

Accountability and Electoral Systems

The Impact of Media Markets on Political Accountability under Majoritarian and PR Rules

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Abstract

This paper examines the differential impact of media coverage on representatives' behavior across different electoral systems. Taking advantage of an original data set on newspaper circulation, of exogenous variation in spatial congruence between media markets and constituencies, and of the mixed electoral system in Germany I answer two questions: First, what is the extent to which media coverage influences the roll call voting behavior of politicians? Second, how does this effect differ between systems of majoritarian and proportional representation (PR)? I find that a one unit increase in the level of congruence between media markets and constituencies decreases a direct MP's propensity to vote in line with his/her party leadership by an average of 3 to 7 percentage points, while it has no effect on list MPs. I do not find an effect of congruence on absenteeism or committee membership. The findings suggest that greater transparency through the press aligns the behavior of single-member district representatives with their constituents' preferences, while it has no such effect on representatives elected through party lists. This raises questions about the 'electoral connection' of list MPs. This paper makes two main contributions. First, it uses a rigorous identification strategy to show how the responsiveness of representatives elected through PR and majoritarian rules to media coverage vary. Second, it presents an original, highly disaggregated data set on newspaper circulation and MP behavior in Germany.

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1 Introduction

Transparency is a prerequisite for accountable representation. The argument that an active and free press plays an important role in informing citizens and thereby enhances transparency and improves political accountability goes back to liberal theorists such as Milton, Locke, Madison and Mill.¹ Since then, a large body of literature has established the importance of an informed electorate for political accountability, and in turn the functioning of democracy, both theoretically (Bardhan and Mookherjee, 2000; Grossman and Helpman, 2001; Persson and Tabellini, 2000) and empirically. The bulk of the empirical literature focuses on the impact of providing voters with information about their representatives on *voters'* behavior (Banerjee et al., 2011; Besley, 2001; Besley and Prat, 2006; Chong et al., 2015; Ferraz and Finan, 2008; Humphreys and Weinstein, 2012). Relatively little empirical work focuses on the impact of information on *politicians'* behavior.² One possible reason is that targeting a large share of a politician's constituents is easiest done through the media, yet endogeneity renders studying the causal impact of media coverage on politicians' behavior difficult: Areas with active media markets tend to be more urban, richer and the home of a population with higher education levels. Observing a correlation between media coverage and political accountability (as in Adsera, Boix and Payne (2003)) does therefore not suffice to establish a causal relationship.

Using an original data set from Germany I study two related questions. First, what is the extent to which a free and fair press influences the behavior of politicians? Second, how does this differ between systems of majoritarian and proportional representation (PR)? Two key challenges exist in answering these questions empirically. First, the quality and independence of press is endogenous: Countries with strong democratic institutions tend to have a free press, raising concerns over omitted variable bias. Second, electoral systems are endogenously determined (Boix, 1999). My paper builds on a large body of literature arguing that majoritarian and PR systems are inherently different (Lijphart, 1994; Powell and Whitten, 1993; Strøm, 2000). To test the theory, scholars have regressed outcome variables such as corruption, partisanship, and the level of redistribution on the type of electoral system in cross-country studies (Iversen 2006, Norris 2004, Norris 2006 ballot). Given that electoral systems are not exogenous this approach raises important concerns about endogeneity. While studies that simply compare the behavior of directly and indirectly elected representatives in mixed systems (Patzelt, 2007; Stratmann and Baur, 2002) circumvent this particular concern, they do not lend themselves to study the differential impact of media coverage since MPs elected indirectly through party lists are more likely to come from urban areas

¹An accountable government is defined as one which "citizens can hold [...] responsible for its actions and, consequently, punish or reward it with their vote at election time." (Maravall, 2007, p. 910)

²Notable exceptions include Butler and Nickerson (2011), Snyder and Strömberg (2010), and Adsera, Boix and Payne (2003).

where media penetration is higher.³

The aims of this paper are primarily empirical. To address the issue of endogenous electoral systems, I study the behavior of MPs in the German mixed system. To deal with the endogeneity of media reporting, I use exogenous variation in spatial congruence between media markets and voting districts, which in turn determines the level of media attention a particular representative receives. This approach was first implemented by [Snyder and Strömberg \(2010\)](#) in the United States. In particular, I estimate the impact of the level of coverage of the actions of members of parliament (MPs) in local newspapers on their behavior in the *Bundestag*, using three distinctive features of the German setting: (i) high newspaper density, (ii) the availability of highly disaggregated circulation data of local newspapers, and (iii) the mixed system, in which half of the MPs are elected according to majoritarian and half according to a PR system. The advantage of comparing electoral rules in one country and for one political body is that other factors, which the literature considers to influence the relationship between politicians and voters, such as district magnitude, size and perceived importance of the assembly, and effective electoral thresholds ([Lijphart, 1994](#)) are held constant.

I first show that congruence between newspaper markets and voting districts is (a) positively correlated with the number of times an MP's name is mentioned in the media and (b) plausibly exogenous. My main outcome variable is the percentage of an MP's roll call votes that are in line with his/her party leadership, which I construct based on disaggregated roll call data from the 16th and 17th legislature of the German Federal Diet. I estimate the effect of media attention, proxied by congruence, on MP voting behavior by regressing roll call behavior on congruence, clustering standard errors by MP. Party discipline in Germany is very high, and a large share of MPs vote with their party 100% of the time. To deal with this corner solution in the outcome variable, I run two additional specifications, a tobit model and a probit model for a binary outcome variable (vote with or against party leadership). Further, I test whether the effect differs with political business cycles. Secondary outcome variables are absenteeism of MPs during roll call votes and, following [Stratman and Baur \(2002\)](#), membership in committees that serve constituency versus party interests. All models are run on three samples: a sample restricted to direct MPs, one restricted to list MPs, and a pooled sample including all MPs.

I find that the effect of media attention, proxied by spatial congruence between media markets and voting districts, on MP roll call voting behavior varies substantially by electoral system. In particular, a one unit increase in congruence reduces a directly elected MP's propensity to vote with his/her party leadership by 4 to 7 percentage points, depending on the specification, significant at the 10% level. I do not find a significant effect of congruence on the voting behavior of MPs elected

³58% of German list MPs in the period 2005-2013 come from urban voting districts, compared to 50% of first past the post MPs. The difference is highly statistically significant.

through party lists. I find that the difference in voting behavior between directly and indirectly elected MPs is strongest in the lead-up to elections: direct MPs are 11 to 13 percentage points less likely to vote with their party leadership than list MPs if the vote takes place twelve or less months before Parliamentary elections, significant at the 5% level. However, I do not find that congruence has a stronger effect on directly elected MPs in the lead-up to elections, compared to other periods in the electoral cycle.

To my knowledge, this is the first study to rigorously assess the differential impact of the availability of information on politician accountability in PR and majoritarian electoral systems. Measuring the differential impact of transparency on directly and indirectly elected representatives is a way of shedding light on their electoral incentives. The findings suggest that greater transparency through the press aligns the behavior of directly elected single-member district representatives with their constituents' preferences, while it has no such effect on representatives elected through party lists. The differential effect of media attention on MPs' voting behavior has important implications for accountability in democracies. First, it demonstrates the importance of free press for the accountability of directly elected representatives. Second, it suggests that list MPs are ultimately accountable to the party leadership, weakening the link to voters' preferences. This finding raises concerns over the 'electoral connection' (Mayhew, 1974) of representatives elected through party lists.

