

# **ESSAYS ON POLITICAL ECONOMY**

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by

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*To my little sister Ivana, who is my shore*

*To my Parents, who push me to go beyond my limits*

*To Chris, who give me directions even in the darkness*

*To Gianni, who gave me wings*

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## **Abstract**

The first chapter shows that the ideological dimension is the key determinant of the decision to vote. We do so with a unique data base that analyses the elections in 16 OECD multi-party system countries for a period of time that spans from the 1979 to the 1995. This data set contains information on the ideological position taken by each party competing in an election and the self-declared ideological position of the citizens on the same ideological continuum. We estimate that the likelihood of voting is higher when there is a close distance between a voter's bliss point and the preference of the nearest party. We also find that ideological location of the second nearest party matters for the decision to vote. Moreover, our results exclude that the ideology of political parties other than the first two nearest to the preferences of the voters are significant for the decision to vote.

The second chapter focuses on why turnout varies across elections and across districts. A simple micro-founded measure of policy based party competition is developed and calculated for every district at every election in 15 European countries over the period 1947-1998. Our results suggest that a large proportion of the within-district inter-election variance in turnout levels can be attributed to differences in the intensity of district-level of political competition.

The third chapter extends the research on happiness and spatial theory of voting by exploring whether the ideological vote affects the level of subjective well-being in the

society. I rely my analysis on data on the subjective life satisfaction of a large sample of individual over 50 elections in 15 OECD countries. The results of the analysis lend firm support to the dominant role of ideological vote in the well-being of the individuals. Specifically, I demonstrate that subjective life satisfaction is negatively affected by the presence of strategic voting. The results also suggest that the level of well-being is lower when the citizen votes strategically for a political party that has not won the electoral competition. Moreover, when I account for the political affiliation, the right-wing voters are more susceptible to ideological consideration than the left wing one. My results are robust to different measures of strategic voting.

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# **Chapter 1**

## **Voters-Candidates Ideological Proximity and the Decision to Vote**

We show that the ideological dimension is the key determinant of the decision to vote. We achieve this with a unique data base that analyses the elections in 16 OECD multi-party system countries for a period of time that spans from the 1979 to the 1995. This data set contains information on the ideological position taken by each party competing in an election and the self-declared ideological position of the citizens on the same ideological continuum. We estimate that the likelihood of voting is higher when there is a close distance between a voter's bliss point and the preference of the nearest party. We also find that the ideological location of the second nearest party matters for the decision to vote. Moreover, our results exclude that the ideology of political parties other than the first two nearest to the preferences of the voters are significant for the decision to vote.

## 1.1 Introduction

Electoral turnout varies widely from country to country, from election to election. Identifying the factors that influence a voter's decision to vote, and therefore the turnout in elections is a major topic of research. Some studies have focused on the voters' desire to affect the outcome of the electoral competition<sup>1</sup>. Other papers placed more emphasis on institutional factors such as political systems (Kostadinova and Power, 2007; Karp and Banducci, 2007; Kuenzi and Lambright, 2007; Milner and Landner, 2006; Jones, 2004), closeness of the election (Geys, 2006; Perez-Linana, 2001; Matsusaska, 1993.), and constitutional power of the elected body (Blays, 2006; Fornos and al., 2004; Cox, 1999; Jackman, 1987). Also a long list of usual "suspects" has been considered as influential on the decision to vote: education (Nagler, 1991), income (Gray and Caul, 2000; Blais, 2002), social background (Franklin, 2004; Karp and Balducci, 1999), religion (Green et al., 2007), and so on.

Among the others, an important factor is the relative position of the voter and the candidates. This dates back to Downs (1954) (and before him to Hotelling, 1929), and it is based on the idea that each voter is able to evaluate the ideological location of all the political parties running in an election on the base of their political platform, and she is able to calculate how far each political party is from her preferences. Following this assumption, a party is preferred if it is the closest to the voter's bliss point (Enelow and Hinich, 1984; Hinich, Layard and

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<sup>1</sup>For an exhaustive review, see Dhillon and Peralta, 2002.

Odershook, 1972; Hinich and Odershook, 1969).

We can interpret this distance as the level of dis-utility of the candidate to the voters: the farther the distance, the less valuable is the party to the voter. When casting a ballot, a voter will choose a party whose political platform is the nearest to her ideological preferences (Aart and Wessels, 2005; Peress, 2005; Plane and Gershtenson, 2004; Hinich and Enelow, 1984; Brody and Page, 1973). However, she will abstain from voting if the nearest party is far away from her position on the left-right continuum.

This reasoning can work well in a bi-party system, but the citizens' decision to vote may become very complex in a multi-party system. When the time comes to decide whether to vote, citizens might take into account not only the position of the nearest political party but also that of the other parties running in an election. When she has to decide whether to vote, her decision will be based on the full set of information that are available. In the electoral competition, the information available to the citizens are the policies that each political party commits (at least this is what all of them claim) to implement when elected in power. Each policy might be interpreted as the party's bliss point on that topic (health, education, economy, and so on). The electoral manifesto represents the medium through which a party sums up in a unique document all its preferences and let them known to the citizens.

In this framework, each electoral platform represents the ideology of a political party in a certain election. Each citizen will compare simultaneously her position with the ideological position claimed by each party running in the electoral race.

At the empirical level, very few studies have analysed the effect of policy-based competition as determinants of the decision to vote. Some studies do not use a spatial dimension as a measure for these variables (Brody and Sigelman, 1983). Among the studies that use spatial measures, most of them have focused their attention on two-candidate elections (Johnston, 2007; Adam and al., 2006; Aart and Wessel, 2005), and in particular the attention was cast on the US elections (Weisberg and Grofman, 1981; Zipp, 1985; Plane and Gershtenson, 2004; Peress, 2005). There are only three papers (Thurner and Eymann, 2000; Aarts and Wessels, 2005; Katz, 2007;) that are focused on multi-party systems. However, these works are affected by a major drawback: they focus their attention on a single country and the period of time analysed is very short (on average not more than two elections).

This paper represents a first attempt to test the impact of ideology on the citizens' probability to vote for a panel of multi-party race countries. To test our hypothesis we combine data on elections held in 16 OECD countries and for a period of time spanning from the 1979 to the 1995 with a very large survey (188,000 observations) of potential participants in each election. We find that the ideological distances of the two nearest parties from the preferences of the voters are the key determinants on which the citizens decide whether to vote or not.

An individual will decide to abstain from voting when the distance between her bliss point and the nearest party location on the Left-Right continuum will exceed a certain positive threshold: the bigger the distance, the greater the probability not to vote. We want to stress that a close proximity with the nearest party does not

make us assume that the citizen will cast her ballot for that political party. The political party that the citizen will vote for is information that does not affect our analysis. In our paper, we want to test whether the parties' ideological location is a key determinant of the decision to vote (and not for whom) and whether each party offers the same incentive for such decision. Our results clearly demonstrate that this decision does not depend only on the distance between the voters' preferences and the nearest party to her preferences but it also depends on the distance between her preferences and the bliss point of the party that is the second nearest to her: the closer the distance, the greater the probability not to vote. Surprisingly, the distance between the citizen's bliss point and any other political parties different from the first two nearest does not affect the probability to vote. The paper is organized in six parts. Section 1 reviews the literature. Section 2 describes the model. Section 3 illustrates the data employed to build the key variables of our analysis. Section 4 briefly explains the methodology employed to analyse the determinants of the decision to vote. Section 5 discusses the results, and section 6 concludes.

## **1.2 Literature Review**

In a democratic society citizens have the right to decide who will represent them and how they desire to be represented. A first attempt to analyse the interaction between voting participation, selection of the candidates, and implementation of the policies is ascribed to the seminal work of Hotelling (1929), followed by



the works of Downs (1957), and Black (1958). They use the common label of Left, Right, and center instrumentally to translate the issue positions of both voters and candidates into voters' preferences and parties' platform along the same ideological continuum. The behavioural assumption underlying the spatial model of electoral competition is that both voters' and parties' actions are motivated by self-interest. The basic model of spatial voting as proposed by Downs (1957) states that citizens will assess the costs and the benefits of the voting action and through a utility maximization process they will decide. The model of potential voter behaviour can be expressed as:

$$R = PB - C \quad (1)$$

where  $R$  is the net benefit gained by the citizens in return from going to the polls,  $C$  is the opportunity cost of voting (in utility term),  $P$  is the subjective probability that the individual's vote will be decisive in determining the desired outcome,  $B$  is the differential utility (interpreted as the ideological distance between voters' preferences and parties' bliss point) derived by a voter from the success of his preferred party to win the election. The basic model of political competition requires foundation assumptions that undermine and limit its applicability to electoral phenomena: voters position in the policy space are known by the competing candidates; the location of candidates' policy platform in the  $[0, 1]$  continuum are known by voters; voters vote sincerely (i.e for the most preferred party); and, finally, candidates care about winning the elections regardless their

policy preferences. However, in the reality, none of these assumptions fully hold. For example, if a political party realizes that its position in the policy space does not maximize its vote share, it will move immediately to increase it (Dougan and Munger, 1989; Lott and Reed, 1989; Ferjohn, 1986). However, in the real life, it is very uncommon that a political party changes its ideological position in the “short run”. Following the words of Hinich and Munger (1994), “...ideological stability is the principal characteristic of a responsible political party”. In their view moving from one ideological position to an other means neither position is credible. This rational immobility is made stronger by the institutional immobility peculiar of every social organization: the degree to which a party changes position over a period of five years is insignificant (Bartolini et al., 1998). Moreover, a party cannot be sure about the position of the voters. They might show their preferences with their ballot (hence only after the election) if they decide not to cast their vote in a strategic way. In order to reconcile the theory with the complexity of the political phenomenon, a rich strand of literature has proposed alternative models (Friedman and Wittman, 1995; Calvert, 1985; Davis and Hinich, 1968). In particular, contrasting the two fundamental assumptions of the spatial theory of voting, Enelow and Hinich (1984) allow in their probabilistic voting model for the uncertainty of voters’ and candidate’s position along the left-right continuum. In their benchmark, each competing candidate strives to gain the support of as many voters as they need to win the race. If this strategy is implemented by all candidates, it leads to an equilibrium in which the competitors party share equally the electoral support positioning toward

the center of the  $[0, 1]$  continuum. However, convergence toward the middle can cause dispersion of electoral support at the extremes. In this case, when the position of the nearest candidate is too far from her own, the scholars have theorized the possibility for the voters to abstain from the electoral race. In other words, if the platform announced by the candidates are perceived by the voters as unsatisfactory, since their location on the policy space is too far from their ideal point, they might abstain (Enelow and Hinich, 1984; Kirchgassner, 2003; Adams and Merrill II, 2006;). The literature has defined this phenomenon as “abstention from alienation”.

Abstention can be also caused by “indifference”. This type of abstention derives from the voters’ perception that there are no important differences among the policy platforms proposed by the competing candidates. The presence of abstention from indifference predicts that the participation rate will fall as political platforms become more homogeneous and/or the distribution of information amongst voters spreads.

While a large part of the empirical literature is focused on understanding the relationship between demographic characteristic and probability to vote (Pini (2009), Li and Dipjyoti (2008), Pacheco (2008), and so on), very few papers have tried to assess if the decision to vote is policy-based. The difficulty to investigate the above mentioned reason for the decision not to vote is explained by the words of Muller (1989): “...the sophistication and elegance of the theoretical models of public choice far exceed the limits placed by the data on the empirical models that can be estimated...”.

We were able to identify in the literature only ten papers trying to investigate the above relationship. Between these, the majority made use of data from bi-party system country. In particular five out of the ten papers found have used United States' Presidential elections data (Brody and Page, 1973; Weisberg and Grofman, 1981; Zipp, 1985; Peress, 2005; Adam and al, 2006) and just one made use of midterm senate election (Plane and Gershtenson, 2004). All of these studies report similar results. They agree in the negative effect that alienation and indifference exert on the decision to vote. However, the observed effect is rather small. This unexpectedly small result might be driven by the analysed specific political system and by the reasonably expected measurement error in the way the alienated and indifferent were calculated. Almost all the mentioned studies made use of "Graded" measure<sup>2</sup> based on survey respondent's position and their perception of parties' positions (Plane and Gershtenson, 2004; Peress, 2005). This approach allows the researcher to summarise in one dimension the multiple dimensions issues typical of the electoral race (Brody and Page, 1973; Wisberg and Grofman, 1981; Johnston et al., 2007).

A multi-dimensional approach is instead used by Zipp (1985). He based his measures on the respondent's evaluation of the parties' position on each of the salient issue in the election. However, a major drawback of this approach is that the saliency of an issue is decided by the researchers and not by the interviewed. If there exists few papers analyzing the policy-based voting hypothesis in a bi-party system, we can recall just two that test this hypothesis in a multi-party

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<sup>2</sup>The only exception is Weisberg and Grofman (1981).

system. The first one is written by Thurner and Eymann (2000) based on the German's elections, and the second one is written by Aarts and Wessels (2005) using data on: Britain, Denmark, Germany, Netherlands, Norway, and Sweden. We need to stress that the study is a comparative cross-section analysis and not a panel one.

In contrast with the previous works, Aarts and Wessels employ a dichotomous measure for alienation and indifference, and Thurner and Eymann (2000) adopt a dichotomous measure to evaluate who are the people indifferent. This approach establishes a major and serious limitation in their analysis. It is founded on the assumption that the population of citizens is homogeneous, and it implies that each individual has the same threshold when she becomes/feels alienated and/or indifferent.

In this paper, we want to refine the policy-based voting hypothesis and empirically assess if the distance between the citizens preferences and the ideological location of each party along the Left-Right continuum is a key determinant of the voting decision. We have differentiated our analysis from the previous literature for the use of a new measure for the alienated and indifferent citizens that take directly into account the ideological position of parties and citizens on the same ideological space. Our measure is not a graded one like the other used widely in the literature until now. We have contributed moreover to the literature for the use of a new data-set that allow us to test our hypothesis on 18 different countries. The period considered is as well very large. We have data for an average of four elections per country. This is the first study that we are aware of that have used

such large number of countries and years. Previous study based their analysis on not more than one or two elections. Moreover, the countries that we have analyzed are not only bi-party system countries. Large part of our sample is formed by data collected in multi-party system countries. All the characteristics described above make this study more likely to reflect the reality of why the people vote.

### 1.3 The Model

We study the decision to vote at an election where  $N$  political parties are running in election. Our model use as a framework the “unified model” of abstention and candidate choice as developed by Merrill and Grofman (1999).

The individual’s decision whether to vote and the decision for which candidate to vote for are taken simultaneously. We normalize the ideological space to the unit segment  $[0, 1]$  with the zero representing the Left. Voters are labelled  $i=1,...,K$ . Each voter can also identify her political preferences on the same spectrum/segment. Therefore a voter  $i$  can think of her position to be a number  $x_i \in [0, 1]$ .

Following the literature ascribed to Davis and Hinich (1966), we assume that voters locate each party on a one dimensional Left-Right ideological space. Voters are able to determine this position by inspecting the manifestoes that the parties unveil during the election time. Because of the large amount of information required to evaluate the candidate on every possible policy dimension, the manifestoes represent for the citizens a “shortcut” in the opinions and beliefs

of political parties.

Each citizen decides to vote if and only if her utility for doing so exceed the cost received in voting. The latter is exogenously determined by  $\delta_i > 0$ . The benefit of voting depends on the distance between the voter's own ideological position and the political parties' positions. Specifically voter  $i$  whose ideological position is  $x_i \in [0, 1]$  draws the following utility from voting:

$$U(x_i, z^{i_1}, z^{i_2}) = A_i - b|x_i - z^{i_1}| + c\{|x_i - z^{i_2}| - |x_i - z^{i_1}|\} \quad (2)$$

Where  $A_i$  is an exogenously given constant,  $b$  and  $c$  are parameters,  $x_i$  is the ideological position of the voters, and  $z^{i_1}, z^{i_2}$  are the positions of the parties which are respectively the nearest and the second nearest to the voter  $i$ 's ideological position. Formally<sup>3</sup>:

$$i_1 = \operatorname{argmin}_{\{j \in 1, \dots, N\}} \{|x_i - z^j|\} \quad (3)$$

and

$$i_2 = \operatorname{argmin}_{\{j \in 1, \dots, N\} \setminus \{i_1\}} \{|x_i - z^j|\} \quad (4)$$

Equation (2) describe us that voter  $i$  has a gross benefit  $A_i$  from the act of voting itself. This benefit is reduced in proportion to the distance between her ideological position and the location of the party whose position is nearest to her

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<sup>3</sup>The measures used are defined by the literature as Euclidean distance. For a through introduction and description of the use of such a measure see, between the others: Platt et al., 1992; Odershook, 1986.

own, and increased in proportion of the distance between the voters' bliss point and the second nearest party.

This distance represents the minimum cost they have to pay if another party, different from the first preferred, will be elected. We are talking about minimum cost because all the other parties will be located at a further distance (higher cost for the citizen). If the second political party is not so far from her preferences, the citizen will be discouraged to vote: her relative utility is insufficient to justify the cost to cast a ballot.

## **1.4 The Data**

In order to test our hypothesis that the distance between the citizens' political preferences and the parties' bliss point affect the decision to vote, we need two pieces of information.

Firstly, whether a citizen has voted on a given election, and second, a measure locating the parties' and citizens' political preferences on the same Left-Right ideological space. To the best of our knowledge, there is no previous study which has placed these two main actors of the democratic process on the same continuum. Only a few studies in the literature were able to measure the ideology of the incumbent and even less were able to place the incumbent and the non-incumbent on the same Left-Right space (Aarts and Wessels, 2005; Adams and al., 2005; Katz, 2007; Wessels and Schmitt, 2007).

We rely on data from two different sources: The "Eurobarometer" (Zacat, 2002)



and the “Manifesto Data” (Budge et al, 2001). The former is a cross-sectional longitudinal study, collecting data from over 180,000 face to face interviews, conducted between the 1979 and the 1995. The survey is designed to provide an in depth analysis on the beliefs, perceptions, and reactions of the citizens of 16 European countries on different political and non-political topics. In particular to recover our dependent variable we have used the answer to the question: *“For which political party have you cast your vote in the last election?”* One of the possible answer to this question is: *“I did not go to vote”*. We create a dummy variable taking the value of 1 if and only if the individual cast his vote for a political party.

We are aware that the self-report decision of respondents to vote is plagued by over reporting phenomenon. This is a problem common to every survey data (Abramson et al. 1986; Belli et al. 2001; Karp and Brockington 2005). As response to avoid the over reporting problem, some surveys include validated turnout in which the survey investigators have validated respondents’ self report using official election records. This procedure is extremely costly and for this reason just very few studies contain validated data. Even though the Eurobarometer is not one of them, this concern is minimized by several studies aiming to verify the gravity of the bias of the self-reported vote (Sigelman, 1982; Abramson et al., 1986; Abramson and Claggett, 1991; McDonald, 2007). They discover that a very small percentage of the people interviewed to misreport their voting behaviour. In particular, Granberg and Holmberg (1993) demonstrate in their studies on Swedish elections that “49 out of 50 Swedish citizens can be

expected to give a truthful answer”. Based on these results, we can confidently assume that the bias in our survey will not invalidate our findings.

The key independent variables in this study are the first nearest party and the second nearest party to the citizens’ ideological position. To build these variables, we evaluate the distance between the citizens’ declared position in political scale and the position of each party running in an election at a certain point in time, for each country of our dataset. We recover the self-position of the individuals from the Eurobarometer. It has been asked: *“When it comes to politics, do you think of yourself as extremely liberal, liberal, slightly liberal, moderate, middle of the road, conservative, extremely conservative? Indicate your preference on a ten point political scale”*.

We are aware of the limitation that the use of a question asking the respondent to locate them selves on a uni-dimensional ideological space poses. The lack of questions in relation to the multiple issues does not allow us to built a multidimensional policy space with the correlate possibility to explicitly weight the importance respondent place on the various issues. If different citizens assign different weight to a different issues, the location on the left-right continuum may become totally arbitrary. Hinich (1978) theorized that a voter will try to simplify the complexity of the voting choice by reducing the number of issues space. His intuition was confirmed by several studies (Lacy and Paolino, 2004; Ansolabehere and al., 2008; Bakker and al. 2010). They demonstrate that the citizens are able to place correctly the political parties on the uni-dimensional space. This finding is not surprising. The base medium of the real-world political spaces are typically

interpreted in terms of “policy dimension” such as: economic Left-Right, social liberal-conservative, foreign policy and so on.

For the position of the political parties, we rely on the “Manifesto data” (Budge and al., 2001). This data base contains a measure of the position of the political parties on the same Left-Right axis. This measure is based on the electoral platforms declared by each party competing in an election. The principle aim of the political manifesto is to set out the policies that the party will pursue if elected to govern.

The use of the manifesto permits to overcome the institutional characteristics, which are distinctive of each countries and of each time. The data set has received several critics in the literature (Benoit et. al., forthcoming; Mudde and Schedler, 2010) both on the non-systematic error that arises from the text generation process and on the reliability and misclassification in the context of hand-coded content analysis methods.

Nevertheless, this is the most used measure in the literature. It has several advantages compared to previous surveys on political party position. First of all, this measure turns out to be consistent with the historical evolution of the Left-Right continuum and it is as valid as other expert survey on political party behaviour in investigating the party policy position.

Moreover, the Manifesto data gives us the opportunity to evaluate every political parties around the Western Europe on a common base, allowing us to compare parties and party system both cross-nationally and over time. Figure 1 shows the distribution of the more than 50 political parties considered in our dataset.

[Insert Figure 1 here]

## 1.5 Empirical Specification

As discussed in the previous section, the turnout is defined as a variable taking two values: “Voted” or “Not Voted”. Eighty five percent of people in our sample has cast their ballot for one of the political parties competing in the electoral race. This leave us with 15 percent of our sample that did not vote. The standard deviation is 0.35 indicating that our sample show a degree of variability sufficient for our analysis. According to the model developed in the previous sections, we characterize the probability of voting by assessing the proximity of the two ideologically nearest parties and we condition it on a set of variables capturing the socio-demographic characteristics of individuals, their beliefs and the macroeconomic environment of each country, when the interview has been taken. In general, we attempt to include all the variables that, for different reasons, have been found to be relevant by the empirical literature on turnout. The econometric specification can be written as follows:

$$\begin{aligned} Pr(vote)_{i,c,t}^s = & \alpha + \beta_1 D1_{i,c,t} + \beta_2 D2_{i,c,t} + \beta_3 D3_{i,c,t} + \\ & + \gamma_1 Demo_{i,c,t} + \gamma_2 Beliefs_{i,c,t} + \gamma_3 Macro + \epsilon_{i,c,t}^s \end{aligned}$$

The estimation is performed through the use of a Probit model. Using the data described above, we are able to place voters and candidates on the same

ideological Left-Right continuum. We used this combined source to recover the most important variables of our analysis: the nearest party (D1), the second nearest party (D2) and the third nearest party (D3) to the voter's preferences. From the model outlined in the previous section, we know that voters and parties' bliss points are located on the same Left-Right uni-dimensional  $[0, 1]$  political space. Suppose that a number  $N$  of political parties compete in the election. Take now the case of a voter who casts her vote for a party  $K$  and whose most preferred position along the ideological space is indicated with  $x_i$ . We can use the function:

$$d(x_i, z_j) = |x_i - z_j| \quad (5)$$

The above function represents the spatial distance in political positions on the ideological space held by the voter and a given party  $j$  competing in an election. We specify the minimum value of  $f(x_i, z^1)$  amongst all the competing parties in the election as follows:

$$f(x_i, z^1) = \min\{d(x_i, z^1)\} \quad (6)$$

when this minimum value is obtained, then the party is the nearest to the voter <sup>4</sup> (i.e. the party has a political platform along the ideological space that is the closest to the one the voter most prefers). Figure 2 shows the ideological distribution of the political party supplying a political platform nearest to the voters' preferences.

[Insert Figure 2 Here]

---

<sup>4</sup>D1 in the specification outlined above.

To identify the second nearest party (D2) to the preferences of the voter, we simply find:

$$f(x_i, z^1) = \min_{j \neq \text{argmin}\{f(x_i, z_j)\}} \{d(x_i, z^1)\} (7)$$

Figure 3 shows the ideological distribution of the political parties that are the second nearest to the preferences of the voters.

[Insert Figure 3 Here]

We use a similar formula to recover the third nearest political party (D3). Since the starting work of Wolfinger and Rosestone (1980), a vast empirical literature consistently finds a correlation between turnout and demographic characteristic. In view of this results, we have decided to add to our analysis, as a control, the vector Demo. We have included the age of the respondents. Twenty six percent of our sample are between 18 and 39 years old (Young). The variable old includes the people that are between 40 and 65 years old. The variability of both variables is high (43-44 percent). We have clustered the citizens according to their date of birth as well. The two biggest cohort are composed by people borne in the 1950-1959 and 1960-1969. Each of these cohorts account for more than 20 percent of our sample. It is not surprising that the cohorts formed by people borne before the 1921 until the 1949 are less populated. In any case the degree of variability is high (between 26 and 43 percent). The reasons for the high participation of these two cohorts could be found in the life experience gained or in the resources accumulated (Rosestone and Hansen, 1993; Burns et al., 1994), in the level of integration in their community, in the awareness of

the problem present in the society, or in the unique socializing experiences of particular age post-war cohorts (Miller and Shanks, 1996). The cohort instead formed by people borne after the 1969 are the less populated (0.8 percent). This confirms the result in the literature (Campbell et al. (1967) and Nie et al. (1979)) that younger voters are less involved in politics and only later in their life they become more attached to political parties and so more prone to participate in the electoral process. We control for the sex of the respondent. Forty nine percent of our sample are female. The standard deviation is around 49 percent showing a great variability inside our data. Two variables are also included, which refer to the level of attained education: a variable for low level and another for high level of education. The low level of education contains people that have studied until they are 16 years old. thirty three percent of our dataset belong to this category. We have considered having high level of education, people that have completed their studies beyond their 21th birthday. The literature showed that the highest influence is displayed by the high level of education in increasing the level of turnout (Wolfinger and Rosestone, 1980). Mainly the higher the education attained, the lower the cost of being informed upon the wide range of issues, associated with the policies proposed by the candidates. The vector Demo also contains a series of dummy variables referring to the marital status of the individual (if the individual is married or single). We can notice as our dataset is formed with highest percentage by people that are married (58 percent). The variable named baby shows as 47 percent of our sample has children. The vector Demo contains an another series of dummies which refer to the employment status

and the kind of job in which the citizen is employed: white collar, office employed, retired, unemployed, working mainly for himself, and working at home. The largest percentage of our sample (approximate 20 percent for each category) is formed by people that white collar, retired or they are housewife. The *Beliefs* represents a vector of voters ideological beliefs. We first include in our analysis how the individuals locate themselves in the Downsian Continuum (i.e. LRS in our summary statistics) <sup>5</sup>, and after, how extreme these political beliefs are (i.e. Extreme in our summary statistics). To recover the last variable, we have simply folded the LRS variable so that the extreme variable takes the value of five when LRS score 1 or 10; the value of four when LRS takes the value of 2 and 9; and so on. Both these variables, and in particular how much extreme is their self-placement on the left-right dimension, have been found to be important predictor of electoral turnout. The inclusion of these variables seem to capture some of the unobserved heterogeneity that drives both turnout and political knowledge, and their inclusion in the turnout equation should limit the omitted variables problem (Larcinese, 2007). We include in our analysis the variable Direction Ideology. This is a dichotomus variable that take the value of zero when the preferred position of the individual is between the declared position of two political parties and the value of one when the individual's bliss point is at the extreme of the political spectrum so that all the parties available are on the right or on the left of his position. We have included a variable describing how often the people talk

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<sup>5</sup>This is a ordinal variable that range from 1 to 10. One represents the extreme left and 10 the extreme right.



about politics. We use this variable as a proxy of their level of awareness of the political matters. Finally, the vector Macro contains both country fixed effects and time fixed effects and their interaction. This vector is designed to check for any unobserved country/time heterogeneity that could be correlated with the explanatory variables, minimizing any bias in our estimates. Summary statistics of all the variables used are reported in Table 1.

