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THE AVAILABLE VOTER

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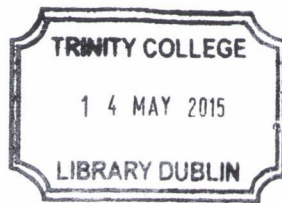
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Summary

Contemporary research on electoral volatility often focuses on those who switch party preferences, but the switching itself does not inform us about who is available for electoral competition among the parties. Making use of the party preferences of the voters of different parties, we examine voter availability (i.e., the degree of availability of the voter to the electoral competition), the degree that the voter is likely to be persuaded by the different parties. The goal of this research is to answer two main questions: What are the factors that explain voter availability on an individual level? What are the factors that explain voter availability on a country level? To answer these questions, regression analyses are employed on the individual and aggregate levels as well as in a multi-level context where both levels are considered, simultaneously. The data used for those analyses are the cross-national European Election Studies (EES) from 1989 to 2009, as well as national election studies such as the Dutch Parliamentary Election Study (NKO) for 2006 and 2010 and the Irish National Election Study (INES) for 2002 and 2007. Country level variables explaining electoral instability are usually studied with a limited number of countries because of the difficulties in collecting comparable data. Utilizing the cross-national European Election studies from 1989 to 2009, we are able to study these variables in 90 elections across multiple countries, and include them in one single analysis with individual-level variables.

For the first research question concerning individual differences, we examined different voting theories and their implications. While some voting theories such as the sociological voting theory of group membership did not prove useful, others such as the psycho-sociological approach, which states that higher party-ID decreases voter availability, had much stronger predictive power. Rational voting theories of spatial voting, which state that being close to different parties on a left-right scale or being more moderate decreases voter availability, are supported as well. Characteristics such as younger age and higher education are found to increase voter availability. Meanwhile, belonging to a higher social class and living in a more urbanized environment did not show any effect on voter availability. Besides those, political attitudes, party leader preferences, retrospective and prospective voting elements, are all considered as well.

For the second research question, aspects of the context in which the voting takes place, such as a higher effective number of parties, more disproportional voting system, and country development increases the voter availability. Although other effects are less consistent, we still find support for the idea that lower system polarization, time away from the national elections, and lower economic sentiment in the last six months increase voter availability, while the effect of cleavages in society is very limited. The importance of considering the aggregate level variables is shown as well by the cross-level interactions where the aggregate level variables influence the relationship between the individual level variables and voter availability. The aggregate level variables do explain the increasing voter availability over time.

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Introduction

The political environment in the days before an election is always intense. Political tension among the parties is at its peak, and the candidates are out to win over every last one of the undecided voters. These candidates present themselves as the "right choice" for these voters – hoping to inspire them to come out and vote for them. For political scientists, consultants, and analysts, studying the electoral behaviour of these undecided voters is the key to understanding the processes that mobilize voters towards a party.

In the political arena, mainstream parties vying for a place in the national circuit already have a solid base of voters who made a firm decision to support their party and did not take other party options into consideration. We could say these voters are "out of competition" (Mair 1987). At the other end of the spectrum, we have the voters "in competition," who do not show stable voting patterns and are available for the electoral competition. Assuming that every voter is a prospective voter for any party is a misguided notion, as the "voters out of competition" are clear on which party they support. The "voters in competition" remain conflicted about which party to vote for. The latter continues to inspire research and commentary since the "voters in competition" decide the fate of the election if there is no clear majority among the parties. Political parties continue to flirt with this voter base until the very end as these voters are available for them. We define voter availability as the degree of availability of the voter to the electoral competition; the degree that the voter is likely to be persuaded by the different parties.

The research question that will be answered has two parts. What are the factors that explain voter availability on an individual level? What are the factors that explain voter availability on a country level? Our goal is to create a framework that will help to understand the important characteristics of the electorate that is available for the electoral competition among parties. It is crucial to investigate voter availability at an individual, as well as aggregate level. Fellow citizens tend to have more resemblances with each other than with citizens from other countries because of the similar institutions, parties, and so on. We will explore what differentiates the voter availability between individuals and between countries.

In the first chapter, we introduce the concept of voter availability. The second chapter provides a literature review and formulates the hypotheses in which we are interested. The third chapter is dedicated to how we will approach voter availability. The fourth chapter is dedicated to the results and at end we formulate the conclusions of the dissertation.

1. Voter Availability

1.1 What is voter availability?

Before the late 1960s, most Western party systems were described with terms like "continuity," "stability," and "resilience" (Crewe and Denver 1985) and the electoral landscape was comprised of voters with clear party preferences. Lipset and Rokkan expressed this belief in 1967, referring to a "frozen party system," and they concluded: "[...] the party systems of the 1960s reflect with few but significant exceptions, the cleavage structure of the 1920 [...] the party alternatives, and in remarkably many cases the party organizations, are older than the majorities of the national electorates" (1967, 50). A political cleavage is an objective demographic division such as class or religion in which the membership category is strongly associated with a particular party (Bingham 1976). Rose and Urwin expressed the same idea as Lipset and Rokkan: "[...] the electoral strength of most parties in Western nations since the war has changed very little from election to election, from decade to decade, or within the lifespan of a generation" (1970, 295). Voters were characterized by their strong affinity to a party, making them resistant to competition among the parties. If a voter had a strong association with a party, he would support that party almost unconditionally.

Today, electoral statistics show increasing variability in election outcomes, with an increase in volatility (Crewe and Denver 1985; Dalton and Wattenberg 2000; Drummond 2006). A large part of the electorate does not have strong ties to any particular party and is available to swing towards or away from parties (Marsh 2006; Van der Eijk and Franklin 1996). This highlights promptly the main difference between this research and the contemporary research on volatility, in so far as we are looking at the availability to change, rather than change itself. Voters who are available for the competition among parties can decide to switch their party choice between two consecutive elections, but switching is not a necessity to be considered as a voter who is available for the electoral competition.

It should be noted that the whole electorate is not up for grabs. As mentioned in the introduction, most of the parties have a certain base of supporters and the chance that these voters are available to other parties is small. Some voters are clear about their party choice and cast their vote as expected; for others, the vote choice is not so clear-cut. This difference exists because every voter has a different set of characteristics and this leads to different presumptions about candidates, issues and parties, and eventually shapes his or her final choice. Each voter has a different set of choices about which party to support, and it is not uncommon for some voters to consider a number of parties. If the differences among party preferences are small, the final vote choice may change (Marsh 2006).

In this dissertation, we explore the electorate that is available to the electoral competition (i.e., the electorate that can swing towards and away from the parties). This field of research is less developed. Only a few studies probe this research question (e.g., Marsh 2006; Kroh 2007; W.G. Mayer 2008). We define voter availability as the degree of availability of the voter to the electoral competition, the degree that the voter is likely to be persuaded by the different parties. Higher voter availability expresses itself as either a voter being undecided before the elections, or considering multiple party choices at the time of the elections, and the outcome can even include split-ticket voting and vote swings towards another party.

1.2 Voter availability and the voting theories

Many different disciplines, from philosophy to statistics, pay attention to decision-making processes. The normative approach assumes an ideal situation where the voter is fully informed, and their choice of party is rational, whereas the descriptive approach describes the phenomenon being studied (Einhorn and Hogarth 1981). In political science, a precise mathematical formulation about decision-making is impossible due to the great complexity of such processes (Bates 1954). Voter decisions also need to be viewed differently from professional or personal decisions where the decider is directly responsible for his or her choice. With vote choice, the voter is taking a private position on a public, non-personal choice for which the voter does not feel directly responsible for, or as much as they would be with a personal matter. "The voter is not under any particular pressure to take great care weighting the pros and cons of a civic choice" (Brown 2005, 7). In political science, different voting theories have been formulated to understand the decision-making process better and we will explore these further.

Until the early 20th century, there were virtually no studies on voting behaviour, and the subject was practically left untouched and unexplored. Though voting is mentioned in many of the classic works on political philosophy, such as *Democracy in America* by De Tocqueville (1838), it is only mentioned as part of the broader consideration of political theory and behaviour. Around 1900, extensions of the right-to-vote across social classes and women were the focus of much debate, and for this reason, were also the focus of electoral studies (J. Evans 2004).

The focus of electoral studies changed in the 1930s with the inspiring work *Political Behaviour: Studies in Election Statistics* by Tingsten (1937), which can be seen as the beginning of scientific comparative political research. Political attitudes are studied with characteristics such as sex, age, and occupation, resulting in formulating laws of political behaviour as the electoral participation within a group is dependent on the strength of the group in the electoral district. Other pioneer studies are the voting studies of Lazarsfeld and Berelson using public opinion surveys. They were not interested in how people voted, but rather why they voted as they did. Lazarsfeld and Berelson introduced the use of panels, interviewing a number of respondents at different periods in the campaigning process. The voter's social group, as well as political events and macro-level context were considered in

explaining the vote choice (Lazarsfeld et al. 1944; Berelson et al. 1954; J. Evans 2004). Lazarsfeld and Berelson shaped the foundation for scientific studies on voting behaviour and are also considered the forefathers of one of the three major schools of thought on the factors explaining voting behaviour, the Columbia School. Their book, *The People's Choice* (Lazarsfeld et al. 1944), is a sociological model of voting behaviour and focuses on the influence of social factors. This, and a later study in 1954 by Berelson et al., explored the decision-making process of voters in detail and concluded that the overall voting preferences remained quite stable because of an absence of cross-pressure (i.e., an environment where the social context was mutually reinforcing) (Berelson et al. 1954; J. Evans 2004).

The findings by Lazarsfeld and Berelson guided researchers from the University of Michigan and resulted in their well-known publication, *The American Voter*, authored by Angus Campbell, Philip Converse, Warren Miller, and Donald Stokes (1960). This publication is one of the first comprehensive studies of national survey data, and its authors concluded that identification with political parties, once established, is difficult to change and, for most voters, is the basis for casting their vote. The Michigan School is the second major research school in voting behaviour with a socio-psychological model based on party identification.

The third school, the Rochester School, proposes an economic-voting model based on rational choice. The founding grounds for this model are described in the 1957 publication by Anthony Downs, *An Economic Theory of Democracy*. Downs defines rationality as engaging in the pursuit of goals in the most reasonable way possible: "A man moves toward his goals in a way which, to the best of his knowledge, uses the least possible input of scarce resources per unit of valued output" (Downs, 1957, 6). The voter compares the expected utility of the parties, which is defined as the personal advantage that a voter gets by having a particular party in government compared with the expected utility of another party (Downs 1957). If there are several options, the voter will take the outcome that will maximize their gain and thus maximize their utility - utility being the difference in the gain between the chosen option and the rejected party option (J. Evans 2004).

These three voting traditions form the origin of the voting theories. The interest, for our research, is that each of these schools refers to voters who do not display stable voting patterns. Lazarsfeld, Berelson, and Gaudet mentioned in their work that voters might belong to multiple groups with different political goals and be

"cross-pressured" (Lazarsfeld et al. 1944). Individuals who are members of several primary groups (such as family and friends), secondary groups (such as associations), or categorical groups (such as social class, race, religion and regions which have different political norms) are pulled in different political directions. As a result, a voter may change his vote intention, feel a reduced sense of partisanship, or split his vote between competing parties (Taylor and Rae 1969). Cross-pressured voters show less interest in the campaign and delay their voting decision during the campaign. These voters are less likely to vote, and exhibit unstable voting intentions (Berelson et al. 1954). Voters who are experiencing cross-pressure are more likely to be exposed and accessible to conflicting partisan perspectives (Toka 2003). In the literature, a formula was introduced by Taylor and Rae to calculate cross-pressure, which is defined as "the proportion of all the pairs of individuals, whose two members are in the same group of one cleavage but in different groups of the other cleavage" (Taylor and Rae 1969, 537).

In *The American Voter,* A. Campbell et al. (1960) acknowledge that cross-pressure is caused by political heterogeneous membership, belonging to groups with different political goals, as Berelson et al. (1954) mentioned. The authors also state that conflicts within the individual's psychological field may arise for reasons different from political heterogeneous membership alone. These include: attitudinal conflicts which lead to postponing the vote choice, being less enthusiastic about casting the vote, having more chances to split the ticket, and being less likely to vote at all. But in *The American Voter*, the strength of partisanship as a fixed factor is used to predict political behaviour (A. Campbell et al. 1960). Party identification is a long-term, affective, psychological alignment with a preferred political party (Berglund et al. 2004). A person with no party ID (or low party ID) is often referred to as an independent voter. In the USA, this refers to a person who does not identify with either the Democratic or the Republican parties, and the term is often used in the media. Many different studies confirmed the decline of the partisanship in the USA, as well as in Europe (Dalton 2000; 2012; Schmitt and Holmberg 1995; Berglund et al. 2004), and that this decline brought an increase in independent voters. The American National Election Studies (ANES) shows that in 1952, 19 percent of the voters identified themselves as Independents. Fast forward to 1964, studies showed that Independents formed 23 percent of the electoral base, which then increased to 36 percent in the 1990s (Keith et al. 1992). In 2008, the number of people who identified as Independents was greater than those who identified as Democrats or

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Republicans (Magleby et al. 2011). We can approach party identification not only by the direction (i.e., which party the person identifies with), but also by the strength of the party identification. The strength of the party identification is related to the strength and stability of the party choice (Berglund et al. 2004).

Downs argues that a voter compares the utility of different options and chooses the option which awards him with the highest personal advantage. If a voter is not expecting a big variation in what follows victory or defeat of a particular candidate or party, then the personal advantage if a particular party/candidate is elected will be small; the utilities between different parties are small, therefore this increases the possibility of abstention. Besides the difference in utilities, the voter also considers the probability of affecting the actual outcome, and personal costs such as physically coming out to decide whether to vote or not (Downs 1957). These aspects are often debated in political science because according to the theory it is hard to explain why people vote in the first place, because the possibility that they will cast the pivotal vote is miniscule (D. Green and Shapiro 1994; Blais 2000). Downs believes that one of the reasons why people still turn out to vote is that they understand that democracy cannot survive very long with low turnouts and it is one's duty to vote (Downs 1957). Riker and Ordeshook (1968) consider the satisfaction of the civic duty of voting which may include affirming allegiance to the political system and affirming a partisan preference among others. This perspective focuses on the benefits of voting rather than personal costs, which provides a better explanation of the turnout at elections.

So, all three traditional voting theories acknowledge and give explanations for those who would have difficulties in making a vote choice following a particular voting theory. In chapter three, we will explore these theories in more detail.

1.3 Voter availability and its implications

As discussed above, higher voter availability expresses itself as either a voter being undecided before the elections, or considering multiple party choices at the time of the elections, and it can even include split-ticket voting and vote swings towards another party at the last moment. Our research design differs from the existing research on volatility because the main focus is not the change itself, but the availability of the voter to switch. To understand the availability to switch from one party to another, the switching itself should be examined as well. Studies on volatility were limited, if not non-existent, before the late 1960s. This was because the party system and voter choices were known to be stable and predictable. The two voting theories mentioned earlier, namely the sociological and socio-psychological theories, were the foundations of this view of voter stability (Crewe and Denver 1985).

With the sociological approach, stability was established by belonging to groups based on the certain cleavages in society. As these positions were hardly amenable to change, they resulted in stable party choices and a predictable electoral outcome (Kroh et al. 2007). With the socio-psychological approach, the party identification paradigm explains the cause of stable party choices due to a long-term allegiance of the voter to a major and established party. This identification not only determines the outcome of the vote, but also gives people who identify with the party a general perception of the world of politics that makes party identification self-reinforcing and self-strengthening over time (Crewe and Denver 1985). It should be noted that these approaches were not contradictory but complementary. The authors who emphasised social structure did not deny the existence of party identification, but instead considered it as the foreseeable concomitant of a wider communal loyalty. These approaches took party identification to be a central position, while also considering social structure to be important, and recognised that class, religion, and other group loyalties were frequently the source of, and what maintained, the party identification of a voter (Crewe and Denver 1985).

Due to the increasing volatility, (Crewe and Denver 1985; Drummond 2006) the voting theories of the Michigan and Columbia schools came under pressure (Dalton and Wattenberg 2002; Dalton 2012). One of the explanations given for this change was the rise of post-materialism values among individuals, as emphasised by autonomy, self-expression, and quality of life (Dalton 1984). Inglehart (1971)

revealed that there is intergeneration change in the value priorities in Western European countries. The decades after World War II were characterised by sustained peace, unmatched prosperity, and massive increases in the number of people undertaking a higher education. This led to a value-pilgrimage from materialist values that emphasised economic and physical security, to a new set of post-materialist values that emphasised autonomy and self-expression. This new young generation of voters with post-materialism values could not be explained by life-cycle factors, but by intergeneration change (Inglehart 1971; 1981; 2008). The rise of these post-materialist voters in the late 1960s and 1970s placed existing party alignments under chronic stress in many advanced industrial democracies (Dalton 1984) and the dependence on measuring vote choice from social characteristics decreased in Western Europe (Franklin et al. 1992).

National electoral surveys in Britain and the United States revealed a firm decline in party identification (Converse 1976; Crewe and Denver 1985). Long-term attachment to the traditional parties was fading and the number of Independents and split-ticket voters was increasing in the United States, while Britain witnessed a reappearance of support for third parties. Besides this, both countries experienced rising rates of vote switching and abstention, which indicated that fewer and fewer voters were reliable party loyalists, and more and more people from the electorate were becoming available (Crewe and Denver 1985). Electoral alignments became weaker and party systems started to experience increased fragmentation and electoral volatility. The diversity created by this process in the last decennia constitutes a major departure from the structured partisan politics that existed earlier (Dalton et al. 1984).

With electoral alignments on the decline, the interest in vote change on the individual level increased as the academic community took to the task of understanding this change. A.H. Birch and Campbell (1950) wrote one of the first articles published on floating voters by exploring those who changed party preferences, and also those who were undecided or who changed their preferences between a poll and the actual elections. Their approach was based on the Columbia tradition, which is the principle of life-long attachment to a particular group. They concluded that the floating voter could not be identified merely based on demographic factors. (A.H. Birch and Campbell 1950).

Key (1966) then argued that in the *responsible electorate*, the switchers based their votes on real political preferences and would judge whether the issues they cared about were becoming better or worse under the incumbent government. These models of government performances, most often, involve the economic situation (e.g., Duch and Stevenson 2005; Van der Eijk et al. 2007). Almost two decades later, Van der Eijk and Niemöller approached the individual change with a psychological-sociological and rational-choice theory with panel data from the Netherlands. They showed that of all the variables suggested in the literature, party identification based on the socio-psychological approach is one of the most powerful. Van der Eijk and Niemöller also investigated proximity voting based on the rational-choice theory that the voter will choose the party that is the closest to self-placement in regard to vote change; that is, vote change may occur if more than one party is close to the preferred ideological position (Van der Eijk and Niemöller 1983).

When we observe that the decline in voter loyalties is not equally prevalent in each and every country, the justification for looking at aggregate level explanations of volatility increased. This approach enjoys major noteworthy contributions, including that of Pedersen, who introduced the Pedersen Index of volatility, which is a measure that became a standard measurement of volatility to compare the voter loyalties among different countries. The index gives the net percentage of individual vote transfers within the electorate party system, so it captures the differences in support for the different parties between two elections. This is a net percentage, meaning if there is an equal change from party A to B as there is from party B to A, the index will not capture the transfer. Pedersen describes the European system in terms of volatility and investigates the national patterns. His results show that high-volatility elections (elections where there is a high net percentage of changes in party support levels) as well as low volatility elections are not randomly scattered across time and nations; some countries never experience high-volatility elections, while others never experience low-volatility elections. Besides this, Pedersen describes a general trend in Europe towards more high-volatility elections and fewer low-volatility elections (Pedersen 1979).

Another major work on volatility is a book by Crewe and Denver titled, *Electoral Change in Western Democracies: Patterns and Sources of Electoral Volatility* (1985), with different contributors who studied electoral volatility and partisan change on a country-by-country basis in Western democracies. They

concluded that although the countries that were analysed varied in the pace, magnitude, and in the precise nature of the social changes, they had all experienced vital and firm social changes. In these countries, the emergence of "counter-culture" was identified in the 1960s that contributed to the rise of new issues in the political sphere. Nearly all of the countries examined showed some extent of social and cultural change that led to the increase of partisan de-alignment. On the individual level, partisan de-alignment refers to a situation where the psychological attachment of the voter to a particular party becomes weaker. On the aggregate level, it refers to a decrease in the strength of the affiliation between social-structural variables and party support (Crewe and Denver 1985).

Different authors explain these patterns based on aggregate factors. Bartolini and Mair (1990) identified the institutional factors that influenced volatility such as the number of parties, disproportionality, policy distances, and cultural/organisational alignment. Roberts and Wibbels (1999) considered that a poor economy increases anti-incumbent voting, while a healthy economy may reduce electoral volatility by solidifying support for the political status quo or generating vote shifts toward incumbents. The length of time the electoral democracy has been in existence (Lane and Ersson 2007) or the electoral system itself (Cox 1997) has also been suggested to be important.

Besides vote swings to another party, split-ticket voting could be one of the implications of voter availability. Split-ticket voting is the phenomenon when a voter chooses two or more different parties in different elections held concurrently (Sanz 2008). This can occur horizontally or vertically. Horizontal ticket-splitting can occur in elections for which multiple, equivalent offices are being contested. Vertical ticket-splitting occurs when elections are held for offices at different levels of government (Burden and Helmke 2009). The decline of electoral alignments has also affected split-ticket voting where the voter's attachment to political parties weakens and the vote choice is less influenced by traditional allegiances, making split-ticket voting more frequent (Fiorina 1992; Dalton 2002). In the USA, split-ticket voting almost doubled from 15 percent or less, to 25 percent or more between the 1950s and 1970s (Fiorina 1992), but decreased in the 1990s (Born 2000). In Europe, there has been an increase in split-ticket voting (Hajner 2001), as in Germany, ticket-splitters still form a minority, albeit a growing one (Schoen 1999). The declining voter loyalties, the rise of independents, the increase of media-centred campaigns and the

increase in incumbency, all have contributed to an increase in split-ticket voting (Grofman et al. 2000).

There are many different explanations concerning split-ticket voting including incumbency, gerrymandering, historical differences among regions, issue-based voting (Bugarin 1999), theories about strategic voting, irrational confusion, and power sharing (Burden and Helmke 2009). We only discuss those theories that expand on our broader discussion of available voters and will limit this discussion to the explanations of split-ticket voting according to the three traditions in voting theories. One of the first explanations of split-ticket voting finds its origin with the Columbia school of voting focusing on cross-pressure. Berelson et al. (1954) formulated that a person can have mixed views; they can be conflicted about party choice by being attracted to each party by one set of opinions, but repelled by another. This is a circumstance of partisan ambivalence - ambivalence is the coexistence of opposing attitudes or feelings. To resolve this voting dilemma, the voter can split the vote (Mulligan 2011). The next voting tradition explaining split-ticket voting is the tradition of the Michigan school of voting. A. Campbell and Miller (1957) distinguished between indifferent and motived split-ticket voters. The indifferent voter splits tickets based on a superficial interest in a particular local candidate, at the request of a friend or some last minute influence which results in crossing party lines. The motivated split-ticket voter splits the vote because the political motives are in conflict due to differences in candidates, or because they prefer the policies of one party, but have an allegiance to the other (A. Campbell and Miller 1957). Fiorina (1992) argues that split-ticket voting is a form of strategic voting in which a share of the electorate try to balance the policy and to get a divided government. This explanation can be best seen in the tradition of the Rochester school of voting and more specifically proximity-voting where the voter is choosing the party closest to his own position. The split-ticket voters are concentrated among those voters whose preferred ideological position lies between that of the Democrats and Republicans in an American context. Fiorina argues that if a voter casts a split-ticket vote, the vote for the presidential elections will go most often to the presidential candidate of the party which is ideologically nearer the voter, and the vote for congress to the candidate of the party farther away (Fiorina 1992). This approach is contradicted by Born who did not find much empirical support (1994) and also found that the dramatic drop in the 1990s of split-ticket voting put this model under pressure (Born 2000). Burden and Kimball formulated it as follows: "voters are not intentionally splitting their tickets to

produce divided government and moderate politics" (1998, 533). Also, for countries with coalition governments and where a horizontal split-ticket was possible (as the case in Germany), split-ticket voting is seen as a sophisticated instrument to support prospective governmental coalitions. However, this approach was criticised as it was shown that we cannot take it for granted that a majority of voters consider the electoral system and the possible coalitions when deciding which parties to vote for (Schoen 1999).

Being undecided at the time of the elections is another feature of having higher voter availability that we will explore in this dissertation. This approach is used in the early works of A.H. Birch and Campbell (1950) and Berelson et al. (1954). The time of the voting decision is suggested as the key independent variable for analysing the campaign effects (Berelson et al. 1954; Fournier et al. 2004). Research has shown that in many established democracies, voters are delaying their vote decision until the election campaign starts. In the 1956 elections, only 21% of the voters made up their mind during the electoral campaign, meanwhile almost half of the electorate were still undecided before the start of the electoral campaign with the 1992 electoral battle being between Clinton and Bush (McAllister 2002). A similar amount of late deciders are found with the 1997 Canadian Election Study, where half of the citizens decided who to vote for during the campaign (Fournier et al. 2004). The late deciders are more likely to switch their vote choice in response to events and messages during the campaign. Their decision is not determined by long-term factors such as partisan identification and ideology (Fournier et al. 2004). Research indicates that campaigns do indeed influence the vote choice (e.g., Holbrook 1996; Shaw 1999; J. Campbell 2001) and especially the vote choice of those who are not aligned to a party (Schmitt-Beck and Farell 2002) or those who are uncertain about parties and candidates (Peterson 2009).

Although aspects of vote abstention will be discussed in the next chapters, it is not the focus of this thesis. The focus of this thesis is voter availability and not voter abstention at election.

1.4   Is the research needed?

Electoral behaviour and the decision-making process leading up to this final choice are important fields of research in political science. The interest in electoral behaviour is also a determinant of a successful election campaign, and the study of those voters who are available for the electoral competition among the parties becomes imperative to create efficient and successful campaigns. The campaigns are designed by the parties to mobilise their loyal voters and persuade those voters for which parties are competing with each other. We cannot argue that the whole electorate is up for grabs, as some voters can be persuaded while others are out of the competition.

The knowledge about those persons who are available for the electoral competition among parties is an underdeveloped field of research in political science. Contemporary research in political science often analyses the volatility (i.e., the actual switchers), but the actual switchers would not inform us about those voters who are available for the electoral competition. Extending the knowledge about the electoral competition, where the focus is not only on the individual, but also on the differences between the countries, would fill a gap in political science research.

1.5   Summary

Before the late 1960s, the party systems in many Western nations were stable and voting theories based on party identification and group membership were considered to be the foundations for understanding the electorate. As the volatility in many Western countries increased, it put these two voting theories under pressure. Today, the electoral landscape has changed tremendously, and we cannot approach the voting decision as was done in the past. We see a varied electorate, an increasing part of which is available for the party competition. Since the inception of voting theory formulations, authors have given reasons why certain voters would not have stable party choices. Our research is focusing on those persons without any stable party choice but instead of the traditional way of looking at voter volatility, we are looking at voter availability. Voter availability is defined in this dissertation as the

degree of availability of the voter to the electoral competition, the degree that the voter is likely to be persuaded by the different parties.

Exploring the three voting traditions, we notice that every tradition is paying attention to those voters who don't have stable voting patterns. The sociological voting theory refers to cross-pressure voters - voters who belong to multiple groups with different political goals. The socio-psychology voting theory mentions a person with no or low party-ID, meanwhile the rational voting theory discusses voters for whom the utility of the different options are small.

As volatility increases over the years, voting theories come more under pressure and volatility gains importance in electoral research. The start to understanding this new conception in voting behaviour is given. The interest won't be limited to understanding the voter who swaps parties on an individual level but also on the aggregate one - especially when research has shown that different nations show a pattern of electoral volatility and this isn't randomly scattered. All those countries with higher volatile elections show to some extent social and culture changes which led to the increase of partisan de-alignment. Electoral system characteristics as disproportionality and party system characteristics as the number of parties and polarization showed its influence. Analysing voter availability just as the vote swings towards and away from certain parties would not give us the full picture.

As one of the consequences of the declining of voter loyalties, split-ticket voting was on the rise. An explanation for this phenomenon was given as well in the three different voting theories where conflicting party opinions and party policy plays a central role. The rationality behind the choice to split the vote is an ongoing discussion in political science. But besides switching the vote and casting a split-ticket, the increase in being undecided at elections shows the decrease of voter loyalties. All these aspects, such as being undecided before the elections, switching parties, and casting a split-ticket vote, will be considered besides considering multiple parties at elections to approach voter availability. Although aspects of vote abstention will be discussed in the next chapters, it is not the focus of this thesis. The focus of this thesis is voter availability and not voter abstention at election.

2. Literature review

In this chapter, we will give an overview of the extensive literature for our research. For voter availability on the individual level, we start with the three traditional voting theories and discuss as well the more recent ones. Afterwards, we will discuss the theories involving demographic characteristics and attitudes. Thereafter, the theories of aggregate level are considered. Based on those theories, we formulate the hypotheses which will be explored in Chapter 4.

2.1 Voter availability on the individual level

2.1.1 Voting theories

We will explore the sociological, psycho-sociological, and rational-choice theories of voting, with the last one using spatial voting models such as directional and proximity theory. Besides those, issue-voting, party leaders voting, and retrospective and prospective economic voting theories are considered as well.

2.1.1.1 Sociological theory of voting

Lazarsfeld and Berelson are the pioneers in the sociological approach of voting, and have authored many publications. *The People's Choice* (Lazarsfeld et al. 1944) was a study focusing on the decision-making process during the 1940 presidential election campaign in the United States, where Franklin Roosevelt ran in opposition to Wendell Willkie. Lazarsfeld, who had a research background in mass media, expected to find empirical support for the direct influence of media on vote intention, but research showed that the media effects on vote intention were minimal, and that the main guidance for the voters was the social groups to which they belonged (Lazarsfeld et al. 1944). "A person thinks, politically, as he is socially. Social characteristics determine political preference" (Lazarsfeld et al. 1968, 69). His research was the origin for the two-step flow theory. This theory does not assume a

direct influence of the media, but instead an indirect one, where the message from the mass media first reaches "opinion leaders" who filter the meaning of the media message before sharing with their social groups where they are influential. In this way, the responses to media are mediated through the group to which the voter belongs to and their interpersonal relationships (Katz and Lazarsfeld 1955). Another key publication, *Voting: A Study of Opinion Formation in a Presidential Campaign* (Berelson et al. 1954) formed the real basis for the sociological approach. The authors concluded that for many voters, their political preferences and cultural tastes can be considered to be similar, and have their origin in class, ethnicity, ecological and family traditions. These preferences display stability and resistance to change, and are strengthened by interpersonal relationships, but are flexible over generations for the society as a whole. The sociological background (e.g., family, friends, and religion) is the main influence on the vote choice, and the political predisposition is established on the basis of the socioeconomic status, race, religion, and area of residence. If these affiliations differ, then the voter is pulled in different directions, resulting in many relevant vote choices which postpone decision-making. The mass media and the campaign itself often emphasise the existing predispositions instead of aiming to change minds, and have a minimal effect on the voting behaviour itself (Berelson et al. 1954).

While Berelson and Lazarsfeld were the pioneers of the sociological approach, Lipset and Rokkan extended it with their cleavage theory in *Cleavage Structures, Party Systems and Voter Alignment: An Introduction* (Lipset & Rokkan 1967). Their historical and sociological approach explains the party system of Western European countries. They argue that there exist four historical cleavages: center /periphery, and state/church, both with origins in the national revolutions, and two others, land/industry and owner/worker, both with origins in the industrial revolution (Lipset and Rokkan 1967). The social cleavages become relevant when groups develop perceptions of the differences and become institutionalised in the political system. The cleavages are aligned to the parties through political socialisation, party strategies, and party organisation, and voters use these social divisions as a device to decide for whom to vote - party cues (Lipset and Rokkan 1967). "Cleavages do not translate themselves into party oppositions as a matter of course: there are considerations of organisational and electoral strategy" (Lipset and Rokkan 1967, 26). Thomassen (2005) argues that out of the four cleavages, social

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class (owner and worker) and religion (state and church) have been the most prevalent and important in Western European countries.

In the last decades, there has been intense debate in the literature regarding the influence of cleavages on vote choice. Research shows that the determining effects of social group memberships declined from the 1960s to the 1990s, with other factors starting to shape party choice (Franklin et al. 1992). Scholars who agree that voters have become decreasingly aligned with the traditional cleavages argue that they will not realign with new social divisions, but instead, they will choose based on the political issues of every election (Nie et al. 1976). Social classes and religion have limited influence on the vote choice, which leads to increasing volatility and influence of short-term factors (Dalton 1984). Thomassen gives two reasons for this decrease of cleavage voting. First, the number of those integrated into one single cleavage shrinks because of social change. Second, the relationship between belonging to a particular segment of society and party choice has weakened (Thomassen 2005). There are also critical questions raised about the decline of cleavage voting. Critics do not question that changes in society are affecting the social structure, but instead debate the impact of it on cleavage voting. They suggest that old cleavages are gradually being replaced by other cleavages which bring their own political alignments (Achterberg 2006). Manza and Brooks (1999) concluded at the end of the 1990s that social cleavages are as relevant as they were in the 1950s and early 1960s. The old cleavages are not disappearing, but newer ideological conflicts are appearing alongside insistent social-group based cleavages in the U.S. G. Evans (2000) came to the same conclusion; that the significance of class voting still exists. Explanations of changes in class voting have been strongly influenced by the choices of method and measurement. Whether or not there is a decreasing influence of the cleavages, or if the cleavages are being replaced by new ones, is not the main question to be answered in our research. We will instead concentrate on if there is some influence of cleavage voting on voter availability.

The groups to which people belong can be in conflict with each other, which brings us to cross-pressure. Cross-pressure is a social situation in which an intrapersonal conflict arises when the motives affecting a decision are incompatible. There are two categories of cross-pressure: attitudinal and affiliative. "Attitudinal conflict may occur when a person is faced with a choice between alternative beliefs or courses of action under conditions which bring into play attitudes motivating

different and opposing choices. Affiliative conflict can result from a person's attachment to several groups which have preferences for different alternatives" (Sills and Merton 1968, 2). To study the pioneering work on the utilisation of cross-pressure in sociological theory, we will have to go back to the early 20th century when German sociologist, George Simmel (1922), introduced the concept of the intersection of social circles. Medieval society was known for concentric circles, meaning that the social circles one belonged to were self-containing. The group affiliations treated the individual as a member of the group rather than as an individual, and membership with the dominant group heavily influenced a person's affiliation with other groups. Modernisation evolved the concept towards voluntary association, and multi-membership was no longer self-contained. Being part of a particular group did not mean being part of similar groups and excluding others. The membership could be combined in different ways leading to the intersection of social circles. The multiple affiliations to non-coherent groups could lead to internal and external conflicts (Simmel 1922).

In the sociological approach of voting, the cleavages work as life-long attachments to a particular group and these determine voting behaviour. This can be seen in terms of the concentric circles of Simmel. When Lazarsfeld, Berelson, and Gaudget (1944) wrote, *The People's Choice* and outlined one of the first sociological voting models, they had already mentioned that persons could be cross-pressured (i.e., persons who have characteristics that would tend to lead them to vote differently in a given context). In a later work by Berelson et al. (1954), the authors concluded that cross-pressured persons show less interest in the campaign and delay their vote decision during the campaign. They are also less likely to vote, and if they do vote, their vote intentions are less stable (Berelson et al. 1954). Lipset and Rokkan (1967) mention that the cleavages in society can create different groups which are not entirely exclusive from each other, and accordingly called them cross-cutting cleavages. In Simmel's view, this would be an intersection of social circles. Bingham (1976) formulated political cleavage as an objective demographic division (such as class or religion) in which membership is strongly associated with one specific political party. He differentiated between individuals whose demographic group memberships are generally associated with the same party (cumulative cleavage positions), and those whose group memberships are associated with different parties (cross-cutting cleavage positions). The first group displays strong

partisanship while the second one has considerably weaker partisanship (Bingham 1976).

With the sociological voting approach, the sociological background and the groups to which a person belongs are the main items determining the vote choice. The possibility exists that persons belong to groups which do not have comparable values. The values of these groups, and the political predisposition coming along with them, differ and cause the person to be pulled in different directions and have affiliations to different parties - the person is cross-pressured (Berelson et al. 1954; Simmel 1955). Persons who are experiencing cross-pressure are more likely to be exposed and accessible to conflicting partisan perspectives (Toka 2003). For this reason, we expect that voter availability can be caused by cross-pressure, being attached to several overlapping groups results in close preferences for different alternatives and will lead to higher levels of voter availability.

Hypothesis 1.1: Being more socially cross-pressured increases the voter availability.

Lipset and Rokkan (1967) showed that there exist four traditional cleavages: center/periphery, state/church, land/industry, and owner/worker. These cleavages work as life-long attachments to a particular group determining the vote choice. The most universal cleavage that can be found in most industrial countries is the class cleavage (owner/worker). Beside this, the religious cleavage (state/church) is extremely important in Europe (Oskarson 2004). Research has shown that the determining effects of social group memberships on party choice declined from the 1960s to the 1990s, and other factors started shaping the party choice (Franklin et al. 1992). Despite the assumption of a decline, we assume there is still some effect of the cleavages, and being more integrated into these groups decreases voter availability.

Hypothesis 1.2: Being more integrated in groups where the cleavages are built on decreases the voter availability.

2.1.1.2 Socio-psychological theory of voting

With the sociological approach, Columbia University was the leading university on voting studies. However, this changed when Michigan University introduced its socio-psychological approach. The original research idea was to examine foreign policy attitudes and not voting intention, but A. Campbell and Khan ended up writing a pioneering publication on the socio-psychological model titled *The People Elect a President* (A. Campbell and Khan 1952).

