

# Multiple Collective Principals and Legislative Cohesion

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### **Abstract**

In many systems, legislators find themselves accountable to multiple, collective principals. This article seeks to answer to question—how do legislators decide between collective principals and what conditions force legislators to chose one over the other. We argue that electoral uncertainty, operationalized as electoral volatility, pushes legislators towards the collective principal that has the greatest influence over their reelection. Using European Union electoral results and roll-call data from the 2nd-6th European Parliaments, we show that increases in electoral volatility undermine parliamentary group cohesion and push legislators to side with the positions of their national parties over their parliamentary group when the two disagree.

Paper Presented at the Annual Meeting of the Western Political Science Association, Las Vegas, NV, April 2-5, 2015

# 1 Introduction

To whom are legislators accountable? The obvious answer is voters. The existing literature on legislative accountability, however, paints a much more complex picture. Carey (2009) argues that legislators are accountable to the voters they represent and as well as the collective principals, typically political parties, that nominate them. While individual and collective principals may often agree on policy outcomes, mismatched preferences between them is not uncommon. These differences force legislators to make choices over whose interests they will favor.

In reality, conceiving of accountability in terms of the dual pressures exerted by voters and parties may not completely explain the voting context for legislators. Legislators can also be caught between the demands of multiple, collective principals. Legislators in federal systems, for example, must contend with demands not only from the leaders of their parliamentary parties and their national leaderships, but also party leaders at the regional level and, perhaps, other regional political elites (Carey 2007). In other systems, national parties themselves are not unitary, but highly factionalized (e.g., Estevez-Abe 2006; Mershon 2001). There, legislators are beholden not only to their national party leaders but also to their faction leaders. Whatever the specifics, ultimately, when disagreement exists between multiple collective principals it creates a difficult, nuanced environment within which legislators must make decisions.

Given the existence of multiple collective principals, this article seeks to answer two questions. First, what explains why legislators opt to side with one collective principal over another? Second, under what conditions will legislators be forced to decide between them? We argue that legislators will be more likely to respond to the demands of the principal most likely to aid their reelection, who we define as the “dominant” principal. Moreover, the incentive to side with this dominant principal is particularly acute during those periods when there is electoral uncertainty for the dominant principal. Our analysis suggests that the power

balance created by institutional arrangements cannot solely explain legislator discipline. We submit that politicians respond to dynamic changes in their electoral uncertainty by favoring the positions of the dominant electoral principal, maintaining discipline with it over potential rivals. Electoral changes heighten the dominant principal's sensitivity to defections from their party line, increasing their monitoring and punishment behavior. In the wake of major changes in the electorate, dominant principals will have little tolerance for politician defection to other principals. By contrast, when electoral results are stable, dominant principals are more willing to allow agents to satisfy the demands of other collective principals.

We test the impact of electoral uncertainty on discipline in the context of 5 legislative terms (1984-2009) of the European Parliament (EP). The EP represents an ideal opportunity to examine multiple collective principals in isolation because of the widely acknowledged second-order nature of elections. Members of the European Parliament (MEPs) generally lack a strong connection to voters, leaving them primarily responsible to their collective principals: the national parties that nominated them and the European parliamentary groups they join once elected. Observations of EP roll-call voting discipline, therefore, facilitate drawing clean conclusions about the relative strength over time of collective principals. We use Bayesian models predicting roll-call vote discipline to evaluate the impact of variance in electoral volatility, across EU member countries and over time, on MEP discipline and party/group loyalty patterns. Our empirical tests show that MEPs alter their behavior in response to electoral uncertainty, obeying their national parties at the expense of their groups when volatility increases.

The findings in the EP suggest generalizable conclusions about politics at the domestic level. The phenomenon of multiple collective principals abounds, as virtually every politician confronts distinct layers of party leadership to a greater or lesser extent. In federal systems, for example, regional politicians think about the dictates of party minders at the regional

level while simultaneously needing to appeal to national level politician preferences. When conflict between collective principals arises, politicians must decide which principal to follow. While much of the answer to this question is proscribed by institutional rules, with more powerful tiers dictating the actions of actors in lesser tiers, we suggest that a complete understanding must also consider dynamic factors influencing behavior and discipline. Dominant principals may vary in their commitment to monitoring and punishing lesser principals depending on the political environment they face. Electoral uncertainty represents one factor modulating legislator loyalty within countries over time.

The article will proceed as follows. First, we examine the literature on cohesion in the EP. We focus on understanding the complications created by multiple collective principals. We also discuss domestic level factors impact on collective principals in the case of the EP. Second, we explain how the uncertainty caused by electoral volatility should impact the cohesion of MEPs. Third, we examine patterns of volatility in EU elections. Fourth, we undertake an empirical analysis of MEP cohesion, where we show how electoral volatility impacts individual MEP cohesion. Finally, our conclusion discusses the general relevance of the argument in light of our paper's EP specific findings.

## **2 Explaining Cohesion in the EP**

For legislative scholars, understanding the relationship between legislators and their parties has received significant attention in a number of different contexts, including the EP. One of the central questions in this research is whether legislators support the positions of their parties on floor votes and what that empirically observed support means theoretically. For some, high rates of party voting are indications of “cohesion,” which implies voluntary support for the party's position, while others examine discipline, which implies a level of coercion used to impel party voting (Hazan 2006). Regardless of the cause of party voting,

high levels are indications of strong parties, able to overcome the collective action dilemma sufficiently to speak with one, consistent voice. Low levels of party voting, however, are indicative of instability and weakness among parties that are unable to achieve common party positions.

