***	1.5549***
Weak region	0.5090***	0.5923***	0.1910	0.4666	0.6119*	0.8068**
GDP growth	0.0074	0.0079	-0.0349	-0.0095	-0.0376	-0.0274
Rural region	-0.4900**	-0.5609**	-0.6379**	-0.6991**	-0.6121**	-0.6919**
Constant	3.1119**	0.7354	6.9445***	4.2591*	-0.0252	-3.2121
Observations	4,548	4,543	4,548	4,543	4,548	4,543
Number of bank	457	457	457	457	457	457
R2	0.24	0.25	0.12	0.11	0.11	0.11

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

7 Further Analyses

In this section we conduct further analyses to shed more light on the circumstances that foster political influence on savings banks. We pick one example from each of the three main categories: bank specifics, economic situation of the particular city or county, and political environment. Specifically, we analyse the impact of bank profitability, economical strength of the area, and political power of the respective local parties.

Bank specifics

Despite their public duty to support the local development and societal activities savings banks are expected to be profitable. The German Savings Bank Association states "savings banks are expected to operate profit oriented, though not profit maximizing." That suggests that savings banks that are more profitable have more leeway to spend money on social activities or allow for certain inefficiencies like too many branches or a larger work force. Furthermore, savings banks need to retain some earnings as this is their only source to build equity, which they need for potential further growth. In short, savings banks need to achieve a certain - not clearly defined - profit level. Once they reached this level, they are relatively free in how to spend potential additional profits. Thus, political influence can be expected to be stronger if the savings bank is more profitable. This is even more true as the same politicians are very often also responsible for the overall results of the savings banks in their role as member (or even head) of the supervisory board. If the profitability is below general expectations they might be more hesitant to put further strains on the bank. An according result would also be a strong indication of the suggested causality as the reverse causality should result in a negative relationship between political influence and profitability, i.e. the higher the political influence the lower the profitability. To test for this hypothesis we define two new subsamples: *high prof* and *low prof*. *High prof* indicates the highly profitable savings banks whose return on assets (excluding extraordinary expenses) is in the top quartile. In the same way *low prof* refers to the banks in the lowest quartile of profitability.

Table 9 depicts the results with regard to branch closures, employee reductions, extraordinary expenses and growth of total loan volume. As columns (3) to (8) show, our hypothesis is confirmed for three out of four analyzed activities: employee redundancies, extraordinary expenses and total loan growth. In all of these cases, the coefficient of *election* is more significant or stronger in magnitude for the subsample of high profitable banks versus the subsample of low profitable banks. That is, as expected political influence seems to be stronger if the associated savings bank is more profitable. Only in the case of branch closures (columns (1) and (2)) we observe the opposite effect. One explanation

might be that the strong and successful management of a profitable savings bank is willing to support their local politicians with minor adjustments as defering employee reductions or spending more on extraordinary activities but is not willing to accept political influence on major strategic decisions like branch closures.

For all four pairs of regressions the coefficients of the controls show the same direction as in the respective primary analyses.

Table 9

The impact of bank profitability on the degree of political influence

Probit model for regression on *Branch closure, Employee reduction* and fixed effect panel regression for *Extraordinary expenses* and *Growth total loans*. All models with bank and time specific fixed effects. Dependent variables as defined in previous regressions. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year growth of total assets in percent. *Operating expenses/total assets, Loan loss reserves/total assets, Return on assets, Equity ratio* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Equity ratio* is total equity divided by total assets. *Total assets/branch* in EUR millions. *Total assets/employee* is total assets divided by number of employees (FTE). *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Interest rate* is the average 1y-EURIBOR for year t. *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. *Rural area* indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. The two subsamples High prof. and Low prof. consist of the banks belonging to the highest and lowest quartile with regard to return on assets before taxes and extraordinary expenses. The R2 for all probit regressions is a pseudo-R2 based on the likelihood estimators.

