

How electoral systems and moonlighting shape parliamentary output in the European Parliament

Christian Staat^a, Colin R. Kuehnhanss^{b,*}

^a *Université libre de Bruxelles, SBS-EM, ECARES, Avenue F.D. Roosevelt 50 CP 114/04, 1050 Brussels, Belgium*

^b *Vrije Universiteit Brussel, Department of Applied Economics, Pleinlaan 2, 1050 Brussels, Belgium*

Abstract

The effort parliamentarians invest in their work is subject to short term opportunity cost considerations and the interest in securing a mandate for the future. This article analyses the output of Members of the European Parliament (MEPs) between 2009 and 2014 with regard to these two moderators. The supranational nature of the European Parliament thereby allows two distinct advantages. First, the analysis of so called ‘moonlighting’ is possible without any specific country bias, and we find larger outside earnings to be negatively correlated with particularly work intense tasks. Second, Member States have considerable freedom in choosing their electoral system for European elections, and the importance of politicians’ output varies between them. We find MEPs from countries with candidate-based and decentralised election rules to produce less output during their mandate than MEPs from party centralised systems.

JEL classifications: D72, H11, P16

Keywords: European Parliament, Moonlighting, Political effort, Election systems

Introduction

In many parliamentary systems, Members of Parliament (MPs) are allowed to pursue outside activities and to receive additional income to their official salary (see e.g. Geys and Mause, 2013, for a cross-national comparison). The possibility of working outside the parliamentary role creates a clear trade-off between the time spent on contributing to the legislative process, and

*Corresponding author.

We would like to thank Felix Arnold, Benny Geys, Bruno Heyndels, Joshua Holm, and Marc Jegers for comments on an earlier draft. The usual disclaimer applies. Colin R. Kuehnhanss is grateful to the Research Foundation Flanders (FWO) for financial support in form of a PhD fellowship.

Email addresses: cstaat@ulb.ac.be (Christian Staat), ckuehnhanss@vub.ac.be (Colin R. Kuehnhanss)

the time invested in pursuing paid work. At the same time, politicians need to consider how their work and the investment of their effort into different types of legislative output will influence their re-selection and re-election chances. While the possibility of earning outside income has been found to influence legislative effort in different ways across national parliaments (see e.g. Arnold et al., 2014; Gagliarducci et al., 2010; Geys and Mause, 2013, forthcoming), the role of the institutional context and its biases within individual countries have not received much attention. We analyse the output produced by Members of the European Parliament (MEPs) between 2009 and 2014. First, we focus on the relationship between moonlighting and the effort MEPs invest in their parliamentary work. Second, we use the multinational composition and the variation in the electoral procedures to elect MEPs across countries to analyse the effect of the electoral systems on their legislative output.

In 2011, the European Parliament (EP) introduced a new Code of Conduct, which requires its Members (MEPs) to declare their income in the three years prior to, and their outside earnings during their mandate. We use MEPs' financial disclosures, data on their personal backgrounds collected from curricula vitae, and records of their activities during the 7th term of the European Parliament (2009-14) to run OLS regressions for our analysis of their legislative effort. We test the effects of outside earnings and electoral systems on a broad range of measures for legislative effort to capture potential variation in the importance MEPs attach to different tasks. The data from the European Parliament allow us to test cross-national aspects that single-country studies cannot evaluate. In particular, as Member States of the EU have some freedom in choosing the election system they use for the European elections, we can analyse how the different systems effect the legislative effort of their MEPs. MEPs need to convince different principals of their suitability for re-selection and re-election, depending on the system they are elected under (Hix et al., 2012). This need directly relates to their incentives to focus on different aspects of their parliamentary role.

We find outside earnings to be negatively correlate with the number and length of draft reports an MEP produces, the number of motions for resolution, and the number of parliamentary questions. Exploiting the national differences between the countries represented in the EP, we find a strong influence of the election systems used by EU Member States on the effort of their MEPs. Politicians from countries with candidate-based and decentralised election rules exert less effort than those from party centralised systems. In particular, they engage less in work intense tasks such as writing draft reports. Those elected under candidate centralised systems, however, compensate this lower output with more 'symbolic' effort that helps to promote their political

profile at home.

Literature Review

The quality and invested effort of parliamentarians is typically seen to be influenced by two main effects: the incentives of candidates to run for office (selection effect); and the reward structure for performance once elected (incentive effect). Both have been found to be influenced by the official salary (see e.g. Besley, 2004; Caselli and Morelli, 2004; Messner and Polborn, 2004; Mattozzi and Merlo, 2008). Candidates for political office are often modelled to have different levels of ability (or quality). Higher salaries are seen to reduce the opportunity costs of running for office for high quality candidates (Besley, 2004; Caselli and Morelli, 2004). At the same time they increase the existing opportunity cost advantage of low quality candidates. The overall quality of the candidate pool then depends on the balance between the opportunity cost effects, but also other factors such as personal motivation and the intrinsic attractiveness of the mandate itself (Messner and Polborn, 2004; Mattozzi and Merlo, 2008).

A number of studies use an exogenous salary shock in the European Parliament in 2009 to evaluate the effect of salary on selection and performance.¹ The findings so far are mixed and sometimes even contradictory. Overall they seem to indicate that higher salaries attract politicians with lower education but also longer political experience to the EP (Braendle, 2015; Fisman et al., 2015; Staat, 2015).² On the performance side, the findings are clearer, and higher salaries seem to increase absenteeism and reduce legislative output (Mocan and Altindag, 2013; Staat, 2015). However, Braendle (2015) finds differing results for performance. When the analysis is restricted to the first two years in office of newcomers in the 6th and 7th parliament, the effect of the salary increase is positive for some output measures. The official salary is, of course, not the only (financial) consideration for candidates when running for office.

Moonlighting

Moonlighting can directly interact with the (self-)selection effect. The possibility of receiving outside earnings while serving in a political office is one way to reduce the opportunity costs of

¹Prior to 2009, MEPs' salaries were linked to that of the national MPs in their respective home countries. With the reform, the salaries of all MEPs were equalised, leading to substantive pay cuts for Austrian and Italian MEPs, but to (up to eight-fold) increases for MEPs from other countries.

²On the municipal level, higher salaries have been shown to attract more educated politicians (Gagliarducci and Nannicini, 2013; Ferraz and Finan, 2011, for Italy and Brazil, respectively). In the Finnish national parliament, Kotakorpi and Poutvaara (2011) find that the quality of female candidates increases with higher salary, but not that of men.

entering politics for citizens with successful economic activities. Gagliarducci et al. (2010) show for Italy, that high-ability citizens are indeed more likely to run for office if they can keep their outside incomes. Once elected they are, however, also more likely to shirk. In addition to their ability, moonlighting may also influence the effort parliamentarians exercise in their legislative work. It presents the elected politician with a trade-off. How much time should be allocated to outside activities rather than to parliamentary work?³

In national-level studies, Gagliarducci et al. (2010) find that higher outside income is associated with a higher absenteeism rate of Italian MPs, whereas Arnold et al. (2014) find no significant influence of outside income on the absenteeism rate of German MPs and the number of speeches they deliver. Arnold et al. (2014) do, however, find a negative relationship between outside income and a range of other effort variables.⁴ They point to country-specific characteristics to explain the differences between their own results and those of Gagliarducci et al. (2010). In the light of the national differences, the EP presents a particularly interesting case for the analysis of moonlighting.

Electoral systems

The EP brings together politicians elected under different electoral rules within the same institution. Member States are free to hold the European elections according to their own prerogative, as long as it satisfies proportional representation. The Member States of the EU may operate a range of different national electoral rules. First, the election may be based on the closed-list (party-list) or the open-list (single transferable vote or similar) system. Second, the electoral area may be subdivided if it does not affect the general nature of the proportional vote. Thresholds for the European election are not allowed to exceed 5% at the national level.