The paper proceeds as follows. Section 2 discussed the theoretical framework and hypotheses, followed by a brief background to the German political system and electoral rules in Section 3. Section 4 discusses the empirical estimation strategy, sources for the primary data set and the construction of critical variables. Empirical results are presented in Section 5. Section 6 discusses the implications of the findings and concludes.

2 Theory

One key impediment of electoral accountability is that voters dispose over limited information about politicians, resulting in the classical principal agency problem of democracy (Przeworski, Stokes and Manin, 1999). Whether citizens vote prospectively and screen for 'good types' of politicians, or whether they vote retrospectively and intend to punish or reward politicians for their past performance, information asymmetries pose a challenge (Adsera, Boix and Payne, 2003). A free and fair press plays a critical role in informing citizens, thereby mitigating the information asymmetries (Reinikka and Svensson, 2004). Yet, different politicians will not receive the same amounts of media attention. If part of this attention is exogenously determined, we can use this variation to study the impact of media reporting on politicians' behavior (Snyder and Strömberg, 2010). I argue that congruence between media markets and voting districts in Germany results

in such exogenous variation. Newspaper editors maximize their reader share by tailoring content to their readers' interests, and therefore are more likely to report about a politician if her voters constitute a larger share of the inhabitants of the newspaper's catchment area. Once crucial element of this argument is the testable assumption that media markets are aligned with settlement patterns, whereas the boundaries of voting districts are not.

Assuming that voters read the articles, I expect enhanced reporting on MPs to translate into better informed voters, who in turn can hold their politicians accountable for their performance during election time. I further assume that politicians maximize their chances of reelection. A path dependency exists with regard to the form in which politicians seek reelection: MPs with a direct mandate are more likely to run again as direct candidates in the next legislative period, while party list MPs are more likely to run on the party list again. Thus, members of parliament who are directly elected by their constituents in a first past the post electoral system primarily depend on their constituents for reelection. Since politicians who are held accountable individually in the next election have a greater incentive to act in the interest of voters (Persson and Tabellini, 2000), directly elected MPs should therefore primarily cater to voters interests. On the other hand, the chances of reelection of MPs who are elected through the party list depend on the rank on the party list they are assigned by their party leadership in the next election. I therefore expect them to primarily cater to the interests of their party leadership.

Assuming that directly elected MPs (also called 'direct' or 'FPTP', for First Past The Post, MPs in this paper) are aware of the amount of reporting about them, I expect them to be more likely to act in line with the interests of their constituents in districts with better news coverage. In particular, I expect them to vote more frequently against the position of their party leadership in controversial elections, to be less likely to be absent from parliament, and to be more likely to bring 'pork' to the district through the membership in committees that serve constituents' interests. As shown below, local newspapers are the primary source of information on their representatives behavior for constituents in Germany. Party leaderships, however, have access to more direct sources of information. Thus, the effect should be stronger for MPs who have been directly elected than for those who have been elected indirectly through party lists. If indirectly elected MPs (also referred to as 'list MPs' in the following) are concerned about the perception of their allegiance with their party leadership in the media, greater congruence may in fact be associated with an increased propensity to vote with party lines.⁴ Considering political business cycles, these effects should be stronger in the lead-up to elections.

⁴For an interesting study on this effect in a non-democratic context, see Malesky, Schuler and Tran (2012).

3 The German Setting

Germany has a mixed electoral system with aspects of both a first past the post and a proportional party list system. The *Bundestag* is the primary legislative body of Germany. Since it effectively functions as a parliament, I use the terms interchangeably. The *Bundestag* consists of over 600 MPs. Of these 299 are directly elected by their constituents' *Erststimme* (first vote) in a first past the post (FPTP) electoral system. Each voting districts sends one directly elected MP to Berlin. At the same time, voters cast a second vote (*Zweitstimme*) for a party. Voters may cast their first vote for a representative of one party and elect a different party with their second vote. The number of votes a party receives determines its overall number of seats in the *Bundestag*. These seats are first filled with the directly elected MPs. Additional seats are filled from the party list (closed party list system). If a party has won more direct mandates than the number of seats it would get according to the second vote, it still keeps them (overhang seats), explaining the slight variation in the total number of MPs from one legislative period to the next. It is possible to run both as direct and as party list candidate at the same time. Parliamentarians are elected every four years, and are not subject to term limits. Parties with the majority of seats in Parliament, typically a coalition of two or three parties, form the government. Only parties with at least 5 percent of the national vote or three directly elected MPs enter into Parliament. Over the period I study (2005-2011), five parties were represented in the *Bundestag*: The social democrats (SPD), the conservative Christian party (CDU/CSU), the environmental party (*Die Grünen*), the left party (*Die Linke*) and the liberal party (FDP). The SPD and CDU/CSU are the two main parties with a combined vote share of around 70%.

Two features of the German media market are worth mentioning. First, with 279 hard copies sold per 1,000 inhabitants over the age of 14, Germany has one of the highest newspaper densities in Europe.⁵ Second, with a total of 1,509 different editions, local and regional newspapers dominate the market. Newspapers remain a key source of information on politics for German voters.⁶

The combination of a mixed electoral system, high newspaper density, availability of highly disaggregated circulation data, and plausibly exogenous voting district boundaries make Germany an ideal case to study my research question. At the same time, a very high degree of party discipline and low levels of absenteeism leave little room for variation, hence stacking the deck against finding an impact of congruence on politicians' behavior.

⁵While local and regional editions are often owned by larger papers the news are tailored to the specific coverage area. Federation of German Newspaper Publishers, 2012 (Bundesverband Deutscher Zeitungsverleger e.V.), <http://www.bdzv.de/home-engl/bdzv/the-federation-of-german-newspaper-publishers/>

⁶In an online survey conducted in Germany in 2009, 46.7% of respondents reported referring to regional or local newspapers to obtain information about politics, 27% reported referring to national newspapers. The share is likely to be higher among non-internet users. <http://de.statista.com/statistik/daten/studie/7141/umfrage/informationsquelle-fuer-politische-informationen/>

4 Empirical Strategy and Data

4.1 Data

I use an original data set comprising detailed circulation data from 1,214 local newspapers for the period from 2000 to 2010, measured every two years across 15,998 locations, covering four electoral cycles (source: IVW⁷). In order to aggregate circulation data into the larger, relevant, unit of voting district I have scraped over 15,000 zip codes corresponding to the 299 voting districts in the 17th legislature (2009-2013) from the website of the *Bundestag*.⁸ Since voting districts have hardly changed between the 16th and 17th legislative period and since congruence has barely changed between the 16th and 17th legislative period I use congruence measures for the 17th legislature throughout. Unfortunately, circulation data is missing for 25 of the 299 voting districts.