	Branch closure		Employee reduction		Extraordinary expenses		Growth total loans	
	High prof.	Low prof.	High prof.	Low prof.	High prof.	Low prof.	High prof.	Low prof.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Election period	0.0291	-0.3355**	-0.2097**	-0.0547	0.0359***	0.0259**	0.8036*	0.1433
Total assets	0.4625***	0.2763**	0.1427	-0.1268	0.0067	-0.0007	0.4452	-1.1072
Growth total assets	-0.0003	-0.0374**	-0.0331***	-0.0784***	-0.0005	-0.0006		
Operating expenses / total assets	-0.0049	0.5337**	0.5338*	0.3659	0.0605***	0.0167	0.6781	-1.5865*
Loan loss reserves / total assets	0.0083	-0.0026	0.1289***	-0.0065	0.0064*	0.0078*	-0.5690***	-0.6503***
Return on assets	-0.4238**	-0.6610***	-0.4611***	-0.0573	0.2144***	0.2412***	3.6962***	2.2837***
Equity ratio					-0.0020	0.0004	-0.3535	-0.2963
Total assets / branch	0.0000	0.0000						
Total assets / employee			0.0000	0.0003***				
Market concentration (HHI)	0.6538	1.5719*	0.8407	2.0979***	-0.2873***	-0.0195	-3.5743	12.6712*
Merger activity	-0.4904***	0.3618	0.0606	0.9367*	0.0582***	0.1173***	-0.3050	-3.1470
Weak region	0.0825	-0.1224	-0.0464	-0.0112	0.0009	0.0129	-0.3895	0.1468
GDP growth	0.0072	0.0000	0.0071	0.0051	-0.0008	-0.0018	0.0009	0.0786
Rural region	0.1679	0.0711	-0.1040	-0.0719	0.0589***	-0.0182	-0.1442	-1.8678**
Interest rates							1.2677***	1.0546***
Constant	-3.6183**	0.1339	0.2724	6.2469***	-0.0239	0.0688	-4.8278	9.6479*
Observations	1,405	1,317	1,410	1,324	1,410	1,322	1,228	1,035
Number of bank	138	148	138	148	138	148	138	127
Chi2	102.43	80.05	210.63	148.47				
p(Chi2)	0.0000	0.0000	0.0000	0.0000				
R2	0.06	0.09	0.13	0.09	0.49	0.42	0.23	0.29

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

Economic situation

Another external factor that might determine the strength of political influence is the local economic situation. It is plausible to assume that a certain level of support by the local savings bank is more visible in the public eye, and as such more fruitful for the respective politician if the economic situation is weak. In a strong economic environment people should depend less on the local savings bank as an employer, social sponsor or loan provider as in a weak environment. To further analyse the importance of the economic situation we define three subsamples refering to the tercile with regard to GDP per capita of the city or county: *weak*, *medium* and *strong*.

Table 10 shows the results for the fixed effect regressions for the subsamples with regard to change in employees, extraordinary expenses and total loan growth. Surprisingly, we find for all three analyses outcomes contrary to our expectations: it seems that political influence is the lowest for areas which are economically weak. The coefficient of *election* is always lowest in the weak scenario or even insignificant except for *branch closure* (column (1)). Looking at the likelihood of employee reductions and the growth of total loans, it even seems that political influence is highest for aress of medium economic strength. One can only speculate why savings banks in economically weak areas are less prone to political influence. Probably the overall banking business is weaker in these areas leaving less room for savings banks to support the political agenda of their government-owner.

Table 10

The impact of the strength of the local economy on the degree of political influence

Probit model for regression on *Branch closure* and *Employee reduction*; fixed effect panel regression for *Extraordinary expenses* and *Growth total loans*. All models with bank and time specific fixed effects. Dependent variables as defined in previous regressions. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year growth of total assets in percent. *Operating expenses/total assets*, *Loan loss reserves/total assets*, *Return on assets*, *Equity ratio* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Equity ratio* is total equity divided by total assets. *Total assets/branch* in EUR millions. *Total assets/employee* is total assets divided by number of employees (FTE). *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Interest rate* is the average 1y-EURIBOR for year t. *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. *Rural area* indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. The three subsamples Weak, Medium, Strong consist of the banks in cities/counties in the lowest, medium, highest tercile with regard to GDP per capita. The R2 for all probit regressions is a pseudo-R2 based on the likelihood estimators.

