Supra National, National and Regional Dimensions of Voter Turnout in European Parliament Elections

Nadia Fiorino
Nicola Pontarollo
Roberto Ricciuti

2017
Contents

1 Introduction .......................................................................................................................... 3
2 Related literature .................................................................................................................. 5
3 Voter turnout in political space ............................................................................................ 7
4 Empirics ................................................................................................................................ 9
   4.1 The dynamics of turnout in Europe .................................................................................. 9
   4.2 Model specification, variables and methodology .......................................................... 13
5 Results .................................................................................................................................. 18
   5.1 Baseline results ............................................................................................................. 18
   5.2 Robustness checks ....................................................................................................... 21
6 Concluding remarks ............................................................................................................ 23
References .............................................................................................................................. 24
Appendix .................................................................................................................................. 28
List of tables ............................................................................................................................ 1
List of figures .......................................................................................................................... 2
Supra National, National and Regional Dimensions of Voter Turnout in European Parliament Elections*

Nadia Fiorino
University of L’Aquila

Nicola Pontarollo‡
Joint Research Centre, European Commission

Roberto Ricciuti**
University of Verona and CESifo

ABSTRACT

We argue that the decision to vote in European Parliamentary (EP) elections lies at the intersection of three political dimensions: one related to the attitude of citizens towards the European Union, one to the characteristics of the national political system, and the third associated with socio-economic variables observed by voters at the local level. This paper investigates this intersection by analyzing the last four EP elections in the EU-14, for 164 regions. We test a multilevel model. The results indicate a significant role of compulsory voting, domestic political cleavages, labor market conditions and trust in the EU. No evidence is found that GDP per capita affects turnout. Finally, the oldest segment of population seems more prone to vote than the youngest.

Keywords: European Parliamentary elections; voter turnout; subnational variation; multilevel model.

* This research was funded by the research program "Inequality and economic crises" within the project "Economic Crises and the Quality of Democracies in Europe" (PRIN project 2010WKTTJP_005). We thank Katharina Hofer and participants at the European Public Choice Conference 2016 (Freiburg) for comments.

‡The views expressed are the authors’ and do not necessarily correspond to those of the European Commission.

** Corresponding author. Email: nadia.fiorino@univaq.it, nicola.pontarollo@ec.europa.eu, roberto.ricciuti@univr.it.
1 Introduction

This paper re-interprets the previous studies on the determinants of voter behavior in European Parliamentary (EP) elections at the aggregate level. It focuses on the political dimension of such determinants: a supranational dimension that involves attitudes towards European institutions, a national dimension that emphasizes the role of the national political context, and a local dimension that refers to specific socio-economic and demographic characteristics.

The variables we use are based on the general theory of voting behavior as well as on some other theoretical propositions more directly related to the EP itself; most of them are not novel per se. Nevertheless, placing the variables involved in the decision to go to the polls into a political space provides new opportunities to capture their multilevel nature strictly linked to the multilevel government that characterizes the complex relations between national and EU politics. The hierarchical model we test is the ‘natural’ consequence of our concept since it empirically examines the linkages between different political levels, lowering the risk of biased estimators and misleading results.

Elections have proven to be a fruitful field of research. Within this wide area of investigation some studies are grounded on individual-level data, others on aggregate-level data, and still others on a mix of the two levels. Contributions on EP elections reproduce this distinction both in the theoretical propositions and in the choice of data. Most of the empirical studies are centered on individual data as well as on a mix of individual- and aggregate-level data. Although cross-country analyses on voter turnout based on aggregate-level data most likely yield valid inferences compared to individual level analyses, empirical system studies of EP elections are still scarce.

Scholars have also noted the importance of space in relation to political issues and have emphasized the influence of local contexts and social interactions. Nevertheless, the empirical literature on voter turnout and more specifically, aggregate-level empirical studies of participation in EP elections generally overlook these aspects. The latter are indeed largely based on cross-national samples (Mattila, 2003; Hix and Marsh, 2007) and case studies (a single election or single country) and do not fully address the context and characteristics of elections at the specifically multilevel system of government where the responsibilities for policies are shared at the supranational, national and regional level.

Cross-country studies make the implicit assumption that countries are positioned on their steady-state equilibria values for turnout. However, a closer look at the data shows a more complex picture of participation rates in EP elections. Fig. 1 displays turnout levels in 164 European regions in the 1999, 2004, 2009 and 2014 elections respectively. It indicates significant changes in the level of turnout in countries and regions over the last four EP elections and points out that voting behavior is heterogeneously distributed from one election to the other both between and within countries. In addition, several variables deemed determinants of electoral turnout (such as population density or income per capita) by previous studies and that we consider in our analysis are not homogeneous within a given country and vary over time. This suggests that the electoral mosaic of EP elections is the result of aggregate socio-economic, cultural and political processes that may take different forms and occur in different places. Lacking the processes that happen in sub-systems (i.e. considering a single observation for each country) involves a loss of information, and may therefore lead to incorrect statistical inferences.

The rest of the paper is organized as follows. Section 2 reviews the literature on aggregate voter turnout and highlights some of the variables used in Section 3, where we provide a conceptual framework in which supranational, national and local levels interact. In

---

1 See on this point the influential study of Kramer (1983) and more recently Van der Brug, van der Eijk and Franklin (2007).

2 Few empirical studies taking into consideration this issue through spatial econometric techniques (Lacombe et al., 2014) or more traditional non-spatial estimation methods (Gerber et al., 2008) have been carried out. Sundstrom and Stockemer (2015) is currently the only aggregate study analyzing both national- and regional-level characteristics of voter turnout in a sample of European country. Nevertheless, they focus on national parliamentary elections for a single year.
Section 4 we analyze the dynamics of the EP elections in our sample, the variables and empirical strategy. Section 5 sets out the results. Finally, Section 6 presents a discussion of our findings.
2 Related literature

Empirical studies of the determinants of voter turnout in EP elections are rooted in the theory of voting behavior in general, as well as in other theories specific to EP elections. A number of surveys of voter turnout (Geys, 2006; Smets and van Ham, 2013; Cancela and Geys, 2016) have been carried out. Most of the literature is based on the Downsian model (Downs, 1957) in which the benefits and costs of voting are weighted and the decision to go to the polls emerges from this cost-benefit analysis. Several variables affect costs and benefits at the aggregate level. Institutional features such as compulsory voting, registration requirements and the type of electoral system have been considered. While compulsory voting is associated with higher turnout because it increases the probability of being caught not voting, registration requirements discourage voters since they increase the time required, the effort and the information costs of voting.

Proportional representation (PR) systems increase voter turnout compared to majoritarian systems (see among others, Selb, 2009). The disproportionality between votes and seats in the latter lowers the incentive to go to the polls since voters, especially those that support small parties, may consider their vote wasted. Moreover, under PR, in each district most parties have a chance to win at least one seat, and therefore have an incentive to mobilize everywhere. Finally, PR leads to more parties, providing a wider choice for voters and thus increasing the likelihood that an individual voter can find a political platform reasonably close to his/her own opinions.