The decision by a legislator to follow a party's line is often a complex one. Carey (2009) cogently argues that legislators are often caught between a "collective" accountability to their parties and an "individual" accountability to the voters that elected them. Parties offer at least two benefits that create strong incentives for legislators to side with their parties, even in the face of constituent opposition. First, the ability of any individual legislator to obtain legislative support for their proposals is difficult. Legislators must overcome significant barriers to collective action in order to achieve this support. Consequently, legislators and other actors create rules and institutions within legislatures to make this process easier (Cox and McCubbins 2005). By creating legislative parties, legislators can better coordinate votes to obtain the benefits from legislative trades and log-rolls (Aldrich 1995; Schwartz 1977). Legislators, thus, have an incentive to form and maintain parties as a means to create their preferred policies.

Second, if we assume that legislators are guided, at least in part, by reelection (Mayhew 1974), then legislators have an incentive to follow parties to the extent that they aid reelection. Based on the U.S. case, Cox and McCubbins (2005, 1993) argue that one incentive for legislators to form parties is to help secure the electoral benefits of their legislative activities. Parties can potentially provide significant electoral resources. In some electoral systems, parties completely control access to the ballot. This power creates strong incentives for legislators to side with their parties regularly (Carey 2009). In systems where parties have weaker control, legislators may have weaker incentives to back party demands. Yet, even in these cases, access to the label may matter. Party labels can provide candidates with a relatively low-cost cue to voters of their policy preferences that may aid their reelection

(Aldrich 1995; Cox and McCubbins 2005, 1993; Kiewiet and McCubbins 1991).

The frequently described divide between voter and collective principals, however, does not fully describe legislator incentives. Indeed, legislators may have multiple collective party (or party-like) principals. Multiple collective principals represent an underemphasized feature common to many electoral systems, especially federal systems, where different levels of party organization can put competing pressures on legislators. Research on federal systems, in particular Brazil, finds that the incentives for legislators to appease powerful regional interests undermines national level party discipline (Desposato 2004; Mainwaring and Linán 1997; Carey 2007). Meanwhile, legislative research on countries with highly factionalized party systems reveals that legislative decision making is complicated by the need to take into account not only national party interests, but also those of individual factions (Mershon 2001; McCubbins and Thies 1997; Cox, Rosenbluth, and Thies 1999; Johnston 1967; Kato 1998; Reed and Scheiner 2003; Ono 2012).

In this article, we empirically examine one such context that has desirable characteristics from a research design perspective, the EP, in order to draw conclusions about the general phenomenon of multiple collective principals. Understanding cohesion in the EP is complicated, and enriched, by the fact that MEPs are simultaneously members of both a national party in their home countries as well as European legislative groups in the parliament. Thus, for MEPs, collective responsibility is bifurcated between national and parliamentary groups. MEPs, therefore, have a complicated set of incentives. Yet, it is their relative lack of pressure from voters that makes them useful for studying multiple party principal problems. Due to the well-documented second order nature of European elections (Marsh 1988; Reif and Schmitt 1980; Schmitt 2005) and required proportional representation rules introduced in the Treaty of Amsterdam in 2002, individual legislator loyalty to voters takes a back seat to their bifurcated collective accountability once in the EP. Elections are generally considered to be referendums on national performance, with low voter turnout, and voters rarely know

the politicians involved in EP elections well. In practice, MEPs must therefore negotiate a delicate balancing act between their collective principals to maximize their specific career goals. Thus, examining the EP allows us to examine the phenomenon of bifurcated collective principals while minimizing the impact of individual accountability to voters on legislator behavior.

The bulk of studies to this point indicate that national parties ultimately hold power over MEPs but that, in general, national party and European group interests overlap on most issues due to ideological alignment (Hix 2002; Hix, Noury, and Roland 2007; Hix 2004; Faas 2003). Both principals have power over MEPs: national parties control nominations and offices outside of the EP, while European groups provide office and policy resources inside the EP (Hix, Noury, and Roland 2007, p. 134-135). At a fundamental level, no work has disputed the fundamental balance of power between national parties and European groups over MEP behavior, although some work suggests that European group leverage over their agents may be growing as institutional powers of the EP increase (Kreppel 2002). The most common empirical manifestation of MEP bifurcated collective accountability is party/group voting discipline. When MEPs split from their European groups to maintain national party unity (or more rarely, vice versa) on roll-call votes, they provide observable evidence regarding the balance of power between principals.

The thrust of recent work on the multiple collective principals problem in the EP lies in fleshing out contextual determinants of party discipline. These studies focus on factors that modulate how (dis)obedient MEPs will be to national parties vs. European groups. Meserve, Pemstein, and Bernhard (2009), for example, discuss discipline differences caused by MEP career ambition profiles, while Klüver and Spoon (2013) outline the impact of issue salience in determining how loyal MEPs are to their national parties, and Lindstädt, Spain, and Wielen (2012) examine the effect of new country legislator adaption to the EP. All the studies essentially argue that an internal characteristic of country, legislator, or vote within

the EP conditions the likelihood that legislators will defect.