Table 1: Newspaper Data - Summary Statistics

Variable	Observations	Mean	SD	Minimum	Maximum
Articles about MP	1,028	137	1,128	0	21,400
Average Articles about MP, 4 Main Newspapers	1,028	651	2,805	0	23,873
Reader Share	1,028	0.05	0.17	0	1.00
Circulation per Voting District	274	2,433	9,097	0	71,393
Congruence	274	0.39	0.16	0	0.76

Table 1 summarizes the newspaper data. Names of MPs, their party affiliation and whether they were directly or indirectly elected were also obtained from the website of the *Bundestag*. The number of times an MP with a direct mandate is mentioned in the context of reporting on the *Bundestag* in a specific newspaper was gathered by conducting a keyword search in the online archives of 478 German newspapers across a total of 265 voting districts, a random subset of the universe of newspaper and MP dyads. In order to be counted as a hit, articles had to contain terms relating to the *Bundestag* in addition to the MP's full name.⁹ Data on voting district characteristics, such as unemployment, population density, education levels etc., which serve as control variables, is sourced from the report of the Federal Returning Officer (*Bundeswahlleiter*).¹⁰ In addition, the data set includes data on each MP's voting decision in all 50 legislative roll call votes during the

⁷Informationsgesellschaft zur Feststellung der Verbreitung von Werbeträgern e.V.

⁸www.bundestag.de

⁹Articles had to contain at least one of the words Abgeordneter, Abgeordnete, Bundestag, Bundestagsabgeordneter or Bundestagsabgeordnete in addition to the full name of the MP in order to be counted as a hit. Data was coded using Mechanical Turk.

¹⁰www.bundeswahlleiter.de/en

16th legislature of the *Bundestag* (2005-2009) and of 41 during part of the 17th legislature (2009-2011), scraped from the website of *Abgeordnetenwatch*¹¹.

4.2 Empirical Strategy

To test the impact of increased reporting on representatives' behavior, I use spatial congruence between media markets and administrative boundaries of voting districts as a source of exogenous variation in the amount of coverage of local politics in local newspapers. Congruence is a measure of the reader share of newspapers aggregated at the voting district level. It is defined as the weighted average of the percentage of newspapers' reader shares within a given voting district, where the weight is the newspapers' market share in that voting district:

$$Congruence_{district} = \sum_{i=1}^J Readershare_{paper,district} * Marketshare_{paper,district}$$

The plausible exogeneity of this measure allows me to preclude omitted variable bias and endogeneity. Assuming that newspapers maximize the percentage of their readers interested in any particular article, we should expect to see papers with a higher share of their readership living within one voting district to be more likely to report on the respective MP, holding all else equal. While the exclusion restriction that spatial congruence is exogenous cannot be tested, orthogonality between congruence and all observable characteristics of voting districts makes it plausible that the effect is only working through the amount of reporting on MPs (see table 2).

The main outcome measure is the percentage of all roll call votes cast by an MP that are in line with the voting behavior of his/her party leadership. This variable serves as a proxy for party discipline (see also [Snyder and Strömberg \(2010\)](#)). I define party leadership as the MPs listed as holding an official position in the party fraction on the party website, such as the chairperson, the speaker, the treasurer etc. The categories used in coding voting behavior are voting yes, no, and abstaining. An MP is coded as voting with party lines if casting the same vote as the majority of his/her party leadership. For robustness, I test an alternative definition in which an MP is considered as voting with party lines if casting the same vote as the majority of the party's MPs.

For the sake of comprehensiveness, I also present results for two secondary outcome variables in the Appendix: (i) absenteeism during roll call votes and (ii) membership in committees that

¹¹Abgeordneten Watch is a German nonprofit organization with the mission of monitoring MP behavior, www.abgeordnetenwatch.de.

further either party or constituents' interests as outcome variables^{12,13}. Absenteeism is defined as not being present during a roll call vote while holding office. I use committee membership as a proxy for constituency service. A more direct measure in many political systems would be financial transfers to constituencies, or 'pork'. However, the characteristics of the federal system in Germany make it very difficult for MPs to have direct influence over the geographic allocation of funds. The allocation of financial transfers from the federal level to the states is determined by a detailed formula. States then decide in their *Länderparlamente*, the corollary to the *Bundestag* at the state level, how to allocate resources to municipalities through infrastructure investment grants etc. (Kemmerling and Stephan, 2002). MPs can therefore influence the amount of resources going to their constituency only indirectly, for example by promoting certain subsidies or types of infrastructure investment projects, which they know will benefit their constituency by virtue of its economic and geographic features. For example, an MP from certain parts of Bavaria with many dairy farmers may promote a bill introducing dairy subsidies etc. Measuring this indirect form of pork barrel politics would require a large coding exercise and is beyond the scope of this paper.

To test the hypothesis that the impact of increased newspaper coverage is greater in the lead-up to elections I run separate regressions which include a dummy variable that takes the value 1 if a roll call vote took place twelve or fewer months prior to the parliamentary election in 2009¹⁴, and interact it with the type of MP.

4.3 Exogeneity of the Congruence Measure

Table 2 presents balance tests comparing characteristics of voting districts above and below the median level of congruence. While the majority of district characteristics are balanced, voting districts with low levels of congruence tend to have a slightly greater population size, have experienced a smaller decrease in population since 2007, higher income from business taxes per inhabitant, and a higher rate of inhabitants who are not German citizens. In short: they are (slightly) more urban.

¹²Constructing the committee variables, I follow Stratmann and Baur's (2002) definition, which groups committees on family, youth and senior citizens and health as committees that further party interests; and committees on agriculture, and traffic and urban planning as committees that further district interests. Party committees are: *Ausschuss für Familie, Senioren, Frauen und Jugend*, *Ausschuss für Gesundheit*, *Verteidigungsausschuss* and *Ausschuss für wirtschaftliche Zusammenarbeit und Entwicklung*. District committees are: *Ausschuss für Verkehr, Bau und Stadtentwicklung*, *Ausschuss für Ernährung, Landwirtschaft und Forsten*, *Ausschuss für Regionale Wirtschaftspolitik**, and *Ausschuss für Kommunales**. Some committees have merged since Stratman and Baur's work in 2002. Committees indicated with a * were not included in their definition of district committees, but are concerned with local economic policy. I run analyses including and excluding them. I include committees on community affairs and on regional economic policy in an alternative specification of district committees. Data on committee membership is currently only included for members of the 17th legislature (2009-2013).

¹³In addition, I have data on the numbers of letters MPs received from constituencies during the 17th legislature on an online platform, as well as their response rates to them. Given that the platform is online, i.e. newspapers do not play any role in disseminating information, I have decided to leave this measure out of the analysis.

¹⁴I only have data on roll call votes leading up to a parliamentary election for the year 2009.

I use two different approaches to deal with this concern: a) including district controls, and b) re-running analysis on a restricted sample excluding voting districts with low congruence levels to ensure that patterns do not change. Results are robust to both strategies.

The variable *readershare* is defined as the percentage of all readers of a newspaper who live in a given voting district, and thus constitutes one data point per newspaper district dyad. In order to aggregate this variable at the voting district level, I construct the weighted average of the *readershare* of all newspapers circulated in the respective voting district, weighted by the market share of a newspaper in the respective voting district (*congruence*). This approach exactly mirrors the one used by Snyder and Strömberg (2010) to study the impact of media attention on members of the US Congress. One of the great advantages of this technique is that it is portable. Applying it to the German context allows me to measure the differential impact of media attention on the behavior of directly and indirectly elected MPs.