Socio-economic factors (such as economic development, population size, population concentration, income inequality) may also affect the costs and benefits of voting and, as such, cross-national variations in turnout. In developed countries people are more informed and have more resources (including time) to devote to politics. This may increase the political involvement of citizens and stimulate voter turnout. Voters living in larger communities are less likely to consider their vote decisive for the outcome of the election, which decreases the benefits of voting. Contradictory theoretical predictions characterize the relationship between turnout and population density. In relatively low-density areas, community relations are closer and more direct (Overbye, 1995) and this may result in ‘social pressure’ to vote. Further, politics is more personal (Blank, 1974), the candidates are well known and this lowers the information costs of voting. However, in countries with higher population densities, voters are more concentrated and easier to mobilize (Lipset, 1981). Theoretical analyses of the relationship between income inequality and political participation are also conflicting. When income is unequally distributed, the poor are unable to influence politics and so tend to withdraw from the political arena (Goodin and Dryzek, 1980). Conversely, greater income gaps intensify social conflict for redistribution between the poor and the rich, increasing possible gains and losses for the two groups in the elections, and therefore voter turnout (Meltzer and Richard, 1981). Most of the empirical studies in this field show a significant negative relationship (Anderson and Beramendi, 2008; Dahl, 2006; Solt, 2008), some others (Oliver, 2001; Brady, 2004) support a positive sign.

The literature has also analyzed the role of party systems in explaining cross-country variations in turnout. Most research incorporates the number of parties. On the one hand, as observed before, the more parties the higher the turnout. On the other hand, as Jackman (1987) suggests, multi-party systems usually produce coalition governments, which make elections less decisive because governments are the result of backroom agreements between parties, reducing the turnout. While almost all empirical research has found a negative correlation between the number of parties and turnout, the view that a higher number of parties reduces turnout because it leads to coalition governments is not empirically supported (Blais and Carty, 1990; Blais and Dobrzynska, 1998).

The most famous explanation for EP elections is the so-called 'second-order national election' theory (Reif and Schmitt, 1980), which is rooted in theories of midterm elections in the United States. This theory is based on two key arguments. The national political arena
determines and dominates EP elections because they occur at a different time to the domestic ‘electoral cycle’. Strictly linked to this argument, the second key proposition is that people vote differently (i.e., people may vote or abstain) in ‘second-order’ EP elections because less is ‘at stake’ compared to ‘first-order’ national parliamentary elections. Various empirical studies support this model, showing that turnout is lower than in national elections, smaller parties perform better and parties in national government are punished, particularly during the midterm (van der Eijk and Franklin, 1996; Marsh, 1998; Hix and Marsh, 2011). These patterns of behavior are seen as signifying the reduced salience of EP elections.3

Finally, also relevant is public opinion on European institutions. The attitudes to European democracy are founded on both the confidence in EU institutions and the quality of national institutions. Citizens use the quality of national institutions as a ‘proxy’ to evaluate EU institutions. While some scholars emphasize that positive appraisal of national institutions at the individual level spills over into greater satisfaction with EU institutions (Andersen 1998; Holbot, 2012), others claim that higher corruption or poorer national institutions increase the support for EU democracy since the opportunity-cost of transferring sovereignty to Europe is lower (Sanchez Cuenca, 2000; Rohrschneider, 2002).

Most of the studies of EP elections focus on a single country or on single elections; cross-country analyses using aggregate-level data are still rare (Mattila, 2003; Hix and Marsh, 2007) and are conducted at the national level, which makes it hard to capture the differences in electoral participation within a country. Instead, these aspects are relevant. The EU is characterized by a multilevel system of governance where the responsibilities for policies are allocated and impact on various levels of the hierarchical political system. Further, voting behavior depends on some contextual factors that are strictly linked to the specificity of the areas and territories. Political science literature has noted the importance of space on turnout (Cho and Rudolph, 2008). Nevertheless, to date, we are not aware of any empirical aggregate-level study of EP elections that has taken this aspect seriously into consideration.

---

3 One of the most striking examples were the European and General Elections in the UK in 2014 and 2015. In 2014 turnout was 34.2%, UKIP, Labour and Conservatives received 27.5%, 25.4% and 23.9%, respectively (http://www.bbc.com/news/events/vote2014/ue-uk-results), whereas one year later turnout was 66.1%, and the three parties received 12.6%, 30.4% and 36.9% respectively (http://www.bbc.com/news/election/2015/results).
3 Voter turnout in political space

This section aims to interpret the previously surveyed literature on the determinants of voter turnout within an integrated framework that sets these variables into political spaces. We argue that the interplay between these spaces and the geographical characteristics of voter turnout gives a more comprehensive picture of the determinants of voting behavior in EP elections.

The EU is a unique institutional setup since responsibilities are shared by national and European institutions. Voter turnout at EP elections is the result of a choice that occurs at the intersection of three different political spaces. One space directly involves supranational European institutions. Citizens’ choices are related to their opinion and attitudes to EU institutions and policies (Anderson, 1998; Holbot, 2012). Starting as a fairly technocratic process based on consensus between governments, the aim of achieving an ‘ever closer union’ has led to an increase in the number of decisions taken in Brussels which impact on the daily lives of European citizens as well as progressively redistributive outcomes of the policy choices in the EU. These dynamics created the framework for the politicization of Europe (see among others on this issue Zürn and de Wilde, 2012; Braun et al., 2016). At the same time, the discussion of the ‘democratic deficit’ of European institutions gave further impetus to attempts to increase their accountability. For example, the appointment of EU commissioners requires ratification by the EP, and this has led to increasingly political scrutiny of the candidates. In 2009, the Treaty of Lisbon amended the Treaty of the European Union, and stated that “Taking into account the elections to the European Parliament and after having held the appropriate consultations, the European Council, acting by a qualified majority, shall propose to the European Parliament a candidate for President of the Commission” (art. 17.7).

Overall the ability of the voters to directly affect EU decisions is low, therefore in a cost/benefit framework the decision not to vote is more likely than in national elections.

However, most political discourse takes place at the national level, our second ‘space’ of interest. Elections “provide the mechanism by which citizens can communicate information about their interests, preferences, and needs and generate pressure to respond” (Verba et al., 1995: 1). Voters observe the behavior of both the government and the opposition, which in turn is shaped by the incentives institutions and rules, provide them with. EP elections may be used to send messages to the government and political parties in general, especially when the EP elections take place during the midterm of the national election cycle. Because they do not directly affect who is running the country, voters may turn out and vote for the opposition (a typical midterm effect) to protest against government policies. Moreover, they may vote for parties on the fringe of the political space in order to express their disapproval of both the government and the official opposition. They may alter their behavior by not voting at all (abstaining). In this view, EP elections are second-order national elections because they debate and reflect essentially national politics (Reif and Schmitt, 1980). More recent explanations of voting behavior at EP elections suggest that as attitudes relating to the European arena become more salient to voters, they may switch their party allegiance or abstain due to disagreement over European issues with the party they support in national elections (see Hix and Marsh, 2007; Hobolt et al., 2009). While the behavior of voters is variously motivated depending on the relative importance of dissatisfaction with government performance or European concerns, the political space relevant for this choice is the national framework.

The quality of national institutions clearly fits this dimension. Voters may treat the perceived level of quality of government – the one that most affects their lives - as a

---

4 The European Peoples Party was the largest group in the EP after the 2014 elections and Jean-Claude Junker, nominated by the party before the elections, was put forward by the Council and subsequently elected. Schmitt et al. (2015) claim that this personalization increased turnout.

5 Recently Murdoch et al. (2017) have found a positive correlation between the policy preferences of EU administrative staff and their home country population. From this evidence, they argue that a certain degree of legitimacy exists for EU officials in relation to their home country.
benchmark when evaluating EU democracy. Furthermore, inequality also belongs to the national dimension, since most of the redistributive policies through taxation, subsidies and more in general government expenditure are taken at the national level.