In this article, we introduce the possibility that the overall party electoral environment can affect MEP behavior. We argue that the relationship between an agent and her collective principals is dynamic. Rather than attempt to distinguish a single, constant, power balance, we theorize that a given legislator will shift her relative loyalty between principals depending on domestic context. In particular, we identify the role of electoral uncertainty for the dominant principal as a modulating factor in determining the behavior of legislators. While many of the baseline elements of a principal-agent relationship, such as institutional powers, will be persistent, any condition that creates uncertainty for the dominant principal can lead to an informal redistribution of powers that influences an agent's discipline.

### **3 Electoral Volatility and Dynamic Collective Responsibility**

For legislative principles and agents, uncertainty may arise from many sources. Here we focus on the uncertainty created by changes in electoral results, as evidenced by electoral volatility. Electoral volatility is usually defined as the change in vote share for parties that have participated in consecutive elections (Pedersen 1979; Birch 2003). Put differently, electoral volatility measures the degree of aggregate change in electorate preferences between two elections. Higher volatility levels often reflect greater partisan turnover, which is typically an extension of substantial shifts in voters' preferences. Moreover, high volatility levels often denote greater instability in a polity, while more stable systems often house lower volatility levels. While there is no universally accepted threshold for excessively high (or low) volatility levels, scholars generally agree that extreme values on one end or the other can be signs of worrisome developments.

There is a significant literature in comparative politics on the causes of electoral volatility.



For those studying this concept at the national level, scholars often emphasize individual party attributes and behaviors that can impact the political process, thus causing fluctuations in electoral returns—and, by extension, volatility levels (e.g., Centellas 2009; Drummond 2006; Epperly 2011; Hazama 2003; Hicken and Kuhonta 2011). Conversely, those scholars approaching volatility from the voters' perspectives (e.g., Dassonneville 2012; Kleinnijenhuis and DeRidder 1998; Söderland 2008) often utilize survey analyses and study individual decision-making and political behavior when exploring the nuances of volatility. Predictably, newer democracies, particularly post-communist states, report higher volatility levels than other, advanced industrial democracies—though some scholars have identified some telling trends in this respect (Lane and Ersson 2000; Epperly 2011). Political institutions, such as the electoral system, may also determine the level of a country's electoral volatility (Birch 2003; Tavits 2005; Mainwaring 1999). The impact of macroeconomic factors such as inflation are also linked to volatility (Roberts and Wibbels 1999; Birch 2003; Tavits 2005). For others, the complexity of social and class divisions in a society are important (Heath 2005; Roberts and Wibbels 1999; Hazama 2003; Madrid 2005; Ferree 2010; Tavits 2005).

For us, electoral volatility is important because significant changes in partisan voting between elections create uncertainty among voters as well as parties and their legislators. Rapid changes in partisan voting create challenges for political actors, since it alters traditional patterns of voting. These changes can increase uncertainty around future electoral outcomes (Darby, Li, and Muscatelli 2004; Bussiere and Mulder 1999; Remmer 2008). The uncertainty created by electoral volatility is, we argue, a dynamic factor affecting the balance of power between legislator's collective principals. In the context of the EP, a dynamic understanding of the principal agent relationship between national parties, European groups, and MEPs suggests that MEPs may shift their relative loyalties between the principals depending on the electoral situation outside of the institution. Thus, it is impossible to define a static, absolute, relationship between MEPs, national parties and groups, heretofore the

focus of a great deal of previous work on national and group discipline (Hix 2002; Hix, Noury, and Roland 2007; Hix 2004). While it is likely that national parties will always be the dominant principal given their control over nominations, national party effort to monitor and control legislators, along with the relative power of the nomination sanction, may vary over time despite consistent formal institutional relationships.

We expect that in times electoral volatility, MEPs will respond by hewing closer to their more institutionally powerful principal, the national parties that control their nomination, especially on occasions they are faced with a choice between their principals. We argue there are two causal processes associated with volatility that produce this behavior: increased pressure from national parties to obey policy dictates and an accentuated desire emanating from MEPs themselves for better nominations. First, in times of uncertainty, risk-averse national parties have incentives to reign in their legislators and take more direct control of policy outcomes and reputation. In a turbulent electoral environment producing surprising results, national parties cannot afford to have their legislators obeying European groups at their expense, as they must control the valuable party label.<sup>1</sup> Second, electoral uncertainty leads MEPs to value the relative quality of their nomination more ardently. In a demonstrably unpredictable electoral environment, many MEPs perceive electoral risk—a promotion or demotion in the eyes of the party could lead to seat loss, meaning most MEPs will be sensitive to what the party desires. Since national parties control nominations, MEPs should respond by voting with their national party over European group more frequently. By contrast, during periods of stability, sitting MEPs need to worry less about minor changes in nomination patterns and should be more willing to take risks and vote in favor of their European group to maximize their internal EP powers, the carrot offered by groups.

The argument above leads to two hypotheses. First, we expect that, on average, higher rates of electoral volatility will weaken the incentives for MEP's to side with their parliamen-

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<sup>1</sup>Note that we expect that national parties will always maintain a reasonably high level of control over their MEP behavior. Rather, we posit that national parties are *relatively* less lenient in times of volatility.

tary group. Given the cross-pressures from home due to the changes in electoral outcomes, we hypothesize that:

*H*<sub>1</sub>: If electoral volatility increases, then MEP cohesion with their parliamentary group will decrease.