Table 2: Summary Statistics by Congruence – Above and Below Median

Variable	Congruence		p-value
	Below med	Above med	t-test
Population, in 1,000	277.27	269.98	0.084
Population density	647.62	592.61	0.625
Change in population since 2007, per 1,000 inhabitants	-1.40	-2.79	0.048
% of population under 25	24.96	25.31	0.175
% of population over 60	25.80	25.74	0.817
% of school leavers, no degree	7.45	7.18	0.173
% of school leavers, high school degree	23.35	23.23	0.894
% of school leavers, university degree	26.82	26.18	0.444
# of cars per 1,000 inhabitants	617.95	615.19	0.760
# of business per 1,000 inhabitants	0.58	0.61	0.227
Total income from business taxes, per 1,000 inhabitants	399.42	330.16	0.010
# of business bankruptcies, per 1,000 inhabitants	1.99	1.95	0.625
Total debt of communities, per 1,000 inhabitants	1,050	1,069	0.715
Unemployment rate	7.93	8.20	0.541
# of people receiving social security benefits, per 1,000 inhabitants	79.53	82.81	0.489
% of population not German citizens	8.43	7.40	0.073

Note: Unit of analysis is the voting district. Sample size: 274 (circulation data is missing for 25 voting districts).

5 Results

5.1 Correlation between Number of Articles Mentioning an MP's Name and Congruence

As argued above, I expect the number of times an MP is mentioned in a newspaper to be positively correlated with the percentage of that newspaper's readers who live in the voting district of the MP. This hypothesis is based on the assumptions that (a) newspapers maximize the total number of readers by targeting articles to their readers' interests, and (b) readers are more interested in reading about MPs representing their constituency, holding all else equal.

Table 3: Newspaper Coverage of German Parliamentarians, 2009-2010

Outcome Variable: Number of Articles about MP		
	(1)	(2)
Model	OLS	OLS
Outcome Variable Type	Log	Count
Readershare	2.910*** (0.88)	29.210* (17.46)
Hits in Main Papers	0.379*** (0.06)	3.877*** (0.67)
Directly Elected	1.135 (0.70)	26.577** (12.36)
In Cabinet	0.355 (1.43)	110.384*** (42.67)
Party Controls	Yes	Yes
Constant	-1.572*** (0.59)	34.977*** (7.49)
Observations	750	750

Note: Random subset of all newspaper-MP dyads of the 17th legislature.

As expected, reader share is positively correlated with the number of times an MP's name is mentioned in a newspaper ('hits'). Table 3 presents results from OLS and negative binomial regressions of the number of times an MP's name appears in a given newspaper¹⁵ on reader share and congruence. Given that congruence is a weighted average of reader share, and given that a newspaper's reader share, i.e. the percentage of all the newspapers readers who live in the MP's constituency, is strongly positively correlated with the number of times the MP is mentioned in this newspaper, it follows that congruence is positively correlated with the number of articles per MP.

¹⁵A name mentioned is only counted if it appears in conjunction with key words related to the *Bundestag*.

5.2 Politicians' Behavior

5.2.1 Estimation Strategy

Since congruence is plausibly exogenous and correlated with the number of times an MP is mentioned in the newspapers, I estimate the causal effect of greater newspaper coverage and hence transparency on an MP's behavior by regressing behavioral outcomes on congruence.

The main outcome variable, percentage of roll call votes in line with party leadership, exhibits strong corner solutions with mass points around 0 for percent absent and around 100% for voting with leadership. In other words, variation is cut-off at 100% voting with party leadership: although some of the many MPs who always vote with their party leadership are more dedicated to party discipline than others, we do not get to observe this variation since by definition 100% is the limit.

I use two different approaches to deal with the corner solutions. The first is to run all regressions as tobit model (Wooldrige, 2002). The second is to change the unit of observation from MP to a single vote. Rather than the percentage of the 41 roll call votes in the 17th legislature or the 50 roll call votes in the 16th legislature in line with party leadership per MP, I now use 41 observations per MP in the 17th and 50 observations per MP in the 16th legislature, each indicating whether an MP voted with his/her party leadership in a respective vote. Since the outcome variable is now binary and since the voting behavior of representatives is correlated across votes, I use a probit model with standard errors clustered by MP.

5.2.2 Descriptive Statistics

Table 4 presents simple difference in means tests. The upper panel shows that only the two main parties, the conservative CDU/CSU and the social-democratic SPD, have a substantial share of directly elected MPs. I therefore restrict the main analysis to these two parties. The lower panel presents simple difference in means tests for the restricted sample.

Table 4: FPTP versus List MPs

Variable	Mean Indirect	Mean Direct	P-value t-test	n Indirect	n Direct
All Parties					
Cabinet	0.01	0.04	0.00	661	600
SPD	0.25	0.35	0.00	661	600
CDU/CSU	0.16	0.61	0.00	661	600
Gruene	0.18	0.01	0.00	661	600
Die Linke	0.17	0.03	0.00	661	600
FDP	0.24	0.00	0.00	661	600
Congruence	0.39	0.40	0.26	560	550
Hits Average	584	719	0.50	333	299
% of Roll Call Votes with Party	0.94	0.95	0.09	661	599
% of Roll Call Votes Absent from	0.10	0.08	0.00	661	599
Member in District Committee \diamond	0.10	0.10	0.99	661	600
Member in District Committee	0.12	0.13	0.75	661	600
Member in Party Committee	0.14	0.15	0.53	661	600
Main Parties Only					
Cabinet	0.01	0.04	0.01	272	576
SPD	0.60	0.36	0.00	272	576
CDU/CSU	0.40	0.64	0.00	272	576
Congruence	0.39	0.40	0.88	247	535
Hits Average	557	712	0.62	112	282
% of Roll Call Votes with Party	0.94	0.95	0.49	272	575
% of Roll Call Votes Absent from	0.09	0.07	0.05	272	575
Member in District Committee \diamond	0.07	0.10	0.13	272	576
Member in District Committee	0.08	0.13	0.04	272	576
Member in Party Committee	0.11	0.15	0.10	272	576

Notes: \diamond As defined by [Stratmann and Baur \(2002\)](#).

5.2.3 Impact of Newspaper Coverage on MP Behavior

This section summarizes the main empirical findings, with a focus on MPs' propensity to vote with their party leadership. For the OLS and tobit models, the outcome variable is defined as the percentage of an MP's legislative votes that are the same as those cast by the majority of the party leadership, conditional on the MP's participation in a vote. For the probit model, it is defined as the count of roll call voted with the party leadership, with standard errors clustered at the MP level. Party leadership is defined as the MPs listed on a party's website as holding an official function in the fraction, such as head of the fraction, speaker, treasurer etc. Results are robust if using voting

with the majority of the party instead.¹⁶

As can be seen in Table 5, congruence has no overall effect on MPs' propensity to vote with his/her party leadership when pooling direct and list MPs. The coefficients on congruence are negative, as one would expect, and fairly consistent across model specifications, but not significant.