## **1.6 Estimation results**

In Table 2 we present the probit regression results of our general model. A look at the point estimates reveals that almost all variables included are statistically significant at 1level. The empirical results confirm that turnout is a function of the proximity of citizens' preferences to the electoral platform associated with the nearest candidate party (Nearest). More specifically, its negative coefficient means that decreasing by 1 point the distance between citizens and nearest political party, the z-score increases by 0.15. Considering that there are usually costs associated with the act of voting (time involved, transportation costs, and so on.), each citizen will be incentivised to cast a ballot if there will be a party offering a political platform near to the voter's preferences. Measuring the citizens' utility through their preferences, the highest utility will be obtained when the voters' bliss point will match the political parties' preferences as measured through the electoral manifesto. Instead, when there is a mismatch between the voters preferences and the candidate' bliss point, the probability of going to vote will decrease

proportionally to the intensity of this mismatch. Moreover, our results suggest a positive relationship between turnout and the second nearest political party. The smaller the distance between the citizens' bliss point and the second nearest party, the greater is the probability not to vote. Specifically, if we increase by 1 point the distance between citizen bliss point and the party's location on the ideological spectrum, the z-score increase by 0.18. This result confirms our hypothesis. When this distance is small, the utility that the individual receives from voting might be outweighed by the costs associated with voting (Enelow and Hinich, 1984). It does not make much difference from his point of view which candidate could win. It is interesting to note that the ideological position of political parties located farther than the second one are not taken into account for the decision to vote. Our regression seems to suggest that people that being more oriented towards the right extreme of the political spectrum increases the z-score of 0.06. The magnitude is very small but the variable is still significant at one percent level. It is very interesting to notice that if we increase of the extremism in the political beliefs, the z-score increase of 0.16. The probability to participate in the elections increases if all the political parties are located on one side of the citizen's bliss point. In this case the cost associated with not going to vote are higher. If his preferred political party would not be elected, each of the other parties elected would implement platforms that will be farther from his preferences. It is not surprising that the z-score increases when the people is more interested in political discussion. Discussing more about politics increases the z-score of 0.34. In order to check the robustness of our results, we have enriched the model in-

cluding also non-policy factors (socio-demographic characteristics, and ideology beliefs of the voters). We can notice that as people age their probability to go to vote increase. Increasing of one unit being old, increase the z-score of 0.18. We note non-uniformity in the generation pattern. For the cohort including people born before the 1920's, the estimates suggest a positive relationship between probability to vote and belonging to this cohort. However the relationship becomes negative for cohorts that include people born after the 1960's. We may justify this strange generational pattern on the base of the World Wars. The generation born during the After War periods may have increased the sensitiveness to social issues. Not surprisingly, the probability to go to vote decreases for the generation born in the economical challenging 70's.

At first glance, the results suggest that males have higher probability to vote than female. However the magnitude of the coefficient is very poor and the variable is significant only at 10% level. The result would seem to corroborate the previous literature (Aidt and Dalla, 2008).

How does education affect turnout? It would seem that, at 1% level of significance, the better educated are more likely to vote. The school permits people to learn how to understand analytically and critically the world around them, decreasing thus the information cost associated with the decision to cast a ballot. The positive coefficient remains constant in all the specification taken into account. We found that at 1% significance level, the people that are married (or live together as married), are more likely to vote than people that are single. As matter of fact, the pressure exercised from the responsibility of another person,

may increase the sensitiveness to national economic issues. However, when the family enlarges an increase in one unit of the number of children that people has, decreases the z-score of 0.11. A possible explanation of this result could be found in the cost associated in going to vote: the larger the family, the larger the cost of time in doing other activities. Moreover, those with no-labour market occupation (unemployed, student, retired) are less likely to vote. Instead, between those who are employed, the white collars have a greater probability to go to vote. The F-test tells us that our model as a whole is statistically significant.

At this point, it could be interesting to verify if the region of the policy space that the individuals inhabit exerts any influence on the relevance of ideological issues for their decision whether to cast a vote. We create two sub-samples. First we limit our analysis just to the people that are ideological located in the middle between the two nearest parties. In this case, we expect that both party will be important for a citizens decision to vote. Table 3 confirm my expectations. The two nearest party are statistically significant at 1% level. As well the sign correspond to our intuition.

We create a second sub-sample that includes people for which the two nearest parties lean both on the right or both on the left of their ideological location. Table 4 shows the results. Only the distance from the nearest political party matters for the decision to vote. It seems that in this case the decision to vote is related only to the so called alienation factors. The second nearest party is statistically insignificant.

## 1.7 Electoral Formula

It seems a necessary step to verify if the electoral system affects in any way the validity of our result about the importance of the two nearest parties for the decision to vote.

The literature has mainly divided the electoral system in two big branches: Proportional Representation system and Majority system. According to the first one, parties win seats in proportion of the number of votes they receive during the election. When we talk about PR system actually we refer to a variety of formulas that approximate proportionality. Because it is not possible to divide seats, it follows that we cannot have a fully proportional system. An example can help to clarify this concept. If we have a five-seat district and a party wins 30% of the votes, it can either win one seats (20% of the total) or two seats (40%), but not 1.5 seats. Several studies have demonstrated that the proportional system fosters the number of political parties competing in the elections. Large part of the government that are formed using this electoral formula are coalitions one. In this context, we can infer that for the citizen's decision to vote, it will be important his distance from both the nearest and the second nearest political parties. If the distance with nearest political party is small, he will have an incentive to go to vote. If the second nearest political party is really far from his preferences, he can reasonably assume that the others political parties will be even farther. This will make his decision not to vote more costly.

On the contrary, the majority system assigns all the available seats to the candidate

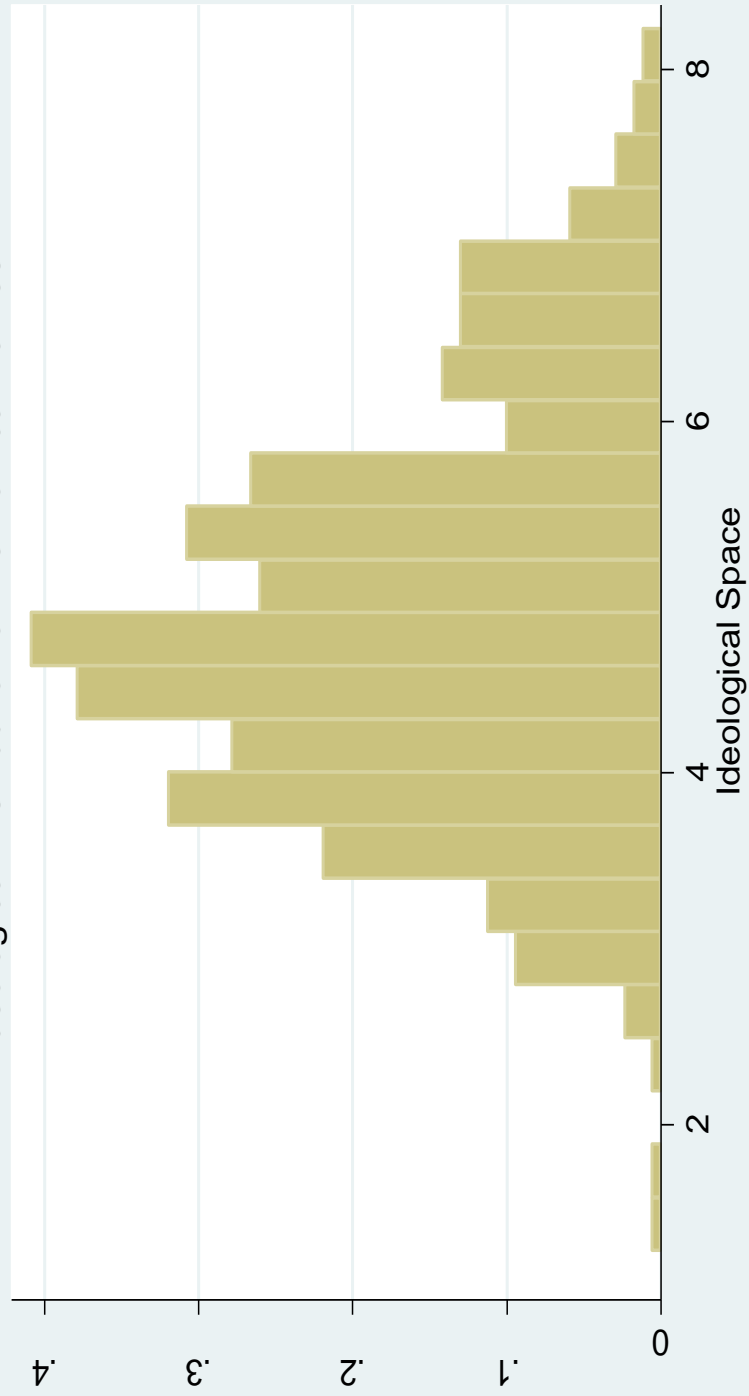
or party that wins the most votes. It is widely acknowledged as one of the most durable and reliable hypotheses in political science that the simple-majority single-ballot system favors the two-party system (Duverger (1951)). We want to demonstrate that our general result does not fully hold for the Majoritarian system countries. We can argue that only the distance between the citizen's bliss point and the nearest political party matter for the decision to vote. If the distance with the nearest political party is big, the cost to cast a ballot will outweigh the benefit of voting. To test our hypothesis we have created two sub-samples. The first one contains all the countries that choose a PR system and the second one takes into account all the countries that follow a Majoritarian system. To divide our sample we have referred to the codification assigned by the "International IDEA institute for Democracy and Electoral Assistance". Our intuitions are fully confirmed by the results reported in table 5. For the PR countries, the nearest and the second nearest political parties variables are significant at 1% level. Instead, only the nearest party is significant at 1% level for the Majoritarian system countries. To check the robustness of our results we have included all the control variables used in our general specification (i.e. Table 2). All the control variables included are significant at 1% level and show the same sign as in the general results.

## **1.8 Conclusion**

Voting is a mechanism through which citizens get their opinion heard and respected. Models of voting behaviour typically attempt to explain the choices

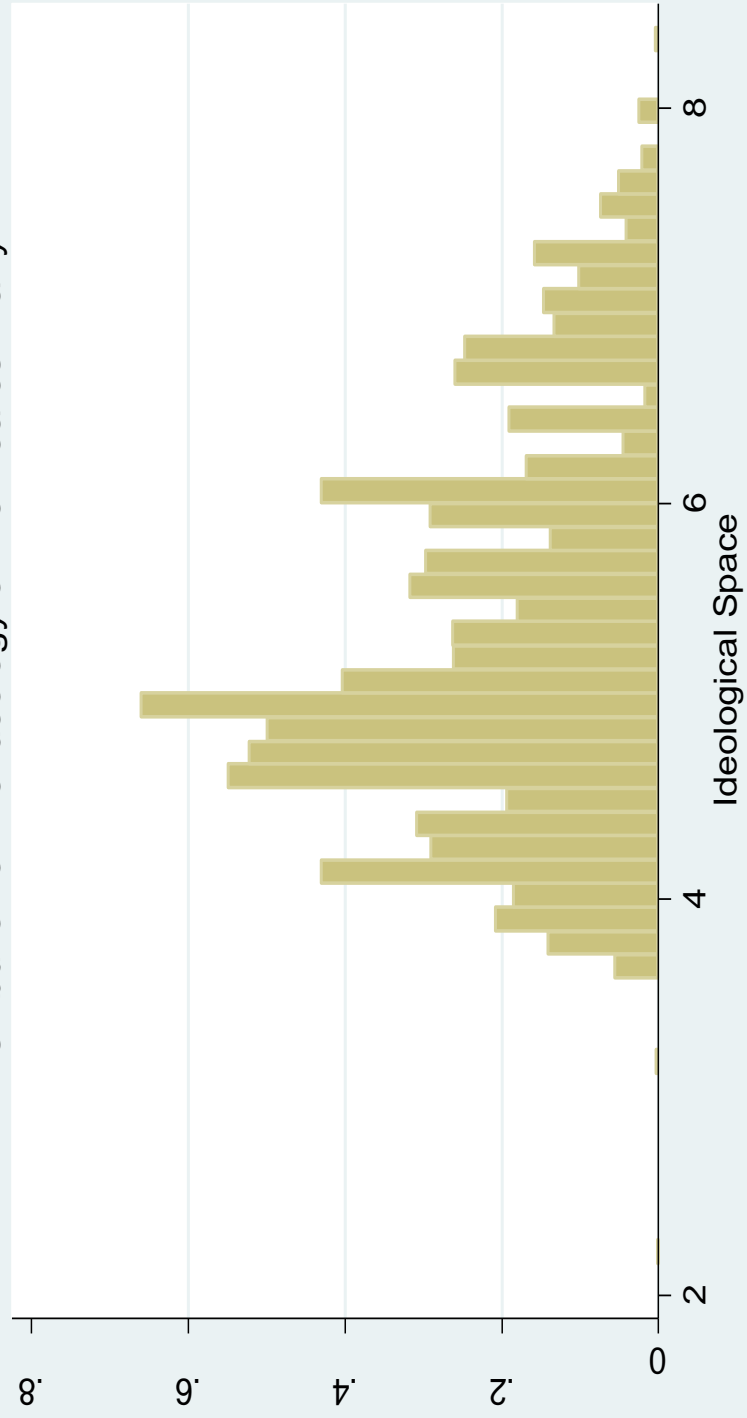
of voters without considering the differences between voters and non voters. However such models have illuminated many aspects of electoral choice, it is important to recognize that by restricting attention to candidate choices among individuals who vote, and by ignoring the process by which individuals select themselves into the set of voters, existing models provide incomplete and possibly distorted explanations of individual behaviour (Sanders, M. (2009)) . In this paper we have provide an insight of possible reasons why this mechanism does not work. Our findings demonstrate that the probability to take part in an election is mainly influenced by the ideological proximity of a political partys platform near to the citizens' preferences. Moreover, our investigation supports the hypothesis that turnout is depressed by the convergence of the candidates platform. It could be interesting to combine the two main results, checking which effect is predominant, in the citizens' decision of voting. Furthermore, our analysis corroborates the finding in the previous literature highlighting the importance of socio-demographic characteristics on voting turnout(Verba, 1993; Wolfinger and Rosestone, 1980). In the future, an attractive research could be applies our result to the specific different type of PR system (STV, DM, AV, and so on).

**Figure 1**  
Ideological Distribution of the Political Parties

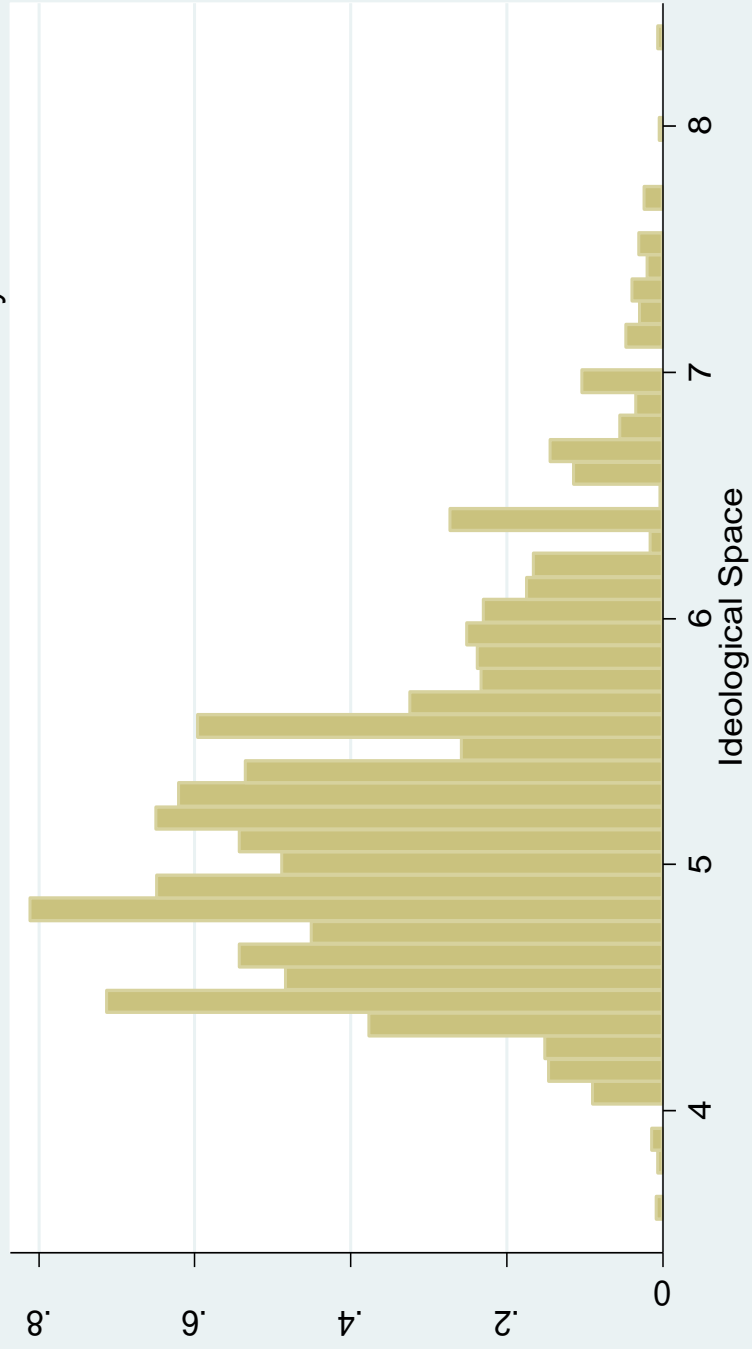




**Figure 2**  
Distribution of the Ideology of the Nearest Party



**Figure 3**  
Distribution of the Second Nearest Party



# Table 1

## Summary Statistics

Austria, Belgium, Denmark, Finland, France, Germany East, Germany West, Great Britain, Greece, Ireland, North Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden

<i><b>Variables</b></i>	<i><b>Mean</b></i>	<i><b>Std. Dev.</b></i>
TURNOUT	0.85	0.35
Nearest Party	0.97	1.05
Second Nearest Party	1.38	1.32
Third Nearest Party	1.72	1.27
Lrs	5.32	2.1
Direction Ideology	0.22	0.41
Extremes	2.20	1.24
Poldisc (Never)	0.18	0.38
Poldisc (Always)	0.26	0.44
Young	0.26	0.44
Old	0.35	0.43
Cohort_'20	0.07	0.26
Cohort_'21-'39	0.24	0.43
Cohort_'50-'59	0.26	0.39
Cohort_'60-'69	0.20	0.41
Cohort_'70-'79	0.08	0.27
Female	0.49	0.49
Single	0.24	0.42
Married	0.58	0.49
Baby	0.47	0.49
Education (Low)	0.33	0.47
Education (High)	0.22	0.41
Income	6.90	3.44
Student	0.10	0.28
Housewife	0.15	0.36
White Collar	0.20	0.12
Self Employed	0.07	0.26
Retired	0.18	0.32
Unemployed	0.05	0.23

**TABLE 2**  
**General Model**

	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Nearest Party	-0.157***	(0.057)
Second Nearest Party	0.185**	(0.083)
Third Nearest Party	-0.061	(0.068)
Lrs	0.064***	(0.008)
Direction Ideology	-0.085***	(0.021)
Extremes	0.228***	(0.031)
Poldisc (Never)	-0.510***	(0.029)
Poldisc (Always)	0.288***	(0.035)
Young	-0.249***	(0.054)
Old	0.185***	(0.038)
Cohort_ '20	0.457***	(0.080)
Cohort_ '21-'39	0.392***	(0.047)
Cohort_ '50-'59	-0.049	(0.031)
Cohort_ '60-'69	-0.245***	(0.059)
Cohort_ '70-'79	-1.261***	(0.108)
Female	0.066***	(0.023)
Single	-0.107***	(0.046)
Married	0.574***	(0.036)
Baby	0.064*	(0.038)
Education (Low)	-0.067*	(0.034)
Education (High)	0.263***	(0.043)
Income	-0.008*	0.004
Student	-0.332***	(0.050)
Housewife	-0.130***	(0.043)
White Collar	0.574***	(0.141)
Self Employed	-0.151***	(0.019)
Retired	0.201	(0.023)
Unemployed	-0.419***	(0.043)
N	116,471	
F( 26, 840)	187.37***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

**TABLE 3**  
**Voter between Two Competing Parties**

	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Nearest Party	-0.205**	(0.091)
Second Nearest Party	0.354***	(0.119)
Third Nearest Party	-0.050	(0.082)
Lrs	-0.170***	(0.029)
Extremes	-0.022	(0.054)
Poldisc (Never)	-0.462***	(0.036)
Poldisc (Always)	0.318***	(0.041)
Young	-0.263***	(0.065)
Old	0.169***	(0.043)
Cohort_ '20	0.398***	(0.100)
Cohort_ '21-'39	0.403***	(0.059)
Cohort_ '50-'59	-0.02	(0.031)
Cohort_ '60-'69	-0.204***	(0.069)
Cohort_ '70-'79	-1.227***	(0.077)
Female	0.066**	(0.066)
Single	-0.101*	(0.056)
Married	0.580***	(0.045)
Baby	0.026	(0.065)
Education (Low)	-0.089**	(0.036)
Education (High)	0.226***	(0.044)
Income	-.017***	0.005
Student	-0.363***	(0.059)
Housewife	-0.197***	(0.051)
White Collar	0.434***	(0.112)
Self Employed	-0.214***	(0.058)
Retired	-0.020	(0.073)
Unemployed	-0.465***	(0.054)
N	70,146	
F( 26, 839)	110.66***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

**TABLE 4**  
**Voter at One Extreme of the Political Spectrum**

	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Nearest Party	-0.253***	(0.081)
Second Nearest Party	0.119	(0.125)
Third Nearest Party	-0.012	(0.129)
Lrs	-0.129	(0.090)
Extremes	0.473***	(0.070)
Poldisc (Never)	-0.599***	(0.059)
Poldisc (Always)	0.204***	(0.046)
Young	-0.271***"	(0.080)
Old	0.209***	(0.059)
Cohort_'20	0.534***	(0.104)
Cohort_'21-'39	0.359***	(0.070)
Cohort_'50-'59	-0.09**	(0.031)
Cohort_'60-'69	-0.257***	(0.090)
Cohort_'70-'79	-1.315***	(0.130)
Female	0.056***	(0.039)
Single	-0.110*	(0.057)
Married	0.566***	(0.061)
Baby	-0.119**	(0.051)
Education (Low)	-0.040	(0.051)
Education (High)	0.324***	(0.058)
Income	-.007	(0.007)
Student	-0.289***	(0.076)
Housewife	-0.032	(0.067)
White Collar	0.834***	(0.191)
Self Employed	-0.073	(0.079)
Retired	0.050	(0.085)
Unemployed	-0.370***	(0.077)
N	46,325	
F( 26, 835)	90.98***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

**Table 5**  
**Electoral Formula**

	<i>(Pr)</i>		<i>(NON-Pr)</i>	
	<i>(Coefficient)</i>	<i>(Std. Err.)</i>	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Nearest Party	-0.149***	(0.071)	-0.176***	(0.072)
Second Nearest Party	0.313***	(0.078)	0.109	(0.101)
Lrs	0.067***	(0.016)	0.064***	(0.033)
Extremes	0.052***	(0.037)	0.277***	(0.048)
Poldisc (Never)	0.245***	(0.045)	0.355***	(0.053)
Poldisc (Always)	-0.516***	(0.035)	-0.525***	(0.042)
Young	-0.226***	(0.065)	-0.439***	(0.080)
Old	0.216***	(0.048)	0.149***	(0.056)
Cohort_'20	0.484***	(0.098)	0.490***	(0.116)
Cohort_'21-'39	0.409***	(0.061)	0.376***	(0.071)
Cohort_'60-'69	-0.238	(0.075)	-0.124	(0.081)
Cohort_'70-'79	-1.250	(0.128)	-1.110	(0.100)
Female	0.085***	(0.030)	0.026***	(0.037)
Single	-0.250	(0.058)	-0.051**	(0.060)
Married	-0.426	(0.048)	0.654	(0.054)
Baby	0.041	(0.046)	-0.122**	(0.051)
Education (Low)	-0.052	(0.044)	-0.034	(0.050)
Education (High)	0.230***	(0.048)	0.090	(0.062)
Income	-.020***	0.006	-0.018	0.007
Student	-0.375***	(0.057)	-0.471***	(0.079)
Housewife	-0.233***	(0.140)	-0.048	(0.063)
White Collar	0.522***	(0.052)	0.326	(0.361)
Self Employed	-0.248***	(0.067)	-0.042	(0.080)
Retired	-0.143***	(0.054)	0.143***	(0.089)
Unemployed	-0.465***	(0.018)	-0.415**	(0.071)
N	75,399			
F( 25, 325)	120.46***	(0.000)	140.49***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

## **Chapter 2**

### **Political Competition and Turnout\***

#### **Abstract**

Much analysis has focused on why individuals vote at all. This paper focuses on why turnout varies across elections and across districts. A simple micro-founded measure of policy based party competition is developed and calculated for every district at every election in 15 European countries over the period 1947-1998. Our results suggest that a large proportion of the within-district inter-election variance in turnout levels can be attributed to differences in the intensity of district-level of political competition.

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\*Chapter co-authored with Dr. James Rockey



## 2.1 Introduction

Why do people vote? They vote in by or special elections with little or no clear consequence for the balance of power. They vote in districts which are almost never competitive. Outside of politics, individuals vote to determine the outcomes of 'reality' tv-shows, and award-ceremonies. Even though the cost of doing so is often large compared to any expected direct benefit. Many, non-exclusive explanations have been proposed. One reason why turnout has been the subject of so much attention by economists as well as political scientists is that it has been difficult to reconcile high observed turnout levels with a satisfactory maximum expected-utility explanation. In general, high-turnout levels are not robust equilibria of large elections in which voting is motivated by a desire to affect equilibrium policy. Instead, explanations of voting have had to model citizens as receiving some intrinsic reward from voting, often called 'the warm glow', or as being boundedly rational in some way. Two important exceptions are Ferejohn and Fiorina (1974) and Gelman, Katz and Tuerlinck (2002). Ferejohn and Fiorina noted that there is no reason to assume that every voter accords to a given rationality concept. They model voters as using a minmax regret criterion and show that in this setting, high-turnout levels are to be expected. Edlin, Gelman and Noah (2007) argue that voting can be seen as a rational choice if voters are modeled as being concerned about the welfare of others. Dawes, Loewen and Fowler (2012) show that those demonstrating more 'social' preferences in a dictator game laboratory experiment are more likely to participate in politics. This

paper takes an alternative approach to this question. It asks what explains variation in turnout if turnout varies across elections and across districts? In this respect it is related to other work that has sought to unpack the ‘warm glow’ phenomenon. Note, that unless voters use different decision rules in different elections, then appealing to different rationality concepts such as the minmax rule considered by Ferejohn and Fiorina (1974) is unlikely to be sufficient.

Figure 1 reveals that whilst turnout levels exhibit some consistency, there is definitely variation within countries between elections that a successful theory of voter turnout should help to explain.

To properly assess what drives voters decision making, it is necessary to have data at the level at which they make decisions. For legislative elections, this normally means district level data. Whilst, this is routine in the study of US politics, it is less used in the context of Europe. However, the politics of European countries are better suited to our purpose.

Firstly, this is because there are almost always three and routinely many more parties standing in any given election. This provides for much more variation in the distribution and intensity of political competition.