The authors examined the influence of various political, psychological, and sociological factors on the vote decision with a pre- and post-election survey. In the suggestions for further research, the authors point out that the concept of party identification as a determinant of political behaviour did not receive enough attention. The Michigan election studies became more institutionalised with national pre- and post-surveys with every election. These studies and previous publications led to the milestone book, *The American Voter* (A. Campbell et al. 1960), which advanced the concept of party identification: a long-term, affective, psychological identification with the political party that the voter prefers, as the central concept explaining voting behaviour (Berglund et al. 2004). This emotional, or affective attachment, is developed initially during the socialisation process in childhood and adolescence, when individuals copy the attitudes and values of their parents, family, and peers (J. Evans 2004). A. Campbell et al. (1960) use a funnel as a metaphor that represents the chain of events that leads to vote choice. During the first stage, in the beginning of the funnel there is the influence of social characteristics (parents, social environment) which leads to socialisation that shapes a voter's partisan leanings. In the second stage, partisanship shapes their attitudes and has a decisive role in how the voter evaluates the political issues of the campaign, and the candidates themselves, which results in their vote choice. Policies and issues only play a minor role in the vote decision, and only a small portion of the electorate displays an ideology. Assuming that a change in party identification is not possible is wrong; party identification establishes a basic division of electoral strength within which the competition of the campaigns take place. The attitudes towards issues and policies are not only a reflection of party loyalty, but they vary through time and can explain short-term fluctuations in partisan division of the vote, whereas party loyalties are relatively stable. Party loyalty changes are rare, but can occur when there are

changes in an individual's social environment or in their broader social and political environment. The first type of change can produce a long-term change in party identification, whereas the second type would lead to a short-term decision where the voter keeps their party identification, but votes differently in a particular election (A. Campbell et al. 1960; Antunes 2011).

As with the sociological approach, where research shows a decrease in cleavage voting, the research simultaneously questions the influence of partisanship on vote choice. Dalton claimed that the increase of post-materialism values in the 1960s and 1970s placed existing party alignment under chronic stress, and led to increasing fragmentation and electoral volatility. The diversity created by this process in the 1970s constitutes a major departure from the structured partisan politics previously at play (Dalton et al. 1984). A process of cognitive mobilisation is one of the reasons given to this rationale (Dalton 1984), where the younger generation gets a higher level of education (Inglehart 1971), which leads to a qualitative change in political sophistication as the voters are more familiar with the political information provided by the mass media (Baker et al. 1981). In the past couple of decades, society has experienced an information explosion through the mass media, and the process of cognitive mobilisation has created an extensive number of sophisticated individuals who lack party ties and for who the need for partisan cues is less needed (Dalton 1984). In a later work by Dalton and Wattenberg (2000), the authors point out that this de-alignment process happens primarily as voters become politically self-determined over time, and is caused by higher education, an increase of individualism, and greater access to information.

In addition, research shows and explains the decrease of the influence of partisanship on the vote choice, and partisanship was also questioned in *The American Voter*. One of the first critics is Key with *The Responsible Electorate* (1966), which questioned the pessimistic view that policies and issues only play a minor role, and argued that the switchers are changing based on real political preferences, and can judge whether the issues they care about became better or worse under the last government. In the *New American Voter,* the authors showed the influential role of political issues in the campaign (Nie et al. 1976). Questions were also raised about whether party attachments are distinct from voting preferences, or if party attachment is more a reflection of the current voting intention or a long-standing commitment to a party (Thomassen 1976). In 1975, while studying

voting attachment, St. Angelo and Dobson hypothesised that the change of partisan identification operates as a psychological safety valve which allows voters to adjust their perception of the parties, candidates or issues, without altering their subsequent behaviours. They argued that a voter may respond negatively to candidates, issues or the party, but rather than change his voting behaviour, the voter will have a weaker sense of identification with the party during the elections (St. Angelo and Dobson 1975). So, instead of a bi-variable approach of a voter being attached or not to a party, we can use as well the strength of the party-ID. This is less controversial, and there is a general agreement that a variable measuring the degree of party attachment is useful, no matter how we interpret party identification (Berglund 2004).

For the socio-psychological approach, we expect that a higher level of voter availability is initiated by a low party-ID. The person does not feel any attachment to any specific party which increases the availability of that person to the electoral competition. A stronger party-ID would take the voter out of the arena more, where the different parties clash to gain support. A stronger party-ID would decrease the voter availability.

Hypothesis 1.3: Lower party-identification increases the voter availability.

2.1.1.3 Rational choice theory of voting

Rational choice theory can be associated with another leading school of thought, the Rochester School. The pioneer in this approach is Anthony Downs with the publication *An Economic Theory of Democracy* (1957), where the economic theory is applied to non-market political decision-making. The central concept is rationality, and Downs defines it as pursuing your goals in the most reasonable way possible; the rational actor is interested in the most cost-effective way of maximising their means (Downs 1957). If there are several decisions, the actor will take the outcome that will best maximise the gain (i.e., maximising the utility where utility is the difference in the gain between the chosen option and the rejected option) (J. Evans 2004). Information is crucial in making a rational vote choice, which is also gathered rationally so that the voter can compare the alternatives and choose the best option in their own interest. According to Downs, a voter will stop collecting

information once the cost of collecting outweighs the value of possessing that information (Downs 1957).

Downs considers only economic and political motivations as rational. If the voters vote on the basis of family pressure or clientelism, an exchange of services and/or goods for political support, the voters are not trying to maximise their gains but "employing a political device for a non-political purpose" (J. Evans 2004, 57). J. Evans illustrates here a clear contradiction with the psychological attachment or sociological group theory. A psychological attachment or the group-attachment undermines the very basis of the vote decision in a rational choice approach (J. Evans 2004). Downs's research and the subsequent studies on rational choice theory are questioned on different aspects of the theory as to the requirement of having accurate information (Popkin 1994; Lupia et al. 2000); the rational choice of not going to vote, (Blais 2000) and methodological weaknesses, as the absence of empirical facts and weak statistical methods (D. Green and Shapiro 1994). The two voting theories discussed in this section are the proximity and directional models which both are based on the concept of rationality.

The proximity model is based on Downs's rationality theory, where a voter tends to vote for the party located at the shortest distance from their own position on the left-right scale; a single left-right axis where the ideologies of the political parties can be mapped along (Downs 1957). A reaction to the rational spatial voting theories of Downs was the directional theory, which assumes that most voters have a clear preference for a certain direction of policy making, and that the strength of those preferences varies among voters.

The difference between these two spatial voting models is that the proximity model formulates a preferred position along a continuum of policy alternatives, whereas the directional model does not formulate a position on the scale, but instead measures the intensity of the respondent to being on one side or the other of the centre (Rabinowitz and Macdonald 1989). This is a directional continuum where there is a neutral point at which voters simply do not care about the issue at hand, and as voters move further away from the centre, they become more intense about the issue. With the traditional policy continuum, each position represents a preference for a particular policy alternative. With the directional theory, the voter will not choose the party closest to the centre, but rather one further away in the hope that the policy for an issue that the voter is concerned about will move in his or her

preferred direction (Macdonald and Rabinowitz 1993). In this case, a moderate voter always prefers an extreme candidate or party to a more moderate one on the same side than any candidate or party on the opposite side. In the proximity theory, a moderate voter can prefer a candidate on the other side of the neutral point if this candidate is closer than other candidates to the voter's issues (Rabinowitz and Macdonald 1989; Macdonald and Rabinowitz 1993). The proximity and directional voting theories can be applied to general party ideology/philosophy or to the party issues.

If voters were able to judge every detail of every position and put it in perspective with respect to their own views, voters would only be interested in issues, and the need for an overall general party ideology is not needed. The ideologies tend to remain relatively stable and give the voters a shortcut, a party cue which saves the voter the cost to remain informed on a wide range of issues. Parties realise that voters are rational actors, and will place themselves where they can maximise support. Based on Downs's rationality theory, a voter tends to vote for the party located at the shortest distance from his own location on the left-right scale (Downs 1957). Downs identifies two situations in which a voter does not vote for the party that is the closest to their self-placement, but still proves that the voter is a rational actor. If a voter is rational, and is not highly integrated into the policy of the party closest to their own position, and votes for a party slightly further away because the voter is much more integrated into the policies of that party, it would still be a rational vote choice. Due to the bigger similarities between parties, this could be the case. The second situation is where a voter is still a rational actor despite not voting for the closest party since he or she feels a vote cast for such a party would be a waste. This is often in first-past-the-post voting systems, but it can also happen in proportional-representative systems. For example, if the voter fears that the party will not gain any parliamentary seats (an electoral threshold could be the cause), a vote for another preferred party can be considered as rational (Downs 1957; Van der Eijk and Niemöller 1983).

Van der Eijk and Niemöller (1983) tested the shortest distance hypothesis in the Netherlands in 1981, and concluded that sixty percent of the voters voted for the party that was the closest to them, and another twenty-three percent voted for the party that was second-closest to them. Their research also made two further assumptions on the smallest distance assumption: the ideological stability hypothesis

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and the distance-reduction hypothesis. Ideological stability means that voters tend to be stable in their ideological self-definition between two elections. The distance-reduction hypothesis means that voters tend to correct or reduce the electoral distance with respect to the perceived position of the parties for which they consecutively vote. In the ideological stability hypothesis, the authors state that voters are reasonably stable in their ideological position, and in most cases, if they switch, they switch between parties which are similar to each other in ideological positions (Van der Eijk and Niemöller 1983).

Directional theory was originally formulated for party issues, but the theory can also be applied to the general party ideology, although ideology is quite different from specific issues. Issues are often two-sided, either approving or disapproving of one side. Ideology is much more subtle where the different ideological positions are reflected by the general orientation towards public policy. With the directional theory, the voter is indicating a certain intensity with which he or she cares about certain issues. In the directional theory, the support for the party should peak at the extremes of the scale, while for the proximity theory the support should peak at the party position (Macdonald and Rabinowitz 1993).

For proximity voting, we suggest that smaller distances, on a general left-right scale, of the position of the parties from the self-placement of a voter increases voter availability. This is because there will be more parties close to the policy that the voter prefers. With the directional theory, the voter is indicating with direction and strength how much a policy change is preferred. We suggest that the closer the self-placement of a voter is to the extremes, the more the voter prefers a change of policy, and the less the voter is open to different party perspectives - this would lead to higher voter availability.

Hypothesis 1.4: The smaller the distance between the parties and self-placement on a general left-right scale, the higher the voter availability.

Hypothesis 1.5: The further away from the mean that the voter's position is on a general left-right scale, the lower the voter availability.

The use of a general left-right scale in Downs's tradition can be questioned on the grounds that every voter has a perfect understanding of the different

ideologies of the parties and can place those on a general left-right scale (Aardal and Wijnen 2004).

Downs was also one of the pioneers on issue-voting since he placed rationality as the central concept in explaining voting behaviour. Another pioneer would be Key (1966). We already mentioned his work when we discussed the review on *The American Voter*. Key argued that *The American Voter* gives the impression that voters are not rational at all, and criticises the ignorance of the authors on swing voters. Key stressed the importance of issues, in addition to current events and candidates. He stressed that voters are able to link issues to certain candidates and cast their votes based on this information.

Indeed, more and more authors started questioning the Michigan approach of party-identification. Pomper (1972) showed that U.S. elections before 1964 did not show any linear relationship between issues and party identification, whereas the elections of 1964 and 1968 did. One reason identified is the generation or education effect (younger people who vote had more coherence of party identification and issues) or by the fact that the parties started emphasising issues much more after the 1964 elections. However, higher voter coherence between party identification and issues does not necessarily indicate that the voter is casting his vote based on the issues. Miller et al. (1976) claimed that in the 1972 U.S. elections, candidates, parties, and issues gained importance, and that this could be labelled as an election issue. The spread of education changed the basis of the vote from the parties and candidates to issues and ideology. Nie and Andersen's research supported the above authors claiming the increasing importance of issues. They showed that in the U.S. presidential elections of 1956 and 1960, party identification played a major role in vote decision, and the issues had only a small impact. But in the elections of 1964, 1968, and 1972, the authors claimed that the role of party identification declined, and that the positions on the issues had a much greater impact on the vote decision (Nie and Andersen 1974). *The Changing American Voter* by Nie et al. (1976) is one of the best known works on this subject based on the series of the Michigan election studies from 1952-1972. The authors claimed a decrease in the impact of party identification, and an increase in the influence of issues and candidates on the vote decision. Popkin et al. (1976) went a step further, claiming that the behaviour of the American voters had not changed, but that the model used in *The American Voter* was inaccurate in the first place, and that the standards applied to the voter were

misleading and the applied tests imperfect. But the verdict was not final, as other authors started questioning the claim that there was a change in vote decision and that voters became more rational in the 60s and 70s than in the 50s. Bishop et al. (1978) demonstrated this using the same data as the above authors (Michigan Election studies) and wrote that the changes in vote decision could be explained by methodological artefacts, changes in question wording, and the format used, instead of an actual change in the more rational decision-making based on the issues.

Evolving from the controversies that voters became more rational and issues became more important in the vote decision in the 60s and 70s, the literature on issue-voting got an increasingly essential role in voting behaviour studies. Meier and Campbell (1979) formulated conditions for issue-voting; the campaign issues must be salient to the voter, the voter must have an opinion on the issues, and the voter is able to identify the candidate's position on these issues. Candidates on their side need to have different positions on the issues. The probability of voting for a certain candidate is a function of whether or not the candidate's positions overlap with those of the voter. Thus, in this way, issue-voting could exist under spatial-voting theory as proximity voting: the voter chooses the party that is closest to their position on a specific issue(s).

In contrast to proximity voting theory, directional theory approaches the issues as symbolic politics. The issues evoke emotions rather than an objective evaluation of all the information. It expresses a symbol (for instance healthcare or taxation) which has the potential to be associated with previous experiences, and these associations make the issues politically significant. This symbolic response has a direction and intensity that is associated with diffuse and emotionally laden reactions to the issues. Academics who advocate this model are adamant that issues should be modelled with direction and intensity, instead of a systematic consideration of an ordered set of alternatives, as with the traditional spatial model (Rabinowitz and Macdonald 1989).

Another concern with issue voting is the saliency of the issue. Aardal and Wijnen argued that an effect of value orientations on voting behaviour is dependent on election-specific issues, and without salient issues in elections, there might not be any effect of value orientation on the vote. If there is a salient issue in an election, then the latent position on the specific value dimension will be activated (Aardal and Wijnen 2004). To collaborate more on this issue, we reference the "saliency theory"

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of party competition introduced by Budge and Fairly (1983a). The theory states that instead of the political parties giving different solutions/answers to a certain political problem ("direct confrontation"), they focus on those issues which have electoral advantages for them and downplay or ignore the other issues ("selective emphasis"). For that reason, there is a stable relationship between the issues and the positions of parties over the long run, and that the differences between elections are caused by the saliency of the issues. A partisan will always consider their party as more capable of resolving the issue than an unattached voter who interprets the differential competence of parties, and votes for the party that they believe is better able to handle the issues which are salient at election time (Budge and Fairly 1977; 1983a, 1983b).

The saliency theory is based on a specific understanding of voting behaviour and strongly appeals to the concept of valence issues and issue ownership (Dolezal 2014). Stokes introduced the difference between position and valence issues in 1963. Position issues are those issues on which parties have different policy positions. For valence issues the parties do not have different policy positions because it is a generally preferred goal. Valence issues couldn't be explained by Downs's spatial voting theory of proximity voting because the voters' preferences of parties are disturbed over an ordered set of policy alternatives. As valence issues do not fit the spatial scheme, the question is shifted towards which party is more likely to achieve it than focusing on the different policy position (Stokes 1963). The two different theories are inclusive. When the polarization on the issue is large, the ideological positions are likely to be more important than party competence and credibility. On the contrary, when the polarization is low, competence should matter more (J. Green and Hobolt 2008).

Besides the saliency theory, there is also a theory about issue ownership. Issue ownership implies that some parties/candidates own certain issues and that during the campaign the party/candidate will emphasise these issues. They have an advantage because the party/candidate is observed as better equipped to resolve the problem than his opponent about the issue(s) which the voter is concerned about. The differences between elections are the problems which the voters are concerned with and not the policy attitudes because these are changing slowly. The voter will use his party linked perception of ability to handle the issues by certain parties/candidates to make his vote choice (Petrocick 1996; Petrocik, Benoit, and

Hansen 2003). Issue ownership is based on the fact that certain issues are "owned" by certain parties. The voter can be less informed about the parties and their policies. The voter has a specific topic that he or she thinks is important and the only importance is which party is representing this issue. The effect of issue ownership on vote choice is conditioned by the alleged salience of the issue (Belanger and Meguid 2008).

With valence issues and issue ownership, the competence of the party to deliver on a specific issue plays a crucial role in the vote decision, meanwhile the proximity of the parties to their own position on the issue is of less importance. Following Belanger and Meguid (2008), the saliency of the issue will condition this relationship.

We suggest that voter availability increases under the proximity voting theory, where a voter is close to more than one party on a salient issue. A small change of the party-position on the issue, or in the preferences of the voter, could push the voter to make another choice at election time. Under the directional theory, a voter's position on a salient issue is in the middle of the scale, meaning that the voter does not have a strong direction or a high intensity on the issue. The closer the issue is positioned to the middle for the voter, the higher the voter availability. The directional theory, exploring the extremes on the different scales, is similar to the research of Kroh et al. (2007), displaying the negative influence of extremism on a left-right scale and on EU issues on the "potential of vote switch."

Hypothesis 1.6: The smaller the distance between the different parties and the self-placement on a left-right scale about issues with a high saliency for the voter, the higher the voter availability.

Hypothesis 1.7: The further away from the mean that the voter's position is on a left-right scale about issues with a high saliency for the voter, the lower the voter availability.

2.1.1.4 Party leader theory of voting

The first presidential television debate that took place between Senator John F. Kennedy and incumbent President Nixon in 1960 showed how television could

affect vote choice. In the presidential debate prior to the elections, Kennedy started as a relatively unknown Senator from Massachusetts, but by the end of the evening he was a star; while Nixon appeared sick and sweaty, Kennedy appeared calm and confident. Those who watched the debate on television thought Kennedy was the clear winner. However, those who listened to the radio considered Nixon as the winner (Webley 2010). Druckman showed in an experiment that television images matter, and people rely more on them than on audio. Television images influence the personality perceptions of voters when evaluating candidates. In this way, he provides evidence that Kennedy may have done better on television because of his superior image (Druckman 2003). Television has become one of the principal sources of information and can influence the outcome of an election. Providing and projecting a positive media image of the party leaders has become increasingly important in campaigning (Mughan 2000). At the same time, we notice that television debates between leaders become an important part of the election campaign in many countries (McAllister 1996).

It is only in the last two decennia that the importance of party leaders in election studies came out of the shadows of voting theories involving party attachment, cleavages, and issues. In all of the major voting studies we mentioned before (e.g., Berelson 1944; A. Campbell et al. 1960; Downs 1957), not much attention was given to the effects of the party leader. Furthermore, if attention is given to it, as in Butler and Stokes (1969), the effect is minimalised. Other authors argue that the role of party leaders plays a more prominent role in the vote decision (Stewart and Clark 1992; Mughan 2000; Graetz and McAllister 1987). However, this is contested by others who have doubts whether the party leader evaluation impacts the vote choice, based on the strong assumption the authors had along with the weak evidence provided (A. King 2002; Bartle and Crewe 2002).

The literature shows two different types of information: the party leaders' own personal views on the issues, and the personal qualities of the leader. The party leader plays a crucial role in defining and defending the party policies, but it is also likely that the leaders' opinions and their party's positions are different. When this happens, the voter will act on the party's positions on the issue and the perception of the party leader. The personal qualities of the leader can serve as cues if the positions of the party or the leader are vague. It can also serve as a cue to know what kind of actions the party will take during unexpected problems that are not part

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of the political debate during the campaign. The personal qualities can be characteristics such as social-demographic, competence, and trustworthiness (Blais 2011).

Curtice and Holmberg (2005) argue that voters no longer have strong emotional attachment to political parties (socio-psychological model) or the preference of political party is represented by the social group to which they belong (sociological model). Voters have difficulties understanding whether the government is to blame for the economy (retrospective model - approaches where the voter evaluates past economic performance) or which party has the best policy issues (issue model). Instead, they can tell which party leaders they like the best and trust. Curtice and Holmberg assume in their article that the effect of party leaders depends on the political structure in which the elections take place. In countries where the elections appear as a presidential election, or where the winner of the most votes generally becomes the head of government without the need to engage in significant post-election formations, then the effect of the party leader is bigger. However, the authors' cautious conclusions about party leader-effects reads: "We found little evidence to support the argument that the political circumstances in which an election is fought have a systematic impact on the importance of leader evaluations in influencing the way voters vote. We cannot claim that leader evaluations consistently matter more when ideological differences are less apparent, or when leaders are particularly popular or unpopular. [...] The impact of leaders is, it seems, as variable and unpredictable as are human personalities themselves" (Curtice and Holmberg 2005, 165).

Other authors such as Lawrence (1978) argue that, in the American elections, voters consider the characteristics of candidates that are related to their ability to perform the job of President. Lawrence considers characteristics grouped into two categories: the purely personal attributes – (intelligence, education, honesty, health, age, ability to motivate others) and experience in governmental or other activities, and the required skills to effectively perform the task of President. He concludes that when the voter does not have a preferred candidate based on the issues, then the voter will choose a candidate they consider more competent and efficient in carrying out the policies. In the case where candidate orientation and issue orientation clash, there may be reason to believe that voters make choices based on candidates rather than issue orientation. The voters may well believe that a

particular competent candidate with whom they disagree on a few issues may do a much better job than a candidate with whom they are more in agreement with in general. For the cross-pressured voters, candidate orientation is a more powerful determinant of vote choice than party identification, where the effects of issue orientation are controlled (Lawrence 1978).

If we would only consider the party leader without any other theories involved, a voter would vote for the leaders they like the best. In our search for explaining voter availability, we suggest that a higher level of voter availability is initiated by having close preferences to different party leaders.

Hypothesis 1.8: Closer preferences between party leaders increase the voter availability.

2.1.1.5 Retrospective and prospective theory of voting

The economic crisis that hit the world in 2008 brought economic voting into the limelight during the elections; this was not really a surprise, as economic issues have been the main driver in certain elections. We all remember Bill Clinton's famous 1992 election slogan, "It's the economy, stupid!", when he was running for president against incumbent George H.W. Bush. As implied, the economy and the prevalent economic recession was a driving issue of the campaigns in 1992, as well as those in the 1980s presidential campaign when Ronald Reagan ran against incumbent Jimmy Carter, and challenged the people to ask themselves if they were better off today than they were four years ago (Blanger 2007). Voters held (and still hold) their government responsible for their economic policies, and react in the polling station on the shifts in the economy. In the next few paragraphs, we will discuss different economic voting models.

To trace the pioneers of the study of economic voting, we will have to go back to Anthony Downs's rational-choice theory (1957). Although Downs does not mention voting based on economic conditions, the concept of rationality, with pursuing the goals in the most reasonable way possible, is the main reasoning behind it. Another pioneer is Key, in *The Responsible Electorate,* he showed that the switchers are changing votes based on real political preferences, and can judge whether the

issues they care about become better or worse under the last government (Key 1966). Key's approach is one of the most recognised approaches of economic voting models. Key argues that voters evaluate the past economic performance of the government and treat it as a referendum where the voter punishes or rewards the incumbent parties in the government, named retrospective voting.

Prospective voting happens when the voter evaluates the future economic performance, and those who expect the economy to improve in the future will be more likely to support the incumbent party than those who believe the economy will get worse. Another differentiation that can be made with economic voting theories is whether or not the voter evaluates his own economic situation (pocketbook voting), or makes evaluations on the national economic conditions (socio-tropic voting) (Lewis-Beck and Stegmaier 2007).

Many authors (e.g., Kramer 1971; Fiorina 1978; Lewis-Beck 1986) supported Key's findings that election outcomes are significantly responsive to objective changes occurring under the incumbent party. Research by Kramer (1971) showed that the outcomes are not irrational, random, or the product of past loyalties. In quantitative terms, a ten percent decrease in income cost the incumbent administration four to five percent of the congressional votes in the period of 1896 - 1969, and half of the variance of the congressional votes could be explained by economic fluctuations. This is an example of socio-tropic (using national conditions) retrospective voting (government responsible for past policy). Fiorina (1978) argued that the citizen's personal economic condition affected the presidential vote choice in the period investigated from 1956 - 1974, and is a prime example of pocketbook retrospective voting. The author suggested that there is a prospective element to economic voting as well (Fiorina 1981). Miller and Watenberg (1985) showed that voters are capable of distinguishing between retrospective and prospective evaluations, and compared these two types of voting in the presidential elections of 1952 through 1980, making use of open-ended items to ask the respondents to evaluate the presidential candidates and political parties. Voters used prospective evaluations, which shows that those are important components of the vote choice (Miller and Watenberg 1985). As the prospective economic voting research started gaining some ground in electoral research, Chappell and Keech (1985) showed the importance of prospective evaluations, while others even went so far as to say that the electorate is exclusively prospective in political economic evaluations (Mackuen

et al. 1996). The importance of prospective elements is also questioned by others (Norpoth 1996).

In this tough debate of prospective versus retrospective evaluations, maybe a more reasonable approach is one where the authors study the importance of both (Clarke and Steward 1994; Lockerbie 1991). To use the words of Nadeau and Lewis-Beck: "...we conclude economic voters are Keysian when a president is running for re-election, but Downsian otherwise" (2001, 179).

Although there are different approaches - retrospective versus prospective and socio-tropic versus pocketbook - there is a general agreement that economic conditions affect the voter's decision-making process. However, there exists a disagreement about which sort of economic information individuals employ in their decision-making (Kinder and Kiewiet 1981) and how it is used in the decision-making process (Fiorina 1981; Kiewit 1983).

Based on Key's approach in *The Responsible Electorate*, we suggest using government performance models. Key (1966) argues that voters evaluate the past (economic) performance of the government (i.e., retrospective voting). The voter evaluates the incumbent government's performance and treats this as a referendum where they will punish or reward the incumbent parties of the government. We will test economic conditions and general evaluations of the government itself. We suggest that the voter availability is linked to the beliefs that the person has about the economic conditions of the country and the previous vote choice. The voter availability depends if the voter is confirmed or challenged about the previous vote choice.

In light of the retrospective voting theory, we suggest that a higher level of voter availability is initiated by two different situations. First, by voters who have chosen, in the previous elections, the party which formed the government and evaluates the government performance negatively and/or experienced a worsening economic situation. Second, by voters who have chosen, in the previous election, the party which ended up in opposition and evaluated the government performance positively and/or experienced an improved economic situation during the incumbent's term. The voters in both cases are not confirmed on the party preference they had with the previous elections. Lower levels of voter availability would be initiated by the opposite.

Hypothesis 1.9: For those voters who voted in the previous elections for a current incumbent party, the more satisfied they were of the government's performance, the lower the voter availability. For those voters who voted in the previous elections for a current opposition party, the more satisfied they were of the government's performance, the higher the voter availability.

Hypothesis 1.10: A worse (better) evaluation of the economy increases (decreases) the voter availability of those who voted for a current incumbent party with the previous elections. A better (worse) economic situation of the economy increases (decreases) the voter availability of those who voted for a current opposition party with the previous elections.

On the other side, we have prospective voting where the voter evaluates the future economic performance. With prospective voting, a higher level of voter availability is initiated by voters who voted for the incumbent party and believe that the economic situation is likely to get worse in the future, or by those voters who voted for the party that lost, but have greater confidence in economic improvement due to the current government. The voter has differing beliefs about the policy direction that leads to an increase in voter availability.

Hypothesis 1.11: A better (worse) expectation of the future economic situation decreases (increases) the voter availability of those who voted for a current incumbent party with the previous elections. A better (worse) expectation of the future economic situation increases (decreases) the voter availability of those who voted for a current opposition party with the previous elections.

2.1.2 Demographic characteristics and attitudes

Many of the demographic characteristics and attitudes that we propose to analyse have already been explored in previous research. We start with a short overview of the existing research for independent, cross-pressured, floating, split-ticket, swing, and "potential to float" voters. In this assessment, the main focus rests on demographic characteristics and attitudes.

With research on floating voters, the authors concluded that those voters who changed vote preference between consecutive elections did not differ in age, sex, or social status from those who did not change (A.H. Birch and Campbell 1950). Nevertheless, the party switchers have less political interest and are less informed about politics (Converse 1962; Dreyer 1971). On the other hand, research has shown that the floating voters are younger voters who make their decision late on who to vote for, but are neither less interested in politics nor have less knowledge about politics than the non-floaters (Verheyen 2005).

For the independent voter who is not aligned with a certain party, research has shown similar results to Converse (1962) about floating voters; that the independent voter is less involved in politics, less politically sophisticated (A. Campbell et al. 1960), and highly ignorant and pathetic (Keith et al. 1992). This becomes more complex when we differentiate the independent voters from the partisan independents (those who call themselves independent but indicate leaning to one of the parties) and the truly independent (those who show no indication of leaning towards any party). We notice that those who are truly independent are at the bottom of political involvement, whereas the partisan independents are at the top of this measurement (Keith et al. 1992). True independents are characterised by being less interested in politics and political campaigns, being less knowledgeable, and being less likely to vote (Magleby et al. 2011). The group of partisan independents are more interested in politics than weak partisans (voters who have a weak attachment to a certain party), and have equal interest levels as the strong partisans (voters with a strong attachment to a certain party) (Keith et al. 1992).

Another approach is to study those who were undecided a few weeks before the elections - voters who made their decision during the campaign. This approach is also used in early studies such as Berelson et al. (1954), whose main findings on these late deciders were that they are less interested in politics, pay less attention to

political news, and are less concerned about the outcome than the early deciders (Pool 1963; Katz 1973). The negative image of late deciders started changing to a more positive one, specifically politically sophisticated voters, with the mass-communication explosion in the 70s and 80s (Chaffee and Choe 1980). McAllister shows that these late deciders are not all the same; he distinguishes impulsive late-deciders from calculating late-deciders. The former is a group of voters that care about the outcome of elections and pay more attention to the media than the impulsive late-deciders. McAllister also concluded that the number of calculating late-deciders is increasing, and election campaigns will attract at least as much attention in the future as they have in the past (McAllister 2002). Recent research on voters in Canada gives an even more positive image of these late deciders. Half of the citizens make their voting decision during the campaign, and the group is relatively interested, attentive, informed about politics, reacts to campaign stimuli, and is more likely to be reachable by the parties (Fournier et al. 2004).

Research concerning cross-pressured voters (voters who have certain characteristics which lead them, in a given context, to vote differently, and which is caused by belonging to a group with opposite influences) shows that those persons are less interested in the campaign, and delay the vote decision during the campaign. Cross-pressured voters are less likely to vote, and if they do vote, then the vote intentions are less stable (Berelson et al. 1954). However, there are different studies that show different results - some studies showed a decrease in political participation of the cross-pressured voters (Mutz 2002), whereas others showed no effect, or even an increase in participation of the cross-pressured voters (Brader et al. 2013).

The split-ticket voter is mostly associated with sophisticated voting behaviour, as alluded to by Fiorina (1996) who argues that split-ticket voting is a form of strategic voting in which a share of the electorate gives a split-ticket vote to balance the policy and to get a divided government. Other explanations such as indifference should be considered as well (Burden and Kimball 1998; Schoen 1999). In one of the first articles about this subject, the authors also distinguished indifference from motivated split-ticket voting. The indifferent voter gives a split-ticket vote because of a superficial interest in a particular local candidate, at the request of a friend, or some last-minute influence which results in crossing party lines. The motivated split-ticket voter splits their vote because the political motives are in conflict with their

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preference for the candidate or policy of one party, but feel a personal allegiance to the other (A. Campbell and Miller 1957).

Another interesting approach is identified in the book, *Swing Voters in America,* where different authors study swing voters, who are defined as voters without a solid commitment to one party or candidate, and who could go either way (W.G. Mayer 2008). W.G. Mayer (2008) operationalizes this with the "feeling thermometer" for presidential candidates, and subtracts the scores for the two candidates (on a scale from 0 to 100 points); a swing-voter would be identified if the difference between the two candidates is not greater than fifteen. In the same volume, Jones (2008) approached swing-voters as those who indicated that they would still consider voting differently at elections (Jones 2008). Also in this volume, Dimock et al. (2008) separate the swing voter, by assigning swing voters as those who are undecided a few weeks before the elections, and who indicated that their vote choice can still change in this period. Meanwhile, the non-swingers are those who indicated they were certain that during this period their vote choice would not change. In the conclusion of *Swing Voters in America,* the different authors pointed out that swing voters are less partisan and more moderate - which is in line with expectations. Besides this, they conclude that the swing voter is less politically engaged, but is not of any particular distinctive demographic. Swing voters are best characterised as a "middle-awareness group", "they do not follow the campaign as closely as committed voters do, but they are not as disengaged as non-voters are" (W.G. Mayer and Teixeira 2008, 139).

To finish, Kroh et al. (2007) defined the "potential of vote switch" among the electorate, using party preferences. Making use of the European Election Studies of 1999, the researchers explored age, education, union membership, party-ID, frequency of watching TV news, political attentiveness, left/right extremism, position on European integration, and whether or not the voter noticed any differences between the parties. The authors showed that being younger, having more education, a weaker party ID, and less left/right extremism influences the potential for vote switch. Overall, however, they concluded that the model has low explanatory power (Kroh et al. 2007). Out of those research designs, we formulated eight hypotheses for demographic characteristics and attitudes which we expect to influence voter availability.

Inglehart argued that an intergeneration change in the valuing of priorities after World War II changed from materialism to post-materialism values, which emphasise autonomy and self-expression (Inglehart 1971; Inglehart 1977) and places the existing party alignment under pressure (Dalton 1984). One of the causes given to this process is that the younger generation gets a higher level of education, the prospect of sustainable peace, and unmatched prosperity (Inglehart 1971). The higher education leads to qualitative change in political sophistication, and they are more familiar with the political information provided by the mass media (Baker et al.1981). The process of cognitive mobilisation is creating an extensive number of sophisticated individuals who lack party ties (Dalton 1984). Keith et al. (1992) formulated that persons become more explicitly partisan as they age, which is caused by familiar life-cycle effects. We assume that the younger generation will have a higher level of voter availability. This, not only because of their higher education, but as well because of the voting pattern which is developed through the life-cycle is not as developed and the attitude change of materialist to post-materialism stresses the self-expression and autonomy. We hypothesise an effect of education and age. For education, voters with a higher education will have less need to follow the party's shortcuts to make a choice and in this way, will have more chances to consider multiple party choices. In regards to age, the younger voters don't have a developed voting pattern yet and an attitude of stressing more self-expression, which will lead to considering multiple party choices. These two hypotheses are similar to Kroh et al. (2007) who also showed a negative effect of age and the positive effect of education on "the potential to vote switch."

Hypothesis 1.12: A lower age increases the voter availability.

Hypothesis 1.13: A higher level of education increases the voter availability.

Next, the theories of Inglehart (1971) and Dalton (1984) are based on modernisation theories which suggest that the shift from agriculture towards industrial production leads to growing prosperity, higher levels of education, and urbanization. Citizens in agrarian societies are strongly rooted in local communities through kinship, family, ethnicity, religion, and cultural bonds. The shift from a traditional agrarian society towards an industrial one concerns the move from agricultural to manufacturing, from farmers to workers. This shift includes a migration

to bigger cities, the rise of the working class and urban bourgeoisie, and the separation of church and state (Norris 2004). We assume that those who are living in rural areas are more associated with the traditional agrarian society and its motivations than those who are living in more urbanised environments. This would lead to a lower level of voter availability for those living in more rural areas.

Hypothesis 1.14: Persons who are living in a more urbanised environment will have a higher level of voter availability.

Inglehart argued in a later article that a new political culture is arising, where class conflict is less important and the society is more concentrated on post-materialism values (Inglehart 1997). He indicates that there is a value switch to more post-materialism values in any society that has experienced sufficient economic growth in recent decades (Ingelhart 1994). We assume that this value switch is not equally distributed in the society. Citizens who are financially less strong will still be more attached to materialist-values, which emphasises economic and physical security, than those who are financially stronger and where the economic and physical security is taken more for granted. So, we believe that the higher the social class, the more the person is exposed to post-materialist values such as autonomy and self-expression, which causes the person to be able to explore the various options on who to vote for more freely.

Hypothesis 1.15: Being part of a higher social class increases the voter availability.

We will also explore specific attitudes, although the literature review provides for some opposite results. We hypothesise that some specific attitudes of political interest, knowledge, trust, and votes at elections, influence the voter availability.

Some research designs approach knowledge and interest as one aspect and label it political sophistication (A. Campbell 1960), while others distinguish between these two (de Vries et al. 2011). Research has shown that political interest and political knowledge are highly correlated (Galston 2001) and these variables normally moderate effects in the same way (Luskin 1987). For our research, we analyse interest and knowledge as separate variables.

Although the literature gave contradicting results about political interest, the results lean towards a more negative image of those voting categories similar to voters in the competition. Converse (1962) showed a negative image for the floating voter, while A. Campbell et al. (1960) showed a negative image for the independent voters. Keith noticed this negative image for the truly independent, but not for the partisan independents (Keith et al. 1992). For cross-pressure, Mutz (2002) supported this negative image, whereas for split-ticket voting, Burden and Kimball (1998) indicated indifference as being the cause. Based on these readings, we hypothesise that a higher level of interest decreases the voter availability. The person who is more interested in politics will be more exposed to political information, and will therefore be more certain about their vote choice, and have less close preferences to different parties.

Hypothesis 1.16: A lower level of political interest increases the voter availability.

For political knowledge, the same discussion as with political interest took place in the literature. Based on the fact that knowledge and interest normally moderate effects in the same way (Luskin 1987), we hypothesise that the same effect as political interest will take place.

Hypothesis 1.17: A lower level of political knowledge increases the voter availability.

Another attitude we will explore is trust in politics. Since political trust began to decline in the mid-1960s, there has been a great deal of turnover and some success of third parties in presidential races (Hetherington 1999). Research has shown that those people with a lower level of trust, the distrustful, are more inclined to vote for the challenger as compared to the incumbent in a two-party presidential race, and will even vote for a third-party or independent candidate (Hetherington 1999; Rosenstone et al. 1984). The distrustful voters are more inclined, if the choice is available, to vote for an outside candidate with anti-government themes (Levi and Stocker 2000). Thus, in this context, we assume that political trust has a positive effect on voter availability. If the political trust is high, the person does not prefer a

radical change and considers more possibilities on who to vote for. On the contrary, persons with lower levels of trust consider fewer parties because they prefer more radical changes.

Hypothesis 1.18: A higher level of political trust increases the voter availability.

In 1960, A. Campbell showed that those who are experiencing cross-pressure on their choice for who to vote for tend to cast their vote with less enthusiasm, and are less likely to vote at all than those who have consistent partisan feelings (A. Campbell 1960). Other research confirmed these conclusions that those people whose networks involve greater political disagreement are less likely to actually participate in politics. The cross-cutting networks hold ambivalent political views which discourage political involvement (Mutz 2002). Also, the swing-voter approach showed less engaged voters (W.G. Mayer and Teixeira 2008). Downs showed that if voters have closer utility differences between the parties, there is more of a chance that the voter would not come out to vote (Downs 1957).