	Branch closure			Employee reduction			Extraordinary expenses			Growth total loans		
	Weak (1)	Medium (2)	Strong (3)	Weak (4)	Medium (5)	Strong (6)	Weak (7)	Medium (8)	Strong (9)	Weak (10)	Medium (11)	Strong (12)
Election period	-0.1688*	-0.1573	-0.0807	-0.0093	-0.2796***	-0.1897***	0.0142*	0.0365***	0.0389***	0.1398	0.7207**	0.3998
Total assets	0.4685***	0.5309***	0.4178***	-0.0293	0.0104	0.0331	0.0140**	0.0060	0.0167***	0.0606	-0.2328	0.0764
Growth total assets	-0.0014	-0.0278**	-0.0118	-0.0626***	-0.0438***	-0.0401***	-0.0005	-0.0036***	-0.0003			
Operating expenses / total assets	0.2572	0.3443*	-0.0317	0.1742	0.0760	0.3947	0.0477***	0.0569***	0.0508***	1.8582***	-0.6363	-1.5128***
Loan loss reserves / total assets	-0.0005	0.0064	0.0328	0.0944***	0.0877***	0.0620**	0.0055*	0.0027	0.0113***	-0.5489***	-0.3121***	-0.3992***
Return on assets	-0.2125*	-0.5539***	-0.3932***	-0.2519**	-0.5815***	-0.3177**	0.2078***	0.2175***	0.2515***	2.5622***	3.7815***	2.9781***
Equity ratio							-0.0098**	-0.0108**	-0.0031	-0.7726***	-0.7034***	-0.0305
Total assets / branch	0.0000	0.0000	0.0000									
Market concentration (HHI)	1.0164*	0.6647	1.2543	2.1810***	-0.0417	0.6015	-0.2081***	-0.0675	-0.2420**	-4.8407*	-7.9597**	-0.5192
Merger activity	0.1630	-0.5040**	-0.4648***	0.2247	0.0731	0.1600	0.0725***	0.0834***	0.0495***	-0.1035	0.4618	-0.3681
GDP growth	0.0074	-0.0037	0.0180*	-0.0017	0.0144	0.0036	0.0002	-0.0021*	0.0001	0.0365	-0.0336	-0.0128
Rural region	0.0344	0.0827	0.3161**	0.0824	-0.0800	-0.0813	-0.0028	0.0036	0.0342**	-0.2946	-0.7147**	-0.7172**
Interest rates										0.6506**	1.0825***	1.2931***
Constant	-4.7158***	-5.0576***	-4.0366***	-1.9154**	0.0435	-1.6969**	-0.1668**	-0.1683**	-0.3207***	1.1439	5.4593**	-0.3957
Observations	1,853	1,801	1,810	1,857	1,809	1,810	1,853	1,809	1,810	1,545	1,504	1,499
Number of bank	200	208	179	200	208	179	200	208	179	198	196	173
Chi2	162.66	201.51	191.6	272.41	275.21	216.9						
p(Chi2)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
R2	0.08	0.10	0.08	0.12	0.13	0.10	0.39	0.41	0.52	0.26	0.28	0.23

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

Political environment

Work by Sapienza (2004) indicates that the political strength of the party or person that controls the bank might influence the magnitude of the influence. That is, the older and stronger the ties between politics and bank the stronger the political influence. In her anaylsis on the Italian banking market Sapienza (2004) finds that the stronger the political majorities the lower the charged interest rate, i.e. the higher the political influence. In the following we investigate whether we can confirm these findings for the case of the German savings banks. To do so, we define two new subsamples: *weak majority* and *strong majority*. A majority is *weak* if the number of votes in the current election for the two main parties CDU and SPD differs by less than 15%. It is *strong* if one of these parties achieved an absolute majority, i.e. obtained more than 50% of the votes. To check for robustness of the results we also applied a margin of 10% differences in votes to define a weak majority and find results unchanged.

Table 11 contrasts the results for the two subsamples based on weak and strong political majorities with regard to branch closures, employee reductions, extraordinary expenses and growth of total loans. For the effect on employee reductions and extraordinary expenses, we find the expected impact of an election only to be significant for regions with weak political majorities. This finding is somewhat contrary to Sapienza (2004). However, it seems highly plausible as it indicates that politicians use their influence on savings banks when their election/reelection is jeopardized. If majorities are clear and politicians do not need to worry about their election, they do not need to make use of their influential power. This finding is in line with observations by Cole (2007) for the Indian market and Betrand et al. (2004) for politically connected corporates in France.