Finally, some components of electoral choice are associated with the environment closest to individuals. The main socio-economic and demographic variables identified in the literature as drivers of voter turnout (such as economic growth, population density, unemployment, or areas that benefit from EU subsidies) are observed at the 'local level' and, as such, are often heterogeneous within a given country. For example, in 2004, in Italy and Spain the difference in long-term unemployment between the most and the least developed regions ranged between 14.2% and 59.4%, and 16.2% and 59.9%, respectively. The UK also has strong territorial variations between the South-East and former industrial cities in the North and income is almost two and a half times higher in the richest than the poorest regions. One of the shortcomings of the literature on voter turnout, and particularly of cross-country literature, is that it takes no account of this heterogeneity within a country, relying on average values. A comprehensive understanding of EU voting requires disaggregation of country patterns for these variables since any of these can generate differences in income distribution or cultural integration that, in turn, may affect the costs and benefits of going to the polls.

The three political spaces we have identified can be traced in data at two geographical levels. There are variables collected at the national level (such as trust in the EU, employment protection or variables capturing the political framework) as well as at a lower level may be regional or provincial (such as data on GDP, unemployment or population density).

Accounting for the intersection between the political spaces allows us to gather local information and to analyze how it depends on and interacts with nationwide information. Since local observations belong to larger national units and vary within these units (i.e., French regions behave similarly, as do German regions), they cannot be treated as independent observations, therefore a simple OLS estimator would be biased. The multilevel model (also known as a hierarchical linear model and nested data model) we estimate overcomes these problems, allowing for more accurate statistical results.
4 Empirics

4.1 The dynamics of turnout in Europe

Turnout at EP elections is initially analyzed to identify its spatial dynamics and the possible tendency to form identifiable clusters. The data on turnout are taken from the European Election Database and national sources and regard four elections: 1999, 2004, 2009 and 2014 in the EU-14, for 164 regions. We consider Portugal, Spain, France, Belgium, Luxembourg, the Netherlands, Denmark, UK, Ireland, Germany, Italy, Greece, Austria and Sweden.

Figure 1 shows the quartiles of turnout in the years investigated. The maps display that turnout has a strictly national pattern for each period. Countries like Italy and Greece exhibit high levels of turnout over the whole period, whilst in others, such as the Netherlands and the United Kingdom, turnout is very low. Between these two extremes, there is a set of less homogeneous countries. From the least to the most homogeneous, lie Spain, France and Germany. Mediterranean countries have the highest turnout, although in the last two elections they are much closer to the EU average than before. This means that there is spatial persistence over time, with well-defined clusters of regions characterized by high and low turnout, respectively.

---

6 Only 14 countries are included because of data availability. The methodology used requires balanced panel data.

7 Greece is analyzed as a single region because of the lack of data for 2014. In the other cases, we refer to NUTS-2 regions, with the exception of the United Kingdom, Spain and Germany where NUTS-1 regions are used. Although they differ in size and administrative importance, the regions in these two groups have usually been considered together (Sundstrom and Stockemer, 2015).

8 We excluded Finland because there are only regional data for 1999 and 2004, only national data for 2009, and no data for 2014. Islands have been connected to the nearest region.
Figure 1: turnout at EU parliament elections

a) Quartiles 1999

b) Quartiles 2004
c) Quartiles 2009

d) Quartiles 2014
A clearer visualization of the changing pattern of turnout over time is also shown in Figures 2 and 3. Figure 2 represents the boxplots for each year. The box in the middle describes central tendencies i.e. the middle 50% of the distribution. The solid thick line inside the box locates the median; the top and bottom edges are the 75th and 25th percentiles, respectively. The height of the box is the inter-quartile range, $IQR$. The median turnout is relatively stable over the four elections, whereas the middle 50% of the cross-section distribution shrinks over time along with the distance represented by the rays emanating from the middle box denoting the upper and lower adjacent values. The “whiskers” correspond to the upper adjacent value, i.e. the largest turnout observed no greater than the 75th percentile plus $1.5 \times IQR$, and to the lower adjacent value, i.e. the lowest turnout observed no smaller than the 25th percentile minus $1.5 \times IQR$. Finally, the dots outside the upper and lower adjacent values are outliers. The outliers in the last three periods refer to regions in the Netherlands. Despite the tendency of turnout to be spatially more homogeneous with time, in a few regions in Belgium, it continues to be rather high.

**Figure 2: Boxplot of turnout**

Figure 3 shows the within and between country variation of turnout over time for countries with more than 2 regions. In line with the previous analysis, the between variation is much larger than the within variation. In addition, with the exception of Italy, there is a clear decline in the variation in turnout, pointing to a more homogeneous spatial pattern both within and between countries.
Figure 3: Within country and between country variance

The results of the previous analysis show that the EP election turnout is not stable over space and time. In addition, despite changes in the geography of electoral participation, the observed spatial pattern is quite strong and closely related to the country to which the regions belong. This suggests that a careful analysis of the determinants of EP elections needs to consider both context variables at the country level as well as factors with a regional dimension.

4.2 Model specification, variables and methodology

The model includes seven regional-level and eight national-level variables. The structure of the data in two different geographical levels led us to consider the multilevel model a natural choice (Hox, 2010:1). This is because a multilevel model allows clustering regions within their countries to evaluate regional-level covariate (so-called Level 1) effects within their national context (so-called Level 2 covariates), correcting for the non-independence of observations within countries (intra-class correlation) and avoiding an overestimation of the statistical significance of these Level 1 indicators (O’Connell and McCoch, 2008). A common problem with observations nested within a higher level is that there may be a problem of dependencies because regional turnout in the same country is likely to be similar in ways not fully accounted for by variables related only to the regional scale included in a single-level model. Multilevel models also have the advantage of accommodating the spatial dependency of the residuals by differentiating between-individual errors from between-neighborhood errors (Orford, 2000). If not considered this dependency leads to biased standard error estimates (Snijders and Bosker, 1999). We analyze a panel structure, exploiting the time dimension of the data.

We assume that the turnout at EP elections is affected by several factors, and estimate the following regression:

$$Turnout_{it} = a_0 + a_1\text{EU}_{it} + a_2\text{NATIONAL}_{it} + a_3\text{REGIONAL}_{it} + \alpha_i + \alpha_t + u_{it}$$  \hspace{1cm} (1)

Where $i$ denotes the country or region, depending on the specification of the variable, and $t$ the election year (1999, 2004, 2009, 2014). $\alpha_i$ is the random intercept representing level
2 (country specific) residuals, $A_t$ is the time specific random intercept residuals, and $u_{it}$ are level 1 (regional specific) residuals. The latter are assumed to be mutually independent and normally distributed with zero mean and variance equal to $\sigma^2$. Level 2 residuals are assumed to be uncorrelated with $u_{it}$, mutually independent and normally distributed with zero mean and variance equal to $\eta^2$ and $\tau^2$ for country and time specific, respectively. Fixed effects are expected to have a systematic and predictable influence on the data, while random effects can be expected to have a non-systematic, idiosyncratic, unpredictable influence on the data. Thus, random effects give the structure to the error term.

The variables can be described as follows:

1) **Turnout**, the dependent variable, is the number of votes in a country/region $i$ at election year $t$ as a share of the registered citizens. The data on this variable come from the European Election Database and from the Interior Ministries of countries investigated.