Secondly, as formalised by Persson, Roland and Tabellini (2000) of necessity parties in the predominantly consensual (following Lijphart (1999)s terminology) democracies of Europe are far more cohesive with strong party lists, than in the US. This constrains individual politicians to campaigning on the basis of their parties manifesto positions.

Thirdly, there is much greater regional variation in news media in European

democracies, with a predominance of national media. This facilitates the use of national level data on the manifesto positions of parties<sup>1</sup>.

This paper employs the district level election results compiled by Caramani (2004) and combines these with survey data on voters' preferences from the Eurobarometer Survey and data on parties manifestos as measured by the Comparative Manifestos Project Budge, Klingemann, Volkens, Bara and Tanenbaum (1997). Details of how these data were combined, and a description of the resultant large panel dataset are provided in Section 2.3.

The focus of this paper is on the impact of political competition on voting behaviour, and as such this necessitates a measure of political competition. Whilst, many increasingly sophisticated indices have been proposed, see Gelman, Katz and Tuerlinck (2002), Gelman, Katz and Joseph (2004) for an excellent discussion, these do not seem well suited to compare variations in district level competition over time. Instead, a micro-founded version of the still widely used Effective Number of Parties (ENP) measure of Laakso and Taagepera (1979) is developed. Crucially, this allows for variation in the distribution of citizen ideology across and districts and elections. In the same way that the ENP measure is equivalent to (the reciprocal of) a Herfindahl index, the new measure is equivalent to a Herfindahl index computed allowing for different distributions of consumers taste parameters. The elaboration of this index is outlined in Section 2.2. The measure is computed for every district, in each of 15 European countries,

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<sup>1</sup>In the US we could use data on individual politicians voting records such as that compiled by the NOMINATE project of Poole (2006).

for the period 1947-1998. Standard panel data techniques, as well as quantile and multilevel approaches, are used to demonstrate the robust relationship between the intensity of political competition and the proportion of electors who choose to vote. Moreover, the estimated coefficients suggest that turnout is relatively sensitive to competition, a one standard-deviation increase in political competition induces a 0.2 to 0.4 standard deviation increase in turnout. The methodology employed and the results are discussed in Section 2.4. Section 2.5 concludes.

## **2.2 Measuring Competition**

As mentioned, there is already a large literature that seeks to resolve the “paradox of (not) voting” and the reader is directed to Dhillon and Peralta (2002) for an excellent survey of the key theoretical positions, and to Geys (2006) for a comprehensive meta-analysis of previous empirical studies. Dhillon and Peralta (2002) conclude that costly and instrumental voting therefore seems to be inconsistent with significant turnout, whilst Geys (2006) finds that “Electoral Closeness” and “Electoral District Size” both predict turnout. Such an impasse admits different conclusions, but it seems natural to consider non-instrumental motivations for voting. Schuessler (2000) makes the case for Expressive voting, in which citizens derive utility from expressing their preferences in the act of voting.

By introducing a model in which the calculus determining whether the benefits of expressive voting outweigh the costs are endogenously determined Schuessler

(2000) is better able to explain varying electoral participation. However, his approach can less easily explain variation between districts in any given election. Moreover, modelling voting as expressive behaviour requires more than an alternative interpretation of the same independent variables. In particular, standard measures of “electoral closeness”, designed to test the instrumental framework, are no longer adequate. The competition measure introduced is designed to be able to explain variation in turnout levels both between elections and across districts. A basic implication of the theory of expressive voting is that an individual should be more likely to vote if there are one or more parties with platforms close to what they prefer. A basic implication of the theory of expressive voting is that an individual should be more likely to vote if there are one or more parties with platforms close to what they prefer. It will capture and generalize this intuition that elections are more competitive when the total discrepancy in the platforms and parties and the preferences of voters for each voter, is lower on average. Voters are assumed to choose whether to vote for one of  $J$  parties or whether to abstain. To simplify the analysis, a key assumption is made. This is an Independence of Irrelevant Alternatives assumption, which states that individuals vote for their most preferred party, or they do not vote at all. This rules out strategic voting, but it is entirely compatible with an expressive voting model. Therefore, we can model each voter as making their decision of how and whether to vote sequentially. That is, they first determine which is their preferred party, and then whether they wish to vote for them, or abstain altogether. We consider a population of agents - voters - who are assumed to be distributed according to

an atomless distribution with mass normalised to 1, the set of agents is denoted  $I$ . Each individual voter  $i$  is indexed by their position on the interval  $i \in [L, \bar{I}]$ . Voters' utility functions are comprised of a common and an idiosyncratic component. The common component is decreasing in the distance between their preferred outcome and the platform proposal  $V(i, j) = |i - j|$ . The idiosyncratic component  $\varepsilon(i, j)$  captures particular costs and benefits, including psychic, expressive, or warm glow effects, of a particular agent voting for a particular candidate. Thus  $U^{ij}$  is given by:

$$U^{ij} = V(i, j) + \varepsilon(i, j) \quad (1)$$

$$U^{ij} = |i - j| + \varepsilon(i, j) \quad (2)$$

Where, following ?  $\varepsilon$  has a Type-1 Extreme Value distribution with CDF:

$$P(\varepsilon(i, j) \leq \varepsilon) = e^{-e^{\varepsilon(i, j)}} \quad (3)$$

Thus, the likelihood of voter  $i$  casting their ballot for party  $j$ , rather than abstaining, is given by the Logit function:

$$P(i, j) = \gamma_j \cdot \frac{e^{-(i-j)}}{1 + e^{-(i-j)}} di \quad (4)$$

$$(5)$$

A corollary of this is the average probability of a citizen choosing to vote for

party  $j$  is equal to  $\gamma_j$  as required.

$$\overline{P(j)} = \int_I \gamma_j \cdot \frac{e^{-(i-j)}}{1 + e^{-(i-j)}} di \quad (6)$$

$$= \gamma_j \cdot 1 = \gamma_j \quad (7)$$

Similarly, total turnout,  $\Gamma$  is given by:

$$\Gamma = \sum_j \int_I \gamma_j \frac{e^{-i-j}}{1 + e^{-i-j}} = \sum_j \gamma_j \quad (8)$$

There are two main approaches to modelling the degree of electoral competition. Firstly, there are those following Laakso and Taagepera (1979) which focus on an appropriate summary statistic for the size distribution of parties. The second class of approaches emphasize the importance of power within a legislature rather than party size, and traces its origins to Mann and Shapley (1964) and Banzhaf (1968) and has recently been critiqued by Gelman, Katz and Tuerlinck (2002). This paper focuses on the former set of models and in particular on the ‘Effective Number of Parties’ popularized by Laakso and Taagepera (1979). They proposed two measures which correspond to (the reciprocal of) a Herfindahl-Hirschmann index, and an Entropy measure, as special cases of a general class of power-indices. Here we focus on the former as it is more commonly used<sup>2</sup>. Moreover, as noted by Laakso and Taagepera (1979) whilst neither index can be recovered from the other, the qualitative interpretation is normally similar. Using this simple

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<sup>2</sup>Extending the approach here to entropy-based measures will be the subject of future work.

framework, it's possible to move from the decision facing an individual voter, to a measure of how intense the competition is for a given citizen's vote. A standard Herfindahl-Hirschmann concentration index can be expressed as follows:

$$H^* = \sum_j \gamma_j^2 \quad (9)$$

$$= \sum_j (\gamma_j \int_I \frac{e^{-(i-j)}}{1 + e^{-(i-j)}})^2 \quad (10)$$

Of course, if  $I$  were uniformly distributed then there will be no implications of considering individual voter's preferences for the computation of competition indices. However, there is no reason to suppose that the distribution of voters' preferences is indeed uniform. Figure 2.2 describes five different configurations of party and voter location that would have the same Herfindahl index. Comparison of the Figures 4(a) and 4(b) reveals the problem. While in Figure 4(a) the competition between the two political parties is weak due to the big distance between their locations and the mean's voter bliss point. For citizens that are located at the centre of the political spectrum would be indifferent which political parties would win the elections. None of them will implement policies that are near to his preferences. Instead, there is a higher level of competition between the two political parties in Figure 4(b). Both of them are located near the median voter's bliss point. In this case, the likelihood of voting will increase and both political parties will strongly compete to win the citizens' vote. Figure 4(c) describes the case of a uniform preference distribution in which the relative



locations of the parties is unimportant. Figures 4(d) and 4(e) are designed to emphasize that it is both the location of voters and parties that is important, not merely an issue of how close to the mean voter parties are. The competition is not particularly strong in Figures 4(d). The two political parties are clearly far from both median voters. The two parties are clearly near the centre of the distribution but because of the particular form of the voter preferences, their position is clearly not appealing to none of median voters. The Figure 4(e) describe instead a slightly different situation where the political parties are more extreme in their preferences. In this case we can reasonably expect that the competition between the two political parties will be higher. Finally, Figure 4(f) describes the case of an additional party. In this case, the level of competition will not be affected by the entrance of the third party for the particular ideological location it has chosen to place himself. Now, inference about the likely consequences is much more difficult although it is clear that if the party were located anywhere else it would increase competition by more. Clearly, then, if variation in preference distributions is to be taken seriously then the relative coincidence of the locations of parties and voters needs to be taken into account. But, simultaneously, the requirements imposed by Laakso and Taagepera (1979) remain paramount. The approach taken here is to calculate a Herfindahl index for different parts of the population and in turn derive an overall measure. In particular,  $H^*$  is calculated for 10/10000 disjoint sub-intervals  $I = I_1 \cup I_2 \cdots \cup I_A$  of the ideological spectrum of equal length. However, the particular length chosen does not really matter in building our measure. We have chosen this particular number given that the

original measure of the location of the individuals on the ideological spectrum goes from 1 to 10.

Competition for the votes of citizens with preferences in the interval  $a$  is therefore:

$$H_a = \sum_j (\gamma_j \int_{i \in I_a} \frac{e^{-(i-j)}}{1 + e^{-(i-j)}})^2 \quad (11)$$

Recall that the Distribution Function of the logit is given by

$$F(i) = \int_{-\infty}^i \frac{e^{-(i-j)}}{1 + e^{-(i-j)}} \quad (12)$$

$$F(i) = \frac{1}{1 + e^{-(i-j)}} \quad (13)$$

Hence, 11 can be rewritten as:

$$H_a = \sum_j (\gamma_j (F(a) - F(a-1)))^2 \quad (14)$$

It is now clear that if competition is not equal all along the ideological spectrum, then the degree of competition will be understated. This follows immediately from Jensen's inequality, which states that if  $f$  is a convex function defined on an interval  $F$  then for  $x_1, x_2, \dots, x_n \in F$ :

$$f\left(\sum_{i=1}^N x_i\right) \leq \sum_{i=1}^N f(x_i) \quad (15)$$

Let  $\phi(a) = \gamma_j(F(a) - F(a-1))$  then:

$$\sum_j f\left(\sum_a \phi(a)\right) \geq \sum_a \sum_j f(\phi(a)) \quad (16)$$

$$\sum_j f\left(\sum_a \phi(a)\right) \geq \sum_j \sum_a f(\phi(a)) \quad (17)$$

Since, here  $f(x) = x^2$ . This implies that:

$$\sum_j \left[\sum_a \phi(a)\right]^2 \geq \sum_j \sum_a \phi(a)^2 \quad (18)$$

$$\sum_j \left[\sum_a \gamma_j(F(a) - F(a-1))\right]^2 \geq \sum_j \gamma_j \sum_a (F(a) - F(a-1))^2 \quad (19)$$

A corollary of this is that the reported Effective Number of Parties, will be overly large. Note, that only in the case of perfectly equal competition at all parts of the ideological spectrum, i.e. if  $x_1 = x_2 = \dots = x_n$  and as described in in Figure 4(e) do Equations 15 and 17 hold with equality. This result suggests that the sum of the subinterval Herfindahl indices is a logical generalisation of the standard Herfindahl index.

$$H = \sum_a \sum_j [\gamma_j(F(a) - F(a-1))]^2 \quad (20)$$

$H$  is the measure of political competition that will be employed. Whilst, there are other ways in which to aggregate competition across the subintervals, summation has the advantage here that if preferences are uniform then the new measure corresponds to the Herfindahl Index. Equivalently,  $H^{-1}$  will be the

Laakso and Taagepera (1979) Effective Number of Parties measure. Moreover,  $H^{-1}$  is also intuitively appealing, as it is simply the aggregate of the number of effective parties for each of the  $A$  subsets of voters. Thus, if a new party enters which is only likely to appeal to very extreme voters then the impact of this, depends on the number of extreme voters. That is, in a district with few or no extreme-right voters, the entry of a hard-right party is likely to have little impact on the effective choice faced by almost every voter, and thus little impact on competition, and is therefore measured as such by  $H$ .

## 2.3 Data

This section describes the data used to operationalise 20 and for the regression analyses. The data used are not new, information on district level electoral outcomes are taken from the CD accompanying Caramani (2004). Data on party manifestos are taken from the CD accompanying Budge et al. (1997) and Klingemann, Volkens, Bara, Budge and McDonald (2006). Data on individual preferences, income, and other demographic characteristics are taken from the Eurobarometer survey (Schmitt and Scholz (2005-12-06)). However, their combination is totally innovative. One reason for this is that the combination of these datasets could not be easily automated due to different and changing district boundaries, and a lack of coincidence between between the different geographic systems used. This necessitated a manual approach. The details of how these data were combined are long-winded, reflecting the approach taken, and are described

in the Web Appendix.<sup>3</sup> The resultant dataset is reasonably large and details results for 224 national elections in 15 European democracies, for the period 1945-'98.<sup>4</sup> Data available are for if not the Universe, the vast majority of candidates. There are a total of around 69,000 candidates standing in 3000 electoral districts. That is, what might seem a surprisingly large average of 23 candidates per district, per election.

Ideally, data would be available on the preferences of each voter in every district, at every election, along with detailed data on candidate and voter characteristics. The case is made in what follows, that despite significant limitations the data on preferences available are very different than those of such an ideal dataset, they still represent a meaningful improvement despite these imperfections.

The data on voter preferences are taken from the Eurobarometer data. A key limitation of these data, is that whilst they exhibit the necessary geographic coverage, in general it is not possible to disaggregate them at the district level. In particular, the highest feasible level of disaggregation gives a median of 23 districts per survey area.<sup>5</sup> Moreover, they are only available for the period 1979-'95. This limitation has implications for both the implementation of the measure of electoral competitiveness developed in section 2.2 and for the interpretation of the results. However, to disregard the data entirely would be to ignore valuable

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<sup>3</sup>The scripts used are available upon request.

<sup>4</sup>The countries, with number of elections in parentheses, are; Austria(8), Belgium(17), Denmark(22), Finland(15), France(14), Germany(14), Ireland(15), Italy(14), Luxembourg(27), the Netherlands(16), Norway(14), Portugal(9), Spain(7), Sweden(17), and the UK(15).

<sup>5</sup>The Eurobarometer data use a geographic coding scheme, similar, but not equivalent to the NUTS2 scheme used by Eurostat.

information. One alternative, would be to try to infer the district level preference distributions by exploiting, for example, differential overlap in districts and the Eurobarometer survey regions. Our preferred option here is simpler. We assume that the quantiles of the Eurobarometer district distribution are consistent, and unbiased, estimators of the electoral district distribution. If  $I_\alpha^*$  is the  $\alpha^{th}$  quantile of the unobserved electoral-district level preference distribution, and  $I_\alpha$  the  $\alpha^{th}$  quantile of of the Eurobarometer-district level distribution, then this assumption can be made more explicit using a two-way error component model:

$$I_\alpha = I_\alpha^* + \lambda_\alpha \quad (21)$$

$$\lambda_\alpha \sim \zeta_\alpha + \eta_\alpha \quad (22)$$

$$\lambda_\alpha \sim N(0, \sigma) + N(\mu, \phi) \quad (23)$$

Where  $\zeta_\alpha$  is sampling error and  $\eta$  is the error associated with variation across electoral districts within a given Eurobarometer district. Then we just require that the sampling error is not associated with the cross district variation,  $cov(\zeta, \eta) = 0$ , and that the average of the cross-district variations is 0,  $E[\mu] = 0$ . The latter is trivially true, but the former maybe more problematic. The extent to which this isn't true will lead to errors in the construction of 20. One potential consequence would could be for this to translate into extreme values of 20 and hence outlying observations. However, the empirical strategy discussed in Section 2.4 should allay many of these concerns, through the use of fixed-effects, and quantile regression.

A similar problem concerns the manifesto data. As data are not available on the individual politicians manifesto positions, it has to be assumed that there are not systematic variations in the electoral platform of individual politicians from that specified by their party's national manifesto. This assumption is made more reasonable by the necessity of coherent policy platforms across districts in most European systems, and a focus on the national level policy debates. This is not to deny the importance of local issues or individual candidates stated preferences, but again to assume that there is no consistent pattern in these, following a similar argument to that made about voters' preferences  $H$  is calculated given these two assumptions.

Let,  $q(a)$  be the  $a^{th}$  quantile of the survey data, then 20 can be calculated as:

$$H = \sum_a \sum_j [\gamma_j(F(q(a)) - F(q(a-1)))]^2 \quad (24)$$

The other variables used may be categorised by whether they are available at the electoral district, the eurobarometer district, or national level. Summary statistics and a Correlation Matrix are reported in Table 1, and Table 2 respectively. At the district level, other than the competition measure, the variables of interest available are the number of candidates (nparties), the vote share of each party, and the total turnout level. In relation to the number of political parties, this variable is obtained using the data contained in "Mapping Policies Preferences" by Bulge et al. 2009. The authors have analysed only the political parties that reached

a threshold of 4% of vote received at national level. This guarantees that only political party recognized at national level will take into account for our analysis. We have an average of 5 political parties. The highest number of parties present in a nation is 11 (see for example Spain, Italy, or Belgium). From the Budge's dataset we have recovered data on the number of people that are entitled to vote (pev). For those observations for which the Eurobarometer data are available then a rich set of additional regressors are available. These include data on income per capita (ordered variable originally ranging from 1 to 12); information on the self-declared social class of the respondent (soclassmean); demographics variables (such as age of the respondent (agemean), level of education (edumean), number of children that the respondent has (childrenmean)), as well as political beliefs (such as information if the citizen feel close to any political party (feelclomean)). Following, the results of the literature reviewed by Geys (2006) the importance of these measures is also investigated.

## **2.4 Empirical Analysis**

The econometric approach taken is designed to address two key features of the available data. Firstly, that few variables are available at the Electoral district level leading to potential concerns about unobserved heterogeneity. Secondly, that the data have an inherently multilevel structure.

The first concern is addressed, as far as possible, using standard panel data techniques. We also use longitudinal quantile regression techniques as introduced



by Koenker (2004) and extended by Harding and Lamarche (2009), Lamarche (2010), Galvao Jr. (2011) to consistently estimate the distribution of the effect on turnout of increased electoral competition. Quantile regression is an  $l_1$  estimator in that it minimises the absolute deviations rather than their squares, one particular advantage of this type of approach is that it is less sensitive to outlying observations.

To address the second concern a multilevel approach is used to analyse the other determinants of district level turnout. Data on these other factors, such as education levels or income per capita, are also taken from the Eurobarometer survey and the Eurostat database and are mostly only available at the regional level. Hence, a multilevel approach in which this particular data structure can be explicitly handled allows consideration of a broader range of possible determinants of turnout.

### 2.4.1 Least-Squares Estimates

Our starting point is a standard error-component model:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \quad (25)$$

$$\varepsilon_{it} = \lambda_i + \mu_t + u_{it} \quad (26)$$

$$u_{it} \sim N(0, \sigma_u) \quad (27)$$

Table 3 summarises the results of estimating 25 for a variety of specifications.

The absolute number of political parties is included alongside the competition measure, as it is important to ensure that the estimated effect reflects additional competition rather than simply the consequences of extra parties regardless of their size or location on the political spectrum. A second important issue is how best to model idiosyncratic factors affecting turnout at a given election. Figure 2.1 suggests that a single linear time-trend is unlikely to be adequate, and that allowing for different national trends may also not be sufficient. Indeed, it is reasonable to argue that trends may vary by region if not district and one issue is to find the right balance between a sufficiently rich time trend that will eliminate as much unobserved heterogeneity as possible and preserving degrees of freedom. Table 3 reports results for a variety of specifications and different time trends. Columns 1 and 2 contain results of random-effects and fixed-effects estimates respectively. The estimated coefficients are similar, and both suggest that a one standard-deviation increase in political competition leads to just under 0.4 of a standard deviation increase in turnout, or around 5 percentage points. The results of a Hausman test suggest that despite the similarity in the coefficients that the fixed-effects specification should be preferred. The importance of allowing for variation across elections is highlighted by the smaller coefficients obtained using specifications reported in Columns 3 and 4. Yet, clearly there may be significant idiosyncratic local features at every election. But, a balance has to be struck between avoiding over parametrisation of the model whilst maximising the explanatory power of the model. Columns 5 and 6 report results that represent an attempt to achieve this balance with the respective inclusion of either regional

level stochastic time-trends or a combination of stochastic national time trends and linear regional trends. The estimated coefficients are now again just below 0.4. The most heavily parametrised specification with district level linear trends is reported in Column 7 and political competition has an estimated coefficient of around 0.34 suggesting a one standard deviation increase in competition leads to an increase of around 4 percentage points. This last specification is probably overly demanding of the available data, but the broad consistency in the estimated coefficients across all seven specifications is persuasive. For sake of completeness I have run the same specification using the standard Herfindahl index. The results are reported in table 4. As in our previous analysis, the hausman test suggests that the fixed-effect model should be preferred to the random-effects one. The Herfindahl index can range from 0 to 1, moving from a huge number of very small political parties to a single political party. Increases in the Herfindahl index generally indicate a decrease in political competition, whereas decreases indicate the opposite. All the coefficients in our specifications are negative showing that increasing the level of competition, the turnout raises as well. However, the magnitude of the reported coefficients is really small. This result is in line with the literature that has used this index to capture the effect of political competition on turnout.

Not surprising the effect of the number of political parties on turnout is similar to the ones obtained using the alternative measure we suggested. In all specification, the number of political party is consistently significant at 1% level. And the sign of the coefficient is always positive indicating that higher the number of political

parties, the level of turnout increases.

Table 5 contains results for individual countries. The results exclude Austria, Finland, and Sweden for which insufficient observations were available. The estimated coefficient of *scomp* is positive everywhere but Belgium although its magnitude varies markedly by country. It is however not significant at conventional levels for either Belgium or Portugal, and only barely so for Spain. One explanation for this is that this might be connected to sample size, as the subsample available for each country is below average. Overall, the results suggest that the large impact of competition, as measured, on Turnout is a consistent across countries despite the rich variety different electoral systems employed. As well in this case, we have replicated the results using the standard measure used in the literature.

Table 6 reports the analyses for individual countries using the Herfindal index as measure of political competition. The results do not diverge so much from the one obtained using our proposed measure. The only difference concerns Belgium that becomes significant at 1% level. Instead, Germany stops to be significant. The major differences that we can mention are related with the magnitude of these coefficients. This is lower than the one obtained using our measure.

### **2.4.2 Quantile Regression Estimates**

Whereas Least-Squares estimates focus on minimising the sum of squared deviations from the mean, Quantile regression estimators focus on minimising the sum of absolute deviations from an arbitrary percentile, commonly the median.

The presentation of this approach will be necessarily brief here and readers are directed to Koenker and Hallock (2001) for an excellent introduction, whilst Koenker (2005) provides a more thorough treatment. Following Koenker and Hallock (2001), recall that Least Squares estimators are the solution to problems of the following form:

$$E(Y|X) = \min_{\beta} \sum_i^N (y_i - \mu(x_i, \beta))^2$$

Where  $\mu(x, \beta)$  is a some parametric function.<sup>6</sup> If  $Q_{Y|X}(\tau)$ , the conditional value of the  $\tau^{th}$  percentile of  $Y$  given  $X$  is the quantile equivalent of  $E(Y|X)$  then the quantile estimators solve:

$$Q_{Y|X}(\tau) = \min_{\beta} \sum_i^N (y_i - \varepsilon(x_i, \beta))$$

Where  $\varepsilon(x_i, \beta)$  is similarly some parametric function. If  $\varepsilon(x_i, \beta) = X' \beta_{\tau}$  and the quantile of interest is the median ( $\tau = 0.5$ ) then:

$$Q_{Y|X}(\tau) = \min_{\beta} \sum_i^N (y_i - x_i' \beta)$$

The quantile regression estimates focus on the same specification described in Equation 25. Rather than focus on the median or some other specific quantiles the entire distribution of effects is estimated simultaneously. Koenker (2004) defines

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<sup>6</sup>OLS corresponds to  $\mu(x_i, \beta) = x_i' \beta$ .

the fixed effect quantile regression model as:

$$Q_{y_{ij}}(\tau|x_{ij}) = \alpha_i + x'_{ij}\beta(\tau) \quad j = 1, \dots, m_i, \quad i = 1, \dots, n \quad (28)$$

Crucially,  $\alpha_i$  is assumed to not vary by quantile, much reducing the number of parameters to be estimated. This is especially important here as for some countries, we have data for relatively few elections and estimating quantile specific fixed effects would likely be too demanding of the data. Still following Koenker (2004), the model in Equation 28 implies solving:

$$\min(\alpha, \beta) \sum_{k=1}^q \sum_{j=1}^n \sum_{i=1}^{m_i} w_k \rho_{\tau_k}(y_{ij} - \alpha_i - x'_{ij}\beta(\tau_k)) \quad (29)$$

Where,  $w_k$  describes the relative influence of each quantile on the estimates of  $\alpha_i$ . The specification of the  $w_k$ 's is a choice for the investigator but we follow Koenker (2004) in assigning weights of  $w_k = (0.25, 0.5, 0.25)$  to the 3 quantiles<sup>7</sup>.  $\rho_{\tau}(s) = u(\tau I(s < 0))$  is the loss function proposed by Koenker and Bassett (1978) and minimising  $\rho_{\tau}(s)$  for any given quantile,  $\tau$ , gives the  $\tau^h$  quantile of the random variable  $s$ .

The resulting estimates of  $\beta$  from solving Equation 29 for the same specification as in Table 3 Column 4 (that with the lowest mean effect of competition) are reported in Figure 4. Three key features are immediately obvious. Firstly, that the estimated effect is uniformly lower than that found using least squares.

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<sup>7</sup>Below, the model is estimated for a broader range of quantiles but the tri-mean weighting is retained, this allows other quantiles no influence on the fixed effect estimates.

Secondly, that the estimates are uniformly at the median and below. Thirdly, that the estimated effect is positive for every quantile of the distribution. These features suggest that while competition raises turnout the effect is right-skewed. This means that for each election fewer district are concerned with high level of competition and that the level of turnout increases only in district where the level of competition is higher. Results for other specifications are available upon request, but again the results are broadly consistent across specifications. Taking together the quantile results, the country-specific results, and the different specifications considered in Table 2, suggests that there is convincing evidence for a relationship between turnout and the degree of political competition. The main qualification on the result, is that the effect seems far from uniform. Why this, will be an interesting avenue for future research.