Existing studies on differences between the electoral systems and their effects have so far predominantly focused on the voting behaviour of MEPs (e.g. Hix et al., 2007), and on the representativeness achieved by the varying electoral rules and the campaigning efforts of MEPs

³The electoral control voters exercise over the mandate holder and the public's (rather) negative view of moonlighting provide a clear incentive for politicians to focus on their parliamentary work. The competition a politician is facing for his seat thereby has a mediating influence. Those elected by a narrow margin have more reason to demonstrate their commitment to their parliamentary work to secure future re-election. Those who won by a large margin are less constrained by such concerns. They can invest more time in earning outside income (Becker et al., 2009).

⁴The time trade-off effect has been shown to be mediated by partisan and socio-economic factors. Higher age has been found to reduce the invested effort (measured by the number of bills sponsored) while improving the absenteeism rate (Fedele and Naticchioni, 2015; Gagliarducci et al., 2010). Men show higher absenteeism rates, and women have fewer outside jobs in the private sector (Becker et al., 2009; Mause, 2009; Geys and Mause, 2012). Finally, right-wing politicians receive outside income more often and also higher amounts than left-wing politicians (Arnold et al., 2014).

in their home constituencies (see e.g. Bowler and Farrell, 1993; Farrell and Scully, 2007, 2010, and references therein). Hix et al. (2012) analyse MEPs' career choices after their mandate as a function of their participation and the electoral systems in which they were elected.⁵ They do, however, not comment on the direct role of electoral systems in determining legislative output. Differences within MEPs' legislative work or the dependence of the focus on different tasks within the parliament on election systems have, to the best of our knowledge, not been studied yet. As the performance of a politician during (and focus on specific parts of) the parliamentary mandate is of distinctly different importance to voters and political parties (Hix et al., 2007), we expect MEPs to adjust their effort to the expectations of the different principals that hold power over their re-selection and re-election chances in their home country. We thus analyse the legislative output of MEPs across the different electoral systems in use.

Institutional Background

The European Parliament is composed of representatives from all EU Member States, who are (since 1979) directly elected every five years. At roughly 50%, the turnover of parliamentarians is quite high in the EP compared to national parliaments (e.g. 25% in the German Bundestag, Leif, 2009). The composition of the EP reflects a degressive proportionality system using the share of Member States' populations in the total population of the EU as baseline. Countries with bigger populations seat more parliamentarians, but smaller countries are over-represented on a per-capita basis. After the elections in 2009, 372 MEPs continued from the 6th to the 7th EP and 364 were newly elected. Due to fluctuation during the term caused by the restructuring of the EP and the replacement of MEPs who left because of their age, health, change of occupation, or other reasons, 857 individuals served as MEP during the 7th EP.⁶ To avoid the biasing of our results, we focus on the 650 MEPs who served the full term in this paper. For them, the completed disclosures are available and their effort can be reliably measured.⁷

⁵For a discussion of different career paths in the European Parliament see also Scarrow (1997).

⁶The total number of MEPs changed twice during the 7th EP. Once due to the Lisbon treaty reforms, and again when Croatia joined the EU. At the time of the European election in 2009, the number of seats per country ranged from five (Malta) to 96 (Germany), with a total of 736 seats. At the end of the 7th legislature in 2014, the EP had 766 seats.

⁷As the declarations of financial interest only became mandatory in 2012, 35 MEPs had already left parliament without reporting their incomes. Others were only in the EP for a few months and their effort cannot be measured reliably. Finally some MEPs served long enough to have a measure of their effort and provided their financial declarations, but the effort variables may be biased due to a potential learning curve at the start of the mandate and the internal organisation of parties and parliamentary Committees. Further, their effort variables would need to be adjusted to those of MEPs who served the full five years. Such adjustment could easily lead to error or loss of validity of the measures.

MEPs are organised in multinational political groups with relatively strong internal cohesion. Political divisions within the Parliament typically reflect the left to right spectrum present in most Member States (Hix et al., 2007). The political groups and their shares of seats are listed in Table 1 in the following Section. The work of the EP is split between Strasbourg and Brussels. A typical working month of an MEP consists of two weeks for Committee and political group meetings in Brussels, one plenary week in Strasbourg, and one week alternating between additional short (one or two-day) plenary sessions in Brussels and time in the constituency.⁸

Members of the European Parliament receive a compensation package of a basic salary and additional allowances.⁹ While the base salary is an important motivator to become an MEP, other considerations can also be important (Staat, 2015). Broadly speaking, three motives for holding office have been identified in political economy: ego-rents, material gains, and public good concerns. We might expect that financial and opportunity cost considerations are relatively more important in less prestigious offices that come with smaller ‘ego-rents’. For most politicians, the European Parliament carries less weight with regard to personal profiliation and career advancement than the national level (Hix et al., 2012). It thus provides a good setting for our study. Material rent-seeking, such as corruption, is inherently restricted in the European Parliament as the budget of the EU is relatively low and MEPs cannot influence local project spending directly.

Nonetheless, the EP faced its most recent scandal in 2011, when some MEPs were accused of accepting cash for influencing the wording of legislative drafts. As a reaction to the scandal and the worsening public image it caused, the EP endorsed a new Code of Conduct for its Members at the end of 2011.¹⁰ Beginning January 2012, all MEPs must disclose any conflicts of interest they may have and, to improve transparency, must provide a declaration of financial interests detailing their income in the three years prior to, as well as their outside earnings during their mandate. The Code of Conduct includes a clear statement of consequences in case of breaches or inaccurate reporting and a mechanism for enforcement. Penalties range from simple reprimands to more drastic punishments, such as fines and suspensions, up to the removal from office.

⁸During the 7th EP, parliamentary work was arranged by policy field in 20 Committees, plus two sub-Committees. Each MEP is at minimum a full member of one Committee and a substitute for at least one other Committee.

⁹See Appendix A for details.

¹⁰Source: http://www.europarl.europa.eu/pdf/meps/201206_Code_of_conduct_EN.pdf

Data

The personal information of MEPs who served in the 7th legislature was automatically retrieved from the web-pages of the European Parliament and from Parltrack,¹¹ data on their parliamentary activities was obtained from VoteWatch Europe,¹² and attendance figures were collected from the minutes of the EP's plenary sessions. Large parts of the moonlighting literature, such as the studies on the effort of Italian MPs discussed above, focus on the absenteeism rate as measure of effort. While the absenteeism rate is an important indicator, we believe that additional legislative output measures should be considered to get a fuller picture of the effect of moonlighting on parliamentary effort. The absenteeism rate may be disproportionately influenced by two factors. First, the incentive scheme attached to the presence of MEPs at the plenary sessions distorts the time trade-off effect. During the 7th EP, MEPs received a per diem rate of 304 Euro. The trade-off is thus not restricted to the fulfilment of the parliamentary duties and the engagement in outside activities to earn further income, but parliamentary work brings an additional financial benefit. Like MEPs, the German MPs analysed by Arnold et al. (2014) face a direct financial incentive to attend plenary sessions. Their absenteeism rate is not correlated with outside earnings, but other effort measures are. Second, presence at plenary sessions is the easiest indicator of an MEP's engagement for the public to observe. Shirking on this particular effort variable may render an MEP easily vulnerable to criticism. An overview of all our measured effort variables is provided in Appendix B.

As some of the effort variables may be dependent on MEPs' support staff, the numbers of accredited and local assistants were retrieved from the EP website. Accredited assistants work in the MEPs' offices in Brussels and Strasbourg. Their duties may include, but are not limited to, organisational and liaison tasks, following and reporting on Committee activities, and the drafting of legislative texts. Local assistants are employed in an MEP's constituency and typically not directly involved in the legislative work. Finally, we encoded the MEPs' curricula vitae to determine their education, professional-, and political experience.¹³

Since January 2012, the mandatory declaration of financial interest has required parliamentar-

¹¹The data include the MEPs' gender, date of birth, educational background, start date and end date of their mandate, the national party affiliation, European political group affiliation, and so forth and is available on <http://www.europarl.europa.eu> and parltrack.euwiki.org. The *age* variable signifies MEPs' age at the start of the 7th EP throughout the paper.