Hypothesis 1.19: Voting at the elections, decreases voter availability.

2.2 Voter availability on the aggregate level

The concept of voter availability, and other measurements of vote uncertainty, is not very well developed in political science, and especially not in comparisons on the aggregate level. For this reason, we will concentrate mostly on research on electoral volatility which has been examined recurrently in the last few decades. As mentioned in the first chapter, the research on electoral volatility was almost non-existent before the 1960s. In those times, the electoral strength of most parties in Western Europe remained stable from election to election, and the research focused primarily on voter stability and not voter volatility. Even if there was research on volatility, it mostly concentrated on one specific country and not on a comparative setting of different countries.

One of the first major noteworthy contributions to comparative studies on voting instability was made by Pedersen (1979). Pedersen introduced a method, the Pedersen Index of Volatility, which has become a standardised measurement of volatility. Pedersen describes the European system in terms of volatility and explores the national patterns which show that high-volatility and low-volatility behaviours are not randomly scattered across time and nations. Some countries have never experienced high-volatility elections, and others have never experienced low-volatility elections. Besides this, Pedersen describes a general trend in Europe towards high-volatility elections, and shows a decreasing trend for low-volatility elections.

Another important contribution was made by Crewe and Denver in their book, *Electoral Change in Western Democracies, Patterns and Sources of Electoral Volatility*, published in 1985, in which different contributors considered electoral volatility [1] and partisan change on a country-by-country basis in Western democracies. They concluded that although there existed variations in pace, magnitude, and the precise nature of the social changes, all of the countries analysed had experienced vital and firm social changes. In these countries, the emergence of a "counter-culture" was identified in the 1960s which has been believed to contribute to the increase in the number of new issues in the political sphere. Nearly all of the countries examined showed, to some extent, the kind of social and cultural changes that might lead to partisan de-alignment. On an

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[1] Standard measurement for the net volatility is the Pedersen Index (Pedersen 1979)

aggregate level, partisan de-alignment refers to a decrease in the strength of the affiliation between social-structural variables and party support. Of the 13 different countries investigated, six offered clear evidence of de-alignment,[2] two of the cases showed partial de-alignment,[3] four did not show any evidence of de-alignment,[4] and one country[5] showed the opposite (Crewe and Denver 1985). As discussed before, this de-alignment process is characterised by wide spread education and information explosion (Dalton 1984), and a switch from materialist to post-materialist values emphasising autonomy, self-expression, and quality of life (Inglehart 1971). Inglehart (1997) indicates that there is a switch to more post-materialism values in any society that has experienced sufficient economic growth in recent decades. It has become part of the conventional wisdom that voter loyalties to political parties are in decline, though this decline is not equally prevalent in each and every country (Mair et al. 2004).

This research on volatility can be placed in a larger research framework of exploring the correlations between the electoral system, party system, and party competition. We will discuss those which have some relevance to our research design. Duverger (1954) introduced Duverger's law, which showed the influence of the electoral system on the party system. The law stated that the electoral system used in a country to convey votes into a certain amount of seats produces a different party system. Plurality voting systems (first-past-the-post) results in a two-party system, and a Proportional Representation (PR) system results in a multi-party system. Duverger identified three different systems: the one-party, the two-party, and the multi-party system. Taagepera and Shurgart (1989) declared that if the district magnitude (DM, the number of seats contested in every district) increases, each party's share of seats tends to correspond more closely to its vote share. So a lower DM has a constraining effect on the system, and the system becomes more disproportional (Taagepaera and Shugart 1989). This leads to less effective numbers of parties where the small and widespread parties have more difficulties in getting seats. In contrast, small regional concentrated parties can have the advantage of a lower district magnitude with smaller constituencies (Gallagher and Mitchell 2005). According to Cox (1997), new parties have more difficulties entering, and will

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[2] United States, Belgium, the Netherlands, Denmark, Britain, and Scotland
[3] Austria and Italy
[4] Canada, Ireland, West Germany, and Australia
[5] France

consider that it is worth trying if the voting systems have a lower district magnitude. Even more, the positioning of the party is crucial in systems with a low district magnitude, as larger amounts of the voters need to be persuaded. Therefore, the median voter is mostly targeted, resulting in lower polarization of the party system (Cox 1990; 1997). Apart from this, a higher threshold (a specific minimum vote share or threshold which a party must obtain in order to gain a seat) can have a constraining effect on the party competition. A lower district magnitude has the same effect as a high threshold. Both limit the proportionality and the opportunities for small parties to win seats. A higher threshold lowers the effective number of parties (Taagepera and Shugart 1989; Gallagher and Mitchell 2005; Van der Eijk and Niemöller 1983).

As a result, we notice that the choice of the voting system affects the party-system and party competition. Bartolini and Mair (1991) suggest that there are two contradictory forces that affect volatility. One is the constraining effect of majority systems that induces tactical voting, and therefore leads to greater volatility, while the second is the relatively low opportunity cost of new-party formation in proportional systems that induces a higher level of volatility. They showed that the mean volatility in majority systems remained greater to that in proportional systems, where there are fewer than eleven parties. Other specific features of the voting system, such as the threshold of representation, showed a positive effect on volatility. Further, they state that it is necessary to go beyond a simple dichotomisation of majority and proportional systems, and to explore the impact of all factors including the imposition of threshold, effect of district size, and preferential voting on voter choice. As it is impossible to measure the exact effect of all the different measures, they suggest the degree of proportionality as a better alternative (Bartolini and Mair 1991). Other studies also confirmed the link between threshold and volatility: the higher the threshold, the higher the electoral volatility (S. Birch 2003; Lane and Ersson 2007).

We suggest that we would find similar results for voter availability as the above authors, systems which are more disproportional have a higher level of voter availability.

Hypothesis 2.1: The higher the disproportionality of the voting system, the higher the average voter availability of the country.

Duverger (1954) identified different party systems based on the different electoral systems. Afterwards, more voices were raised to consider the size of the different parties as well. Blondel (1968) extended the three classes of Duverger by looking at the number of parties and their relative sizes. In this manner, he distinguished two-party systems, two-and-a half party systems, multi-party systems including a dominant party, and a multi-party system without a dominant party. Sartori (1976), as well as Blondel, showed the need to extend the classification of the party system based on the number of parties. Sartori used two rules to count the number of parties in a system, namely the coalition and blackmail potential. Coalition potential refers to the extent that a party is viewed as relevant, based on its ability to form a coalition. A party can be seen as irrelevant when, over time, it has never formed a majority. Blackmail potential refers to the extent that a party is viewed as relevant based on its existence and appearance. An example would be that other parties are considering the party program of this party to define their own. This would influence the direction of the party competition. A party with neither coalition nor blackmail potential will not be counted. Based on these criteria of the number of parties, Sartori extended the three classes of Duverger (1954) to seven. Sartori splits up the one-party system into three subgroups. The subgroups' one-party system and hegemonic party system both belong to non-competitive party systems, (systems which do not permit contested elections). The pre-dominant party system belongs to competitive party systems, but where the same party is always in government, no other party has a realistic chance because the first party regularly wins the majority of the seats. In a two-party system, two parties share or alternate in power. The multi-party system has three subgroups as well, namely limited, extreme pluralism, and atomized. Limited pluralism would be 3 to 5 relevant parties, and extreme pluralism would be 5 to 8 relevant parties. The atomized system is a very extreme multi-party system where an additional party would not affect the pattern of competition anymore (Sartori 1976). After Sartori's method of counting parties, a more mathematical approach became the standard in political science to assess the number of parties (i.e., ENP, the Effective Number of Parties). ENP, designed by Laakso and Taagepera (1979), takes into account the number of parties and their relative weight. "The effective number of parties is the number of hypothetical equal-size parties that would have the same total effect on fractionalization on the system as have the actual parties of unequal size" (Laakso and Taagepera 1979, 40). The research on electoral volatility recognises the strong effect of the number of parties,

where a higher number of parties increase the electoral volatility. An easy reasoning behind this is that the more parties, the more choices to choose from, and the more opportunities for switching (Pedersen 1983; Bartolini and Mair 1990; S. Birch 2003; Lane and Ersson 2007). We suggest that the greater the number of parties, the greater the probability that a voter will have close preferences to two or more parties. If there are more alternatives given to the voter, we suggest that there are also more parties which could count on some support of the voter. This would imply that in countries where there are more parties to choose from, voter availability is higher.

Hypothesis 2.2: The more parties in a system, the higher the average voter availability of the country.

Sartori (1976) identified the party system based on the relative size of the different parties, but mentioned the ideological distances as well. The degree of polarisation of the voting system is correlated with the type of party competition that can be either centripetal (parties towards centre build majorities), or centrifugal (parties towards extremes build majorities). For the latter, this goes together with a system which is over polarised, and is therefore dysfunctional - polarised pluralism. In this case, the fragmentation of parties has a destabilising effect which complicates the creation of coherent majorities and sustainable democracies. Centripetal party competition goes together with moderate pluralism which does not have a destabilising effect (Sartori 1976). Polarisation reflects the higher levels of social and political conflict (Tavits 2005), and the degree of polarisation will depend on the similarities and differences among the policies proposed by different parties. Similar policies indicate low polarisation and different policies indicate high polarisation (Klingemann 2004). Research has shown that the greater the policy difference between the parties, the less likely an individual will actually switch parties (Bartolini and Mair 1990; Roberts and Wibbels 1999; Tavits 2005). An explanation for this can be found with spatial voting models. The proximity models based on Downs's rationality theory show that voters tend to vote for the party located at the shortest distance from their own location on the left-right scale (Downs 1957). The volatility increases in multi-party systems because the voter can transfer his or her vote more easily, because of the greater number of parties and the smaller ideological differences among them (Pedersen 1983; Bartolini and Mair 1990). In low polarised countries where policy differences are smaller, we hypothesise that the condition

where a voter has close preferences to different parties is more common than in countries with higher policy differences among the parties. Thus, the lower the polarisation of a system, the higher its voter availability.

Hypothesis 2.3: The higher the party system's polarisation, the lower the average voter availability of the country.

Before, we mentioned the cleavage structure in society. Lipset and Rokkan (1967) are considered the pioneers of these, and their work focused on four cleavages: center/periphery, state/church, land/industry, and owner/worker. The voters are using these social divisions as decision grounds on who to vote for. Thomassen (2005) argues that of the four cleavages, social class (owner and worker) and religion (state and church) have been the most prevalent and important in Western European countries, exerting great influence on voting behaviour. While some scholars argue that the impact of social class on voting is in decline (Dalton 1988; Franklin 1985), others argue it has not declined (Brooks and Manza 1997). As well some consider that old cleavages are gradually being replaced by newer ones based on cultural and environmental issues (Achterberg 2006) or post-materialist values (Inglehart 1997). While researchers' assessments of cleavages vary, almost all of the mentioned research acknowledges that parties are (were) deeply rooted in cleavages such as class and religion, which is considered one reason for vote stability. A party system with strong cleavages is more stable and the voters are more loyal. Research has confirmed the negative relationship between the strengths of cleavages and volatility, meaning that, as the cleavages weaken, the electoral volatility increases (Roberts and Wibbels 1999; Bartolini and Mair 1990). Besides class and religion, ethnic diversity also tends to reduce electoral volatility, because in ethnically more diverse countries, the voters will consistently vote for the party which represents their ethnic group (Madrid 2005; Bartolini and Mair 1990). We suggest that stronger cleavages in society lead to lower levels of voter availability.

Hypothesis 2.4: The stronger the cleavages inside the country, the lower the average voter availability of the country.

Another set of factors frequently mentioned in exploring volatility is the effects of government approval and disapproval. Key (1996) showed that switchers are changing political choices based on real political preferences, and as such they judge whether the issues they care about are becoming better or worse under the last government. Some authors claim that voters are evaluating the past economic performance of the government (i.e., retrospective voting) (Key 1966; Fiorina 1978). Other authors claim there is also an evaluation of the future economic performance (i.e., prospective voting) (Fiorina 1981; Lewis-Beck 1986; Clarke and Steward 1994; Lockerbie 1991). Others claim even exclusive prospective voting (Mackuen et al. 1996). The literature shows that there is a link between the state of the economy and election results, but the strength and nature of the relationship varies (Marsh and Tilly 2010). One of the difficulties is that many countries have coalition governments, which makes it difficult to employ the traditional reward-punishment model where the incumbents are rewarded or punished on the economy as it is usually unclear which party is responsible for the country's economic performance (Duch and Stevenson 2005; Van der Brug et al. 2007). In The American Voter, the authors state that it is more likely to punish the incumbent party for its mistakes than reward it for its successes (A. Campbell et. al. 1960), and that economic downturns reduce votes for the incumbent party, but economic prosperity does not have the same effect (Bloom and Prince 1975). In the same line of thought, studies show that a poor economy increases anti-incumbent voting, while a healthy economy reduces electoral volatility by solidifying support for the political status-quo or generating vote shifts toward incumbents (Roberts and Wibbels 1999; Lewis-Beck and Paldam 2000). In addition, the voter evaluates the last months before an election rather than a full term of government (Verheyen 2005). Given these behaviours, we assume that a higher economic confidence in a country, in the last six months before the questionnaires were taken, decreases voter availability. We argue that the voters are quite satisfied and there is less reason to doubt for whom to vote. It also implies that low economic confidence in the last six months increases voter availability.

Hypothesis 2.5: The higher the economic confidence in the last six months inside the country, the lower the average voter availability of the country.

Research concerning electoral volatility in Eastern Europe suggests that the low level of economic modernisation explains more of the party system instability than the fractionalization of the party system. Eastern Europe is characterised by a lower level of development compared with Western Europe. The authors suggested that the volatility in Eastern Europe will decline over time when the economy takes off (Lane and Ersson 2007). This contradicts the research of Inglehart who indicates that there is a switch from materialist to more post-materialist values in any society that has experienced sufficient economic growth in recent decades (Inglehart 1997). This would suggest a decrease of party alignment and an increase in party switching, which would create more volatility. We suggest that the higher the standard of living, the higher voter availability.

Hypothesis 2.6: The higher the standard of living of the country, the higher the average voter availability of the country.

S. Birch (2003) showed that the longer the period between two elections, the more time the voters have to switch their preferences and to vote differently from the last elections. Countries of the European Union do not only have elections for regional and national elections but also for the super-national level, the European parliament. Reif and Smith (1980) are of the view that European elections are a "second order national election" and are considered lower in importance than the national elections, as they do not decide the party that will run the country, and thus voter interest is low. The elections are known for their low turnout, and as opposed to the national elections, smaller parties perform better, and those who are in government perform worse (Marsh and Franklin 1996). We suggest that if the European elections are held around the same time as the national elections, the electoral tension is higher. More attention will be given by the media and there will be a nation-wide environment of elections where voters will be paying more attention to politics. We hypothesise that the closer the national elections, the greater the decrease in voter availability, since the voter is paying more attention to elections and politics and the vote choice becomes clearer - there is less doubt about the vote choice.

Hypothesis 2.7: The further away the general election of the country, the higher the average voter availability of the country.

2.3   Summary

This chapter gives an overview of the theories and the hypotheses for voter availability on the individual and aggregate level. For the individual level, we started our analyses with extensive literature of voting theories as well as other theories related to voter availability. In the tradition with the Columbia approach, we suggested that belonging to heterogeneous groups or being more integrated in those groups decreases the voter availability. For the Michigan approach, having a lower party-ID would increase the voter availability. Within the rational choice traditions, we have different voting theories for which we formulated different hypotheses. In the proximity theory, not being uniquely close to one party, or with the directional theory, showing low intensity towards a certain policy (issue) direction increases the voter availability. Besides the three traditional voting theories, we formulated as well hypotheses for more recent theories as party leader voting for which we suggested that having close preferences to different party-leaders would increase the voter availability. For retrospective voting, we suggested that for those who voted for a government party in previous elections and evaluated the past government policy negatively, or evaluated the development of the economy negatively, the voter availability would increase. For those who voted against the government, the opposite is suggested that a positive evaluation of the government or the economy increases the voter availability. For prospective voting, we suggest that if the government voter expects that an economic situation would evolve negatively in the future this would increase the voter availability. On the other hand, for those voters who voted for a non-government and expect a positive development of the economy in the future, this increases the voter availability. Besides these voting theories, we also looked at other research designs where considering multiple party choices, being undecided, having a lower party-ID, switching party or splitting the vote choice is the variable which is examined. Based on that research, we articulated hypotheses concerning characteristics and attitudes. We hypothesised that demographic and social characteristics such as a younger age, higher education, living in a more urbanised environment, and being part of a higher class increases the voter availability. On the other hand, attitudes such as having a higher political interest and knowledge, having a lower political trust, and voting at elections would decrease the voter availability.

For the aggregate level section, we mentioned that the concept of voter availability is not very well developed in political science and especially not on the aggregate level. For that reason, we concentrate mostly on research on voter volatility to formulate the hypotheses. Based on the literature, we formulate seven hypotheses to examine voter availability on the aggregate level involving the party and election system besides country characteristics. We suggest that the more parties there are and the lower the polarisation of the party system, the higher the average voter availability of the country. For the electoral system, we suggest that the higher the disproportionality, the higher the average voter availability of the country. However, we suggest as well, an effect of the electoral tension if the general elections are during the same time. The further away (prior or future) the general elections are from the moment the questionnaire is taken, the higher the average voter availability of the country. Lastly, we suggest influence of country characteristics. The weaker the cleavages inside the country, the higher the standard of living and the lower the economic confidence in the last six months, which would increase the average voter availability of the country. These hypotheses will be examined in Chapter 4. However, before that we will search for a valid functional definition and measurement for voter availability, which will be done in the next chapter.

3. The Measurement of Voter Availability

In the first chapter, we introduced the concept of voter availability which we defined as the degree of availability of the voter to the electoral competition, the degree that the voter is likely to be persuaded by the different parties. In this chapter, we will explore voter availability in more detail, and we will take a closer look at how we can conceptualise voter availability and measure it with a survey methodology. We start with the search for a method to explain the concept of voter availability, followed by an exploration of party utilities and how availability can be measured in a dichotomous and non-dichotomous fashion. Finally, we will explain the method that will be used in this research and examine it in more detail.

3.1 Searching for a method

Higher voter availability can be expressed by vote switching, being undecided on who to vote for in elections, considering multi-party choices, and split-ticket voting. A voter who is switching sides between two consecutive elections is not the same as a voter who is undecided before the elections, this is because in the former case the voter can either confirm the choice made in the previous election or choose another party. The different facets of availability do not apply to everyone among the electorate. We will first theoretically explore the consequences of approaching the available voter - the voter who is available for the competition among parties as a floating voter, a split-ticket voter, or as an undecided voter.

First, we will approach the available voter as a floating voter (i.e., a voter who changes his vote choice between consecutive elections). This is the approach that is mostly used in contemporary research on electoral instability. An advantage of this approach is that we know for sure that the voter has actually switched, and not merely thought about it, and has voted differently from the previous election. However, the disadvantage of using this approach is that actual switchers do not

inform us if they were available for the electoral competition among parties. While this approach informs us that the voter decided to vote differently than he or she did in the previous elections, it does not inform us of when the decision was actually made. The voter may have decided to change his party preference just a few months after they voted in the previous elections, which would take the voter out of the party competition. This person should be considered to be out of the competition at election time, even though their vote choice is different from the last elections. On the other hand, voters who have no steady vote choice, and who considered switching but held to their original choice (i.e., voted for the same party again), will not be considered as available voters. Although these voters may choose another party, the actual switches do not inform us about the process of decision-making. It is not necessary for a voter to actually change his preferences between consecutive elections in order to be considered as an available voter. Electoral volatility is usually measured by the behaviour of switching between parties during consecutive elections. Meanwhile, voter availability provides a view of those voters who are available for the electoral competition, and where a vote switch can be the consequence but not a necessity. Throughout this dissertation, there will often be references to electoral volatility, because many questions that were raised in political science concerning electoral volatility can also be raised for voter availability. Electoral volatility and voter availability are closely related, whereas the former examines the switching itself, the latter examines the potential to switch.

Another way of analysing voter availability would be to approach the available voter as a split-ticket voter. There are conditions for the applicability of split-ticket voting, if there are not multiple elections or if the voting system does not give the opportunity to split the vote, split-ticket voters will not exist and therefore cannot be used in exploring voter availability. Furthermore, as in the case with volatility, split-ticket voting would not inform us about the voter availability for the electoral competition among parties. We cannot be sure that a voter who splits his vote was available for electoral competition, if they were available to be persuaded by different parties. On the other hand, a voter who did not split his vote choice would not be excluded with certainty from the electoral competition among the parties.

The main issue with the above two approaches is that while they concentrate on the electoral outcome (whether the person voted differently from the last elections or whether the person gave a split-ticket vote), they do not consider the pre-decision

process. In the pre-decision process, the voter is making a decision for whom to vote. This process is crucial to understand the voter availability. It will tell us which voters had greater difficulty in reaching a decision and it will inform us of the key factors affecting this decision. For analysing vote decision-making processes, we should concentrate on the process as well as its outcome.

A method which focuses more on the decision-making process, would be concentrating on the moment when the voter ended the decision-making process, and decided for whom to vote. In this fashion, we could distinguish the undecided/decided voters at a certain moment prior to the elections. Nevertheless, there are some concerns associated with this approach. Lazarsfeld et al. (1944) suggested that people are unaware of their own decision-making processes, which makes it harder to interpret the results and understand their choices. Another issue pointed out by W.G. Mayer is that it is very difficult to get a clear, consistent, and reliable measure of the moment of decision-making. Another limitation of surveys is that the size and composition vary a lot depending on the way a particular question is worded and how the interviewer is instructed to behave towards those who claim to be undecided (W.G. Mayer 2007).

Another method would be to concentrate on the decision-making process itself and understand how a voter reaches his final choice after a deliberating period. The "search for dominance-structure theory" (SDS), is a model that explains the decision-making process based on preferences for different party alternatives. This cognitive process starts when an individual faces different choices of candidates and/or parties. Each choice is weighted in terms of attractiveness on a number of subjectively-defined dimensions. The main idea behind this theory is that the voter attempts to structure and restructure the information about the different parties in such a way that one alternative becomes the self-evident choice. This process plays out in four unique phases: pre-editing, finding a promising alternative, dominance testing, and dominance-structuring. In the pre-editing phase, the voter separates relevant information from the less-relevant information and then attempts to simplify the decision-making process by selecting the alternatives that should be included in the situation (i.e., in the dominance structure [of choices]). The voter selects possible alternatives of candidates and parties for which he would consider voting. In the second phase (finding a promising alternative), the individual looks for different alternatives based on subjective features. The voter tries to find an alternative that

has a reasonable chance to be seen as dominant over the other alternatives selected in the pre-editing phase. In the third phase (dominance testing), the voter tests whether any of the chosen alternatives dominate the others, and if any is found to dominate the voter-choice, it is chosen and the decision process ends. However, if there is no dominant alternative evident to the voter, he will move into the dominance-structuring phase. In this phase, the voter weighs the pros and cons of all chosen alternatives, and attempts to neutralise or counterbalance their disadvantages by emphasising the advantages and deemphasising the disadvantages, and then structures all the alternatives (Montgomery and Svenson 1989; Montgomery 1983). The concern with this approach is that it is a very rational approach to decision-making, and we therefore cannot assume that every voter is going through this process. However, we can assume that every voter has certain preferences for specific parties, even those who did not go through the rational decision-making process.

Analysing the floating voter or the split-ticket voter would not inform us of how the voter came to his decision (the process), but would instead only inform us of the actual choice (the consequence). Concentrating on the voter's undecidedness before the elections provides more insights about the decision-making process. But again, it would not inform us about the decision-making process itself, where the voter is analysing different alternatives to arrive at a final choice. Using this approach, we will be able to understand the dynamics affecting the final vote choice which will provide us with more insights into voter availability. In the next two sections, we will analyse how we can measure party preferences and whether this will help us in exploring voter availability.

3.2 Measuring party preferences

Tillie claims that the traditional methods that focus exclusively on the party that was voted for are unsatisfactory. In traditional methods, party preference is limited to one party while the other parties are ignored. This would imply that each party, which has not been voted for, is not preferred and equal for the voter. Tillie further argues that determinants of vote decisions can only be identified by studying preferences rather than just the final choice. The transformation of those party preferences into a final choice is the electoral choice process (Tillie 1995).

"What surveys do not ask is whether the party indicated by the respondent is the respondent's very clear-cut choice or whether the respondent was genuinely trying to decide between a number of parties" (Marsh 2006, 4). This method of using party preferences was pioneered by Van der Eijk and Niemöller in the early 80s when different methods of measuring party preferences were tested with the Dutch elections (Van der Eijk and Niemöller 1983), and found their way to other electoral studies in Britain, Germany, Ireland, and Spain (Van der Eijk et al. 2006).

Both the "Search for Dominance Structure" theory and Tillie's work point out that the cognitive process where a voter is structuring the different alternatives to come to a final choice is an important aspect of the decision-making process. Tillie suggested that party preference could be seen as the "motivational strength of voting for a party." To find a valid operationalisation, Tillie used the following four criteria to derive a valid indicator that will identify a voter's motivational strength to vote for a party (i.e., their party preference) (Tillie 1995):

1) Observe the preferences for more than one party.

2) Do not exclude or impose factors as being relevant for generating preferences; assessing the attractiveness of every option, the indicator should allow the respondent to consider all factors which they (un)consciously take into account.

3) Include questions that are explicitly related to party choice in elections.

4) The indicator should be measurable in a survey context.

Tillie explores the "Probability to Vote" (PTV) with the four criteria mentioned to see if this would be a valid operationalisation. For this validation process, Tillie makes use of the Dutch Parliamentary Election Study where the PTV question was mentioned for the first time in 1982 (Van der Eijk and Niemöller, 1983).[6] The PTV questions are questions about the probability that the voter would ever vote for a certain party in the future. The respondent answers on a 10-point rating scale where only the extreme categories are labelled. The minimum on the scale is category 1: "I will certainly never vote for this party," meanwhile the maximum is category 10: "At some time I will certainly vote for this party."[7]

Firstly, Tillie showed that the indicator can be used as a survey instrument since the voters are able and willing to respond. Voters apparently experience less difficulty in providing an answer, as opposed to related questions such as "feeling thermometer" questions [8] (Tillie 1995). Other research has also had similar conclusions: "If the purpose is to study electoral choice and the process leading up to electoral choice, then the propensity to vote for a party is to be preferred over thermometer or feeling scores, and over likes/dislikes scores" (Van der Eijk and Marsh 2011, 2).

Another important consideration for Tillie is whether respondents actually express preferences for more than just one party. If each respondent is approaching the PTV question with preconceived notions of approval/rejection of a certain party, then the extra value of PTV will be more limited than if the voter gives intermediate scores to some parties. Research has shown that this varies from party to party, but generally speaking for each party at least one third of the responses are intermediate. If we take a closer look at individual preferences, we notice that almost one-third of the respondents give at least a 6 (on a scale from 1 to 10) to at least

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[6] "Some people are quite certain that they will always vote for the same party and that it is unthinkable that they will ever vote for another party. Others reconsider in each case to which party they will give their vote. I will mention a list of parties. Please indicate for each how probable it is that you will ever vote for it. Please tell me the number of the respective box on this card. IF you do not know a party or if you do not know which answer to give, just say so and we will go to the next party.
The show card displays a 10-point rating scale of which only the extreme categories are labelled: Category 1: I will certainly never vote for this party. Category 10: At some time I will certainly vote for this party" (Tillie 1995, 38).

[7] In some research designs, such as the EES, an 11-point scale is used going from 0 to 10.

[8] The feeling thermometer questions are questions where the voter is placing politicians/parties on a thermometer scale from 0 to 100 where a favourable feeling (a warm feeling) would be expressed by a high number.

three different parties, which demonstrates the added value of the use of PTVs (Tillie 1995).

Another aspect is that the voter is typically responding to the PTV question in the same way as he would vote. Tillie shows that respondents usually give the highest vote probability score to the party they voted for (Tillie 1995). Other researchers have also reached the same conclusions (i.e., that there is a close relationship between party choice and the highest PTV score). Ninety-three percent of the respondents gave the highest PTV score to the party they actually voted for in the Netherlands in the 1998 elections. Similar results were found in different countries in the EU and at different elections (Van der Eijk et al. 2006).

Tillie's last validation is as well of relevance to the concept of available voters. If we assume that the highest PTV score is only given to the party the respondent voted for it, then there is no need to distinguish between party preference and party choice. However, when Tillie explored the relationship between voting behaviour and PTVs during the Dutch elections of 1986 and 1989, his research uncovered that if a respondent does not vote for a party that they supported in the previous election, the preference scores decline, but not dramatically. For fifty-four percent of the vote switchers, the previous party voted for becomes the second-ranked party and the mean vote probability decreases by 1.8 points on the 10-point scale.

Tillie concluded that: "A strong relationship between party preference and voting behaviour exists, while both can still be distinguished from another" (Tillie 1995, 53). The use of this 10-point scale for the PTV questions, with different probability categories, very closely approximates an interval level measurement for which not much substantive information is lost. This scale makes it possible to give a certain order to the different parties which is transitive (Party A > Party B > Party C so Party A > Party C) and also comparable between subjects. Tillie concluded that because PTV scores show the strength of a particular choice, they therefore measure the utility that each voter would gain from voting for each party - party utilities (Tillie 1995).

3.3   From party preferences to voter availability

In the previous section, we discussed how party preferences can provide us with a deeper understanding of the vote decision model. Party utilities can also inform us about the voter availability. This is comparable to how a consumer would make the decision about a certain product. A consumer's decision on which product he or she prefers will be determined by the consumer's view regarding the utility of the products and the cost attached. Suppose we have two products, product A and product B, which have equal costs but where the utility of product A is much greater than the utility of product B, this will result in a clear-cut choice for the consumer. Suppose that the utility difference between those two products is small, this will result in uncertainty of which product is preferred. Similar with voting, if the utility to vote for two parties is head-to-head and the costs (e.g., going to the polling station) are equal, then the final choice of the voter won't be clear. If the differences of utility between the two parties are larger, the final choice will become clear-cut.

We defined voter availability as the degree to which the different political parties are able to compete for a person's vote. A voter who has similar preferences for different parties will have a higher voter availability because it is uncertain which party he or she will vote for in the end. We continued with our definition that a higher voter availability can be expressed as a voter being undecided before elections, considering multiple parties as choices at the time of elections, split-ticket voting, and swing voting towards another party at the last moment. The assumption that all of these aspects are valid for having close preferences for different parties would be wrong. But having close preferences for different parties at least generates the conditions in which these aspects can happen. Later in this section, we will explore if some of these aspects are valid for voters who have close preferences for multiple parties. Party utilities, and more specifically PTVs, are already used in political science to explore the electoral competition among parties. In the next section, we will discuss the previous research where electoral competition is approached by categorising voters in a dichotomous and non-dichotomous fashion.

3.3.1 Dichotomous measurement of voter availability

A dichotomous approach means that we are classifying voters into two groups: those "in the competition" (i.e., voters available to the electoral competition) and those "out of the competition" (i.e., voters not available to the electoral competition). Marsh explored electoral competition in Ireland in 1989 and 2002 by making use of the PTV questions, and showed that there are a little more than 30 percent of voters who have equal preference scores for two or more parties, while almost three-quarters give a high score to two or more parties. According to Marsh, this group corresponds most obviously to the popular notion of "floating voters". If the gap in party preferences between the best and second best party is small, this can be considered a voter who is undecided on who to vote for. Marsh defines these voters as those who give a high score (above 5) to two or more parties in the utility questions, and where the gap between the two parties who scored highest is less than or equal to 2. Voters who are "out of the competition" have a clear preference for one party, the gap between the top two parties is greater than 2, and the most preferred party is highly rated (above 5). Besides these two voter groups, there is still another group with no strong preferences at all (equal or below 5) which are later excluded in the analyses. In this way, we get a dichotomous distinction between voters "in the competition" and "voters out of the competition." Besides this dichotomous distinction, Marsh explored how much unique support each party has, and how much support is shared with other parties. He constructed a scale from 0-1 that measured the potential support for each party by treating the utility scores as the probability of each choice, and the average scores for each party can be seen as a measure of the party's potential support among the electorate (Marsh 2006).

Other authors, such as Kroh et al. (2007), use a similar dichotomous approach to define potential vote switching. A respondent would be defined as a potential switcher if the gap between the two most preferred parties on the PTV questions is no more than one point. A non-switcher would be a voter for whom the difference between the two most preferred parties is more than one point.

W.G. Mayer used a similar method with the presidential elections in the U.S. in which he studied the swing voter: "a voter who could go either way, a voter who is not so solidly committed to one candidate or the other as to make all efforts at persuasion futile" (W.G. Mayer 2007, 359). W.G. Mayer measured the swing voter

with a "feeling thermometer" that included questions such as how favourably or unfavourably the respondent rates the presidential candidates from 0 to 100 points. W.G. Mayer subtracted one candidate's rating from the other and defined swing voters as those where the absolute difference between candidates is less than 15 (W.G. Mayer 2007). As mentioned earlier, questions on the feeling thermometer are similar to PTVs in that they measure party utilities, but research shows that PTV results should be preferred over those of the thermometer when studying electoral choice (Van der Eijk and Marsh 2011).

We will explore this dichotomous approach of being available or unavailable for electoral competition a bit further with the Dutch Parliamentary Election Studies (NKO) of 2006 and 2010. Similar to the method used by Marsh (2006) and Kroh et al. (2007), we consider the voters "in the competition" (i.e., voters available to the electoral competition) as being those voters who give a high score (above 5) to two or more parties for the utility questions, and where the gap between the two highest scored parties is less than or equal to 1. Meanwhile, voters for whom the difference between the two most preferred parties is more than one are considered as "out of the competition" - voters not available to the electorate competition.

The NKO data is collected by a stratified two-step random sample with municipality as the first unit and persons as the second. It consists of face-to-face interviews (CAPI) of approximately 2,500 respondents which are conducted in two different waves (Schmeets and van der Bie 2008). We are using NKO data because it contains the crucial PTV questions, as well as many other questions which are applicable to our research. The 2006 Elections in the Netherlands were originally planned for May 2007. However, when D66, the smallest coalition partner, withdrew their support from the government over a citizenship issue, early elections were called. Though D66 withdrew support based on a citizenship issue, the main issue during the elections was the economy. In 2010, the Netherlands again experienced early elections as in 2006, but this time it was due to the fall of the fourth Balkenende cabinet. The Ministers of the Socialist PVDA resigned over differences on whether to extend participation in the Afghanistan military mission. In the 2010 elections, the issues driving the campaign were the economy, or more specifically, economic recovery. This was followed by home-mortgage interest reduction, the legal retirement age, and study benefits for students (NOS 2010).

In our effort to create a framework to understand the voter availability, we will first compare the two categories of "in competition" and "out of competition" with voters who switched vote choices between two consecutive elections and those who did not. Second, we will compare the "in/out of competition" to voters who indicated they did not always vote for the same party in the past/voters voted for the same party. Third, we will compare "in/out of competition" to undecided voters, (i.e., voters who were undecided during the pre-election survey) (x months, weeks, days, before the elections)/decided voters. Fourth, we will compare the "in/out of competition" to voters who changed their vote intention between the pre-election survey and the post-election survey/voters who did not. Fifth, we will combine those voters who were undecided with those who changed their vote intention. Finally, we will compare "in/out of competition" to doubting voters (i.e., voters who seriously considered voting for a different party during the campaign period/non-doubters). It would be interesting to have a look at how these various categories of voters compare to the voters "in/out of competition." So, we can make six different dichotomous separations of voters.

1) *The Floater:* A voter who did (not) change his vote choice from the previous elections.[9]

2) *The Never-Floater:* A person who (never) changed their vote choice over multiple past elections.[10]

3) *The Undecided:* A voter who was undecided on who to vote for during the last weeks before the elections.[11]

4) *The Intention Changer:* A voter who (did not) change his vote intention throughout the duration of the campaign and the elections.[12]

5) *The UCM* (Undecided and Changed Mind): A combination of undecided voters and those who changed their intention to vote. The other group would be those who followed their vote intention when making their vote choice.

6) *The Doubter:* Voters who (did not) seriously consider voting for another party during the general election.[13]

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[9] A recall question concerning the vote choice with previous parliamentary elections will be used.

[10] Did you always vote for this party in parliamentary elections?

[11] Will you vote on (vote date)? If no, suppose vote is mandatory; which party would you vote for? If yes, which party (more parties possible)?

[12] By comparing the party outcome on the previous question about the vote intention with the actual vote choice.

We will check the Pearson's r correlations between these dichotomous separations and the dichotomous "in/out of competition"[14] voters based on the measure of party preferences.

Table 3.1: Correlations between Voter In/Out Competition with the Other Measurements (NKO 2006-2010)

Voter In/Out Competition	NKO 2006	NKO 2010
Floater	0.3139***	0.2955***
Never-floater	0.2347***	0.1528***
Undecided	0.3846***	0.1544***
Intention changer	0.1966***	0.2150***
UCM	0.4020***	0.2384***
Doubter	0.3011***	0.3018***

*** for p< 0.001

Table 3.1 shows correlations in between 0.1966 and 0.4020 for 2006 and in between 0.1528 and 0.3018 for 2010. [15] These correlations show that the measurement of having close party preferences to the two most preferred parties ("in competition") or not having close preferences ("out of competition") is correlated with other measurements. So, being "in competition" is linked with different aspects of not having a fixed party preference, as having doubts about who to vote for, considering other parties, changing vote choice between elections or between the pre-election survey and the post-election survey. It is interesting to note that the correlations in 2006 were stronger than in 2010, the reason for which is beyond the scope of this

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[13] Did you truly consider voting for a different party than (party of choice)? This question is administered during the post-election survey.

[14] Voters "in competition" are those who give a high score (above 5) to two or more parties for the utility questions, and where the gap between the two highest scored parties is less than or equal to 1. Voters "out of competition "are those for whom the difference between the two most preferred parties is more than 1.

[15] N 2006: 1821 for Floater, 2003 for Never-floater, 2185 for Undecided, 1326 for the Intention Changer, 2185 for the UCM, and 2070 for the Doubter. 2010:1644 for Floater, 1709 for the Never-floater, 1849 for Undecided,1239 for Intention Changer variable, 1849 for UCM, and 1912 for the Doubter. The differences in numbers are due to dropped cases where the respondent answered DK, but kept those in for other analyses if information was available. The lower n for changed mind is because we left the group of undecided voters out for this specific variable.

study. We also notice that the *Floater* and the *Doubter* have similar correlation coefficients in different years, while the correlations of the other variables can vary more. The *Never-floater* has the lowest correlations with "voters in competition" in both years.