### **2.4.3 Multi-level Estimates**

As discussed previously, one problem is that many variables of interest are not measured at the district level. The remedy employed here is to employ a simple two-step methodology that decomposes the vector of fixed effects into an explained component and remaining unit specific heterogeneity. This approach should not be confused with the increasingly popular FEVD estimator of Plumper and Troeger (2007)<sup>8</sup>. Instead, the approach is rather simpler. We observe data on a set of variables  $Z$  at a higher level of aggregation than we do the dependent

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<sup>8</sup>Although the recovery of slowly time-varying variables would be useful in this context, this estimator requires a strong orthogonality assumption which is unlikely to be reasonable here. For further details see Beck(2011).

variable or the independent variables  $X$ . We thus estimate the following regression specification using OLS:

$$Y = \alpha_1 D_1 + \beta X + \rho_1 T_2 + \varepsilon_1 \quad (30)$$

$$\hat{\alpha}_1 = \alpha_2 D_2 + \gamma Z + \rho_2 T_2 + \varepsilon_2 \quad (31)$$

Where  $D_1$  is a vector of district fixed-effects,  $D_2$  is a vector of country fixed effects,  $T_1$  and  $T_2$  are stochastic time trends, and  $\varepsilon_1 \sim N(0, \sigma_1)$  and  $\varepsilon_2 \sim N(0, \sigma_2)$ ,  $Cov(\varepsilon_1, \varepsilon_2) = 0$ , are error terms. The control variables used are demographic variables from the Eurobarometer survey, however we collapse these data such that the unit of observation is the regional mean. The results of this approach are reported in Table 7. The full set of controls are unavailable for all districts and so columns 1-6 report results for a variety of different specifications. However, the overall message is clear - all variables are significant at one percent level. These results are in line with the finding in the literature. All the estimated coefficients are positive but income. This implies that turnout is, *ceteris paribus*, higher if people feel closer to a certain political party, confirming the partisanship hypothesis.

It is not surprising that higher level of education and older age are associated with high level of turnout. Large part the literature agree on these results. Instead the result for income is counter-intuitive. The only explanation that we can propose is that higher income voters face a greater opportunity cost of voting and as such



choose not to. This seems compatible with an expressive model (as well as classical Downsian approaches) as there is no particular reason to presume that the expressive utility derived from voting is correlated with income, and as such those facing higher costs should vote less. To double check this result, we have used the variable social class as a proxy for income. The result seems to confirm the puzzling result for income. Higher the social class to which the citizen belongs, lower the level of turnout.

## **2.5 Conclusion**

This paper has developed a new measure of political competition that is based on the ideological distribution of voters and political parties. This measure constitutes a major innovation in the literature. None of the existing measures have used the ideological dimension as a benchmark upon which elections are evaluated if they are competitive or not. It is quite puzzling, considering that the elections are the metaphysical place on which different ideologies clash. Our paper departs from the existing analyses for the way in which we have employed our measure as well. Large part of the literature has tried to understand the impact of political competition on turnout. In our paper, we try not to give a omnibus-comprehensive answer to the question why people vote but we try to understand why the level of turnout changes from districts to district during the same election, and from election to election in the same country. To answer to these questions, we have focus our attention on district level data. As far as

we know, very few paper have employed this level of the analysis for European countries. Large part of the analysis made at district level are limited to the US elections. To verify the hypothesis that the difference in the level of turnout is mainly driven by the level of competition, we have built a unique dataset that combine data from several different sources including the district level historical election data of Caramani (2004), and data from the Comparative Manifesto Project and Eurobarometer. We are not aware of any other dataset that contains detailed information in relation to political, demographic, and social variable. The richness of our dataset has allowed us to employ both conventional panel-data techniques as well as a Quantile and a Multilevel approach to provide consistent evidence that political competition has a statistically significant and quantitatively large impact on turnout levels.

Table 1: Summary Statistics

	mean	sd	min	max
turnout	0.743	0.113	0.082	0.997
scomp	0.213	1.113	-0.947	6.599
nparties	5.083	2.091	2.000	11.000
pev	186832.808	252107.790	22785.000	3700000.000
agemean	45.171	1.885	33.167	51.680
soclassmean	2.194	0.407	1.473	3.176
incomemean	7.341	0.959	3.068	9.378
childrenmean	0.583	0.185	0.000	1.297
educmean	4.185	0.694	2.544	7.450
feelclomean	351.863	58.980	159.429	600.000

Table 2: Correlation Matrix

	turnout	scomp	nparties	pev	age	soclass	income	children	education	feelclose
turnout	1									
scomp	0.0398	1								
nparties	0.248	-0.849	1							
pev	-0.106	-0.353	0.337	1						
agemean	0.338	0.162	0.00346	-0.183	1					
soclassmean	0.170	-0.645	0.714	0.417	-0.0999	1				
incomemean	0.254	0.192	-0.0772	-0.226	0.170	-0.0887	1			
childrenmean	-0.396	0.342	-0.483	-0.0952	-0.355	-0.357	-0.0305	1		
educmean	-0.0544	-0.428	0.434	0.288	-0.371	0.570	-0.0162	-0.106	1	
feelclomean	-0.0997	0.142	-0.160	-0.208	-0.153	-0.0860	0.236	0.162	0.0272	1

Table 3: Survey-based Measure Results

The Dependent Variable is Turnout						
	(1)	(2)	(3)	(4)	(5)	(6)
scomp	0.389*** (0.029)	0.392*** (0.034)	0.192*** (0.035)	0.213*** (0.042)	0.352*** (0.073)	0.258*** (0.051)
nparties	0.209*** (0.011)	0.102*** (0.012)	0.284*** (0.014)	0.267*** (0.025)	0.237*** (0.034)	0.228*** (0.030)
Estimator	Random-Effects	Fixed-Effects	Fixed-Effects	Fixed-Effects	Fixed-Effects	Fixed-Effects
Time Trend	None	None	Stochastic	Stochastic	Stochastic	Stochastic & linear
				(Country-Specific)	(Region-Specific)	(National) (regional)
<i>N</i>	4826	4826	4826	4826	4826	4826

Clustered robust standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 4: Survey-based Measure Results

The Dependent Variable is Turnout						
	(1)	(2)	(3)	(4)	(5)	(6)
hhindex	-0.038*** (0.008)	-0.084*** (0.009)	-0.095*** (0.009)	-0.073* (0.041)	0.097*** (0.041)	-0.112** (0.058)
nparties	0.092*** (0.018)	0.289*** (0.021)	0.324*** (0.024)	0.291*** (0.031)	0.318*** (0.022)	0.325*** (0.027)
Estimator	Random-Effects	Fixed-Effects	Fixed-Effects	Fixed-Effects	Fixed-Effects	Fixed-Effects
Time Trend	None	None	Stochastic	Stochastic	Stochastic	Stochastic & linear
				(Country-Specific)	(Region-Specific)	(National) (regional)
<i>N</i>	16016	16016	16016	16016	16016	16016
Clustered robust standard errors in parentheses.						
* $p < 0.10$ , ** $p < 0.05$ , *** $p < 0.01$						

Table 5: Results by Country

The Dependent Variable is Turnout										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
scomp	-0.211 (0.128)	1.232*** (0.289)	1.584*** (0.169)	2.853*** (0.159)	0.120*** (0.027)	0.262*** (0.093)	0.272*** (0.074)	0.326 (0.231)	0.085* (0.045)	0.297*** (0.039)
nparties	0.406*** (0.079)	0.299*** (0.023)	0.431*** (0.051)	0.371*** (0.031)	0.233*** (0.049)	0.268** (0.109)	0.062 (0.055)	0.433*** (0.063)	0.249*** (0.057)	1.923*** (0.231)
Country	Belgium	Denmark	France	Germany	Ireland	Italy	Netherlands	Portugal	Spain	UK
N	167	136	671	1169	300	454	130	48	197	1468

Clustered errors in parentheses. Fixed effect estimates also included a stochastic time-trend

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 6: Results by Country

The Dependent Variable is Turnout										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
hindex	-0.357*** (0.023)	-0.932*** (0.018)	-0.239*** (0.040)	-0.071 (0.061)	-0.231*** (0.074)	-0.306*** (0.021)	0.162** (0.071)	-0.368*** (0.033)	-0.356* (0.038)	-0.192*** (0.051)
nparties	0.806 (0.035)	0.135 (0.021)	0.385*** (0.033)	0.050*** (0.050)	0.002*** (0.066)	0.772** (0.054)	-0.639 (0.153)	1.202*** (0.084)	3.49*** (0.032)	0.166*** (0.027)
Country	Belgium	Denmark	France	Germany	Ireland	Italy	Netherlands	Portugal	Spain	UK
N	470	301	1221	1917	606	1109	267	180	350	8672

Clustered errors in parentheses. Fixed effect estimates also included a stochastic time-trend

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



Table 7: Multilevel Estimates of the Socio-Economic Determinants of Turnout levels

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Closeparty</i>	0.003*** (0.0006)	0.003*** (0.0007)	0.003 (0.0007)	0.004*** (0.0008)	0.004 (0.0008)	0.004 (0.0008)
<i>Age</i>			0.040*** (0.011)	0.056** (0.012)	0.056** (0.012)	0.060*** (0.012)
<i>Education</i>		0.127*** (0.023)	0.137*** (0.23)	0.215*** (0.027)	0.215*** (0.027)	0.267*** (0.032)
<i>Income</i>				0.054*** (-0.015)	-0.116*** (-0.017)	-0.131*** (0.278)
<i>SocialClass</i>						
<i>N</i>	2277	2277	2277	2277	2277	2277
<i>R</i> <sup>2</sup>	0.032	0.036	0.038	0.028	0.040	0.036

Clustered robust standard errors in parentheses. The error are clustered at regional level.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Figure 1: Turnout Varies Both Across Time and Across Countries.

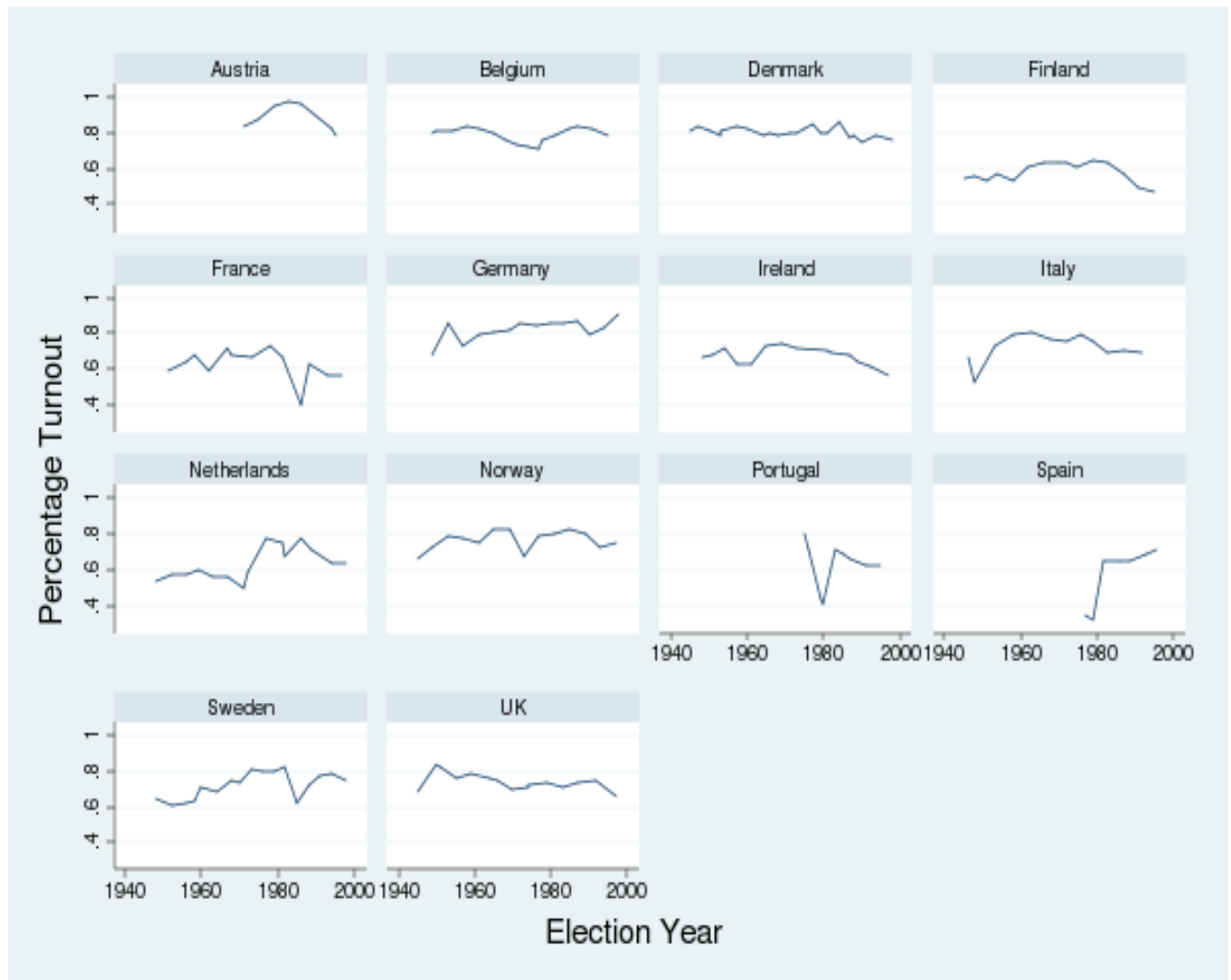


Figure 2: The structure of a voters' decision

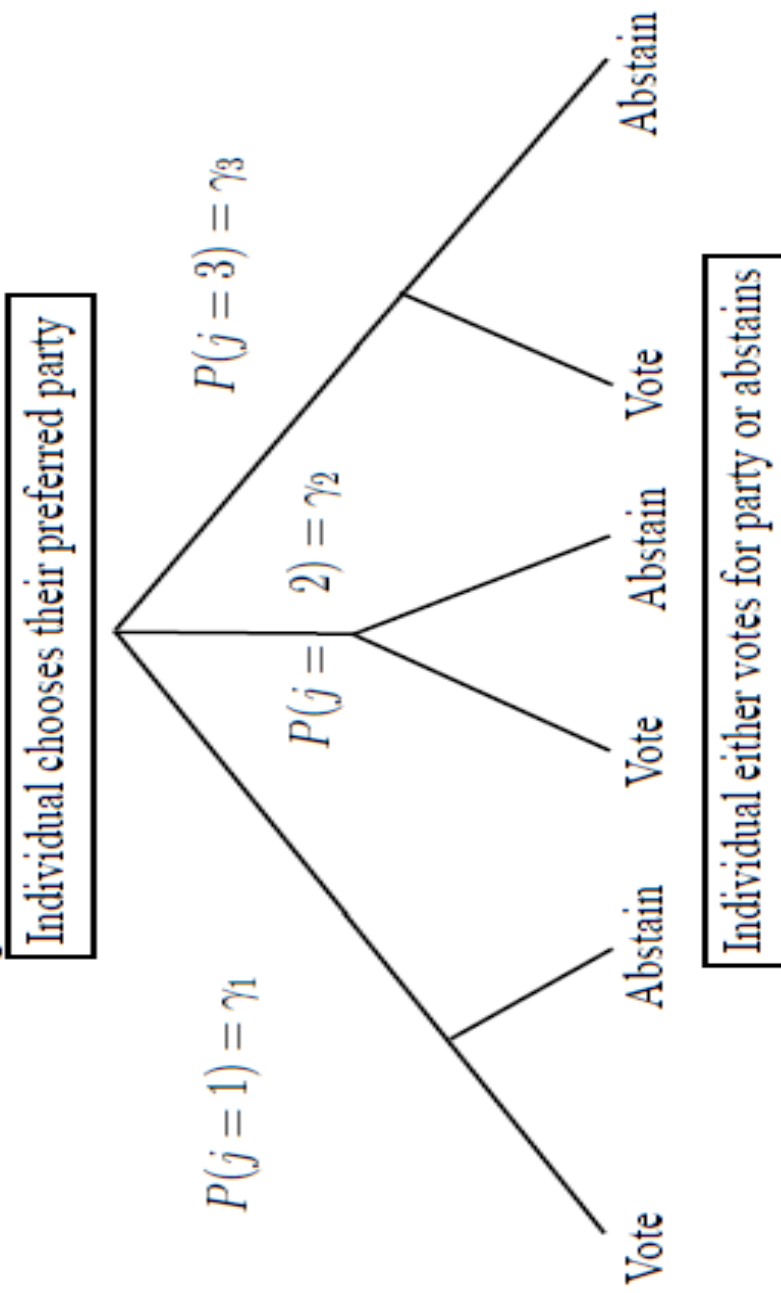
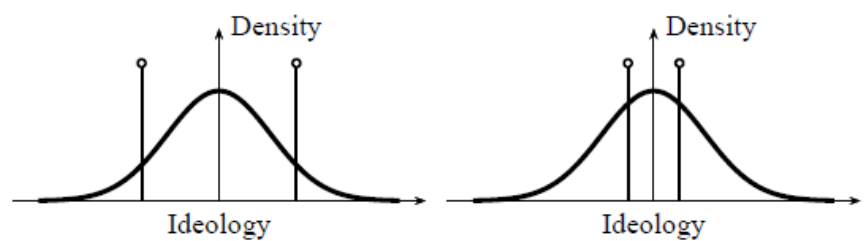
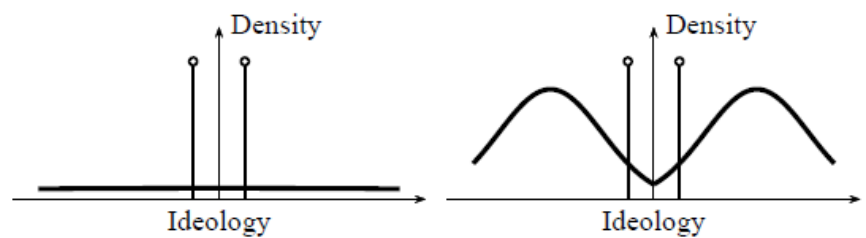


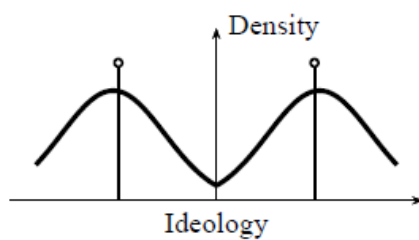
Figure 3: Different combinations of party location and population preference distributions



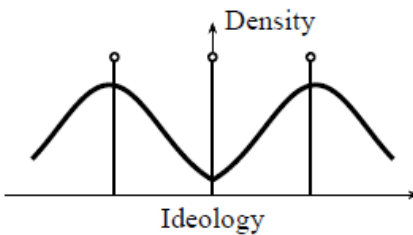
(a) Centrist Population, Two Relatively Extreme Parties (b) Centrist Population, Two Centrist Parties



(c) Uniform Population, Two Centrist Parties (d) Bimodal Population, Centrist Parties



(e) Bimodal Population, Relatively Extremist Parties



(f) Bimodal Population, Three Parties

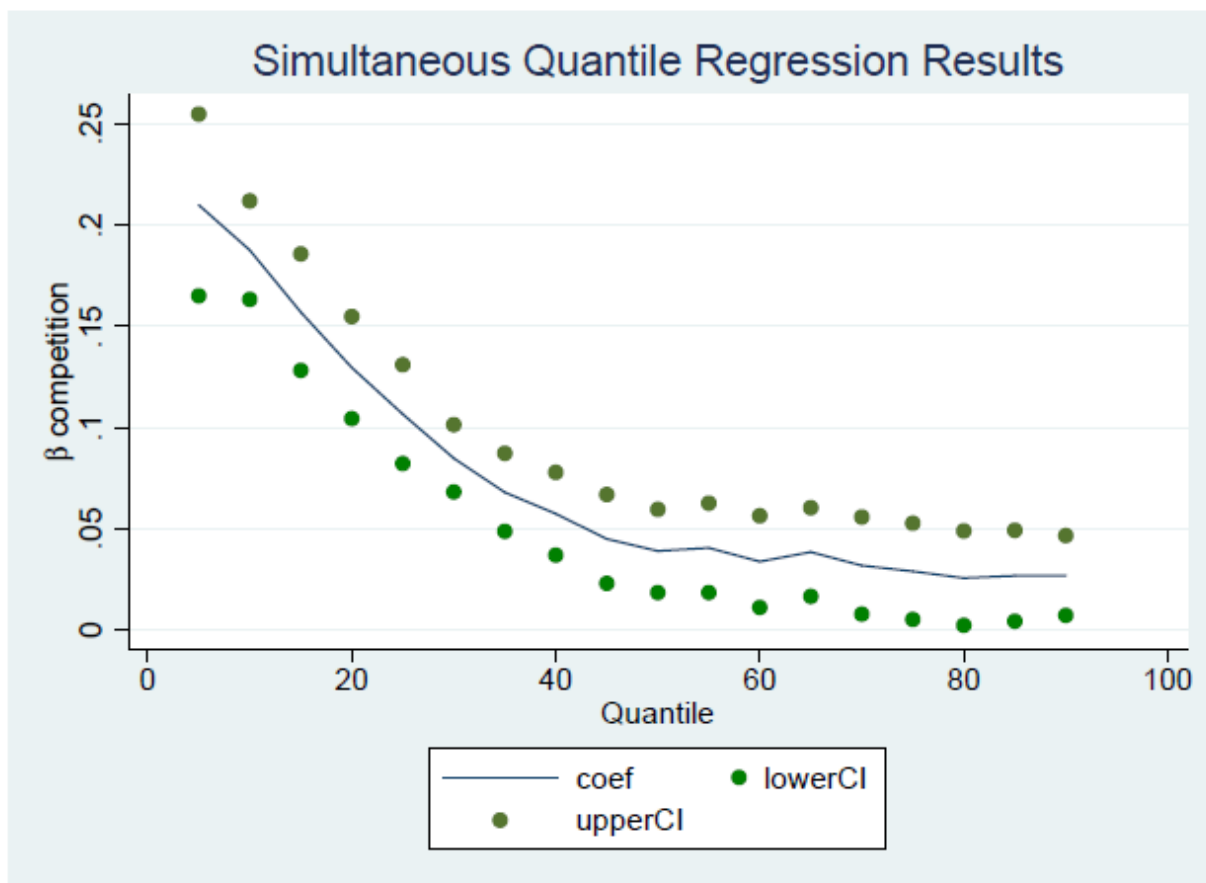


Figure 4: Simultaneous Quantile Regression Estimates of the Effect of Competition on Turnout

## **Chapter 3**

### **Human Well Being and Strategic Voting**

I extend the research on happiness and spatial theory of voting by exploring whether the ideological vote affects the level of subjective well-being in the society. I base my analysis on data on the subjective life satisfaction of a large sample of individuals over 50 elections in 15 OECD countries. The results of the analysis firmly support the dominant role of the ideological vote in the well-being of the individuals. Specifically, I demonstrate that subjective life satisfaction is negatively affected by the presence of strategic voting. The results also suggest that the level of well-being is lower when the citizen votes strategically for a political party that has not won the electoral competition. Moreover, when I account for political affiliation of the individuals, the right-wing voters are more susceptible to ideological consideration than left wing voters. My results are robust to different measures of strategic voting.

### 3.1 Introduction

In recent years, an increasing number of disciplines have focused their attention on what makes us happy. The economic literature does not constitute an exception. In the last 20 years, the effort of several scholars was devoted to examine the impact on happiness (or quality of life) of a large number of factors. I can distinguish between three different groups of determinants of happiness. The first one is the socio-demographic characteristics (such as age, gender, education, and marital status). Wilson (1967) attributes happiness to the “young, healthy, well-educated, well paid, extroverted, optimistic, worry-free, religious married person with high self-esteem, job morale, modest aspirations, of either sex and a wide range of intelligence”. These results are recently confirmed by Helliwell, J. (2003). Using data from the world values survey between 1980 and 1997, covering 46 different countries. She has tested the impact of happiness on the marital status of the citizens. The level of happiness is the highest for the married, followed by the living as married, then widows, the divorced and finally the separated. Oswald (1997) has tested that the relationship between age and happiness is apparently U-shaped (Oswald, 1997). The level of happiness is the highest for young or old people. In general, I can confidently state that there is a large consensus in the the literature about the relationship between well-being and socio-demographics factors (Helliwell, J. F., Putnam, R. D. (2004); Frey, B., Stutzer, A. (2005); Keyes, C., Schmotkin, D., Ryff, C. (2002); Ott, J. (2005); and so on...). The second group includes the socio-economic factors(such as

income, social class, and individual unemployment status). Easterlin, R. A. (2003) finds that an increase in income, or an increase in the goods at one's disposal, increase the happiness of a person. However, it does not bring with it a lasting increase because of the negative effect on utility of hedonic adaptation and social comparison. Following this result, he argues that there is a need to use policies to make peoples preferences better-informed (e.g. that they should invest less time in financial goals because increased wealth has little impact on well-being), and thereby increase individual and societal well-being. However, as a response to the Easterlin's paradox just described, Di Tella, R., MacCulloch, R. (2005) find (from the responses of 400,000 people in the OECD between 1975 and 1999) that (after controlling for the year and the country) happiness was positively correlated with the absolute income gained per year and negatively with the unemployment level. It is really interesting to notice that the difference in happiness between married and separated is larger than between the employed and the unemployed (Helliwell, J. (2003)). And the last one consists of macroeconomic characteristics (such as GDP, the general level of unemployment and inflation (Clark and Oswald, 1994; Gerlach and Stephan, 1996; Di Tella et al., 2001, Di Tella et al., 2005)).

However, even after accounting for a wide range of characteristics such as the ones described above, the Happiness phenomenon remains largely unexplained. If money can buy happiness (Oswald, 2007), why do people living in the richest countries have a low level of happiness? To be married is a source of happiness, but still divorce is common. Being unemployed is a source of high unhappiness "over and above the income loss..." (Frey and Stutzer, 2000).



Recently, a strand of the literature has started to focus his attention on the relationship between the political behaviour and society's well-being. This literature is still in its infancy, so I can mention very few papers that have put in relationship the decision to vote and happiness. The starting point of their analysis is the model proposed by Downs. According to this model, voting is costly and the citizen will take part in the election only when the benefits received will out-weight the costs associated with the act of voting. However, there is not an agreement in the literature about what are the costs associated with the act of voting and what is the correct function that shape the benefit associated with such act. Some author has tried to use the subjective well being as part of the utility function of the voters. Radcliff (2001) tested how the SWB is positively affected by the presence of a Left-Wing Government. However, this result is not unequivocal. Di Tella and MacCulloch (2005) found that SWB of right-wing individual is positively affected by the presence of a government leaning towards the right of the ideological spectrum. Their result finds corroboration in the work of Napier and Jost (2008). They explained this positive relationship on the propensity of the right-wing voters to justify income inequalities. In their study on the Swiss Canton, Frey and Stutzer (2000) found that the degree of direct democracy affects significantly the life satisfaction. They link the citizen participation with the monitoring level of the politician's activity. In their view, the stricter control operated by the individuals translates into the implementation of policies that are closer to the bliss point of the citizenry: satisfaction with the government choice is mirrored in a higher level of well-being. Dolan et al

(2008), reversed the problem posed by Frey and Stutzer and studied for the first time the casual relationship between decision to vote and SWB. They found that the probability to cast a ballot is not affected by the life satisfaction. However, when they take into account the political affiliation, they demonstrate how the Conservatives with higher SWB are less likely to vote. All the above papers as well if they do not agree on which side of the ideological spectrum foster SBW, they seems to agree on the highly importance of ideological position of government and citizens in affecting the well-being of the individual.

In this paper I argue that is not the colour of the government itself, and/or the citizens' ideological location on the left-Right spectrum to affect the people level of happiness, but the way in which people exercise their legal right to vote. Specifically, I want to test whether the voters' well being is higher when they cast their ballot in a strategic way.

I use the term strategic and non-sincere indifferently. Mainly my definition of strategic voting is drawn from Merlo (2007): "...in an election based on ideological consideration, voters vote sincerely if they cast their vote in favour of the candidate whose ideological position is closest to their own (given the ideological position of all the candidates in an election)". The voters cast their ballot for the most preferred party without taking into consideration the parties' chance to win the election (Abramson et al, 1992; Cox and Shugart, 1996; McCuen, 1999) or which party would form the official opposition (Franks, 1997). There are two major reasons why strategic voting can be expected to negatively affect voters' SWB. Firstly, people's thoughts and feelings are influenced by the

actual, imagined, or implied presence of the other members of their recognizable group<sup>1</sup>. The statement that other people may be imagined or implied suggests that they are prone to social influence even when no other people are present, such as when watching television, or following internalized cultural norms. When it comes to the election, they identify themselves with a political party that best represent their interest, or with who they share a common political ideology. Every time a citizen casts his vote for a political party different from the one that best represent his preferences, he may feel that he has betrayed the his political group.