¹²Source: <http://www.votewatch.eu>

¹³The CVs were also obtained from the European Parliament web-pages, supplemented by the MEPs' personal Wikipedia entries, and cross-checked by nationals of the MEPs' home countries for verification of the coded information.

ians to report their income during the three-year period prior to taking up office and during their mandate. The numbers reported in this section provide our *prior income* variable. Three separate sections of the declaration require the detailed statement of employment or self-employment during the mandate, (paid) membership in any boards or committees, and one-off remunerated activities.¹⁴ They provide the *outside earnings* data, and thus the core variable for our analysis. Incomes from different sources have to be listed individually and assigned to one of four categories: 1) 500 to 1000 Euro a month; 2) 1001 to 5000 Euro a month; 3) 5001 to 10,000 Euro a month; and 4) more than 10,000 Euro a month. The accuracy of the measurement and analysis of the income of MEPs is thus not only constrained by the assumption of honest reporting, but also by the rather wide reporting categories. As category 4 is open-ended and no mean value or upper bound can be determined, we always take the lower bound of each category for our analysis. Where multiple sources of income are listed, they are summed together. Of the 650 MEPs serving the full term, 132 MEPs declared outside earnings between 500 and 20,000 Euro per month (see also Table 1).

Table 1 provides an overview of the demographics for those elected in 2009, the total 857 MEPs who served during the 7th EP, and those who served the full term. The changes to the number of seats and the replacements during the term create identification issues with regard to the activities of some MEPs. For this reason, we focus only on the 650 MEPs who served the full term.

As MEPs are not elected under a unified European election rule, we categorise electoral systems along two main lines (see also Bowler and Farrell, 1993; Farrell and Scully, 2010; Hix et al., 2012). First, do voters have discretion over the ranking of candidates on party lists? We denominate open-list electoral systems as candidate centred and closed list systems as party centred. Second, does the candidate selection happen at the national or sub-national level? We code electoral systems as centralised when there is only one constituency, and as decentralised when there is more than one constituency, i.e. the electoral area is subdivided.

In addition, we collected data for a number of control variables at the national level (see also Staat, 2015). As Hobolt and Høyland (2011) show, national ruling parties are punished most when the European election falls between two national elections. Hence, we include an interaction term of *government* and *proximity* to control for the motivational implications of this effect. The dummy variable *government* indicates whether an MEP belongs to the ruling

¹⁴One-off outside activities must be reported only if their total exceeds 5000 Euro per year.

Table 1: Sample Demographics

	N=	Elected 2009 ^a		All in 7th EP ^a		Full term	
		736		857		650	
Age		56.0	years	55.6	years	56.2	years
Female		35.1	%	35.5	%	35.9	%
University degree		78.0	%	77.4	%	77.9	%
PhD		17.4	%	17.5	%	16.9	%
Newcomer 2009 ^b		47.6	%	52.7	%	47.1	%
Formerly in National Parliament		31.0	%	30.0	%	30.5	%
Former Minister or Head of State		11.3	%	10.6	%	10.9	%
ALDE: Alliance of Liberals and Democrats for Europe		11.4	%	11.2	%	11.5	%
ECR: European Conservatives and Reformists		7.3	%	6.5	%	8.2	%
EFD: Europe of Freedom and Democracy		4.3	%	4.1	%	4.8	%
EPP: European People's Party		36.0	%	35.5	%	35.9	%
GUE-NGL: European United Left - Nordic Green Left		4.8	%	5.4	%	3.7	%
Greens/EFA: Greens/European Free Alliance		7.5	%	7.7	%	7.4	%
NI: Non-attached Members (non-inscrits)		3.7	%	4.0	%	3.5	%
S&D: Progressive Alliance of Socialists and Democrats		25.0	%	25.7	%	25.1	%
Mean outside earnings (N)		465.4	Euro	458.0	Euro	457.3	Euro
Share with outside earnings		19.6	%	20.0	%	20.3	%
Number with outside earnings (n=)		144		171		132	
Mean outside earnings (n)		2378.5	Euro	2295.3	Euro	2268.9	Euro
Mean prior income		3239.8	Euro	3121.4	Euro	3420.0	Euro

Notes:

^a Thirty-five MEPs left parliament before the declarations of financial interest became mandatory. The earnings numbers in these two columns are thus only based on 701 and 822 MEPs, respectively.

^b Newcomers had never served in the EP before.

party/parties in the respective Member State at the time of the European election. The dummy variable *proximity* takes the value 0 if the European election acts as a midterm election between national elections, and value 1 if the European election has been in the same month as a national parliamentary election.¹⁵ As an indicator of the satisfaction with the European Union, we derive the variable *image EP* from the Eurobarometer surveys, as turnout is an insufficient measurement for satisfaction of the national population with the EU.¹⁶ The country-level *corruption index* was taken from Kaufmann et al. (2011), and reflects the relative position of countries' level of corruption as mapped on a standard normal random variable.¹⁷ Both variables reflect political circumstances expected to influence the behaviour of MEPs in choosing their priorities between parliamentary and outside work. We also include the *size of the national parliament* as a proxy for the size of the pool of politicians available in a country. Further, we use the Herfindahl index (*HHI*) of Mocan and Altindag (2013, p.1136), measuring political party competition during the European elections in 2009: It 'is measured as $\sum scki^2$, where *scki* stands for the share of the votes received by the parliamentarian i's political party in country c during the EU election year k'¹⁸ Parties with a vote share of less than 5% are not taken into account. To facilitate the interpretation of the regression results, we transform the index to percentage points. A higher *HHI* indicates a higher vote concentration on fewer parties. While it does not capture any intra-party-competition, MEPs from countries with higher *HHI* face - at least on an inter-party level and subject to the stability of the parties within the country - less political insecurity than those from countries with a lower *HHI*. A summary of the national level variables is provided in Table C.5 in Appendix C.

Results

We begin the analysis of the effort parliamentarians invest by looking at the two most prominent indicators used in the literature so far: attendance and draft reports.¹⁹ Attendance is the easiest effort variable for the public to observe, whereas the interest in draft reports is usually

¹⁵The data on the timing of elections within the Member States is available at http://www.nsd.uib.no/european_election_database/election_types/ep_elections/.

¹⁶The survey data is accessible at http://ec.europa.eu/public_opinion/archives/eb_arch_en.htm

¹⁷The complete distribution described by Kaufmann et al. (2011) ranges from -2.5 and +2.5. To facilitate interpretation, we inverted the signs from the original variable, so that positive values correspond to a higher level of corruption.

¹⁸Mocan and Altindag (2013) obtain the underlying election result data from the European Election Database available at http://www.nsd.uib.no/european_election_database/election_types/ep_elections/.

¹⁹Draft reports are the equivalent to bills sponsored by a politician in other systems, such as the Italian case analysed by Fedele and Naticchioni (2015). See also Appendix B.

reserved to stakeholders. The latter require much work and dedication, but allow MEPs to exert the most influence on legislation.

Columns (1) through (4) in Table 2 show that - as at the national level - *outside earnings* at the European level are not significantly correlated with the attendance rate. Age has an inverted U-shaped influence, and those belonging to a governing party and newcomers attend more often (the attendance rate is 2.66 and 2.22 percentage points higher for each group, respectively). For newcomers a good voting track-record may be a means of improving their standing within the political group and of increasing their chances of receiving more responsibilities, for example in form of rapporteurships (Hausemer, 2006). Due to the interaction term, the coefficient for *government* reflects a conditional effect for those cases when the European elections act as a midterm election. Membership in a governing party then has a strong positive effect on output. A lower level of political competition is generally associated with a lower attendance rate. MEPs who face less inter-party competition for their seat are not as pressed to demonstrate their dedication. MEPs elected under a candidate decentralised system have an attendance rate that is around 5 percentage points lower than that of their colleagues from party centralised systems. This could be an indicator of the importance of spending time in the constituency for the former. Their position is directly determined by their profile within the constituency, while the actual legislative effort has a lower impact on their future political career (Hix et al., 2012).