Second, we argue that the drop in cohesion is due to MEPs opting to side with their national parties over parliamentary groups. Previous research points out that the positions of national parties and parliamentary groups are often highly correlated due simply to ideological alignment (Hix 2002; Hix, Noury, and Roland 2007; Hix 2004; Faas 2003). It is not a surprise, for example, that the group containing all European center-right parties shares common policy positions. However, it is also clear that these parties can differ on critical issues and that defections do occur in a non-trivial number of cases. In the 5th EP, for example, Hix, Noury, and Roland (2007, p. 137) find that party/group agreement characterizes 89% of votes but that a still sizeable 11% represent a conflict between an MEP's collective principals. Thus, a key question becomes—on those votes where the position of the national party differs from that of the parliamentary group, with whom does the MEP side? In this case, we expect that electoral uncertainty increases the likelihood that MEPs will side with their national parties over their parliamentary groups:

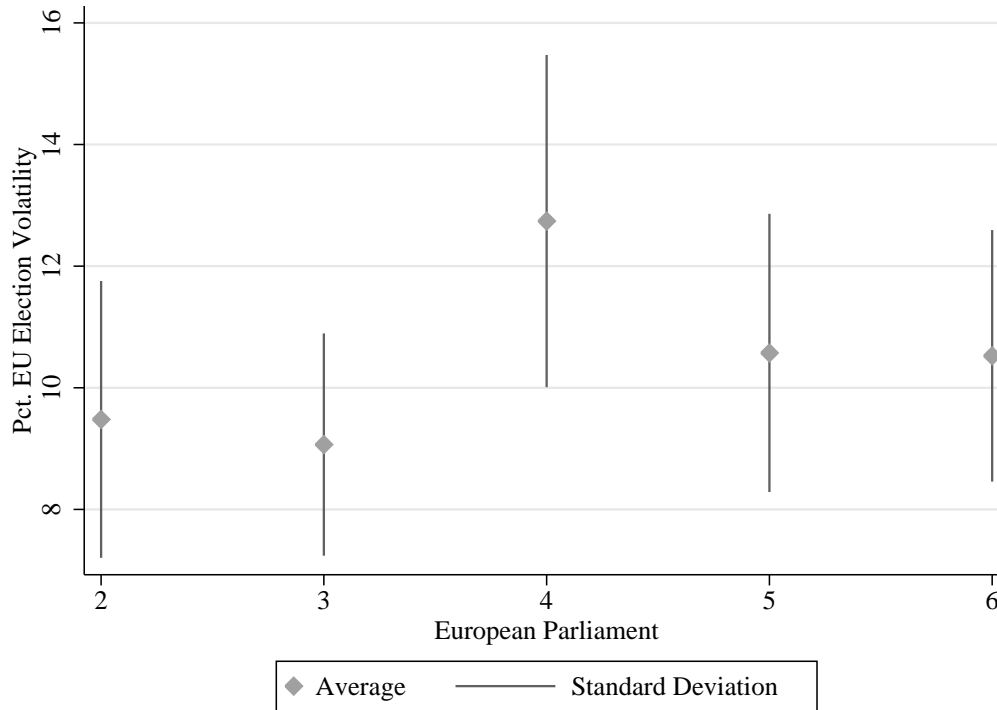
*H*<sub>2</sub>: If electoral volatility increases, then the rate at which MEPs side with their national party over their parliamentary group on roll-call votes will increase.

The remainder of this article will test these hypotheses.

## **4 Electoral Volatility and the EU Parliament**

To evaluate the impact of uncertainty on MEP cohesion, we first begin by estimating electoral volatility in EU elections. We calculate EU electoral volatility for the first 6 EPs

Figure 1: EU Volatility, 2nd-6th EPs



(1979-2014).<sup>2</sup>

In calculating our electoral volatility measures, we follow the approach set forth by Pedersen (1979). We calculate the absolute percentage change in electoral vote as:

$$V_{c,t} = \sum \frac{|P_{c,i,t} - P_{c,i,t-1}|}{2}. \quad (1)$$

$V$  denotes the aggregate electoral volatility in election  $t$  in country  $c$ .  $P$  represents party  $i$ 's vote share.

Figure 1 plots the average electoral volatility of EU member countries' EP elections for the 2nd-6th EPs. We also graph one standard deviation around the mean for each EP election. There is an increase in EU election volatility after the 3rd EP; however, after the

<sup>2</sup>We do not include the first EP, since we need two electoral periods to calculate volatility. This also means that for some EPs, new member countries are not included.

4th EP election, we see a significant decrease in the average level of volatility. We also observe significant variation within EPs. The standard deviations for each EP are relatively large, indicating that within any one EP the level of volatility varied.

## 5 Uncertainty and Cohesion in the EP

The data on electoral volatility suggest significant variation across countries within EPs. Does the uncertainty created by this volatility impact MEP cohesion? To test our hypotheses, we created a dataset of all MEPs and their roll-call votes from the 2nd through the 6th EPs.<sup>3</sup> To test  $H_1$ , we use a measure of cohesion based on Rice (1925). In most cases, Rice scores are calculated at the aggregate, party level. To calculate a score for the individual party  $p$  with vote  $v$ , we use the formula:

$$RICE_{p,v} = |PctFor_{p,v} - PctNo_{p,v}|. \quad (2)$$

Typically, abstentions and non-votes are counted.