Table 5: Congruence and Voting Behavior – Main Parties

	Roll Call Votes with Party Leadership					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	-0.015 (0.02)	-0.014 (0.02)	-0.034 (0.03)	-0.026 (0.03)	-0.204 (0.16)	-0.178 (0.17)
FPTP MP		-0.003 (0.01)		0.002 (0.01)		-0.051 (0.06)
In Cabinet		0.005 (0.02)		-0.002 (0.03)		0.083 (0.20)
SPD		-0.029*** (0.01)		-0.048*** (0.01)		-0.284*** (0.06)
16th Legislature		0.001 (0.01)		-0.049*** (0.01)		-0.018 (0.06)
District Controls		yes		yes		yes
Constant	0.955*** (0.01)	1.051*** (0.06)	1.009*** (0.01)	1.245*** (0.09)	1.722*** (0.07)	2.678*** (0.47)
Observations	781	781	781	781	32,284	32,284

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the Bundestag. Probit estimations cluster standard errors at the MP level.

The core question of this paper is the effect of congruence on MPs' voting behavior when differentiating between direct and list MPs. The German case offers a rare opportunity not only to study the impact of electoral systems and media coverage on politician behavior, but to look at the differential effect (exogenously) higher levels of media coverage have on politicians elected under different electoral systems.

The main outcome variable is voting in line with party leadership. In controversial votes where the preferences of the party leadership differ, I expect congruence to have a negative effect of the propensity of directly elected MPs to vote with the majority of their party leadership. The effect of congruence on the voting behavior of list MPs is ambiguous. Since parties do not rely on newspapers to learn about MP behavior in Parliament, we should not expect an effect. However,

¹⁶The correlation between the two alternative outcome variables is 0.98.

if list MPs care about being publicly perceived as acting in accordance with party leadership, then we should see a positive effect of congruence on party discipline.

Tables 6 and 7 present results from restricted samples. The effect of congruence on the voting behavior of directly elected MPs is negative and significant at the 10% level. Results are robust across different specifications. A one unit increase in congruence reduces a directly elected MP's propensity to vote with his/her party leadership by 3 to 7 percentage points, depending on the model. Congruence has a positive but not statistically significant effect on the voting behavior of MPs elected through party lists (Table 7). These findings are in line with the predictions of the theory.

Table 6: Congruence and Voting Behavior—Sample Restricted to Direct MPs from Main Parties

	Roll Call Votes with Party Leadership					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	-0.038* (0.02)	-0.039* (0.02)	-0.071* (0.04)	-0.063 (0.04)	-0.374* (0.20)	-0.365* (0.20)
In Cabinet		0.002 (0.02)		-0.008 (0.03)		0.064 (0.20)
SPD		-0.028*** (0.01)		-0.048*** (0.01)		-0.267*** (0.07)
District Controls 16th Legislature		yes -0.004 (0.01)		yes -0.063*** (0.01)		yes -0.044 (0.08)
Constant	0.965*** (0.01)	1.128*** (0.07)	1.030*** (0.02)	1.371*** (0.12)	1.797*** (0.08)	3.304*** (0.51)
Observations	534	534	534	534	22,328	22,328

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parantheses. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the Bundestag. Probit estimations cluster standard errors at the MP level.

Table 7: Congruence and Voting Behavior—Sample Restricted to List MPs from Main Parties

	Roll Call Votes with Party Leadership					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	0.031 (0.03)	0.033 (0.04)	0.035 (0.05)	0.039 (0.05)	0.144 (0.27)	0.216 (0.27)
SPD		-0.015 (0.01)		-0.017 (0.02)		-0.228* (0.12)
District Controls		yes		yes		yes
16th Legislature		0.015 (0.01)		-0.011 (0.02)		0.049 (0.11)
Constant	0.934*** (0.01)	0.864*** (0.11)	0.969*** (0.02)	0.968*** (0.17)	1.572*** (0.12)	1.368 (0.99)
Observations	247	247	247	247	9,956	9,916

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the Bundestag. Probit estimations cluster standard errors at the MP level.

Breaking down roll call votes by their level of controversy within parties, defined as the percentage of MPs voting differently than their party leadership, I find that the votes on which MPs are most likely to defect from party lines are related to topics such as the war on terror (Afghanistan), abortion, and stem cell research. Within the conservative CDU/CSU roll call votes related to environmental policy, for example about carbon trade and nuclear energy, are also controversial. Within the social-democratic SPD the elimination of mandatory conscription is controversial.¹⁷

Next, I test whether these effects are stronger closer to the parliamentary election. Since the second half of the 17th legislature is not yet included in the dataset, I have to restrict my sample to representatives from the 16th legislature for this analysis. I include a dummy variable *12 Months*, which takes the value 1 if a roll call vote took place twelve or fewer months prior to the parliamentary election in March 2009. Table 8 summarizes the results. I find that the difference in voting behavior is strongest in the lead-up to elections: direct MPs are 11 to 13 percentage points less likely to vote with their party leadership than list MPs if the vote takes place twelve or less months before Parliamentary elections. However, I do not find a significant effect of the interaction term between congruence and the dummy variable 12 Months for either the pooled or the restricted

¹⁷Topics of the top decile of controversial votes within the SPD during the 16th legislature were: the war on terror and military in general, abortion, tax, and privatization of the Deutsche Bahn. The top decile in the CDU/CSU were votes related to: abortion, carbon trade, tax, genetically modified agriculture, minimum wage, the war on terror, and nuclear energy.

sample (results are presented in Appendix Table A3).

Table 8: Voting Behavior Over Time

	Outcome: Number of Roll Call Votes with Party Leadership		
	Probit (1)	Probit (2)	Probit (3)
FPTP MP	-0.06 (0.07)	-0.066 (0.07)	-0.064 (0.06)
FPTP * 12 Months	-0.111* (0.06)	-0.120** (0.06)	-0.129** (0.06)
12 Months	0.273*** (0.05)	0.283*** (0.05)	0.291*** (0.05)
In Cabinet		0.393*** (0.10)	0.378*** (0.09)
SPD		-0.235*** (0.06)	-0.255*** (0.06)
District Controls		yes	yes
State FE			yes
Constant	1.576*** (0.06)	2.184*** (0.52)	1.293* (0.71)
Observations	20,308	20,088	20,088

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses. The unit of analysis is the vote in the Bundestag. Standard errors clustered at the MP level in parentheses.

I also do not find any effect of congruence on the level of absenteeism in Parliament. Results are presented in the Appendix (Tables A6 and A7). This is not surprising. Absenteeism rates are low, amounting to 7% among directly elected and 9% among list MPs, implying that an average representative missed 4 out of the 50 legislative votes in the 16th legislature (about one vote per year). The null effect of congruence on absenteeism could be explained by the following: (i) reducing absenteeism further is very costly, given increasing marginal cost of attending sessions, (ii) MPs rightly or wrongly believe that constituents do not value presence in Parliament as much as voting behavior, and/or (iii) newspapers only report on more controversial votes, and those are not the ones MPs are missing. The available data does not allow to differentiate between these.