Columns (5) through (8) show the regressions for the count of delivered draft report pages. As the number of reports an MEP can take on may vary with the complexity of the topic and the extent of political disagreement, we use the number of pages an MEP produces to account for these factors. We find a clear negative effect of *outside earnings* on the number of pages produced. For every 1000 Euro an MEP earns on the side per month, 4.6 fewer pages are written.²⁰ Though the effect falls just outside the conventional margins of significance, *newcomers* appear to produce fewer pages than more seasoned colleagues. This indication could be explained by a potential learning curve at the start of the first mandate and the internal distribution system for reports within political groups. Newly elected Members are less likely to have draft reports allocated to them. The education of MEPs in form of a *university degree* and the number of *accredited assistants* they employ in Brussels are strongly correlated with the length of reports. The more assistants available to support the drafting of documents, the more prolific the MEP is on this

²⁰When using the number of reports rather than the page count, the negative effect of *outside earnings* is fully sustained.

effort measure. The number of accredited assistants is thereby fully within the discretion of each MEP, as they all receive (and are limited to) the same monthly budget for this purpose. The national level variables show that lower political competition, as captured by the *HHI*, has a negative influence on the length of reports, while MEPs belonging to *government* parties produce longer reports. Finally, candidates from *party centralised* systems produce longer reports than their colleagues from all other election systems. This may on the one hand reflect the party's support for, and steering of, their MEPs' work in Brussels. On the other hand, it may reflect the higher importance of legislative work in securing the re-selection for a party list, whereas MEPs from less centralised and candidate based systems depend less on their actual output to convince voters (Hix et al., 2012). The significant differences between the larger political groups (particularly EPP and S&D) and the smaller groups reflect the allocation system used within Committees. While Committee chairs have some influence on the choice of system, allocation is typically based on the share of seats the political groups hold. Larger groups thus prepare per definition more reports than smaller groups.

Table 2: Regression results for MEPs' legislative output (attendance and draft report pages)

	Attendance				Draft report pages			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Outside earnings (in thousands)	-0.07 (0.30)	-0.19 (0.32)	-0.27 (0.34)	-0.26 (0.21)	-2.38 (2.27)	-2.91 (1.94)	-4.67** (2.00)	-4.62** (2.24)
Prior income (in thousands)	-0.24 (0.15)	-0.20 (0.12)	-0.18* (0.10)	-0.13 (0.12)	2.32 (2.38)	2.81 (1.96)	2.28 (1.95)	2.62 (1.64)
Newcomer 2009		1.66** (0.71)	1.98** (0.86)	2.22** (0.86)		-26.23* (15.03)	-18.67 (13.24)	-15.95 (10.13)
Male		-1.77** (0.78)	-0.61 (0.69)	-0.47 (0.76)		-15.39 (10.92)	-8.01 (11.55)	-7.15 (11.72)
Age		0.98*** (0.25)	0.83*** (0.27)	0.83** (0.38)		2.79 (4.97)	1.85 (5.07)	1.38 (4.88)
Age ²		-0.01*** (0.00)	-0.01*** (0.00)	-0.01** (0.00)		-0.03 (0.05)	-0.02 (0.05)	-0.02 (0.04)
University degree		2.25 (1.57)	1.81 (1.37)	2.23** (1.07)		26.86** (12.46)	29.21*** (10.39)	32.45*** (11.26)
PhD		0.28 (1.26)	0.10 (1.25)	-0.21 (1.15)		15.13 (15.58)	13.96 (14.06)	11.50 (14.17)
Years experience		-0.09 (0.07)	-0.16** (0.07)	-0.16** (0.07)		-0.81 (0.56)	-0.57 (0.49)	-0.73 (0.64)
Accredited Assistants		1.00 (0.89)	0.43 (0.73)	0.36 (0.48)		26.03*** (7.48)	19.19*** (6.48)	18.11*** (5.45)
Local Assistants		-0.05 (0.21)	0.03 (0.20)	0.08 (0.15)		-1.95 (2.05)	-2.39 (1.70)	-1.22 (1.69)
National parliament size			-0.00 (0.00)	0.00 (0.00)			0.06 (0.03)	0.06 (0.04)
Corruption index			0.45 (0.87)	0.13 (0.64)			5.11 (10.53)	0.12 (7.78)
Image EP			0.01 (0.06)	0.07 (0.07)			-0.33 (0.65)	-0.09 (0.66)
HHI			-0.10 (0.01)	-0.20** (0.10)			-0.08 (1.01)	-1.60* (0.84)
Government			2.85** (1.39)	2.66** (1.06)			40.58*** (9.08)	39.82*** (12.99)
Proximity			2.18 (1.75)	2.58* (1.50)			-10.67 (10.08)	-6.68 (14.29)
Government × Proximity			-1.09 (2.02)	-0.82 (1.68)			-6.63 (22.20)	-2.97 (23.71)
<i>Political Group</i>				<i>EPP is reference group</i>				
ALDE			-0.73 (1.81)	-0.95 (1.52)			-16.71 (11.11)	-17.03 (16.59)
ECR			-2.27 (2.46)	-1.62 (1.84)			-46.26*** (10.26)	-39.12** (17.56)
EFD			-8.67 (5.72)	-7.94** (3.12)			-75.21*** (18.02)	-68.04*** (16.03)
GUE-NGL			-2.18 (2.34)	-2.95 (1.90)			-44.77** (20.97)	-49.68** (21.47)
Greens/EFA			2.93 (2.04)	2.39* (1.39)			-12.31 (19.36)	-15.50 (20.87)
NI			-2.55 (3.86)	-2.27 (2.81)			-63.47*** (13.86)	-61.42*** (16.06)
S&D			0.39 (1.12)	0.29 (0.92)			1.04 (10.92)	0.54 (15.88)
<i>Election System</i>				<i>Party Centralised is reference group</i>				
Candidate Centralised				0.70 (1.73)				-29.79 (19.80)
Candidate Decentralised				-5.22*** (1.77)				-44.03** (19.86)
Party Decentralised				-2.70 (1.86)				-35.11* (20.40)
Constant	84.97*** (0.71)	55.00*** (8.66)	62.19*** (8.84)	58.69*** (12.18)	94.32*** (11.28)	-24.07 (137.20)	14.08 (162.53)	52.48 (141.80)
SE clustered at country level	Yes	Yes	13 Yes	No	Yes	Yes	Yes	No
Observations	650	650	650	650	650	650	650	650
R ²	0.008	0.061	0.131	0.152	0.004	0.076	0.143	0.151

Notes: Linear regression model point estimates with robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

In Table 3 we report the full regressions for all our measured effort variables. Columns (4) and (8) from Table 2 are reproduced for completeness. In contrast to the draft reports, almost all other effort measures are independent of the political group size and do not show any specific correlations between political group membership and effort. The only exception are amendments, for which the groups' secretariats provide research assistance and guidance regarding the political groups' positions. The observed correlations between the political group dummies and the number of amendments mirror those for the draft reports. To keep the presentation of the results clear, we do not report the political group estimates in Table 3.

The first two columns of Table 3 show the results for the attendance rate and number of speeches. The *prior income* and *outside earnings* have no discernible influence on these two effort variables. The number of speeches held in plenary is only significantly correlated with our national level variables. A larger political pool and lower competition reduce the number of speeches delivered, as does the *proximity* between national and European elections. The negative effect of lower competition on the number of speeches comes with a significantly reduced attendance rate. As national elections require time spent at home, mid-term elections have a bigger relative impact on the attendance rate of some MEPs. When the national elections happen at the same time as the European elections, the campaigning coincides and all MEPs from these countries need to make a time trade-off, eliminating relative differences. Concomitantly, the need to use speeches to reassure national party and European political-group positions to increase chances of re-election decreases with proximity as political differences between the two levels become less detrimental to the individual (Slapin and Proksch, 2010). MEPs elected under *candidate centralised* systems clearly deliver fewer speeches than the candidates from all other systems, which may reflect a lower need to justify individual positions when they diverge from either the political group or the national party line.