In this article, we are interested in measuring the extent to which individual MEPs vote with their European groups, not simply group aggregates. We modify the Rice score to code individual MEPs  $i$  in parliamentary group  $g$  on vote  $v$  in parliamentary term  $t$ :

$$IRICE_{g,i,t} = \frac{\sum WithParty_{g,i,v,t}}{\sum VOTES_{g,i,v,t}}. \quad (3)$$

$WithParty_{g,i,v,t}$  equals 1 if legislator  $i$  votes with the majority position of her parliamentary group  $g$  on vote  $v$  in EP  $s$ .  $VOTES_{g,i,v,t}$  is 1 if  $i$  is a member of parliamentary group  $g$  on vote  $v$  in parliamentary term  $t$  and casts a vote.

For our second hypothesis,  $H_2$ , we are interested in measuring how often MEPs side

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<sup>3</sup>All roll-call data and MEP data were provided by Hix, Noury, and Roland (2007).

with the position of their national party over the position of their EP groups' positions. Using all roll-call votes, we begin by calculating the percentage of MEPs of each national party  $p$  or European group  $g$  who voted "For" each vote  $v$  in parliamentary term  $t$ . For all votes where the percentage of "For" votes by the party or group is greater than 50 percent, we code the  $NationalPartyPosition_{t,p,v}$  and  $EuropeanGroupPosition_{t,g,v}$  variables as "1", if the percentage of "For" votes is less than or equal to 50 percent, we code the variables "0." We then code the  $SideNational_{s,g,i,v}$  "1" on all votes where a) the position of the MEP's group and national party differ (i.e., when  $NationalPartyPosition_{s,p,v}$  does not equal  $EuropeanGroupPosition_{s,g,v}$ ) and b) the MEP sided with the position of the national party over their group. We then code each MEP  $i$  in group  $g$  in parliamentary term  $t$  with:

$$SideNational_{t,g,i} = \frac{\sum SideNational_{s,g,i,v}}{\sum VOTES_{t,g,i,v}}. \quad (4)$$

One problem with using roll-call based measures of cohesion is that individual votes vary in their importance. We are concerned about how the importance of roll-call votes may vary in two ways. First, some roll-call votes may ask MEPs to take positions on issues that do not garner significant disagreement within the chamber. For an MEP to shirk party demands on a nearly unanimous roll-call vote is of little consequence. An MEP that shirks party demands on a close vote, however, might undermine the party's ability to influence policy outcomes. We deal with this problem by weighting the individual Rice scores by the "closeness" of the vote as recommended by Carey (2009):

$$CLOSE_{t,v} = 1 - (1/THRESHOLD_{t,v} * | THRESHOLD_{t,v} - PctFor_{t,v} |). \quad (5)$$

As  $CLOSE_{s,v}$  approaches 1, the vote on the floor becomes more evenly divided. A value of 1 would indicate an evenly divided floor vote. A value of 0 would indicate a unanimous vote.

We then create weighted versions of both our dependent variables:

$$IWRICE_{t,g,i} = \frac{\sum WithParty_{t,g,i,v} * CLOSE_{t,v}}{\sum VOTES_{t,g,i,v} * CLOSE_{t,v}}. \quad (6)$$

$$WSideNational_{t,g,i} = \frac{\sum SideNational_{s,g,i,v} * CLOSE_{t,v}}{\sum VOTES_{t,g,i,v} * CLOSE_{t,v}}. \quad (7)$$

To ease interpretation, we standardize both variables in our models.

Individual roll-call votes may also vary depending upon their impact on policy-making. It is possible that the impact of uncertainty will affect MEP cohesion differently depending on the policy-making impact of individual roll-call votes. Four types of vote (codecision, assent, cooperation, and consultation) are “legislative votes” that most directly impact policy making (Hix, Noury, and Roland 2007). Parties may be more interested in the behavior of MEPs on these votes than on ones that have less direct influence on policy. Consequently, we use two different samples of roll-call votes to calculate our two, weighted roll-call votes. First, we calculate  $IWRICE_{t,g,i}$  and  $WSideNational_{t,g,i}$  for *all* roll-call votes. Second, we calculate these two variables using only *legislative* votes.

Our primary independent variable is our measure of EU electoral volatility, *EU Volatility*. We include this variable as a group-level predictor, meaning that it varies by country and not by individual. Based on  $H_1$ , we expect that *EU Volatility* will be negatively correlated with  $IWRICE_{t,g,i}$ . Based on  $H_2$ , we expect that *EU Volatility* will be positively correlated with  $WSideNational_{t,g,i}$ .

We include several control variables. First, we code all MEPs with the log of district magnitudes of their national electoral systems. There is a significant literature linking legislative cohesion and district magnitude (e.g., Bean 1990; Fenno 1978; Fiorina 1997; Mayhew 1974; North 1994; Norton and Wood 1990; Ward and John 1999; Stratmann and Baur 2002; Lancaster and Patterson 1990; Thames 2001, 2005; Carey 2009). Much of this