2) **EU** is a vector that includes variables related with the EU itself: *Trust_EU* and *Objective1 regions*. Specifically, *Trust_EU* measures the public attitudes towards the European Parliament, where 0 means no trust in an institution, and 10 means complete trust (source: European Social Survey). *Objective1 regions* is a dummy variable equal to 1 if regions are below 75% of EU GDP per capita and thus receive the majority of EU Structural Funds, 0 otherwise. While in countries/regions that are large net contributors to the EU budget voters may think that the EU is financed with their tax money and this may lower their incentive to vote in EP elections, in countries/regions benefiting from the EU subsidies voters are more likely to go to the polls (Mattila, 2003).

3) **NATIONAL** is a vector that includes institutional, political, economic and quality of government variables at the country level. The institutional variables, *Compulsory voting* and *Weekday vote*, have largely been explored in the literature (among others, Franklin, 2002). The connection between compulsory voting and higher voter turnout is self-evident. When the rule enforces turnout, the costs of not voting increases, leading to higher turnout rates. Elections on weekdays increases the cost of voting since people follow their daily routines, decreasing electoral participation. The source of both these variables is the Ministry of Interior. The vector also contains variables related to features in the national political arena: *Herfindahl_gov*, *Herfindahl_opp* and *Effective number of parties*. Herfindhal indices measure the sum of the squared seat shares of all government (*Herfindhal_gov*) or opposition parties (*Herfindhal_opp*). These variables aim to capture the fractionalization of the government and of the opposition, respectively (source: Beck et al., 2001). Alternatively, we use *Effective number of parties* (Laakso and Taagepera, 1979), a variable employed in several strands of the political science literature, which weighs the number of parties in the legislature by the relative strength measured by their share of seats (source: Gallagher, 2015). All these variables attempt to analyze the fragmentation of the party system. As theoretically there is no consensus on whether political fragmentation can be

---

9 Data are defined at the national level. Data at the regional level are not used due to some limitations. First, while they are generally available for years 2002, 2004 and 2008, for various countries the small number of interviews in some regions prevents inferences from being drawn because of the large margin of error. Furthermore, the variable trust in the European Parliament is constructed using survey weights. The use of weights is highly recommended on the ESS website to mitigate some of the problems related to survey data (http://essedunet.nsd.uib.no/cms/topics/weight/). Data are for years 2002, 2004, 2008 and 2014. Data for Greece regard 2002, 2004, 2008 and 2010, for Italy 2002, 2004 and 2012, for Luxembourg 2002 and 2004. In the case of Italy, data for 2004 are used instead of data for 2008, while for Luxembourg data for 2004 are used to proxy data for 2008 and 2014.

10 This dummy variable is based on the information available online (see http://ec.europa.eu/regional_policy/index.cfm/en/policy/evaluations/data-for-research/).

11 These variables build on empirical literature on political fragmentation that have concentrated on both the government and opposition. The rationale is that for a given coalition opposition comprising one or more party
expected to increase or decrease political participation, we do not have an a priori expectation about the sign of these variables. The vector includes the variable Inequality that captures income inequality through a Gini index (calculated on net income, source: World Income Inequality Database - WIID3.4). Quality of Government instead controls for the trust in national institutions. This variable is measured using the data from the 2017 update of the QoG OECD dataset and captures the core features of QoG (impartiality, bureaucratic quality and corruption) as well as broader measures such as rule of law and transparency.

A key problem in analyzing EP elections is their second-order nature, which fails to motivate voters in the elections themselves, or more broadly in relation to politics at the European level (Reif and Schmitt, 1980; Van der Eijk and Franklin, 1996; De Vreese et al., 2006). The result is that voter choices are based on domestic rather than European policy concerns. In this perspective, EP elections are useful as vehicles for transmitting information from voters to leaders. The proxy traditionally used to capture this issue is the time passing between national first-order and EP second-order elections. Nevertheless, the political structure of EU countries varies greatly, therefore it is difficult to treat time as a variable able to capture specificities. Instead of this variable, we include a Protest vote variable calculated as the difference between the sum of the percentage of the two major parties in the general elections immediately preceding the European elections and the sum of the percentage of the same two parties in the European elections.12 This variable aims to capture the extent of protest voting differing from the results of general elections. Unsatisfied voters may abstain but may also send a message to more established parties by voting for outsiders in second-order EP elections. While our indicator is an ex post measure with respect to the time between national and EP elections, it is nonetheless a more satisfactory proxy of the different stakes characterizing the two kinds of election. This is because it is built on the actual choices voters made.13

4) The REGIONAL vector includes economic as well as socio-demographic variables. Log(per capita GDP) is the logarithm of GDP per capita in PPS, the usual indicator of economic development, to account for the literature that emphasizes the role of economic resources in stimulating access to information and thereby the political involvement of citizens and voter turnout (Powell, 1982). The source of these data is the Eurostat Regional Database.14 To control for the labor market conditions Employment protection and Unemployment are used. Employment protection corresponds to the OECD indicators of employment protection. This variable is a synthetic indicator of ‘the strictness of regulation on dismissals and the use of temporary contracts’. More specifically it measures the procedures and the costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work contracts. For each year, indicators refer to the regulations applicable on January 1 (source: OECD). We use this indicator to proxy the uncertainty of labor market conditions. Unemployment is the percentage of long-term unemployed out of total unemployment (source: Eurostat Regional Database). The literature provides two competing theories regarding the expected relationship between turnout and the economy. Some scholars argue that people under

---

12 Source: European Electoral Database and Ministry of Interior of the considered countries.

13 It could be claimed that before the 2014 EP elections, in some European countries, anti-establishment parties opposing the austerity policies of the EU and European integration made an electoral breakthrough, displacing some of the mainstream parties from the first two ranks. This is the case, for example, in Italy (where Movimento Cinque Stelle became the second largest party after the 2013 general election) and Greece (where Syriza became the second largest party in 2009). To check whether the variable is robust, we re-run the empirical analysis on a shorter 1994-2009 time span, when the political system was more stable. The results for this variable, available upon request, are in line with those presented here.

14 Due to data availability, the following years: 2000, 2004, 2009 and 2013 are used.
economic adversity are encouraged to be more active politically (vote, protest, lobby...) and are more prone with their vote to punish government policies (Verba et al., 1995). The alternative theory says the opposite and assumes that voters respond to adverse economic conditions by withdrawing from the political process (Rosenstone, 1982). The vector also includes $Log(Density)$ i.e. the log of the number of inhabitants per square km. We have no prior expectation regarding the sign of the coefficient associated with this variable given conflicting theoretical predictions. On the one hand, attitudes that stimulate voter turnout develop more easily in relatively concentrated political environments where community relations are closer and more direct, thus a negative sign is expected (Oliver, 2000, among others). In contrast, another theory suggests a positive sign could be expected since in areas with higher population densities voters are more concentrated and easier to mobilize (Lipset, 1981). The source for this variable is Eurostat Regional Database for population and Cambridge Econometrics for regional areas. Finally, the Dependency ratio, that is the ratio of people over 65 to the young between 20 and 24, captures the influence of the age structure of the population on voter turnout (source: Eurostat Regio Database). The expected sign for this variable is positive.

Although Bendor et al. (2003) and Fowel (2006) found that the current turnout choice is related to the turnout choice in the previous election, we do not include an autoregressive term of turnout on the right-hand side of the equation (2) because first-differences in the GMM and the autoregressive term would have halved the number of elections and observations. Moreover, they would have prevented the use of time-invariant variables (compulsory voting, and dummy for objective1 regions). Finally, finding viable internal instruments was difficult. However, the fixed effect introduced in the robustness checks, may mitigate this problem by taking into account the idiosyncratic persistence for each country.