Overall, we observe that we are capturing doubts, uncertainty, and vote switch with the approach of having tight preferences to different parties (i.e., being in competition for whom to vote). It can be argued whether a dichotomous approach is the right approach. The PTV question would make it possible to distinguish among the different voter categories in a broader approach than the dichotomous approach discussed here. In the next section, we will explore the non-dichotomous approaches of voter availability.

3.3.2 Non-dichotomous measurement of voter availability

Kroh et al. (2007) point out the disadvantages of using a dichotomous approach to measure availability of the voters to the electoral competition. One of their key arguments is that this approach disregards the huge differences in party preference for non-available voters - voters "out of competition." They invert the difference in preferences between the two most preferred parties and arrive at a score that indicates the likelihood of switching between parties. A higher value indicates that there is a greater likelihood that a voter will change parties. The result has 10 possible values and is treated as an interval-level variable[16] (Kroh et al. 2007). We will continue to discuss the results of the non-dichotomous approach in more detail, and we will compare the voter availability with the dichotomous approach of *Doubter* mentioned in the previous section. We will give the distribution of those voters who seriously considered voting differently during the campaign and who did not in each of the 10 different values measuring the gap between the first and second most-preferred party derived from the PTV questions.

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[16] (Availability = -1 * ([preference for most preferred party] − [preference for second-most preferred party]). In this approach, we will get a value between -9 and 0 with a higher value that gives a value of availability. This with a 10-point PTV question.

**Table 3.2: Doubts and the Gap between the Two Most-Preferred Parties,
Row Percentages. (NK0 2006-2010)** [17]

	NKO 2006			NKO 2010		
GAP	NO	YES	Total	NO	YES	Total
0	34	66	22.87	31	69	22.66
1	42	58	26.06	41	59	31.77
2	59	41	21.48	56	44	24.82
3	69	31	12.55	73	27	10.92
4	73	27	5.88	84	16	5.36
5	76	24	5.32	90	10	2.06
6	71	29	1.57	93	7	0.72
7	92	8	0.60	90	10	0.51
8	93	7	0.65	100	0	0.15
9	88	12	3.01	95	5	1.03
Total	1154	1006	2160	981	961	1942
%	53.43	46.57	-	50.51	49.49	-

In Table 3.2, we can clearly observe that the size of the gap is inversely proportional to the number of people who considered changing their vote choices during the campaign.[18] Respectively, 66 and 69 percent of the respondents, whose top two preferred parties have equal preferences, seriously considered voting differently at the time of the elections. Both sets of data (2006 and 2010), show that as the percentage shrinks, the gap between the two most preferred parties grows, confirming an inverse relationship between the two variables. However, this percentage stabilises as the gap becomes bigger. On the other hand, we notice that in 2006, more than 8 out of 10 are in categories 0, 1, 2, and 3 and for 2010 this number increases to 9 out of 10. Despite being skewed towards the smaller gaps, this shows that the smaller the difference, the bigger the possibility that a voter considered voting differently during the campaign.

Though Kroh's et al. (2007) approach is very interesting, it does not consider the other parties that the respondent also favoured, albeit with a smaller preference than the two most favoured ones. A person who filled in 9-7-1-1-0 will be different from a person who filled in 9-7-7-7-0, where the latter displays more parties for which are possible to vote for. Similarly, a respondent who gives two parties an equal score is different from a person who gives three or four parties an equal score, where the latter displays more possibilities of parties for which to vote for.

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[17] 2006: Pearson chi2(9) = 232.3362   Pr = 0.000 2010: Pearson chi2(9) = 242.0515   Pr = 0.000

[18] 2006: correlation of 0.3027 (n=2160) 2010: 0.3364 (n=1943) in 2010

But does it really matter where a voter's 3rd and 4th party choices fall on the PTV scale? We believe that it is important to consider where other parties lie on the PTV scale. These parties may exert a certain influence on the final result. We explore this in more detail using the NKO dataset of 2006 and 2010, and the voter categories identified with the dichotomous approach, namely the *Doubter,* the *UCM* and the *Floater.*

We will analyse their vote preferences for the four most preferred parties by assessing the gap between the two most preferred ones (first gap), the gap between the second and third most preferred party (second gap), and the gap between the third and fourth (third gap) most preferred party on the PTV questions. We will give the distribution of the variables we mentioned (*Doubter, UCM,* and *Floater*) if we would only consider the first gap, as well as by considering the second and third gap. For every gap, we use the same method as with the dichotomous approach whereby we separate two groups if the gap is equal or smaller than one, and where the gap is bigger than one.

Table 3.3: Doubts and the Gaps between Preferred Parties, Row Percentages (NKO 2006) [19]

Gap 1	Gap 2	Gap 3	NO	YES	Gap 1	Gap 2	Gap 3	NO	YES
0	≤1	≤1	33	67	1	≤1	≤1	36	64
		>1	33	67			>1	42	58
	Total		33	67		Total		39	61
	>1	≤1	36	64		>1	≤1	41	59
		>1	36	64			>1	52	48
	Total		36	64		Total		44	56
Total			34	66	Total			41	59
2	≤1	≤1	55	45	3	≤1	≤1	62	38
		>1	62	38			>1	81	19
	Total		58	42		Total		68	32
	>1	≤1	59	41		>1	≤1	76	24
		>1	64	36			>1*	58	42
	Total		61	39		Total		72	28
Total			59	41	Total			70	30

= category with less than 50 cases so we should be careful interpreting these results

Table 3.3 shows that there is some importance (although in some cases the effects are very limited) in considering more than just the two most preferred parties. For example, in the 2006 data, we observe that if the gap between the first and second most preferred party is one, there is a 59/41 distribution in favour of those who did consider voting differently during the campaign compared with those who did not. However, if we go into more detail in this category, we find that if the gap between the top two most preferred parties is one, then we get different results. There is a 61/39 distribution if the second gap is smaller or equal to one and a 56/44 distribution if this gap is greater than one. Further details indicate that if the first gap is one and the second is greater than one, and the third less than or equal to one, then there is a 59/41 distribution and 48/52 if the third gap is greater than one. These results show that it does matter for the distribution on "(not) considering voting differently during the campaign" where the voter is placing the third and fourth preferred party on the PTV scale.

Similarly, for the 2010 data, we notice that it is also important to consider multiple party preferences to analyse the PTV scores. We notice a 56/44 distribution in favour of "not considering voting differently during the campaign" if the gap

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[19] N in order: gap 0: 156/104/260/129/105/234/494, gap 1: 206/129/335/141/57/228/563, gap 2: 161/111/272/114/78/192/464, gap 3: 108/58/166/74/74/31/105/271.

between the two most preferred parties equals two. Meanwhile, if the second gap (i.e., the gap between the second and third preferred party) is less than or equal to one, then the distribution lowers to 54/46, meaning more voters considered voting differently. If the second gap is greater than one, the distribution increases to 61/39, meaning fewer voters considered voting differently.

Table 3.4: Doubts and the Gaps between Preferred Parties, Row Percentages (NKO 2010) [20]

Gap 1	Gap 2	Gap 3	NO	YES	Gap 1	Gap 2	Gap 3	NO	YES
0	≤1	≤1	31	69	1	≤1	≤1	39	61
		>1	32	68			>1	39	61
	Total		31	69		Total		39	61
	>1	≤1	29	71		>1	≤1	44	56
		>1	36	64			>1*	44	56
	Total		31	69		Total		44	56
Total			31	69	Total			41	59
2	≤1	≤1	52	48	3	≤1	≤1	72	28
		>1	57	43			>1*	69	31
	Total		54	46		Total		71	29
	>1	≤1	62	38		>1*	≤1*	77	23
		>1*	57	43			>1*	88	12
	Total		61	39		Total		79	21
Total			56	44	Total			73	27

*= category with less than 50 cases so we should be careful interpreting these results.

The tables and analyses for the UCM and floater approach are discussed in Appendix A. The above analyses and those in Appendix A suggest that besides the top two most-preferred choices, the third and fourth preferred parties also play their role in the availability. We can also explore the PTVs by considering the exact number of parties that have some importance to the respondent. We will consider all of the parties which have some importance to the voter in the analyses.[21]

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[20] Gap 0: 175/78/253/128/59/187/440, gap 1: 312/118/430/144/43/187/617, gap 2: 240/106/346/106 /30/136/482, gap3: 126/42/168/35/9/44/212
[21] This mean is the number of parties which got a score higher than 1 on the PTV question, knowing that 1 means the respondent would never vote for that party.

Table 3.5: Doubts and Number of Important Parties, Row Percentages
         (NKO 2006-2010)[22]

Number of parties	NKO 2006			NKO 2010		
	No	Yes	Total	No	Yes	Total
1	89	11	3.66	95	5	1.13
2	70	30	6.25	75	25	0.82
3	64	36	8.43	75	25	2.27
4	57	43	13.01	55	45	3.86
5	52	48	13.19	55	45	8.81
6	51	49	15.60	53	47	13.39
7	45	55	9.58	46	54	16.22
8	49	51	8.66	46	54	15.35
9	50	50	6.02	50	50	16.43
10	45	55	5.88	47	53	21.73
11	41	59	9.72	-	-	-
Total	1154	1006	2160	981	961	1942
%	*53.43*	*46.57*		*50.51*	*49.49*	

Table 3.5 shows the more parties there are with some importance to the voter, the more the voter considered voting differently during the campaign. Besides a theoretical argument that the preferences of other parties can have their impact on the voter availability, we provide empirical evidence from the Dutch Parliament Election Study. We will formulate an approach to measure the voter availability which considers multiple party preferences and not just the two most preferred parties.

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[22] 2006: Pearson chi2(10) = 88.1538   Pr = 0.000 /2010: Pearson chi2(9) = 41.0111   Pr = 0.000

3.4   Formula for voter availability

We will propose a formula to measure the voter availability that takes into account all of the different party preferences but with a weight factor attached to each one of them. In this way, we can ensure that the higher ranked parties would have more importance than the lower ranked ones. Based on this approach, we created the following formula:

n= number of parties that the respondent filled in/answered on with importance.[23]

ptv = probability to vote for a particular party

$$VoterAvailability = \frac{\sum_{i=2}^{n}\left[\{9-(ptv_{i-1}-ptv_{i})\}n^{n-i}\right]}{9\left(\sum_{i=2}^{n}n^{n-i}\right)}$$

(1)

Formula 1 is specifically for a 10-point PTV scale where there are 10 different values possible from 0 to 9. So, instead of using a scale of 1 to 10, a 0 to 9 is used where 0 is the minimum score and means "will certainly never vote for this party" and 9 is the maximum score and means "at some time will certainly vote for this party." The formula awards every respondent a percentage that indicates the voter availability.

To make voter availability comparable inside and in-between countries, we are applying the following two ground rules:

-        For a person who filled in more 0s (will never vote for that party), we will only consider one 0. This rule is set for different reasons. Firstly, the number of PTVs questioned depends on how many relevant parties there are in the system. By considering all of the responses with a 0, there would be a strong influence of the number of PTVs questioned. Secondly, if the respondent points out that he or she

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[23] With a 10-point scale from 1-10 where 1 means never vote for, this is the number of all parties with party preference higher than 1.

will never vote for the party, there is theoretically no need to still consider this party in the personal preferences.

    -        If a person did not fill in any 0s but has missing values, we will recode one of the missing values to a 0. This is done as we need one "0" to calculate the preference distance between the lowest preference which a voter would consider and 0, the option where a voter would never vote for a specific party.

In the continuation of this dissertation, an 11-point scale from 0 to 10 is also sometimes used. Therefore, the formula is adjusted as follows:

$$Voter\,Availability = \frac{\sum_{i=2}^{n}\left[\{10-(ptv_{i-1}-ptv_{i})\}n^{n-i}\right]}{10(\sum_{i=2}^{n}n^{n-i})}$$

(2)

To better understand the formulas, let's assume that a respondent gives five parties, respectively, the values 9-7-1-1-0 on an 11-point PTV scale from 0 to 10. In this case, the number of parties would be five and our equation would give us the following: $((10-(9-7))^{*}$ 5^{3} + $(10-(7-1))^{*}$ 5^{2} + $(10-(1-1))^{*}5$ + $((10-(1-0))^{*}1)$ /$10^{*}(5^{3}+5^{2}+5+1)$ = 0.743. Suppose that the same person filled in 9-7-7-1-0, then the value of voter availability increases to 0.82. If we use Kroh's method, while considering only the two highest ranked parties with scores of 9 and 7, the result would be the second highest number (i.e., -2 on a scale of -10 to 0). Rescaling this to a number between 0 and 1, this would give a value of 0.8 for voter availability. So, the formula that we propose is letting the voter availability vary from the original first gap. [24]

Another aspect of the formula is the quantity of relevant parties to the respondent. The voter, who is filling in the PTV questions with 9-7-1-0-0-0-0 scores, would be analysed similarly to the one with 9-7-1-0 scores, leading to a voter

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[24] More details about the formula can be found in Appendix B.

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availability score of 0.7286. If a respondent is giving an extra party a value of 1 (so, 9-7-1-1-0), this would increase the voter availability to 0.7429, and if the same respondent fills in just two extra 1s (so, 9-7-1-1-1-0), this would lead to a voter availability of 0.7499. What is important here to notice is that the effect of adding an extra party preference becomes smaller with the lower gap being considered. Another proof of this is if the respondent is giving ten parties a value, 9-7-1-1-1-1-1-1-1-0, this would give a voter availability of 0.7660 which is higher than those examples but the increase is limited.

Compared to Kroh's et al. (2007) method, our formula considers all parties that are important for the respondent and not only the two with the highest PTV scores. It also treats our measurement more continuously, with fewer problems than in the Kroh et al. (2007) approach, although we still get a skewed distribution.

In the next section, we will explore our method in more detail by focusing on the lacuna in the thinking process, where we assume that having a higher voter availability means that the voter is more open for the electoral competition.

3.5   Examining the voter availability method

In this section, we will perform some tests to explore this method a bit further. We will make use of the three sets of categories we discussed earlier, namely: *Doubter*, *UCM* (undecided and changed mind), and *Floater,* using the Dutch Parliamentary Election Studies.

We will divide the dependent variable (the voter availability) into ten equally sized groups according to their level of availability[25] where category one contains voters with the lowest voter availability and in category ten the highest.

Figure 3.1: Cross-Classification of Doubts by Voter Availability (NKO 2006-2010) [26]
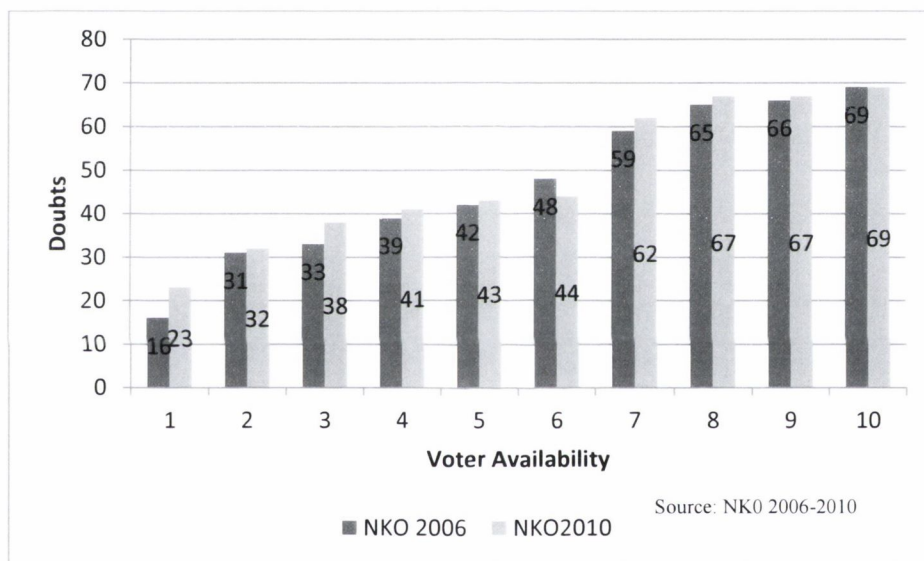
Figure 3.1 shows, for each category of voter availability, the percentage of voters who seriously considered voting differently. We notice in 2006 (n=2160) and 2010 (n=1942) that the higher the category of voter availability, the more respondents of the group considered voting differently. Two out of ten considered voting differently in the lowest group, and this number increased to seven out of ten in the highest category. The fact that at the higher end the effect is less is not really a

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[25] Percentiles 2004: 0.53/0.67/0.71/0.78/0.80/0.87/0.89/0.92/0.98, percentiles 2009:
0.63/072/0.78/0.8/0.87/0.89/0.9/0.96/0.98
[26] 2006: Pearson chi2(9) = 241.5392   Pr = 0.000 / 2010: Pearson chi2(9) = 248.4739   Pr = 0.000

problem knowing that the variable is skewed to the right, as with the approach of Kroh et al. (2007). (See percentiles)

Making use of the vote intention, we could explore this method a bit more. Firstly, we can analyse the people who are not sure yet for whom to vote with the pre-election survey and those who changed their vote intention during the last weeks of the campaign in comparison with those who followed their vote intention (UCM-approach).

Figure 3. 2: Cross-Classification of UCM by Voter Availability (NKO 2006-2009)[27]
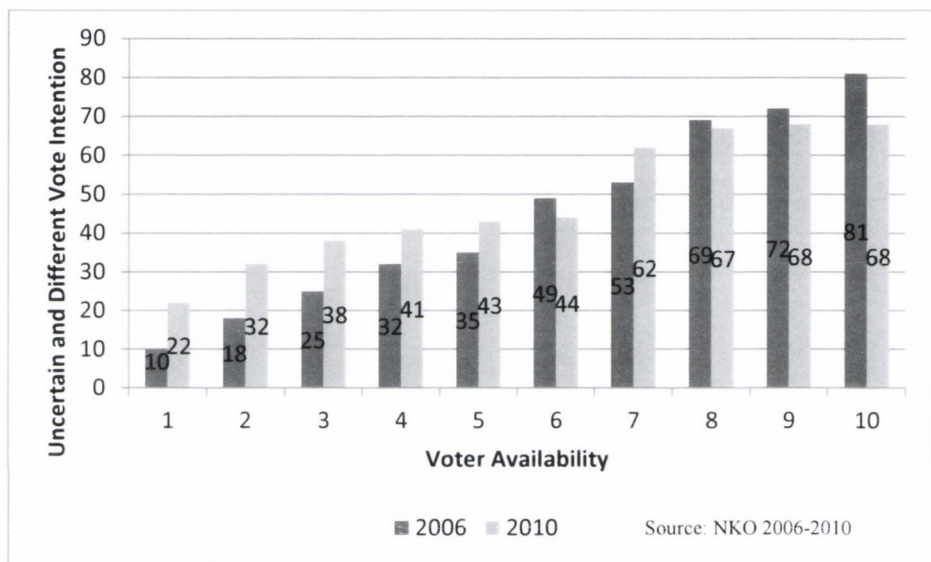
Figure 3.2 shows that for 2006 (n=2266) and 2010 (n=1878) respondents who changed their vote intention, or were undecided at the pre-survey, are only one or two out of ten in the lowest category of voter availability. Meanwhile, this number increases to seven or eight out of ten in the higher categories of voter availability.

Next we explore the *Floater*, which defines two groups, those who switched their vote choice between elections and those who did not. For 2006 (n=1872) and 2010 (n=1660), we notice very similar results as with the previous graphs, where the groups with a higher level of voter availability contain more respondents who actually switched electoral preference between elections.

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[27] 2006: Pearson chi2(9) = 481.0625 Pr = 0.000 /2010: Pearson chi2(9) = 172.7288 Pr = 0.000

Figure 3.3: Cross-Classification of Floating by Voter Availability (NKO 2006-2009)[28]
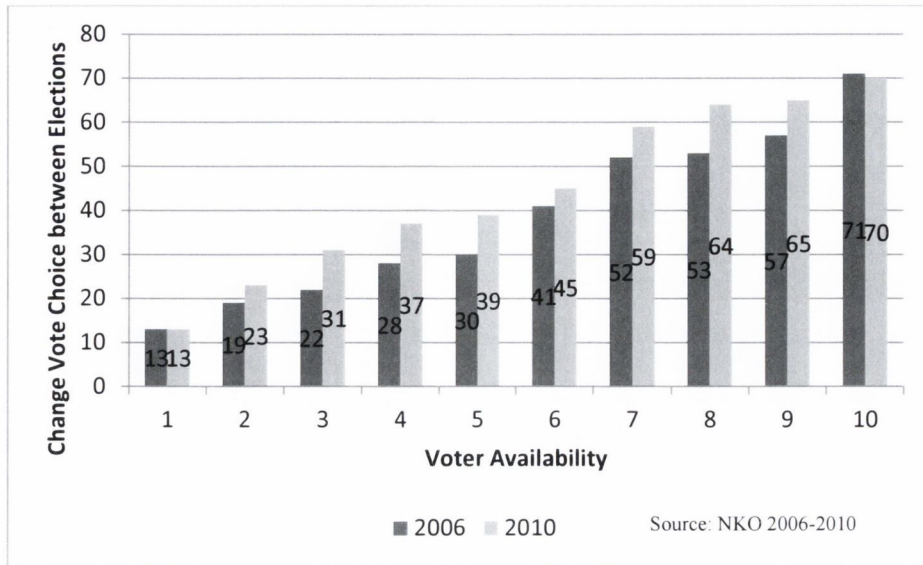
All of the graphs shown above give indications that, for the categories with higher voter availability, we are capturing the respondents who vote differently between consecutive elections, who seriously considered voting differently during the campaign and those who were undecided with the pre-election survey or changed their vote intention during the campaign. So, we are capturing those voters who are available for the electoral competition.

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[28] 2006: Pearson chi2(9) = 246.0434   Pr = 0.000/ 2010: Pearson chi2(9) = 223.2071   Pr = 0.000

3.6   Summary

In this chapter, we searched for a method to measure voter availability. We made it clear that looking at those who changed their vote choice from previous elections were split-ticket voters, or who were undecided would not give us the full picture of voter availability. The interest for us is not so much the final choice, but the pre-decision process in which the voter is searching for the preferred option for which to vote for. Making use of the PTVs, which are an indicator of the strength of support for each particular party, gives us the possibility to explore the preferences for more than one party. Research has shown that PTV is the most promising indicator in this context. In the literature, there exists already a method based on the PTV which would give us an indication of voting availability. This method is based on the proximity of the party preferences between the two most preferred ones. We examined this method of close party preferences further comparing it with methods capturing vote switch, doubting, and indecisiveness. The dualistic approach of being in/out of competition based on the PTV scores shows significant correlations with these other methods. The disadvantage of the in/out of competition method is that working with a two-fold division makes the analyses less in-depth. A solution is also given in the literature where an ordinal scale is used based on the gap. Making use of the NKO, we showed that this ordinal scale method is capturing the uncertainty of the vote choice. A disadvantage of this method is that it would only consider the gap between the most preferred parties, and ignore all the rest. Our research has shown that a gap between the two most preferred parties is a good indicator of voter availability, but completely ignoring the lower preferred parties is not. We introduced a method which considers multiple parties, but where the gap between the two preferred parties remains the main indicator of voter availability. This method is tested with the Dutch Parliamentary Election Study and shows that we are capturing vote switch, doubting, and indecisiveness. Before, we defined voter availability as the degree of the availability of the voter to the electoral competition, the degree that the voter is likely to be persuaded by the different parties. From a party-perspective, this would be the degree to which the different political parties are able to compete for a person's vote. In this chapter, we can extend this definition by the operationalisation we proposed in this chapter. This leads to the following definition: Voter availability is the degree of the availability of the voter to the electoral competition measured by the proximity of the different party preferences.

4. Results

The electoral availability will be explored at different levels. We will start with the individual level, afterwards the aggregate level, and end with a multi-level investigation of electoral availability.[29]

4.1 Voter availability on the individual level

We will not be able to explore all of the different hypotheses in one dataset. We will start making use of the EES because it is also the dataset that we will be using for the aggregate as well as for the multi-level. Afterwards, we will make use of national election studies from Ireland and the Netherlands to explore the hypotheses that we were not able to examine through EES.

4.1.1 Testing the main hypotheses with the EES

We are using the EES of 1989, 1994, 1999, 2004, and 2009 which focuses on countries that participated in the European Parliament Elections. These studies involve questions about voting behaviour and issues such as electoral participation. Since the EU was evolving at the time, the number of countries participating in each electoral study increased with the increase in the EU's member countries. In 1989, surveys were undertaken in 13 different countries[30]; in 1994, 14 countries[31]; in 1999, 15 countries; in 2004, 24 countries[32]; and for 2009 in 27 countries. For our research, we have 13 countries in the 1989 dataset; 13 in 1994; 16 in 1999; 20 in 2004[33]; and

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[29] Appendix I holds a glossary of variables used in the dissertation

[30] Besides the 12 EU members, Northern-Ireland is part of the EES as a separate identity.
[31] Besides the 12 EU members, Northern-Ireland and East-Germany are part of the EES as separate identities.
[32] All the EU members except Malta.
[33] With the aggregate analyses, we have 21 countries in 2004. Religious attendance in Italy is measured differently than in other countries, which is why we exclude it in these analyses.

28 in 2009.[34] These EU elections took place around the same day in all the member states, and the EES questionnaire was also fielded during the same period. Despite the fact that the EU elections are held for one and the same parliament, the elections in the different countries to choose an EU representative are held within different party systems. Every election in a different country differs in its party rivalry and political landscape from the other countries. The EES holds its own merits and demerits, while it allows us to test different hypotheses over multiple countries and to analyse in a multi-level context, the EES is not as extended as the national elections studies in Ireland and the Netherlands. The EES is a cross-national study with two levels, and the individuals are nested within their national units. We will make use of dummy variables to counter the country effects in individual level sections, and in the multi-level sections we will make use of models where the individual and aggregate levels are examined simultaneously.

A drawback of using five different datasets over different years is that not every year has the same set of questions, and differences between the hypotheses tested can vary. We will first provide an overview of the different variables and hypotheses which will be tested on the EES data.

4.1.1.1 Variables

Age is measured by the age of the respondent in the year the elections are held. Education is measured by the age of the respondent when he or she finished their highest level of education.[35] Political involvement is measured by political interest, political knowledge, trust in politics, and voting in elections. Since we are using five different datasets, the questions may be articulated differently in each of the datasets. Firstly, interest in politics - all five datasets have four categories as response categories.[36] The next one is political knowledge - political knowledge could not be measured in all five datasets and for 1989, 1999, and 2004, there were

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[34] Differences between the countries a part of EES and those included in the election study can be caused because the election study of the country did not have the PTV questions. Also, Belgium is split up by Flanders and Wallonia.

[35] Education has 6 categories 0-14, 15-16, 17-18, 19-21, 22-25 and > 25. For 1989, there are only 5 categories because the question asked did not make it possible to distinguish between 22-25 and >25..

[36] Not at all, a little, somewhat, very.

not any available variables from which we could construct a knowledge variable. In 1994, political knowledge was based on four questions about the positions within the EU and the country.[37] In 2009, it is based on seven knowledge questions.[38] For each of these years, we will construct a scale from zero to one.

In 1994, the question on political trust gathered information about six different institutions and the level of credibility of their decisions among the people.[39] In 2004, trust was based on five 10-point scale questions about different institutions.[40] In 2009, it was based on a five-point agree/disagree scale with three questions.[41] We identify the countries' level of trust on a scale of one to ten, where ten means the highest level of political trust. The last variable within the respondents' attitudes is the voted variable, where a dummy variable is created if the respondent voted in the European elections which took place a few days/weeks before the interview was taken or the questionnaire was filled in.

Another variable, class, is measured by using a self-categorising variable about the class to which the respondent belongs.[42] Urbanization is measured with a categorical variable with three levels.[43]

The respondents' integration with certain groups and its effects on vote choice will be studied next. As with Kroh et al. (2007), we will include church attendance and trade union membership to measure the social group affinity of the respondents. Church attendance has five categories measuring involvement,[44] while

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[37] Open ending question about President of EU-Commission, European commissioner of own country, national minister of finance and national minister of foreign affairs. Scale reliability coefficient (Cronbach's alpha) = 0.7694

[38] Based on 7 true or false questions: Switzerland is member state, EU has 25 member states. Every country elects same number of MEPs. Every six months there is a different country presiding in the Council and three country specific questions. One question where the respondent needs to tell the department of a minister's and the right department, one about the eligible age to stand as a candidate and one about the quantity of electoral seats in the parliament. Scale reliability coefficient: 0.7055

[39] Rely on European Commission, national government, European court of justice, Council of Ministers, National parliament, and European parliament. Scale reliability coefficient: 0.943.

[40] Trust in national parliament, trust in European parliament, trust in the government, trust in the commission and the final one in the council. Scale reliability coefficient: 0.8822

[41] EU parliament considers the concerns of EU citizens, trust EU institutions and that the national parliament is concerned with citizens. Scale reliability coefficient: 0.7181

[42] Five different classes: working class, lower middle class, middle class, upper middle class, upper class.

[43] Rural area or village; small town or middle-size city and the last category big town.

[44] Never, once a year, a few times a year, once a week, a few times a week.

trade union has a binary outcome (i.e., if the respondent or somebody else from the household is a member of a trade union).

With the psychological-social approach, party identification is the central concept in explaining voting behaviour. As mentioned earlier, party identification is not best measured with a bi-variable approach of being attached or not, but with the strength of how much the respondents identify with the party. For all of the datasets, we will make use of a variable with four different values.[45]

In our earlier discussions, we had identified two approaches which use spatial voting models. For these two variables, we will be using positions on a left-right scale. For the proximity-voting approach, the positions of different parties are needed, while for the directional-voting approach this is not required.[46] We will be testing this on a general left-right scale as well as a left-right scale with a certain EU issue. The questions about the EU issue were not probed in 1989, and for this reason are only available in four out of five datasets. In 1994, there are questions concerning currency,[47] while in 1999, 2004, and 2009 there are questions about unification.[48] To calculate the proximity, we will make use of a similar formula used for calculating the dependent variable. We will calculate the distances between the self-placement of a respondent and the position of all the different parties on the scale. Next, we calculate the difference between the distances of the closest and the second closest party, and these values will be placed in the formula proposed in the previous chapter.[49] For the directional theory hypotheses, we will use the same

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[45] Four categories namely: no attachment, merely a sympathizer, fairly close, and very close.

[46] For 2009, this is an 11-point scale.

[47] Should the country keep its local currency and make it more independent from the other European currencies or should we aim at one common European currency?

[48] Some say European unification should be pushed further. Others say it already has gone too far. What is your opinion? Please indicate your views using a 10-point scale. On this scale, 1 means unification "has already gone too far" and 10 means it "should be pushed further".

[49] In the formula, we subtract the maximum distance between two points on a left-right scale (this can be 9 or 10, depending on which scale has been used) with the above calculated differences between distances between parties to the self- placement. We will then use the weights (as in the previous chapter), where the distances between the two closest parties to self-placement will be weighted more than the distance between the second and third closest to the self-placement. Next, we take the sum of all these weighted distances which becomes the numerator in the fraction. The denominator is the maximum score possible (where all the parties are at the same distance from the respondent) so our results are given on a scale from 0 to 1 the closeness of different parties to the self-placement on a left-right scale.

questions, but only consider the positions of the respondents and not that of the parties. [50]

Many of the variables proposed are ordinal variables. The main difference between a categorical and an ordinal variable is that the latter has a clear ordering. We are treating those ordinal variables as interval-level variables in our analyses. In the research by Kroh (2007) where the potential electoral change is examined, the same and similar ordinal variables are approached as interval-level ones. This is not uncommon in political science as, for example, in the research of Godbout and Belanger (2007), a political sophistication scale is constructed out of knowledge questions, or Marsh (2009) where a four-point political interest scale is used, or Dalton (2010) where a four-point scale for strength of party-ID is used. The attitudes in our research are often measured making use of a Likert-scale. This scale, since its introduction in 1932 (Likert 1932), is very popular in social sciences and is often the subject of discussion if treated as interval-level. The typical Likert scale has 5 to 11 points which indicate the degree of agreement with a certain statement. Since Likert introduced the method in 1932, the question remains about the relationship between the number of response categories and reliability of measurement (Masters 1974) and the question if it can be treated as an interval-level variable (Jamieson 2004; Lubke and Muthen 2004). Many studies have shown that Likert scales produce interval data and that the F-test is very robust in violations of the interval data assumptions (Carifo and Perla 2007). In our case, we do not expect any major issues affecting our findings. The only variable we should be careful with is the political interest as this variable is based on a single Likert response item.

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[50] For 1989-2004 we have a 10-point scale and 2009 an 11-point scale. We rescale the 10-point scale so in both cases we have a scale going from 0 to 5 on the extreme position of the respondent.

4.1.1.2 Results

In this section, we discuss the results of the EES. Appendix C provides a summary of the statistics describing all the different variables. We approach the results by giving an overview of which variables are available for the different years.

Table 4. 1: Variables Included in the Different Datasets (EES 1989-2009)[51]

VARIABLES	1989	1994	1999	2004	2009
Age	X	X	X	X	X
Education*	X	X	X	X	X
Social class	X	X	X	X	X
Urbanization	X	X	X	X	X
Religious attendance	X	X	X	X	X
Union member	X	X	X	X	-
Interest	X	X	X	X	X
Voted	X	X	X	X	X
Knowledge	-	X	-	-	X
Trust	-	X	-	X	X
Party-ID	X	X	X	X	X
Left-right proximity	X	X	X	X	X
Extreme left-right	X	X	X	X	X
Issue proximity	-	X	X	X	X
Extreme issue	-	X	X	X	X

In performing OLS regression analyses, we should be sure that our data has met the assumptions underlying OLS regression. Otherwise, the results may be misleading. Appendix D gives an overview of those tests and results. The tests show that we have an issue with heteroscedasticity, which means that all disturbances in the regression model have the same variance. Heteroscedasticity does not dismiss the unbiased property of OLS estimates but the estimates are no longer efficient and OLS isn't the best linear unbiased estimator (BLEU) (Gujarati 1999). If errors are normally, independently and identically distributed, then OLS is more efficient than

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[51] For 1989, there is no category 6: Education has 6 categories 0-14, 15-16,17-18,19-21,22-25 and > 25. For 1989, there are only 5 categories because the question did not make it possible to distinguish between 22-25 and > 25.

any other unbiased estimator. If errors are not, then other unbiased estimators might outperform OLS (Hamilton 2003). Heteroscedasticity is common in cross-sectional data and methods that correct for heteroscedasticity are essential for accurate data analyses (Long and Ervin 2000). Robust standard errors are a solution for the problem of errors which are not independent and identically distributed as robust standard errors lessen these assumptions. This method is discussed in and developed by Huber (1967) and White (1980; 1982) and extended by Gail, Tan, and Piantadosi (1988), Kent (1982), Royall (1986), and Lin and Wei (1989). In the survey literature, the same estimator has been developed (Kish and Frankel 1974; Fuller 1975; Binder 1983). The use of robust standard errors will not change the coefficient estimates provided by OLS but will change the standard errors and significance tests (Gujarati 1999).

Table 4.2: Models to Explain Voter Availability, Individual Level Variables: OLS with Robust S.E. (EES 1989-2009)

Variables	1989	1994	1999	2004	2009
Age	-0.0017***	-0.0011***	-0.0017***	-0.0011***	-0.0010***
Education	0.0112***	0.0052*	0.0082***	0.0070***	0.0087***
Social class	-0.0006	0.0069	0.0005	0.0005	0.0032
Religious attendance	-0.0006	0.0024	-0.0031	-0.0004	0.0022
Union member	0.0152	0.0146	0.0107	0.0091	-
Rural area	BASE	BASE	BASE	BASE	BASE
Small town	0.0139	0.0094	0.0062	0.0078	-0.0100*
Big town	0.0179	0.0113	0.0074	-0.0005	-0.0026
Interest	0.0062	-0.0110*	0.0091*	0.0064*	0.0041
Voted	-0.0198*	-0.0075	-0.0153*	-0.0221***	-0.0173***
Knowledge	-	0.0191	-	-	-0.0341***
Trust	-	0.0051*	-	0.0103***	0.0024*
Party-ID	-0.0435***	-0.0616***	-0.0578**	-0.0596***	-0.0654***
Left-right proximity	0.3023***	0.1433***	0.1563***	0.2225***	0.2640***
Extreme left-right	-0.008***	-0.0028	-0.0081***	-0.0075***	-0.0084***
Issue proximity	-	0.1063***	0.0315*	0.0608***	0.0818***
Extreme issue	-	-0.0134***	-0.0060**	-0.0058***	-0.0033***
Country dummies	X	X	X	X	X
Constant	.3300***	0.4849***	0.6522***	0.4663***	0.5843**
N	5783	4799	5677	12532	15778
F-statistics	70.41***	39.56***	43.78***	139.46***	106.70***
R-square	0.2211	0.1880	0.2049	0.2260	0.2443

* for $p<0.05$, ** for $p<0.01$, and *** for $p<0.001$.

The table with the separate regressions for each year shows that the younger the age, the greater the voter availability in all of the different years, with a significance level of 1%. For education, we notice a positive significant effect across the different years, showing that having a higher education increases the voter availability. Continuing, the results show that social class has a low and insignificant effect on the voter availability across the different years, indicating that belonging to a higher class does not affect the voter availability. We explore the effects of social group memberships with the frequency of attended religious ceremonies and trade union membership. Both of these variables do not show any significant results. Next, we explored urbanization which has three categories, namely rural area, small town, and big town, which are treated as categorical variables, and the rural area is used as the reference category. The different variables do not show significant results except in one year where both categorical variables show significance.

Next, we explore the attitudes starting with political interest; we notice that the interest of an individual in politics has a positive effect in most of the years, meaning that a higher level of political interest increases the voter availability. In 1999 and 2004, we notice a positive significant effect, whereas 1994 holds a negative effect. Another aspect of political sophistication is political knowledge. The results reveal that knowledge has a significantly negative effect on voter availability in 2009, and a positive but insignificant effect in 1994. Voting at EU elections decreases the voter availability, and we found significant results in 1989, 1999, 2004, and 2009. The last attitude we examine is political trust, for which we use the data from 1994, 1999, and 2004. The results are significant for all of the yearly regressions for the stated years. The sign of the coefficient of the trust variable reveals that when political trust is increasing, the voter availability increases as well. Next, we explore the effect of party-identification in the tradition of the socio-psychological approach of voting. Table 4.2 shows a negative and significant effect across the different years.