There are no significant effects for *branch closures* or *growth total loans*, which might reflect the fact that both of these actions require longer planing and cannot be influenced any more on a short-term base when elections turn out to become tight.

For all four pairs of regressions the coefficients of the controls show the same direction as in the respective primary analyses.

Table 11
The impact of local political majorities on the degree of political influence

Probit model for regression on *Branch closure* and *Employee reduction*; fixed effect panel regression for *Extraordinary expenses* and *Growth total loans*. All models with bank and time specific fixed effects. Dependent variables as defined in previous regressions. *Election* is a dummy indicating an election. If the election is held in the second half of the year the same calendar year is defined as election year. If the election is held in the first half of the year the previous year is defined as election year. *Total assets* is the logarithm of total assets (in EUR mn). *Growth total assets* is the year-on-year growth of total assets in percent. *Operating expenses/total assets*, *Loan loss reserves/total assets*, *Return on assets*, *Equity ratio* all denoted in percent. *Return on assets* is profit before taxes over total assets. *Equity ratio* is total equity divided by total assets. *Total assets/branch* in EUR millions. *Total assets/employee* is total assets divided by number of employees (FTE). *Market concentration* is the Hirschmann-Herfindahl-Index based on number of branches in the economic region ("ROR"). *Merger activity* is a dummy indicating a merger in year t. *Interest rate* is the average 1y-EURIBOR for year t. *Weak area* is a dummy indicating that the city/county belongs to the lowest quartile in terms of GDP per capita. Rural area indicates that the city/county belongs to the lowest quartile with regard to population density. *Population density* is the number of inhabitants per square kilometer in thousands. *GDP growth* is the year-to-year growth of GDP denoted in percent. The subsample *weak majority* consists of all banks in electoral districts where the obtained votes of the two major parties do not differ by more than 10%. The subsample *strong majority* consist of all banks in electoral districts where one of the parties possess an absolute majority of more than 50% of the votes. The R2 for all probit regressions is a pseudo-R2 based on the likelihood estimators.

	Branch closure		Employee reduction		Extraordinary expenses		Growth total loans	
	Weak	Strong	Weak	Strong	Weak	Strong	Weak	Strong
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Election period	-0.1039	-0.2043	-0.2447***	-0.1154	0.0408***	0.0291**	0.1143	0.0102
Total assets	0.4735***	0.4300***	-0.1138**	0.0471	0.0165***	0.0152*	-0.1523	-0.3467
Growth total assets	-0.0224*	-0.0164	-0.0820***	-0.0288**	-0.0008	-0.0048**		
Operating expenses / total assets	0.0779	0.1361	0.0647	0.6083	0.0940***	0.0540*	-1.6949*	-0.8227
Loan loss reserves / total assets	-0.0099	0.0710	-0.0055	0.2163***	0.0040	-0.0023	-0.3932***	-0.6461***
Return on assets	-0.1301	-0.5239***	-0.5030***	-0.3582**	0.2534***	0.2101***	1.9438**	2.8161***
Equity ratio					-0.0192***	-0.0189**	-0.6151**	-0.3651*
Total assets / employee			0.0001	0.0004**				
Market concentration (HHI)	1.3269	0.2756	2.4586***	1.7621	-0.1401*	-0.3209**	2.1058	2.3729
Merger activity	-0.3077	-0.5027*	-0.2785	0.1800	0.0483***	0.0587**	-0.7550	-0.3132
Weak region	0.0529	-0.0792	0.0016	0.1485	0.0062	-0.0058	0.9925**	0.3244
GDP growth	0.0008	0.0211	0.0316**	-0.0050	0.0002	-0.0008	0.0413	-0.0831
Rural region	0.1738	0.3442***	-0.0695	0.1374	0.0119	0.0198	0.5686	-1.1971***
Interest rates							1.0158***	1.3153***
Constant	-4.2092***	-3.5862***	-0.0810	-4.6930***	-0.3329***	-0.1197	6.0818*	5.1603*
Observations	1,226	981	1,226	986	1,225	986	976	873
Number of bank	189	146	189	147	189	147	187	143
Chi2	139	103.94	176.18	145.89				
p(Chi2)	0.0000	0.0000	0.0000	0.0000				
R2	0.09	0.10	0.12	0.13	0.47	0.45	0.2	0.32