Secondly, the act of voting itself represents a self affirmation of all the values and beliefs that constitute the individuality of a person. Voting for a political party is a declaration of what the voter thinks in matter of equality, economy, welfare, and so on. In this light, casting a strategic vote is like lying about their own value. It is commonly accepted in modern psychology that the act of lying is a source of stress for the individual. If a voter casts his ballot for a political party different from his preferences, he may undergo the same type of stress that he may face when he is lying. This translate in a lower level of SWB. This paper represents the first attempt to address the relationship between strategic voting and SWB. The main dataset used for our analysis is not innovative. The Eurobarometer was used by Di Tella and MacCulloch (2005) in their analysis. However, the Eurobarometer is only one of the three dataset that I have combined to create a unique compilation of data. The second dataset used is contained in

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<sup>1</sup>Allport, 1985

the book by Budge et al. (2001) and it provides information on the ideological location of the political parties based on their manifestoes. The third source is the data contained in the book by Jean Wooldendorp and Hans Keman (2004) “Party Government in 48 Democracies”. The book contains the names of the parties that won any election. This information is particularly important given that my analysis concerns on a large extent PR countries that allow coalition government. Unluckily, it does not exist any digital record of this information. I have digitized them manually. The combined sources form a unique and rich collection of data. The number of elections and the number of countries considered is really high: over 50 elections in 14 OECD countries. The years taken into account span from 1975 to 2002.

I have proposed a new measure to evaluate if the people vote can be considered strategic or not (according to the definition given above). I find that the people casting their ballot in a strategic way are more likely to be unhappy than people that votes in a sincere way. Moreover, the left-wing supporters are more likely to be unhappy if they cast their vote in a strategic way. Instead the effect is not statistically significant for the voters leaning to the right of the ideological political spectrum. I also found that the probability to be happy is lower when the party they have voted for is not elected to form the new government. However, in this last case, I obtain a counter intuitive result for the right-wing voters. For this sub-category, I found a positive relationship between strategic vote and SWB. The paper is organized in five parts. Section 2 review the literature on strategic voting. Section 3 describe the database used and give an account of the strategy employed

to built our variables of interest. Section 4 depict the empirical methodology. Section 5 discusses the results, and section 6 concludes.

## 3.2 Data

The data that I use in this study is drawn from a variety of sources. The main variable are based on the “Mannhein Standard Euro-Barometer” (henceforth “Euro-Barometer”), compiled by European Commission. The database collects information on happiness, voting behaviour, and demographic characteristics from over half million face-to-face interviews in 14 OECD countries. The period of time of interest spans from 1975 to 2002. The dependent variable (Happiness) used for my analysis is based on the answer to the following question: “On the whole, are you very satisfied, not very satisfied or not at all satisfied with the life you lead?”. The individual could choose his answer between four categories: “Very Satisfied”, “Fairly Satisfied”, “Not Very Satisfied”, and “Not at all satisfied”<sup>2</sup>. We have coupled the categories of unhappiness and happiness to create a dichotomous variable taking the value of 1 if they are happy. In this paper, as a major explanatory variable, I focus on the strategic vote. To identify the strategic voters, I rely on the definition given by spatial theory of voting: a voter votes sincerely in an election if she casts her ballot in favour of the candidate whose ideological position is closest to her own (given the ideological positions of all the candidates in the election). Sincere voting means to have a clear preference

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<sup>2</sup>the two small categories “Do not know” and “No answer” are not included in our analysis

for a particular political party or candidate and to vote accordingly. Thus, the vote must be based on one's own preferences. Strategic voting, on the other hand, may well be based on other considerations such as helping to bring about a certain coalition government or to show your own dislike for a certain candidate, or to punish the political party for past behaviour and so on. For this analysis, I do not need to investigate the citizens' underlying motivation to vote strategically. I assume that every time, the citizen does not vote for his most preferred party, he casts a strategic ballot. To recover this variable I have matched some of the information contained in the Euro-Barometer with the data contained in the "Mapping Policy Preferences: Estimates for Parties, Electors, and Government 1945-2002" (Budge et al., 2001). This dataset contains the position of each political party competing in an election on a Left-Right ideological spectrum. I have used the following two questions drawn from the Euro-Barometer: *"when it comes to politics, do you usually think of yourself as extremely liberal, liberal, slightly liberal, moderate, middle of road, slightly conservative, conservative, extremely conservative? Indicate your preferences on a ten-point political scale (1 being extreme left, 10 being extreme right)"*; I have combined the above information with a question related to the vote expressed: *"in the last election, which party did you vote?"*. I have replaced the party voted with their ideological position on the left-right spectrum as calculated by Budge et al (2006). In this way, I have a common ideological space for the set of voters and the set of political parties. To identify the nearest party (ideologically speaking) to the preferences of the voter, I calculate the euclidean distance between the self-reported individual

ideological preference and the ideological position of each competing party in a certain election. I compare all the euclidean distances obtained to identify the political party for which this distance is the smallest. Every time a citizen casts his ballot for the party whose political platform along the ideological space is the closest to the one he most prefers, he votes sincerely. Otherwise, he shows a strategic behaviour <sup>3</sup>. The strategic variable created is a dichotomous one that takes the value of one when the voters are strategic.

### 3.3 Empirical Strategy

To test whether the propensity to be happy is affected by the way in which the people vote, I use an ordered logit model. The econometric specification can be written as follow:

$$H_{i,c,t}^s = \alpha + \beta \text{Strategic}_{i,c,t}^s + \gamma \text{Demo}_{i,c,t}^s + \delta \text{Macro} + \epsilon_{i,c,t}^s$$

The subscript  $i$  and  $t$  indicate respectively the individuals and the time. As I have showed before,  $H$  is the individual's propensity to be satisfied. This "Happiness" variable is defined as a three point scale variable taking the value of: Very happy, Quite Happy, Not at All Happy. The variable Sincere indicates whether a citizen has cast his vote in favour of the candidate whose ideological position is closet to his own (given the ideological position of all the other candidate in an election) or not. To make my analysis comparable with previous studies, I have included in my

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<sup>3</sup>For more information in how I build the variable see Acacia, 2011.

regression several variables that the literature has found accountable for the level of happiness. For this reason my estimation equation regresses the individual happiness scale on two other sets of determinants: the demographic variables and the economic variables. The first set contains all the variables describing the personal attributes of the respondents. It includes: age (three age groups are explicitly accounted for, ranging from 18 to 99 years old), gender, extent of formal education (low or higher education), relationship status (single, married, cohabiter, divorced), the number of children (one, two, or three), the employment status (self-employed, or student). For the latter set, two variables are taken into account: the unemployment, and the income situation of the family. All our estimates include country fixed effects, time fixed effects, and their interaction. They are mainly designed to minimize any unobserved heterogeneity that could be correlate with our explanatory variable.

### **3.4 Estimation Results**

Before moving on to our main results, it is worth pointing out that, all our estimates report standard errors that are robust to heteroskedasticity of unspecified form. My primary specification brings support to the idea that “ideological motivation” plays an important role in the level of subjective well-being. The results from table 1 confirm that a voter has a lower probability to be happy if he decides to cast his vote for a political party that is not the nearest to his preferences. More specifically, voting for a party that is not the most preferred one decreases



the probability to be happy by 1.2 percent. This result seems to contradict the rationality assumption underlying the theory of voting. If the people are utility (or hedonistic) maximizers and vote in a strategic way that decreases their probability to be happy, why do they do it? As Kahneman and Thaler (1994) have pointed out “some choices that the people make may involve a lack of empathy for the future self who will have to live with the choice”. This failure in forecasting the cost (interpreted as a decrease in happiness) of their choice may mislead them to vote for a political party that is not the nearest to their preferences. However, when I account for the political preferences of the voter my analysis leads to an interesting result. I have created two separate sub-samples, one for left-wing and one for right-wing individuals. The negative coefficient of my main variable is still significant at the 1 per cent level for the people leaning toward the left of the political spectrum.

However, when I analyze the right-wing supporter, the coefficient becomes insignificant. This is not an intuitive finding and could be driven by the result of the electoral race. I regress my specification taking into account whether the people have voted for a political party that has won the electoral competition or not. Table 4 shows that being strategic affects negatively the level of well-being if the political party voted by the citizen has not won the election. A possible explanation may be grounded on the base of the utility of the strategic voting. The citizen may feel that his vote represents a waste of resources. On one side, with his vote, he has not supported the political party that is nearer to his preferences. On the other side, he may feel that he has failed in reaching the objective he has

fixed. As well in this case, when I take into consideration the political preferences of the voters, the results vary greatly between the left and right supporter (Table 5). People, leaning towards the right of the political spectrum, that have voted strategically for a party that has not won the electoral race, have higher likelihood to be happy. I infer that the ideological position plays a dominant role for the right supporters. Their SWB is affected positively by the absence in the government of the political party voted by citizens but that still does not represent their ideological view. On the contrary, the voting behaviour of the left-wing supporters seems motivated by more opportunistic considerations. It is worth noticing that in each specification I have analysed in this paper, the demographic and economic variables yield very similar results (in sign and magnitude) as were previously found by the literature. For example, young people seem to have lower probability to be happy compared to the middle aged. On the contrary, people that are older have a higher probability to be happy compare to the one included in the reference category. People that are married or live together with their partner seem to have a higher level of SWB. To check the robustness of my results I also considered a specification with an alternative measure of strategic voting. To build this alternative variable I used the following question drawn from the Euro-Barometer: “generally speaking do you feel closer to one of the national political parties than the other? If yes, which one?” I compare the answer to this question with the one about their vote in the last election. I create a dichotomus variable that takes the value of one (strategic vote), if the party they feel close to is not the same as the party they have voted for, and the value of zero (sincere vote) otherwise.

Table 2 shows the result of the regression with the new variable. The strategic variable is still significant at 5 per cent level. To show that my results are robust in regard to the estimation method, I have estimated my primary specification using an ordinary least square. Column 2 of table 2 show that the OLS offers qualitatively the same results as the ordered logit.

### **3.5 Conclusion**

In this paper I have tried to deepen our knowledge in relation to the determinants of happiness. My paper brings strong evidence that there is relationship between voting behavior and reported level of happiness. I can argue that voting for a political party with a platform far away from a person's own preferences is negatively correlated with the level of subjective well-being. When I account for the influence of the political ideology on happiness, my general result holds for the left wing voters. Instead, it is surprising that there is no relationship between the right wing voters supporter and the level of happiness. When I account for the hypothesis that the voted political party is in the government, the right wing shows a positive correlation between the probability to be happy and voting for a political party that represents their preferences. This is consistent with the hypothesis that voters gain hedonistic utility from the possibility of being represented by people who share the same ideological political view. The result does not hold for the left wing political supporter. While my results are informative, there are obvious shortcomings. My results are robust even if I use different method to identify

strategic voters and different methodology to analyze the data. I am not able to assert that respondents in the survey are less inclined to be happy if they vote strategically or they vote in a strategic way because they are less happy. The casual relationship between the two variables could be object of future studies. On one side my findings corroborate and deepen the results obtained by Di Tella MacCulloch (2005). On the other side, they deepen our knowledge about the relationship between institutional factors and happiness.

# Table 1

## General Model

	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Strategic	-0.104**	(0.048)
Young	-0.257***	(0.047)
Old	0.171***	(0.038)
Cohort_ '21-'39	-0.320***	(0.035)
Cohort_ '40-'49	-0.421***	(0.040)
Cohort_ '50-'59	-0.346***	(0.046)
Cohort_ '70-'80	0.181***	(0.059)
Female	0.128***	(0.016)
Single	0.039	(0.050)
Married	0.3334***	(0.026)
Cohabiter	0.564***	(0.076)
Separated	-0.427***	(0.095)
Divorced	-0.217***	(0.052)
N_Child 0	-0.101*	(0.056)
N_Child 1	-0.082	(0.055)
N_Child 2	0.026	(0.052)
Education (Low)	-0.370***	(0.035)
Education (High)	0.410***	(0.050)
Income 1	-0.165***	(0.033)
Income 3	0.181***	(0.031)
Income 4	0.411***	(0.039)
Student	0.653***	(0.068)
Self Employed	-0.237***	(0.041)
Unemployed	-0.754***	(0.058)
/cut1	-1.64***	(0.064)
/cut2	1.05***	(0.065)
N	54,909	
F( 24, 471)	85.05***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

## Table 2

### Robustness Check

	(Alternative Strategic Measure)		(OLS)	
	(Coefficient)	(Std. Err.)	(Coefficient)	(Std. Err.)
Strategic			-0.035**	(0.015)
Strategic/Close	-0.136***	(0.038)		
Young	-0.198***	(0.052)	-0.083**	(0.030)
Old	0.366***	(0.039)	0.054***	(0.030)
Cohort_ '21-'39	-0.294***	(0.040)	-0.106***	(0.027)
Cohort_ '40-'49	-0.251***	(0.052)	-0.130***	(0.032)
Cohort_ '50-'59	-0.292***	(0.051)	-0.113***	(0.031)
Cohort_ '70-'80	0.228***	(0.075)	0.060***	(0.052)
Female	0.130***	(0.022)	0.040***	(0.005)
Single	-0.265***	(0.034)	0.014	(0.046)
Married	0.347***	(0.035)	0.108***	(0.023)
Cohabiter	0.584***	(0.097)	0.190***	(0.070)
Separated	-0.402***	(0.091)	-0.139***	(0.095)
Divorced	-0.198***	(0.063)	-0.066***	(0.049)
N_Child 0	-0.172	(0.039)	-0.034*	(0.038)
N_Child 1	-0.053	(0.021)	-0.025	(0.020)
N_Child 2	-0.027	(0.020)	0.010	(0.017)
Education (Low)	-0.428***	(0.041)	-0.120***	(0.026)
Education (High)	0.339***	(0.054)	0.130***	(0.044)
Income 1	-0.215***	(0.038)	-0.050***	(0.028)
Income 3	0.265***	(0.037)	0.060***	(0.027)
Income 4	0.437***	(0.045)	0.137***	(0.033)
Student	0.594***	(0.082)	0.203***	(0.070)
Self Employed	-0.185***	(0.044)	-0.077***	(0.033)
Unemployed	-0.736***	(0.071)	-0.230***	(0.042)
/cut1	-1.56***	(0.069)		
/cut2	1.086***	(0.063)		
N	12,894		54,909	
R-squared			0.151	
F( 24, 471)	85,90***	(0.000)		

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

**Table 3**  
**Political Preferences Model**

	<b>Left</b>		<b>Right</b>	
	<i>(Coefficient)</i>	<i>(Std. Err.)</i>	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Strategic	-0.216***	(0.055)	-0.069	(0.039)
Young	-0.262***	(0.055)	-0.222***	(0.039)
Old	0.104***	(0.048)	0.188***	(0.030)
Cohort_ '21-'39	-0.306***	(0.046)	-0.312***	(0.027)
Cohort_ '40-'49	-0.374*	(0.052)	-0.401***	(0.032)
Cohort_ '50-'59	-0.338**	(0.058)	-0.291***	(0.031)
Cohort_ '70-'80	0.134**	(0.069)	0.192**	(0.052)
Female	0.168***	(0.023)	0.086***	(0.013)
Single	0.024	(0.067)	-0.091	(0.046)
Married	0.305***	(0.058)	0.380***	(0.023)
Cohabiter	0.599***	(0.109)	0.624***	(0.070)
Separated	-0.343***	(0.124)	-0.544***	(0.095)
Divorced	-0.125	(0.090)	-0.315***	(0.049)
N_Child 0	-0.103	(0.067)	-0.081	(0.038)
N_Child 1	-0.084	(0.064)	-0.082	(0.020)
N_Child 2	-0.049	(0.060)	-0.008	(0.017)
Education (Low)	-0.369***	(0.041)	-0.328***	(0.026)
Education (High)	0.337***	(0.048)	0.504***	(0.044)
Income 1	-0.145***	(0.042)	-0.168***	(0.028)
Income 3	0.161***	(0.037)	0.182***	(0.027)
Income 4	0.362***	(0.046)	0.413***	(0.033)
Student	0.581***	(0.077)	0.660***	(0.070)
Self Employed	-0.274**	(0.068)	-0.278***	(0.033)
Unemployed	-0.751***	(0.054)	-0.607***	(0.042)
/cut1	-1.592***	(0.071)	-1.76***	(0.063)
/cut2	1.127***	(0.070)	0.952***	(0.064)
N	31,900		23,009	
F( 24, 468/465)	50.40***	(0.000)	41.13***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

**Table 4**  
**Party Voted in the Government**

	(Yes)		(No)	
	(Coefficient)	(Std. Err.)	(Coefficient)	(Std. Err.)
Strategic	-0.096	(0.067)	-0.139***	(0.021)
Young	-0.360***	(0.066)	-0.151**	(0.039)
Old	0.095***	(0.051)	0.223***	(0.030)
Cohort_ '21-'39	-0.341***	(0.054)	-0.300***	(0.027)
Cohort_ '40-'49	-0.473***	(0.058)	-0.334***	(0.032)
Cohort_ '50-'59	-0.432***	(0.069)	-0.256***	(0.031)
Cohort_ '70-'80	0.227***	(0.078)	0.130	(0.052)
Female	0.054**	(0.026)	0.190***	(0.013)
Single	-0.029	(0.064)	-0.131*	(0.046)
Married	0.326***	(0.051)	0.359***	(0.023)
Cohabiter	0.439***	(0.097)	0.739***	(0.070)
Separated	-0.416***	(0.158)	-0.404***	(0.095)
Divorced	-0.332***	(0.097)	-0.071	(0.049)
N_Child 0	-0.176*	(0.082)	-0.034	(0.010)
N_Child 1	-0.046	(0.083)	-0.114	(0.020)
N_Child 2	-0.072	(0.082)	-0.018	(0.017)
Education (Low)	-0.347***	(0.042)	-0.373***	(0.030)
Education (High)	0.326***	(0.059)	0.501***	(0.049)
Income 1	-0.208***	(0.048)	-0.114***	(0.033)
Income 3	0.177***	(0.042)	0.184***	(0.026)
Income 4	0.468***	(0.045)	0.358***	(0.033)
Student	0.486***	(0.100)	0.731***	(0.064)
Self Employed	-0.243***	(0.049)	-0.253***	(0.035)
Unemployed	-0.710***	(0.075)	-0.749***	(0.052)
/cut1	-1.972***	(0.049)	-1.336***	(0.094)
/cut2	0.807***	(0.047)	1.305***	(0.095)
N	27,812		27,097	
F( 24, 464/468)	42.24***	(0.000)	48.73***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.



**Table 5**  
**Party Voted is not part of the Government**

	(Left)		(Right)	
	<i>(Coefficient)</i>	<i>(Std. Err.)</i>	<i>(Coefficient)</i>	<i>(Std. Err.)</i>
Strategic	-0.301***	(0.067)	0.296***	(0.086)
Young	-0.205***	(0.076)	-0.006	(0.113)
Old	0.149***	(0.063)	0.278***	(0.095)
Cohort_ '21-'39	-0.248***	(0.066)	-0.370***	(0.083)
Cohort_ '40-'49	-0.336***	(0.070)	-0.304***	(0.089)
Cohort_ '50-'59	-0.280***	(0.079)	-0.145***	(0.108)
Cohort_ '70-'80	0.146*	(0.085)	0.079	(0.161)
Female	0.226**	(0.030)	0.133***	(0.049)
Single	-0.052	(0.084)	-0.339**	(0.132)
Married	0.299***	(0.076)	0.507***	(0.121)
Cohabiter	0.788***	(0.133)	0.615***	(0.135)
Separated	-0.350***	(0.147)	-0.550***	(0.279)
Divorced	-0.029	(0.108)	-0.163	(0.180)
N_Child 0	-0.012	(0.086)	-0.167	(0.121)
N_Child 1	-0.162	(0.084)	-0.048	(0.121)
N_Child 2	-0.017	(0.085)	-0.013	(0.125)
Education (Low)	-0.407***	(0.051)	-0.175***	(0.070)
Education (High)	0.431***	(0.058)	0.605***	(0.065)
Income 1	-0.119**	(0.052)	-0.117***	(0.083)
Income 3	0.194***	(0.046)	0.141***	(0.070)
Income 4	0.386***	(0.057)	0.277***	(0.073)
Student	0.701***	(0.089)	0.669***	(0.140)
Self Employed	-0.273***	0.074	-0.287***	(0.133)
Unemployed	-0.793***	(0.092)	-0.555***	(0.092)
/cut1	-1.347***	(0.049)	-1.334***	(0.146)
/cut2	1.294***	(0.047)	1.380***	(0.148)
N	18,591		8,506	
F( 24, 464/428)	35.10***	(0.000)	22.08***	(0.000)

\*\*\* denotes significance at 1% level, \*\*denotes significance at 5% level.

# **Appendix**

## **A.1 Introduction**

This Data Appendix provides additional information related to our database construction. Specifically, we will give a detailed account of the difficulties encountered in merging the two main databases used for our analysis. Section 1 describes the key variables used for matching the information contained in the two datasets. Section 2 gives a detailed account (by country) of the harmonisation problems encountered to construct our data.

## **A.2 Key Variables**

Our main database is contained in the book “Elections in Western Europe 1815-1996” written by Daniele Caramani. The data reports “a detailed historical breakdown, by party, of the election outcomes in the various individual constituencies or district”<sup>1</sup>. For the purpose of our analyses, we need to merge the above information with the one contained in the “Eurobarometer”, a database collected by the “Mannheimer Zentrum fr Europäische Sozialforschung” (MZES) in co-operation with the “Zentrum fr Umfragen, Methoden und Analysen”. The Eurobarometer is a cross-sectional longitudinal study, designed to provide an in depth analysis on the beliefs and characteristic of the citizens of 14 European countries <sup>2</sup> on differ-

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<sup>1</sup>Mair, 2001

<sup>2</sup>Specifically, the countries covered in the analyses are: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, and United

ent topics. Between the others, we can mention the “demographic variables” that describe the social position of the respondents, their sex, age, or education level; the “socio-political variables” concerning attitudes toward political and social issues (in particular the self-positioning in political scale); or the “voting variables” concerning the vote intention or the vote recall; and so on. To merge the two datasets, we need to identify the sub-national geographical unit (constituency or district<sup>3</sup>) in which the Eurobarometer’s interviewed live and match this information with the share of voting received by each party in that constituency. For our purpose, we use the variable “CONSTITUENCY” for the Caramani’s data and the variable “REGIONAT” for the Eurobarometer data. It is worth to mention that the variable REGIONAT has a twofold advantage. First of all, the interviewer provide the information contained in this variable. Second, the variable does not contain missing value. This allows us to identify with absolute certainty the constituency to which the interviewed belongs to. The two variables are based on the “Eurostat Region Code”. This code use a hierarchical system called “Nomenclature Territorial Units” (henceforth NUTS) to dividing up the territory, mainly according to the institutional division in force in each country. Generally, the the land is partitioned in three different levels. At a first level, each country is sub-divided in a whole number of NUTS 1 regions, each of which in turn is sub-divided into a whole number of NUTS 2 regions, and so on. Each level is defined by a minimum and a maximum population threshold for the size of the NUTS region. Usually,

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Kingdom.

<sup>3</sup>From now on, we use the two terms indifferently.

NUTS 1 contains a minimum of 3 Millions of citizens and a maximum of 7 Millions, NUTS 2 has a population size between 800,000 and 3 millions, and NUTS 3, the smallest one, has a minimum of 150,000 people and a maximum of 800,000<sup>4</sup>. However, despite any attempt to ensure that each region of comparable size appears at the same NUTS level, we can find regions that differ greatly in number of population in the same level. The problem is caused by an initial lack of a specific legislation to regulate the subject. For almost thirty years (precisely from the 1970, when the system was applied for the first time), the implementation and updating of the NUTS was mainly based on a “Gentlemen agreement” between the Member State and the Eurostat. In this period, each country could freely make any amendments to the boundary changes. Only during the July 2003, a proper regulation was enforced that allow each country to change the regional breakdown only every three years. This has create a sort of stability and continuity in the classification. Since the implementation of the regulation, every change in the unit level has to be communicated to the European Commission, which in turn amend the classification in the next period of stability.

### **A.3 Constituency Coding by Country**

The period of time object of our analysis is governed by the “Gentlemen agreement”. Each country can freely modify their sub-national geographical boundary without the previous communication to the European authority. This has created a

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<sup>4</sup>For major detail see “[http://epp.eurostat.eu/cache/ITY\\_OFFPUB/KS-RA-07-020/EN/KS-RA07-020-EN.PDF](http://epp.eurostat.eu/cache/ITY_OFFPUB/KS-RA-07-020/EN/KS-RA07-020-EN.PDF)”

twofold difficulties in merging the two datasets. First of all, the two database use two different NUTS levels. The Eurobarometer uses mainly the NUTS 2 level, instead the Caramani's database refers to the NUTS 3 level. For the purpose of our analysis we had to sum up the more detailed information contained in the Caramani's data to create a variable that make the two datasets compatible. The task was particularly difficult because we had to check constituency per constituency the NUTS 2 level to which they belong and there is no official document that track every boundary changes implemented in each country. Moreover, along the time, several constituencies change the region they belong to. Second, but not less important, there is problem linked with how the constituencies are named. The two database sometimes refers to the same constituency but they use different names. It could happens that some constituencies were abolished and the territory were transferred to a new constituency created ad hoc. However, this change was just nominally because the area considered was the same: they are substantially the same constituency as before, but formally they become two different constituencies. Moreover, we have detected, for the Caramani's data, several misspelling errors in the constituencies' name. This has created some confusion in relation to their existence as districts. To harmonise the two dataset, we have created a new variable that identify the NUTS 2 level the constituency belongs to. This requested us to check one by one each single district mentioned in the Caramani's data and Eurobarometer for every possible misspelling or error in the way it was recorded, or for possible boundary changes along the time, and to assign them a new code common to the two databases.

### **A.3.1 Austria**

#### **Oberösterreich**

Hausruckviertel, Innenviertel, Linz und Umgebung, Mhlviertel, Oberösterreich, Traunviertel.

#### **Niederösterreich**

Mostviertel, Niederösterreich, Niederösterreich Mitt, Niederösterreich Sd, Niederösterreich Sd-Ost, Waldviertel, Weinviertel, Wien-Umgebung.

#### **Wien**

Wien, Wien Innen-Ost, Wien Innen-Sd, Wien Innen-West, Wien Nord, Wien Nord-West, Wien Sd, Wien Sd-West.

#### **Burgeland**

Burgenland, Burgenland Nord, Burgenland Sd.

#### **Steiermark**

Graz, Steiermark, Steiermark Mitte, Steiermark Nord, Steiermark Nord-West, Steiermark Ost, Steiermark Sd, Steiermark Sd-Ost, Steiermark West.

#### **Salzburg**

Flachau/Tennengau, Lungau/Pinzgau/Pongau, Salzburg, Salzburg Stadt.

## **Karnten**

Klagenfurt, Krnten, Krnten Ost, Krnten West, Willach.

## **Tirol**

Innsbruck, Innsbruck-Land, Oberland, Osttirol, Tirol, Unterland.

## **Vorarlberg**

Unterland, Vorarlberg, Vorarlberg Nord, Vorarlberg.

## **A.3.2 Belgium**

The country is divided in ten regions. The only relevant boundary change that we have to take into account happened during the 1995. The region of Brabant, was split in two: “Flemish Brabant” and “Wallon Brabant”. The NUTS 3 level constituency of “Brussels” dissapears and become a NUTS 2 region, totally surrounded by the “Flemish Brabant” region but not any more part of this. The Caramani’ dataset contains NUTS 3 level data but the Eurobarometer refers to the NUTS 2 level. We have map the first one in the second one. Following, there is a detailed account of how the data were combined:

### **Flandre Orientale (Oost Vlaanderen)**

Alost (Aalst), Alost-Audenarde (Aalst-Oudenaarde), Audenaarde (Oudenaarde), Termonde (Dendermonde), Gand Eeklo (Gent-Eeklo), Saint Nicolas Termonde

(Sint Niklaas Dendermonde), Saint Nicolas (Sint Niklaas).

