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Abstract

We examine moonlighting by politicians in Germany. In July 2007, the German Supreme Court adjudicated that members of parliament (MPs) have to publish details of their outside earnings. Using panel data models, we investigate how outside earnings are correlated with absence and parliamentary activity. The results do not indicate that outside earnings are correlated with absence rates and speeches; but they do suggest that outside earnings are somewhat negatively correlated with oral contributions, interpellations, and group initiatives. We propose that the results for Germany do not corroborate evidence on other countries such as Italy because party discipline, institutions, and political cultures differ across countries.

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Keywords: moonlighting by politicians, outside earnings, attendance and activity in parliament, good and bad politicians.

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1. Introduction

Some politicians acquire experience in private business before, during, and after being active in politics. Members of parliament (MPs) in Germany, for instance, are allowed to continue with the business activities that they were engaged in before entering politics. It is also conceivable that politicians use their prominence and networks to earn money by, for example, giving speeches. Politicians have to split their efforts between their obligations as an MP and their outside activities, generating a time trade-off. Earning outside income may thus influence how MPs fulfill their parliamentary responsibilities (which include, for example, attending plenary sessions in parliament, committee meetings, giving speeches in parliament, and offering consultation sessions for citizens).[4]

Outside earnings and parliamentary activity were a hot issue during the German election campaign of 2013. The Social Democrat Peer Steinbrück accumulated substantial outside earnings by giving speeches at corporate events, and commentators conjectured that such outside activities would negatively affect parliamentary effort. Steinbrück ran as a candidate for chancellor in the 2013 federal election against the conservative incumbent Angela Merkel. Commentators agreed that Steinbrück's outside earnings were one of the reasons why the Social Democrats lost the election.

We investigate how outside earnings of German federal parliament (Bundestag) members were associated with absence and parliamentary activity over the 17th legislative period, 2009-2013. We focus on the 17th legislative period because the German Supreme Court adjudicated in 2007 that MPs have to publish their outside activities. There is no study that examines the nexus between outside earnings and parliamentary activity in Germany. In contrast to studies for other countries (e.g. Gagliarducci et al. 2010 for Italy), we also use measures of parliamentary activity that go beyond the absence rate, namely speeches, oral

[4] Soule and Clarke (1970) and Hitlin and Jackson III (1977) examine amateurs and professionals in the 1968 Democratic national convention and the 1974 Democratic mid-term conference. Jones et al. (2002) describe how electoral rules in Argentina influence political careers. Mattozzi and Merlo (2008) investigate why career politicians and political careers exist.

contributions, interpellations, and group initiatives. We use a panel data set to control for MPs' unobserved ability. The results do not indicate that outside earnings are correlated with absence rates and speeches; but they do suggest that outside earnings are somewhat negatively correlated with oral contributions, interpellations, and group initiatives. We propose that the results for Germany do not corroborate evidence on other countries such as Italy because party discipline, institutions, and political cultures differ across countries.

2. Related studies

Moonlighting is expected to influence politicians' activities in parliament: when MPs pursue outside activities, they have less time to spend on pure parliamentary activities.[5] In Italy, outside earnings have been shown to increase absence from parliament using the pre-parliament incomes of freshmen politicians as an instrumental variable for outside earnings. High-ability citizens are, however, more likely to run for office when they are allowed to keep their outside earnings (Gagliarducci et al. 2010).[6] Allowing moonlighting may hence influence the selection of (high-ability) candidates into politics.

Two issues are likely to influence the quality of politicians: differences in opportunity costs induce low-quality candidates to run with higher probability than high-quality candidates (selection effect), and higher salaries for politicians improve politicians' performance due to an incentive effect (Besley 2004, Caselli and Morelli 2004, Messner and Polborn 2004).[7] In Italy, higher wages have attracted more educated candidates (Gagliarducci and Nannicini 2013). In Finland, higher salaries for politicians have increased the quality of female candidates, but not the quality of male candidates (Kotakorpi and Poutvaara 2011).

[5] For a survey on moonlighting by politicians, see Geys and Mause (2013). Bender and Lott (1996) review the literature on legislator voting and shirking.
[6] Merlo et al. (2009) also use the pre-parliament incomes of politicians as an instrumental variable for outside earnings. See Nannicini et al. (2013) on how Italian voters punish absence.
[7] Peichl et al. (2013) find that German MPs earn 35-65% more than private sector executives, but not more than top-level private sector executives. See Kotakorpi et al. (2013) on the returns of political office in Finland. See also Bordignon et al. (2013) on the self-selection of politicians and Evrenk et al. (2013) on the quality of politicians in party-primaries.

Experts examine which determinants influence MPs' attendance and activities in parliament. In Italy, for example, MPs who have no political experience prior to entering parliament have been shown to attend votes less often when outside opportunities increase. MPs who do have political experience prior to entering parliament have not, by contrast, been found to attend votes less often when outside opportunities increase (Fedele and Naticchioni 2013). MPs from governing parties were absent less often in parliament compared to MPs from opposition parties (Gagliarducci et al. 2010 and Galasso and Nannicini 2011). MPs elected into parliament via the majoritarian tier were absent less often than MPs elected into parliament via the proportional tier (Gagliarducci et al. 2011). MPs who won the mandate in contestable districts were absent from parliament less often because parties allocated their best politicians to contestable districts (selection effect, see Galasso and Nannicini 2011). German MPs who won the mandate in the 2009 election in contestable districts were also absent from parliament less often (Bernecker 2013).[8] In the European parliament, increasing salaries have been shown to increase absence rates and to decrease the number of questions (Mocan and Altindag 2013). Fisman et al. (2013), by contrast, do not find that salaries influenced attendance in the European parliament; legislative output, however, increased when MPs attended parliamentary meetings more frequently.[9]

How outside earnings influence absence from and activity in parliament remains as an empirical question.