Notes: Robust standard errors and time-specific effects not reported. * significant at 10%; ** significant at 5%; *** significant at 1%

8 Conclusion

Focusing on elections as major political events, we show in this paper that the state-owned savings banks in Germany are influenced by local politics, i.e. we show that savings banks significantly change their business behavior in the context of local elections on city and county level. This is the first time that direct political influence can be shown for one of the major developed banking market. The large sample size of over 5,000 observations including over 1,250 elections over a period of 13 years, the inclusion of time and bank/city/county specific fixed effects as well as an extensive set of control variables ensures the robustness of the results. A further benefit of the analysis is the homogenous regulatory and legal background of all banks, which minimizes the problem of potential omitted variables as eminent in cross-country studies.

In a first step we use fixed-effect probit and OLS regressions to understand how elections change the behavior of the associated savings banks. We obtain five key results on the basic relationship between business behavior and elections: Firstly, the likelihood of savings banks to close a local branch is significantly lower (by about 18% for an average bank) around an election. Secondly, the probability that savings banks lay-off some of their employees drops by 17% during elections for an average bank. At the same time the probability to hire new personnel increases by 25% on average. Thirdly, there is also a significantly lower likelihood of mergers around elections for banks located in Western Germany, which even decreases further once distressed banks (which might be forced into a merger to prevent imminent bankruptcy) are eliminated. Fourthly, savings banks tend to spend on average EUR 560,000 on extraordinary activities more than during other years. This equals approximately 15% of average extraordinary expenses and 12% of average net income. Although we cannot see the real beneficiaries of these spendings, it can be assumed that they reflect additional support to cultural and other societal activities and institutions. Finally, we confirm findings of Dinc (2005) that state-owned banks tend to grant more loans around elections, to both corporate and private clients.

To better understand the circumstances that facilitate political influence we conduct some further analyses and yield three main insights: firstly, political influence seems to be lower in economically weaker areas. Secondly, profitable banks are more prone to political influence than less profitable banks. Finally, political influence seems to be stronger when political majorities are narrow and lower when one of the parties possesses an absolute majority.

Our analyses also provides some insights into the public duty of state-owned savings banks. The coefficients of our control variables suggest that savings banks are less likely to close branches in economically weak areas. At the same

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time we find clear evidence that financially strong and efficient banks are less likely to close branches and lay-off employees, i.e. are better able to fulfill the second part of their dual mission, supporting the development of the local city or county.

Our findings clearly show that political influence on state-owned banks is not only a phenomenon of developing countries with a weak legal system. We provide ample evidence consistent with the political view of government ownership of banks: the presented relationships between elections and changes in business behavior of savings banks are strong indications of potential political influence on these banks. However, there are many more interesting questions for further research in this field, e.g.: how costly is political influence to the public? What is the relationship between political influence and operating efficiency, i.e. are banks with stronger political ties less efficient?[34] How successful is political influence, i.e. has the behavior of banks a measureable impact on election results? Does political influence differ if the particular bank is owned by more than one city or county (in line with Memmel and Stein (2005))?

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[34] An et al. (2007) show for Korea that banks with close political ties are less efficient.