### **Flandre occidentale (West Vlaanderen)**

Bruges (Brugge), Courtrai (Kortijk), Courtrai Roulers Tielt (Kortrijk Roeselare Tielt), Furnes Dixmude Ostende (Veurne Diksmuide Oostende), Furnes Dixmude Ypres Ostende (Veurne Diksmuide Ieper Oostende), Roulers Tielt (Roeselare Tielt), Ypres (Ieper).

### **Anvers (Antwerpen)**

Anvers (Antwerpen), Malines (Mechelen), Turnhout, Malines Turnhout (Mechelen Turnhout).

### **Limbourg (Limburg)**

Hasselt, Hasselt Tongres Maaseik (Hasselt Tongeren Maaseik), Tongres Maeseyck (Tongeren Maaseik).

### **Bruxelles**

Bruxelles Hal Vilvorde (Brussel Halle Vilvoorde).

### **Brabant**

Nivelles (Nijvel), Louvain (Leuven), Bruxelles (Brussel).



**Brabant Wallon (Waals Brabant)**

Nivelles (Nijvel).

**Brabant Flamand (Vlaams Brabant)**

Louvain (Leuven), Bruxelles (Brussel).

**Hainaut (Henegouwen)**

Charleroi, Charleroi (Thuin), Mons Bergen, Mons Soignes (Bergen Zinnik), Soignes (Zinnik), Thuin, Tournai Ath Mouscron (Doornik Aat Moeskroen).

**Namur (Namen)**

Dinant Philippeville, Namur Dinant Philippeville, Namur (Namen).

**Lige (Luik)**

Huy Waremme (Hoel Borgworm), Lige (Luik), Verviers.

**Luxembourg (Luxemburg)**

Arlon Marche Bastogne Neufchteu Virton, Neufchteau Virton, Arlon Marche Bastogne (Aarlen Marche Bastenaken).

### **A.3.3 Denmark**

#### **Jylland**

Aalborg amtskreds, Aarhus amtskreds, Frederiksborg amtskreds, Haderslev m. fl., Amters amtskreds, Hjoerring amtskreds, Nordjyllands amtskreds, Randers amtskreds, Ribe amtskreds, Ringkoebing amtskreds, Skanderborg amtskreds, Soenderjyllands amtskreds, Thisted amtskreds, Viborg amtskreds.

#### **Fyn**

Fyns amtskreds, Odense amtskreds, Svendborg amtskreds, Vejle amtskreds.

#### **Hovestadtsomradet**

Storstroems amtskreds, Oestre storkreds, Praestoe amtskreds, Vestre storkreds, Koebenhavns amtskreds, Soendre storkreds.

#### **Sjaelland**

Bonholms amtskreds, Holbaek amtskreds, Maribo amtskreds, Roskilde amtskreds, Soroe amtskreds, Vestjaellands amtskreds.

### **A.3.4 Finland**

#### **Pohjois-Suomi**

Oulun laanin, Lapin laanin.

### **Vali-Suomi**

Keski Suomen laanin, Vaasan laanin, Vaasan laanin etelainen, Vaasan laanin itainen, Vaasan laanin pohjoinen.

### **Ita-Suomi**

Mikkelin laanin, Kuopion laanin, Kuopion laanin itainen, Kuopion laanin lantinen, Pohjoinen Karialan laanin, Oulun laanin.

### **Etela-Suomi**

Turun Porin laanin pohjoinen, Turun Porin laanin etelainen, Hameen laanin etelainen, Hameen laanin etelainen, Hameen laanin pohjoinen, Kymen laanin, Kymen laanin itainen, Kymen laanin lantinen.

### **Uusimaa**

Uudenmaan laanin, Helsinki laanin, Nylands Lan.

### **Ahvenenmaa**

Ahvenmnaan laanin.

## **A.3.5 France**

The territory of France is divided in 555 constituencies. Each of them account for a seat in Parliament. These districts are grouped in 95 regions (NUTS 3),

which in turn are grouped again in 22 districts belonging to the NUTS 2 level. While the Caramani's data give us information in relation to the NUTS 3 level, the Eurobarometer contains just information in relation to the NUTS 2 level. We have checked and assigned the NUTS 3 regions of the Caramani's data to the corresponding superior level of geographical grouping of the Eurobarometer.

### **Nord Pas De Calais**

Nord, Pas-de-Calais.

### **Haute-Normandie**

Eure, Seine-Maritime.

### **Picardie**

Aisne, Oise, Somme.

### **Champagne Ardenne**

Ardennes, Aube, Marne, Marne (Haute-).

### **Lorraine**

Meurthe-et-Moselle, Meuse, Moselle, Vosges.

### **Alsace**

Rhin (Bas-), Rhin (Haute-).

### **Basse Normandie**

Calvados, Manche, Orne.

### **Bretagne**

Ctes du Nord, Finistre, Ile et Vilaine, Morbihan.

### **Pays de la Loire**

Loire Atlantique, Maine et Loire, Mayenne, Sarthe, Vende.

### **Ile de France, Paris**

Essonne, Hauts de Seine, Paris, Seine-Saint-Denis, Seine et Marne, Seine et Oise, Yvelines, Val d'Oise, Val de Marne.

### **Centre(Country)**

Cher, Eure et Loir, Indre, Indre et Loire, Loir et Cher, Loiret.

### **Bourgogne**

Cte d'Or, Nievre, Saone et Loire, Yonne.

### **Franche Comte**

Doubs, Jura, Saone (Haute-), Territoire de Belfort.

## **Auvergne**

Allier, Cantal, Loire (Haute-), Pay de Dome.

## **Rhone Alpes**

Ain, Ardeche, Drome, Isere, Loire, Rhone, Savoie, Savoie (Haute-).

## **Poitou-Charentes**

Charente, Charente Maritime, Sevres (Deux-), Vienne.

## **Limousin**

Correze, Creuse, Vienne (Haute-).

## **Aquitaine**

Dordogne, Gironde, Landes, Lot et Garonne, Pyrenees Atlantiques.

## **Midi Pyrenees**

Ariege, Aveyron, Garonne (Haute-), Gers, Lot, Pyrenees (Hautes-), Tarn, Tarn et Garonne.

## **Languedoc Roussillon**

Aude, Gard, Herault, Lozere, Pyrenees Orientales.

## **Provence Alpes Cote d' Azur**

Alpes (Hautes-), Alpes Maritimes, Alpes de Provence, Bouches du Rhone, Corse, Corse (Haute-), Corse du Sud, Var, Vaucluse.

## **A.3.6 Germany**

### **Braunschweig**

Braunschweig.

### **Schleswig-Holstein**

Flensburg, Flensburg Schleswig, Herzogtum Lauenburg, Herzogtum Lauenburg Stormarn Sd, Husum, Kiel, Lubeck, Norder und Sderdithmaschen, Nordfriesland Dithmarschen Nord, Oldenburg, Ostholstein, Pinneberg, Pinneberg, Plon, Plon-Neumunster, Rendsburg, Rendsburg Eckernforde (Rendsburg Excernforde), Rendsburg Neumunster, Schleswig, Schleswig Eckemforde, Segeberg Stormarn Nord, Segeburg Eutin, Segeberg, Steinburg Dithmarschen Sd, Steinburg Sderdithmarschen, Steinburg, Storman Herzogtum Lauenburg, Stormarn.

### **Hamburg**

Altona, Barmbek, Bergedorf, Eimsbittel, Eppendorf, Eppendorf Winterhude, Finkenwerder, Hamburg Altona, Hamburg Bergedorf, Hamburg Eimsbittel, Hamburg Mitte, Hamburg Harburg, Hamburg Nord, Hamburg Nord I, Hamburg Nord II, Hamburg Wandsbek, Harburg, Lokstedt, Wandsbek.

## **Bremen**

Bermerhaven, Bremen Nord, Bremenhaven Bremen Nord, Bremen West.

## **Niedersachen**

Alfeld Holzminden, Aurich Emden, Bersenbruck, Bersenbruck Lingen, Braunschweig Land Helmstedt, Braunschweig, Celle, Celle-Uelzen, Cloppenburg, Cloppenburg Vechta, Cuxhaven, Cuxhaven Hadeln Wesermude, Delmenhorst, Delmenhorst Wesermarsch, Diepholz, Diepholz Melle Wittalge, Emden Leer, Emsland, Fallingsbostel Hoya, Friesland Wilhelmshaven, Gandersheim Salzgitter, Gifhorn, Gifhorn Peine, Goslar, Goslar Wolfenbittel, Gottingen, Gottingen Munden, Hameln Holzminden, Hameln Pyrmont Holzmindel, Hameln Springe Hannover I, Hannover II, Hannover III, Hannover Land, Hannover Land I, Hannover Land II, Harburg, Harburg Soltau, Harz, Helmstedt Wolfsburg, Hildesheim, Hildesheim Stadt und Land, Holzmindel, Hoya, Leer, Lüneburg, Lüneburg Dannenberg, Lüneburg Luchow Dannenberg, Mittelems, Neustadt Grafschaft Schaumburg, Nienburg, Nienburg Schaumburg, Nienburg Schaumburg Lippe, Northeim, Northeim Einbeck Duderstadt, Northeim Osterode, Oldenburg, Oldenburg Ammerland, Osnabrück, Osnabrück Stadt und Land, Osnabrück Land, Peine Gifhorn, Salzgitter, Salzgitter Wolfenbittel, Schaumburg, Soltau Fallingbostel Rotenburg II, Soltau Harburg, Soltau Rotenburg, Stade, Stade Bremenvorde, Stade Rotenburg I, Stadt Braunschweig, Stadt Hannover I, Stadt Hannover II, Stadt Hannover Nord, Stadt Hannover Süd, Stadt Osnabrück, Unterems, Vechta Cloppenburg, Verden, Ver-



den Osterholz, Verden Rotenburg Osterholz, Wilhelmshaven, Wolfenbützel Goslar Land, Ulzen.

### **Mecklenburg Vorpommern**

Greifswald, Guestrow, Gustrow, Neubrandenburg, Neustrelitz, Rostock, Rostock Land, Schwerin Hagenow, Stralsund, Wismar.

### **Sachsen Anhalt**

Altmark, Bernburg, Dessau, Eisleben, Elbe, Elbe Havel, Halle Neustadt, Halle Altstadt, Halle Neustadt, Harz und Vorharzgebiet, Magdeburg, Magdeburg Schönebeck, Merseburg, Wittenberg, Zeitz.

### **Berlin**

Berlin Charlottenburg, Berlin Friedrichshagen, Berlin Hellersdorf, Berlin Hohen-schönhausen, Berlin Kreuzberg, Berlin Kopenick, Berlin Mitte, Berlin Neukölln, Berlin Pankow, Berlin Reinickendorf, Berlin Riedrichshagen, Berlin Spandau, Berlin Tempelhof, Berlin Tiergarten, Berlin Zehlendorf.

### **Brandenburg**

Bad Liebenwerda, Brandenburg, Cottbus, Eberswalde, Frankfurt (Oder), Fürstenwalde, Luckenwalde, Neuruppin, Oranienburg, Potsdam, Prenzlau, Senftenberg.

## **Nordrhein Westfalen**

Aachen, Aachen Land, Aachen Stadt, Ahaus Bocholt, Altena Ludenscheid, Arn-  
berg Soest, Beckum Warendorf, Bergheim, Bergheim Euskirchen, Bielefeld, Biele-  
feld Land, Bielefeld Land Halle, Bielefeld Stadt, Bochum, Bochum I, Bochum  
II, Ennepe Ruhr Kreis II, Bochum III, Bochum Witten, Bonn, Bonn Stadt und  
Land, Borken, Borken II, Borken Bocholt Ahaus, Bottrop, Bottrop Gladbeck, Bot-  
trop Recklinghasen IV, Coesfeld Steinfurt I, Detmold, Detmold-Lippe, Dinslaken,  
Dortmund I, Dortmund II, Dortmund III, Dortmund III Lunen, Duisburg I, Duis-  
burg II, Duren, Duren Monschau Schleiden, Dusseldorf I, Dusseldorf II, Dussel-  
dorf III, Dusseldorf Mettmann I, Dusseldorf Mettmann, Dusseldorf Mettmann II,  
Ennepe Ruhr Kreis, Ennepe Ruhr Kreis I, Ennepe Ruhr Witten, Erftkreis I, Es-  
sen I, Essen II, Essen III, Euskirchen Erftkreis II, Geilenkirchen Erkelenz Julich,  
Geilenkirchen Heinsberg, Geldern Kleve, Gelsenkirchen, Gelsenkirchen I, Gelsenkirchen  
II, Gelsenkirchen II Recklinghausen III, Gladbeck-Bottrop, Gutersloh, Hagen,  
Hamm Unna II, Heinsberg, Herford, Herfort Stadt und Land, Herne, Herne Cas-  
trop Rauxel, Hochsauerlandkreis, Hoxter Lippe II, Hoxter, Hoxter Lippe II, Iser-  
lohn, Iserlohn Stadt und Land, Kempen Krefeld, Kleve, Krefeld, Kreis Aachen,  
Koln I, Koln II, Koln III, Koln IV, Koln Land, Lemgo, Leverkusen, Leverkusen  
Rheinisch Bergischer Kreis I, Lippe I, Lippestadt Brilon, Lippstadt Brilon, Lud-  
inghausen, Ludinghausen Cosfeld, Meschede Olpe, Mettmann I, Mettmann II,  
Minden, Minden Lubbecke, Minden Lubbecke II, Moers, Markischer Kreis I,  
Markischer Kreis II, Monchengladbach, Mors, Mulheim, Munster, Muster Stadt  
und Land, Neuss I, Neuss II, Neuss Gravenbroich, Neuss Grevenbroich I, Ober-

bergischer Kreis, Oberbergischer Kreis Siegkreis II, Oberhausen, Olpe Meschede, Olpe Siegen II, Olpe Siegen Wittgenstein II, Paderborn, Paderborn Wiedenbruck, Recklinghausen I, Recklinghausen II, Recklinghausen II Borken I, Recklinghausen Land, Recklinghausen Stadt, Rees Dinslaken, Remscheid Solingen, Remscheid, Rhein Sieg Kreis I, Rhein Sieg Kreis II, Rhein Wupper Kreis, Rheinisch Bergischer Kreis, Rheinisch Bergischer Kreis I, Rheinische Bergischer Kreis, Rheydt Grevenbroich II, Rheydt Monchengladbach Viersen, Siegen I, Siegen Stadt und Land Wittgenstein, Siegen Wittgenstein, Siegen Wittgenstein I, Siegkreis, Siegkreis I Bonn Land, Soest, Solingen, Solingen Remscheid, Steinfurt II, Steinfurt Coesfeld, Steinfurt-Tecklenburg, Sost, Tecklenburg, Unna, Unna I, Unna II, Unna Hamm, Viersen, Wanne Eickel Wattenscheid, Warburg Hoxter Buren, Warendorf, Wesel I, Wesel II, Wattenschied Wanne Eickel, Wuppertal I, Wuppertal II.

## **Hessen**

Bergstrasse, Bergstrasse Heppenheim, Budingen Friedberg, Darmstadt, Darmstadt Stadt und Land, Dieburg, Dillkreis Wetzlar, Eschwege, Eschwege Melsungen, Frankenberg Fritzlar Homberg Ziegenhain, Frankfurt I, Frankfurt II, Frankfurt III, Frankfurt am Main I, Frankfurt am Main III, Frankfurt am Main I Main Taunus, Frankfurt am Main II, Frankfurt am Main III, Friedberg, Fritzlar Homberg, Fulda, Giessen, Gross Gerau, Hanau, Hersfeld, Hochtaunus, Hofgeismar Waldeck Corbach, Kassel, Kassel Stadt und Land, Lahn-Dill, Limburg, Limburg Bad Schwalbach, Marburg, Oberlahnkreis Bad Homburg, Obertaunuskreis, Odenwald, Offenbach, Offenbach Stadt und Land, Rheingau Taunus Limburg, Schwalm Eder,

Waldeck, Werra Meissner, Wetterau, Wetzlar, Wiesbaden.

### **Rheinland Pfalz**

Ahrweiler, Altenkirchen, Bitburg, Bittburg, Cochem, Frankenthal, Kaiserslautern, Koblenz, Kreuznach, Landau, Ludwigshafen, Mainz, Montabaur, Montabur Oberwesterwald kreis, Neustadt, Neustadt Speyer, Neuwied, Pirmasens, Prum, Speyer, Sudpfalz, Trier, Worms, Zweibrucken.

### **Saarland**

Homburg, Homburg St. Ingbert, Ottweiler, Ottweiler St. Wendel, Saarbrucken Land, Saarbrucken I, Saarbrucken II, Saarbrucken Land, Saarbrucken Stadt, Saarlouis, Saarlouis Merzig, Sankt Wendel, St. Ingbert.

### **Thuringer**

Altenburg, Eisenach, Erfurt, Gera Stadt, Gotha Arnstadt, Jena, Meiningen, Nordhausen, Saalfeld, Suhl, Sommerda, Weimar.

### **Saachsen**

Annaberg, Aue, Bautzen-Lbau, Brautzen, Chemnitz I, Chemnitz II, Delitzsch, Dresden I, Dresden II, Dresden-Land, Dbeln, Freiberg, Glauchau, Grlitz, Hoyerwerda, Leipzig I, Leipzig II, Leipzig-Land, Meissen, Pirna, Reichenbach, Zwickau.

## **Baden**

Bhl-Rastatt, Donaueschingen, Emmendingen, Freiburg, Konstanz, Lrrach, Offenburg.

## **Wurttemberg Baden**

Aalen, Backnang, Bruchsal, Boblingen, Crailsheim, Esslingen, Goppingen, Heidelberg, Heilbronn, Karlsruhe Land, Karlsruhe Stadt, Ludwigsburg, Mannheim Land, Mannheim Stadt, Sinsheim, Stuttgart I (West), Stuttgart II (West), Tauberbischofsheim, Waiblingen.

## **Wurttemberg Hohezollern**

Balingen, Biberach, Calw, Ravensburg, Reutlingen, Rottweil.

## **Baden Wurttemberg**

Aalen Heidenheim, Backnang Schwabisch Gmund, Bruchsal Karlsruhe Land II, Boblingen, Crailsheim, Donaueschingen, Donaueschingen, Emmendingen Lahr, Emmendingen Wolfach, Esslingen, Freiburg, Goppingen, Heidelberg, Heidelberg Land Sinsheim, Heidelberg Stadt, Heilbronn, Karlsruhe, Karlsruhe Land, Karlsruhe Stadt, Karlsruhe Land, Konstanz, Leonberg Vaihingen, Ludwigsburg, Lorrach-Mullheim, Mannheim I, Mannheim II, Neckar Zaber, Nurlingen, Nurlingen Boblingen, Odenwald Tauber, Offenburg, Pforzheim, Pforzheim Karlsruhe Land I, Rastatt, Ravensburg Bodensee, Rhein Neckar, Rottweil Tuttlingen, Schwarzwald

Baar, Schwabisch Hall, Schwabisch Hall Hohenlohe, Schwabisch Gmund Backnang, Stuttgart I, Stuttgart II, Stuttgart III, Stuttgart Nord, Stuttgart Sud, Tauberbischsheim, Tbingen, Waiblingen, Waldshut, Zollernalb Sigmaringen.

## **Bayern**

Altoetting, Amberg, Amberg Neumarkt in der Oberpfalz, Ansbach, Aschaffenburg, Augsburg, Augsburg Land, Augsburg Stadt, Bad Kissingen, Bamberg, Bayreuth, Burglengenfeld, Cham, Coburg, Deggendorf, Dillingen ander Donau, Donau Ries, Donauworth, Erlangen, Forchheim, Freising, Furstenfeldburck, Furth, Hof, Inglostadt, Karlstadt, Kaufbeuren, Kempten, Kempten (Allgau), Kulmbach, Landshut, Main Spessart, Memmingen, Miesbach, Munchen Land, Munchen Nord, Munchen Ost, Munchen Sud, Munchen West, Munchen Mitte, Neu Ulm, Nurnberg, Nurnberg Furth, Nurnberg Nord, Nrnberg Sud, Oberallgau, Ostallgaeu, Passau, Pfarrkirchen, Regensburg, Rosenheim, Roth, Rottal Inn, Schwabach, Schwanndorf, Schweinfurt, Starnberg, Straubing, Tirschenreuth, Traunstein, Vilshofen, Weiden, Weilheim, Weisenburg in Bayern, Weissenburg, Wurzburg.

## **A.3.7 Italy**

### **Piemonte and Valle d'Aosta**

Alessandria, Asti, Cuneo, Novara, Torino, Vercelli, Avigliana (Susa), Chivasso, Collegno (Grugliasco), Courgne (Arco alpino), Ivrea, Moncalieri, Nichelino (Carmagnola), Pinerolo, Rivoli (Orbassano), Settimo (Chieri), Torino Barriera Mi-

lano, Torino Cesina (San Paolo), Torino Collina, Torino Lingotto (Mirafiori Sud), Torino Mirafiori Nord, Torino Porta Palazzo, Torino Vallette, Torino centro, Venaria(Cirle), Acqui (Ovada), Alba, Biella, Borgo Sesia, Borgomanero (Omegna), Canelli (Nizza), Casale (Valenza), Mondov (Fossano), Novi (Tortona), Saluzzo (Savigliano), Trecate (Oleggio), Verbania (Domodossola), Vercelli, Aosta, Collegio Unico Valle d'Aosta.

### **Liguria**

Albaro (Nervi), Albenga (Spotorno), Chiavari (Fontanabuona, Moneglia), Genova, Genova Centro (Brignole Foce), Genova Principe (Val Polcevera), Genova (Sestri, Sampierdarena), Genova (Varazze), Imperia, Imperia (Taggia, Alassio), La Spezia, La Spezia Cinque Terre, Levante (Sarzan, Val di Magra), Rapallo (Valle Scrivia, Bogliasco), Savona, Savona (Vado Celle), Val Bisagno, Ventimiglia (Sanremo).

### **Lombardia**

Bergamo, Brescia, Como, Cremona, Mantova, Milano, Pavia, Sondrio, Varese, Abbiategrasso, Agrate Brianza, Bollate, Busto Garolfo, Cinisello Balsamo, Cologno Monzese, Corsico, Desio, Legnano, Meda, Melegnano, Melzo, Corvetto, Monza, Paderno Dugnano, Pioltello, Rho, Rozzano, Seregno, Sesto San Giovanni, Vimercate, Alto Lago, Bassa Est, Bassa Ovest, Bergamo, Brescia Nord, Brescia Sud, Busto Arsizio, Cantù, Chiari, Clusone, Como, Dalmine, Erba, Gallarate, Garda, Laghi, Lecco, Merate, Olgiatese, Pontida, Saronno, Seriate, Tradate, Trescore

Brianza, Treviglio, Valcamonica, Valle Brembana, Valsabbia, Valtellina (Sondrio), Valtronpia, Varese, Varese (Nord), Alto Mantovano, Crema (Lodi), Crema (Soresina), Cremona, Lodi, Mantova, Mortara, Pavia, Suzzara, Vigevano, Voghera,

## **Milano**

Milano Centro, Milano (Baggio Gallarate), Milano (Centro Direzionale), Milano Certosa Quarto Oggiaro, Milano Città Studi, Milano Fiera, Milano Lambrate, Milano Niguarda Bicocca, Milano San Siro, Milano Vigentino Lorenteggio, Milano Vittoria Romana.

## **Trentino Alto Adige**

Bassa Altesina, Bolzano, Bressanone, Merano, Pergine Valsugana, Rovereto, Trento, Val di Non Sole Giudicarie.

## **Veneto**

Padova, Rovigo, Treviso, Venezia, Verona, Vicenza, Adria, Arzignano Montebelluna, Baldo Garda, Bassa Veronese, Bassano del Grappa, Camposampiero, Cittadella, Est Veronese, Este, Lessinia, Padova Est, Padova Ovest, Pieve di Sacco, Rovigo, Sandrigo, Schio Valdagno, Thiene, Verona Est, Verona Ovest, Vicenza, Belluno, Castelfranco Veneto, Chioggia Cavarzere, Conegliano, Feltre Agordo, Mestre Sud Mira Dolo, Miranese, Montebelluna, Oderzo, Portogruaro, Treviso, Venezia Mestre Nord, Venezia San Don di Piave, Venezia San Marco, Vittorio Veneto, Abano, Villafranchese.



### **Friuli Venezia Giulia**

Alto Friuli, Bassa Friulana, Belluno, Gorizia, Media Collinare, Medio Friuli, Megnano Salice, Pordenone, Trieste, Trieste Centro, Trieste Muggia, Udine.

### **Emilia Romagna**

Bazzano/Reno, Bologna, Bologna Centro Nord, Bologna Est, Bologna Montagna, Bologna Ovest, Bologna Pianura Est, Bologna Pianura Ovest, Carpi Correggio, Castelfranco Mirandola, Cento/Argenta, Cesena, Comacchio Codigoro, Faenza, Ferrara, Fidenza, Fiorenzuola d'Arda, Forlì, Forl, Forl Montagna, Imola, Modena, Parma, Parma Montana, Piacenza, Ravenna, Ravenna Cervia, Ravenna Lugo, Reggio Bassa Emilia, Reggio Emilia, Reggio Emilia Montana, Reggio nell'Emilia, Rimini Nord, Rimini Riccione, Sassuolo Modena, Vignola Pavullo.

### **Toscana**

Arezzo, Campi Sesto Mugello, Capannori Garfagnana, Carrara, Cascina San Miniato, Chianti Val d'Arno, Cortona, Empoli, Firenze, Firenze Centro, Firenze Oltrarno, Firenze Pontassieve Coverciano, Firenze Rifredi Peretola, Grosseto, Livorno, Livorno Collesalveti, Livorno Rosignano Marittimo, Lucca, Maremma Massa Marittima, Massa, Massa-Carrara, Montevarchi, Piombino Follonica, Pisa, Pistoia, Pontedera, Prato Carmignano, Prato Montemurlo, Scandicci Signa, Siena, Val di Nievole Montecatini, Viareggio Versilia.

## **Marche**

Ancona, Ascoli Piceno, Civitanova Marche, Fano, Fermo, Jesi, Macerata, Osimo, Pesaro, Pesaro e Urbino, San Benedetto del Tronto, Senigallia, Urbino.

## **Umbria**

Alto Tevere Trasimeno, Assisi Gubbio, Foligno Spoleto, Orvieto Narni, Perugia, Perugia Centro, Perugia Todi, Rieti, Terni.

## **Lazio**

Frosinone, Latina, Roma, Viterbo, Civitavecchia, Colleferro, Giudonia Montecello, Marino, Monterotondo, Pomezia, Roma Centro, Roma Appio Latino, Roma Ardeatino, Roma Ciampino, Roma Collatino, Roma Della Vittoria, Roma Don Bosco, Roma Fiumicino, Roma Gianicolesse, Roma Lido di Ostia, Roma Montecelio, Roma Ostiense, Roma Pietralata, Roma Portuense, Roma Prenestino Centocelle, Roma Prenestino Labicano, Roma Primavalle, Roma Tomba di Nerone, Roma Torreangela, Roma Trieste, Roma Trionfale, Roma Tuscolano, Roma Val Melaina, Roma Zona Sub. Gianicolesse, Tivoli, Velletri, Alatri, Aprilia, Cassino, Formia, Frosinone, Latina, Rieti, Sora, Tarquinia, Terracina, Viterbo.