[8] German MPs who won the mandate in the 2005 election in contestable districts had lower outside earnings (Becker et al. 2009). Female MPs had fewer additional jobs, particularly in the private sector (Geys and Mause in press). Physically attractive female MPs had, however, more additional jobs (Geys in press). MPs from right-wing parties had more outside activities than MPs from left-wing parties (Mause 2009). Geys and Mause (2012) portray the nexus between outside earnings and electoral control. Geys (2013) discusses how electoral cycles influence outside activities of MPs in the United Kingdom.

[9] In the United States' congress, MPs were found to exhibit lower voting participation in their last term (Lott 1990). In the United Kingdom, politicians' expense claims and parliamentary activity were positively correlated, indicating that politicians are intrinsically motivated (Besley and Larcinese 2011).

3. Institutional background

3.1 Absence from recorded votes and activity in parliament

There are various voting procedures in the German Bundestag. We rely on the only voting procedure that reveals the voting behavior of each MP, namely recorded votes. 218 recorded votes took place between the beginning of the legislative period in 2009 and the end of the legislative period in 2013. We thus use absence rates in these recorded votes for each MP in each year of the legislative period.[10]

We use four measures of parliamentary activity. Firstly, we use speeches, including both speeches actually given and speeches placed on record. We acknowledge that MPs determine the number of speeches jointly with their factions. We assume, however, that the willingness to give a speech is strongly correlated with the actual number of speeches given. MPs may well place speeches on record, which are included in our measurement of the number of speeches.[11]

Secondly, we use oral contributions, including for example interposed questions, replies, declarations, and heckling. Oral contributions measure all kinds of oral activities during plenary sessions excluding pre-formulated speeches. We expect oral contributions to measure individual-specific effort. In contrast to speeches, oral contributions occur spontaneously during debates and are thus difficult to prepare by staffers.

Thirdly, we use the number of small and large interpellations. MPs submit interpellations in a written form. Interpellations are intended to retrieve information from the government. Fourthly, we use the number of group initiatives, including bills, different types of applications, and reporting. To be sure, it remains questionable how much effort individual

[10] The federal parliament also publishes information on MPs' excused absences. MPs are, however, allowed to excuse themselves for being absent without any reason. We therefore cannot distinguish between excuses with and without good reason and do not distinguish between excused and unexcused absences in the empirical analysis. When MPs are absent, they have to incur wage cuts of up to 100 euros per day.

[11] In the course of the Euro crisis some MPs gave speeches in parliament even though their view on the Euro crisis, such as bailout packages, was in contrast to the faction leaders' views. Frank Schäffler from the reigning FDP, for example, gave speeches in parliament opposing the faction leaders' and the government's view on bailout packages.

MPs put into interpellations and group initiatives because MPs often jointly pose interpellations and, by definition, jointly prepare group initiatives.[12]

We acknowledge the shortcomings of the individual variables measuring absence or activity of MPs. Using all four of these variables jointly may, however, to some extent offset these shortcomings and thus allows deriving conclusions from how outside earnings are correlated with MPs' effort.

3.2 Outside earnings of MPs

The German federal parliament decided in August 2005 that MPs must publish their outside activities and outside earnings.[13] The law now requires MPs to publish their sources and levels of outside earnings. Table 1 shows the eight categories into which MPs have to classify their outside activities. We only consider categories two to five because these are the only categories that involve a trade-off between outside earnings and attendance/activity in parliament. These categories contain income from employment and self-employment (such as income from speeches), income from positions in corporations (such as positions on supervisory boards), income from positions in public entities (such as county councils or churches), and income from positions in societies and foundations. We do not include income from holding a position in the government or a party when calculating outside earnings as income from holding a position in the government or a party does not describe "outside" earnings. MPs have to publish outside earnings from each activity in a coded way as a monthly or yearly income. Level 1 includes outside earnings of between 1,000 and 3,500 euros, level 2 includes outside earnings of between 3,500 and 7,000 euros, and level 3 includes outside earnings of above 7,000 euros. Disclosure requirements also include unpaid

[12] For the German states, Braendle and Stutzer (2013) show that the number of interpellations increases with the share of public servants in parliament.

[13] Nine MPs called the Supreme Court to adjudicate on the legitimacy of the law. The president of the federal parliament decided to wait for the Supreme Court verdict before publishing MPs' outside earnings. In July 2007 the German Supreme Court adjudicated that MPs have to publish their outside activities and outside earnings.

activities and activities remunerated at less than 1,000 euros. In the empirical analysis, we use the lower bounds of these income categories: level 1 describes outside earnings of 1,000 euros, level 2 of 3,500 euros, and level 3 of 7,000 euros.

We acknowledge that using outside earnings does not include how much time an MP invested in earning outside income, and that outside earnings thus serve only as a proxy for the time invested.

3.3 The German political party landscape and federal elections

Two major political parties characterize the political spectrum in Germany: the leftist SPD and the conservative CDU. In Bavaria, Germany's largest federal state by area, the conservatives are not represented by the CDU, but by their sister party, the CSU. No party competition emerges between the CDU and the CSU, and they form one faction in the federal parliament. We therefore refer to both parties collectively as the CDU in the empirical analysis. All of Germany's federal chancellors have been members of one of these two major blocs: the SPD and the CDU.