Appendix

Table 12: Description of dependent and explanatory variables

Variables	Description
Dependent variables	
Branch closure	Dummy equals one if number of branches is lower than in previous year.
Employee reduction	Dummy equals one if number of employees more than 1% lower than in previous year.
Employee increase	Dummy equals one if number of employees more than 1% higher than in previous year.
Merger activity	Dummy equals one if bank merged with other bank in particular year t.
Extraordinary expenses	Extraordinary expenses as percentage of total assets. Extraordinary expenses include especially donations and funds used for societal activities, e.g. sponsoring of local sport teams or cultural events.(DSGV, 2005)
Growth volume total loans	Percentage change of average total loan volume from t-1 to t excluding loans to other financial institutions.
Growth volume corporate loans	Percentage change of average corporate loan volume from t-1 to t excluding mortgages.
Growth volume private loans	Percentage change of average loan volume to consumers from t-1 to t including mortgages.
Explanatory variables	
Election	Dummy indicating an election in year t. Election year is the same calendar year if an election is held in the second half of this year or the previous calendar year if election is held in the first half of the year. With regard to employee changes and merger activities we include the year following the election year to take into account the delay between announcement and reflection in official financial statements.(Dinc, 2005)
Bank specifics	
Total assets	Logarithm of total assets (in million Euros) to proxy for size of bank.(Dinc, 2005)
Growth total assets	Percentage change of average total assets from t-1 to t.
Operating expenses / total assets	Total operating expenses over total assets in year t as proxy for average efficiency of bank.
Loan loss reserves / total assets	Total loan loss reserves (stock item) over total assets in year t as proxy for riskiness of current loan portfolio.
Return on assets	Income before taxes over total assets as proxy for bank's profitability. For analysis on extraordinary expenses we add back extraordinary expenses: (income before taxes+extraordinary expenses)/total assets.
Equity ratio	Total equity over total assets as proxy for both riskiness of bank and risk attitude of management.
Deposit-to-loan ratio	Total deposits over total loans to non-banks. Proxies for the availability to fund local investment opportunities through deposits.

Variables	Description
Total assets/branch	Average total assets (in million Euros) in t over number of branches at year end. Proxies for the average size of an average branch, i.e. whether business is conducted more centralized or more decentralized.
Employees/branch	Average number of employees in t over number of branches at year end. Alternative proxy for the size of an average branch, i.e. whether business is conducted more centralized or more decentralized.
Accounts/employee	Number of current accounts over total number of employees as proxy for labor efficiency.

Market structure

Market concentration (HHI)	Hirschmann-Herfindahl-Index of concentration based on the number of branches of each bank in the county or city. Proxy for potential competition in the local market.

Macroeconomics

Interest rate	Average 1y-EURIBOR rate to control for general interest rate level.
Weak area	Dummy indicating that bank in located in a county or city belonging to the lowest quartile with regard to GDP per capita in t.
GDP growth	Year-on-year growth of GDP in county or city where the bank is located in.
Rural area	Dummy indicating that bank in located in a county or city belonging to the lowest quartile with regard to inhabitants per square kilometer in t.
Population density	Inhabitants per square kilometer used as alternative proxy for rural area.

Table 13
Correlation matrix of explanatory variables

See table 12 for description of the variables.

	Total assets	Growth total assets	Operating expenses / total assets	Loan loss reserves / total assets	Return on assets	Equity ratio	Deposit-to-loan-ratio	Employees / branch	Market concentration (HHI)	Merger activity	Weak area	GDP growth	Rural area
Total assets	1.000												
Growth total assets	-0.065	1.000											
Operating expenses / total assets	-0.326	-0.043	1.000										
Loan loss reserves / total assets	0.047	-0.229	-0.050	1.000									
Return on assets	-0.131	0.348	0.014	-0.125	1.000								
Equity ratio	0.007	-0.209	-0.040	-0.143	0.028	1.000							
Deposit-to-loan-ratio	-0.023	-0.035	0.171	0.228	-0.005	-0.361	1.000						
Employees / branch	0.121	-0.057	-0.004	0.088	-0.076	0.040	-0.131	1.000					
Market concentration (HHI)	0.110	-0.040	0.075	0.157	-0.002	-0.236	0.480	-0.247	1.000				
Merger activity	0.152	-0.029	-0.010	-0.017	-0.102	0.010	0.009	0.007	0.001	1.000			
Weak area	-0.195	-0.024	0.219	0.124	0.031	-0.184	0.331	-0.102	0.428	-0.035	1.000		
GDP growth	-0.016	-0.020	-0.014	0.065	-0.038	-0.043	0.155	-0.043	0.065	-0.005	0.015	1.000	
Rural area	-0.230	-0.028	0.085	-0.111	0.014	-0.016	0.148	-0.278	0.312	-0.023	0.322	0.021	1.000

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