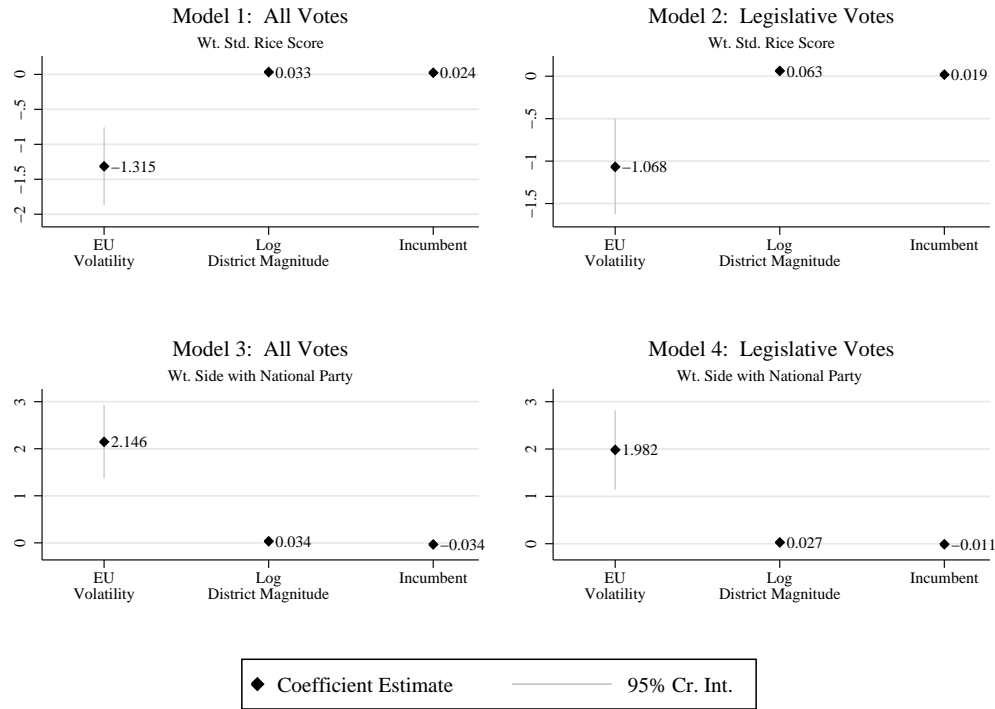
literature finds greater cohesion in higher district magnitude systems, since these systems tend to have stronger parties and have electoral systems that create fewer personal vote incentives. By including this measure, we are able to gain some leverage on the context of national parties. Second, we include a dummy variable indicating whether the MEP was an incumbent. Incumbents, due to their experience or position in the party, may be in a safer position to shirk than non-incumbents. Third, we include dummy variables for parliamentary groups. It is possible that factors specific to particular EP groups will impact their level of cohesion. In all models, the Socialist group (S&D, PES, SOC, and S) serves as the reference group. Finally, we include a series of dummy variables indicating the parliamentary term in which the MEP served. This accounts for major institutional changes, particularly treaty modifications, occurring over EP terms that may affect cohesion. In all models, the 2nd EP serves as the reference group.

For our analysis, we estimate a series of Bayesian hierarchical models. We model random intercepts for MEPs based upon the country in which they were elected. We adopt this approach for two reasons. First, it is possible that errors will vary by country. Estimating country-level intercepts will help us deal with this issue. Second, our primary independent variable, *EU Volatility*, varies by country. Hierarchical models allow us to estimate the effect of group-level predictors, in this case country-level predictors, on individual-level dependent variables (Gelman and Hill 2007). Simply including a series of country-level indicator variables in a linear regression would not be sufficient to measure the impact of group-level predictors.

We estimate all models using Rstan (Stan Development Team 2014). We use uninformative priors for all coefficients. We use a weakly informative half-Cauchy prior for the random intercepts (Gelman 2006; Gelman et al. 2013). For all models, we estimate 4 separate chains with 8,000 iterations each and a “burn-in” of 2,000 iterations. We thin the iterations, saving



Figure 2: Posterior Estimates, Models 1-4



2,000 per chain. All diagnostics indicate that each chain converged in all models.<sup>4</sup>

We estimate four separate hierarchical models to test our hypotheses. Models 1 and 2 regress a standardized version of  $IWRICE_{t,g,i}$  on *EU Volatility*. Model 1 uses a dataset of all roll-call votes, while model 2 only includes legislative votes. Models 3 and 4 regress a standardized version of  $WSideNational_{t,g,i}$  on *EU Volatility*. While model 3 includes all roll-call votes, model 4 only includes legislative votes. Figure 2 plots the coefficient medians and 95 percent credibility intervals for the posteriors of our main independent variables, the measure of volatility, the log of district magnitude, and incumbent, for these four models. Table 1 in the appendix contains a table that presents the detailed results including those of the parliament and group fixed-effect dummies.

Figure 2 presents strong support for our hypothesis,  $H_1$ . In model 1, the *EU Volatility*

<sup>4</sup>For all parameters, the potential scale reduction factor,  $\hat{R}$ , was close to 1 and the number of effective independent simulation draws,  $\hat{n}_{eff}$ , was over 400 (Gelman et al. 2013).

variable is negatively correlated with our measure of party cohesion. Since the 95 percent credibility interval around the median does not contain 0, we consider this result to be statistically significant. We also find that in model 2 that the *EU Volatility* is statistically significant and negatively correlated with party cohesion. Consequently, as electoral volatility increased, MEPs were less disciplined. There is a difference between the estimates based on our different samples, *all votes* and *legislative votes*. The *EU Volatility* coefficient is slightly smaller, -1.068 versus -1.315, in model 2 than in model 1.