The much smaller FDP and the Greens (Bündnis 90/Die Grünen) have played an important role as coalition partners. Although the SPD has formed coalitions with all of the other three parties, the CDU has never formed a coalition with the Greens at the federal level. The CDU has formed coalitions with the SPD and the FDP.

In federal elections, voters cast two votes in a personalized proportional representation system. The first vote determines which candidate is to obtain the direct mandate in one of the 299 electoral districts with a simple majority. The second vote determines how many seats the individual parties receive in parliament. Each party that received at least 5% of the second votes obtains a number of the 598 seats in the parliament that corresponds to the party's

second vote share.[14] Candidates voted into the parliament with the first vote (direct mandate) obtain their seats first. Candidates from party lists obtain the remaining seats. When the number of direct mandates exceeds the party's vote share, the party obtains excess mandates. Because the other parties did not obtain equalizing mandates in the elections before 2013, excess mandates made it possible for an individual party to receive a larger number of seats as compared to the number of seats this party would have received based on the second vote result.

4. Empirical analysis

4.1 Descriptive statistics

We use data from the website of the German federal parliament, from MPs' personal websites, and from the German newspaper "Die Zeit" for the period 2009-2013 (17th legislative period).[15]

Figure 1 shows histograms of the absence rate and parliamentary activities for the individual MPs. The histograms portray skewed distributions of the absence rate, speeches, oral contributions, interpellations, and group initiatives. These distributions are skewed to the right, meaning that most MPs display low or average levels of activity, while there are some MPs that tend to be very active in parliament.

The upper left panel of Figure 2 shows that left-wing politicians were more frequently absent in the 17th legislative period of the federal parliament than their colleagues from other parties. MPs from the Left Party did not attend 15.3% of the recorded votes on average, MPs from the SPD did not attend 10.6% of the recorded votes, and MPs from the Greens did not attend 7.8% of the recorded votes per year. Right-wing politicians, in contrast, had lower absence rates. MPs from the FDP did not attend 6.5% of the recorded votes on average and

[14] Candidates obtain a direct mandate even if their party fails to reach the 5% clause. If a party obtains less than 5% of the second votes, but at least three direct mandates, the party obtains a number of seats in the parliament according to the party's second vote share.
[15] We compiled information on outside earnings in August 2013.

MPs from the CDU did not attend 5.5% of the recorded votes per year. It is conceivable that right-wing politicians were absent less often than left-wing politicians because the CDU and FDP were the governing parties and therefore they had to ensure their majority in parliament (see also Gagliarducci et al. 2010 and Galasso and Nannicini 2011).[16] MPs from opposition parties have, by contrast, lower incentives to attend votes because the opposition parties fail to form a majority in parliament in any event.

The upper right panel of Figure 2 shows that MPs from small parties were more active in giving speeches. MPs from the Greens gave 8.4 speeches on average, Left Party MPs gave 7.6 speeches, and FDP MPs gave 7.4 speeches per year. MPs from large parties, by contrast, gave fewer speeches. SPD MPs gave 5.6 speeches on average and CDU MPs gave 5.1 speeches per year. MPs from small parties may well give more speeches to attract attention. The number of minutes for speeches allocated to the factions is, however, proportional to the factions' size. MPs from small parties may thus have given shorter speeches.

The center left panel of Figure 2 shows that left-wing politicians were more active in giving oral contributions. MPs from the Greens contributed on average 4.6 times, Left Party MPs contributed 3.1 times, and SPD MPs contributed 2.1 times per year. Right-wing politicians, in contrast, made oral contributions less frequently. FDP MPs contributed on average 1.7 times and CDU MPs contributed 0.9 times per year. It is conceivable that left-wing politicians contributed more often because the SPD, Left Party, and Greens were the opposition parties.

The center right panel of Figure 2 shows that politicians from opposition parties were more active in interpellating. MPs from the Greens interpellated on average 43.9 times, Left Party MPs interpellated 38.1 times, and SPD MPs interpellated 11.4 times per year. Politicians from governing parties, by contrast, interpellated less often. CDU MPs interpellated on average 0.6 times and FDP MPs also interpellated 0.6 times per year.

[16] In Italy, left-wing politicians have shown lower absence rates, while belonging to the government coalition is controlled for (Gagliarducci et al. 2010).

The lower left panel of Figure 2 shows that politicians from opposition parties were more active in preparing group initiatives. MPs from the Greens prepared on average 49.3, Left Party MPs prepared 42.0, and SPD MPs prepared 17.1 group initiatives per year. Politicians from governing parties, by contrast, prepared fewer group initiatives. FDP MPs prepared on average 5.4 and CDU MPs prepared 4.0 group initiatives per year.

Figure 3 shows that outside earnings were substantially higher among right-wing politicians. CDU MPs earned on average 7,900 euros in outside income, while FDP MPs earned 4,400 euros in outside income per year. Left-wing politicians, by contrast, had lower outside earnings. SPD MPs earned 3,000 euros in outside income on average, Left Party MPs earned 1,400 euros, and MPs from the Greens earned 300 euros in outside income per year. For MPs from all parties, outside earnings from employment and self-employment were the most important source of outside earnings.[17]

Figure 4 shows that the share of MPs with outside earnings was substantially higher among right-wing parties. The CDU had 26.7% of MPs with outside earnings and the FDP had 26.6% of MPs with outside earnings per year. Left-wing parties, on the other hand, had lower shares of MPs with outside earnings. The Left Party had 12.9% of MPs with outside earnings, the SPD had 11.7% of MPs, and the Greens had 3.5% of MPs with outside earnings per year.