Table 1 summarizes the statistics and territorial level of the variables, and Table A1 in the Appendix provides a correlation matrix.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. dev</th>
<th>Min.</th>
<th>Max.</th>
<th>Territorial level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory voting</td>
<td>0.0793</td>
<td>0.2704</td>
<td>0.0000</td>
<td>1.000</td>
<td>national</td>
</tr>
<tr>
<td>Dependency ratio</td>
<td>0.9342</td>
<td>0.2527</td>
<td>0.3952</td>
<td>20.510</td>
<td>regional</td>
</tr>
<tr>
<td>Effective number of parties</td>
<td>3.791</td>
<td>1.4892</td>
<td>2.130</td>
<td>8.420</td>
<td>national</td>
</tr>
<tr>
<td>Employment protection</td>
<td>25.160</td>
<td>0.6092</td>
<td>10.320</td>
<td>45.830</td>
<td>national</td>
</tr>
<tr>
<td>Herfindhal_gov</td>
<td>0.6900</td>
<td>0.2328</td>
<td>0.1810</td>
<td>1.000</td>
<td>national</td>
</tr>
<tr>
<td>Herfindhal_opp</td>
<td>0.5043</td>
<td>0.1659</td>
<td>0.2199</td>
<td>0.855</td>
<td>national</td>
</tr>
<tr>
<td>Inequality</td>
<td>29.52</td>
<td>3.1573</td>
<td>21.00</td>
<td>37.80</td>
<td>national</td>
</tr>
<tr>
<td>Log(Density)</td>
<td>51.550</td>
<td>11.718</td>
<td>11.940</td>
<td>88.990</td>
<td>regional</td>
</tr>
<tr>
<td>Log(per capita GDP)</td>
<td>10.080</td>
<td>0.2693</td>
<td>93.670</td>
<td>11.130</td>
<td>regional</td>
</tr>
<tr>
<td>Objective1 regions</td>
<td>0.2485</td>
<td>0.4324</td>
<td>0.0000</td>
<td>1.000</td>
<td>regional</td>
</tr>
<tr>
<td>Quality of Government</td>
<td>0.8201</td>
<td>0.1174</td>
<td>0.5440</td>
<td>1.000</td>
<td>national</td>
</tr>
<tr>
<td>Protest vote</td>
<td>0.1292</td>
<td>0.1210</td>
<td>-0.1726</td>
<td>0.397</td>
<td>national</td>
</tr>
<tr>
<td>Trust EU</td>
<td>4.424</td>
<td>0.5118</td>
<td>2.568</td>
<td>5.752</td>
<td>national</td>
</tr>
<tr>
<td>Turnout</td>
<td>0.4971</td>
<td>0.1625</td>
<td>0.1960</td>
<td>0.944</td>
<td>regional</td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.3937</td>
<td>0.1332</td>
<td>0.0410</td>
<td>0.754</td>
<td>regional</td>
</tr>
<tr>
<td>Weekday vote</td>
<td>0.1631</td>
<td>0.3697</td>
<td>0.0000</td>
<td>1.000</td>
<td>national</td>
</tr>
</tbody>
</table>
5 Results

5.1 Baseline results

Table 2 sets out our results. Some variables are highly significant, whatever the chosen model. Looking at model 1, compulsory voting increases the costs of not voting, leading to higher turnout rates although no penalties are imposed for failure to comply, while elections held during the week have no effect on voter participation. Adding socio-economic and demographic variables (model 2) shows that neither per capita GDP nor population density impact on voter turnout. In addition, as in the literature championed by Radcliff (1994), Unemployment has a significantly negative effect on voter participation while Employment protection positively affects turnout. The Dependency ratio is also significant, confirming that the age structure of the population helps to explain variations in the electoral behavior of voters. The oldest segment of the population is more likely to vote than the youngest.

Model 3 and 3a include the variables capturing the influence of domestic politics. While a more concentrated government decreases electoral participation, the concentration of the opposition has a positive effect on voter turnout, albeit at a low significance level. The Effective number of parties is used in model 3a as an alternative to Herfindhal.gov and Herfindhal opp. The results of this variable indicate that it is significantly and positively related to the dependent variable. Therefore, the higher the number of parties the higher the voter turnout. The positive association between the effective number of parties and turnout could also be interpreted as an implicit sign that proportional representation fosters turnout because it produces more parties, thus providing voters with more choice and more mobilization. The findings on Herfindhal.gov that turnout rises with higher fragmentation of government reinforce this interpretation since government coalitions are the result of proportional representation. Inequality is positive and significant, therefore increasing inequality seems to mobilize voters. The variable capturing the quality of the national government negatively affects turnout, claiming that when voters are satisfied with domestic institutions they are less interested in participating to a higher layer of governance.

The Protest vote is highly significant and positive. Voters may decide to “punish” the most popular parties in the previous elections in the subsequent EU parliament elections: the higher the gap the higher the turnout.\(^\text{15}\)

Model 4 and 4a add the vector EU. While the majority of variables previously considered retain their sign and significance, unemployment and employment protection turn out not to be significant. Trust in the EU has a significant impact on turnout in both models, while support from cohesion policy has a marginal negative effect on turnout. The first effect can be interpreted as interest from the electorate towards the EU. This result is rather unusual in the literature.\(^\text{16}\) Concerning the second variable, it is likely that the positive effect of these EU programs on voting is counteracted by the very characteristics of these areas that are economically marginal, poorer than average by definition, affected by high unemployment, and often scarcely populated, factors that tend to lower voter participation. The loss of significance of the variables capturing labor market conditions seems to confirm this interpretation.

\(^{15}\) Usually in Europe the two largest parties are the party in government and its main opposition and they alternate in power. If a voter wants to punish them, he has to vote for a smaller party. In some countries, “grand coalitions” in which the two main parties rule together (often in Austria, more recently in Germany), so the protest vote consists in choosing a non-coalition party (and not abstaining).

\(^{16}\) See Hobolt (2012) and the references therein.
### Table 2: Estimation results, multilevel model, fixed effects