Besides the socio-psychological approach of voting, we also examined the spatial approach with the proximity and directional voting theories. For both, we explore this with a general left-right scale, as well as with a particular issue, namely EU positions. The results showed a significant positive effect on voter availability for the proximity on a general left-right scale, as well as for the issues across all of the different years. We also found support for the hypothesis that if voters are more radical on the general left-right scale, or a scale with the EU issue, the voter availability

decreases. This is shown by a significant negative effect across all of the different years in the study.

The number of observations included in the individual level regressions in 1989 is 4799, while in 1994 it is 5783. The number of observations in 1999 is 5667, while in 2004 it is 12532, and in 2009 it is 15778. It is observed that all of the annual level regressions are statistically significant at the 1% level of significance. The R-squared value of the 1989 model is 0.22, while the R-squared value of the regression models applied to the data from 1994 is 0.19. Similarly, the value of the R-squared statistic is 0.21 when OLS with robust standard errors is applied to the data from 1999, while it is 0.23 in the 2004 model, and 0.24 in 2009.

Despite robust standard errors addressing the issue of heteroscedasticity, we have to be aware of model specification errors. Model errors can occur when one or more relevant variables are not included in the model or the other way around when one or more irrelevant variables are included in the model. We included variables based on the different voting theories but also attitudes and demographic characteristics are used. As we put in all of those variables in the same model, we should be aware of post-treatment bias. "Post-treatment bias happens when researchers, in attempting to control for variables that may skew the results of a study, inadvertently control for a variable that is directly related to the outcome they wish to measure, yielding erroneous results" (G. King 2010, 2). An argument could be made that the variables such as left-right proximity, extreme left-right or attitudes such as trust, interest, and voted are post-treatment variables. The effects of religion, social class, urbanization, and union membership could be "controlled away" by those. To check, we run regressions with only demographic characteristics: age, education, social class, religious attendance, union member, and urbanization (Appendix E). In those regressions, we notice that the variables of social class, religion, and urbanization all show one significant result over the five different years. We don't find strong proof of controlling away the effects of the sociological voting theory. Attitudes, positioning on a left-right scale and party-ID are crucial in our explanations of voter availability and leaving them out would result in omitted variables.

Next, we will pool the data of the different studies, and through this step, we will study the effects that we may have not captured before. For the pooled data, besides the dummy countries, we will also create dummies for the different years. In the EES89-09 regression, we will make use of all of the variables which are available in all

of the different datasets. The reference category for the year is 1989. In the second regression, EES94-09, we will add the variables "extreme issue" and "issue proximity," where the reference category for the years would be 1994. For the third regression, all of the years were used where we could measure trust (i.e., 1994, 2004, and 2009). Its reference category for years is also 1994. For the fourth regression, where we consider "knowledge," the datasets for 1994 and 2009 will be used, with the reference category 1994 for years. Finally, for the last regression, we will use all of the years where union membership could be measured, which includes all of the years except 2009. For this regression, the reference category for the different years is 1989.

Table 4.3: Models to Explain Voter Availability, Pooled data, Individual Level Variables: OLS with Robust S.E (EES 1989-2009)

VARIABLES	89-09	94-09	94 & 04 & 09	94 & 09	89-04
Age	-0.0014***	-0.0012***	-0.0012***	-0.0010***	-0.0015***
Education	0.0078***	0.0068***	0.0065***	0.0079***	0.0071***
Social class	0.0024*	0.0027*	0.0024	0.0044*	0.0035*
Religious attendance	0.0002	0.0004	0.0008	0.0025	-0.0017
Union member	-	-	-	-	0.0128***
Interest	0.0043**	0.0029	0.0019	0.0005	0.0050**
Voted	-0.0164***	-0.0166***	-0.0194***	-0.0152***	-0.0128***
Knowledge	-	-	-	-0.0189**	-
Trust	-	-	0.0049***	0.0030***	-
Party-ID	-0.0591***	-0.0601***	-0.0616***	-0.0642***	-0.0562**
Left-right proximity	0.2431***	0.2172***	0.2226***	0.2358***	0.2159***
Extreme left-right	-0.0100***	-0.0081***	-0.0082***	-0.0076***	-0.0088***
Issue proximity	-	0.0644***	0.0703***	0.0874***	-
Extreme issue	-	-0.0060***	-0.0052***	-0.0050***	-
Rural Area	BASE	BASE	BASE	BASE	BASE
Small town	0.0009	-0.0005	-0.0026	-0.0045	0.0090**
Big town	0.0048	0.0046	0.0023	0.0030	0.0110**
Country dummies	X	X	X	X	X
Year=1989	BASE	-	-	-	BASE
Year=1994	0.0316***	BASE	BASE	BASE	0.0305***
Year=1999	0.0395***	-0.0034	-	-	0.0404***
Year=2004	0.0715***	0.0353***	0.0377***		0.0551***
Year=2009	0.0919***	0.0557***	0.0535***	0.0618***	
Constant	0.5124***	0.5713***	0.5377***	0.5098***	0.4838***
N	53533	39300	33541	20592	33632
F-statistics	313.44***	221.13***	201.51***	131.73***	217.34***
R-square	0.2076	0.2097	0.2166	0.2298	0.1943

* for p<0.05, ** for p<0.01, and *** for p<0.001

The pooled EES 89-09 and EES 94-09 regressions show that the variables we found to be significant in the yearly regression are also significant in the pooled data. Furthermore, we notice that the political interest has a positive significant effect on availability, and social class also shows a positive significant effect in certain pooled regression analyses. This significant effect of political interest and social class disappears when we use all of the different years (94-04-09) where political trust can be measured; this variable shows overall a positive effect on voter availability. If we eliminate 2004 from this regression equation, we are able to include the variable knowledge. We notice a significant negative effect on availability of knowledge, while political interest has a non-significant positive effect, and social class has a significant positive effect. What is remarkable is that when we use all of the years where union membership can be measured (excluding 2009), all of the variables show significant results, except for religious attendance. In this regression, we also find a significant effect for the categorical variable of urbanised locations (small towns and big towns) compared with that of rural areas.

Table 4.4: Descriptive Values for Substantive Effect Size of Variables, Pooled Data (EES 1989-2009)

VARIABLES	EES 89-09 Coefficients	Range	Substantive effect size
Age	-0.0014***	18-101	-0.1136
Education	0.0078***	1-6	0.0388
Social class	0.0024*	1-5	0.0096
Interest	0.0043**	1-4	0.0128
Voted	-0.0164***	0-1	- 0.0164
Party-ID	-0.0591***	1-4	- 0.1774
Left-right proximity	0.2431***	0-1	0.2431
Extreme left-right	-0.0100***	0-5	- 0.0500
	EES 94-09		
Issue proximity	0.0644***	0-1	0.0644
Extreme issue	-0.0059***	0-5	-0.0295
	EES 94 & 09		
Knowledge	-0.0189**	0-1	-0.0188
Trust	0.0030***	0-1	0.0030
	EES 89-04		
Union Member	0.0128***	0-1	0.0128

*for $p<0.05$, ** for $p<0.01$, and *** for $p<0.001$

Table 4.4 gives an overview of the strength of the different variables. As the pooled dataset of all five years does not provide us with all of the variables, we also add those missing variables examined in the other pooled datasets. We will discuss the eight significant variables of the dataset with all of the years.

For the variable of age, if all of the other variables are fixed, we observe that for each change of one unit in age (i.e., the respondent is one year older), the voter availability decreases by 0.0014. The latter's value converts itself to a decrease of predicted voter availability of 0.1136 if there is a change from the minimum age of 18 to the maximum of 101. For the variable of education, from a minimum education level of one to the highest of six, we notice an increase in predicted voter availability by 0.0388 per

level. For the variable of social class, we observe that a change from the minimum one (lowest socio-economic class) to a maximum of five (highest socio-economic class), results in an increase in predicted voter availability by 0.0096. For the different attitudes, interest in politics and voted in elections, we notice that a change in interest from a minimum interest level of one to a maximum of four, will increase the predicted voter availability by 0.0128. Meanwhile, if the person voted in elections, the predicted voter availability will decrease by 0.0164. The variable party-ID shows us that if party-ID changes from a minimum of 0 (respondent has no party-ID) to a maximum of three (strong party-ID), then the predicted voter availability decreases by 0.1774. The variable left-right proximity shows an increase in predicted voter availability by 0.2431 if a change occurs from the minimum of zero to the maximum of one. To finish, we notice a decrease of predicted voter availability of 0.05 if a change occurs, from the minimum of zero to the maximum of five for extremer positions; where those who are surveyed place themselves more at the extremes of a left-right scale. Based on these values, we can say that the effect of being close to the different parties on a left-right scale has the strongest effect, followed by that of party-ID and age. The effects of holding an extreme position on an issue on the left-right scale and the level of education have weaker effects as compared to the ones mentioned above, but are still stronger than political interest, voted in elections, and social class.

In order to make the results easier to comprehend, let's suppose we do not include any of the variables in the EES 89-09 regression study, and include only the dummies for countries and years; this will give us an R-square of 0.0961. If only the dummies for years are used, this will lead to an R-square of 0.0084. Finally, if we only include the countries' dummies, the R-square falls to 0.0837. The R-square of the model with the explanatory variables holds an R-square of 0.2076.

4.1.2. Testing other hypotheses with National and European election studies

There are still a few hypotheses that we could not test with the EES data, namely, the cross-pressured hypothesis, as well the prospective/retrospective voting hypothesis, and the party-leader voting hypothesis.

4.1.2.1 Sociological cross-pressure voting

In the sociological approach, cross-pressure can arise from the different groups to which a respondent belongs. An individual's vote choice may be reinforced if the different group memberships point into a similar political direction, and may feel cross-pressured if it points in different directions. The following hypothesis will be investigated: greater social cross-pressure on a voter increases the voter availability of that voter.

To explore this, we will make use of different voting studies tested on one specific country. We will make use of the Dutch elections study of 2006, the European elections study of 2004 for Estonia, and the European elections study of 2009 for the United Kingdom. Those three countries are chosen as they are similar on some aspects but very different on others. Netherlands is known for having many political parties, meanwhile the UK is known for the disproportionality of the party system, and Estonia is an Eastern European country with a lower GDP. The effective number of parties (measured by seats) in the Netherlands was 5.54 in 2006, for Estonia in 2003 it was 4.67, and the UK in 2005 it was 2.46 (Gallagher and Mitchell 2008). The ethnic fractionalization varies for the Netherlands and the UK from very low 0.11 and 0.12 to a high 0.51 in Estonia (Alesina et al. 2003). The religious fractionalization varies from 0.50 for Estonia to a high 0.69 for the UK and 0.72 for the Netherlands (Alesina et al. 2003).

For the social pressure variable, we will make use of the actual vote choice to construct the variable; this is the only variable in the thesis making use of the actual vote choice. Depending on the cleavages considered for a specific country, we will calculate for every group (for example: Catholic-middle class or Protestant-upper class) the predicted party choice. Next, we calculate the variance of those party choices in each group. This will be the social pressure variable.

Starting with the NKO 2006, we will categorise the voters based on two variables, namely, class and religion, which can be considered as two of the main cleavages in the Netherlands. Class is categorised according to the socio-economic groups: upper, upper middle, middle class, upper working class, and working class. Religion beliefs can be separated into Atheist, Roman Catholic, Dutch-reformed Calvinist, Protestant Church of the Netherlands, Islam, and others. For each group membership, we will predict a party choice based on their actual vote in the 2006 elections. As a next step, we will create a combination of the groups within these two cleavages, and for every combination group, we will calculate the average prediction of party choice based on the two cleavages. Next, we will calculate the overall variance among the thirteen possible parties for every group. The variable created has thirty-five different variance scores assigned to the different combinations of groups, and the lower the variance, the greater a person is attracted equally towards multiple parties. We assume that a higher variance (being less cross-pressured) leads to lower voter availability.

Making use of the EES, we will analyse Estonia in 2004. To avoid getting very small groups, we will make use of three predominant beliefs (Protestant, Orthodox, and Atheism), three class groups (working class, lower middle class, middle class) and three categories for urbanization, namely (rural, small middle size town, and large town). Of these 3 different variables, we get twenty-seven different groups to select out of nine different parties.

Finally, for 2009 we use the data for Great Britain with the 2009 elections. We will make use of three beliefs (Atheism, Catholic, and the Church of England), three class divisions (working class, lower middle class/ middle class / upper middle class, upper class) and four categories of urbanization (rural area, small mid-sized town, suburbs of large town/city, and large town or city). This would lead to thirty-six different groups.

Table 4.5: Model to Explain Voter Availability, Cross-Pressure: OLS with S.E. (NKO 2006, EES 2004-2009)

Variables	Netherlands 2006 (NKO)	Estonia 2004 (EES)	UK 2009 (EES)
Cross pressure	-1.6468**	3.7061	0.0010
Constant	0.8377	0.6373	0.6224
N	2262	417	532
F-statistic	9.92**	0.76	1.99
Adjusted R-square	0.0061	0.0006	0.0084

** for p <0.01

The results for the Netherlands, Estonia, and the UK are not very promising with only one dataset showing a significant coefficient which is very low. Though theoretically, the cleavage approach proposed a viable assumption, the results with the NKO and EES datasets do not give any grounds for further investigation.

4.1.2.2 Retrospective voting and prospective voting

We will first analyse retrospective, and then prospective elements regarding vote choice. In retrospective voting, the hypothesis assumes that voters will evaluate the performance of the past government and will then make a decision for whom to vote. We will use a general evaluation of the government performance and as well socio-tropic and pocketbook economic voting elements. The data used to assess the hypotheses are the INES 2002-2007 and NKO 2006-2010 datasets. What is important to understand is that the election studies used here are taken after the elections, so if we talk about the current government this means the government that was in power up until the elections. If we mention previous elections, this means the election prior to the election conducted in the election study. Government voters are those who voted with the previous elections for a party which was the incumbent party during the last legislation. Non-government voters are those who voted with the previous elections for a party which ended up in the opposition during the last legislation.

With the INES dataset the respondents have to choose from one of the following answers: very good job, good job, bad job, very bad job, and do not know,

for the general governmental performance. The socio-tropic evaluation is based on the question that asks respondents to evaluate the economy of Ireland over the last 5 years (i.e., during the lifetime of the government). Choices range from: got a lot better, a little better, stayed the same, got a little worse, or got a lot worse. The pocketbook economic evaluation is measured by asking if the current financial situation of your household, as compared to the last 5 years, got a lot better, a little better, stayed the same, got a little worse, or a lot worse.

NKO formulated the questions measuring the satisfaction of the government that included choices such as: very satisfied, satisfied, not satisfied nor dissatisfied, dissatisfied, and very dissatisfied.[52] The economic evaluations consist of questions on whether the country's economic situation and the respondents' own financial situation are influenced by government policy. The choices were: favourable, unfavourable, and not (un)favourable. The question is different from those of the questions in the INES, as government responsibility is included in the wording.

For the general evaluation, we will make use of the ordinal scale which will be approached as a continuous variable.[53] In the same way the economic evaluations can be approached for the INES dataset, but not for the NKO dataset where only three answering categories are given. To make the results of INES and NKO more comparable, we will create dummy variables for positive and negative evaluations of the economic situation, where the category "stay the same" (economy remains the same) will be the reference category. For the 2007 INES, no question was asked about a respondent's own financial means; therefore, this variable will be excluded in the 2007 dataset.

The hypotheses we proposed are both based on the fact that voter availability depends on evaluating the government's performance and a voter's (own) economic situation which will be dependent on their previous vote choice. We will explore this by making use of the multivariable regression model where we will split up the voters into those who voted for parties of the incumbent government and those voted for opposition parties with the previous elections.

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[52] In the second wave also the question is asked if the current government did a very good, good, not good nor bad, bad, or very bad job.

[53] INES 4 values, NKO 5 values. Both scales are going from very bad/ dissatisfied to very good/satisfied.

Table 4.6: Models to Explain Voter Availability, Retrospective Voting: OLS with S.E. (NKO 2006-2010)

VARIABLES	NKO 2006		NKO 2010	
	Government	Not Government	Government	Not Government
Government Satisfaction	-0.0327***	-0.0090	-0.0176**	0.0081
Positive past country economy	-0.0003	0.0379***	0.0227	-0.0044
Neutral past country economy	BASE	BASE	BASE	BASE
Negative past country economy	0.0439*	-0.0014	0.0006	-0.0137
Positive past own means	-0.0628**	-0.0291	-0.0466*	-0.0075
Neutral past own means	BASE	BASE	BASE	BASE
Negative past own means	-0.0131	-0.0346**	-0.0417**	0.0049
Constant	0.6919***	0.7888***	0.7800***	0.8575***
N	957	875	765	865
Adjusted R²	0.0287	0.0174	0.0224	0.0051
F-statistics	5.12***	3.44***	3.90 ***	2.22

* for p<.0.05, ** for p<0.01, and *** for p<0.001

Table 4.7: Models to Explain Voter Availability, Retrospective Voting: OLS with S.E. (INES 2002 -2007)

VARIABLES	INES 2002		INES 2007	
	Government	Not government	Government	Not government
Government Satisfaction	-0.0693***	0.0229	-0.0409*	-0.0017
Positive past country economy	0.1375**	0.0859*	0.0094	-0.0010
Neutral past country economy	BASE	BASE	BASE	BASE
Negative past country economy	0.1265**	-0.0082	-0.0159	-0.0070
Positive past own means	-0.0039	-0.0092	-	-
Neutral past own means	BASE	BASE	-	-
Negative past own means	0.0223	0.0066	-	-
Constant	0.4763***	0.7657***	0.6126	.7990
N	809	574	373	449
Adjusted R²	0.0431	0.0374	0.0034	-0.0066
F-statistics	4.26***	2.22	1.42	0.02

* for p<.0.05, ** for p<0.01, and *** for p<0.001

Based on the four different datasets on which we performed multivariable regression, we conclude that for the voters who voted for the parties of the incumbent government, there is a significant negative effect of the general government's performance evaluation on voter availability. This suggests that the vote choice (i.e., the party voted for previously) becomes a clearer alternative and that is why the voter availability decreases. For non-government voters, the data does not provide us with a solid conclusion.

For the socio-tropic evaluations, there is an important difference between the two datasets, as for the Dutch data there is a reference to the government in the wording, meanwhile for the Irish there is not. Despite this difference, we notice for NKO 2006 and for INES 2002 that for the non-government voters, who evaluated the

economy positively, increased the voter availability compared to those who believe the economy stayed the same. For the government voters who evaluated the economy negatively, the voter availability increases compared to those who believe the economy stayed the same. The opposite effects of a positive evaluation of the economy by the governmental voters or a negative evaluation of the economy by the opposition voters, the decreases in the voter availability could not be proven statistically. This is partially due to the previous variable, evaluation of the government performance, which captured some of this effect. For NKO 2010 and INES 2007, no significant results are found and the direction of the effect (sign) does not behave as expected.

Assessing for pocketbook evaluations, we do not have data for INES 2007. In the Dutch data, we can say there is support in both datasets that a positive evaluation of a respondent's own financial means, compared with those for whom the financial means stayed the same, decreases the voter availability for the government voters. For the INES data, the effect (sign) is as we suggested but the effect is not significant. Concerning the other hypotheses of pocketbook voting concerning no-government voters, no solid conclusions could be drawn.

With prospective voting, the voter is evaluating the future economic performance. Those who are expecting the economy to improve in the future will be more likely to support the incumbent party than those who believe the economy will get worse. We hypothesise that government voters who expect the economy to improve (get worse), will display a decrease (increase) in the voter availability. For the non-government voters, we expect the opposite effect. The questions concerning prospective voting are not used in all of the four datasets we used in retrospective voting, and we can only use the INES 2002 and NKO 2010. For the NKO data, the respondent is asked to predict the financial situation of his/her own household in the next twelve months, and to predict the economic situation in the Netherlands in the coming twelve months. The answer categories include: will improve, get worse, and no difference (besides DK). In the INES data, the same question is asked but with different answer categories, namely: gets a lot better, gets a little better, stays the same, gets a little worse, and gets a lot worse. To make the two countries more comparable, we will use three dummy variables: will improve, get worse, and no difference. We will use the "no difference" as the reference category, and will put in the improved/got worse dummies in the multivariable regression.

Table 4.8: Models to Explain Voter Availability, Prospective Voting: OLS with S.E. (NKO2010-INES2002)

VARIABLES	NKO 2010		INES 2002	
	Government	Not Government	Government	Not Government
Positive future country economy	-0.0048	-0.0122	-0.0501*	-0.0170
Neutral future country economy	BASE	BASE	BASE	BASE
Negative future country economy	-0.0017	-0.0047	0.5798**	0.0013
Positive future own means	0.3039	0.0192	-0.0024	0.0615*
Neutral future own means	BASE	BASE	BASE	BASE
Negative future own means	-0.0051	0.0035	0.0183	0.0151
Constant	0.8199***	0.82654***	0.7240***	0.7955***
N	784	886	737	548
Adjusted R²	0.0003	-0.0013	0.0379	0.0112
F-statistics	1.06	0.72	7.20***	1.53

* for p<.0.05, ** for p<0.01, and *** for p<0.001

With the NKO 2010 dataset, we do not notice any significant results for prospective voting, and the directions of the effects are also not always as we predicted. In the INES 2002 data, the voter availability decreases for the government voters who foresee an improvement of the economy, whereas a negative evaluation of the future economy increases the voter availability. Pocketbook evaluations for the government voters are not significant. Meanwhile, with the non-government voters, we notice a positive significant effect on voter availability for NKO 2002 if the respondents foresee an improvement of their own financial situation in the future.

Overall, we found some evidence of retrospective and prospective voting mostly involving the group of government voters and not voters who voted for the opposition parties with the previous elections. We found strong support for the hypothesis that the more satisfied with the government performance the voter is who voted in the previous elections for an incumbent party, the more the voter availability decreases. For the voters who vote for an opposition party, no significant results are found and we cannot reject the 0-hypothesis. A possible explanation for this is that those who voted for a governmental party and are satisfied with the work done find confirmation in their previous choice. For those who voted for an opposition party and are not satisfied with the government performance, another opposition party is as well a potential choice besides the previous vote choice.

Concerning retrospective socio-tropic voting, we could partially show that a positive evaluation of the economy for the non-government voters and a negative evaluation of the government voters increase the voter availability compared to those with a neutral evaluation of the economy. Concerning retrospective pocketbook voting, we could partially show that a positive evaluation of the economic situation for the governmental voters decreases the voter availability. Concerning prospective socio-tropic voting, we found a weak suggestion that for the pro-government voters, a positive image of the future economy will decrease voter availability, whereas a negative image will increase voter availability.

4.1.2.3 Party leader voting

In the literature review, we discussed some authors who argue that the role of party leaders play a prominent role in the vote decision (Stewart and Clark 1992; Mughan 2000; Graetz and McAllister 1987). We hypothesised that a higher level of voter availability is initiated by having close preferences to different party leaders, and that a close preference to multiple party leaders will lead to a higher level of voter availability. To assess this hypothesis, we will add three of the variables which demonstrated before the strongest effects on voter availability as control variables. (age, party-ID, and left-right proximity).

Table 4.9: Models to Explain Voter Availability, Party-Leader: OLS with S.E. (NKO 2006 2010 & INES 2002-2007)

Voter Availability	NKO 2006	NKO 2010	INES 2002	INES 2007
Party leader	0.3190***	0.1877***	0.2738***	0.5200***
Age	-0.0028***	-0.0011***	-0.0016***	-0.0010*
Party-ID	-0.0422***	-0.02170***	-0.0301***	-0.0143**
Left-right proximity	0.5139	0.0691*	0.2084***	0.2505***
Constant	0.6240***	0.6639***	0.4740***	0.1913***
N	1511	1864	1377	642
Adjusted R²	0.1495	0.0680	0.1051	0.2264
F-statistics	66.18***	34.96 ***	41.41***	47.90***

* for p<0.05, ** for p<0.01, and *** for p<0.001

We notice a significant and positive effect in all four datasets, which implies that a greater affinity towards different party leaders leads to a higher proximity in party preferences, and thus to a higher level of voter availability. If we examine this in more detail, we notice that the party leader effect for NKO 2006 increases voter availability by 0.31 if the proximity to party leaders changes from 0 to 1. This effect is stronger than the effect of age where the predicted voter availability decreases by

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0.22 if the age changes from 18 to 94. Also, the effect of party-ID is less, as we noticed a decrease of predicted voter availability by 0.17 if the party-ID changes from a minimum of zero to the maximum of four. For NKO 2010 data, we notice similar results where the effect of the party leader is stronger than party-ID, age, and left-right proximity. In the INES 2002 data, we notice an increase in predicted voter availability by 0.274 if the proximity to different party leaders changes from zero to one. This effect is greater than the influence of age and party-ID, where we notice a decrease in predicted voter availability around 0.12 if age changes from the minimum of 18 to a maximum of 100, or if party-ID increases from zero to four. In the INES 2007 data, we notice a very strong party leader effect where predicted voter availability increases by 0.52 if the proximity to different party leaders changes from zero to one. Also, the effect of the proximity on a left-right scale is reasonably strong with a 0.25 increase in voter availability if the left-right proximity changes from zero to one.

Despite the strong and significant effect, we should be careful with this conclusion as the directional effect is questionable. Does a voter, as we suggest here, change the party preferences according to the party leader preferences or does the voter change party leader preferences according to the party preferences? The datasets and questionnaire we are using in this dissertation are too limited to give a solid answer and demands further research.

4.1.3 Summary

We discussed nineteen hypotheses and found support for the hypothesis that a younger age or higher level of education increases the voter availability. The hypothesis that respondents who are living in a more urbanised environment will lead to a higher level of voter availability is rejected. Our hypothesis that being part of a higher social class increases the voter availability gave us ambiguous answers, and we hope to find a better answer in the multi-level chapter.

While there is some support that a higher level of political knowledge decreases the voter availability, the results also suggest that higher levels of political interest increase voter availability. The null-hypothesis that there is no relationship between political trust and availability is rejected; a higher level of political trust

increases the voter availability. There is support that a voter who voted in elections decreases the electoral competition. For the hypothesis concerning social cross-pressure, we could not find any evidence to support the claim that more cross-pressure increases voter availability. In addition, the hypothesis that being more integrated into certain groups (e.g., union and religious attendance), where the cleavages are built on increases voter availability could not be proven either.

The hypothesis stating that lower party-identification increases voter availability is strongly supported, while the spatial voting hypotheses (i.e., the smaller the distance between the parties and self-placement on a general left-right scale for certain issues), found strong support. The hypothesis that extreme positions on a general left-right scale and issue scale decreases voter availability found support. The hypothesis stating that closer like-scores for party-leaders increase voter availability is supported as well.

Finally, we found some evidence supporting the hypothesis concerning retrospective voting, but this evidence is mostly concentrated on those who voted for the government with the previous elections and not those who voted for an opposition party. For prospective voting, there is some suggestion to explore further the socio-tropic influence but the evidence is weak.

We examined many different influences on voter availability, from social characteristics and attitudes to the different voting theories, and found strong supporting evidence for some of the hypotheses we formulated, while for others, we could only suggest a relationship based on weak support. In addition, some hypotheses could be confidently rejected because there was no support of a relationship.

4.2 Voter availability on the aggregate level

In the previous section, we look at voter availability on the individual level. We provided different explanations involving the different voting theories, characteristics, and attitudes. In this section, we will explore the influence of national system characteristics on voter availability. This will give us the frame in which the individual differences can occur.

Analysing different election studies of different countries would complicate the comparisons too much, and that is why we will only make use of EES from 1989 to 2009, which are also used in the previous section. The studies focus on countries which participated in the elections for the European Parliament. For our research, we have: 13 countries in 1989, 13 countries in 1994, 16 in 1999, 21[54] in 2004, and 28 in 2009.[55] These EU elections took place around the same day in all of the member states of the EU, and the questionnaires of the EES were also taken in the same period. Despite the fact that the elections were held for one and the same parliament, the elections were held in different party systems from different countries. In addition, every election in a different country differed in party rivalry and had a different political landscape.

By measuring the average level of the individual voter availability for each country, we will attempt to explain the difference in voter availability by the party system and country characteristics.[56]

4.2.1 Variables

For our first hypothesis, we will measure the disproportionality of the system, with the Gallagher's Least Squares Index (Gallagher 1991). In our case, this will be the difference between the percentage of seats and votes allocated in the last

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[54] With the individual analyses, we have 20 countries in 2004. Religious attendance in Italy is measured differently than in other countries, which is why we exclude it in those analyses.

[55] Differences between the countries a part of EES and those included in this study can be caused by the fact that the country did not have the PTV questions. Also, Belgium is split up by Flanders and Wallonia.

[56] These are the averages based on the socio-demographic weights.

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general elections. Besides the argument that EU elections are of lesser importance than the elections for who should rule the country, other arguments can be made for why measuring the disproportionality with the EU elections would not be useful. A ground rule for European elections is that the voting system must be a form of proportional representation, despite the possible different voting systems for the general elections of the country itself. For example, in the UK, the European elections are based on PR, whereas country elections use the first-past-the-post system. This would usually give us bigger disproportionality differences in those countries. Another reason is that there is a big difference between seats for small and big countries, which would influence the results too much where countries with a higher number of seats have less proportionality.

For the second hypothesis, we considered the number of parties in each country. We will make use of the ENP, designed by Laakso and Taagepera (1979). There are two different ways to measure ENP, it can either be measured by the seats (effective number of legislative parties denoted by Ns) or by the votes (effective number of elective parties denoted by Nv). For our study, we will consider the measurement by seats represented in the national parliament at the moment the questionnaire is taken. We chose this measurement as opposed to the number of elective parties because, depending on the country, it is possible that the elections were held a longer time before the questionnaire was taken, and this would not be representative at the moment the questionnaire was taken. A solution to this would be to use the effective number of parties in the European elections, but as Reif and Smith (1980) indicated, the European elections are a "second order national election" and their importance is lower because it does not decide who runs the country. The argument that smaller parties perform better and government parties worse (Marsh and Franklin 1996), would not give the right idea of the effective number of parties inside the country. Two other arguments that strengthen this decision are that the PTV is formulated as follows: "How probable is it that you will ever vote for the following parties?" So, it is asking about vote intention in general and does not specifically question the vote intention for European Elections. The last argument is that the PTV does not have questions about all of the parties who are running in the elections, only those who are of importance to the political system (i.e., represented in parliament). All of these arguments lead to the preference of the effective number of legislative parties, measured with the last general elections for this hypothesis.

The third variable, polarisation, can be measured in different ways. One of the methods proposed in academic literature is to calculate the position of the parties based on party manifestos. In party manifestos, the parties conduct an analysis of the situation just before an upcoming election and present their agenda for the next period (Oskarson 2004). Based on these party manifestos, we can estimate party positions on a left-right scale (Budge et al. 1987; Klingemann 2005). The validity of the method has been the topic of many debates in the current literature since the manifestos focus on the salience of the issues rather than the actual party positions (Gabel and Huber 2000; Laver and Garry 2000; Dalton 2008). Another disadvantage is that this would give the polarisation of the countries over the EU elections, and this can be different from polarisation with national elections because the party programs of national and European elections are often different. Instead of making use of the party manifestos, we will make use of the party placement by the electorate, and calculate the aggregate position for every party.[57] We will assess these party positions on the polarisation index proposed by Dalton (2008).[58] For the vote distribution, we will make use of the vote distribution of the last general elections.

The fourth variable is the impact of cleavages and, as discussed earlier, we will explore three social cleavages: class, ethnicity, and religion. Bartolini and Mair (1990) suggest that one of the key structural aspects of cleavage strength is the cultural heterogeneity of the country. Bartolini and Mair suggest using ethno-linguistic and religious fractionalization as a measurement. We will make use of the ethnic fractionalization and the religious fractionalization proposed by Alesina et al. (2003),[59] who collected data from about 190 countries which were mainly based on the Encyclopedia Britannica of 2001. We prefer the measurement of Alesina et al. over the measurement by Fearon (2003), Easterly and Levine (1997), or Atlas

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[57] Following up on self-placement on a left-right scale in EES, the survey asked respondents to place the parties of their country: *How about the (Party X)? Which number from 0 to 10, where 0 means "left" and 10 means "right" best describes (Party X)?*

[58] PI = SQRT{$\sum$(party vote share$_e$)*([party L/R score$_e$ – party system average L/R score]/5)2} (where $_e$ represents individual parties). "This index is comparable to a measure of the standard deviation of a distribution and is similar to the statistics used by other scholars. It has a value of 0 when all parties occupy the same position on the left–right scale and 10 when all the parties are split between the two extremes of the scale" (Dalton, 2008, 906).

[59] These two variables are constant across the years. Other data about the religious and ethno-linguistic fractionalisation is available but is also not measuring this in the different years.

$$FRACT_j = 1 - \sum_{i=1}^{N} s_{ij}^2$$

where sij is the share of group I (i=1..N) in country j.

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Narodov Mira (1964).[60] The measurement of Alesina et al. is the only dataset which has data for all of the countries present in our research; furthermore, it is widely used in political science. The measure of ethnic fractionalization is based on a broader classification of groups, taking into account other cleavages such as racial characteristics besides language. To measure the strength of the class cleavage, we propose to make use of a measurement of income inequality. The larger differences in income between the social classes tends to increase class voting since the class itself loses or wins more in an economic sense by voting for a leftist or rightist party (Knutsen 2006). We will make use of the Gini household disposable income. This variable is based on the Gini index, which represents the income distribution of a country. This index varies between zero (a low degree of income inequality) and one (a high degree of income inequality). The Gini household disposable income is an estimate of the Gini index of inequality in equivalised (square root scale) household disposable income using the Luxembourg Income Study data of 1960 as the standard. A custom missing-data algorithm is used to standardise the United Nations University's World Income Inequality Database (Solt 2009). Important to know here is that we are considering social cleavages based on social divisions. A social division can be politicised but this isn't always the case.

For our fifth hypothesis, we will measure the standard of living. Voting behaviour studies have been using macroeconomic measurements such as GDP per capita, GDP growth, inflation, and unemployment figures (Lewis-Beck and Stegmaier 2000; Pacek and Radcliff 1995; Roberts and Wibbels 1999). The GDP per capita is often considered as an indicator of the standard of living of the country, where a higher GDP per capita can be considered as a higher standard of living (Kakwani 1993). The GDP per capita is based on purchasing power parity measured by the World Bank[61] (World Bank 2013).

For our sixth hypothesis, the measurement of economic confidence, we will make use of the Economic Sentiment Indicator (ESI). This is a composite indicator made up of five sectorial confidence indicators with different weights: industrial

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[60] Easterly and Levine measurement are based on Atlas Naradov Mira.

[61] "The PPP GDP is the gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources" (World Bank, 2013).

confidence indicator, services confidence indicator, consumer confidence indicator, construction confidence indicator, and the retail trade confidence indicator (Eurostat 2010).[62] We will take the average level of confidence in the six months before the elections took place.

The last hypothesis indicates the electoral tension which is measured by the proximity between the national and European elections (when the questionnaire was taken). We will count the number of months from when the last elections took place, and from when the next elections are planned to take place. The smallest number of these two will be used. It is important to note here that the next scheduled elections do not always refer to the actual election date because of snap elections. An example of this is the German elections of September 2005. The previous elections took place on September 22, 2002. The legislative term in Germany is four years, so that means that the elections were planned on September 2006 and not 2005. The elections were actually held in September 2005 because Chancellor Schröder failed a motion of confidence on July 1, 2005 (Schmitt and Wüst 2006). During the European elections of 2004, we could not have been aware that the elections would be held a year in advance, thus, counting the number of months, we would assume that the next elections would be in September 2006. Since September 2002 is closer to June 2004 (European elections) than September 2006, we will use the first in our analyses. If the date of the elections is not known, we will use the date of the regular end of the legislative period.

4.2.2 Results

Before discussing the effects of the different independent variables, we will take a closer look at the average voter availability in the different countries. In total, we have data available for 28 countries over several years, including 13 country cases for 1989, 13 for 1994, 16 for 1999, 21 for 2004, and 28 for 2009.[63]

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[62] This is calculated as an index with mean value of 100 and standard deviation of 10 over a fixed standardized sample period.

[63] The country of Belgium is split up into the regions of Flanders and Wallonia. The Flemish voters can only vote for Flemish parties and Walloons for Walloon parties (with the exception of the Brussels region where the voter is assigned to the Flanders or Wallonia region depending on which language group the voter is registered to). Weight based on socio-demographic characteristics.

Table 4.10: Average Weighted Voter Availability for Each Country

Country	1989	1994	1999	2004	2009
Malta	-	-	-	-	0.42
Bulgaria	-	-	-	-	0.44
Romania	-	-	-	-	0.48
Greece	0.41	0.54	0.63	0.53	0.54
Cyprus	-	-	-	0.56	0.57
Hungary	-	-	-	0.62	0.58
Poland	-	-	-	0.68	0.60
Spain	0.55	0.54	0.56	0.58	0.63
Czech Republic	-	-	-	0.63	0.66
Portugal	0.58	0.59	0.48	0.65	0.66
Estonia	-	-	-	0.73	0.68
Slovakia	-	-	-	0.72	0.68
Italy	0.81	0.70	0.71	0.73	0.70
Latvia	-	-	-	0.69	0.71
Lithuania	-	-	-	-	0.71
Germany	0.63	0.66	0.64	0.68	0.73
Flanders	0.63	0.65	0.68	-	0.73
Denmark	0.66	0.69	0.73	0.68	0.73
United Kingdom	0.59	0.58	0.68	0.66	0.75
Sweden	-	-	0.72	0.87	0.76
Wallonia	0.49	0.55	0.68	-	0.76
Finland	-	-	0.75	0.71	0.76
Austria	-	-	0.67	0.64	0.77
Luxembourg	0.67	0.68	0.73	-	0.77
Slovenia	-	-	-	0.75	0.78
France	0.76	0.78	0.81	0.76	0.78
Ireland	0.71	0.71	0.77	0.72	0.81
Netherlands	0.59	0.72	0.77	0.75	0.84
Mean	0.62	0.65	0.69	0.68	0.68

Table 4.10 shows us that voter availability differs depending on the country and the time of the elections. We also observe that countries such as Bulgaria, Romania, Malta, Cyprus, Greece, Spain, and Portugal are on the low end of the availability scale, whereas other countries such as Sweden, the Netherlands,[64] and France are on the high end. However, voter availability can also differ within the country between different years. For example, the voter availability for Greece

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[64] Except for 1989.

increased in 1999 to 0.63, while it remained below 0.54 for all of the other years, indicating that voter availability of a country is not stable. Similarly, Italy had a higher level of availability in 1989 of 0.82, compared with around 0.70 during the other years. We will try to capture and explain these differences in availability between and within the countries.