The descriptive statistics in Table 2 show that absence rates varied between 0 and 100%, the number of speeches varied between 0 and 39, the number of oral contributions varied between 0 and 40, the number of interpellations varied between 0 and 230, and the number of group initiatives varied between 0 and 151 per year among MPs.[18] Outside earnings varied between 0 and 296,000 euros per year among MPs.

[17] Considering only MPs with positive outside earnings, CDU MPs earned on average 29,700 euros in outside income and FDP MPs earned 16,500 euros in outside income per year. SPD MPs earned on average 26,100 euros in outside income, Left Party MPs earned 11,100 euros, while MPs from the Greens earned 7,600 euros.
[18] Oskar Lafontaine from the Left Party did not attend 10 out of 10 votes in 2009 because he was ill.

Table 3 shows the correlation coefficients between absence, speeches, oral contributions, interpellations, group initiatives, and outside earnings. As expected, outside earnings are positively correlated with absence rates and negatively correlated with speeches, oral contributions, interpellations, and group initiatives. The correlation coefficients are small and range between 0.06 and 0.12 in absolute values. The pairwise correlations between outside earnings and parliamentary effort are statistically significant at the 1% level. The correlation coefficients are largest between speeches, oral contributions, interpellations, and group initiatives (0.24 to 0.80).

4.2 Empirical strategy

The baseline panel data model has the following form:

$$MP\text{'s } effort_{ijt} = \beta_j \, Outside\ earnings_{it} + \eta_i + \theta_t + u_{it}$$

$$\text{with } i=1,\ldots,652;\ j=1,\ldots,5;\ t=1,\ldots,5$$

where $MP\text{'s } effort_{ijt}$ describes the share of recorded votes not attended (absence; j=1), the number of speeches given in parliament (j=2), the number of oral contributions (j=3), the number of interpellations (j=4), or the number of group initiatives (j=5) by MP i in year t (t runs from 1 to 5 because of the five calendar years from 2009 to 2013). $Outside\ earnings_{it}$ describes outside earnings in 100,000 euros. Due to the fact that data on outside earnings are only published in categories, we use the lower bounds of these categories when calculating outside earnings (see Section 3.2). η_i is an MP fixed effect, θ_t is a time fixed effect, and u_{it} describes an error term.

We estimate fixed-effects models with standard errors robust to heteroskedasticity (Huber/White/sandwich standard errors – see Huber 1967 and White 1980).[19] The panel includes the five calendar years from 2009 (September; beginning of the legislative period) to 2013 (September; end of the legislative period). We include all MPs in this 17th legislative period of the German federal parliament. We thus also include MPs who left the parliament within the legislative period and their successors. The sample includes 652 MPs and 3,131 observations.

4.3 Regression results

Table 4 shows the results. Using the absence rate as the dependent variable, the coefficient of outside earnings in column (1) is positive, but does not turn out to be statistically significant. Using speeches as the dependent variable, the coefficient of outside earnings in column (2) is negative, but does also not turn out to be statistically significant. Column (3) shows a negative correlation between outside earnings and the number of oral contributions. The coefficient of outside earnings is statistically significant at the 10% level. The numerical meaning of the coefficient is that the number of oral contributions decreases by 0.08 when outside earnings increase by one standard deviation (17,140 euros). Column (4) shows a negative correlation between outside earnings and the number of interpellations. The coefficient of outside earnings is statistically significant at the 5% level. The number of interpellations decreases by 0.68 when outside earnings increase by one standard deviation. Column (5) shows a negative correlation between outside earnings and the number of group initiatives. The coefficient of outside earnings is statistically significant at the 1% level. The number of group initiatives decreases by 1.06 when outside earnings increase by one standard deviation.

[19] Linear models are not perfectly suited for censored dependent variables. However, there is no tobit or negative binomial fixed effect panel estimator that we could employ. We believe that controlling for unobserved heterogeneity in MPs' abilities is needed and therefore use a common fixed effects panel estimator.

The year dummies show that the absence rate was higher in 2011, 2012 and 2013 compared to 2009 (reference category). For speeches, oral contributions, interpellations, and group initiatives, the year dummies show that activities were higher in the 2010-2012 period compared to 2009 and 2013, because the year dummies for 2009 and 2013 do not cover full years at the beginning and the end of the legislative period.

Why is it that outside earnings are (negatively) correlated with the number of oral contributions, interpellations, and group initiatives, but not significantly related with the absence rate and the number of speeches? MPs with outside earnings may well reduce their time spent on parliamentary work. It is conceivable that MPs with outside earnings reduce less important and less visible activities, such as oral contributions, interpellations, and group initiatives. MPs, by contrast, avoid reducing more visible activities, such as attendance in parliament and the number of speeches.

Table 5 shows the results for MPs from individual parties. For the CDU, FDP, and the Greens, the results do not show that outside earnings are correlated with the absence rate or activity in parliament. For the SPD, columns (3) and (4) show a negative correlation between outside earnings and the number of oral contributions, and between outside earnings and the number of interpellations. The coefficients of outside earnings are statistically significant at the 5% and 1% level. The numerical meaning of the coefficients is that the number of oral contributions decreases by 0.11 and the number of interpellations decreases by 0.61 when outside earnings increase by one standard deviation (18,315 euros). For the Left Party, columns (1) and (2) show a positive correlation between outside earnings and the absence rate, and between outside earnings and the number of speeches. The coefficients of outside earnings are statistically significant at the 1% level. The absence rate increases by 0.03 and the number of speeches increases by 0.71 when outside earnings increase by one standard deviation (4,284 euros). Outside earnings do not turn out to be statistically significant when we use group initiatives of MPs from individual parties as dependent variable.