The remaining columns show the results for effort variables that have a more direct influence on the legislative output. As a general observation, male MEPs are less productive than female MEPs. While the sign of the estimates is negative for 7 of our 8 effort measures, the difference is significant for amendments, opinions, and written declarations. MEPs with a *degree* are somewhat more productive, and the number of *accredited assistants* positively affects the numbers of draft report pages, amendments, and opinions. Among the national-level variables, the political competition, participation of an MEP's party in *government*, and the interaction between *government* and *proximity* have the largest influence. In particular, those belonging to a government party have a higher attendance rate, number of draft report pages, and number of

motions for resolution, while lower political competition at home is mostly negatively correlated with the effort MEPs invest. Two exceptions are the written declarations and parliamentary questions in columns (7) and (8), respectively. These two effort measures have the least direct influence on the legislative output of the European Parliament, and may be a relatively easy tool for MEPs to showcase and inflate their activity level. In a climate of low national political competition and in *candidate decentralised* systems, they provide a relatively easy means of demonstrating activity at a comparably low cost in terms of time and resources needed. Overall, MEPs from candidate based and decentralised election systems produce less direct output than their colleagues from party centralised systems. The difference is particularly apparent for draft reports and amendments, the main legislative instruments. Strong national party structures may have advantages for their members in Brussels. Existing studies report sustained influence of national parties and their delegations on committee allocations, the voting behaviour of MEPs, and even the work of Committees (see.g. Hix, 2002; Whitaker, 2001, 2005). Detailed analyses of any potential support structures for legislative output seem, unfortunately, still to be missing. It would, however, be easy to imagine positive effects of national parties on their MEPs' output through improved resources allocation, exchange of information, and organised bargaining within and across political groups.

Outside earnings are negatively correlated with the length of draft reports, the number of motions for resolution, and the number of parliamentary questions an MEP produces. While the results are not uniform, it appears that the negative relationship with *outside earnings* is strongest for particularly work intensive legislative effort variables. The results of Arnold et al. (2014) for the German case show a broadly similar pattern. As in their results, attendance and speeches are not correlated with outside earnings, but other effort variables are. Absent a single-country cultural bias in our results, the lack of correlation between *outside earnings* and the attendance rate may be explained by the additional per-diem monetary incentive MEPs receive for attending. The trade-off is not limited to either fulfilling one's political duty or generating additional income, but the per diem rate provides a guaranteed additional income, which might not be matched with certainty by another activity. An additional interpretation could lie in the comparably public nature of the attendance rate and speeches. They are relatively easy to observe and scrutinise by the media and the public. Other variables, such as the drafting of reports, opinions, and motions for resolution may be more hidden from the public eye and obscured by the complexity of the legislative process.

Table 3: Regression results for MEPs' legislative output

	(1) Attendance	(2) Speeches	(3) Report Pages	(4) Amendments	(5) Opinions	(6) Motions	(7) Declarations	(8) Questions
Outside earnings (in thousands)	-0.26 (0.21)	7.79 (6.36)	-4.62** (2.24)	-0.09 (1.34)	-0.07 (0.08)	-2.21* (1.23)	0.05 (0.04)	-4.89** (2.21)
Prior income (in thousands)	-0.13 (0.12)	-2.59 (2.26)	2.62 (1.64)	0.72 (0.55)	0.04 (0.04)	-0.40 (0.62)	-0.03* (0.02)	0.15 (1.76)
Newcomer 2009	2.22** (0.86)	34.28 (26.21)	-15.95 (10.13)	9.77** (4.33)	0.39 (0.27)	0.59 (5.52)	-0.25 (0.18)	1.77 (13.51)
Male	-0.47 (0.76)	-14.26 (27.15)	-7.15 (11.72)	-16.40*** (4.40)	-0.72** (0.34)	-5.40 (6.04)	-0.49** (0.19)	3.64 (16.07)
Age	0.83** (0.38)	2.49 (9.24)	1.38 (4.88)	-1.38 (1.54)	0.12 (0.11)	0.33 (2.10)	0.01 (0.06)	1.65 (4.67)
Age ²	-0.01** (0.00)	-0.06 (0.08)	-0.02 (0.04)	0.01 (0.01)	-0.00 (0.00)	-0.01 (0.02)	-0.00 (0.00)	-0.03 (0.04)
University degree	2.23** (1.07)	-14.53 (29.22)	32.45*** (11.26)	10.62** (4.89)	0.24 (0.36)	-0.51 (6.51)	0.25 (0.17)	-4.20 (18.80)
PhD	-0.21 (1.15)	-31.48 (36.09)	11.50 (14.17)	-2.37 (5.14)	0.07 (0.34)	5.05 (8.19)	-0.20 (0.23)	-23.27 (18.01)
Years experience	-0.16** (0.07)	0.66 (1.48)	-0.73 (0.64)	-1.01*** (0.27)	-0.02 (0.02)	-0.31 (0.33)	-0.01 (0.01)	-0.81 (0.74)
Accredited Assistants	0.36 (0.48)	-7.11 (12.80)	18.11*** (5.45)	8.21*** (2.52)	0.32** (0.15)	-2.79 (3.55)	0.07 (0.09)	1.54 (7.59)
Local Assistants	0.08 (0.15)	5.33 (5.22)	-1.22 (1.69)	1.24 (0.85)	-0.03 (0.04)	-0.17 (0.91)	0.05* (0.02)	-4.32** (1.80)
National parliament size	0.00 (0.00)	-0.54*** (0.14)	0.06 (0.04)	0.01 (0.02)	0.00 (0.00)	-0.03 (0.02)	-0.00** (0.00)	-0.20** (0.08)
Corruption index	0.13 (0.64)	7.55 (24.31)	0.12 (7.78)	0.46 (3.79)	0.22 (0.20)	-2.35 (4.68)	0.17 (0.15)	28.96** (12.12)
Image EP	0.07 (0.07)	-0.51 (1.88)	-0.09 (0.66)	-0.42 (0.38)	0.00 (0.02)	0.79* (0.43)	-0.01 (0.02)	-1.96** (0.89)
HHI	-0.20** (0.10)	-4.94** (2.35)	-1.60* (0.84)	-1.43*** (0.42)	0.00 (0.03)	-0.12 (0.51)	0.04*** (0.02)	3.92*** (1.33)
Government	2.66** (1.06)	-48.22 (34.86)	39.82*** (12.99)	-5.40 (5.19)	0.18 (0.38)	13.12** (6.46)	-0.31 (0.20)	20.65 (19.52)
Proximity	2.58* (1.50)	-71.07* (38.29)	-6.68 (14.29)	16.18* (9.06)	0.23 (0.50)	21.22* (12.55)	0.09 (0.40)	22.01 (21.10)
Government × Proximity	-0.82 (1.68)	13.38 (47.61)	-2.97 (23.71)	20.38** (8.94)	0.42 (0.61)	-29.95** (13.53)	0.21 (0.37)	-55.37** (24.68)
<i>Party Centralised is reference group</i>								
<i>Election System</i>								
Candidate Centralised	0.70 (1.73)	-193.65*** (63.36)	-29.79 (19.80)	-5.93 (8.18)	0.64 (0.46)	-10.18 (12.00)	0.33 (0.36)	-42.40 (34.19)
Candidate Decentralised	-5.22*** (1.77)	-4.35 (44.81)	-44.03** (19.86)	-15.98** (8.07)	-0.40 (0.58)	3.27 (10.47)	1.19*** (0.34)	121.54*** (30.95)
Party Decentralised	-2.70 (1.86)	67.33 (48.35)	-35.11* (20.40)	-35.14*** (8.61)	-0.22 (0.63)	10.05 (11.97)	0.46 (0.36)	33.96 (24.39)
Constant	58.69*** (12.18)	750.25** (318.92)	52.48 (141.80)	155.76*** (47.70)	-2.14 (3.25)	12.22 (67.07)	1.60 (2.01)	219.82 (169.91)
Political group dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	650	650	650	650	650	650	650	650
R ²	0.152	0.113	0.151	0.176	0.066	0.103	0.103	0.148