<table>
<thead>
<tr>
<th>Groups</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 3(a)</th>
<th>Model 4</th>
<th>Model 4(a)</th>
<th>Model 5</th>
<th>Model 5(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.4724***</td>
<td>(0.0347)</td>
<td>0.3309*</td>
<td>(0.0190)</td>
<td>-0.0160</td>
<td>(0.0183)</td>
<td>-0.0206</td>
<td>0.0375</td>
</tr>
<tr>
<td>Weekday vote</td>
<td>-0.0409</td>
<td>(0.0514)</td>
<td>-0.0018</td>
<td>(0.0556)</td>
<td>-0.0336</td>
<td>(0.0474)</td>
<td>-0.0493</td>
<td>-0.0144</td>
</tr>
<tr>
<td>Compulsory voting</td>
<td>0.3352***</td>
<td>(0.0669)</td>
<td>0.3712***</td>
<td>(0.0797)</td>
<td>0.3372***</td>
<td>(0.0756)</td>
<td>0.2908***</td>
<td>0.3032***</td>
</tr>
<tr>
<td>Log(GDP per capita)</td>
<td>0.0069</td>
<td>(0.0170)</td>
<td>0.0021</td>
<td>(0.0165)</td>
<td>0.0101</td>
<td>(0.0161)</td>
<td>0.0069</td>
<td>0.0125</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.0733**</td>
<td>(0.0356)</td>
<td>-0.0976***</td>
<td>(0.0353)</td>
<td>-0.0673*</td>
<td>(0.0346)</td>
<td>-0.0312</td>
<td>-0.0310</td>
</tr>
<tr>
<td>Employment protection</td>
<td>0.0591**</td>
<td>(0.0237)</td>
<td>0.0438*</td>
<td>(0.0229)</td>
<td>0.0662***</td>
<td>(0.0230)</td>
<td>0.0242</td>
<td>-0.0497**</td>
</tr>
<tr>
<td>Log(Density)</td>
<td>-0.0034</td>
<td>(0.0039)</td>
<td>-0.0029</td>
<td>(0.0038)</td>
<td>-0.0025</td>
<td>(0.0038)</td>
<td>-0.0021</td>
<td>-0.0029</td>
</tr>
<tr>
<td>Dependency ratio</td>
<td>0.0596***</td>
<td>(0.0164)</td>
<td>0.0563***</td>
<td>(0.0164)</td>
<td>0.0661***</td>
<td>(0.0160)</td>
<td>0.0765***</td>
<td>0.0804***</td>
</tr>
<tr>
<td>Herfindhal_gov</td>
<td>-0.0981***</td>
<td>(0.0297)</td>
<td>-0.1720***</td>
<td>(0.0288)</td>
<td>-0.1598***</td>
<td>(0.0274)</td>
<td>0.0626*</td>
<td>0.0761***</td>
</tr>
<tr>
<td>Herfindhal_opp</td>
<td>0.0688*</td>
<td>(0.0335)</td>
<td>0.0991*</td>
<td>(0.0321)</td>
<td>0.0310***</td>
<td>(0.0056)</td>
<td>0.0236***</td>
<td>0.0273***</td>
</tr>
<tr>
<td>Effective number of parties</td>
<td>0.1216***</td>
<td>(0.0270)</td>
<td>0.0032</td>
<td>(0.0287)</td>
<td>0.1460***</td>
<td>(0.0260)</td>
<td>0.0207</td>
<td>0.1427***</td>
</tr>
<tr>
<td>Protest vote</td>
<td>0.1010***</td>
<td>(0.0124)</td>
<td>0.0568***</td>
<td>(0.0127)</td>
<td>0.1210***</td>
<td>(0.0125)</td>
<td>0.0266</td>
<td>0.0901***</td>
</tr>
<tr>
<td>Trust_EU</td>
<td>-0.0133*</td>
<td>(0.0069)</td>
<td>-0.0117*</td>
<td>(0.0069)</td>
<td>-0.0144*</td>
<td>(0.0068)</td>
<td>0.0052*</td>
<td>-0.3715***</td>
</tr>
<tr>
<td>Objective1 regions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.1934**</td>
<td>(0.0873)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inequality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIC</td>
<td>-1478.97</td>
<td>-1502.3</td>
<td>-1521.97</td>
<td>-1538.407</td>
<td>-1578.027</td>
<td>-1555.345</td>
<td>-1589.125</td>
<td>-1585.033</td>
</tr>
</tbody>
</table>

*Significant at 1%, ** significant at 5%, *** significant at 10%. Standard errors in brackets.
In order to check whether the multilevel model is the appropriate choice, Table 3 gives a likelihood ratio test of the multilevel model with country and with time-random effect versus a model without random effects. The significance levels of the p-value for such a test, which is based on a chi-squared distribution, shows that the linear mixed model is always the best choice.

### Table 3: Standard errors estimates, multilevel model, random effects

<table>
<thead>
<tr>
<th>Groups</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Mod. 3(a)</th>
<th>Model 4</th>
<th>Mod. 4(a)</th>
<th>Model 5</th>
<th>Mod. 5(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count.</td>
<td>0.0954**</td>
<td>0.1143**</td>
<td>0.1035**</td>
<td>0.1076**</td>
<td>0.0606**</td>
<td>0.080**</td>
<td>0.002**</td>
<td>0.0039**</td>
</tr>
<tr>
<td>Year</td>
<td>0.0161**</td>
<td>0.0259**</td>
<td>0.0309**</td>
<td>0.0232**</td>
<td>0.0008**</td>
<td>0.021**</td>
<td>0.001**</td>
<td>0.0007**</td>
</tr>
<tr>
<td>Resid.</td>
<td>0.0742</td>
<td>0.0718</td>
<td>0.0705</td>
<td>0.0697</td>
<td>0.0680</td>
<td>0.0690</td>
<td>0.0045</td>
<td>0.0045</td>
</tr>
<tr>
<td>( \bar{\beta}_{\text{country}} )</td>
<td>0.5137</td>
<td>0.5391</td>
<td>0.5051</td>
<td>0.5367</td>
<td>0.4683</td>
<td>0.4700</td>
<td>0.2703</td>
<td>0.4286</td>
</tr>
<tr>
<td>( \bar{\beta}_{\text{year}} )</td>
<td>0.0867</td>
<td>0.1222</td>
<td>0.1508</td>
<td>0.1157</td>
<td>0.0062</td>
<td>0.1246</td>
<td>0.1667</td>
<td>0.1246</td>
</tr>
</tbody>
</table>

P-values of likelihood ratio tests: *Significant at 1%, ** significant at 5%, *** significant at 10%.

In addition, the total variance can be split by our nested effect variance to give the proportion of variance accounted for, showing whether each random effect is meaningful. When all the percentages for each random effect are very small, there are no random effects and linear mixed modelling is not appropriate.

The variance of turnout conditional on the explanatory variables is equal to \( \eta^2 + \tau^2 + \sigma^2 \). Therefore, the overall conditional variability of turnout can be decomposed into two components \( \bar{\beta}_{\text{year}} = \eta^2 / (\eta^2 + \tau^2 + \sigma^2) \) and \( \bar{\beta}_{\text{country}} = \tau^2 / (\eta^2 + \tau^2 + \sigma^2) \), known as the intra-class correlation coefficients. These components represent the proportion of variability due to country and time clustering respectively, and measure the correlation shared by units within the same country or in the same year.

**Figure 4: Random effect estimates**
The intra-class correlation coefficients for country-random effects are quite substantial, ranging from 47% to 54%. The total variability explained by yearly random effects is only around 1-15%, so the nested effects related to the time variable are not meaningful.

The intercepts for the country-random term, whose estimates are based on model 4, are reported in Figure 4. The intercept term varies between -0.102 and 0.125 and the standard deviation is equal to 0.059. The positive values refer to Italy, the Netherlands, Luxembourg, Ireland and Spain, in line with the persistent high turnout over time analyzed in section 3.1. The countries with the lowest turnout rates plus Greece present a negative intercept. The reason is the strong variation in EP election participation: from 71.5% in 1999 to 52.6% in 2009 and 60% in 2014.

5.2 Robustness checks

The multilevel approach can be particularly problematic in a comparative analysis with few countries (Maas and Hox, 2005). One possible alternative is to control for heterogeneity by means of dummy variables, avoiding the omitted variable bias (Allison, 2009: 14).

Following Hox (2010: 13), the country-specific error term in multilevel models is assumed to be normally distributed and independent of both the other variables in the model and the individual level error term. In fixed-effect regression (Table 4), since the country specific error term is a set of fixed numbers estimated in the model, it does not matter whether or not the residuals are independent of the other variables in the model (Allison 2009: 21). The results of OLS regression with country and time dummy variables are presented in Table 3 and support our previous findings. The AIC statistic is typically lower in the multilevel estimation than in the OLS model, showing that the former outperforms the latter.