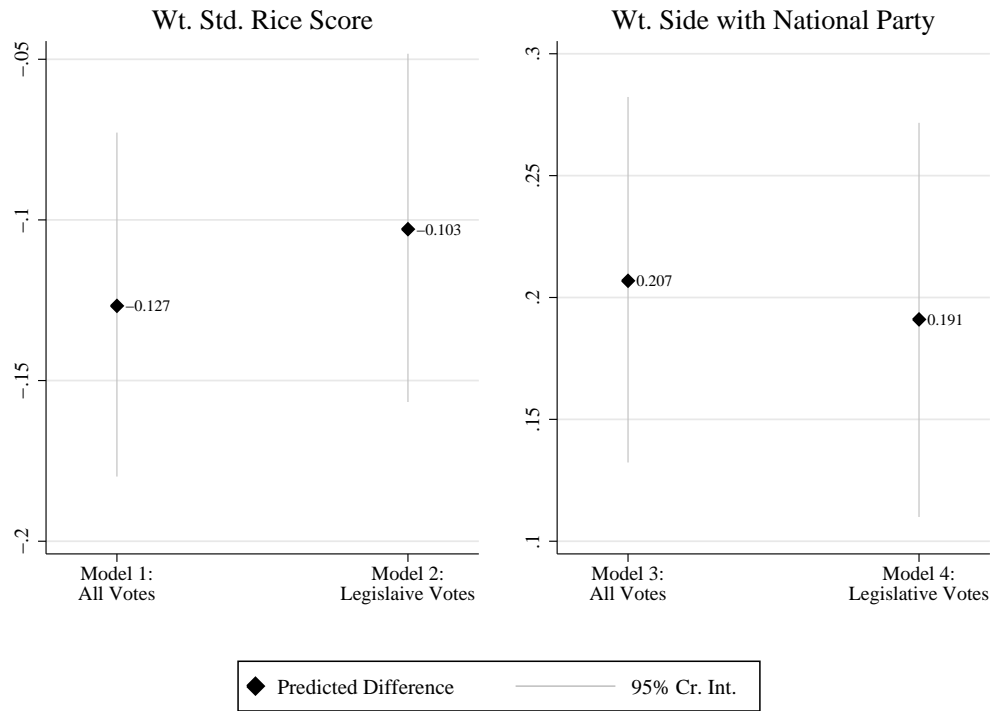
We also find support for  $H_2$ . In model 3, the *EU Volatility* variable is statistically significant and positively correlated with  $WSideNational_{t,g,i}$ . Thus, as volatility in EU elections increases, MEPs are increasingly likely to side with their national parties' positions over their groups' positions when they differ. We find a similar result, though with a smaller magnitude in model 4, which uses only legislative votes. The difference in the magnitude of the coefficients is small, 0.164. Thus, as expected, as electoral uncertainty increased, MEPs were more likely to side with their national parties than with their parliamentary groups.

Our model results do show that the impact of volatility has a substantive impact as well. Figure 3 plots the differences in the expected values of  $IWRICE_{t,g,i}$  and  $WSideNational_{t,g,i}$  if we increase our volatility variable from one standard deviation below their means to one standard deviation above their means.<sup>5</sup> In terms of  $IWRICE_{t,g,i}$ , increasing volatility reduces cohesion by 12.7 percent of a standard deviation in model 1. If we examine only legislative votes we still see a substantive, but smaller impact—10.3 percent of a standard deviation. In terms of siding with the national party over the parliamentary group, we see a similar pattern. If we increase volatility, based on the results of model 3 that uses all votes, we see a 20.7 percent of a standard deviation increase. Using only legislative votes, model 4, the result is similar, 19.1 percent of a standard deviation.

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<sup>5</sup>To calculate expected values, we set the log of district magnitude at its mean. The incumbent variable is set to its mode, 0. The “European Democrats” group variable was set to 1. The 5th EP variable was set to 1 as well.

Figure 3: Posterior Medians Substantive Impact of Volatility, Models 1-4



In terms of our control variables (see figure 2), we find limited results. Incumbency is positively correlated with cohesion and negatively correlated with siding with the national party across all models; however, it is never statistically significant. The log of district magnitude variable is positively correlated across all specifications, but is only statistically significant in model 2.

## 6 Discussion of Results and Conclusion

In this article, we sought to understand how legislators dealt with multiple, collective principals. We argue that legislators will tend to side with the dominant collective principal who exerts the most influence over their reelection. We further argued that the tendency to side with the dominant principal is impacted by the level of electoral uncertainty. Ex-

aming the EP offers us the ability to examine how MEPs decide between two collective principals—national parties and European parliamentary groups—with limited influence of the individual accountability provided by voters. The results of our analysis are unambiguous: we demonstrate that as electoral uncertainty increases, MEPs are, on average, less likely to vote with their parliamentary group and are more likely to vote side with the national party when its position diverges from the parliamentary group. These results are consistent with our expectation that in times of electoral uncertainty, MEPs will side with the principal who has the most influence over their reelection.

The results help us better understand the dynamic relationship between principals and their agents in legislatures. Our findings do show that MEPs are more likely side with their national parties than their parliamentary groups, a common finding in the EU specific literature. This makes sense given that national parties are more likely to impact the reelection of MEPs than are parliamentary groups. Our analysis, however, demonstrates that the character of the relationship is not fixed but varies contextually. In this case, we show that the level of support is dependent upon the level of electoral uncertainty at the domestic level. Thus, support for parliamentary groups is not static over time, and will vary with changes in domestic electoral uncertainty.

This dynamic relationship is an important finding in terms of furthering our understanding of cohesion and parties in the EP. While other scholars have carefully examined party-group discipline in the EP, most have concentrated on how EU-level factors impact cohesion. This article moves the debate forward by demonstrating how conditions at the domestic level impact MEPs through ties to their national parties. While the existing research often decouples voters and MEPs in terms of accountability, our research emphasizes the link between domestic electoral factors and the EP. We tie EP outcomes specifically to domestic-level uncertainty faced by national parties. This raises the possibility that other types of domestic level variation may, in fact, explain, cohesion variation in the EP.