4.4 Robustness

Estimating a fixed-effects model does not allow for including time-invariant variables, such as gender and party affiliation. To exploit the variation in MPs' time-invariant characteristics, one thus may estimate a random-effects model. Estimating a random-effects model, however, gives rise to a potential bias from omitted (time-invariant) variables, such as unobserved heterogeneity in MPs' abilities. We thus do not rely on results from a random-effects model.

The results of the fixed-effects model may suffer from reverse causality bias, because MPs decide simultaneously on outside activities and on attendance or activity in parliament. In an instrumental variable approach, one may well use potential market incomes of MPs as an instrumental variable for outside earnings (see Gagliarducci et al. 2010 and Merlo et al. 2009). There are no data available on the incomes earned by individual German MPs before they entered parliament. Matching data on the politicians' occupations before becoming an MP or the politicians' occupations learned with data on average incomes of occupations helps to describe potential market incomes. We do, however, not rely on results from a 2SLS model, because potential market incomes do not account for the different abilities of MPs, which is likely to give rise to different potential incomes (unobserved heterogeneity). There is another concern about the 2SLS approach. We cannot rule out that potential market incomes influence the absence rate or the activity through a channel other than outside earnings. We thus cannot ensure that the exclusion restriction is fulfilled.

We tested whether the results change when outside earnings are measured in logs.[20] Replicating Table 4 renders the coefficient of outside earnings to be positive and statistically significant when we use the absence rate as the dependent variable and the coefficients of outside earnings to lack statistical significance when we use the number of oral contributions and the number of interpellations as dependent variables.

[20] In taking the natural logarithm of outside earnings (in euros), absence rates (in percentage points), speeches, oral contributions, interpellations, and group initiatives (number), we use log(0) = 0.

We also tested whether the results change when we measure outside earnings, absence rates, the number of speeches, the number of oral contributions, the number of interpellations, and the number of group initiatives in logs. Replicating Table 4 renders the coefficient of outside earnings to be positive and statistically significant when we use the absence rate as the dependent variable and the coefficient of outside earnings to lack statistical significance when we use the number of interpellations as the dependent variable.

We tested whether the results change when we consider absence rates measured in days with recorded votes, rather than as measured by the number of recorded votes. Measuring absence rates in days may capture outside opportunities more precisely because the number of recorded votes per day varies between 1 and 20: not attending one day with 20 recorded votes gives rise to less outside opportunities compared to not attending 20 days with one recorded vote each.[21] Replicating Table 4 does not change the inferences.

We tested whether including/excluding MPs without outside earnings in the whole legislative period changes the inferences. Replicating Table 4, excluding MPs who did not have outside earnings in the whole legislative period renders the coefficients of outside earnings to lack statistical significance when we use the number of oral contributions, the number of interpellations, and the number of group initiatives as dependent variables.[22]

We tested whether including/excluding MPs with low/high outside earnings changes the inferences. The results show that excluding MPs with low outside earnings does not change the inferences. Excluding MPs with high outside earnings renders the outside earnings variable to be statistically significant when we use the absence rate as dependent variable.

[21] We account for MPs who attended some, but not all recorded votes on a day: when an MP did not attend two out of four recorded votes, for example, we consider the MP as having not attended half the day.

[22] MPs without outside earnings during the entire legislative period do not help identifying the nexus between outside earnings and parliamentary effort, but may influence the coefficients of the model via covariates that change over time.

5. Conclusion

We examine how German MPs' outside earnings are correlated with their absence and parliamentary activity. We assess MPs' effort empirically by drawing on new data on German MPs: in July 2007, the German Supreme Court adjudicated that MPs must publish details of their outside earnings. Our dataset covers the 17th legislative period from 2009 to 2013. Using absences during recorded votes, and the number of speeches, oral contributions, interpellations, and group initiatives as indicators for effort and running fixed-effect panel regressions, the results do not show that outside earnings are correlated with absence and speeches. Outside earnings are, however, somewhat negatively correlated with oral contributions, interpellations, and group initiatives.

Our results do not corroborate findings based on Italian data, where MPs' outside earnings were shown to significantly increase absence rates (Gagliarducci et al. 2010). Three explanations spring to mind why results based on German and Italian data differ.

Firstly, penalties for missing recorded votes differ in Germany and Italy. In Germany, moonlighting MPs face wage cuts of up to 100 Euro for each session of recorded votes they miss (see §14 *Abgeordnetengesetz*). In Italy, missing recorded votes does not decrease MPs' salaries. The baseline salary is also much higher in Italy (Mause 2014). Consequently, even if there were penalties for missed recorded votes, MPs' salaries are relatively less dependent on attendance. It is thus conceivable that results differ across countries because MPs only react to the incentives they face.

Secondly, differences in party discipline may well influence MPs' behavior. While party discipline in Europe, and especially in Germany, is generally quite strong, Italy is an exception to this rule. For example, over the period 1996-2000, one fourth of all deputies in the Italian parliament switched parties at least once (Heller and Mershon 2008). A lack of party identification may explain why we observe a negative relationship between outside earnings and attendance rates in Italy.