The independent variables are ENP, disproportionality, polarisation, ethnic fractionalization, religious fractionalization, gini coefficient (class cleavage), GDP (development), ESI (economic confidence), and the proximity to the general elections (expressed in number of months). The full details on the nature of each variable and how they are measured can be found in the previous section. In Appendix F, we give a summary of the statistics of the different variables, such as the mean and standard deviation.

For the regression analyses, we will be using on an individual level, regressions with robust standard errors because the time based statistical data collected usually contains bits of correlations between error terms and the independent variables of the regression, heteroscedasticity. To protect our estimate against the distorting effects of such issues, we used the robust standard errors in the OLS regression models.

Table 4.11: *Models to Explain Voter Availability, Aggregate Variables: OLS with Robust S.E. (EES 1989-2009)*[65]

	POOL	1989	1994	1999	2004	2009
ENP	0.0391***	0.2220*	0.01970*	0.0284*	0.0328*	0.0489**
Disproportionality	0.0062***	0.0253	0.0106*	0.0073*	0.0057	0.0098*
Polarisation	-0.0185*	-0.2044*	-0.0587	-0.0330**	-0.0194	-0.0045
Ethnic fractionalization	-0.1111**	-0.3867	-0.2545*	0.0055	0.1254	-0.0823
Religious fractionalization	-0.0027	-0.1129	-0.0773	-0.1022**	-0.1090	0.0196
GINI	-0.0034	0.0175	-0.0043	-.0165***	-0.0075	-0.0019
GDP	0.0384***	0.0893	0.0063	0.0147	0.0074	0.0547***
Economic sentiment	-0.0012*	0.0167	-0.0051	0.0042*	-0.0052	-0.0062*
Proximity general elections	0.0024*	-0.0048	-0.0031	0.0047*	0.0024	0.0032
Constant	0.6559***	-1.4249	1.3993**	0.6007*	1.3036**	0.8156**
N	91	13	13	16	21	28
F-Statistics	14.20***	9.24*	12.56*	40.57***	2.93*	14.70***
R-square	0.5888	0.8869	0.9585	0.9610	0.6478	0.8013

* for p<.0.05, ** for p<.0.01, and *** for p<.0.001

Table 4.11 provides a summary of the OLS regression models for the pooled data and for each election year. In the pooled data, as well as in the yearly data, we notice a positive estimated coefficient for the number of parties. The significance means that changes in this number affect changes in the dependent variable (i.e., the average voter availability). The effective number of parties varies between 2 and 7.67 in the pooled dataset, with a mean of 3.71. If the other dependent variables are fixed, we notice that for each increase of one unit in the ENP, voter availability increases by 0.039. Bartolini and Mair (1990) showed that institutional factors, such as the number of parties, have a direct relationship with volatility, meaning the higher the number of parties, the higher the volatility. These results confirm that there is

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[65] For GDP we will be using 10.000 dollars per unit.

evidence for a similar relationship between the number of parties and voter availability, and it supports the validity of our first hypothesis that the more parties in a system, the higher the voter availability of the country.

Bartolini and Mair (1991) showed that the mean volatility in majority electoral systems remained greater to that in proportional systems, where there are fewer than eleven parties. A similar conclusion can be made for voter availability, as a higher level of disproportionality increases voter availability. We notice a positive and significant effect for the pooled data and for the yearly data of 1994, 1999, and 2009. The disproportionality of the different countries in the pooled data varies from 0.42 to 25.25 with a mean of 5.64. If the other independent variables are unchanging, we notice that for each increase of one unit in disproportionality, voter availability increases by 0.006. Thus, a higher level of disproportionality is associated with a higher level of voter availability.

The table also indicates an inverse effect of polarisation on voter availability. The coefficient of the polarisation indicator in the regression estimation is negative and statistically significant, and also statistically significant across the pooled regression model and for the yearly data for 1989 and 1999. The party system polarisation in the pooled data varies from a minimum of 1.28 to 6.19 with a mean of 3.66. If the other dependent variables are fixed, we notice that for each increase of one unit of polarisation, voter availability decreases by 0.018 units. This further provides some evidence that higher polarisation weakens voter availability. Studies show that the greater the policy difference between parties, the less likely an individual will actually switch parties (Bartolini and Mair 1990; Roberts and Wibbels 1999; Travitz 2005). Thus, a higher level of polarisation is associated with a lower level of voter availability.

The fourth hypothesis, that stronger cleavages decrease voter availability, is based on the analysis of cleavage structures by Lipset and Rokkan (1967). We focus on three main cleavages: class, religion, and ethnicity. For religion and ethnicity, we could not find a good measurement for the different years, so we used the same number for the different years. To assess class, we used the GINI household disposable income (a measurement of income inequality), which gave us the option to differentiate between the different years. The pooled data shows for all three variables a negative effect as we would expect, but for the yearly data we also notice in a few years a positive effect, which is the opposite of what we would expect. Of

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the three measurements in the pooled data, only ethnic cleavage reaches the significance level of 5%. Ethnic cleavage is also significant for the data of the year 1994. For religious fractionalization and income inequality, we do not notice significant results except for both in 1999, (although income inequality showed a significant effect on a significance level of 10% in the pooled data). So, there is very limited evidence of the religious cleavages as an important factor of voter availability. For class cleavage (income inequality), the effect is close to reaching the significant level in the pooled data and also in some of the yearly regressions. But as with religion, the evidence is too weak to make solid conclusions about the effect of class cleavage on voter availability. For ethnic cleavage, we notice a significant negative effect in the pooled data and for the year 1999. The results lean more towards the stated hypothesis that the stronger the cleavages, the lower the availability, but the evidence is weak. We cannot confidently claim the significant negative relation between the cleavages (ethnic fractionalization, religious fractionalization, and income inequality) and voter availability because of the mixed statistical evidence on the outcome. Research has shown a negative relationship between the strengths of cleavages and volatility (Roberts and Wibbels 1999; Bartolini and Mair 1990), and for voter availability there is also weak evidence of a negative relationship.

Economic well-being across countries is compared using the GDP per capita using the PPP measure. Inglehart (1997) indicates that in any society that has experienced sufficient economic growth, there is a switch towards more post materialist values. We hypothesise that a higher standard of living increases voter availability, because in countries with a higher standard of living there is a higher prospect for post-materialist values, and in these countries the cognitive processes are more imbedded in the society. The results in the given models indicate that when the well-being of the country increases, voter availability also increases, which means the well-being of the people of the countries makes them more electorally competitive. We have significant results for the pooled data and with the yearly data in 2009. The results provide evidence, to a certain extent, that the estimated coefficient on GDP per capita is statistically significant and positive and results in the acceptance of the hypothesis, in line with the study of Inglehart (1997).

Further to this discussion, we explored the influence of the economic confidence on the country. The hypothesis we suggested was: a higher economic confidence decreases voter availability. The estimate is negative and statistically

significant in the pooled regression and in the regression of 2009, but we also notice a positive and significant effect in 1999. Thus, we have some evidence that a higher economical confidence decreases voter availability. But strong conclusions cannot be drawn based on the results from 1989 and 1999. In *The American Voter,* the authors stated that the electorate is more likely to punish the incumbent party for its mistakes than reward it for its successes (A. Campbell et. al. 1960). Other research has concluded that economic downturns reduce votes for the incumbent's party, but economic prosperity does not have the same effect (Bloom and Prince 1975). In line with this research, our research provides support to a certain extent, of a similar effect where lower economic confidence increases voter availability.

Finally, for the last hypothesis, we examined the number of months between the general elections and the European elections. We assumed that if the national elections are around the same period, the electoral tension is higher in the country. This leads to a greater media focus and coverage of the elections, and voters also end up paying more attention to politics. We hypothesise that a higher political tension decreases voter availability because the voter is more exposed to the parties. Thus, electoral choices are clear to the voter and she or he would have fewer doubts about for whom to vote. The table shows evidence to support the hypotheses where we have a positive and significant result for the pooled data as well for the 1999 dataset. For the years before 1999, we notice a non-significant negative effect, whereas the years after show a non-significant positive effect. So, there is some weak support that if the elections are further away, there is an increase in voter availability.

For the pooled dataset, we will now explore the strength of the different significant variables so that it will be easier to compare their effects with each other. First, for ENP, we notice an effect from a minimum ENP of 2 to a maximum of 7.67, availability increases by 0.22. Similarly, for polarisation, we notice that if the polarisation changes from a minimum of 1.28 to a maximum of 6.19, availability decreases by 0.09. For disproportionality, an increase from a minimum of 0.42 to a maximum of 25.25 results in an increase in voter availability of 0.15. For ethnic fractionalization, we observe a change from the minimum of 0.0414 to a maximum of 0.5867, which results in a decrease in availability by 0.06. A GDP change from a minimum of 10797 to a maximum of 67963 results in an increase in availability by 0.22. The economic sentiment indicators vary from a minimum of 65.03 to a

maximum of 113.88, and results in a decrease in availability of 0.06. And, finally, the number of months varies from a minimum of 0 to a maximum of 26, and results in an increase in availability of 0.06.

The model fit statistic, also known as the F-statistic, shows significance across the different years as well as for the pooled data. Comparisons should be made with caution because not every yearly regression consists of the same number of countries. Despite this, we notice that the best fit is found for the 1999 dataset. Also, the R-squared is the highest for the 1999 data.

Next we will make a quantile regression, known as simultaneous-quantile regression, to explore the results further. Quantile regression is important to analyse the variation of the effect of independent variables in the different ranges of the dependent variable. It divides the dependent variable into ranked percentiles and applying regression analyses in every percentile. We can estimate multiple quantile regressions simultaneously which gives us the ability to estimate parameters appropriate for each quantile. This gives us the possibility to examine if the effects of the dependent variables on the independent variable are the same in the different percentiles.

Table 4.12: Model to Explain Voter Availability: Simultaneous-Quantile Regression Pooled Data, Aggregate Variables (EES 1989-2009)

Variables	Quantile 25	Quantile 50	Quantile 75
ENP	0.0343***	0.0351***	0.0460***
Polarization	-0.0211*	-0.0130	-0.0091
Disproportionality	0.0055	0.0053***	0.0058***
Ethnic fractionalization	-0.1095	-0.1233*	-0.0800
Religious fractionalization	0.0432	0.0015	-0.0454
Gini	-0.0051	-0.0037	-0.0019
GDP	0.0478 ***	0.0378***	0.0218
Economic sentiment	-0.0016*	-0.0019*	-0.0019*
Proximity general elections	0.0018	0.0023*	0.0023
Intercept	0.6862***	0.7382***	0.7144***
R-Square	0.4590	0.3766	0.3318
N= 91			

* for p<.0.05, ** for p<.0.01, and *** for p<.0.001

The results indicate that the number of political parties has a statistically significant and positive effect on voter availability on the different ranges of the dependent variable. The estimates confirm again the acceptance of the stated hypothesis, which related the number of political parties positively across the countries with voter availability.

Next, we can observe that the effect of disproportionality increases over the quantiles from the 50th to the 75th. The coefficient is statistically significant and positive, confirming that the effect of disproportionality on voter availability is positive.

The effect of polarisation only shows a significant effect for the 25th quantile but not across the other quantiles. The effect is negative, as was the case with the OLS regression where we found a significant effect in the pooled data. Differences between OLS and these regressions exist because the former uses the averages of effects across the whole sample, while the latter divides the data into different sized groups of the sample. The effects of ethnic fractionalization are negative over the different quantiles, but only significant in the 50th quantile. For religious fractionalization, the effect is not consistent over the different quantiles which strengthens the argument that religion fractionalization is not an important factor to analyse voter availability, as was the case with the OLS regression before. The effect of class (income inequality measured by GINI coefficient) is not significant when compared across quantiles and has a negative coefficient. The effect of GDP is highly statistically significant across the 25th and 50th quantiles, while the result is not statistically significant for the 75th quantile. The effect of months shows a positive non-significant effect across the different quantiles. The fact that we notice that the estimated coefficients differentiate in the different quantiles is proof of heteroscedasticity. If the distribution has constant variance, we would notice that the estimated coefficients (except for the intercepts) would be roughly the same (Gould 1992).

Next, if we take a look again at those countries in Table 4.10 for which we have data in all five elections years (Greece, Spain, Portugal, Italy, Germany, Denmark, The United Kingdom, France, Ireland, and the Netherlands), there are some suggestions that there is an increase in the average voter availability. If we only look at the mean voter availability in those countries, we notice an average country voter availability of 0.63 in 1989, 0.65 in 1994, 0.68 in 1999, 0.67 in 2004, and 0.72 in 2009. Comparing the twenty years difference, we notice that only Italy has a lower average voter availability than in 1989. And for Spain, Portugal, Germany, Denmark, the United Kingdom, Ireland, and the Netherlands, the average voter availability is the highest in 2009 (so 7 out 10).

If we look at the OLS regression model with robust S.E. in Table 4.11, we notice that the model with only years as explanatory variables has a significant effect in 2009. So, indeed, the average voter availability of 2009 is significantly higher than in 1989. If we put in the aggregate level variables, the coefficient of the years becomes much closer to each other and the significant effect of the year 2009

disappears. So, if we control for the aggregate level variables, we notice there is no significant difference between the year 1989 and 2009 for voter availability. In the section using multi-level techniques we will examine this as well, where we will make use of a model explaining the voter availability using the two level explanatory variables.

Table 4.13: Models to Explain Voter Availability: Years-Only and Full Model, Aggregate Variables: OLS with Robust S.E. (EES 1989-2009)

VARIABLES	YEARS ONLY	FULL
ENP	-	0.0274*
Disproportionality	-	0.0047**
Polarisation	-	-0.0075
Ethnic fractionalization	-	-0.1049
Religious fractionalization	-	-0.0238
GINI	-	-0.0049
GDP	-	0.0448
Economic sentiment	-	-0.0015
Proximity general elections	-	0.0031
Year=1989	BASE	BASE
Year=1994	0.0232	-0.0118
Year=1999	0.0500	-0.0098
Year=2004	0.0441	-0.0232
Year =2009	0.0883*	-0.0002
Constant	0.6290***	0.7397*
N	50	50
F-Statistics	5.19***	10.68**
R-Square	0.2995	0.6743

4.2.3 Summary

We estimated the relationship between the dependent variable, voter availability, and the independent variables, effective number of legislative parties, disproportionality, polarisation, ethnic fractionalization, religious fractionalization, GINI household disposable income, GDP per capita, economic sentiment, and proximity to the general elections. Employing data derived from the EES, we performed robust regression and quantile regression analyses to test the hypotheses we proposed. The null-hypothesis, that there is not an effect of the number of parties on voter availability, could be rejected with confidence. The higher the number of parties in the electoral system increases voter availability. The influence of the electoral system is explored by disproportionality. Although we did not find significant results for each different year, the results showed that higher disproportionality increases voter availability. Similarly, for polarisation we did not find significant results over all of the different years, but we did notice that higher polarisation decreases voter availability. For the fourth hypothesis, we examined the strength of cleavages measured by ethnic fractionalization, religious fractionalization, and income inequality. We have some indications that the strength of the cleavage decreases voter availability with ethnic fractionalization, and less so with class (i.e., income inequality). We also find some support in the analyses that a higher standard of living increases voter availability. Concerning the economic confidence among the voters in the last six months, we found weak support for a negative relationship, meaning that a higher confidence decreases voter availability. Finally, we found weak support for the hypothesis that the further away the elections are from the moment the general national elections are held, the higher the voter availability.

Checking the difference over time, we noticed that the average voter availability increased over time, and is significantly different in 2009 compared to 1989. Nevertheless, when controlling for the aggregate level variables, this effect is not significant anymore, showing that those variables are capturing the difference that existed between 1989 and 2009 in the average voter availability.

The previous sections concentrated on the individual influences on voter availability, whereas this section concentrated on the aggregate ones. In the next section, we will explore both of these levels simultaneously in order to provide stronger conclusions on the questions raised.

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4.3   Voter availability on the aggregate and individual level

In the previous sections, we examined individual (level-1 variables) and aggregate (level-2 variables) explanations separately. But in reality, both sets of factors can potentially—and simultaneously—influence the behaviour of voters. Moreover, these factors can also interact with one another. That is, the effect of an individual level predictor might vary as a function of national institutions or other aspects of the political context (Dalton and Anderson 2011). Consequently, this section explores the two different levels simultaneously through the use of multi-level regression techniques. We also develop models with cross-level interactions to analyse how the level-2 variables moderate the effect on voter availability of level-1 variables. We end the chapter by exploring voter availability over time. These three exploratory studies are based on the EES of 1989 to 2009.

4.3.1   Introduction to multi-level modelling

North (1981) stated that institutions are the "rules of the game" for human interactions. People form attitudes and make choices in variable contexts, which come in the form of formal institutions and as differential economic, social, and political conditions. These conditions shape the interpretations and actions of the person (Anderson 2007).

In the previous section, we looked at the individual and aggregate level explanations of voter availability. The regression analyses on the individual level conducted earlier had shortcomings, as we could not correct for correlated errors that might arise from clustering individuals at the aggregate level.

A multi-level model (MLM) that incorporates a hierarchical structure, in our case individuals within countries, makes it possible to estimate contextual influences. This multi-level approach is necessary because the individuals in a certain country tend to be more similar to each other for a number of reasons. They have the same parties to choose from, common political institutions, and a common history of being compatriots. Some authors even assume that all comparative research is intrinsically multi-level and scholars have started to comprehend the conditions and in what way

macro-level differences across countries influence the individual preferences and behaviour (Kedar and Shively 2005; Dalton and Anderson 2011).

Steenbergen and Jones (2002) formulated different substantive and methodological reasons for using information from multiple levels of analysis. We will discuss three of these. First, multi-level data makes it possible to combine multiple levels of analysis in one single comprehensive model by specifying predictors at different levels. Since our model considers multiple levels of analysis, it is less likely to suffer from model misspecifications than a single-level model. Second, the multi-level analysis allows exploring causal heterogeneity; by investigating cross-level interactions, we can determine whether the causal effect of lower-level predictors is moderated by the higher-level predictors. Third, a statistical argument reasons that in a single-level model, we ignore the multi-level character of data. In our case, the voter availability scores of individuals in one country are more correlated than the scores of the individuals in different countries. This causes significant statistical costs in the form of possibly incorrect standard errors and an inflated Type I error rate (Steenbergen and Jones 2002).

4.3.2 Is MLM opportune?

We will first consider if MLM is needed. Second, we will determine if its use causes statistical problems as a result of sample sizes or other factors. To judge the appropriateness of MLM, we use the Interclass Correlation Coefficient (ICC); this coefficient indicates the proportion of group-level variance compared to that of the total variance. A common rule of thumb is to use multi-level modelling when the ICC is greater than 0.05 for models including the clustered data without explanatory variables (Hox 2002). Exploring the five different datasets, we notice that all the ICC values are greater than 0.05,[66] which suggests that MLM modelling will be needed to have a better understanding of voter availability.

The second consideration for using MLM is whether or not we have enough cases for MLM. For datasets from 1989 and 1994, we have 13 countries, while the

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[66] 1989 = 0.1147/ 1994= 0.0712 / 1999= 0.1145 / 2004= 0.0893 / 2009 = 0.1120.

dataset of 1999 has 15 countries,[67] 2004 has 21 countries, and 2009 has 28 countries. Academic research on this topic is generally swayed to say that a greater number of groups are more important than a greater number of individuals within each group (Maas and Hox 2005). This is partially because the method was developed with such data structures in mind. However, no optimum number of groups has been identified for MLM. Some scholars suggest a 30/30 rule, meaning that there should be at least 30 groups with at least 30 individuals in each group (Kreft and de Leeuw 1998; Maas and Hox 2004). Hox (1998) even raises this to a minimum of 50 groups, with at least 20 observations in each group, when interactions across levels are the purpose of the investigation. In contradiction to this, some academic researchers propose a lower rule of thumb. Patterson and Goldstein (1991) keep a 25/25 rule of thumb (i.e., 25 groups with 25 observations in each group). There are also some extreme considerations when researchers have further dropped the number of groups needed for MLM to 10 (Snijders and Bosker 1999). The authors Maas and Hox performed some tests on the number of groups needed for MLM, and they tested a minimum of 10. They concluded that based on the fact that the MLM standard errors of the regression coefficient were still within bounds, it is possible to perform an MLM study with only 10 groups. On the other hand, based on the fact that the standard errors of the second variances are unacceptable, they believe 10 groups are not really enough (Maas and Hox 2005). Thus, we cannot make any solid conclusions from the literature on how many cases/groups are needed. "The required group size depends strongly on the special interests of the researcher, the expected effect sizes and the complexity of the model" (Meuleman and Billet 2009, 45).

4.3.3 Clarifying the MLM

Our primary concerns are models where we examine both levels simultaneously. In addition, we are interested in the interaction of these two so we can be more accurate about the influence of the variables in the different levels of voter availability. We are examining whether level-1 variables are moderated by the

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[67] 16 in the aggregate but because religious attendance in Italy was measured differently compared to in other countries in 1999, we left out this country.

level-2 variables, and the other way around, in predicting voter availability. The next consideration is which MLM is appropriate for use in our study. It is clear that we need a two-level structure, where the higher level consists of country variables, and the lower level of individual variables. This a strict hierarchy structure where the individuals are clustered in one specific country without an across-classified structure.

Concerning the estimation of the parameters, the most commonly used is the Maximum Likelihood (ML) in MLM. This is a widespread estimation procedure which produces estimates for the population parameters that maximise the probability of examining the data that are actually observed in the model. ML has two different approaches: the Full Maximum Likelihood (FML) and the Restricted Maximum Likelihood (RML). In FML, both the regression coefficients and the variance components are included in the function. In RML, only the variance components are included in a first step, while the regression coefficients are estimated in a second step. One of the main differences between the two approaches is that FML does not take into account the degrees of freedom that are lost by estimating the fixed effect, while RML estimates the variance of the components after removing the fixed effects from the model. The consequence is that RML estimates have less bias and are more realistic, thus leading to better estimates especially when the number of groups is small (Hox 2002). But for both of these ML estimates, we expected normality of the level-2 errors. Checking our data for this (by producing a normal probability plot of the level-2 residuals), we notice a problem with the normality assumption for using ML estimates. In these cases, the standard errors for the random effects at the second level are highly inaccurate, and estimates other than ML should be used. Robust standard errors are, in this case, more reliable than asymptotic standard errors based on ML (Maas and Hox 2004). We will be making use of robust standard errors if possible, otherwise we will use REML.

If we take a closer look at the variance structure, MLM proposes different models including the simplest multi-level model, and the random intercept model which has a single residual term for each level. In these models, only the intercept term in the regression equation is assumed to vary randomly across countries and the effects of the explanatory variables are assumed to be the same in each component at the highest level (Rasbash et al. 2009). The random-coefficients, or random slopes, allow the effects of covariates to vary over the clusters (Rabe-

Hesketh and Skrondal 2008). In these models, the effects of explanatory variables are not constant across higher level units, and the prediction lines of the higher levels for the relations have different slopes which are achieved by specifying two residuals, namely: an intercept residual and a slope residual (Rasbash et al. 2009). As our data structure is not perfectly aligned towards having a panel structure and does not contain any trended pattern over the predictors, hence a random intercepts model is adopted against the random slopes model which is more feasible for the panel type of data structure.

4.3.4 Variables in the MLM

The dependent variable in the model is voter availability as discussed before. We have nine independent variables on level-2 including: effective number of parties, disproportionality, polarisation, ethnic and religious fractionalization, GINI household coefficient, GDP, economic sentiment of the last six months (ESI), and the proximity to the general elections. For the level-1 independent variables, we have a different set of variables for the different years depending on the availability in the Election Study. Variables included are age, education, social class, religious attendance, union member, urbanization, interest in politics, voted at the elections, political knowledge, political trust, party identification, left-right proximity, extreme left-right, issue proximity, and extreme issue. [68]

4.3.5 Results of MLM

Table 4.14 summarizes the findings for the Mixed and Two-Level (Multi-level) model with random-intercepts. First, we will have a look at the proportional reduction in the estimated total residual variance, and compare it to the unconditional model without covariates (intercept-only model; 0-model).

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[68] More details about the hypotheses and variables can be found in Chapter 2. A glossary of the variables can be found in Appendix I.

Table 4.14: *MLM to Explain Voter Availability: Robust S.E. (EES 1989-2009)*

VARIABLE	MLM89	MLM94	MLM99	MLM04	MLM09
INDIVIDUAL LEVEL:					
Age	-0.0017***	-0.0011***	-0.0017***	-0.0011***	-0.00010***
Education	0.0114*	0.0053	0.0084**	0.0070***	0.0088***
Social class	-0.0008	0.0072	-0.0002	0.0004	0.0034
Religious attendance	-0.0007	0.0011	-0.0033	-0.0006	0.0019
Union member	0.0143	0.0130	0.0110	0.0092	-
Rural area	BASE	BASE	BASE	BASE	BASE
Small town	0.0130	0.0082	0.0067	0.0079	-0.0099*
Big town	0.0176	0.01095	0.0090	-0.0003	-0.00251
Interest	0.0061	-0.0108*	0.0090	0.0064	0.004043
Voted	-0.0191*	-0.0087	-0.0154*	-0.0223***	-0.0170**
Knowledge	-	0.0216*	-	-	-0.0348***
Trust	-	0.0049	-	0.01014***	0.0024
Party-ID	-0.0436***	-0.0605***	-0.0574***	-0.0595***	-0.0652***
Left-right proximity	0.3059***	0.1443***	0.1572***	0.2202***	0.2662***
Extreme left-right	-0.0083	-0.0027	-0.0078	-0.0076*	-0.0084***
Issue proximity	-	0.1090***	0.0285	0.0598***	0.0824***
Extreme issue	-	-0.0132***	-0.0062	-0.0058***	-0.0032
COUNTRY LEVEL:					
ENP	0.2279***	0.0222***	0.0164	0.0269**	0.0127*
Disproportionality	0.0244***	0.0051**	0.0069***	0.0035	0.0008
Polarisation	-0.1923***	-0.0141	-0.0272***	0.0058	-0.0037
Ethnic fractionalization	-0.3035*	-0.2650***	0.0272	0.0327	-0.0585
Religious fractionalization	-0.1208*	-0.0310	-0.0798**	-0.0778	0.0028
GINI	0.0218***	-0.0050*	-0.0148***	-0.0013	0.0010
GDP	0.0977**	0.0217***	0.0057	0.0387**	0.0362***
Economic sentiment	0.0177***	-0.0041***	0.0037***	-0.0018	-0.0036**
Proximity general elections	-0.0049*	0.0009	0.0033**	0.0010	0.0032**
Constant	-1.8630***	1.0163***	0.6176***	0.5077	0.5927***
AIC	1549.75	163.62	-655.45	-1700.09	-1753.74
BIC	1709.65	344.96	-482.75	-1499.32	-1546.75
N	5783	4799	5667	12532	15778
Groups	13	13	15	21	28

* for p<0.05, ** for p<0.01, and *** for p<0.001

Table 4.15: Total Variance of the MLM and Intercept-Only Models

VARIABLE	MLM89	MLM94	MLM99	MLM04	MLM09
Intercept only	0.0977	0.0820	0.0741	0.0700	0.0791
MLM	0.0763	0.0598	0.0518	0.0532	0.0530

For the intercept-only model, the residual variances represent unexplained error variance because no explanatory variables are added in the model. For 1989, we notice that 22% of the variance is explained by the covariates, meanwhile for 1994 (27%), 1999 (30%), and 2004 (24%), a higher percentage is observed. Finally for 2009, 33% of the variance is explained by the covariates.

Concerning the variables, we observe that the age of an individual affects voter availability across the different years. The results are similar to the findings when we run the OLS regression models on the individual level, with categorical variables for countries across the years (here after individual regressions). The effect of age on voter availability is found to be statistically significant at a 0.1% level of significance. A lower age of the respondent increases the predicted voter availability.

Next, the results indicate that the level of education has a statistically significant effect on voter availability. The results are statistically significant at the 0.1% level of significance for the years 2004 and 2009; for 1999, a 1% level of significance was found and for 1989 our results remain significant at 5%. While the results of the effects of education on voter availability are not statistically significant for 1994, they were significant for the individual regressions performed in the fourth chapter. A higher level of education increases the predicted voter availability.

The effects of social class and religious attendance on voter availability are not statistically significant, and the sign (so the effect) is inconsistent. These results are similar to what we noticed in individual regressions. The data on union membership is available for the years 1989, 1994, 1999, and 2004, only. We notice a positive effect which is surprisingly opposite to the hypothesis we suggested. The results indicate that the findings are similar to that of the individual regressions, with no significant effects. Next, we explore urbanization, and the results indicate that if an individual is from a small town, voter availability is not found to increase significantly when compared to the individuals belonging to a rural town (reference category). Similarly, we observe that if an individual is from a large town, the

increasing level of voter availability is not statistically significant, either. Also, the effect is different for the years up until 1999 compared with those for 2004 and 2009.

The effect of interest in politics shows a statistically significant effect at a 5% significance level with a negative effect for 1994, the other years show a positive insignificant effect. With the individual level regression in section 4.1, we observed a significant positive effect for the years 1989, 1999, and 2004. After introducing the level-2 variables, the significant effect across those years disappears. For the attitude variable, whether or not the voter voted at the recent EU elections, our results are similar to those in the individual analyses. There is an insignificant effect for 1994, but across the other years, the results are significant at the standard confidence level of 95%. The knowledge of an individual, as reported in the EES of 1994 and 2009, shows a significant effect on voter availability. The results are positively significant with a 5% level of significance in 1994, but negatively significant with a 0.1% level in 2009, which are different from the results of the individual regressions that observed a significant result for 2009 only. For political trust, we notice a positive and insignificant effect on voter availability in 1994 and 2009, contrary to a highly significant effect on voter availability in 2004. With the individual regressions, we noticed a significant effect across all of the different years. As with political interest, the effect becomes weaker when introducing the level-2 variables.

Party-identification shows a highly significant and negative effect on voter availability across all of the different regression models of the different years with MLM. These results are similar to the individual level regressions. The negative coefficient reveals that increasing strength of party-identification will reduce the level of voter availability.

Next, the variable left-right proximity. With the individual, as well as the MLM yearly regressions, we noticed a positive statistical effect across the different years. When the difference in distance between the different parties and the respondent on a left-right scale becomes smaller, the predicted voter availability increases. Another variable, for which we use the left-right scale, is the "extreme left-right" variable, where the position of the respondent on a general left-right scale is used. This variable measures the extremism on this scale. Holding more extreme positions on a left-right scale does not show significant results for 1989, 1994, and 1999, contrary to 2004 and 2009 where we found statistically significant results. These results are different from the individual regressions where we noticed a significant effect across

all of the different years, except for the year 1994. So, we could say that including the level-2 variables in the regression decreases the strength of the "extreme left-right variable". Although we do not find significant results in all of the different MLM regressions, there is a suggestion that the more extreme the position on the general left-right scale, the greater the decrease in voter availability.

The regression table also shows that the difference in distance between the different parties and the respondent on a scale with an EU issue has statistically significant effects for 1994, 2004, and 2009. For the regression analysis in 1999, it is observed that the result is not statistically significant, although the individual regression shows a significant effect for this specific year. Despite the insignificant results for 1999, we can suggest that if the distances on an EU-issue scale between the different parties and the respondent becomes smaller, the predicted voter availability will increase. Holding a more extreme position on a left-right scale about the EU issue is found to have a statistically significant effect on voter availability for 1994 and 2004, while the results are not statistically significant for the EES data in 1999 and 2009. In the individual analysis, we found significant results across the different years. Again, there is some suggestion of a relationship, but because of the insignificant effect in two datasets, strong conclusions cannot be drawn.

For the level-2 variables, we first notice that the effective number of parties has a significant effect on voter availability in the EES data collected in 1989, 1994, 2004, and 2009, and is observed to be insignificant in 1999. With the analysis on the aggregate level, where the mean of voter availability for each country is being used as a dependent variable (here after aggregate regressions), we notice a positive and significant effect across the different years.

Disproportionality affects voter availability at a 0.1% significance level in 1989 and 1999, and in 1994 at a 1% significance level. In the other years, no significant results are captured, although there is a positive effect on voter availability. Also, for the aggregate regressions, we showed the significance in three out of five yearly regressions. Thus, there is some suggestion that higher disproportionality increases voter availability.

The polarisation of a country has negative effects on voter availability, as suggested in the hypothesis, across the different years except for 2004. These effects show a significant negative effect for 1989 and 1999, and non-significant

effects for 1994, 2004, and 2009. Compared to the aggregate regressions, we also found a statistically significant negative effect of polarisation on voter availability in two out of the five datasets.

The results of ethnic fractionalization are not consistent in the direction of the effect, and show a positive effect in 1999 and 2004, and a negative effect across the other years. The results show a significant effect in 1989 and 1994. That we get significant results for 1989 and 1994 could suggest that the influence of ethnic cleavages is disappearing. The effect of religious fractionalization shows a negative effect across the different years, except for 2009 where we notice a positive effect. The negative effect is found to be statistically significant at a 5% and 1% level of significance only in 1989 and 1999, respectively. The results of the remaining years, 1994, 2004, and 2009, have an insignificant effect on voter availability. Thus, compared to the aggregate regressions, we found a bit more support with MLM that a higher fractionalization of religion and ethnicity decreases voter availability.

The GINI household disposable income is inconsistent with the direction of the effect on voter availability. In 1989 and 2009, it has a positive effect while the other years show a negative effect. These effects are significant for 1989, 1994, and 1999, whereas with the aggregate regressions we only found a significant effect in 1999.

GDP per capita at the Constant International PPP has been found to have a statistically significant effect across all of the years except 1999. For 1989, this is a negative effect, while for 1994, 2004, and 2009, the effect was positive, as was suggested in the hypothesis. With the aggregate analysis, we only found a positive significant effect in 2009.

The effect of ESI shows a significant effect on voter availability across all of the different years except 2004. The coefficient becomes a positive effect in 1989 and 1999, while for the other years, a negative effect is shown. Thus, similar to the aggregate data, we have mixed results.

The effect of the proximity of the general elections has a mixed outcome as well. It is observed to be negative in 1989 and positive in all of the other years. For 1989, this effect is significant at a 5% significance level, and for 1999 and 2009, it is positive on a 99% confidence level. With the analysis on the aggregate level, we found a significant effect only for 1999.

Next, we will pool the data. Pooling can lead to larger sample sizes which would give us more precise estimators, and grant us more statistical power. With the low number of countries in the yearly MLM regressions, this technique would especially provide us with more solid answers for the level-2 variables.

Appendix G provides us with the results of the naïve pooling option. With this method, we ignore the time component and approach all the countries for different years as separate observations. However, as the name itself implies, this is a naïve way of pooling. The data we are dealing with are independently-pooled, cross-sectional, meaning that random observations are collected at certain time periods and more random observations are collected at different times. Unlike the case with panel data, individual observations cannot be repeated at every time period as the individuals are not the same across the different years. But we encounter similar problems, namely autocorrelation in two directions; the errors from the regression model will be prone to correlation within years as well as within specific countries (Lebo and Webber 2014). So, analysing every country of every year as a separate independent observation could cause a problem.

For the independently pooled cross-sectional data, the observations drawn at a certain year may have a different distribution than in those from a different year. We cannot assume that the dependent variable (or the independent variables) remains constant over time, thus, we need to allow for differences across the years. MLM relies on the assumption that errors are both spatially and temporally independent (Lebo and Webber 2014) and where errors are correlated over time, the standard errors for the model will not be correct (Steenbergen and Jones 2004; Lebo and Webber 2014).

We will provide two approaches to address this problem. Firstly, we allow the variance to differ for each year. Independent covariance structure allows a distinct variance for each random effect within a random-effects equation and assumes that all covariances are zero (variance year model).[69] Another solution for this would be to approach the data as a non-hierarchical model where units are cross-classified by two factors (countries and years) and with each unit potentially belonging to any of a combination of levels of the different factors (Rabe-Hesketh and Skrondal 2008). We will make use of two way-error components. In this model, two random intercepts

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[69] REML estimations will be used because robust regressions are not supported.

represent the factors (countries and years) that are crossed instead of nested since the MLM models are mainly designed for models with nested effects. A way to do that is to create an artificial level-3 unit where both countries and years are nested. Next, we treat the variable countries as a level-2 unit and specify a random intercept for it. For the variable years, we specify a level-3 random intercept for each year.

Table 4.16: MLM to Explain Voter Availability, Pooled data: Variance Year and Cross-Error Component: REML (EES 1989-2009)

VARIABLES	Variance year model	Cross error-Components
INDIVIDUAL LEVEL:		
Age	-0.0013***	-0.0014***
Education	0.0086***	0.0080***
Social class	0.0020	0.0019
Religious attendance	0.0005	-0.0005
Rural area	BASE	BASE
Small town	0.0027	0.0018
Big town	0.0007	0.0048
Interest	0.0061***	0.0045***
Voted	-0.0151***	-0.0165***
Party-ID	-0.0611***	-0.0593***
Left-right proximity	0.2415***	0.2405***
Extreme left-right	-0.0092***	-0.0098***
COUNTRY LEVEL:		
ENP	0.0302***	0.0154***
Disproportionality	0.0034*	0.0028***
Polarisation	-0.0048	-0.0170***
Ethnic fractionalization	-0.0957**	-0.1034
Religious fractionalization	-0.0190	0.0113
GINI	-0.0006	-0.0001
GDP	0.0360***	0.0261***
Economic sentiment	-0.0012**	-0.0012***
Proximity general elections	0.0027***	0.0015***
Constant	0.4884***	0.6353****
AIC	**-28.51**	**1195.97**
BIC	**211.47**	**1409.28**
N	**53533**	**53533**
Groups	**90**	**28**

* for p<0.05, ** for p<0.01, and *** for p<0.001

Through the variance year model, we notice results that are similar to most of the yearly regressions for level-1 variables; there are significant effects of age,

education, voted at the elections, party-ID, and left-right proximity on the individual level. In addition, we also notice that the variables interest and extreme left-right, shows significant positive and negative effects, respectively. This is comparable with the results we notice for the pooled individual data. The positive effect of social class is not statistically significant in this regression, but it was significant with the pooled individual data. The variables social class, religious attendance, and urbanization did not show significant results (besides small effect of urbanization in 2009) in the yearly nor in the MLM regression. For the aggregate variables, we notice a significant effect of ENP, disproportionality, ethnic fractionalization, GDP, economic sentiments, and months. Besides polarisation, which showed a statistically significant effect with pooled aggregate regressions before, the results are comparable with those analyses. Of the level-2 variables, we notice that the effects of ENP and disproportionality are fairly consistent and significant over the yearly MLM, as well as with the pooled MLM. Meanwhile, other variables such as GDP, ESI, months, and ethnic fractionalization did not show consistency or significance across the yearly MLM. However, they do provide us with more clarity on the effects supporting the hypotheses with the pooled MLM. The effects of polarisation, GINI coefficient, and religious fractionalization did not show significant results with the pooled MLM, but did show significant effects in some of the different years. The approach provides us with results very similar to those with the naïve pooling (Appendix G) but it shows better results on the AIC and BIC. In the previous section, when using AIC and BIC we mentioned the limits of their use because of the unequal number of variables and observations in the models. Here, we have an equal number of observations and variables and this model shows better results for AIC and BIC.