As a further robustness check, we consider only regional random effects and time dummies. The results are once again in line with our main findings. Finally, we estimate our model excluding countries comprising one region only (that is Greece, Denmark and Luxemburg), all together and one by one. We find no differences in terms of sign and significance compared to the models presented in Table 2. These results are not given here but are available upon request.
Table 4: Estimation results, OLS with country dummies

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 3 (a)</th>
<th>Model 4</th>
<th>Model 4 (a)</th>
<th>Model 5</th>
<th>Model 5 (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.4614***</td>
<td>0.1500</td>
<td>0.2545</td>
<td>0.0370</td>
<td>0.0076</td>
<td>-0.0811</td>
<td>0.0258</td>
<td>0.1342</td>
</tr>
<tr>
<td></td>
<td>(0.0133)</td>
<td>(0.1851)</td>
<td>(0.1878)</td>
<td>(0.1832)</td>
<td>(0.1856)</td>
<td>(0.1861)</td>
<td>(0.2241)</td>
<td>(0.2086)</td>
</tr>
<tr>
<td>Weekday vote</td>
<td>-0.0504</td>
<td>-0.0401</td>
<td>-0.0285</td>
<td>-0.0173</td>
<td>0.0191</td>
<td>0.0070</td>
<td>0.0323</td>
<td>0.0263</td>
</tr>
<tr>
<td></td>
<td>(0.0859)</td>
<td>(0.0835)</td>
<td>(0.0824)</td>
<td>(0.0814)</td>
<td>(0.0800)</td>
<td>(0.0809)</td>
<td>(0.0799)</td>
<td>(0.0794)</td>
</tr>
<tr>
<td>Compulsory voting</td>
<td>0.4498***</td>
<td>0.4793***</td>
<td>0.4873***</td>
<td>0.4815***</td>
<td>0.3616***</td>
<td>0.4235***</td>
<td>0.3274***</td>
<td>0.3580***</td>
</tr>
<tr>
<td></td>
<td>(0.0391)</td>
<td>(0.0404)</td>
<td>(0.0399)</td>
<td>(0.0393)</td>
<td>(0.0433)</td>
<td>(0.0434)</td>
<td>(0.0444)</td>
<td>(0.0444)</td>
</tr>
<tr>
<td>Log(GDP per capita)</td>
<td>0.0071</td>
<td>0.0035</td>
<td>0.0025</td>
<td>0.0067</td>
<td>0.0034</td>
<td>0.0068</td>
<td>0.0046</td>
<td>0.0046</td>
</tr>
<tr>
<td></td>
<td>(0.0173)</td>
<td>(0.0171)</td>
<td>(0.0168)</td>
<td>(0.0166)</td>
<td>(0.0168)</td>
<td>(0.0165)</td>
<td>(0.0164)</td>
<td>(0.0164)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.0713*</td>
<td>-0.0965***</td>
<td>-0.0652*</td>
<td>-0.0476</td>
<td>-0.0411</td>
<td>-0.0381</td>
<td>-0.0321</td>
<td>-0.0321</td>
</tr>
<tr>
<td></td>
<td>(0.0362)</td>
<td>(0.0360)</td>
<td>(0.0355)</td>
<td>(0.0357)</td>
<td>(0.0361)</td>
<td>(0.0356)</td>
<td>(0.0355)</td>
<td>(0.0355)</td>
</tr>
<tr>
<td>Employment protection</td>
<td>0.0934***</td>
<td>0.0756***</td>
<td>0.1028***</td>
<td>0.0127</td>
<td>0.0753***</td>
<td>-0.0237</td>
<td>0.0089</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0271)</td>
<td>(0.0270)</td>
<td>(0.0266)</td>
<td>(0.0279)</td>
<td>(0.0281)</td>
<td>(0.0299)</td>
<td>(0.0306)</td>
<td></td>
</tr>
<tr>
<td>Log(Density)</td>
<td>-0.0030</td>
<td>-0.0025</td>
<td>-0.0020</td>
<td>-0.0019</td>
<td>-0.0013</td>
<td>-0.0023</td>
<td>-0.0018</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0039)</td>
<td>(0.0038)</td>
<td>(0.0038)</td>
<td>(0.0037)</td>
<td>(0.0038)</td>
<td>(0.0037)</td>
<td>(0.0037)</td>
<td></td>
</tr>
<tr>
<td>Dependency ratio</td>
<td>0.0642***</td>
<td>0.0611***</td>
<td>0.0718</td>
<td>0.0775***</td>
<td>0.0832***</td>
<td>0.0738***</td>
<td>0.0774***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0167)</td>
<td>(0.0167)</td>
<td>(0.0163)</td>
<td>(0.0163)</td>
<td>(0.0164)</td>
<td>(0.0162)</td>
<td>(0.0161)</td>
<td></td>
</tr>
<tr>
<td>Herfindhal_gov</td>
<td>-0.0923***</td>
<td>-0.1715***</td>
<td>-0.1280***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0310)</td>
<td>(0.0322)</td>
<td>(0.0348)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herfindhal_opp</td>
<td>0.0665*</td>
<td>0.0859***</td>
<td>0.0665*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0342)</td>
<td>(0.0332)</td>
<td>(0.0370)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective number of parties</td>
<td>0.0311***</td>
<td>0.0256***</td>
<td>0.0264***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0059)</td>
<td>(0.0061)</td>
<td>(0.0062)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protest vote</td>
<td>0.1185***</td>
<td>0.0012</td>
<td>0.1432***</td>
<td>0.0138</td>
<td>0.1304***</td>
<td>0.0304</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0274)</td>
<td>(0.0294)</td>
<td>(0.0267)</td>
<td>(0.0296)</td>
<td>(0.0281)</td>
<td>(0.0293)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust_EU</td>
<td>0.0915***</td>
<td>0.0440***</td>
<td>0.1084***</td>
<td>0.0862**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0139)</td>
<td>(0.0137)</td>
<td>(0.0155)</td>
<td>(0.0155)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective1 regions</td>
<td>-0.0140**</td>
<td>-0.0131*</td>
<td>-0.0117**</td>
<td>-0.0163***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0069)</td>
<td>(0.0070)</td>
<td>(0.0069)</td>
<td>(0.0069)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inequality</td>
<td>0.0663**</td>
<td>0.0059**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0028)</td>
<td>(0.0027)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Government</td>
<td>0.1853*</td>
<td>0.4092***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.1075)</td>
<td>(0.0964)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*R² (adj.) 0.8100 0.8178 0.8169 0.821 0.8297 0.8248 0.8325 0.8328
| AIC         | -1564.968  | -1588.479  | -1583.328  | -1599.96    | -1626.73    | -1610.308   | -1633.568   | -1636.939   |
| Country dummies | yes     | yes     | yes     | yes     | yes     | yes     | yes     | yes     |
| Time dummies  | yes     | yes     | yes     | yes     | yes     | yes     | yes     | yes     |

*Significant at 1%, ** significant at 5%, *** significant at 10%. Standard errors in brackets. An F-test on joint significance of dummy variables confirmed that the p-value is always < 0.01.
6 Concluding remarks

This paper puts forward a unified framework to interpret voter participation in EP elections as a more suitable way to investigate the multilevel EP decision-making process. We claim that three different political spaces affect the decision to go to the polling station: supranational (directly relevant to the way the EU is perceived), national (related to the political arena in which voters live) and regional (socioeconomic outcomes that voters may observe closely) and that these political spaces have a geographical ‘dimension’. Hence, we study the features of voter turnout in the last four EP elections in the EU-14, in 164 regions.