Thirdly, Germany and Italy have very different political cultures. A political culture may be self-reinforcing (Beniers and Dur 2007). If attending recorded votes is regarded as an indispensable duty in Germany while being substitutable for any other activity in Italy, our results are plausible. Differences in political culture may be measured, for example, by social capital, trust or legal origin (Boix and Posner 1998, Bjørnskov 2010).

Our findings, however, must be interpreted with caution. Since we run fixed-effects panel regressions, the effect of outside earnings on parliamentary activity is identified by MPs who earn differing amounts of outside income over the course of the years. About 75% of all MPs do not have outside earnings. Many of the MPs that have outside earnings earn the same amount each year. MPs with zero or constant outside earnings do not contribute to identify the effect. If we run party-specific regressions, even more cases are left out and identification is based on a handful of MPs. The variation in the data we can use is thus small.

Ideally, we would like to extend our sample to the legislative period 2013-2017. Thanks to new and stricter disclosure rules, variation in reported outside earnings in the legislative period 2013-2017 is probably much higher. However, these data will only be available as of 2017 onwards.

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In 2013 we started to write two individual papers on the issue investigated in this paper. Felix Arnold published his paper as DIW Discussion Paper “German MPs’ Outside Jobs and Their Repercussions on Parliamentary Effort” and presented his paper at the Economic Policy Seminar of the FU Berlin. Björn Kauder and Niklas Potrafke presented their paper “Outside earnings, attendance, and activity: Do German MPs meet their obligations?” at the Public Economics Workshop 2013 in Munich, the Annual Congress of the International Institute of Public Finance 2013, an internal conference at the Ifo Institute, and at the Australasian Public Choice Conference 2013. At the beginning of 2014, we merged the two papers.

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Figure 1: The distributions of absence rate and activities are skewed

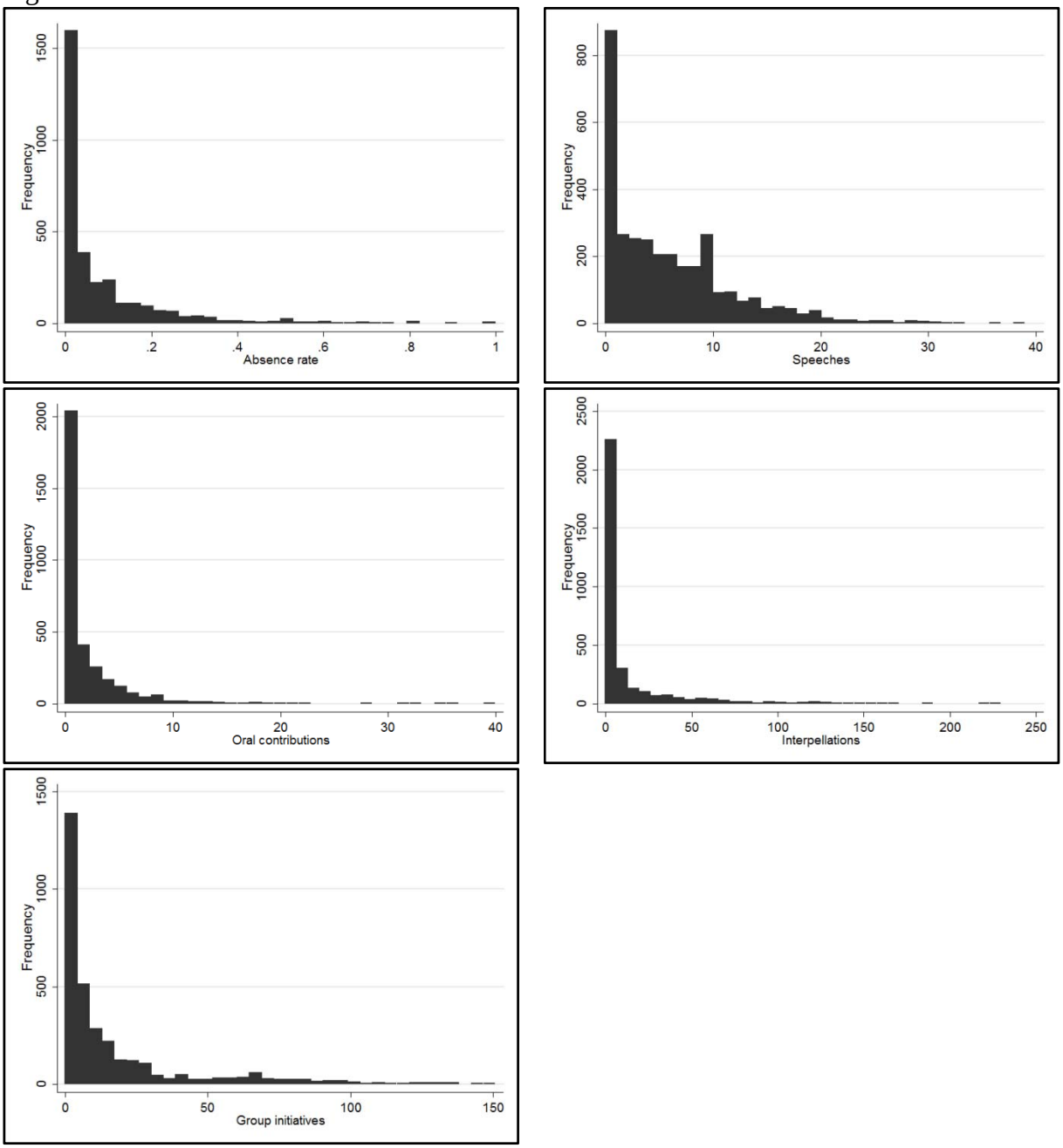
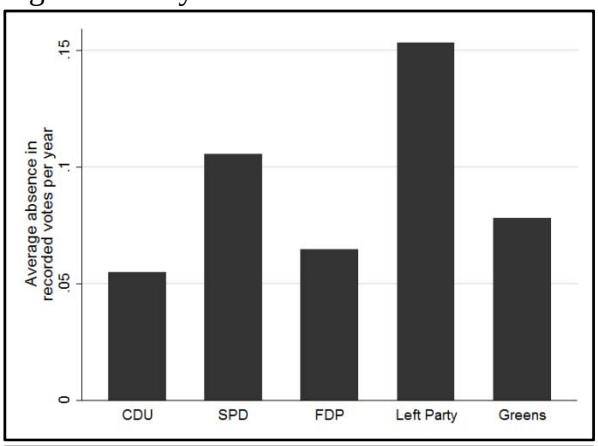
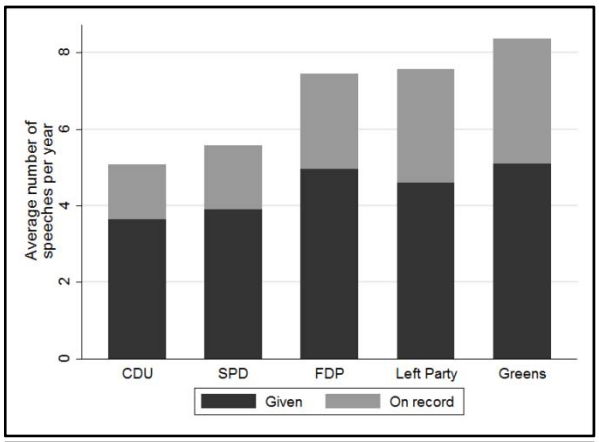
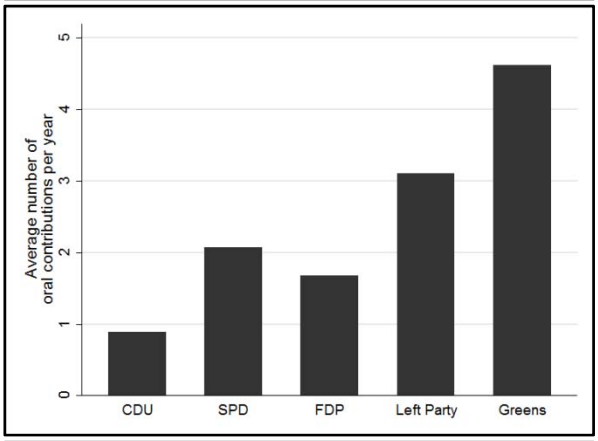
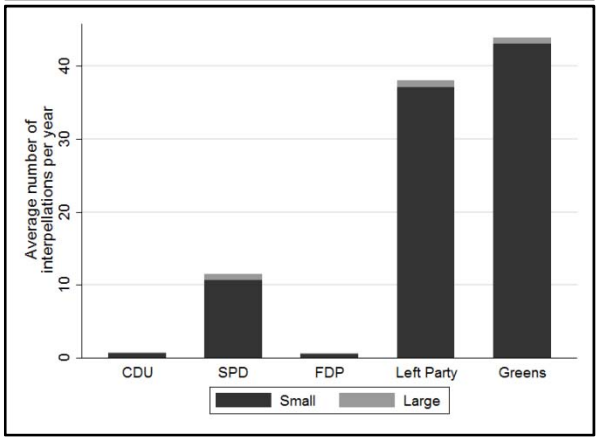