The cross-error components model shows similar results to the Variance Year Model for the individual variables. For the aggregate level variables, we notice that ethnic cleavages show an insignificant relationship at the 5% level (although it is still on a 10% significance level). Besides this, the effect of disproportionality has a stronger significance level in the cross-error component and polarisation shows a significant negative effect and this effect was not significant for the variance year model.

4.3.5 Voter availability over time

Does voter availability differ over time? In the aggregate level section, we showed that this was suggested when looking at the average voter availability of different countries, but after analysing those we found that there was not a significant increase when controlling the aggregate level variables. As mentioned before, we are dealing with independently pooled cross-sectional data and have 10 countries in the dataset for which we have data for all of the years, namely: Denmark, Germany, Greece, Spain, France, Ireland, Italy,[70] the Netherlands, Portugal, and the UK. We will use these countries in our analyses to analyse the differences over time.

We will provide three different regressions, one with only country and year categorical variables, a second one including the individual level variables, and finally a model with individual and aggregate level variables.

From the regression table we conclude, as before, that the voter availability is increasing over time. Controlling for the individual level variables, we still notice significant differences over time. If we add the aggregate level variables, we notice that the significant differences between the years disappear. This shows that the aggregate level variables indeed explain the variation over time, and when we control for these variables, there is not much variation any longer between the different years.

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[70] If we leave out religious attendance, Italy could be included in the analyses; this is because of the earlier mentioned problem with measuring religion attendance. Religion attendance has, overall, no significant effect, so we decided to leave it out in the analyses.

Table 4.17: Models to Explain Voter Availability Over Time: Country, Individual and Multi-Level Models (EES 1989-2009)

VARIABLES	COUNTRY DUMMY	INDIVIDUAL WITH COUNTRY DUMMY	MLM
INDIVIDUAL			
Age		-0.0015***	-0.0015***
Education		0.0080***	0.0085***
Social class		0.0033**	0.0021
Rural area		BASE	BASE
Small town		0.0025	0.0041
Big town		0.0057	0.0038
Interest		0.0043**	0.0066***
Voted		-0.0130***	-0.0133***
Party-ID		-0.0591***	-0.0596***
Left-right proximity		0.2359***	0.2387***
Extreme left-right		-0.0088***	-0.0086***
AGGREGATE			
ENP			0.0250***
Disproportionality			0.0030*
Polarisation			0.0018
Ethnic fractionalization			-0.0589
Religious fractionalization			-0.0154
GINI			0.0000
GDP			0.0511
Economic sentiment			-0.0007
Proximity general elections			0.0031*
Country dummies	X	X	
YEAR 1984	BASE	BASE	BASE
YEAR 1994	0.0239***	0.03013***	0.0011
YEAR 1999	0.0511***	0.03607***	-0.0179
YEAR 2004	0.0459***	0.0544***	-0.0092
YEAR 2009	0.1079***	0.0980***	0.0213
Constant	0.6520***	0.5435***	0.3797*
AIC	9071.32	170.13	-292.16
BIC	9194.17	375.59	-514.75
N	47822	38601	38601
Number of elections	50	50	50

* for p<0.05, ** for p<0.01, and *** for p<0.001

4.3.6 Cross-level interactions

In this section, we will explore the most plausible and relevant cross-level interactions. A significant cross-level interaction shows that the strength or nature of the relationship between the lower-level independent variable and the dependent variable changes as a function of the higher-level independent variable.

Previous research designs have shown that variables such as effective number of parties, disproportionality, polarisation, fractionalization, and other political institutional and country characteristics influence political aspects such as the election turnout (Jackman 1987; Blais and Aarts 2006) and volatility (Bartolini and Mair 1990; Pedersen 1983; S. Birch 2003). Assuming that the aggregate level variables influence only voter availability and no other individual-level independent variables would be misleading and that is why we expect cross-level interactions.

One of the main influences on voter availability is the age of the person and that a higher age decreases the voter availability. One explanation is the habit of voting where the voter develops a more stable voting pattern over time and excludes certain parties as a vote choice. Duverger's law claims that supporters of a smaller party do not want to waste their vote and for this reason will vote for a less preferable party (candidate) since their most desirable party (candidate) does not have a chance to win under a plurality system with single-member districts (Duverger 1954). Tactical voting is more common in plurality electoral systems than proportional representation (PR) systems. Cox argues that we can categorise the systems based on the number of parties where tactical voting varies from being very common to less common (Cox 1997). We suggest that age and proportionality of the voting system interact to predict the voter availability such that age is a more important predictor of voter availability in proportional voting systems than in disproportional voting systems. The negative effect of age on voter availability varies depending on the proportionality of the system; the negative effect of age is weaker in a more disproportional system. The argument here is that older voters are more familiar with the negative effects of disproportionality, and consider that their first preferred party may not always get represented in the Parliament, meanwhile younger voters are not so familiar with this. Older voters in more disproportional systems would show higher voter availability than older voters in more proportional systems.

Hypothesis 3.1: The more proportional the party system, the stronger the effect of age on voter availability.

At the aggregate level discussion, we suggested that a higher standard of living increases voter availability. This notion is in line with the study of Inglehart, who indicated that in any society that has experienced sufficient economic growth, there is a switch towards more post materialist values. This switch is caused by an intergeneration change in the value priorities (Inglehart 1971; 2008). We suggest that the negative effect of age on voter availability is determined by the level of development of the country with a strengthening effect in countries with a higher GDP. We reason that economic security is presumed by the younger generations, meanwhile for the older generations the higher standard of living is not taken for granted as they have experienced the country in the nascent stages while it was developing. We suggest that for countries with a lower level of development, the younger generation is more comparable to the older generation, as economic security is not a given, which explains the weaker effect of age on voter availability.

Hypothesis 3.2: The more developed the country, the stronger the effect of age on voter availability.

Another socio-demographic characteristic that influences voter availability is education. Although the effect of education on tactical voting is debated in the literature (Franklin, Niemi, and Whitten 1994; Fisher 2004), most of the research designs include education in their analyses. We showed before that having a higher education increases the voter availability. We expect the effect of education on voter availability to be influenced by the level of disproportionality and suggest that the effect of education on voter availability is weaker in more disproportional voting systems. In these systems, the voters are more pushed to consider multiple parties as their first preferred party is too small to get a seat and the effect of higher education on voter availability is weaker. In PR systems, the incentive to cast a tactical vote is less and the effect of higher education on voter availability is stronger. The explanation for this is that voters with a lower education will be showing more resemblance to those with a higher education in more disproportional systems, weakening the effect of education on voter availability.

Hypothesis 3.3: The more proportional the party system, the stronger the effect of education on voter availability.

The strength of the party-identification is another independent variable in our model. Dalton argues that there is a partisan decline caused by social modernisation (Dalton 1984). Schmitt claims that social modernisation can't explain the differences between countries. Partisanship depends at least as much on political context as on social modernisation (Schmitt 2002). The strength of the party-ID is conditioned by contextual factors such as the number of parties, and fragmentation and polarisation of the party system (Schmitt and Holmberg 1995). "The importance of partisanship for the vote, covaries with the institutional arrangement and the style of political competition in which general elections are organised" (Schmitt 2002, 3). We suggest that the effect of party-identification on voter availability is moderated by ENP, polarisation, and disproportionality. In countries with a low number of parties, the choices for the voter are more limited. Schmitt and Holmberg (1995) suggest that the effect of party-ID on the vote in those countries is stronger than in countries with a higher number of parties. We also suggest that the effect of party-ID on voter availability is weaker in countries with a higher number of parties since in those countries, a strong party-ID would not translate to lower voter availability as greatly as it would in countries with a low number of parties, since there are more parties which possibly attract the voter as well.

Hypothesis 3.4: The higher the number of parties, the weaker the effect of party-ID on voter availability.

Schmitt claimed that the higher ideological conflict between the parties, the higher the polarisation and the more partisanship there is (2002). We suggest that the effect of a strong party-ID on voter availability would be stronger in more polarised countries than in countries with a low polarisation, where ideological differences between the different parties are smaller. A strong party-ID towards a certain party would not result as directly in less voter availability and a voter can as well consider other parties despite a stronger party-ID towards a certain party. The argument behind it is that the differences with other parties are smaller in countries with low polarisation than in countries with a higher polarisation.

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Hypothesis 3.5: The higher the polarization, the weaker the effect of party-ID on voter availability.

Schmitt analysed the effect of the electoral system itself on partisanship. Stronger ideological conflicts in politics are brought about (among other things) by majoritarian electoral systems. Consensual systems go together with proportional representation and are unfavourable for party-ID (Schmitt 2002). In this context, we suggest that higher disproportionality strengthens the effect of party-ID on voter availability.

Hypothesis 3.6: The more proportional a system, the weaker the effect of party-ID on voter availability.

One of the attitudes examined in the model is political interest and we suggest that the effect depends on the political system as well. Earlier, we showed that higher fractionalization and polarisation reduce the electoral options of the voters, leading to lower voter availability. We suggest that in more ethnic fractionalised and higher polarised countries the effect of political interest on voter availability is weakened. The reasoning behind this suggestion is that a voter who shows interest in politics in those countries, the interest will be limited to one party. Meanwhile, having higher political interest in less polarised and less ethnic fractionalised countries is largely associated with interest in multiple parties.

Hypothesis 3.7: The higher the polarisation, the weaker the effect of political interest on voter availability.

Hypothesis 3.8: The higher the ethnic fractionalization, the weaker the effect of political interest on voter availability.

The last interactions we want to examine are those based on spatial voting models for which we used the variables left-right proximity and left-right extremeness. We showed earlier that if there are more parties in the system, there is a greater possibility for a party to be close to the voter's own position which decreases electoral availability. Wessels and Schmitt (2008) showed that the larger

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the number of parties, the stronger the impact of proximity considerations in the vote choice. This would mean that the negative effect of left-right proximity on voter availability would be stronger in multi-party systems than in systems with fewer parties.

Hypothesis 3.9: The higher the number of parties, the stronger the effect of left-right proximity on voter availability.

Wessels and Schmitt (2008) argue in the same article that the less dense the political supply is distributed on a left-right scale (the more polarised), the stronger the impact of proximity considerations on the vote. Similarly, with issue voting, J. Green and Hobolt (2008) formulated that with high polarisation on an issue, the ideological position is likely to be more important than party competence and credibility. On the contrary, when polarisation of an issue is low, competence should matter more. We suggest, based on those theories, that the positive effect of left-right proximity on voter availability will be stronger in more polarised countries.

Hypothesis 3.10: The more polarised a system, the stronger the effect of left-right proximity on voter availability.

The last individual variable to consider is the left-right extremes. On the individual level, we showed that more extreme positions on the left-right scale decrease voter availability. We suggested that this effect is influenced by the strength of the cleavages in the society which are used for the decision-making on who to vote for (Lipset and Rokkan 1967) and as shown before, limit the voter availability. When the cleavages are stronger, the voter is more limited in the vote choices and the effect of holding more extreme positions on a left-right scale will decrease the voter availability even more.

Hypothesis 3.11: The stronger the cleavages (ethnic, religion, and class), the stronger the effect of left-right extremes on voter availability.

These hypotheses show that we could expect some cross-level interactions. We are aware that it would be easier to interpret the coefficients of the interactions if

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they are expressed as deviations from their respective means, group mean centring. On the other hand, group mean centring changes the meaning of the entire regression model in a complicated way (Hox 2002). Besides, we are more interested in the type of interaction than in the exact coefficients, which is why we will not use group mean centring. Analysing cross-level interactions is similar to single-level interactions for which we interpret the interaction variable together with the direct effects of the explanatory variables and include, besides the interaction effects as well, both of the direct effects even if those are not significant in the regression model (Hox 2002).

Table 4.18: MLM to Explain Voter Availability, Pooled data: Multi-level Variance Year Model with Cross-Level Interactions: REML (EES1989-2009)[71]

Variables	Coefficient	Variables	Coefficient
Age	-0.0008***	*Polarisation left-right proximity*	0.0372***
Disproportionality age	0.00003**	**Extreme left-right**	0.0205***
GDP age	-0.0003***	*Ethnic left-right extreme*	-0.0033
Education	0.0105***	*Religion left-right extreme*	-0.0126***
Disproportionality education	-0.0004**	*GINI left-right extreme*	-0.0008***
Party-ID	-0.0952***	**Rural area**	BASE
Disproportionality party-ID	0.0016***	**Town**	0.0028
ENP party-ID	0.0073***	**City**	0.0006
Polarisation party-ID	-0.0005	**Ethnic fractionalization**	-0.0324
Social class	0.0020°	**Religious fractionalization**	0.0001
Religious attendance	0.0007	**GINI**	0.0010
Interest	0.0228***	**GDP**	0.0496***
Ethnic interest	-0.0197*	**ENP**	0.0151*
Polarisation interest	-0.0038**	**Disproportionality**	0.0007
Voted	-0.0156***	**Polarisation**	-0.0235**
Left right proximity	0.0927***	**Proximity general elections**	0.0028***
ENP left-right proximity	0.0076	**Economic sentiment**	-0.0013**
		Constant	0.5195***
N	53533	**AIC**	**-79.01**
Groups	90	**BIC**	276.51

° for p<0.1 *for p<0.05, ** for p<0.01, and *** for p<0.001*

Including the interaction terms in the model suggests that the effect of the individual variable on voter availability is not just limited to the unique variable but also depends on the level-2 variables. In the ML variance year model we used earlier, we noticed a main effect of age of -0.00131.

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[71] Appendix H details a model with all the significant interactions

In the regression model with cross-level interactions, the direct effect of age could be formulated as follows: Age * (-0.00075 + 0.0000346 * Disproportionality - 0.0000000295 * GDP). To explain this further, we use two example countries. The disproportionality for the first country equals the minimum, namely 0.42, and for the other country it equals the maximum, namely 25.25. The GDP in both countries is 25000. In the first country with low disproportionality, an increase of one unit of age (one year older) gives a predicted decrease of electoral availability of approximately 0.0015. Meanwhile, for the country with high disproportionality, a decrease of 0.0006 is observed. So, indeed the negative effect of age becomes stronger in countries with low disproportionality. Next, we keep the disproportionality the same (in this example, six) and compare two countries where the first one has a GDP of 15000 and the other one a GDP of 65000. We notice that for an increase of one unit of age, the country with a low GDP has a predicted decrease of 0.0010 and with the higher GDP, a predicted decrease of 0.0025. Showing that indeed the negative effect of age becomes stronger in countries with a higher GDP.

We formulated eleven hypotheses earlier about the effects of interactions. For the first two about the same age, we showed that both hypotheses are indeed valid. The more proportional a party system and the more developed the country, the stronger the effect of age on voter availability. Regarding education, we reject the 0-hypotheses which stated that there isn't an effect of proportionality on education. The table shows us that, indeed, the more proportional the party system, the stronger the positive effect of education on voter availability.

For party-ID, we formulated three hypotheses where the higher the number of parties, the higher the polarisation and the more proportional a system, the weaker the effect of party-ID on voter availability. The 0-hypothesis wasn't rejected for polarisation but it was for the number of parties. A higher number of parties weakens the negative effect of party-ID strength on electoral availability. For disproportionality, we notice an opposite effect as expected, meaning the more proportional the system, the weaker the effect of party-ID.

For political interest, we formulated two hypotheses, namely that higher polarisation and higher ethnic fractionalization weakens the positive effect of political interest on voter availability. For both hypotheses, the 0-hypotheses, that there isn't a relation, can be rejected.

For left-right proximity, we tested interaction effects with ENP and polarisation. The 0-hypothesis for the number of parties, that there isn't an effect of the number of parties, couldn't be rejected. For polarisation, we notice how the more polarised the country, the stronger is the effect of left-right proximity on voter availability.

For the last individual variable, left-right extremes, we considered the three cleavage variables for interactions. The three cleavage variables have the same sign, meaning the direction of the effect is the same. We will give two examples, one with weak cleavages and the other with strong ones. For the weak cleavages, we analyse a country with an ethnic-linguistic and religious fractionalization of 0.1 and for class a Gini household coefficient of 23. For strong cleavages, we analyse ethnic-linguistic and religious fractionalization of 0.6 and a Gini household coefficient of 35. For weak cleavages, every increase of a year results in a predicted decrease of voter availability of 0.00013. For the strong cleavages, we notice a predicted decrease of voter availability of 0.018. So, indeed, the stronger the cleavages, the stronger the negative effect of age on voter availability.

For most of the interactions we suggested in our hypotheses, we showed their validity and proved that indeed the relationship between the individual level-variables and voter availability is influenced by the level-2 variables.

4.3.6 Summary

We started this chapter with MLM of the level-1 and level-2 variables with the EES and performed analyses for each year separately. Over the years, we showed that the level-2 variables such as ENP, disproportionality, cleavages (ethnic, religion, and class), economic sentiment, development, and proximity of the general elections influence voter availability. However, as with the aggregate analyses in Chapter 4, we showed that not all of these variables remained consistent through the years and the effects of ENP and disproportionality could be considered as the most consistent. For the level-1 variables, most of the time, we observed the same results as with the individual-level regressions analyses, exhibited an influence of age, education, voted at the elections, party-ID, left-right proximity, and issue proximity. However, there are some variables which show decreased importance when we include the level-2 variables, as political trust, political interest, and extreme positions on the left-right/issue scale.

After these analyses, we used two different techniques for pooling the data, (Variance year and Cross error-components model). With these models, we notice significant effects of ENP, disproportionality, ethnic cleavage, development, economic sentiment, and proximity to the general elections, while not all of those showed statistical significant results in the yearly regressions. Among the level-1 variables mentioned, we noticed significant effects of age, education, political interest, voted at the elections, party-ID, left-right proximity, and issue-proximity, which provide us with stronger arguments to support the hypotheses we mentioned earlier. We dedicated one section to the interactions between the level-1 and level-2 variables and showed that there are many cross-level interactions; the effect of the individual independent variable on the dependent variable is moderated by an aggregate level variable, and confirms that a MLM model is useful in analysing voter availability. We analysed the voter availability across the different years as well and in real numbers, we found an increase of voter availability but if we control for aggregate level variables, the increase is not significant. The aggregate level variables explain the increase over time.

4.4   Discussion of results

Based on the literature review in Chapter 2, we formulated nineteen hypotheses on the individual level and seven on the aggregate level. In the previous section, we formulated eleven hypotheses that examined the interactions between the individual and aggregate level. The main dataset used for these analyses is the EES but we also used the national elections studies of the Netherlands and Ireland for those hypotheses that we were not able to test with the EES.

We began our literature review with the three voting theories and formulated hypotheses for the individual level. In tradition with the Columbia approach, we suggested that belonging to heterogeneous groups or being more integrated in those groups decreases the voter availability and tested this theory on the national dataset for the Netherlands, as well the EES for Estonia and the UK. Lipset and Rokkan formulated in 1967 that cleavages can create groups which are not entirely exclusive - cross-cutting cleavages. Bingham (1976) suggested that there are cleavages for which the membership is strongly associated with one specific party and there are also cleavages for which the group membership is associated with multiple parties. We tested three of the traditional cleavages namely: urbanization, religion, and class. The method used in this dissertation did not need further examination as we did not find any proof of the theories put forward by Bingham, Lipset, and Rokkan involving voter availability.

The second hypothesis concerning the Columbia approach suggested that higher integration in the groups where the cleavages are built on decreases voter availability. This hypothesis is tested over different years in models on an individual as well as on a multi-level that examined union membership and religious attendance. Religious attendance and union membership did not show any significant effect for the yearly data for the individual-level nor the multi-level models. For union membership, we found a positive effect for the pooled data with individual variables, which is the opposite of what we were expecting. Since we were concerned about controlling the effect of the sociological voting theory, we examined in Appendix E regressions without those variables which could have caused this problem, but the results did not suggest a post-treatment problem. Overall, we could not find support for the sociological approach in the tradition of Lipset and Rokkan (1967), where being more integrated in the groups where the cleavage structure is

based on decreases the voter availability. This outcome is in line with research suggesting that the effects of social membership declined in the last decades (Nie et al. 1976; Dalton 1984; Franklin et al. 1992; Tomassen 2005) and contradicts Manza and Brooks (1999) who suggest that social-group based cleavages were as important in the 1950s and early 1960s. On the other hand, we cannot be sure that the sociological voting theory affected electoral availability in times when cleavages were important on the vote choice as we only examined datasets since 1989.

The next school of thought was the Michigan University which uses a socio-psychological approach based on party-identification to explain voting behaviour. Results on the individual and multi-level suggest that a stronger party-ID decreases the electoral availability. This is aligned with much of the research following the approach formulated in The American Voter (A. Campbell et al. 1960), where the party-identification operates as a party cue affecting the vote choice. In our case, it is affecting the proximity of the preferences to different parties.

The Rochester School found the fundamentals for the rational choice theory with the work of Antony Downs as its pioneer. Based on its rationality principle, we formulated four hypotheses for the two spatial voting theories. For proximity voting, the voter will vote for the party located at the shortest distance from the voter's own location on the left-right continuum (Van der Eijk and Niemöller 1983). For the directional theory, the voter has a preference for a direction with a certain strength. For the directional theory, the support for the party should peak at the extremes of the scale, while for the proximity theory, support should peak at the party position (MacDonald and Rabinowitz 1993). Those hypotheses are approached on a left-right scale with general party ideology as well with specific EU-issues. For the proximity theory, we suggest that the smaller the distance between parties and self-placement, the higher the increase in voter availability. We found strong support for general left-right as well as for EU-issues for all the models where we pooled the data (individual as well as multi-level models). For the yearly regressions, we found support for these hypotheses in most of the years on the individual as well for the multi-level models. For the directional theory, we suggested that the further away the voter's position is from the mean, the lower the voter availability. Support is found in most of the yearly regressions and the pooled models for the individual level. For the multi-level model, the effect is not significant any longer for all of the different years but holds the

accepted significance level in a pooled model. [72] Overall, these results suggest that the proximity-voting theory is a strong and solid theory in explaining voter availability, meanwhile for directional-voting theory the substantial effect is smaller. For the directional theory, the result can be trusted for models with (pooled) individual level variables but if we consider aggregate level variables as well, the results can only be trusted if the data is pooled but not for individual years (as the 5% confidence level is not reached). The rationality principle of Downs (1957) for spatial voting with the shortest distance hypotheses as formulated by der Eijk and Niemöller (1983), and directional theory formulated by MacDonald and Rabinowitz (1993) are important factors in considering electoral availability. Key (1966) stressed the importance of issues for the vote choice and our research confirms this as well for electoral availability.

In the last two decennia, the importance of the party leader became more prominent as it was not given much attention in the three traditional voting theories (e.g., Berelson 1944; A. Campbell et al. 1960; Downs 1957). Some scholars argue that the role of party leader is an important element in the vote decision (Stewart and Clark 1992; Mughan 2000; Graetz and McAllister 1987). We suggested that a higher level of voter availability is initiated by having close preferences to different party leaders. In examining the Dutch and Irish national election studies for which we control age, party identification, and left-right proximity, a strong significant effect is observed. We disagree with scholars who doubt that party leader evaluation impacts the vote choice (A. King 2002; Bartle and Crewe 2002) and agree with those who do.

The pioneer study of Downs is the foundation of spatial voting theories as well as economic voting, and retrospective and prospective voting. Key, another pioneer scholar in economic voting theories, argues that voters evaluate the incumbent government's performance and decide to punish or reward the incumbent parties (retrospective voting) (1966). Using national electoral studies of the Netherlands and Ireland, we examined the different hypotheses on voter availability in an economic voting framework, where government and non-government voters are split up. We found support for Key's findings showing that for the government voters, the more satisfaction about the performance of the government, the higher the voter availability. Key's findings were supported by many scholars (e.g., Kramer 1971;

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[72] For the pooled multi-level model, the variable for EU-issues is not included in EES 1989.

Fiorina 1978; Lewis-Beck 1986). If we look at the economic conditions, some scholars emphasise national conditions (socio-tropic evaluations) (e.g., Key 1966), meanwhile others look at the voter's own economic situation (pocketbook evaluation) (e.g., Fiorina 1978). In our results, we found partial support for retrospective socio-tropic voting, where a positive evaluation of the economy for the non-government voters and a negative evaluation of the government voters increase the voter availability compared to those with a neutral evaluation of the economy. For retrospective pocketbook voting, we could partially show that a positive evaluation of one's own economic situation for the governmental voters decreases the voter availability. For prospective voting, scholars suggest that voters evaluate the future economic performance (Chappell and Keech 1985; Mackuen et al. 1996). For the socio-tropic side of prospective voting, we found a weak suggestion that for government voters, a positive image of the future economy will decrease voter availability, whereas a negative image will increase voter availability. For prospective pocketbook voting, no evidence could be found. So, overall we found more support for government voters over non-government voters, retrospective over prospective voting.

For our research, we also examined demographic characteristics and attitudes. We suggested that lower age would increase the voter availability. Earlier research on floating voters suggested that there is no difference in age, sex, or social status between those who changed preference and those who didn't (A.H. Birch and Campbell 1950), meanwhile other studies contradicted those results (Verheyen 2005). Our research showed that voter availability decreases as the age of the voter increases. The substantial effect of age is the strongest of all the demographic characteristics. This is line with earlier research (Verheyen 2005) about floating voters and potential switchers (Kroh et al. 2007) An explanation for this is that younger voters did not develop a stable voting pattern yet (Keith et al.1992) and that the younger generation has a higher level of post materialist values which emphasises autonomy and self-expression (Inglehart 1971; 1977).

One of the causes given to the process of party de-alignment is that the younger generation is more highly educated. We notice that having a higher education level does indeed increase the voter availability. These results are in line with the cognitive mobilisation process (Dalton 1984). The results contradict early research including that of A.H. Birch and Campbell (1950) who argued that floating

voters are not distinctive demographically, or the research of W.G. Mayer and Teixeira (2008) who held similar views about swing voters. Similar to Kroh et al. (2007), we found evidence of the influence of education.

Another aspect of the modernisation theory suggests that the shift from a traditional agrarian society towards an industrial one leads to urbanization (Inglehart 1971; Dalton 1984). Citizens in local communities are strongly rooted, while those in cities are not as imbedded in the community (Norris 2004). We could not find any support for the theory that persons in a more urban environment have a higher level of voter availability.

Inglehart (1994) indicates that there is a switch to more post materialist values in any society that has experienced sufficient economic growth in recent decades. We assume that this value switch is not equally distributed in the society and that a higher social class increases the voter availability. The voters with a higher social class are less dependable on economic security and consider multiple party choices more freely. The pooled data with only individual levels suggest some effect but as the separate yearly regressions with only individual and the multi-level models did not show any significant results, this aspect of the modernisation theory is not supported for voter availability.

Lastly, we explored the attitudes for the individual-level variables. There are two attitudes which showed a significant effect across the years as well as in the pooled data with only individual-level variables, namely: political trust and voted at the EU elections. While the former increases the voter availability, the latter decreases the voter availability. In the multi-level model, the voted at the EU elections variable stays significant in most of the years as well in the pooled dataset. The effect of trust is not as constant over the different years in models with individual and multi-level variables but is for the pooled model one. The results of voted at EU elections is in line with the research of W.G. Mayer and Teixeira (2008) who concluded that swing voters are less engaged in politics, and early research about cross-pressure voters which suggested a negative effect (Berelson et al. 1954). This is in line with Downs's rational-choice theory, which argues that the voters compare the utility of different options and choose the option that offers the highest personal advantage. Suppose that the voter is not expecting a big variance between two parties, and there is little personal advantage/disadvantage from a victory/defeat of a certain candidate/party. In this case, the utilities between the parties are small which

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increases the possibility of abstention (Downs 1957). The results of political trust are in line with the research which has shown that the distrustful are more inclined to vote for an outsider candidate with anti-government themes, if the choice is available (Levi and Stocker 2000). This is similar to Mayer's research (2008), which argued that the swing voter is a moderate voter and not an extreme one. If the political trust is high, the person does not prefer a radical change and considers more possibilities for whom to vote.

The other two attitudes remaining are political interest and knowledge. Political interest is not constant with direction or significance in models over different years. Pooling the data showed a positive significant effect, meaning that a higher level of interest increases the voter availability. Previous research showed a negative effect of political interest concerning floating voters (e.g., Converse 1962) and independent voters (e.g., A. Campbell et al. 1960). In addition, research showed this negative image of late deciders who were less interested in politics and paid less attention to political news than early deciders (Pool 1963; Katz 1973). Our results support more of a positive image of those who are available for the electoral completion, this as suggested by Fournier (2004) for late deciders, or Kroh et al. (2007) for potential switchers. Nevertheless, the results are too weak to make any strong assumptions. Political knowledge as political interest was not constant with direction and significance. We suggested a negative effect, meaning that a higher level of knowledge would decrease the voter availability. For models with only individual level variables, we notice a negative significant effect for one year and the pooled data, but a positive non-significant effect for the other. For the multi-level model, we notice two significant effects with opposite directions. As for political interest, the evidence for political knowledge is too weak to make any conclusions. Interesting to note is that in all of the models, the variables of interest and knowledge are trending in opposite directions which propose an argument against Luskin's study that knowledge and interest as a rule modulate in the same way (1987).

The second main concern in this research is the influence of aggregate level factors on voter availability. Pedersen's research (1979) introduced a formula for electoral volatility and described a general trend in Europe towards more high volatile elections, and Crewe and Denver (1985) who explain this trend stress that the affiliation between social-structural variables and the party support, are major contributions to this new field of research in electoral behavioural studies. Foremost,

the research of Bartolini and Mair (1991), who identified institutional factors influencing volatility, founded the essentials for our research design. Pedersen (1983) and Bartolini and Mair (1991) showed the relevance of the number of parties on electoral volatility. In line with this research, we came to the same conclusion that the more parties there are in a system, the greater the increase in electoral volatility. In the last section, we also examined the cross-level interactions. Schmitt and Holmberg (1995) argued that the effect of party-ID on the vote choice is conditioned by the number of parties, for which the effect of party-ID is stronger in countries with a low number of parties. Our results showed that the same can be said for voter availability, where the higher the number of parties, the weaker the effect of party-ID on voter availability. Wessels and Schmitt (2008) showed the higher the number of parties, the stronger the impact of proximity considerations on the vote choice. We expected a similar effect on voter availability where the higher the number of parties, the stronger the effect of left-right proximity but this could not be shown.

Bartolini and Mair (1991) also suggested that for countries with a more disproportional voting system the mean volatility is higher. One of the features causing more disproportionality is a higher threshold which increases the electoral volatility (S. Birch 2003; Land and Ersson 2007). Despite not every yearly aggregate and multi-level regression showing a significant effect for disproportionality, the ones for which we pool the data did. A higher disproportionality increases the voter availability. For the cross-level interactions, we also expected that the proportionality of a system influences the effect of age, education, and party-ID on voter availability. Duverger (1954) claimed that as supporters of smaller parties do not want to waste their vote, they vote for a less desirable party in disproportional voting systems. As the voter grows older, he or she generates a habit of voting and getting more familiar with the party system. We showed that the effect of age will be stronger in more proportional voting systems as the older voters in more disproportional systems are aware of these effects and for that reason, are more similar to the younger voters than in proportional systems. A similar effect on tactical voting was shown by education, where tactical voting is associated more with higher educated voters (Fiorina 1996; Verheyen 2007). We revealed that the more proportional the voting system of the country, the stronger the effect of education on voter availability. Schmitt suggested that PR systems are unfavourable for party-ID (2002). We suggested the effect of party-ID would be weaker in PR systems, but we found that the more proportional the voting system, the stronger the effect of party-ID on voter

availability. An explanation for this contradicted result is that those with a lower party-ID are more likely to cast a tactical vote (Neimi 1992). Tactical voting is an aspect of disproportional systems and for those systems the effect of party-ID on voter availability is weaker as the voters with a higher party-ID are pushed to consider as well multiple parties.

The research of Bartolini and Mair (1990) as well as Roberts and Wibbels (1999) and Travis (2005) has shown that the greater the policy differences between parties, the greater the system's polarisation, and the less likely an individual will actually switch party choice. This dissertation supports these findings but the results are not as consistent and strong as the above two effects of the voting system on voter availability over the different years and with the pooled dataset on the aggregate and multi-level. Besides those direct effects of polarisation, we also expected effects on the relationship of individual level variables and voter availability. Schmitt showed the correlation between polarisation and party-ID, where higher polarisation is resulting in more partisanship (2002). The suggested interaction effect based on Schmitt (2002) could not be verified in our research instead of the interaction effect of political interest with polarisation. We indicated that the higher the polarisation, the weaker the effect of political interest on voter availability. This means that a voter who shows interest in politics in highly polarised countries will be more interested in one specific party without considering multiple voting options. Wessels and Schmitt (2008) revealed that the more polarised a country, the stronger the impact of proximity considerations. In the same line of thought, we showed that the more polarised a system, the stronger the effect of left-right proximity on voter availability.

Lipset and Rokkan (1967) and Bartolini and Mair (1990) showed that in countries with stronger cleavages, the electoral volatility is lower. For our research, we examine the class, ethnic, and religious cleavages. As the effect of those variables is not consistent over the different years in our research, we can't make any strong inferences about them. In the tradition of the theories of Inglehart (1971; 1981; 1984; 1997) who exposed that in any society that experienced sufficient economic growth will switch from materialist to post materialist values, we suggested that a higher standard of living would increase the voter availability. The interesting aspect about this variable is that for the aggregate regressions, only for 2009, we notice a significant effect, meanwhile for the multi-level regressions this effect

becomes significant in four of the five different years. For the pooled data, we also showed a strong and constant effect which supports our hypothesis. The indirect effect of the cleavages on voter availability is examined in cross-level interactions where the relationship between strength of the cleavages and the left-right extremes as well as between ethnic fractionalization and political interest is examined. Since the cleavages are used as party cues in the decision-making (Lipset and Rokkan 1967), in a party system with strong cleavages, the voters are more loyal (Roberts and Wibbels 1999; Bartolini and Mair 1990). In this view, we show that the stronger the cleavages, the stronger the effect of left-right extremeness on voter availability. A person who holds extreme positions on the left-right scale shows less voter availability and this effect is even stronger in countries with a stronger class and religious cleavage. We also examined if the strength of a cleavage affects political interest and demonstrated that the higher the ethnic fractionalization, the weaker the effect of political interest on voter availability. The suggested explanation for this effect is that in countries with strong cleavages, interest in politics will not lead to confirming one specific vote choice instead of considering multiple voting options.

Besides the party system and country characteristics influencing voter availability, we also suggested effect of short-term economic considerations and the electoral tension of the elections. In the key research on electoral behaviour, namely, The American Voter, the authors state that it is more likely to punish the incumbent party for its mistakes than reward it for its success (A. Campbell et al. 1960) and that economic downturns reduces votes for the incumbent party, but economic prosperity does not have the same effect (Bloom and Prince 1975). We found positive and negative effects over the different years and significant negative effects for the pooled data. This last effect can be seen as support to our hypothesis but strong conclusions cannot be made. This is the same for electoral tension for which we suggested that the further away the general elections are of the country, the higher the voter availability. We found some support in line with Birch (2003) who revealed that the longer the period between two elections, the more time the voters have to switch their preferences. Meanwhile, the pooled data regressions show this effect and we could not make the same conclusion for all the individual regressions.

One other question which is repeatedly examined is the change over time. We concluded that there is indeed an increase in voter availability but this variation over time can be explained by the change of aggregate level variables.

Conclusions

"He who thinks a great deal is not suited to be a party man: he thinks his way through the party and out the other side too soon." (Nietzsche [1878] 1996, 179)

Although Nietzsche shared his thoughts more than a century ago, they still remain a topic of discussion in political research today. How does the "party man" differ from the voter who is not aligned with a certain party? Contributing to a long tradition of electoral research on volatility, this dissertation tries to fill a gap about the available electorate, the electorate for whose vote the different parties can compete for. Contemporary research in electoral volatility often focuses on those who switch party preferences between consecutive elections, but the act of switching does not inform us about who is available or not for electoral competition. Our research falls under the heading of electoral volatility research, but the main difference between this and the earlier works is that we are looking at the availability of the voter to the electoral change, rather than the electoral change itself.

Voter availability is defined as the degree of the availability of the voter to the electoral competition, the degree that the voter is likely to be persuaded by the different parties. This availability is not only translated into vote swings, but can also express itself as a voter being undecided before the elections, considering multiple party preferences or giving a split-ticket vote. While looking for a method to measure voter availability, we first focused on one of those aspects of voter availability. Second, we claimed that the traditional methods which focus exclusively on the party voted for are unsatisfactory. The determinants of the vote decision can only be identified by studying the preferences rather than the final choice (Tille 1995). This pre-decision process is crucial for understanding voter availability and for that reason, we are making use of "Probability to Vote" to operationalise voter availability. These are indicators of the strength of support for each party and give us the opportunity to explore voter preferences for more than one party. The formula proposed in Chapter 3 is an addition to the approach proposed by Kroh et al. (2006). Empirical research of the NKO data for 2006 and 2010 showed that the most important indication of voter availability is the gap between the two highest ranked parties, but despite this there is also a need to consider lower ranked parties. The formula we proposed considers all the parties with some importance to the voter. The

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main idea behind this novel measurement is that closer preferences between the different party options would indicate a higher level of voter availability.

This dissertation answers the two main research questions, namely: what are the factors that explain voter availability on the individual level and what are the factors that explain voter availability on the aggregate level? We examined these questions not only on their respective levels but also on the multi-level. The data used is mainly the EES 1989 to 2009, but also the NKO of 2006 and 2010 and the INES of 2002 and 2007.