## **Abruzzo**

Avezzano, Chieti, Giulianova, L'Aquila, L'Aquila degli Abruzzi, Lanciano Sangro, Montesilvano, Ortona, Pescara, Sulmona, Teramo, Vasto.

## **Molise**

Campobasso, Isernia, Termoli.

## **Campania**

Avellino, Benevento, Caserta, Napoli, Salerno, Acerra Frattaminore, Afragola Cardito, Arzano Sant' Antimo, Casorla Frattamaggiore, Castellammare di Stabia Pompei, Cercola San Giorgio a Cremano, Giuliano Quarto Villaricca, Gragnano Capri Sorrento, Merano Melito, Napoli Arenella, Napoli Bagnoli Fuorigrotta, Napoli Ischia, Napoli/Pianura, Napoli Ponticelli, Napoli San Carlo Arena, Napoli Secondigliano, Napoli Stella San Lorenzo, Napoli Vomero, Nola Marigliano, Ottaviano San Giuseppe Vesuviano, Portici Ercolano, Pozzuoli, Somma Vesuviana Pomigliano d' Arco, Torre Annunziata Boscoreale, Torre del Greco Trecase, Ariano Irpino, Atripalda, Avellino, Aversa, Battipaglia, Benevento, Capua, Casal Di Principe, Caserta, Cava de' Tirreni, Eboli, Maddaloni, Mirabella Eclano, Nocera Inferiore, Sala Consilina, Salerno Centro, Salerno Mercato San Severino, Sant'Agata de' Goti, Santa Maria Capua Vetere, Scafati, Sessa Aurunca, Vallo della Lucania.

## **Puglia**

Altamura, Andria, Bari, Bari Japigia Mola, Bari Mural Poggio Franco, Bari San Paolo Carbonara, Barletta, Bitonto, Brindisi, Cerignola, Foggia, Foggia Centro, Galatina, Gallipoli Casarano, Gargano, Lecce, Maglie, Manduria, Manfredonia,

Martina Franca, Massafra/Ginosa, Mesagne, Modugno, Molfetta Bisceglie, Monopoli Fasano, Nard, Ostuni Francavilla Fontana, Putignano Conversano, San Severo, Squinzano Campi, Taranto, Taranto Borgo Tre Carrare, Taranto Stalle, Trani Corato, Tricase, Triggiano Acquaviva.

### **Basilicata**

Lauria, Matera, Melfi, Pisticci, Potenza.

### **Calabria**

Castrovillari, Catanzaro, Corigliano Calabro, Cosenza, Crotone, Isola di Capo Rizzuto, Lamezia Terme, Locri, Palmi, Paola, Reggio Calabria Sbarre, Reggio Calabria Villa San Giovanni, Reggio di Calabria, Rende, Rossano, Siderno, Soverato, Vibo Valentia.

### **Sardegna**

Alghero, Cagliari Centro, Cagliari e Oristano, Cagliari Assemini, Carbonia, Iglesias, Macomer, Nuoro, Olbia, Oristano, Porto Torres, Quartu Sant'Elena, Sassari, Serramanne Campidano, Tortoli.

### **Sicilia**

Caltanissetta, Catania, Enna, Messina, Palermo, Ragusa, Siracusa, Trapani, Agrigento, Alcamo, Bagheria, Caltanissetta, Canicatt, Cefal, Gela, Licata, Marsala, Mazzara del Vallo, Palermo Capaci, Palermo Libert, Palermo Resultana, Palermo

Settecannoli, Palermo Villagrazia, Palermo Zisa, Partinico Monreale, Sciacca, Termini Imerese, Trapani, Acireale, Augusta, Avola, Barcellona Pozzo di Gotto, Caltagirone, Catania Cardinal, Catania Misterbianco, Catania Picanello, Enna, Giarre, Gravina di Catania, Messina Nord, Messina Sud, Milazzo, Modica, Nicosia, Patern, Taormina, Vittoria.

### **A.3.8 Luxembourg**

This country is geographically divided in four main part: South, Centre, North, and East. This sub-division correspond to NUTS 2 level. The same level of NUTS is used in the Eurobarometer and in the Caramani's database.

### **A.3.9 Netherlands**

#### **Groningen**

Groningen.

#### **Friesland**

Friesland.

#### **Drenthe**

Drenthe.

### **Overijssel and Noordstelijke Polder**

Overijssel, Zwolle.

### **Gelderland**

Arnhem, Nijmegen, Gelderland.

### **Flevoland**

Flevoland.

### **Noordholland**

Amsterdam, Den Helder, Haarlem, Noordholland.

### **Zuidholland and Centrale bevolkeringsregister**

's Gravenhage, Dordrecht, Leiden, Rotterdam, Zuidholland.

### **Utrecht**

Utrecht.

### **Noordbrabant**

Noordbrabant, 's Hertogenbosch, Tilburg.

### **Zeeland**

Zeeland.

### **Limburg**

Limburg.

## **A.3.10 Norway**

### **Nord-Norge**

Finnmark, Troms, Nordland.

### **Trondelag**

Nord Trøndelag, Sør Trøndelag.

### **Oslo og Akershus**

Akershus, Oslo, Kristiania.

### **Hedmark og Oppland**

Hedmark, Oppland.

### **Sør Østlandet**

Buskerud, Telemark, Vestfold, Østfold.

### **Vest landet**

Moere og Romsdal, Moere, Sogn og Fjordane, Hordaland, Bergen.

### **Agder og Rogaland**

Rogaland, Vest Agder, Aust Agder.

## **A.3.11 Portugal**

### **Norte**

Braga, Braganca, Guarda, Viana do Castelo, Vila Real.

### **Porto**

Porto.

### **Viseu**

Viseu.

## **A.3.12 Spain**

### **Galicia**

Coruna (La), Lugo, Orense, Pontevedra.



### **Principado de Asturia**

Oviedo Asturias.

### **Cantabria**

Santander Cantabria.

### **Castilla y Leon**

Avila, Burgos, Leon, Palencia, Salamanca, Segovia, Soria, Valladolid, Zamora.

### **Pais Vasco**

Alava, Guipuzcoa, Vizcaya.

### **Comunidad de Navarra**

Navarra.

### **La Roja**

Logrono La Rioja.

### **Aragon**

Huesca, Teruel, Zaragoza.

**Cataluna**

Barcelona, Gerona, Lerida, Tarragona.

**Extramadura**

Badajoz, Caceres.

**Madrid**

Madrid.

**Castilla-La Mancha**

Albacete, Ciudad Real, Cuenca, Guadalajara, Toledo.

**Comunidad Valenciana**

Alicante, Castellon de la Plana, Valencia.

**Andalucia**

Almeria, Cadiz, Granada, Huelva, Jaen, Malaga, Sevilla.

**Region de Murcia**

Cordoba, Murcia.

### **Baleares**

Baleares.

### **Canarias**

Palmas (Las), Santa Cruz de Tenerife.

## **A.3.13 Sweden**

The Caramani's Database and the Eurobarometer use the same level of NUTS.

### **Ovre Norrland**

Norbottens län, Norrbottens län, Västernorrlands län.

### **Mellersta Norrland**

Västernorrlands län, Jämtlands län.

### **Norra Mellansverige**

Värmlands län, Kopparberg län, Gävleborgs län,

### **Västsverige**

Hallands län, Bohuslän, Göteborg kommun, Göteborg stad kommun, Älvsborg län norra, Älvsborgs län södra, Skaraborgs län.

### **Stockolm**

Stockholms län, Stockholms stad kommun, Stockholms län, Stockholms stad kommun.

### **Ostra Mellansverige**

Uppsala län, Södermanlands län, Östergötlands län, Örebro län, Västmanlands län.

### **Småland med Öarna**

Västra Götalands län norra, Västra Götalands län södra, Västra Götalands län västra, Västra Götalands län östra, Göteborg kommun, Göteborgs stad kommun, Jönköpings län, Kronobergs län, Kalmar län, Gotlands län.

### **Sydsverige**

Blekinge län, Kristianstads län, Malmö kommun, Malmö Fyrstadskretsen, Malmöhus län.

## **A.3.14 United Kingdom**

The number of constituencies reported by the Caramani's Dataset in relation to the United Kingdom is more than 1300. Historically, we had no more than 650 constituencies per election. The reason of this huge gap is the impressive number of boundary changes the government has applied along the time. The most serious

problem we had to face was the situation when the boundary changes involved a transfer of the constituency to another geographical unit. In the following we give a detailed account of every modification of the sub-national breakdown that happened in UK in the last 100 years by NUTS 2 level.

### **Grampian**

“Aberdeen” was a single constituency from the 1832 until the 1885. The redistribution of Seats Act in 1885 splits the city in two constituencies: “Aberdeen North” and “Aberdeen South”. Instead the county of Aberdeenshire was covered by the constituency of “Eastern Aberdeenshire” and “Western Aberdeenshire”. In 1918 the boundaries were redefined again by the Representation of the People Act 1918. The “City of Aberdeen” has been created and together with “Aberdeen North” and “Aberdeen South” covered the city of Aberdeen. The county instead was split between the “Aberdeenshire and Kinkardineshire Central”, “Aberdeenshire and Kinkardineshire East”, and “Aberdeenshire and Kinkardineshire Kinkardine and Western”. However in the 1950, The House of Commons (Redistribution of Seats) Act 1949 redefined the boundaries of the City of Aberdeen. It remained a two-constituency city, divided between “Aberdeen North” and “Aberdeen South”. Between the 1955 election and the 1982, several boundaries reviews were made to take into account of the increasing size of the city of Aberdeen. Under the Local Government (Scotland) Act 1973, counties were abolished, and the City of Aberdeen was enlarged to include area formerly within the county of Aberdeen. Following the Local Government (Scotland) Act 1994, the city of Aberdeen be-

come one of the thirty two unitary city council areas of Scotland. In the 1996, the city of Aberdeen was shared between three constituency: “Aberdeen North”, “Aberdeen South”, and “Aberdeen Central”. However, “Aberdeen Central” was abolished for the 2005 election and the areas become part of “Aberdeen North”. The County of Aberdeenshire was instead divided between the “East Aberdeenshire” and “West Aberdeenshire”.

“Kincardine and Deeside” was a constituency from the 1983 until the 1997. Before the 1997 election it was mainly replaced by “Aberdinshire and Kincardine”. “Banfshire” was a constituency until the 1970. From the 1974 election become “Banff”. In the 1983, it underwent several boundaries change. Part of the “Banffshire” and “East Aberdeenshire” were merged to create a new constituency named “Banff and Buchan”. Part of “Banff” was merged with “Moray and Nairnshire” (1918-1982). The new constituency was named “Moray”.

## **Highland**

“Inverness” was a constituency from the 1918 until the 1983, when it was replaced by “Inverness, Nairn and Lochaber”. It underwent boundaries reduction in the 1997 and named “Inverness East, Nairn and Lochaber”.

“Ross and Cromarty” was a county constituency from the 1832. In the 1983 was replace by “Ross, Cromarty, and Skye”. The constituency was created by merging together the former “Ross and Cromarty” with some area of the former “Inverness” constituency.

“Caithness and Sutherland” was a constituency from 1918. In the 1997, the con-

stituency was merged with an area from “Ross, Cromarty and Skye” and named “Caithness and Sutherland and Easter Ross”.

“Orkney and Shetland” is the safest Liberal seat in UK.

“Western Isle” was created in the 1918 and since then it has not changed her boundaries.

### **Dumfries and Galloway, Strathclyde**

“Argyllshire” was a county constituency from the 1801 until the 1950 when it was renamed “Argyll”. In the 1983, it was merged with part of “Bute and Northern Ayrshire” (1918-1983) and named “Argyll and Bute”.

“Ayr District of Burgh” is a district of burgh constituency from the 1801. In the 1950, “Ayr Burgh” and “Prestwick Burgh” were merged into the county constituency of “Ayrshire and Bute, Ayr”. It was renamed “Ayr” in the 1970.

“South Ayrshire” and “North Ayrshire” were two county constituency from the 1868 until the 1983, when they were abolished.

“Dunbartonshire East” and “Dunbartonshire West” were two constituency created in the 1950 from the county constituency of “Dunbartonshire”. During the 1974, these two constituency were reduced in size and a third one formed (“Dunbartonshire Central”). All of three were abolished in the 1983 and created again for the 2005 election.

“Galloway” was a constituency created in the for the 1918 general election. It was abolished for the 1983, when it was partially replaced by the new “Galloway and Nithsdale” constituency. In the Caramani Database, during the 1974 and the 1979

election is named “Kirkcudbrightshire and Wigtownshire, Galloway”.

“Gateshead” existed from the 1832 until the 1950, when it was replaced by “Gateshead East” and “Gateshead West”. The two constituency were transferred from the county of Durham to the county of Tyne and Wear in the 1974. Moreover, they were merged again in one constituency (“Gateshead East and Washington West”) for the election held in the 1997.

“Glasgow Scoutstoun” was a burgh constituency from the 1950 until the 1974, when it was replaced by “Glasgow Garscadden”. It was replaced by “Glasgow Anniesland”.

“Glasgow Gorbals” was a constituency until the 1974 election. It was replaced by “Glasgow, Queen’s Park”. This last constituency was really short lived. In the 1983 it was replaced by “Glasgow Central”, “Glasgow Rutherglen”, and “Glasgow Cathcart”.

“Glasgow St Rollox” was a burgh constituency from the 1885. It was replaced in the 1950 by “Glasgow Woodside”. However, it was abolished after the 1974 election and its territories were split between “Glasgow Hillhead” and “Glasgow Maryhill”.

“Greenock” was a burgh constituency from the 1918 until the 1974, when it was replaced by “Greenock and Port Glasgow”. It went under boundaries change again in the 1997 when it was replaced by “Greenock and Inverclyde”. “Hamilton” was a burgh constituency from the 1918 until the 1997, when it was split in the constituencies of “Hamilton North and Bellshill” and “Hamilton South”.

“Kilmarnock” was a county constituency from the 1918. In the 1983 was replaced



by “Kilmarnock Loudoun”.

“Motherwell” was a constituency from the 1918. The name was changed to “Motherwell and Wishaw” in the 1974. Before the 1983 election, it was split in two different constituency: “Motherwell North” and “Motherwell South”. However, The two constituency were merged again in one for the 1997 election.

“Pasley” was a constituency from the 1918. It was split in two constituency for the 1983 election.

“Renfrewshire West and Inverclyde” was a constituency from the 1983 until the 1997. It was created out of, and merged back into, the “West Renfrewshire”. Instead, “East Renfrewshire” was a constituency from the 1885. It was abolished for the 1983 general election, when it was partially replaced by the new “Eastwood” constituency.

“Forfashire” was a county constituency from the 1708. It was merged together with “Montrose District Burgh” and replaced by “North Angus and Mearns” and “South Angus” in the 1950. The two constituency were again merged together in the 1983 election. The resulting constituency was named “Angus East”. The boundaries were again changed in the 1997. The “Angus East” was merged with a small portions of “Tayside North” and “Dundee East”. Following this change the constituency was renamed “Angus”.

“Berwickshire” was a constituency from the 1918 until the 1950. Then, it was replaced by “Berwick and East Lothian”. This constituency was replaced by “East Lothian” for the 1983 general election. “Clackmannan and East Stirlingshire” was a constituency from the 1918 until the 1983, when it was replaced by the new

“Clackmannan” constituency. “Dundee” was created in the 1832. During the 1950 election, it was split in “Dundee East” and “Dundee West”.

The “Dunfermline Burgh” was created in the 1918. It was replaced by the “Dunfermline” constituency in the 1974. The constituency was divided in two other constituencies (“Dunfermline East” and “Dunfermline West”) for the 1983 election.

“Kirkcaldy” was created for the 1974 election, mostly to replace “Kirkcaldy Burgh”. “West Lothian” was created for the 1945 general election to replace mostly the previous “Linlithgowshire” constituency. It was split in two (“Linlithgow” and “Livingston”) during the 1983 general election.

“Midlothian and Peeblesshire, Northern” and “Midlothian and Peeblesshire, Peebles and Southern” were merged together in the 1950. The new born constituency of “Midlothian and Peeblesshire” was re-named again in the 1955 as “Midlothian”.

“Perth” was a constituency from the 1918 until the 1950. In this date, it was replaced by “Perth and East Perthshire”. Its boundaries were changed again in the 1983 including the area of “Perthshire and Kinross-shire, Kinross and Western”. It was re-named “Perth and Kinross”. It was replaced again by “Perth” in the 1997.

“Stirling and Falkirk Burgh” was a burgh constituency until the 1974, when it was replaced by “Stirling, Falkirk and Grangemouth” and “Stirlingshire West”. Both these constituency were abolished in the 1983, when the new constituency of “Stirling” was created.

## **Durham, Cleveland**

“Durham, Chester-le-Street” was created in the 1815. It was replaced by “North Durham” for the 1983 general election.

“Durham, Sedgefield” was created in the 1919. It was ceased to exist in the 1974, but it was re-created in the 1983.

“Middlesbrough, East” and “Middlesbrough, West” were created in the 1918. They were merged together during the 1974 general election. The new constituency was named “Middlesbrough”.

“Middlesbrough South and Cleveland East” was created in the 1997, mostly replacing the constituency of “Langbaugh”.

“Stockport” was first created in the 1832. It ceased to exist in the 1950, when it was replaced by the two constituencies of “Stockport North” and “Stockport South”. “Stockport” was re-created again for the general election of the 1983. However, there was again a change in the boundaries in the 1997. “Stockton-on-Tees” was created in the 1868. It was split in two (“Stockton North” and “Stockton South”) in the 1983 general election.

## **Cumbria**

“Whitehaven” was created in the 1832. In the 1983 was replaced by “Copeland”.

“Cumberland, Penrith and Cockermouth” was a constituency between the 1918 and the 1950. It was replaced by “Penrith and the Border” and “Workington”.

“Westmorland” was created for the 1918 general election. It was abolished in the

1983. The area was split between the new seat of “Westmorland and Lonsdale” and the northern area was transferred to “Penrith and the Border”.

### **Northumberland, Tyne and Wear**

“Blyth Valley” was established in the 1950 as a “Blyth” and it was re-named in the 1983.

“Houghton-le-Spring was created in the 1885. It was replaced by “Houghton and Washington” for the 1983 general election. However, the boundaries were changed again in the 1997 and the constituency was replaced by “Houghton and Washington East”.

“Morpeth” was replaced in the 1983 by “Wansbeck”.

“Newcastle upon Tyne and Wallsend” was created for the 1997 general election by merging the two constituencies of “Newcastle upon Tyne East” and “Wallsend”.

“Sunderland” is a constituency since the 1832. It was split in two constituencies “Sunderland North” and “Sunderland South”.

### **Lancashire**

“Accrington” was created in the 1918 and it was replaced by “Hyndburn” for the 1983 general election.

“Blackburn” is a county constituency since the 1832. It was split in the constituencies (“Blackburn East” and “Blackburn West”) for the 1950 election, but they were merged again for the 1955 general election.

“Blackpool” was split in two (“Blackpool North” and “Blackpool South”) for the

1945 general election. “Blackpool North” was replaced by “Blackpool North and Fleetwood” in the 1997.

“Fylde” was created in the 1918. It was replaced by “Fylde North” and “Fylde South” in the 1950. However, the two constituencies were merged again in the 1983 general election.

“Ince” was created in the 1885. It was subject to boundaries changes in the 1918, 1950, and again in the 1970. It underwent area reduction in the 1983 and re-named as

“Makerfield”. The remain area was merged with the area belonging to the “Ormskirk” constituency. The new constituency was named “Lancashire West”. “Lancashire, Clitheroe” was a county constituency from the 1559 until the 1983, when it was replaced by “Ribble Valley”.

“Lancashire, Lancaster” was merged with the “Wyre” constituency in the 1997. The new constituency was named “Lancaster and Wyre”.

“Lancashire, Lonsdale” was created in the 1918. It was replaced by “Morecambe and Lonsdale” for the 1950 general election.

“Lancashire, Middleton and Prestwick” was created for the 1918 general election, and it was abolished for the 1983 general election when it was partially replaced by the new constituency of “Heywood and Middleton” in Greater Manchester.

“Lancashire, Mossley” was created in the 1918 and it was abolished in the 1950. Part of the territory formed the “Droylsden” constituency for just one election. This last constituency was encapsulated in the “Ashton under Lyne” constituency in Greater Manchester.

“Lancashire, Widnes” was created in the 1885. It was abolished in the 1983, when large part of the territory formed the “Halton” constituency in Cheshire.

“Preston” was a constituency since the 1529. It returns two members. It was replaced by “Preston North” and “Preston South”. They were merged again in the 1983. However, part of “Preston South” territory formed a new constituency named “Ribble South”.

### **Greater Manchester**

“Altricham and Sale” was created in the 1945. It underwent boundaries change in the 1997 and it was re-named “Altricham and Sale West”.

“Bolton” was a constituency from the 1832 until the 1950, when it was replaced by “Bolton East” and “Bolton West”. The constituency of “Bolton East” was replaced by “Bolton North East” and “Bolton South East”. The last one included as well territory from Farnworth.

“Bury” was a constituency since the 1832. Its boundaries changed in the 1950 and it was re-named “Bury and Radcliffe”. However, it was split in two (“Bury South” and “Bury North” ) for the 1983 general election.

“Littleborough and Saddleworth” was created for the 1983 general election, and it was abolished in the 1997, when it was partly replaced by the new “Oldham East and Saddleworth” constituency. This new constituency included as well the area formerly belonging to “Oldham” (see “Oldham”).

“Manchester, Clayton” was created for the 1918 general election and abolished in the 1955. It was replaced by “Manchester Cheetam” and “Manchester Open-

shaw”. The form was in turn abolished in the 1974. Not so long after, the latter was abolished as well.

“Manchester, Wythenshawe” was created in the 1950 general election, and it was abolished for the 1997 one. It was largely replaced by the new “Wythenshawe and Sale East” constituencies.

“Oldham” was a two-seat constituency from the 1832 until the 1950, when its boundaries were changed. The constituency was replaced by “Oldham East”, now a single seat constituency.

“Heywood and Royton” was created for the 1950 general election, and abolished for the 1983 general election. Its territory was largely divided between the new constituencies of “Heywood and Middleton” and “Oldham Central Royton”. This last constituency was in turn abolished in the 1997 and its territories merged with the area “Oldham West” to form the new constituency of “Oldham West Royton”.

“Salford North” was a constituency from the 1885 until the 1950, when it was replaced by “Salford East” and “Salford West”. The territories of “Salford West” were divided between “Eccles”, “Worsley” and “Salford East”. This last constituency was abolished in the 1997 and it was replaced by a new “Salford” constituency.

“Stockport” was a constituency from the 1832. It was split in two (“Stockport North” and “Stockport South”) in the 1950. However, it was re-created for the 1983 general election.

“Stretford” was a constituency from the 1950 until the 1997, when it was replaced by “Stretford and Urmston”.

## **Merseyside**

“Bebington” was a constituency from the 1950 until the 1974, when it was replaced by “Bebington Ellesmere Port”.

“Birkenhead” was created in the 1832. It was replaced by the new “Birkenhead East” and “Birkenhead West” in the 1918. The constituency was re-established for the 1950 general election. Since then, it has returned only Labour MPs.

“Huyton” was a constituency from the 1950 until the 1983 general election. The constituency ceased to exist with the implementation of the 1983 boundary changes. It was largely replaced by the “Knowsley South” constituency. However, part of the territories formed the constituency of “Knowsley North”.

“Knowsley North” was created in the 1983. It ceased to exist in the 1997 when it was replaced by “Knowsley North Sefton East”.

“Liverpool Exchange” and “Liverpool Scotland” were created under the Redistribution of Seats Act 1885. Both of them were abolished for the 1974 election, when they were merged to form “Liverpool Scotland Exchange”. This last constituency was in turn partially replaced by “Liverpool Riverside” in the 1983.

“Liverpool East Toxteth” and “Liverpool West Toxteth” were created in the 1885. They were merged together to form “Liverpool Toxteth” in the 1950. However, following some boundary change, the new constituency was replaced by “Liverpool Mossley Hill” and “Liverpool Riverside”.

“St Helen” was created in the 1885. The constituency was abolished in the 1983, being split into north and south division.

“Wirral” was split in two (“Wirral West” and “Wirral South”) in the 1983.



## **Cheshire**

“Cheshire Wirral” was created in the 1885. Following some boundary change, it was re-named “Wirral” and it became part of the Merseyside.

“Crewe” was a constituency from the 1885 until the 1983. Large part of the area formed the constituency of “Congleton” and the remain part was merged with “Nantwich” to create the constituency of “Crewe and Nantwich”.

“Runcorn” was created in the 1950 and it was abolished in the 1983, when it was replaced by the constituencies of “Halton” and “Warrington South”. The last one include as well some area from the “Warrington” constituency.

“Warrington” was a parliamentary constituency from the 1832 until the 1983. It was largely replaced by “Warrington North” and “Warrington South”.

## **Humberside**

“Goole” was created for the 1950 general election and it was abolished in the 1983. It was replaced by “Boothferry” and “Don Valley” (South Yorkshire).

“Yorkshire (East Riding), Buckrose” was a county consitutency from the 1885 until the 1950. It was replaced by “Bridlington” and “Beverly”. “Beverly” was abolished in the 1955, immediately after its creation. It was revived for the period between the 1983 and the 1997 and after was largely incorporated into the new “Beverly and Holderness” constituency.

“Kingston upon Hull East” was created in the 1885. It is lately known as “Hull East” (1983-2010).

“Kingston upon Hull Central” was created for the 1885 general election, and it was abolished in the 1955. It was re-created in the 1974, and it was abolished again for the 18983 general election.

“Brigg and Cleethorpes” was created for the 1983 general election, and it was abolished in the 1997. Its territory were divided between the new constituencies of “Cleethorpes” and “Brigg and Goole”.

“Brigg and Scunthorpe” was created in the 1974, mostly from the former seat of Brigg. It was abolished for the 1983 general election, when it was partially replaced by the new constituencies of “Brigg and Cleethorpes” and “Glanford and Southorpe”.

“Glanford and Southorpe” was created in the 1983 and it was replaced by the constituency of “Grimsby” for the 1997 general election.

## **North Yorkshire**

“Harrogate” was created in the 1950. Following some boundaries change in the 1997, its name was changed in “Harrogate and Knaresborough”.

“Scarborough and Whitby” was first created for the 1918 general election, partly replacing the old “Scarborough” constituency. It was abolished in the 1974. Then, the “Scarborough” constituency was re-established, but was again replaced by a new “Scarborough and Whitby” constituency for the 1997 general election.

“Vale of York” was created in 1997 from parts of the seats of “Ryedale”, “Skip-ton”, “Ripon and Richmond”, and “Yorks”.

“Yorkshire (North Riding)Cleveland” was a constituency in the north riding of

Yorkshire from the 1885 until the 1974, when it was replaced by “Cleveland and Whitby”<sup>5</sup>.

### **West Yorkshire**

“Batley and Morley” was created for the 1918 general election, and it was abolished in the 1983. Then, It was replaced by the seat of “Batley and Spen” and “Leeds South and Morley”.

“Elmet” was created in the 1983 from the constituency of “Barkston Ash”. “Halifax” was created in the 1832. Until the 1974, it was part of the West Riding of Yorkshire. However, following some boundary changes, it become part of the West Yorkshire.

“Huddersfield” was created in the 1832. It was replace by “Huddersfield East” and “Huddersfield West” in the 1950. Both of the new constituencies were abolished in the 1983.

“Leeds North-East” was created in the 1918. It was a county constituency of the West Riding of Yorkshire until the 1974. Following some boundary change, it become part of the county of West Yorkshire.

“Leeds North-West” was created in the 1918. It was a county constituency of the West Riding of Yorkshire until the 1974. Following some boundary change, it become part of the county of West Yorkshire.

“Leeds South” was created in the 1918. It was a county constituency of the West Riding of Yorkshire until the 1974. Following some boundary change, it become

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<sup>5</sup>See Durham, Cleveland

part of the county of West Yorkshire.