Notes: Linear regression model point estimates with robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Robustness checks

To test the robustness of our results, we run the following checks (tables are reported in Appendix D), both of which confirm our previous results. First, we repeat the analysis with the reported numbers for *prior income* and *outside earnings* adjusted by purchasing power parity (PPP).²¹ As the parliamentarians in the EP come from countries with sometimes very different per capita GDP, a potential underestimation of the role of nominal outside incomes of MEPs from poorer countries could cause a bias in our results. An MEP from a poor country may need to invest more time to earn the same nominal outside income than a colleague from a richer country. Two theoretical arguments speak against such a bias. First, politicians tend to be part of a country's elite. Income from, for instance, directorships or occupations with an international perspective may already reduce the cross-national income difference. Second, once elected, MEPs spend the majority of their time away from their constituency. It is a reasonable assumption that the professional engagement outside of parliament will also be influenced by the pay standards on the international level on which they operate. Given that the center of MEPs' activities are mostly outside their home countries, the full PPP-adjustment of the *outside earnings* may introduce its own bias, running in the opposite direction of the nominal earnings numbers.

As a second robustness check, we re-evaluate the information MEPs provided in their declarations on the *prior income*. So far we have taken the declarations MEPs submitted at face value. In general, the form provided to the MEPs by the European Parliament for the purpose of submitting the financial declarations is fairly straight-forward and clearly worded. However, the formulation of the first section (on which we base our *prior income* variable) unfortunately leaves considerable room for interpretation. MEPs are asked to declare their 'occupation(s) during the three-year period before [taking] up office with the Parliament'. Only a later released user guide for the Code of Conduct specifies, that those three years only concern the period preceding the mandate for the 7th EP. Re-elected Members should thus list their previous role as MEP in this section. Many Members seem to have misunderstood the instructions and initially provided either data on their occupations before their first election (sometimes reaching back decades), or simply omitted their previous mandate. One-hundred forty MEPs submitted revised declarations between early 2012 and June 2013 reflecting corrections along these lines.

²¹We use the conversion rates provided by the OECD for 2011, available at <https://stats.oecd.org/> (2011 PPP results in euros, European Union as reference).

However, in many cases the declarations of re-elected MEPs still failed to mention their previous mandate. In such instances, we corrected the *prior income* variable by replacing outdated income information referring to time-periods before 2007 and omissions of the previous mandate with the non-declared salaries from the 6th EP. For our *outside earnings* variable we always take the declared incomes as reflected in the original or, where applicable, revised declarations.

The robustness checks fully confirm our results reported in the main analysis above. In Table D.6 we report the regression results for the effort of MEPs with the PPP converted income figures. The PPP-adjustment corroborates the negative correlation of *outside earnings* with the effort of MEPs. Table D.7 reports the results with the corrected *prior income* variable. Here too, we find no distinct changes from our main specification.

Discussion and Conclusion

In this paper, we use a unique data set to empirically test the influence of the outside earnings of Members of the European Parliament (MEPs) on their legislative effort during the 7th term (2009-14) of the European Parliament (EP). Parliamentarians face a trade-off: they can either spend their time fulfilling their political duties, or they invest it in the generation of additional income. By focusing on the European level, we can for the first time exclude country specific biases in the analysis of politicians' effort. We test the influence of the institutional context in form of election rules on the efforts of parliamentarians.

In the literature on moonlighting, politicians' effort is predominantly measured by their attendance rate at plenary and voting sessions. To avoid bias in the measurement of legislative effort, we take eight different measures of legislative effort into account and find a negative correlation between outside earnings and more work intense - and for the public harder to observe - effort variables. The number of draft report pages (and of draft reports as such), opinions, and parliamentary questions MEPs produce are all negatively correlated with higher outside earnings. While we only present correlations in this paper, our findings invite further research on the prioritisation of tasks by politicians. One limitation we face in this regard is a missing measure of MEPs' political activities outside the EP, either as part of their European mandate or in support of national or local politics.

Finally, the European-level data allow us to compare politicians' behaviour across the different election rules under which they gained their mandates. Those MEPs elected under candidate-based and decentralised systems produce less legislative output than their colleagues from party-centralised systems. However, those coming from a candidate centralised system engage more in

comparably 'symbolic' activities such as declarations. This finding supports the interpretation of Hix et al. (2012), that the legislative effort is more important for improving re-selection and re-election chances of parliamentarians in party centralised systems. MEPs in those systems must demonstrate commitment to the party line and impress the gatekeepers within the party organisation. In the candidate-based and decentralised systems, it is more important to either have a good standing with the leaders of the regional party chapter, or to maintain a positive profile with the local electorate. Political effort is thereby less important.

Appendix A. MEP salary and allowances

The base salary of an MEP is set at 38.5% of the salary of a judge at the European Court of Justice. The annual base salary before taxes was €96,246.36 in 2014 and is subject to an EU tax and to contributions to an accident insurance. After tax, the net salary comes to €75,004.44 on which member states may impose further national taxes. MEPs' allowances include a per-diem rate for each attended plenary sitting day. The per-diem pay is adjusted regularly and stood at €304 in 2014. The full per-diem pay is only attributed when the MEP attends at least half of the votes during the plenary day. The per-diem is a pure financial incentive to attend plenary sessions, as MEPs get the full, actually incurred, travel expenses for trips from and to the constituency, Brussels, and Strasbourg reimbursed. Each MEP also has a monthly budget of €21,209 at his or her disposal to pay the salaries and expenses of accredited assistants (in Brussels or Strasbourg) and local assistants in the home constituency.²²

Appendix B. Parliamentary Activities

We use the parliamentary activities of MEPs to measure their performance. While we are aware of the limitations of our measurements of effort, there are no other measurable variables at hand. We cannot measure the commitment and persuasion effort of MEPs nor their work outside the formal bounds of the Parliament, such as informing the public or any work in their constituencies. An MEP's attendance in plenary sessions is the most accessible effort variable to observe. It requires physical presence and the votes an MEP casts have a direct impact on legislation. Anecdotal evidence from conversations with decision makers in Brussels indicates a clear hierarchy in the importance of parliamentary activities. Being nominated the rapporteur for a report or opinion seems to be seen as evidence for the determinedness of the MEP to work hard. Of course some reports need more competence and longer scrutiny. However, there are some tasks that can easily give a false impression of commitment and great effort, which might not hold true. Speeches in plenary (oral or handed in as written statements) and parliamentary questions, are a case in point, as they may be merely demonstrative. The same is true for parliamentary questions that can be used to raise the effort level without clear benefit to the work of the EP. In the following, we define each parliamentary activity we measure and Table B.4 provides an overview of the effort MEPs exerted during the 7th European Parliament.