Figure 2: Party affiliation is correlated with activities









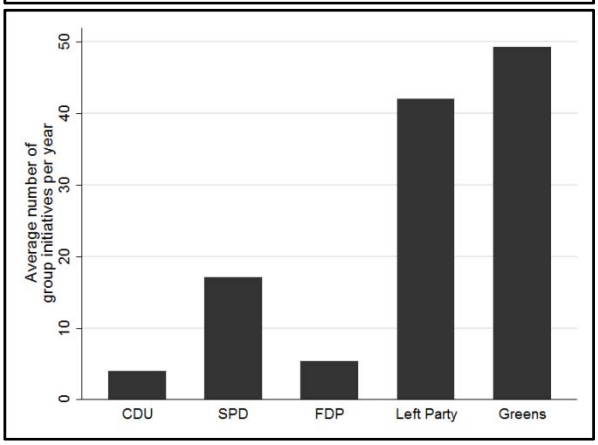


Figure 3: Right-wing politicians have highest outside earnings

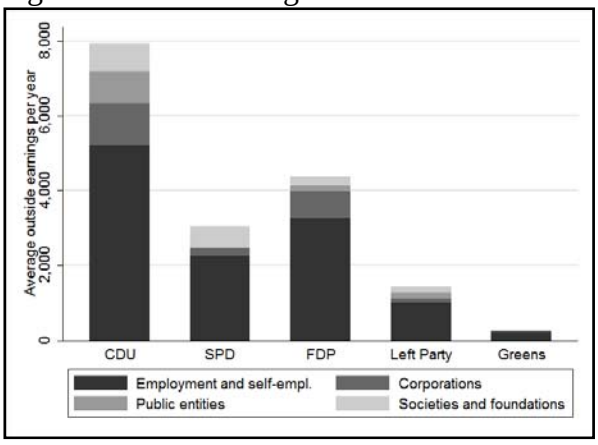


Figure 4: Right-wing parties have highest share of MPs with outside earnings

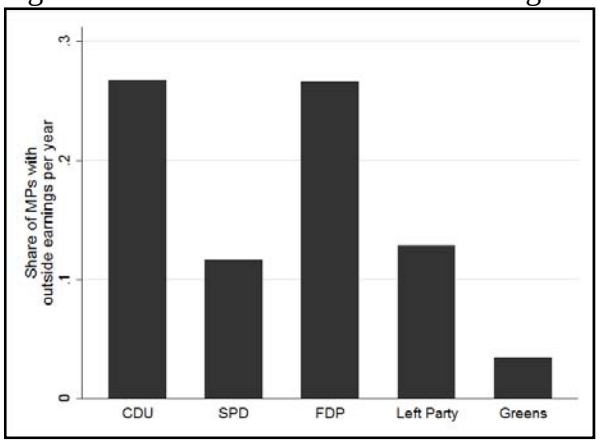


Table 1: MPs have to report outside activities in eight categories

No.	Description	Example
1	Professional career before membership in the parliament	College professor
2	Employment and self-employment	Speech
3	Positions in corporations	Supervisory board
4	Positions in public entities	Church
5	Positions in societies and foundations	Development aid agency
6	Agreements on future activities and pecuniary advantages	Absorption of tuition fees
7	Participations in corporations	Law firm
8	Donations	–

Outside earnings from employment and self-employment are officially named outside earnings "beside the mandate".

Table 2: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Absence	3131	0.08	0.14	0	1
Speeches	3131	6.21	5.78	0	39
Oral contributions	3131	1.97	3.18	0	40
Interpellations	3131	12.50	26.25	0	230
Group initiatives	3131	16.90	25.11	0	151
Outside earnings (total)	3131	0.05	0.17	0	2.96
Outside earnings (employment and self-employm.)	3131	0.03	0.15	0	2.96
Outside earnings (corporations)	3131	0.01	0.04	0	1.05
Outside earnings (public entities)	3131	0.00	0.04	0	0.84
Outside earnings (societies and foundations)	3131	0.00	0.04	0	0.84
CDU	3131	0.38	0.49	0	1
SPD	3131	0.24	0.42	0	1
FDP	3131	0.15	0.36	0	1
Left Party	3131	0.12	0.33	0	1
Greens	3131	0.11	0.31	0	1

Outside earnings measured in 100,000 euros.

Table 3: Correlation coefficients between absence, activities, and outside earnings

Variable	Absence	Speeches	Oral contributions	Inter-pellations	Group initiatives	Outside earnings
Absence	1					
Speeches	-0.08***	1				
Oral contributions	-0.03	0.37***	1			
Interpellations	0.06***	0.24***	0.39***	1		
Group initiatives	0.07***	0.36***	0.46***	0.80***	1	
Outside earnings	0.07***	-0.06***	-0.08***	-0.10***	-0.12***	1

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Regression results. Fixed-effects model with standard errors robust to heteroskedasticity (Huber/White/sandwich standard errors)

	(1) Absence	(2) Speeches	(3) Oral contributions	(4) Interpellations	(5) Group initiatives
Outside earnings (total)	0.009	-0.537	-0.467*	-3.944**	-6.177***
	(0.059)	(1.125)	(0.264)	(1.564)	(2.115)
2010	0.006	6.253***	2.348***	16.378***	22.255***
	(0.007)	(0.202)	(0.143)	(1.116)	(1.247)
2011	0.013*	7.345***	2.226***	14.643***	21.559***
	(0.008)	(0.221)	(0.133)	(1.082)	(1.039)
2012	0.016**	7.532***	2.179***	14.422***	20.885***
	(0.008)	(0.236)	(0.112)	(1.063)	(0.970)
2013	0.023***	5.448***	1.280***	6.123***	11.198***
	(0.008)	(0.207)	(0.081)	(0.506)	(0.548)
Observations	3,131	3,131	3,131	3,131	3,131
Number of n	652	652	652	652	652
R-squared within	0.00624	0.454	0.192	0.204	0.315
R-squared between	0.00479	0.00400	0.00751	0.0143	0.0253
R-squared overall	0.00331	0.225	0.0802	0.0611	0.125

2010 to 2013 describe time fixed effects (reference category: 2009)
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Regression results: Individual parties. Fixed-effects models with standard errors robust to heteroskedasticity (Huber/White/sandwich standard errors)

	(1) Absence	(2) Speeches	(3) Oral contributions	(4) Interpellations	(5) Group initiatives
Outside earnings (total): CDU	0.077	-0.440	0.065	1.432	-0.963
(Obs.: 1,197)	(0.048)	(1.170)	(0.269)	(1.225)	(0.814)
Outside earnings (total): SPD	-0.047	-0.585	-0.602**	-3.312***	-1.930
(Obs.: 738)	(0.051)	(1.661)	(0.304)	(1.155)	(1.293)
Outside earnings (total): FDP	-0.096	2.379	0.104	-0.070	4.500
(Obs.: 470)	(0.106)	(7.720)	(4.101)	(1.089)	(5.133)
Outside earnings (total): Left Party	0.641***	16.668***	-2.400	-16.421	-26.192
(Obs.: 381)	(0.138)	(3.689)	(1.671)	(25.068)	(29.923)
Outside earnings (total): Greens	-0.019	-4.924	-0.906	33.988	21.229
(Obs.: 345)	(0.120)	(10.860)	(3.830)	(27.686)	(13.787)

Each row describes an individual estimation with (non-reported) time fixed effects
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1