As mentioned above, German MPs have limited opportunities of engaging in direct pork barrel politics due to the characteristics of the federal system. Federal fiscal transfers to states are determined by a detailed formula, leaving little room for manipulation. Decisions on the allocation of funds to municipalities are then made by the *Länderparlamente*, the corollary of the *Bundestag* at the state level (Kemmerling and Stephan, 2002). Stratmann and Baur (2002) argue that the

primary vehicle for MPs to favor their constituents materially is the membership in committees concerned with district matters, such as the committee on traffic, agriculture etc. Although these committees do not have direct discretion over the allocation of resources, they can influence policy in their respective areas, thereby favoring certain constituencies. For example, the committee on agriculture may promote a subsidy to a specific type of farmers. For the period from 1990 to 2002, [Stratmann and Baur \(2002\)](#) find that direct MPs are significantly more likely to be members of committees that primarily further district interests than list MPs, and vice versa for committees primarily concerned with party matters such as family, youth, senior citizens and health.

For the period from 2005 to 2009, I do not find any evidence for this effect.¹⁸ Tables A8 and A9 in the Appendix summarize the results. I find that direct MPs are more likely to serve on both party and district committees than list MPs, although the effect is stronger for district committees. Direct MPs are 33 percentage points more likely to serve on a district committee than list MPs, and 40 percentage point more like to serve on a district committee, again compared to list MPs, but the effects are not robust across specifications.

6 Conclusion

This paper explores the differential impact enhanced media coverage has on the behavior of members of the German *Bundestag* who are either elected directly through a first past the post system or indirectly via nomination on party lists. In particular, it studies two related questions. First, what is the extent to which media coverage influences the behavior of politicians? Second, how does this differ between systems of majoritarian and proportional representation (PR)? To control for the endogeneity of the intensity of reporting about a particular MP in a given newspaper, I use spatial congruence between newspaper markets and voting districts as an exogenous determinant of the amount of attention an MP receives in the local news. In addition, I replicate earlier empirical work on systematic differences in the behavior between MPs who are elected directly by their constituents and those elected through party lists.

I find that congruence has a an effect on German MPs who were elected directly according to a first past the post voting rule, but not on MPs who were elected through party lists. Directly elected MPs from voting districts with higher levels of congruence between media markets and constituency boundaries, i.e. MPs who are exposed to more media attention, are more likely to vote against their party leadership in the *Bundestag* than those who are not. A one unit increase in the congruence measure results in a 3 to 7 percentage point increase in the propensity to vote against party leadership. This effect size is remarkably similar to the one [Snyder and Strömberg](#)

¹⁸Also if using a very similar specifications to the one [Stratmann and Baur \(2002\)](#) use. It should be noted that some committees have merged in the meanwhile, making an exact replication for the more recent period impossible.

(2010) find for (directly elected) Congressmen in the United States.¹⁹ The same is not true for German list MPs: I find that greater congruence does not have a significant effect on their legislative voting behavior. This finding is in line with the theoretical prediction: Directly elected MPs depend on their constituents for re-election, while list MPs depend on their rank on the party list, which the party leadership assigns them. Assuming that the preferences of the party leadership and constituents over a specific bill are at times not aligned, the theory predicts that directly elected MPs are more likely to vote in line with their constituents' preferences, while list MPs are more likely to vote in accordance with the party leadership's position. This effect of the electoral system on voting behavior should be stronger if constituents are better informed about their representatives' voting behavior, and thus better able to monitor them. The empirical findings confirm these predictions.

It should be noted that with the current sample the effect of congruence on the roll call voting behavior of directly elected MPs is only significant at the 10% level. I am in the process of increasing the sample by including data on roll call votes in the second half of the 17th legislature and the first half of the 18th legislature in order to improve precision.

I do not find an effect of congruence on absenteeism in Parliament. In Germany, absenteeism rates are low with of 7% among directly elected and 9% among list MPs, implying that an average MP missed 4 out of the 50 legislative votes in the 16th legislature (about one vote per year). The null effect of congruence on absenteeism could be explained by the following: (i) reducing absenteeism further is very costly, given increasing marginal cost of attending sessions, (ii) MPs rightly or wrongly believe that constituents do not value presence in Parliament as much as voting behavior, and/or (iii) newspapers only report on more controversial votes, and those are not the ones MPs are missing. I also do not find an effect of congruence on parliamentary committee membership.

The differential effect of media attention on MPs' voting behavior has important implications for accountability in democracies. First, the finding demonstrates the importance of free press for the accountability of directly elected representatives. Second, it demonstrates that list MPs are ultimately accountable to the party leadership, weakening the link to voters preferences. Comparing electoral rules in one country and for representatives in a single legislative body offers the advantage that other factors which the literature considers to influence the relationship between politicians and voters such as district magnitude, size and perceived importance of the assembly, and effective electoral thresholds (Lijphart, 1994) are held constant. To my knowledge, this is the first study to rigorously assess the differential impact of the availability of information on politician accountability in PR and majoritarian electoral systems. The findings suggest that greater transparency through the press aligns the behavior of single-member district representatives with

¹⁹In fact, they find that a one unit increase in congruence, defined in the same way as here, results in a 3 to 7 percentage point decrease in the likelihood of voting with one's party leadership.

their constituents' preferences, while it has no such effect on representatives elected through party lists. This raises questions about the 'electoral connection' of list MPs.

References

- Adsera, Alicia, Carles Boix and Mark Payne. 2003. "Are You Being Served? Political Accountability and Quality of Government." *Journal of Law, Economics, and Organization* 19(2):445–490.
- Banerjee, Abhijit V., Selvan Kumar, Rohini Pande and Felix Su. 2011. "Do Informed Voters Make Better Choices? Experimental Evidence from Urban India." Working Paper.
- Bardhan, Pranab and Dilip Mookherjee. 2000. "Capture and Governance at Local and National Levels." *American Economic Review* pp. 135–139.
- Besley, Timothy. 2001. "The Political Economy of Government Responsiveness. Theory and Evidence from India." CEPR Discussion Paper No. 2721.
- Besley, Timothy J and Andrea Prat. 2006. "Handcuffs for the Grabbing Hand? Media Capture and Government Accountability." *American Economic Review* 96(3):720–736.
- Boix, Carles. 1999. "Setting the Rules of the Game: The Choice of Electoral Systems in Advanced Democracies." *American Political Science Review* 93(03):609–624.
- Butler, Daniel M and David W Nickerson. 2011. "Can Learning Constituency Opinion Affect How Legislators Vote? Results from a Field Experiment." *Quarterly Journal of Political Science* 6(1):55–83.
- Chong, Alberto, De La O Ana, Dean Karlan and Leonard Wantchekon. 2015. "Does Corruption Information Inspire the Fight or Quash the Hope? A Field Experiment in Mexico on Voter Turnout, Choice, and Party Identification." *The Journal of Politics* 77(1):55–71.
- Ferraz, Claudio and Frederico Finan. 2008. "Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes*." *The Quarterly Journal of Economics* 123(2):703–745.
- Grossman, Gene and Elhanan Helpman. 2001. Special Interest Politics. In *Special Interest Politics*. Cambridge University Press.
- Humphreys, Macartan and Jeremy Weinstein. 2012. "Policing Politicians: Citizen Empowerment and Political Accountability in Uganda Preliminary Analysis." Working Paper.