Given the nature of the data, the multilevel model is the appropriate modelling choice for a parametric estimation. The model shows that regional-level turnout is strongly driven by some national-level covariates as well as by regional-level variables. Overall, as the literature suggests, our results indicate that the elderly are more prone to turn out in EP elections than youngsters. Where the law enforces turnout, voter participation increases even when no penalties are associated with abstention. EU financial transfers negatively affect participation in EP elections, suggesting that the negative effect of poverty and unemployment in areas benefiting from EU transfers overcomes the positive effects of these transfers. No evidence is found that GDP per capita influences turnout, while labor market conditions (unemployment and workers protection) do. Most importantly, our results confirm that the national political scenario affects European elections. It seems that coalition governments, generally the result of PR systems, increase turnout. This evidence indirectly shows that proportional representation could foster turnout because it produces more parties, giving voters more choice and leading to greater mobilization. Individuals who want to vote for small parties have more reason to turn out under PR. Moreover, everything else being equal, participation in EP elections is driven by protest against the establishment. Finally, the significance of the variables that account for trust in European institutions suggests that public opinion matters in affecting turnout in EP elections.

These findings have implications for the debate on the democratic deficit and legitimacy of the EU. They suggest that national governments and politicians are possibly the only visible actors involved in policy-making since national quality of government as well as national economic and political performance affect voters turnout in EP elections. Nevertheless, citizens do care about EU institutions and policies. The ongoing challenge for the EU is thus not only to guarantee economic prosperity, rather to increase the salience of the EP elections building confidence in the EU democratic institutions. The Spitzenkandidaten is probably only the first step in this direction.
References


Laakso, M. Taagepera, R., 1979, “Effective” number of parties: A measure with application to West Europe, Comparative Political Studies, 12, 3-27.


### Appendix

**Table A1: Correlation matrix**

<table>
<thead>
<tr>
<th></th>
<th>Turnout</th>
<th>Weekday vote</th>
<th>Compulsory voting</th>
<th>Log(GDP per capita)</th>
<th>Unempl. protect.</th>
<th>Log(Density)</th>
<th>Dep. ratio</th>
<th>Herfindhal gov</th>
<th>Herfindhal opp</th>
<th>Effective number of parties</th>
<th>Protest vote</th>
<th>Trust EU</th>
<th>Ob. 1 regions</th>
<th>Inequality</th>
<th>Quality of Gov.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnout</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekday vote</td>
<td>-0.3398</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compulsory voting</td>
<td>0.6938</td>
<td>-0.1295</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log(GDP per capita)</td>
<td>0.0181</td>
<td>0.1119</td>
<td>0.0973</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unempl. protect.</td>
<td>0.2350</td>
<td>-0.2557</td>
<td>0.1534</td>
<td>-0.3279</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment protection</td>
<td>-0.1454</td>
<td>-0.4012</td>
<td>-0.2981</td>
<td>-0.0985</td>
<td>0.1815</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log(Density)</td>
<td>0.0111</td>
<td>0.2067</td>
<td>0.1576</td>
<td>0.3648</td>
<td>0.2314</td>
<td>-0.0724</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependency ratio</td>
<td>0.0710</td>
<td>-0.2326</td>
<td>-0.0896</td>
<td>0.0323</td>
<td>0.1121</td>
<td>0.1497</td>
<td>-0.3065</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herfindhal gov</td>
<td>-0.2895</td>
<td>-0.0099</td>
<td>-0.5073</td>
<td>-0.3106</td>
<td>0.0153</td>
<td>-0.0039</td>
<td>-0.1349</td>
<td>-0.1190</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herfindhal opp</td>
<td>0.0254</td>
<td>-0.1615</td>
<td>-0.3344</td>
<td>-0.2593</td>
<td>0.0775</td>
<td>0.0424</td>
<td>-0.1756</td>
<td>0.0450</td>
<td>0.6336</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective n. of parties</td>
<td>0.6506</td>
<td>-0.0939</td>
<td>0.6717</td>
<td>0.1289</td>
<td>0.1718</td>
<td>-0.1675</td>
<td>0.0985</td>
<td>0.0765</td>
<td>-0.5638</td>
<td>-0.3785</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protest vote</td>
<td>0.6316</td>
<td>-0.0106</td>
<td>0.6628</td>
<td>0.1883</td>
<td>0.0969</td>
<td>-0.0548</td>
<td>0.1541</td>
<td>-0.0041</td>
<td>-0.6639</td>
<td>-0.4695</td>
<td>0.8843</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust EU</td>
<td>-0.0411</td>
<td>-0.0296</td>
<td>-0.1965</td>
<td>-0.0181</td>
<td>0.0208</td>
<td>-0.0957</td>
<td>-0.0555</td>
<td>0.1598</td>
<td>0.3345</td>
<td>0.1119</td>
<td>0.0197</td>
<td>-0.0353</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective1 regions</td>
<td>0.5461</td>
<td>-0.2030</td>
<td>0.2962</td>
<td>-0.0844</td>
<td>0.0697</td>
<td>0.1884</td>
<td>-0.0141</td>
<td>-0.2044</td>
<td>-0.0722</td>
<td>0.0160</td>
<td>0.3700</td>
<td>0.4611</td>
<td>-0.1357</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Inequality</td>
<td>-0.003</td>
<td>-0.006</td>
<td>-0.193</td>
<td>-0.247</td>
<td>0.172</td>
<td>0.082</td>
<td>0.093</td>
<td>0.060</td>
<td>0.568</td>
<td>0.602</td>
<td>-0.343</td>
<td>-0.428</td>
<td>0.033</td>
<td>-0.130</td>
<td>1.0000</td>
</tr>
<tr>
<td>Quality of Government</td>
<td>-0.114</td>
<td>0.356</td>
<td>0.042</td>
<td>0.210</td>
<td>-0.169</td>
<td>-0.148</td>
<td>0.157</td>
<td>-0.178</td>
<td>-0.441</td>
<td>-0.758</td>
<td>-0.027</td>
<td>0.164</td>
<td>-0.034</td>
<td>-0.231</td>
<td>-0.631</td>
</tr>
</tbody>
</table>
List of tables
Table 1: Descriptive statistics........................................................................................................17
Table 2: Estimation results, multilevel model, fixed effects .........................................................19
Table 3: Standard errors estimates, multilevel model, random effects ....................................20
Table 4: Estimation results, OLS with country dummies.................................................................22
List of figures

Figure 1: turnout at EU parliament elections ..........................................................10
Figure 2: Boxplot of turnout.................................................................................12
Figure 3: Within country and between country variance.................................13
Figure 4: Random effect estimates ...................................................................20
GETTING IN TOUCH WITH THE EU

In person
All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: [http://europea.eu/contact](http://europea.eu/contact)

On the phone or by email
Europe Direct is a service that answers your questions about the European Union. You can contact this service:
- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696, or
- by electronic mail via: [http://europa.eu/contact](http://europa.eu/contact)

FINDING INFORMATION ABOUT THE EU

Online
Information about the European Union in all the official languages of the EU is available on the Europa website at: [http://europa.eu](http://europa.eu)

EU publications
You can download or order free and priced EU publications from EU Bookshop at: [http://bookshop.europa.eu](http://bookshop.europa.eu). Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see [http://europa.eu/contact](http://europa.eu/contact)).
JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre’s mission is to support EU policies with independent evidence throughout the whole policy cycle.

EU Science Hub
ec.europa.eu/jrc

@EU_ScienceHub
EU Science Hub - Joint Research Centre
Joint Research Centre
EU Science Hub

doi:10.2760/847841