Lastly, the article adds to our general understanding of how agents balance competing, collective principals. The existing literature highlights how legislators in federal systems or those dominated by intra-party factions face the difficult challenge of collective principals. Our findings imply that the impact of these other, non-dominant, collective principals will be felt most sharply in times of electoral stability. Overall, the EP case reaffirms the far-reaching importance of party electoral considerations, and the role of electoral uncertainty in particular. It begs the question of whether uncertainty has a similar impact in other situations where legislators face multiple, collective principals given that electoral volatility represents a universal pressure in competitive democracies.

# Appendix

Table 1: Regression Results

<i>Independent Variable</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff. Est., (95% Cr. Int.)</i>	<i>Coeff. Est., (95% Cr. Int.)</i>	<i>Coeff. Est., (95% Cr. Int.)</i>	<i>Coeff. Est., (95% Cr. Int.)</i>
EU Volatility	-1.315 (-1.866, -0.756)	-1.068 (-1.626, -0.501)	2.146 (1.373, 2.929)	1.982 (1.141, 2.819)
Log District Magnitude	0.033 (-0.028, 0.082)	0.063 (0.027, 0.089)	0.034 (-0.010, 0.089)	0.027 (-0.012, 0.070)
Incumbent (1,0)	0.024 (-0.013, 0.063)	0.019 (-0.025, 0.063)	-0.034 (-0.093, 0.022)	-0.011 (-0.074, 0.047)
I-EDN, EDD (1,0)	-0.985 (-1.168, -0.802)	-1.103 (-1.300, -0.906)	1.648 (1.386, 1.914)	1.684 (1.398, 1.967)
ED (1,0)	0.562 (0.423, 0.701)	0.634 (0.489, 0.776)	-1.114 (-1.311, -0.912)	-1.009 (-1.217, -0.796)
PPE, PPE-DE (1,0)	-0.038 (-0.088, 0.010)	0.003 (-0.049, 0.059)	0.002 (-0.065, 0.073)	-0.022 (-0.103, 0.050)
DEP, RDE, UPE, UEN (1,0)	-0.194 (-0.290, -0.102)	-0.033 (-0.137, 0.062)	0.388 (0.252, 0.524)	0.165 (0.010, 0.311)
L, LDR, ELDR (1,0)	-0.208 (-0.283, -0.134)	-0.225 (-0.303, -0.142)	0.385 (0.279, 0.495)	0.374 (0.257, 0.494)
COM (1,0)	0.127 (0.030, 0.225)	0.125 (0.019, 0.235)	-0.045 (-0.191, 0.086)	-0.014 (-0.167, 0.133)
CG (1,0)	0.273 (0.041, 0.501)	0.395 (0.139, 0.648)	-0.478 (-0.804, -0.130)	-0.576 (-0.933, -0.206)
GUE/NGL, GUE (1,0)	0.187 (0.008, 0.363)	0.378 (0.182, 0.575)	0.027 (-0.222, 0.287)	-0.204 (-0.492, 0.059)
CTDI, NI, TGI (1,0)	-1.266 (-1.383, -1.151)	-1.079 (-1.205, -0.951)	2.325 (2.154, 2.493)	1.754 (1.566, 1.936)
CDI, ARC, ARE (1,0)	0.051 (-0.072, 0.187)	0.171 (0.023, 0.321)	0.187 (-0.012, 0.389)	0.006 (-0.196, 0.211)
V (1,0)	0.331 (0.239, 0.426)	0.423 (0.316, 0.529)	-0.362 (-0.500, -0.225)	-0.483 (-0.635, -0.333)
DR, Verts/ALE (1,0)	0.526 (0.344, 0.713)	0.585 (0.388, 0.784)	-0.736 (-1.004, -0.463)	-0.823 (-1.116, -0.531)
Ind. (1,0)	-0.227 (-0.468, 0.006)	-0.284 (-0.560, -0.003)	2.128 (1.766, 2.479)	1.915 (1.521, 2.288)
3rd EP (1,0)	0.109 (0.039, 0.179)	0.140 (0.070, 0.212)	-0.101 (-0.198, -0.005)	-0.157 (-0.262, -0.052)
4th EP (1,0)	0.128 (0.051, 0.199)	0.169 (0.099, 0.244)	-0.153 (-0.253, -0.052)	-0.222 (-0.327, -0.114)
5th EP (1,0)	0.116 (0.045, 0.187)	0.109 (0.035, 0.182)	-0.211 (-0.312, -0.107)	-0.208 (-0.317, -0.099)
6th EP (1,0)	-1.858 (-1.935, -1.785)	-1.736 (-1.806, -1.665)	-0.237 (-0.336, -0.136)	-0.195 (-0.301, -0.089)
Intercept	0.198 (0.047, 0.415)	0.056 (0.001, 0.186)	0.027 (-0.123, 0.142)	0.067 (-0.037, 0.179)
$\sigma_{country}$	0.077 (0.021, 0.209)	0.028 (0.009, 0.093)	0.076 (0.033, 0.152)	0.057 (0.024, 0.121)
$\sigma_y$	0.532 (0.519, 0.546)	0.588 (0.573, 0.603)	0.793 (0.773, 0.813)	0.850 (0.829, 0.872)
N	3063	3040	3063	3040

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