- Kemmerling, Achim and Andreas Stephan. 2002. "The Contribution of Local Public Infrastructure to Private Productivity and its Political Economy. Evidence from a Panel of Large German Cities." *Public Choice* 113(3-4):403–424.
- Lijphart, Arend. 1994. *Electoral Systems and Party Systems: A Study of 27 Democracies*. Oxford University Press.
- Malesky, Edmund, Paul Schuler and Anh Tran. 2012. "The Adverse Effects of Sunshine: A Field Experiment on Legislative Transparency in an Authoritarian Assembly." *American Political Science Review* 106(04):762–786.
- Maravall, Jose Maria. 2007. Accountability and the Survival of Governments. In *The Oxford Handbook of Comparative Politics*, ed. Carles Boix and Susan Carol Stokes. Oxford University Press.
- Mayhew, David R. 1974. *Congress: The Electoral Connection*. Yale University Press.
- Patzelt, Werner J. 2007. "The Constituency Roles of MPs at the Federal and Länder Levels in Germany." *Regional and Federal Studies* 17(1):47–70.
- Persson, Torsten and Guido Enrico Tabellini. 2000. *Political Economics: Explaining Economic Policy*. MIT Press.
- Powell, Bingham and Guy D Whitten. 1993. "A Cross-National Analysis of Economic Voting: Taking Account of the Political Context." *American Journal of Political Science* pp. 391–414.
- Przeworski, Adam, Susan C Stokes and Bernard Manin. 1999. *Democracy, Accountability, and Representation*. Vol. 2 Cambridge University Press.
- Reinikka, Ritva and Jakob Svensson. 2004. "Local Capture: Evidence from a Central Government Transfer Program in Uganda." *The Quarterly Journal of Economics* 119(2):679–705.
- Snyder, James M and David Strömberg. 2010. "Press Coverage and Political Accountability." *Journal of Political Economy* 118(2):355–408.
- Stratmann, Thomas and Martin Baur. 2002. "Plurality Rule, Proportional Representation, and the German Bundestag: How Incentives to Pork-Barrel Differ across Electoral Systems." *American Journal of Political Science* 46(3):506–514.
- Strøm, Kaare. 2000. "Delegation and Accountability in Parliamentary Democracies." *European Journal of Political Research* 37(3):261–290.
- Wooldridge, JM. 2002. *Econometric Analysis of Cross Section and Panel Data*. MIT Press.

A Supplementary Tables

TABLE A1: Congruence and Voting Behavior, Main Parties, Including Interaction Terms

	Roll Call Votes with Party Leadership					
	Percent				Number	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	-0.038 (0.02) [0.105]	-0.038 (0.02) [0.110]	-0.070* (0.04) [0.072]	-0.064 (0.04) [0.106]	-0.374* (0.20) [0.064]	-0.362* (0.20) [0.070]
Congruence * List MP	0.069* (0.04) [0.090]	0.069* (0.04) [0.083]	0.105 (0.07) [0.115]	0.108 (0.07) [0.103]	0.518 (0.34) [0.123]	0.571* (0.33) [0.087]
List MP	-0.031* (0.02) [0.070]	-0.024 (0.02) [0.163]	-0.057** (0.03) [0.046]	-0.045 (0.03) [0.114]	-0.226 (0.15) [0.131]	-0.178 (0.15) [0.242]
In Cabinet		0.004 (0.02)		-0.003 (0.03)		0.075 (0.20)
SPD		-0.029*** (0.01)		-0.048*** (0.01)		-0.286*** (0.06)
District Controls 16th Legislature		yes 0.001 (0.01)		yes -0.049*** (0.01)		yes -0.016 (0.06)
Constant	0.965*** (0.01)	1.059*** (0.06)	1.028*** (0.02)	1.265*** (0.10)	1.797*** (0.08)	2.719*** (0.45)
Observations	781	781	781	781	32284	32284
P-values Joint Hypothesis Test						
Cong*List, Congruence	0.1746	0.1694	0.1608	0.1887	0.1555	0.1393
Cong*List, List	0.1935	0.1988	0.1076	0.2579	0.2967	0.1304

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors are presented in parantheses, p-values in brackets. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the *Bundestag*. Probit estimations cluster standard errors at the MP level.

**TABLE A2: Standardized Congruence and Voting Behavior
Sample Restricted to Direct MPs from Main Parties**

	Roll Call Votes with Party Leadership					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Std congruence	-0.006* (0.00) [0.098]	-0.006* (0.00) [0.095]	-0.012* (0.01) [0.075]	-0.01 (0.01) [0.116]	-0.061* (0.03) [0.064]	-0.060* (0.03) [0.073]
In Cabinet		0.002 (0.02)		-0.008 (0.03)		0.064 (0.20)
SPD		-0.028*** (0.01)		-0.048*** (0.01)		-0.267*** (0.07)
District Controls 16th Legislature		yes -0.004 (0.01)		yes -0.063*** (0.01)		yes -0.044 (0.08)
Constant	0.950*** (0.00)	1.113*** (0.07)	1.002*** (0.01)	1.346*** (0.12)	1.651*** (0.03)	3.161*** (0.50)
Observations	534	534	534	534	22328	22328

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors are presented in parantheses, p-values in brackets. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the *Bundestag*. Probit estimations cluster standard errors at the MP level.

TABLE A3: Voting Behavior Over Time
Sample Restricted to Direct MPs in Main Parties

DV: Number of Roll Call Votes with Party Leadership			
	(1)	(2)	(3)
12 Months	0.204** (0.09) [0.017]	0.202** (0.09) [0.019]	0.203** (0.09) [0.019]
Congruence * 12 Months	-0.098 (0.19) [0.602]	-0.096 (0.19) [0.612]	-0.101 (0.19) [0.596]
Congruence	-0.184 (0.22) [0.405]	-0.176 (0.21) [0.411]	-0.099 (0.23) [0.667]
In Cabinet		0.355*** (0.09)	0.337*** (0.10)
SPD		-0.208*** (0.08)	-0.274** (0.11)
District Controls		yes	yes
State FE			yes
Constant	1.611*** (0.10)	2.191*** (0.58)	1.337* (0.81)
Observations	12433	12433	12433

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors clustered at the MP level in parantheses, p-values in brackets.

TABLE A4: Congruence and Roll Call Absenteeism - Main Parties

	Roll Call Votes Absent from					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (4)	Tobit (5)	Probit (7)	Probit (8)
Congruence	-0.028 (0.02) [0.165]	-0.01 (0.02) [0.602]	-0.028 (0.02) [0.164]	-0.01 (0.02) [0.600]	-0.164 (0.14) [0.233]	-0.017 (0.13) [0.897]
FPTP MP		-0.016** (0.01)		-0.016** (0.01)		-0.115** (0.05)
In Cabinet		0.168*** (0.02)		0.168*** (0.02)		0.795*** (0.10)
SPD		0.030*** (0.01)		0.030*** (0.01)		0.198*** (0.04)
16th Legislature		-0.001 (0.01)		-0.001 (0.01)		0.003 (0.05)
District Controls		yes		yes		yes
Constant	0.090*** (0.01)	-0.051 (0.06)	0.090*** (0.01)	-0.051 (0.06)	-1.353*** (0.06)	-2.297*** (0.35)
Observations	781	781	781	781	35021	35021

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors are presented in parantheses, p-values in brackets. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the *Bundestag*. Probit estimations cluster standard errors at the MP level.