“Leeds West” was created in the 1918. It was a county constituency of the West Riding of Yorkshire until the 1974. Following some boundary change, it become part of the county of West Yorkshire.

“Yorkshire (West Riding), Pudsey and Otley” was created for the 1918 general election, partially replacing the previous “Pudsey” and “Otley” constituencies. It was abolished for the 1950 general election, when it was largely replaced by the new constituency of “Pudsey”, while “Otley” become part of Ripon.

“Yorkshire (West Riding) Wentworth” was originally created in the 1918 and it was abolished in the 1950. The name was revived when a new constituency was created.

### **South Yorkshire**

“Barnsley” was created under the Redistribution of Seat Act 1885. It was abolished in the 1983 and replaced by “Barnsley Central”, “Barnsley East and Mexborough”, and “Barnsley West and Penistone”.

“Doncaster” was created in the 1885. It was abolished in the 1983 and it was replaced by a new constituency named “Doncaster Central”, covering almost the same area.

“Doncaster North” was created in the 1983 from the bulk of the old “Don Valley” and part of the abolished constituency of “Goole”.

“Sheffield Ecclesall” was a constituency from the 1885. Its boundary were slightly changed in the 1950 and it was re-named “Sheffield Heeley”. The new con-

stituency underwent a major alteration of its territory in the 1955 with the inclusion of the “Sheffield, Neepsend”.

“Wentworth” was originally created in the 1918. It was abolished in the 1950, and the name was revived when a new constituency was created in the 1983.

### **Clwyd, Gwyned, Dyfed, Powys**

“Flintshire” was a constituency from the 1542 until the 1950, when it was abolished. It was replaced by two new constituencies named “Flintshire East” and “Flintshire West”. Both of them were abolished in the 1983.

“Brecon and Radnorshire” was created in the 1918. Its name was changed to “Brecon and Radnor” in the 1997.

“Caernavonshire” was a constituency from the 1918. It ceased to exist in the 1950, when it was replaced by “Caernarvon” and “Conway”. In turn, both of them were abolished in the 1974. However, “Caernavon” was re-created and its name was changed to “Caernarfon”.

“Cardiganshire” was created in the 1536. It was enlarged with the addition of part of “Pembrokeshire” and “Pembroke North” and its name was changed to “Ceredigion”. Its boundaries were reverted in the 1997.

“Merionetshire” was created in the 1542. It ceased to exist in the 1983, when it was largely replaced by the new constituency of “Meirionnydd and Conwy”.

“Ynys Môn” was created in the 1545. It is known as well with the name of “Anglesey”.

### **Mid-, South-, West- Glamorgan, Gwent**

“Cardiff Central” was created for the first time in the 1918. It was abolished in the 1950, and re-created again for the 1983 general election.

“Cardiff North” and “Cardiff West” were created for the 1950 general election. They were abolished in the 1950. Their territories were amalgamated (with some the area from “Cardiff Central”) to create a new constituency named “Cardiff North-West”. The new constituency ceased to exist in the 1983 and its territory returned to the constituencies they belonged to originally.

“Cardiff East” and “Cardiff South” were created for the 1918 general election. They were abolished in the 1950. Their territories were amalgamated (with some the area from “Cardiff Central”) to create a new constituency named “Cardiff South-East”. The new constituency was abolished in the 1983, and replaced by “Cardiff South and Penarth”.

“Ogmore” and “Aberavon” were created in the 1918. Their territories were joint together to form the new constituency of “Bridgend”.

“Glamorganshire, Llandaff and Barry” were created for the 1918 general election. It was abolished in the 1950, when it was replaced by “Barry”. “Merthyr Tydfil Merthyr” was created for the 1918 general election, and abolished in the 1950. It was largely replaced by the new constituency of “Merthyr Tydfil”. As well this new constituency was abolished in the 1983. Its territory were merged with the Rhymney area to form a new constituency named “Merthyr Tydfil and Rhymney”. “Newport” was a constituency from the 1918 until the 1983, when it was split in two different constituencies (“Newport East” and “Newport West”).

“Pontypool” was created in the 1918, and it was replaced with “Torfaen” from the 1983 general election.

“Rhondda East” and “Rhondda West” were created in the 1918. They were merged together in the 1974, and the new constituency was named “Rhondda”.

### **Shropshire, Staffordshire**

“Cannock” was established in the 1918. It was abolished in the 1983 when it was replaced by “Cannock and Burntwood”. Later on, as well this constituency was abolished. It was replaced by “Cannock Chase” for the 1997 general election.

“Lichfield” was a county constituency from the 1885. It was replaced by “Lichfield and Tamworth” constituency, which in turn was abolished in the 1983. The territories formed a new constituency called “Mid-Staffordshire”. This last constituency ceased to exist in the 1997 and it was replaced by the revived constituency of “Lichfield”.

“Oswestry” was created in the 1885. It was replaced by “North Shropshire” in the 1983.

“Shrewsbury” was established in 1918. It was replaced by “Shrewsbury and Atcham” in the 1983. However, this change affected only the name, and not the boundaries.

“Stafford” was a constituency since the 1295. It was replaced by “Stafford and Stone” in the 1950. However, it was re-created in the 1983.

“Staffordshire South-West” was created for the February 1974 general election. It was formally abolished in the 1983, and its territory formed the new constituency

of

“Staffordshire South”. However, the change affected just the name. It underwent a boundary change in the 1997 when the area around “Penkridge” was included in the “Stafford” constituency.

“Staffordshire South East” was created for the 1983 general election, and it was abolished in the 1997, when it was replaced by the new “Tamworth” constituency.

“Staffordshire, Kingswinford” was created for the 1885 general election, and it was abolished in the 1950. The new constituency of “Brierley Hill” took over much of the area.

### **West Midlands (County)**

“Bilston” was created for the 1918 general election. It was named as a division of “Wolverhampton”. The Wolverhampton prefix was dropped from the official constituency name. The seat was abolished for the February 1974 general election, when it was replaced by the new “Wolverhampton South East” constituency.

“Birmingham, Erdington” was first created in the 1918. It was abolished in the 1955, and then it was created again in the 1974.

“Birmingham, Hodge Hill” was created in the 1983, partially replacing the earlier “Birmingham, Stechford” constituency.

“Birmingham, Deritend” was a constituency from the 1918 until the 1950. It was replaced by “Birmingham, Small Heath” and “Birmingham, Sparkbrook”. This last two constituencies were merged together to form “Birmingham, Sparkbrook and Small Heat” in the 1997.



“Coventry, East” was created for the 1945 general election and it ceases to exist in the 1974.

“Coventry, West” was a short lived constituencies. It was created in the 1945 and it ceased to exist in the 1950.

“Coventry, North” was established in the 1950. It was split in two constituency (“Coventry, North East” and “Coventry, North West”) in the 1974. “Coventry, South” was created in the 1950 and it was abolished in the 1974. The area was split between two constituencies (“Coventry, South East” and “Coventry, South West”). However, the territories were merged again in the 1997.

“Dudley” was created by the Reform Act 1832. It was abolished for the 1974 general election, when it was replaced by “Dudley, East” and “Dudley, West”. The two new constituencies were abolished in the 1997 and the area was divided between two new constituencies (“Dudley, North” and “Dudley, South”).

“Halesowen and Stourbridge” was created in the 1974. It ceased to exist in the 1997, when its territory was divided between two new constituencies (“Halesowen and Rowley Regis” and “Stourbridge”).

“Rowley Regis and Tipton” was created for the 1950 general election, and it was abolished in the 1974. The area of Tipton was incorporated into “West Bromwich West” and the Rowley Regis area was added initially to “Warley West” and after it become part of “Halesowen and Ropwley Regis” (1997).

“Walsall” was created in the 1955. It was split in two new constituencies (“Walsall North” and “Walsall South”) in the 1955. “Warley East” and “Warley West” were first created in the 1974. They were abolished in the 1997, when large part of the

territories were merged in the new constituency of “Warley”.

“West Bromwich” was created in the 1868. It was split in two new constituencies (“West Bromwich East” and “West Bromwich West”) in the 1974.

### **Hereford and Worcester, Warwickshire**

“Herefordshire” was created for the first time in the 1918. It was abolished for the 1983 general election and it was re-created in the 1997.

“Bromsgrove” was a constituency since the 1950. During the 1974 general election was replaced by “Bromsgrove and Redditch”. However, it was created again for the 1983 general election.

“Rugby” was established in the 1885. It was replaced by “Rugby and Kenilworth” during the 1983 general election.

“Warwickshire Meriden” “Warwickshire Solihull” underwent some boundary changes for the 1983 election. The constituency was so transformed into a safe Conservative seat. The areas in favour of the Labour party were transferred to the new “North Warwickshire” seat.

“Kidderminster” was created by the Reform Act 1832. It was abolished for the 1983 general election, when it was largely replaced by the new “Wyre Forest” constituency.

“Worcestershire Evesham” was abolished for the 1950 general election. The territory was largely transferred to the “Worcestershire South” constituency.

“Stourbridge” was first created in the 1918. It was abolished in the 1950, and re-created in the 1997.

## **Derbyshire, Nottinghamshire**

“Derby” was a constituency from the 1918 until the 1950. Then, it was divided between the single-member constituencies of “Derby North” and “Derby South”. “Derbyshire South” was established for the first time in the 1832. It was replaced in the 1950 election by the “Derbyshire South West”. However, the constituency was re-created in the 1983.

“Carlton” was a constituency from the 1950 until it was abolished for the 1983 general election. It was partly replaced by the new “Gedling” constituency.

“Nottingham South” was a constituency between the 1885 and the 1974. It was replaced by “Nottingham East” and “Nottingham West”. It was created again from the previous two constituencies in the 1983 general election.

“Sherwood” was created in the 1983 from area taken from the constituencies of “Newark”, “Carlton”, and Ashfield”.

## **Lincolnshire**

“Gainsborough” was established in the 1885. It was named “Gainsborough and Horncastle” between the 1983 and the 1997.

“Grantham” was abolished for the 1997 general election, and the area covered by this constituency is now mostly in “Sleaford and North Hykeham”. “Grantham” become part of the new parliamentary division of “Grantham and Stamford”.

“Lincolnshire (Parts of Lindsey), Briggs” was created for the 1885 general election, and it was abolished for the 1974 general election when it was replaced by

the new constituency of “Brigg and Scunthorpe” in Humberside.

“Lincolnshire, (as 398), Rutland and Stamford” was created for the 1918 general election. It was abolished in the 1983. The area was divided between the constituencies of “Rutland and Melton” and “Stamford and Spalding”.

“Louth” was a constituency from the 1885 until the 1983, when it was abolished. It was replaced by “Brigg and Cleethorpes” and “East Lindsey”.

### **Leicestershire, Northamptonshire**

“Daventry” was a constituency between the 1918 and the 1950. It was replaced by “South Northamptonshire”. However, it was created again for the 1974 general election.

“Leicester, East”, “Leicester, South”, and “Leicester, West” were created in the 1918. They were abolished in the 1950, and the territories distributed between “Leicester, North-East”, “Leicester, North-West”, “Leicester, South East”, and “Leicester, South West”. These four new constituencies were abolished in the 1974, and the areas were divided between the re-created “Leicester, East”, “Leicester, South”, “Leicester, West”. Another boundary change happened in the 1983 with the creation of the constituency of “Leicestershire, North-West”.

“Melton” was created in the 1885. It was abolished in the 1983, when it was replaced by “Rutland and Melton”.

“Northampton” was a constituency between the 1918 and the 1974, when it was replaced by “Northampton North” and “Northampton South”.

## **Cambridgeshire**

“Cambridgeshire” was a county reconstituted in the 1918, when the constituency was divided between the new constituencies of “North East Cambridgeshire” (including a small part of “Peterborough), “South East Cambridgeshire” and “South West Cambridgeshire” (including a minority of the territory from the former Huntingdonshire). It was abolished in the 1983, when it was created the constituency of “Cambridgeshire, South East”. The last one was abolished in the 1997 and it was replaced by the constituencies of “South Cambridgeshire” and “Huntingdon”.

## **Norfolk**

“Norwich” was a borough constituency from the 1298. It was abolished for the 1950 general election, when it was replaced by the two new single-member constituencies “Norwich North” and “Norwich South”. A constituency named “Norwich Central” existed between the 1950 and the 1974.

“Great Yarmouth” was created in the 1885. The constituency was called informally “Yarmouth” between the 1950 and the 1974.

## **Suffolk**

“Suffolk (West), Sudbury” was a constituency between the 1885 and the 1950. It was merged with “Suffolk (East), Woodbridge” and named “Sudbury and Woodbridge”. However, this new constituency was abolished for the 1983 general election, and the area split between “Suffolk Coastal”, “Central Suffolk”, and “South

Suffolk". In particular "Central Suffolk" include the territory of the former "Eye" constituency, and it was replaced by "Central Suffolk and Ipswich North" for the 1997 general election.

"Lowestoft" was created in the 1885. It was abolished for the 1983 general election when it was re-named "Weaveney".

### **Gloucestershire, Avon, Wiltshire**

"Bristol East" and "Bristol North" were two constituencies between the 1885 and the 1950, when they were abolished. "Bristol East" was split in two new constituencies "Bristol North East" and "Bristol South East". Both the two new constituencies were abolished for the 1983 general election, when "Bristol East" was revived.

"Chippenham" was re-named "North Wiltshire" in the 1983.

"Circenster and Tewkesbury" was created for the 1918 general election. It was partly replaced by the two new constituencies of "Costwold" and "Tewkesbury".

"Forest of Dean" was created in the 1885 general election to replace part of "West Gloucestershire", and abolished in the 1950 general election. It was re-established for the 1997 general election.

"Gloucestershire" was a constituencies between the 1950 and the 1951. It was abolished for the 1955 general election and it was replaced by Stroud.

"Swindon" was a constituency until the 1997, when it was replaced by the two new constituencies of "North Swindon" and "South Swindon".

### **Dorset, Somerset**

“Bournemouth” was created in the 1918. It was split in two new constituencies “Bournemouth East and Christchurch” and “Bournemouth West” by the Representation of the people Act 1948. Subsequently, “Bournemouth East and Christchurch” was split into two constituencies (“Bournemouth East” and “Christchurch and Lymington”) for the 1974 general election. Moreover, “Christchurch and Lymington” was largely replaced in the 1983 by the new “Christchurch” constituency. “Somerset, North” was a constituency between the 1950 and the 1983. It was largely replaced by “Woodspring”.

### **Devon, Cornwall**

“Devon West” was created for the February 1974 general election, largely including the area formerly belonging to “Tavistock”. It was abolished in the 1983, when it was largely replaced by the new “Torridge and West Devon” constituency. “Devon, South Molton” was created for the 1885 general election, when it was largely replaced by “Torrington”. This last constituency was abolished in the 1974. “Totnes” was created in the 1885 and it was abolished in the 1983. It was replaced by “South Hams”, but it was created again in the 1997.

### **Bedfordshire, Hertfordshire**

“Bedford” was first created in the 1918. It was replaced by “Bedford North” in the 1983, but it was re-created for the 1997 general election.

“South Bedfordshire” was established for the 1950 general election, and it was abolished for the 1983 general election. Large part of the territories were included in the new constituency of “Bedfordshire South West”.

“Hemel Hempstead” was created for the first time in the 1918. It was abolished for the 1983 general election and it was re-created in the 1997.

“Hertfordshire South” was created in the 1974, and it was abolished for the 1983 general election when it was partly replaced by the new “Hertsmere” constituency.

“Luton” was created upon the abolition of “Bedfordshire” in the 1885. Subsequently, it was divided into “Luton East” and “Luton West”. The two new constituencies were divided in “Luton North” and “Luton South” in the 1983.

### **Oxfordshire, Berkshire, Buckinghamshire**

“Eton and Slough” was created in the 1945. It was abolished in the 1983 when it was replaced by “Slough”. This last constituency covers part of the borough of “Slough” in Berkshire.

“Oxford” was a constituency from the 1295 until the 1983, when territory was divided between “Oxford East” and “Oxford West and Abingdon”. This last constituency includes as well the former constituency of “Abingdon”.

“Mid-Oxfordshire” was created for the February 1974 general election from parts of the seats of “Banbury” and “Henley”. It was abolished for the 1983 general election.

“Reading” was created in the 1295. It was abolished in the 1950, by splitting the territory between two new constituencies “Reading North” and “Reading South”.



These two constituencies were merged back into a single “Reading” constituency for the 1955 general election. However, “Reading North” was re-created in the 1974. In the 1983, the constituencies in “Reading” were reorganized, creating the new constituencies of “Reading East” and “Reading West”.

“Windsor and Maidenhead” was established at the February 1974 general election. It was abolished in the 1997, when it was replaced by the two new separated constituencies of “Windsor” and “Maidenhead”.

### **Surrey, West-Sussex, East-Sussex**

“Chertsey and Walton” was created for the 1974 general election from parts of the seats of “Chertsey” and “Esher”. It was abolished in the 1997 general election.

“Dorking” was a constituency from the 1950 general election until it was abolished for the 1983 general election and it was replaced by “Mole Valley”.

“East Grinstead” was created in the 1885. After its abolition, the territory was divided between “Mid-Sussex” and “Wealden”.

“Esher” was created in the 1950. It ceased to exist in the 1997, when it was merged with the constituency of “Walton”.

“Farnham” was created in the 1918, and it was abolished for the 1983 general election. It was largely replaced by the new constituency of “South West Surrey”.

“Hasting” was created in the 1363. It was partially replaced by the new “Hastings and Rye” constituency.

“Rye” was created in the 1832, and it was abolished in the 1950. The constituency was re-established for the 1955 general election, and abolished again for the 1983

general election. The territory was included in the new constituency of “Hastings and Rye”.

“Horsham and Crawley” was created for the February 1974 general election. It ceased to exist in the 1983, when it was largely replaced by a new constituency with the same name.

“Surbiton” was created in the 1955. It ceased to exist in the 1997, when it was largely replaces by the new “Kingston and Surbiton”.

“Carshalton” was created for the 1945 general election. It was abolished for the 1983 general election, when it was partially replaced by the constituency of “Carshalton and Wallington”.

“Surrey, Chertsey” was formed for the 1885 general election from part of the “Mid Surrey”. It was abolished for the 1974 general election. The territory was merged with parts of the seats of “Esher” in the 1974 to form the constituency of “Chertsey and Walton”. The last was abolished for the 1997 general election. “Worthing” was created in the 1945 by dividing “Horsham and Worthing”. It ceased to exist in the 1997.

## **Essex**

“Essex South East” was created for the 1885 general election, and it was abolished in the 1950. The constituency was re-established in the 1955, and it was abolished again in the 1983.

“Rochford and Southend East” was created in the 1997 by merging the two constituencies of “Rochford” and “Southend East”.

“Southend-on-Sea” was created in the 1918. It was abolished in the 1950, when it was replaced by the two new constituencies of “Southend East” and “Southend West”.

### **Greater London**

“Feltham” was a constituency from the 1955 until the 1974, when it was abolished. Its territory were merged with part of the territories belonging to the former “Heston and Isleworth”. The new constituency was named “Feltham and Heston”. “Battersea North” and “Battersea South” were created for the 1918 general election, when the former “Battersea” constituency was divided in two. They were abolished in the 1983, when the areas were re-united to form the new “Battersea” constituency.

“Bethnal Green, North East” and “Bethnal Green, South West” were created in the 1885. The two constituencies were abolished in the 1950, and the territories were merged, with part of the area belonging to “Hackney South”, in one constituency named “Bethnal Green”. This last constituency had a very brief life. It was abolished for the 1974 general election. The area was unified with the territories of “Bow” to form the constituency of “Bethnal Green and Bow”. However, in the 1983 it underwent another boundary change. The area of “Bethnal Green” was merged with the one belonging to “Stepney” and formed a new constituency called “Bethnal Green and Stepney”. As well this last constituency was soon abolished, and the area was united with “Bow” to form the constituency of “Bthnal Green and Bow”.

“Bermondsey” was created for the 1950 general election. It comprised the territories formerly belonging to the constituencies of “Bermondsey, Rotherhithe” and “Bermondsey, West”. It was abolished in the 1983, when it was largely replaced by the new “Southwark and Bermondsey” constituency.

“Croydon South” was created for the 1918 general election. It was abolished for the 1950 general election. However, it was revived in the 1955. During the 1974 general election, the seat was renamed “Croydon Central” and a new seat of “Croydon South” was created to the south of its previous location, with little overlap. “Croydon East” and “Croydon West” were two short lived seat created for the 1950 general election. They were replaced by “Croydon North East” and “Croydon North West” for the 1955 general election. However, these last two constituencies were merged together to form “Croydon North” in the 1997.

“Ealing East” and “Ealing West” were two short lived constituencies created in the 1945. Their territories were divided in two new constituencies, “Ealing North” and “Ealing South” for the 1950 general election.

“East Ham North” was established in the 1918. It belonged to the county of “Essex” until the 1965, when its territory was transferred to the county of “Greater London”. It was abolished in the 1974 and its territory formed the new “Newham North East” constituency. As well this last constituency was replaced by the revived “East Ham”.

“East Ham South” was established in the 1918. It belonged to the county of “Essex” until the 1965, when its territory was transferred to the county of “Greater London”. It was abolished in the 1974 and its territory were split between the

two new constituencies of “Newham North East” and “Newham South”. As well these last two constituencies were replaced by “East Ham” and “West Ham” in the 1997.

“Enfield” was created in the 1885, and it was abolished for the 1950 general election. Then, it was replaced by the new constituencies of “Enfield East” and “Enfield West”. Both these two constituencies were part of the “Middlesex” county until the 1965, when they were transferred to the county of “Greater London”. Both the constituencies were abolished in the 1974. “Enfield East” was replaced by “Enfield North” and “Edmonton”. “Enfield West” was replaced by the “Enfield North” and “South Hertfordshire”.

“Enfield Southgate” was established in the 1950. It was known as “Southgate” before the 1974.

“Fulham” was first created in the 1885. The territory was split between the new constituencies of “Fulham East” and “Fulham West” for the 1918 general election. However, the areas were unified again in the 1955. It underwent further boundaries change in the 1974, when the area formerly belonging to Byron Court was added. It was replaced by “Hammersmith and Fulham” in the 1997.

“Greenwich” was a constituency from the 1885 until the 1997 when it was merged with part of the former “Woolwich” constituency to form the seat of “Greenwich and Woolwich”.

“Hampstead” was created for the 1885 general election. It was abolished for the 1983 general election, when it was partly replaced by the new “Hampstead and Highgate” constituency.

“Harrow Central” was created in the 1950 by merging the two seats of “Harrow East” and “Harrow West”. It was abolished in the 1983.

“Hendon” was created in the 1997 by merging the two seats of “Hendon North” and “Hendon South”.

“Holborn” was established in the 1885. It was abolished for the 1950 general election, when it was replaced by the constituency of “Holborn and St. Pancras South”. This last seat was abolished as well in the 1983 , when it was replaced by the new constituency of “Holborn and St. Pancras”.

“Inslington West” was a constituency from the 1885. It was abolished in the 1950, when it was merged with part of the area of “Inslington South” to form the new seat of “Inslington South West”. Following some further boundaries changes in the 1974, the territory of this new constituency was merged with the area belonging to “Inslington East” to form the two new constituencies of “Inslington North” and “Inslington Central”. In the 1983, the area of “Inslington Central” was merged with the seat of “Inslington North”.

“Kensington North” and “Kensington South” were both created in the 1885. They were abolished for the 1974 general election, when their territories were merged to form the new seat of “Kensington”. This last constituency was in turn replaced by the new seat of “Kensington and Chelsea” in the 1997.

“Kingston upon Thames” was created in the 1918. The constituency was part of the county of “Surrey” until the 1965, when it was transferred to the county of “Greater London”. The seat was abolished for the 1997 general election. Its territory was then divided between the new constituency of “Kingston and Surbiton”

and “Richmond Park”.

“Lambeth, Brixton” was created in the 1885. It was abolished for the 1974 general election, when it was largely replaced by the new seat of “Lambeth, Central”. “Lambeth, Central” was abolished for the 1983 general election, when most of its territory was transferred, with the territory belonging to “Lambeth North”, to the redrawn “Vauxhall” constituency.

“Lewisham North” and “Lewisham South” were created in the 1950. They were abolished in the 1974, when part of the area of “Lewisham North” was merged with “Lewisham South” to form the revived seat of “Lewisham East”. The other part of “Lewisham North” was merged with the constituency of “Deptford” to form the new seat of “Lewisham Deptford”.

“Acton” was established in the 1918. It was part of the county of “London” until the 1965, when it was included in the county of “Greater London”. It was replaced by the seat of “Ealing Acton” in the 1983.

“Mitcham” was created for the 1918 general election from part of the “Wimbledon” constituency. It belonged to the county of “London” until the 1965, when it was transferred to the county of “Greater London”. It was replaced by “Mitcham and Morden” for the 1974 general election.

“Paddington” was created for the 1974 general election, partially replacing the previous “Paddington North” and “Paddington South”. It was abolished for the 1983 general election.

“Poplar South” was created for the 1918 general election. It was merged with “Bow, and Bromley” to form the new constituency of “Poplar” in the 1950. This

last new constituency was in turn abolished in the 1974, when it was merged with three other constituencies: “Stepney Limehouse”, “Stepney Mile End”, and “Stepney, White Chapel and St. George”. The new constituency was named “Stepney and Poplar”. “Stepney and Poplar” was abolished in the 1983, when the territory was merged with the seat of “Bethnal Green” to form the new constituency of “Bethnal Green and Stepney”.

“Walthamstow” was created in the 1974, by merging the two former constituencies of “Walthamstow East” and “Walthamstow West”. These two former seats were part of the county of “Essex” until the 1965, when they became part of the county of “Greater London”.

“Wood Green” constituency was created for the 1918 general election. It was part of the “Middlesex” county until the 1965, when it was transferred to the county of “Greater London”. It was abolished in the 1983, when it was merged with the seat of “Hornsey” to form the constituency of “Wood Green and Hornsey”.

“Woolwich” was established in the 1983 by merging the two former seats of “Woolwich East” and “Woolwich West”.

### **Hampshire, Isle of Wight**

“Fareham” was first created in the 1885, however it was abolished in the 1950 to form the constituency of “Fareham and Gosport”. During the 1974, this last constituency was split in two, and “Fareham” was revived and the new constituency of “Gosport” was created.

“Hampshire, New Forest and Christchurch” was established in the 1918, partially



replacing the previous “New Forest” constituency. It was abolished for the 1950 general election, when it was partially replaced by a recreated “New Forest” constituency. However, this last constituency ceased to exist in the 1997, when it was split in two new constituencies: “New Forest East” and “New Forest West”.

## **Kent**

“Bexleyheath” was created for the 1974 general election. It was abolished in the 1997, when it was largely replaced by the constituency of “Bexleyheath and Crayford”.

“Chislehurst” was created in the 1918. It was abolished in the 1997, when it was partly replaced by the new “Bromley and Chislehurst” constituency.

“Erith and Crayford” was created in the 1955 general election, and it was abolished for the 1997 general election, when it was replaced by the new constituencies of “Erith and Thamesmead” and “Bexleyheath and Crayford”.

“Faversham” was created for the 1885 general election, and it was abolished for the 1997 general election. It was replaced by the new constituencies of “Sittingbourne and Sheppey” and “Faversham and Mid Kent”.

“Mid Kent” was created for the 1983 general election from parts of the seats of “Rochester and Chatham” and “Maidstone”. It was abolished in the 1997 general election.

“Thanet East” and “Thanet West” were created in the 1974. They were abolished for the 1983 general election, when they were replaced by “Thanet North” and “Thanet South”.

“Kent, Tunbridge” was created in the 1918. It replaced the previous “Tunbridge” constituency. It was abolished for the 1974 general election, when it was replaced by the new “Tonbridge and Malling” constituency.

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