²²Source for all numbers:
how-much-does-an-mep-make/

<http://www.transparencyinternational.eu/2014/08/>

Table B.4: Legislative output produced by full-term MEPs during the 7th EP

	N = 650	Average	Median	sd	Min.	Max.
Attendance rate		84.1	86.8	10.6	23.1	99.4
Speeches in plenary		201.0	94.0	311.2	2	2174
Draft reports		3.0	2.0	5.1	0	54
Draft reports (pages)		101.2	51.0	134.6	0	914
Reports amended		76.5	65.0	53.2	0	379
Opinions		2.6	2.0	3.6	0	53
Motions for resolutions		38.7	11	71.5	0	471
Written declarations		1.6	1.0	2.1	0	16
Parliamentary questions		97.7	44.5	179.7	0	1492

- *Attendance.* The attendance rate reflects the share of plenary sessions an MEP attended. To be counted as present, an MEP simply needs to fill-in the sign-up sheet when entering the chamber.
- *Speeches in Plenary.* MEPs can request time for speaking during plenary session. Speeches can be oral interventions, even one minute snippets, or take the form of written explanations after votes. We measure the number of oral speeches an MEP delivers and the number of written interventions.
- *Draft Reports.* Draft reports are texts for legislative or non-legislative proposals that a responsible ‘report writer’, i.e. the MEP serving as rapporteur, proposes for the adoption in plenary. Usually, rapporteurs are nominated by the competent Committee(s) from within its ranks. Being a rapporteur is a challenging job, as all the amendments have to be tabled and the draft report has to be negotiated with the representatives of the other political groups (the ‘shadow-rapporteurs’) before it is presented in the committee and then in the plenary, where it is voted on. If it passes, it becomes an adopted text. Reports differ in their complexity and political importance. To account for more complex and time-consuming reports, we do not rely on the number of rapporteurships an MEP holds, but count the number of pages in each draft report.
- *Amendments.* Amendments to reports or opinions are suggestions by MEPs submitted to committee or directly to plenary. Once they are received, they are voted on, and adopted amendments are incorporated into the draft text. Amendments are a way for individual MEPs to modify policy proposals. We measure the number of amendments tabled by each MEP.

- *Opinions.* Committees not directly responsible for the preparation of a legislative report, may, of their own accord or on invitation by the responsible Committee, write an opinion expressing their views. Opinions take the form of amendments or suggestions on a draft report. Once the writer in charge of an opinion finishes it, the opinion is voted on in the committee and, if successful, is handed over to the rapporteur of the committee in charge. We measure the number of opinions an MEP is responsible for.
- *Motions for Resolutions.* As the right to initiate laws lies with the European Commission, motions for resolutions are a way for the EP to define its stance on a particular issue and request the Commission to react with a legal proposal in response. We measure all motions put forth by an MEP.
- *Written Declarations.* Written declarations can be initiated by at least 10 members from at least three political groups. A written declaration expresses the opinion of its signatories (but is not binding for the EP) on a European issue, which has to fall within the competence of the EU. It cannot be on an issue subject to an ongoing legislative procedure. If after three months the declaration is signed by a majority of MEPs, it is published in the minutes and is sent to other European institutions. Written declarations often have no impact on the decision-making agenda, but help to raise awareness on a specific topic. In the seventh legislature (2009-2014) there were on average 75 written declarations a year. However, only 35% of them passed the majority threshold. We measure the number of declarations submitted by MEPs.
- *Parliamentary Questions.* Each MEP has the right to submit questions, written or orally, to other European Union institutions and bodies. They allow the MEP to scrutinise the work of those other institutions. We measure the number of questions an MEP asks.

Appendix C. National level variables

Appendix D. Robustness checks

Table C.5: National level variables

Country	Election system	Corruption index	HHI	Image EP	National Parliament Size
Austria	Cand Cen	-1.76	.20	34	183
Belgium	Cand Dec	-1.43	.06	51	150
Bulgaria	Cand Cen	0.25	.14	60	240
Cyprus	Cand Cen	-0.33	.27	52	56
Czech Republic	Cand Cen	-2.52	.18	39	200
Denmark	Cand Cen	-0.91	.15	41	179
Estonia	Cand Cen	-2.30	.18	46	101
Finland	Cand Cen	-1.42	.15	33	200
France	Party Dec	-1.72	.15	44	577
Germany	Party Cen	-0.01	.22	46	612
Greece	Party Cen	-0.34	.25	45	300
Hungary	Party Cen	-1.77	.37	33	386
Ireland	Cand Dec	-0.13	.18	57	166
Italy	Cand Dec	-0.13	.21	56	630
Latvia	Cand Cen	-0.12	.13	24	100
Lithuania	Cand Cen	-1.99	.14	46	141
Luxembourg	Cand Cen	-0.83	.21	56	60
Malta	Cand Cen	-2.17	.46	51	69
Netherlands	Cand Cen	-0.37	.13	45	150
Poland	Party Dec	-1.04	.29	52	460
Portugal	Party Cen	0.26	.20	49	230
Romania	Party Cen	-0.23	.22	62	334
Slovakia	Cand Cen	-1.02	.17	54	150
Slovenia	Cand Cen	-1.00	.16	50	90
Spain	Party Cen	-2.29	.33	52	350
Sweden	Cand Cen	-2.09	.14	40	349
United Kingdom	Party Dec	-1.60	.16	22	646

Notes: Excludes Croatia as it only joined the European Union on 1 July 2013.

Table D.6: Robustness check: Legislative output regressions with prior income and outside earnings in purchasing power parity (PPP)

	(1) Attendance	(2) Speeches	(3) Report Pages	(4) Amendments	(5) Opinions	(6) Motions	(7) Declarations	(8) Questions
Outside earnings (PPP in thousands)	-0.32 (0.22)	6.84 (6.59)	4.53** (2.22)	-0.24 (1.36)	-0.09 (0.07)	-2.26* (1.25)	0.05 (0.04)	-5.15** (2.29)
Prior income (PPP in thousands)	-0.10 (0.11)	-1.59 (2.34)	2.41 (1.65)	0.39 (0.48)	0.04 (0.04)	0.05 (0.72)	-0.04** (0.02)	-0.47 (1.67)
Newcomer 2009	2.24*** (0.86)	34.40 (26.25)	-15.91 (10.14)	9.88** (4.33)	0.40 (0.27)	0.57 (5.54)	-0.25 (0.18)	2.05 (13.52)
Male	-0.47 (0.76)	-14.52 (27.18)	-7.05 (11.74)	-16.22*** (4.40)	-0.72** (0.34)	-5.61 (6.06)	-0.49** (0.19)	3.95 (16.10)
Age	0.83** (0.38)	2.40 (9.24)	1.37 (4.87)	-1.31 (1.54)	0.12 (0.10)	0.23 (2.09)	0.01 (0.06)	1.80 (4.67)
Age ²	-0.01** (0.00)	-0.06 (0.08)	-0.02 (0.04)	0.01 (0.01)	-0.00 (0.00)	-0.00 (0.02)	-0.00 (0.00)	-0.04 (0.04)
University degree	2.25** (1.07)	-14.49 (29.24)	32.37*** (11.25)	10.61** (4.88)	0.24 (0.36)	-0.47 (6.52)	0.25 (0.17)	-4.05 (18.77)
PhD	-0.13 (1.15)	-31.42 (36.19)	11.27 (14.25)	-2.40 (5.17)	0.07 (0.34)	5.26 (8.20)	-0.19 (0.23)	-22.56 (18.03)
Years experience	-0.16** (0.07)	0.64 (1.48)	-0.72 (0.64)	-1.00*** (0.27)	-0.02 (0.02)	-0.33 (0.33)	-0.01 (0.01)	-0.79 (0.73)
Accredited Assistants	0.36 (0.48)	-6.95 (12.79)	18.01*** (5.44)	8.18*** (2.53)	0.32** (0.15)	-2.76 (3.55)	0.07 (0.09)	1.53 (7.61)
Local Assistants	0.08 (0.15)	5.50 (5.23)	-1.30 (1.68)	1.18 (0.85)	-0.03 (0.04)	-0.09 (0.91)	0.05* (0.02)	-4.43** (1.80)
National parliament size	0.00 (0.00)	-0.55*** (0.14)	0.07 (0.04)	0.02 (0.02)	0.00 (0.00)	-0.03 (0.02)	-0.00** (0.00)	-0.20** (0.08)
Corruption index	0.11 (0.64)	7.19 (24.30)	0.28 (7.79)	0.63 (3.80)	0.22 (0.20)	-2.59 (4.69)	0.17 (0.15)	29.08** (12.12)
Image EP	0.08 (0.07)	-0.42 (1.86)	-0.21 (0.65)	-0.45 (0.38)	-0.00 (0.02)	0.81* (0.43)	-0.01 (0.02)	-1.94** (0.88)
HHI	-0.20* (0.10)	-4.87** (2.35)	-1.70** (0.84)	-1.46*** (0.42)	-0.00 (0.03)	-0.09 (0.51)	0.05*** (0.02)	3.93*** (1.34)
Government	2.65** (1.06)	-47.65 (35.00)	40.02*** (12.93)	-5.45 (5.19)	0.19 (0.38)	13.26** (6.45)	-0.32 (0.20)	20.10 (19.54)
Proximity	2.38 (1.49)	-72.67* (38.34)	-4.06 (13.95)	17.11* (9.09)	0.27 (0.51)	20.38 (12.41)	0.05 (0.39)	21.29 (20.90)
Government × Proximity	-0.81 (1.68)	12.89 (47.82)	-3.53 (23.68)	20.42** (8.96)	0.40 (0.61)	-30.25** (13.56)	0.22 (0.37)	-54.81** (24.69)
<i>Electon System</i>				<i>Party Centralised is reference group</i>				
Candidate Centralised	0.65 (1.73)	-193.76*** (63.25)	-29.73 (19.79)	-5.67 (8.19)	0.64 (0.46)	-10.65 (11.99)	0.33 (0.36)	-42.45 (34.09)
Candidate Decentralised	-5.35*** (1.76)	-6.71 (44.45)	-42.13** (19.62)	-14.96* (7.98)	-0.37 (0.57)	2.22 (10.47)	1.18*** (0.34)	122.19*** (30.32)
Party Decentralised	-2.56 (1.85)	69.32 (48.42)	-37.76* (20.46)	-35.93*** (8.64)	-0.27 (0.64)	10.53 (12.01)	0.49 (0.36)	34.13 (24.45)
Constant	58.26*** (12.20)	746.43** (318.75)	58.55 (140.77)	156.00*** (47.86)	-2.09 (3.24)	12.62 (66.64)	1.49 (2.01)	215.95 (170.46)
Political group dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	650	650	650	650	650	650	650	650
R ²	0.152	0.113	0.151	0.175	0.067	0.102	0.104	0.148