TABLE A5: Congruence and Roll Call Absenteeism
Sample Restricted to Direct MPs from Main Parties

	Roll Call Votes Absent from					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	-0.012 (0.02) [0.609]	0.002 (0.02) [0.915]	-0.012 (0.02) [0.608]	0.002 (0.02) [0.914]	-0.072 (0.18) [0.682]	0.05 (0.17) [0.765]
In Cabinet		0.179*** (0.02)		0.179*** (0.02)		0.828*** (0.09)
SPD		0.025*** (0.01)		0.025*** (0.01)		0.172*** (0.06)
16th Legislature		0.006 (0.01)		0.006 (0.01)		0.043 (0.06)
District Controls		yes		yes		yes
Constant	0.077*** (0.01)	-0.062 (0.06)	0.077*** (0.01)	-0.062 (0.06)	-1.430*** (0.07)	-2.450*** (0.43)
Observations	534	534	534	534	24067	24067

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors are presented in parantheses, p-values in brackets. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the *Bundestag*. Probit estimations cluster standard errors at the MP level.

TABLE A6: Congruence and Roll Call Absenteeism
Sample Restricted to List MPs from Main Parties

	Roll Call Votes Absent from					
	Percent				Count	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	-0.06 (0.04) [0.125]	-0.027 (0.04) [0.485]	-0.06 (0.04) [0.123]	-0.027 (0.04) [0.477]	-0.316 (0.22) [0.145]	-0.093 (0.22) [0.669]
In Cabinet		-0.083 (0.10)		-0.083 (0.10)		-0.701*** (0.10)
SPD		0.031** (0.01)		0.031** (0.01)		0.190** (0.08)
16th Legislature		-0.014 (0.01)		-0.014 (0.01)		-0.082 (0.08)
District Controls		yes		yes		yes
Constant	0.115*** (0.02)	-0.102 (0.12)	0.115*** (0.02)	-0.102 (0.12)	-1.211*** (0.09)	-2.376*** (0.62)
Observations	247	247	247	247	10954	10954

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors are presented in parantheses, p-values in brackets. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the *Bundestag*. Probit estimations cluster standard errors at the MP level.

TABLE A7: Congruence and Roll Call Absenteeism, Main Parties, Including Interaction Terms

	Roll Call Votes Absent from					
	Percent				Number	
	OLS (1)	OLS (2)	Tobit (3)	Tobit (4)	Probit (5)	Probit (6)
Congruence	-0.060*	-0.046	-0.060*	-0.046	-0.316	-0.196
	(0.04)	(0.03)	(0.04)	(0.03)	(0.22)	(0.22)
	[0.091]	[0.166]	[0.090]	[0.163]	[0.145]	[0.364]
Congruence * FPTP MP	0.047	0.054	0.047	0.054	0.243	0.28
	(0.04)	(0.04)	(0.04)	(0.04)	(0.28)	(0.27)
	[0.272]	[0.183]	[0.271]	[0.179]	[0.383]	[0.296]
FPTP MP	-0.037**	-0.037**	-0.037**	-0.037**	-0.219*	-0.225**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.12)	(0.11)
	[0.044]	[0.035]	[0.043]	[0.034]	[0.067]	[0.046]
In Cabinet		0.169***		0.169***		0.799***
		(0.02)		(0.02)		(0.10)
SPD		0.030***		0.030***		0.198***
		(0.01)		(0.01)		(0.04)
District Controls		yes		yes		yes
16th Legislature		-0.001		-0.001		0.002
		(0.01)		(0.01)		(0.05)
Constant	0.115***	-0.038	0.115***	-0.038	-1.211***	-2.232***
	(0.02)	(0.06)	(0.02)	(0.06)	(0.09)	(0.36)
Observations	781	781	781	781	35021	35021
P-values Joint Hypothesis Test						
Cong*FPTP, Congruence	0.2122	0.359	0.2106	0.3538	0.3172	0.5733
Cong*FPTP, FPTP	0.0205	0.0368	0.0201	0.0351	0.0258	0.0265

Note: * p<0.10, ** p<0.05, *** p<0.01. Standard errors are presented in parantheses, p-values in brackets. The unit of analysis of OLS and Tobit estimations is the MP; the one of probit estimations is vote in the *Bundestag*. Probit estimations cluster standard errors at the MP level.

TABLE A8: Committee Membership

	Party Committee Member			District Committee Member		
	(1)	(2)	(3)	(4)	(5)	(6)
FPTP MP	0.147	0.327*	0.509	0.249	0.399**	0.183
	(0.15)	(0.20)	(0.42)	(0.16)	(0.20)	(0.43)
	[0.328]	[0.095]	[0.230]	[0.115]	[0.045]	[0.673]
Congruence * FPTP			-0.472			0.57
			(0.97)			(1.02)
			[0.628]			[0.575]
Congruence		-0.192	0.143		0.136	-0.283
		(0.48)	(0.84)		(0.48)	(0.89)
		[0.689]	[0.865]		[0.776]	[0.750]
SPD		0.185	0.184		0.174	0.18
		(0.18)	(0.18)		(0.18)	(0.19)
District Controls		yes	yes		yes	yes
Constant	-0.639***	4.958	4.817	-0.848***	-2.4	-2.236
	(0.13)	(3.67)	(3.69)	(0.14)	(3.68)	(3.70)
Observations	384	354	354	384	354	354
P-values Joint Hypothesis Test						
Cong*FPTP, Congruence			0.8208			0.8207
Cong*FPTP, FPTP			0.2222			0.1179

Note: * p<0.10, ** p<0.05, *** p<0.01. Binary outcome variable which takes value 1 if MP is member in any district or party committee, and 0 otherwise. Probit model.

**TABLE A9: Committee Membership
Using Stratmann & Baur's 2002 Definition**

	(1)	(2)	(3)
FPTP MP	0.164 (0.16) [0.318]	0.292 (0.21) [0.163]	0.137 (0.45) [0.761]
Congruence * FPTP			0.416 (1.07) [0.698]
Congruence		-0.439 (0.50) [0.384]	-0.746 (0.94) [0.427]
SPD		0.111 (0.19)	0.116 (0.19)
District Controls		yes	yes
Constant	-0.950*** (0.14)	-2.057 (3.86)	-1.949 (3.87)
Observations	384	354	354
P-values Joint Hypothesis Test			
Cong*FPTP, cong			0.6357
Cong*FPTP, FPTP			0.3536

Note: * p<0.10, ** p<0.05, *** p<0.01. Binary outcome variable which takes value 1 if MP is member in any district committee, and 0 otherwise. Probit model.