Notes: Linear regression model point estimates with robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table D.7: Robustness check: Legislative output regressions with adjusted prior income for re-elected MEPs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Attendance	Speeches	Report Pages	Amendments	Opinions	Motions	Declarations	Questions
Outside earnings (in thousands)	-0.20 (0.22)	8.33 (6.54)	-3.95* (2.32)	-0.44 (1.37)	-0.06 (0.08)	-2.28* (1.34)	0.05 (0.04)	-4.30* (2.50)
Adjusted prior income (in thousands)	-0.19 (0.14)	-2.80 (2.50)	1.40 (1.55)	1.01 (0.64)	0.02 (0.04)	-0.26 (0.71)	-0.03 (0.02)	-0.57 (2.08)
Newcomer 2009	1.98** (0.86)	30.82 (26.34)	-14.36 (10.47)	11.04** (4.40)	0.41 (0.28)	0.29 (5.67)	-0.29 (0.18)	0.99 (13.75)
Male	-0.47 (0.76)	-14.51 (27.13)	-6.61 (11.73)	-16.38*** (4.39)	-0.72** (0.33)	-5.48 (6.03)	-0.50** (0.19)	3.80 (16.05)
Age	0.85** (0.38)	2.70 (9.25)	1.49 (4.86)	-1.49 (1.54)	0.12 (0.11)	0.32 (2.10)	0.01 (0.06)	1.80 (4.70)
Age ²	-0.01** (0.00)	-0.06 (0.08)	-0.02 (0.04)	0.01 (0.01)	-0.00 (0.00)	-0.01 (0.02)	-0.00 (0.00)	-0.04 (0.04)
University degree	2.20** (1.07)	-14.93 (29.29)	32.58*** (11.27)	10.78** (4.90)	0.24 (0.36)	-0.54 (6.54)	0.24 (0.17)	-4.31 (18.89)
PhD	-0.21 (1.14)	-31.35 (36.00)	11.14 (14.25)	-2.37 (5.14)	0.06 (0.34)	5.10 (8.17)	-0.20 (0.23)	-23.39 (17.99)
Years experience	-0.17** (0.07)	0.59 (1.48)	-0.64 (0.64)	-0.99*** (0.26)	-0.02 (0.02)	-0.32 (0.33)	-0.01 (0.01)	-0.80 (0.72)
Accredited Assistants	0.37 (0.48)	-6.81 (12.81)	17.83*** (5.46)	8.13*** (2.53)	0.31** (0.15)	-2.75 (3.55)	0.07 (0.09)	1.54 (7.64)
Local Assistants	0.08 (0.15)	5.40 (5.28)	-1.45 (1.69)	1.25 (0.86)	-0.03 (0.04)	-0.14 (0.90)	0.05* (0.03)	-4.41** (1.84)
National parliament size	0.00 (0.00)	-0.34*** (0.14)	0.06 (0.05)	0.01 (0.02)	0.00 (0.00)	-0.03 (0.02)	-0.00** (0.00)	-0.20** (0.08)
Corruption index	0.19 (0.65)	8.06 (24.25)	0.40 (7.84)	0.19 (3.82)	0.22 (0.20)	-2.37 (4.71)	0.17 (0.15)	29.34** (12.11)
Image EP	0.07 (0.07)	-0.57 (1.86)	-0.11 (0.66)	-0.39 (0.38)	0.00 (0.02)	0.79* (0.43)	-0.01 (0.02)	-2.00** (0.88)
HHI	-0.21** (0.10)	-5.06** (2.35)	-1.59* (0.83)	-1.38*** (0.42)	0.00 (0.03)	-0.12 (0.50)	0.04** (0.02)	3.87*** (1.31)
Government	2.76*** (1.06)	-46.36 (34.62)	38.12*** (12.98)	-5.94 (5.19)	0.16 (0.37)	13.39** (6.54)	-0.29 (0.20)	20.64 (19.60)
Proximity	2.66* (1.51)	-70.50* (38.30)	-5.89 (14.31)	15.80* (9.05)	0.24 (0.51)	21.14* (12.59)	0.09 (0.40)	22.67 (21.13)
Government × Proximity	-0.91 (1.67)	11.53 (47.16)	-0.91 (23.82)	20.86** (8.94)	0.45 (0.61)	-30.26** (13.54)	0.18 (0.37)	-55.17** (24.64)
<i>Party Centralised is reference group</i>								
<i>Election System</i>								
Candidate Centralised	0.77 (1.73)	-192.88*** (63.63)	-29.50 (19.92)	-6.32 (8.19)	0.64 (0.46)	-10.20 (12.11)	0.34 (0.36)	-41.89 (34.51)
Candidate Decentralised	-4.88*** (1.81)	-0.49 (46.21)	-43.61*** (20.77)	-17.74** (8.32)	-0.38 (0.59)	3.34 (10.87)	1.22*** (0.34)	123.54*** (33.17)
Party Decentralised	-2.78 (1.86)	66.68 (47.96)	-35.66* (20.51)	-34.77*** (8.60)	-0.23 (0.64)	10.10 (11.99)	0.45 (0.36)	33.38 (24.09)
Constant	58.71*** (12.21)	750.69** (319.10)	52.08 (141.80)	155.63*** (47.70)	-2.14 (3.25)	12.28 (67.14)	1.61 (2.02)	219.82 (169.88)
Political group dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	650	650	650	650	650	650	650	650
R ²	0.153	0.113	0.148	0.178	0.065	0.103	0.103	0.148

Notes: Linear regression model point estimates with robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

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