What are the main findings? First, concerning the three different traditions in voting theory, we found the most support for the socio-psychological and rational theories, whereas we observed little support for the sociological voting theory. For the socio-psychological approach, we could say that being less aligned with a certain party decreases voter availability. For the rational, spatial-voting theories, we found support that the proximity of the voter's position to the different parties on a left-right (issue) scale increases voter availability. Another aspect of spatial-voting (i.e. holding a more extreme position on these scales), decreases voter availability, and was supported as well. For the sociological voting theory for which we tested as being more integrated in the groups where the cleavage structure is built on and being less cross-pressured by belonging to homogenous groups, resulting in a decrease in the voter availability could not be supported.

Besides the traditional voting theories, we also examined more novel voting theories. We found support for the idea that having closer preferences between different party leaders indeed increases voter availability. With the economical voting theories, retrospective and prospective voting, we found an effect of retrospective voting, but one should be careful not to draw too strong conclusions due to the weak results of economic voting.

In addition, we examined demographic characteristics and attitudes. For the modernisation theory, which suggests that belonging to a higher social class or living in a more urbanised environment increases voter availability, the hypotheses were not supported. In contrast, the effects of characteristics such as having a younger age and having a higher education increase the voter availability and were strongly supported. Finally, we examined political attitudes. Strong support was found for the hypothesis that a person who actually voted at the elections has a lower voter

availability than a person who did not. The other attitudes showed that a higher political trust increases the voter availability, although including the aggregate-level variables weakens this effect. For political interest and knowledge, no strong conclusions could be made due to the weak and contradicting results.

The question that the party system, the voting system, and country characteristics influence voter availability is positively answered. That a higher number of legislative parties in a system increase voter availability is a hypothesis that we can be confident about. Apart from that, we find sufficient support that the more disproportional the party system and the more developed the country, the greater the increases in voter availability. Concerning polarisation of the party system, the results are not as strong but we can conclude there is an influence as higher polarisation decreases the voter availability. With cleavages in society, we suggest that the stronger the cleavages, the lower the voter availability. We notice that the ethnic cleavage has a more consistent effect, whereas the effects of class and religious cleavages are limited in their explanation of voter availability. Besides those mid-term and long-term variables, we also added short-term variables as the economic sentiment six months before the elections and the political tension (measured by how far the general elections are from the moment the questionnaire is taken). Despite the non-consistent results in the different years, pooling the data showed that the lower the economic sentiment and the further away the elections, the higher the voter availability. Due to the lower number of countries in each year, the effects are not as likely to achieve statistical significance. By pooling the data, we get a higher number of elections to examine. The influence of those aggregate level variables does not limit itself to a direct influence but also to the influence of the relationship between the individual variables and voter availability. One of those effects is that the more developed the country, the stronger the effect of age on voter availability or the higher the number of parties, the weaker the effect of party-ID on voter availability. The increase of voter availability in real numbers over the different years is explained by those aggregate level variables and not as increases, as such.

So, what do all of these effects mean and should we care about them? There are two main conclusions to be made. First, we can say that voter availability is not something that is randomly distributed among the electorate. There are some groups who have a higher "potential" of being available for the electoral competition, such as, for example, a young person with a higher education who is positioned more

moderately on the left-right scale. Meanwhile, an older person with a lower education who is holding a more extreme position on a left-right scale would be considered "out of competition." So, we can distinguish certain groups in society by attitudes and characteristics that should be the target of electoral campaigns.

Second, we can say that voter availability is not randomly distributed among different countries. Certain country and system characteristics increase the electoral availability while others decrease it. This could be interesting for electoral design where electoral stability is the goal.

But then again, what makes this research unique for the research on voter instability and what are the further implications on voting behavioural studies? There are two aspects of our research which are the main additions to the field of electoral volatility.

First, earlier research in electoral volatility often focuses on a single country or a single year. Our research makes use of 90 different elections across Europe and across time and gives the possibility to examine voter availability with a multi-level method. Our research shows the importance of country and party/voting system characteristics and underlines the importance of aggregate level variables in voting behavioural studies. We strongly recommend that voting behavioural studies consider multi-level methods in their analyses.

Second, contemporary research in electoral volatility often focuses on those who switch party preferences between consecutive elections, but the switching itself does not inform us about who is available or not for electoral competition. We are looking at the availability of the voter to the electoral change making use of the "Probability to Vote Question." Previously, authors have used this question to measure the potential to switch, but they only considered the gap between the two most preferred parties. Our research showed that the lower ranked parties have some importance as well and our formula considers all the parties with some importance to the voter. This new formula is an improvement to current measurements in the field.

Besides these two main aspects, we want to outline some other main implications of our research.

First, concerning the different voting theories we notice that from the three traditional voting theories, we found most support the socio-psychological and rational voting theories, whereas we found few in support of the sociological voting theory. This is in line with the electoral voting theories which outline the decrease of the importance of cleavages on voting behaviour. Our research underlines the importance of party-leader and issues in the electoral research.

Second, our research shows the importance of demographic characteristics and attitudes. Electoral research sometimes leaves these out of the equation to analyse voting behaviour. Our research suggests that these characteristics and attitudes are important and should be considered.

Third, besides the more traditional aggregate level variables in electoral research, such as the number of parties, disproportionality, polarisation, and cleavages, we introduced variables such as development which is common in political science research, but not as integrated in electoral research. In addition, we also introduced short-term variables such as the economic sentiment and the proximity of the general elections. These variables showed some importance and it would be interesting to see the effect of these on different aspects of voting behaviour studies.

Although our research provided us with answers on voter instability, other questions remain, or new ones are brought into play.

Concerning political interest and knowledge, we notice that we get the opposite effect and those results contradict much of the previous research. Is this really contradictory or does the available voter act like an "average voter," meaning that they are neither very interested nor uninterested, neither very knowledgeable nor unknowledgeable?

Do our results hold for a non-European context as well or are the results "just" European results? It would be interesting to see if our results would hold if we change the party system (e.g., a pure 2-party system) or the country characteristics (e.g., a developing country).

Another question raised and which was out of the scope of our research is to approach the differences between specific parties. Using case studies where specific parties are considered would extend our knowledge of the available electorate

enormously. We can imagine that the voter who is holding close preferences for the Green party and the Labour party is not the same as a voter having close preferences to Sinn Féin and the PDs. Analysing those differences by country would give us the chance to examine a new field of voter availability. This aspect of available voters would be of interest to political parties in addition to academia. We can analyse the differences between the voters who voted for a certain party and those who have a high potential to do so. This information could be used for parties to gain party support.

Another unfamiliar territory which can expand the interest to political campaigning is to analyse the effects of campaigns on those voters who are available for the elections. Political campaigns could be more efficient if they could focus on those voters who have a higher potential to switch.

Overall, this dissertation extended the knowledge that we currently have about the available voter. Although we did not answer or could not answer all of the possible questions raised about this matter, this dissertation should be seen as an attempt at approaching electoral volatility and the electoral competition in an innovative way, with a comprehensive data base and with great promise for future research.

Appendices

Appendix A: Considering multiple parties for calculating voter availability

In Chapter 3, we examined if we need to consider the two most-preferred choices as well as the third and fourth preferred parties. In the chapter, we did those analyses for doubter approach, but not for the UCM and floater approach. In this appendix, we will discuss the results of those analyses.

For the UCM approach, we have two groups. On the one hand, we have a group consisting of those voters who were undecided a few weeks before the election and those who changed their vote intention between the pre- and post-election survey. And on the other hand, we have those who stuck to their vote intention when casting their vote. In the 2006 data, we noticed that when the PTV questions showed an equal preference of the two most preferred parties, there is a 74/26 distribution in favour of "being undecided or changed mind." If the second gap is small as well (less than or equal to 1), then there is a 79/21 distribution, and a 68/32 if the gap is greater than 1. Also, other categories with different gap sizes show similar results which display the importance of considering multiple party preferences to analyse the PTV scores.

Table A.1: UCM and the Gaps between Preferred Parties, Row Percentages (NKO 2006) [73]

Gap 1	Gap 2	Gap 3	NO	YES	Gap 1	Gap 2	Gap 3	NO	YES
0	≤1	≤1	19	81	1	≤1	≤1	37	64
		>1	24	76			>1	41	59
	Total		21	79		Total		38	62
	>1	≤1	23	77		>1	≤1	45	55
		>1	46	54			>1	57	43
	Total		32	68		Total		49	51
Total			26	74	Total			43	57
2	≤1	≤1	61	39	3	≤1	≤1	68	32
		>1	69	31			>1	89	11
	Total		64	36		Total		76	24
	>1	≤1	66	34		>1	≤1	76	24
		>1*	79	21			>1*	75	25
	Total		70	30		Total		76	24
Total			66	34	Total			76	24

*= category with less than 50 cases so we should be careful interpreting these results

The 2010 results are similar to those of 2006. If the gap equals 1, we get a 54/46 division in favour of being "undecided and changing vote intention." If the second gap is small, this number increases to a 58/42 distribution. Meanwhile, if the second gap is greater than 1, it decreases to a 45/55 distribution. Next, we split those respondents whose first gap is 1 and whose second gap is less than or equal to 1, into those where the third gap is small as well (less than or equal to 1), and whose third gap is greater than 1. We notice that the distribution increases to 61/39 in favour of being "undecided and changing vote intention" to "not changing the vote intention" of those voters with a small gap between the third and fourth preferred party (third gap). For those where this third gap is greater than 1, we get a 50/50 distribution.

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[73] N in order: gap 0: 157/108/265141/82/223/488, gap 1: 206/132/338/143/68/211/549, gap 2: 171/115/286/125/57/182/468, gap3: 109/59/168/85/20/105/273

Table A.2: UCM and the Gaps between Preferred Parties, Row Percentages (NKO 2010)[74]

Gap 1	Gap 2	Gap 3	NO	YES	Gap 1	Gap 2	Gap 3	NO	YES
0	≤1	≤1	33	67	1	≤1	≤1	39	61
		>1	35	65			>1	50	50
	Total		33	67		Total		42	58
	>1	≤1	24	76		>1	≤1	52	48
		>1	50	50			>1*	65	35
	Total		32	68		Total		55	45
Total			33	67	Total			46	54
2	≤1	≤1	55	45	3	≤1	≤1	63	37
		>1	64	36			>1	69	31
	Total		58	42		Total		65	36
	>1	≤1	59	41		>1	≤1*	70	30
		>1*	80	20			>1*	86	14
	Total		63	37		Total*		73	27
Total			59	41	Total			66	34

*= category with less than 50 cases so we should be careful interpreting these results

Next, we explore the *Floater* approach for those who did or did not vote the same as in the previous elections. For the 2006 data, we notice that if the gap is 0, meaning equal preferences between the two most preferred parties, there is 62/38 distribution in favour of not floating. However, the distribution increases to 68/32 if the second gap is small (equal or closer to 1) and decreases to 54/46 if the second gap is large (greater than 1). We notice similar results in the 2010 data. Also, in this case the importance of the third and fourth preferred party on the PTV scale is shown.

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[74] N in order: gap0: 169/79/248/122/54/176/424, gap1: 300/115/415/144/40/184/599, gap2: 234/104/338/98/25/123/461, gap3: 121/42/163/33/7/40/203

Table A.3: Floater and the Gaps between Preferred Parties, Row Percentages **(NKO 2006)** [75]

Gap 1	Gap 2	Gap 3	NO	YES	Gap 1	Gap 2	Gap 3	NO	YES
0	≤1	≤1	71	29	1	≤1	≤1	58	42
		>1	64	36			>1	47	53
		Total	68	32			Total	54	46
	>1	≤1	68	32		>1	≤1	50	50
		>1	50	50			>1	36	64
		Total	54	46			Total	45	55
Total			62	38	Total			50	50
2	≤1	≤1	29	71	3	≤1	≤1	34	66
		>1	32	68			>1	13	86
		Total	30	70			Total	27	37
	>1	≤1	30	70		>1	≤1	16	84
		>1*	22	78			>1*	16	84
		Total	28	78			Total	16	84
Total			29	79	Total			23	77

*= category with less than 50 cases so we should be careful interpreting these results

Table A.4: Floater and the Gaps between Preferred Parties, Row Percentage (NKO 2010) [76]

Gap 1	Gap 2	Gap 3	NO	YES	Gap 1	Gap 2	Gap 3	NO	YES
0	≤1	≤1	68	32	1	≤1	≤1	57	43
		>1	78	22			>1	55	45
		Total	71	29			Total	57	43
	>1	≤1	69	31		>1	≤1	39	61
		>1*	42	58			>1*	43	57
		Total	61	39			Total	40	60
Total			67	33	Total			51	49
2	≤1	≤1	41	59	3	≤1	≤1	26	73
		>1	35	65			>1*	13	87
		Total	59	61			Total	23	77
	>1	≤1	28	72		>1	≤1*	20	80
		>1*	32	68			>1*	29	71
		Total	29	71			Total*	22	78
Total			36	64	Total			22	78

*= category with less than 50 cases so we should be careful interpreting these results

[75] N in order: gap0: 112/84/196/104/73/177/373, gap1: 163/115/278/121/66/187/465, gap2: 136/99/235/109/50/159/394, gap3: 93/51/144/70/18/88/232
[76] N in order: gap 0: 144/67/211/110/48/158/369, gap 1: 268/101/369/127/35/162/531, gap 2: 203/93/296/92/25/117/413, gap 3: 99/38/137/30/7/37/174

Appendix B: Other considered methods for measuring voter availability

In Chapter 3, we introduced the following formula:

$$Voter\,Availability = \frac{\sum_{i=2}^{n}\left[\{10-(ptv_{i-1}-ptv_i)\}n^{n-i}\right]}{10(\sum_{i=2}^{n}n^{n-i})}$$

While the steps for calculating the gap and the weight factor are explained in the chapter, we will also consider other methods and will provide a short overview of a few different approaches and why we choose this particular method for our study of voter availability.

The sum of all the PTV scores for each individual; a higher score indicates that the person is considering more parties.

The method is not without its disadvantages; first, it is harder to compare different countries since the countries with a greater number of parties will have a greater chance of obtaining a higher score. Second, a higher score does not automatically indicate higher availability. For example, a person who scored the first two parties at 7-7 will have a cumulative score of 14 for all parties, however, another person who filled in 10-4-4 for the top three parties, gets a score of 18. In this example, while the latter has an overall higher score of availability, it is the former that is having a higher level competition. A solution would be to use the average of the PTV scores filled in which the first respondent scores 7 and the second scores 6, but the disadvantage here is that we cannot distinguish between a person who scored three parties with a 9 and another person who only scored one party and that, too, with a 9. The average in both cases would be the same although we can say with confidence that the first respondent is clearly having more doubts on who to vote for. Another solution would be to incorporate how many PTV questions are asked, but this would make the differences between countries too large. Thus, of all these approaches, the one considering the gap is a more reasonable approach, and is used in our study to measure voter availability.

We also considered using a different weight factor from the one we are using now (i.e., n^{N-i}). The value of the weight factor, from this method, will incorporate five (5) parties and will be 1-5-25-125 where 1 is for the lowest gap, 5 for the highest, and so on. Another possibility would be, for example, 2,4,8,16,32,64,128 which indicates that every gap in the continuum is twice as important as the preceding gap. The advantage of this approach is that it incorporates the variation and ensures a better distribution of the values. The disadvantage is that there is less importance on the two most preferred parties. A person has only one vote to cast so the first gap should be the main parameter of voter availability. The lower gaps should give the possibility to enhance the voter availability based on the two most preferred parties, nevertheless not to change it too drastically. Our proposed method limits the variation and positions the first gap as the main indicator.

Another question that has to be answered is if we should exclude certain respondents. Marsh (2006) left those respondents out of his analysis whose PTV scores did not reach 6 to provide a better comparison between voters in the competition and those out of the competition. Though there exist very strong theoretical arguments that those respondents who have lower PTV scores display increased abstention for voting during elections, excluding all of them is a bit too harsh. An example of this is the EES of 2004 where there was a 65/35 division to vote with the higher PTVs (6-10) and those with lower PTVs (1-5), a 35/65 division. We will not go as far as Marsh and exclude all respondents who did not rate any party above 5, but will exclude those with the lowest 4 categories; this means that on a 10-point scale, respondents not rating any party higher than 4 will be excluded. On an 11-point scale (from 0-10), this would mean any respondent who did not rate any party above 3. On the other hand, we will exclude those voters who answered all the PTV questions for different parties within the country and gave all of them an equal score.

Appendix C: Summary statistics of individual level data (EES)

Year	Statistics	Voter availability	Age	Education	Social class	Religious attendance	Union member	Interest	Voted
1989	N	9495	33319	33319	31081	26622	31247	32998	10475
	Mean	0.624	43.179	2.612	2.382	3.038	0.281	2.335	0.723
	SD	0.311	17.524	1.412	1.031	1.091	0.449	0.953	0.447
1994	N	10795	47921	47880	44484	34876	35382	24694	12313
	Mean	0.645	44.221	2.850	2.340	3.089	0.300	2.339	0.711
	SD	0.286	17.480	1.496	1.051	1.058	0.458	0.926	0.453
1999	N	11908	13522	12478	12242	9592	13221	13009	12954
	Mean	0.695	44.252	3.476	2.366	3.509	0.320	2.465	0.705
	SD	0.269	15.966	1.575	1.085	1.155	0.466	0.877	0.456
2004	N	20634	23917	22587	21982	21522	22761	23135	23389
	Mean	0.688	47.540	3.480	2.412	2.510	0.317	2.423	0.685
	SD	0.264	16.965	1.474	1.039	1.159	0.465	0.870	0.493
2009	N	23859	26749	26629	26116	26537	0	26964	26394
	Mean	0.690	50.296	3.687	2.472	2.504	.	2.562	0.710
	SD	0.281	16.910	1.455	1.019	1.201	.	0.901	0.454
Pooled	N	76691	145428	142893	135905	119149	102611	120800	86525
	Mean	0.676	45.649	3.105	2.389	2.876	0.300	2.417	0.677
	SD	0.280	17.363	1.531	1.043	1.171	0.458	0.917	0.468

YEAR	Statistics	Knowledge	trust	Party-ID	Proximity left-right	Extreme left-right	Proximity issue	Extreme issue	rural	Small town	Big town
1989	N	0	0	31900	8898	28413	0	0	33215	33215	33215
	Mean	.	.	0.980	0.849	1.605	.	.	0.379	0.340	0.281
	SD	.	.	0.959	0.200	1.608	.	.	0.485	0.474	0.450
1994	N	12443	24443	46184	10349	35739	8860	11405	35150	35150	35150
	Mean	0.581	3.554	0.922	0.812	1.413	0.859	2.718	0.364	0.346	0.290
	SD	0.370	2.285	0.936	0.223	1.555	0.217	1.464	0.481	0.476	0.454
1999	N	0	0	12248	10805	11412	9501	12009	13485	13485	13485
	Mean	.	.	0.857	0.849	1.720	0.825	1.811	0.383	0.348	0.269
	SD	.	.	0.959	0.219	1.783	0.267	1.594	0.486	0.476	0.443
2004	N	0	22770	20913	19671	20438	17354	20754	23866	23866	23866
	Mean	.	4.938	1.004	0.806	1.814	0.789	2.172	0.328	0.347	0.325
	SD	.	2.010	0.971	0.236	1.784	0.271	1.947	0.470	0.476	0.468
2009	N	26503	26708	25595	22376	23633	19618	24679	26917	26917	26917
	Mean	0.563	5.915	0.934	0.844	2.050	0.834	2.466	0.322	0.287	0.391
	SD	0.267	1.984	1	0.206	1.825	0.241	1.901	0.467	0.453	0.488
Pooled	N	38946	73921	136840	72099	119635	55333	68847	132633	132633	132633
	Mean	0.568	4.833	0.944	0.830	1.682	0.822	2.305	0.355	0.333	0.312
	SD	0.304	2.316	0.962	0.219	1.701	0.253	1.822	0.478	0.471	0.463

Appendix D: OLS assumptions tests

The tests:

-Normality of residuals: errors are normal distributed. Inter-quartile range test. This test assumes the symmetry of the distribution. The test gives severe and mild outliers. Severe outliers consist of those points which are either 3-inter quartile-ranges below the first quartile or 3 inter-quartile ranges above the third quartile. If we have severe outliers, we should reject normality at a 5% significance level. Mild outliers are common in samples of any size (IDRE 2014).

- Homoscedasticity: residual variance is constant. The Breush-Pagan test. The null hypothesis is that the variance of the residuals is homogenous (IDRE 2014).

- No Multicollinearity: None of the predictor variables are highly correlated. Variance inflation factor test. VIF values greater than 10 are problematic (IDRE 2014).

- Linearity: Predictors are linearly related to the DV. Scatter plot between the response variable and the predictor should show a linear relationship (IDRE 2014). We make a scatterplot for every ID variable. Even though we run scatterplots for every Independent Variable, we will be showing only the two scatterplots which are the most problematic.

1989:
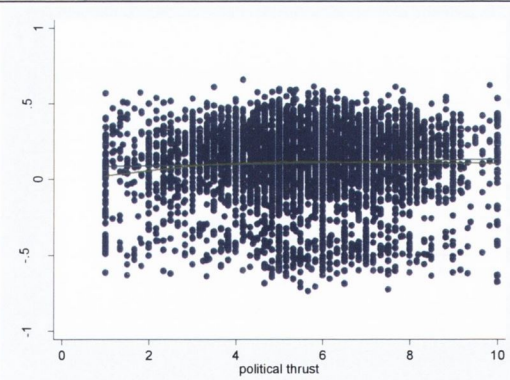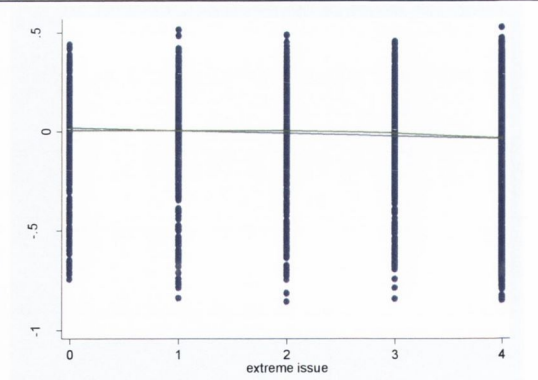
Normality of residuals: Inter-quartile range test			
		LOW	HIGH
mean= 0.078	inner fences	-0.5192	0.7266
median= 0.1174	# mild outliers	1267	10
10 trim= 0.1012	% mild outliers	3.77%	0.03
std.dev.= 0.2638	outer fences	-0.9864	1.194
Pseudo std.dev.= 0.2309	# severe outliers	0	0
N=33632	% severe outliers	0	0
IQR= 0.3114			

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance	Variables: fitted values of voter availability		
chi2(1) = 293.56	Prob > chi2 = 0.0000		

Multicollinearity: VIF test					
Variables	VIF	1/VIF	Variables	VIF	1/VIF
Age	1.31	0.763173	Country dummies		
Education	1.46	0.683743	1	2.34	0.426486
Social class	1.2	0.833546	3	5.64	0.177233
Religious attendance	1.27	0.784329	4	6.8	0.147035
Union member	1.22	0.819997	6	6.04	0.165668
Urban: small town	1.3	0.769031	7	4.23	0.236566
Urban: big town	1.34	0.744648	8	5.17	0.19355
Interest in politics	1.44	0.69576	9	5.46	0.183066
Voted	1.17	0.854401	10	5.66	0.176729
Party-ID	1.32	0.757846	14	1.96	0.509107
Left-right proximity	1.15	0.868032	17	3.98	0.250948
Extreme left-right	1.08	0.922605	20	3.88	0.257402
			25	4.38	0.228073
Mean VIF	2.95				

Linearity test

1994:

Normality of residuals: Inter-quartile range test			
		LOW	HIGH
mean= 1.4e-10	inner fences	-0.5246	0.5792
median= 0.0485	# mild outliers	277	0
10 trim= 0.0276	% mild outliers	5.77%	0
std.dev.= 0.2444	outer fences		
pseudo std.dev.= 0.2045	# severe outliers	0	0
n= 4799	% severe outliers	0	0
IQR= 0.2759			

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance	Variables: fitted values of voter availability		
chi2(1) = 261.36	Prob > chi2 = 0.0000		

Multicollinearity: VIF test					
Variables	VIF	1/VIF	Variables	VIF	1/VIF
Age	1.32	0.755699	Country dummies		
Education	1.54	0.649038	1	2.58	0.387335
Social class	1.24	0.80625	3	6.96	0.143729
Religious attendance	1.24	0.804268	4	8.06	0.124004
Union member	1.31	0.764058	6	5.97	0.167421
Urban: small town	1.3	0.768584	7	4.86	0.205836
Urban: big town	1.34	0.746307	8	5.45	0.18348
Interest politics	1.4	0.714299	9	5.42	0.184429
Voted	1.2	0.832771	10	5.89	0.169859
Knowledge	1.4	0.713609	14	3.57	0.279934
Trust	1.1	0.907251	17	4.04	0.247498
Party ID	1.25	0.802142	20	4.89	0.204523
Left-right proximity	1.37	0.729266	25	5.19	0.192713
Extreme left-right	1.11	0.90279			
Issue proximity	1.09	0.918203			
Extreme Issue	1.07	0.933882			
Mean VIF	2.97				

Linearity test

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1999:

Normality of residuals: Inter-quartile range test				
		LOW	HIGH	
mean = 0.01	inner fences	-0.5054	0.5763	
median = 0.0555	# mild outliers	1254	8	
10 trim = 0.036	% mild outliers	5.44%	0.03%	
std.dev.= 0.239	outer fences	-0.911	0.982	
pseudo std.dev.= 0.2005	# severe outliers	0	0	
n= 23045	% severe outliers	0	0	
IQR= 0.2704				
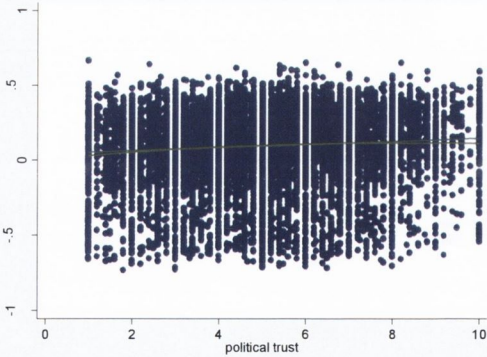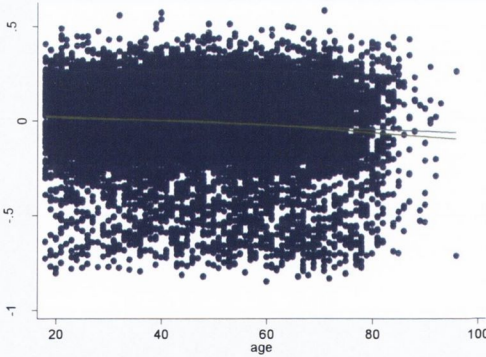
Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance	Variables: fitted values of voter availability		
chi2(1) = 534.08	Prob > chi2 = 0.0000		

Multicollinearity: VIF test

Variables	VIF	1/VIF	Variables	VIF	1/VIF
Age	1.22	0.817338	Country dummies		
Education	1.46	0.686893	1	2.81	0.355374
Social class	1.3	0.770499	3	8.84	0.113153
Religious attendance	1.22	0.822883	4	10.13	0.098743
Union member	1.26	0.791833	6	4.91	0.203725
Urban: small town	1.34	0.748414	7	6.89	0.145102
Urban: big town	1.41	0.708975	8	5.25	0.190471
Interest politics	1.3	0.771546	9	4.91	0.20376
Voted	1.22	0.820615	14	2.96	0.337741
Party ID	1.22	0.819895	17	8.19	0.122057
Left-right proximity	1.43	0.698092	18	4.71	0.212496
Extreme left-right	1.15	0.868718	20	3.91	0.255654
Issue proximity	1.3	0.771376	23	3.32	0.300798
Extreme Issue	1.1	0.91323	24	4.66	0.214656
			25	8.31	0.120355
Mean VIF	3.49				
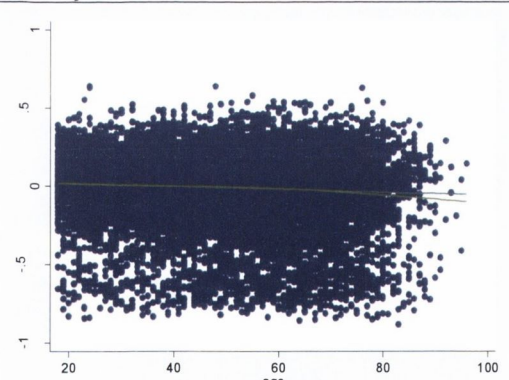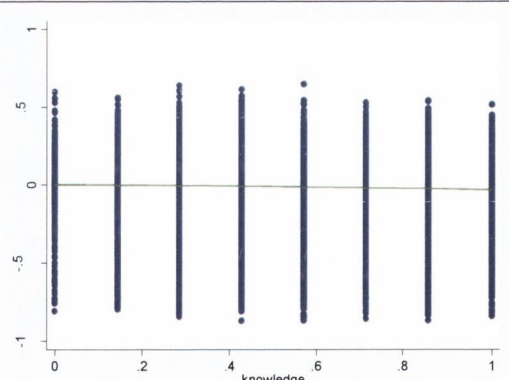
Linearity test

2004:

Normality of residuals: Inter-quartile range test			
		LOW	HIGH
mean=-0.0038	inner fences	-0.4895	0.5355
median=0.0394	# mild outliers	1006	5
10 trim=0.0226	% mild outliers	5.80%	0.03%
std.dev.= 0.2321	outer fences	-0.8739	0.9199
pseudo std.dev.= 0.19	# severe outliers	0	0
n= 17334	% severe outliers	0	0
IQR= 0.2563			

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance	Variables: fitted values of voter availability		
chi2(1) = 1052.63	Prob > chi2 = 0.0000		

Multicollinearity: VIF test

Variables	VIF	1/VIF	Variables	VIF	1/VIF
Age	1.24	0.80913	Country dummies		
Education	1.5	0.666965	3	3	0.33293
Social class	1.27	0.785513	4	1.77	0.565724
Religious attendance	1.25	0.799806	5	1.71	0.583204
Union member	1.33	0.753018	6	1.73	0.577246
Urban: small town	1.42	0.705914	7	2.1	0.476799
Urban: big town	1.51	0.66227	8	2.68	0.37376
Interest politics	1.28	0.782563	9	2.8	0.357185
Voted	1.21	0.82643	10	2.21	0.451632
Trust	1.21	0.827842	11	1.76	0.566795
Party ID	1.29	0.773993	12	1.76	0.568387
Left-right proximity	2.14	0.466413	15	2.39	0.418047
Extreme left-right	1.15	0.871239	17	2.01	0.497254
Issue proximity	1.66	0.602837	18	2.52	0.396962
Extreme Issue	1.07	0.933598	19	1.99	0.50153
			20	2.18	0.459088
			21	1.87	0.535249
			22	2.15	0.465438
			23	2.26	0.443304
			24	3.11	0.321255
Mean VIF	2.97		25	3.13	0.319205

Linearity test

2009:

Normality of residuals: Inter-quartile range test				
		LOW	HIGH	
mean= -0.0133	inner fences	-0.4921	0.5173	
median= 0.0304	# mild outliers	1230	28	
10 trim= 0.0128	% mild outliers	5.97%	0.14%	
std.dev.= 0.2343	outer fences	-0.8706	0.8959	
pseudo std.dev.= 0.1871	# severe outliers	0	0	
n= 20592	% severe outliers	0	0	
IQR= 0.2524				
Breusch-Pagan / Cook-Weisberg test for heteroscedasticity				
Ho: Constant variance	Variables: fitted values of voter availability			
chi2(1) = 1810.30	Prob > chi2 = 0.0000			
Multicollinearity: VIF test				
Variables	VIF	1/VIF	Variables	VIF	1/VIF
Age	1.21	0.824853	5	2.52	0.397429
Education	1.4	0.71266	6	3.7	0.270423
Social class	1.25	0.801929	7	3.66	0.273268
Religious attendance	1.27	0.786643	8	3.72	0.268911
Urban: small town	1.43	0.700977	9	4.03	0.247864
Urban: big town	1.53	0.654665	10	2.56	0.391314
Interest politics	1.32	0.760389	11	3.08	0.324476
Voted	1.2	0.835018	12	2.64	0.379267
Knowledge	1.26	0.794204	13	2.45	0.407344
Trust	1.12	0.895858	14	3.86	0.258796
Party ID	1.27	0.788307	15	3.3	0.302773
Left-right proximity	1.39	0.720845	16	2.14	0.467021
Extreme left-right	1.18	0.84758	17	4.05	0.246857
Issue proximity	1.21	0.826929	18	4.01	0.249685
Extreme Issue	1.08	0.921927	19	2.98	0.335723
			20	2.92	0.342726
Country Dummies			21	3.61	0.277217
1	2.21	0.451484	22	3.15	0.317692
2	3.27	0.305967	23	3.91	0.25569
3	4.37	0.228733	24	4.14	0.241795
4	3.69	0.270832	25	4	0.250051
			26	2.45	0.407998
Mean VIF	2.57		28	2.59	0.386544
Linearity test					

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Appendix E: Post treatment bias

Table E.1: Models to Explain Voter Availability Individual Variables EES 1989-2009: OLS Robust Standard Errors

Variables	EES 1989	EES 1994	EES 1999	EES 2004	EES 2009
Age	-0.0022***	-0.0018***	-0.0026***	-0.0020***	-0.0019***
Education	0.0132***	0.0075**	0.0099***	0.0111***	0.0131***
Social class	0.0055	0.0077*	0.0044	0.0023	0.0020
Religious attendance	-0.0006	0.0019	-0.0017	-0.0046*	-0.0014
Union member	0.0078	0.0014	0.0088	0.0068	-
Rural	BASE	BASE	BASE	BASE	BASE
Small town	0.0140	0.0111	0.00043	0.0069	-0.0108*
Big town	0.0158	0.0098	0.0011	0.0029	-0.0081
Country dummies	X	X	X	X	X
Constant	0.530***	0.5952***	0.7461***	0.6654***	0.7756
N	6756	7215	8002	17631	22510
F-statistics	69.61***	39.92***	57.97***	161.79***	99.94***
R-square	0.1621	0.0956	0.1535***	0.1163	0.1365

* for p<0.05, ** for p<0.01, and *** for p<0.001

Appendix F: Summary statistics of aggregate level data (EES)

Year	statistics	Availability	ENP	Polarization	Disp	Ethnic	Religion	Prox elections	GINI	GDP	ESI
1989	N	13	13	13	13	13	13	13	13	13	13
	Mean	0.62	3.30	3.45	5.31	0.24	0.34	12.00	27.82	23587.50	107.54
	SD	0.11	0.87	0.63	4.06	0.20	0.22	9.50	3.41	6398.59	8.52
1994	N	13	13	13	13	13	13	13	13	13	13
	Mean	0.65	3.74	3.11	7.10	0.24	0.34	10.00	29.16	25555.74	97.36
	SD	0.08	1.56	0.75	6.27	0.20	0.22	7.75	4.69	7810.79	5.20
1999	N	16	16	16	16	16	16	16	16	16	16
	Mean	0.69	3.76	2.69	5.79	0.21	0.33	11.13	28.39	29413.83	102.23
	SD	0.08	1.11	0.78	5.09	0.19	0.20	9.23	4.59	8227.81	6.57
2004	N	21	21	21	21	21	21	21	21	21	21
	Mean	0.68	3.73	3.22	5.74	0.19	0.40	17.48	29.24	25258.46	103.32
	SD	0.08	1.22	0.96	5.26	0.15	0.19	7.13	4.40	7714.62	5.22
2009	N	28	28	28	28	28	28	28	28	28	28
	Mean	0.68	3.83	3.62	4.97	0.24	0.37	13.43	29.23	26585.53	76.86
	SD	0.11	1.13	1.18	3.49	0.18	0.19	7.63	4.15	11232.66	5.80
Pooled	N	91	91	91	91	91	91	91	91	91	91
	Mean	0.67	3.71	3.27	5.65	0.22	0.36	13.26	28.87	26201.17	94.74
	SD	0.10	1.17	0.98	4.69	0.18	0.20	8.35	4.21	8893.19	13.71

Appendix G: Naïve multi-level model

Table G.1: Model to Explain Voter Availability, Naïve ML Model: OLS with Robust S.E. (EES 1989-2009 pooled)

VARIABLES	Naïve pooling
INDIVIDUAL LEVEL:	
Age	-0.0013***
Education	0.0087***
Social class	0.0020
Religious attendance	0.0006
Urban: Rural	BASE
Urban: Small town	0.0032
Urban: Big town	0.0016
Interest politics	0.0060***
Voted	-0.0150***
Party-ID	-0.0607***
Left-right proximity	0.2432***
Extreme left-right	-0.0092***
COUNTRY LEVEL:	
ENP	0.0301***
Disproportionality	0.0034**
Polarisation	-0.0049
Ethnic cleavage	-0.0964**
Religious cleavage	-0.0186
GINI	-0.0005
GDP	0.0360***
Economic sentiment	-0.0012***
Months	0.0027***
Constant	0.4856***
AIC	114.8146
BIC	319.2398
N	53533
Groups	90

* for p<0.05, ** for p<0.01, and *** for p<0.001

Appendix H: Multi-level model with all cross-level interactions

Table H.1: Model to Explain Voter Availability Multi-level Variance Year Model (REML) with Cross-level Interactions (EES 1989-2009 pooled)

Age	-0.0027 ***	Religion *left-right proximity*	-0.1151***
Disproportionality Age	0.00006 ***	Class *left-right proximity*	0.0061 ***
Ethnic *Age*	0.0018 ***	Disproportionality *left-right proximity*	0.0032 °
Polarisation *Age*	0.0002 **	*Extreme left-right*	0.0246***
ENP *Age*	0.0002 ***	Polarisation *left-right extreme*	-0.0028***
GDP *Age*	-0.0003 ***	Ethnic *left-right extreme*	-0.0081 °
Education	0.0104 ***	Religion *left-right extreme*	-0.0134***
Disproportionality Education	-0.0004 *	GINI *left-right extreme*	-0.0005***
Social Class	0.0023 *	Disproportionality *left-right extreme*	-0.0003*
Religious Attendance	-0.0118***	Rural	BASE
Polarisation Religious attendance	0.0037***	Small Town	0.0027
Interest in politics	0.0230 ***	Big Town	0.0007
Ethnic *interest in politics*	-0.0192*	Ethnic	0.0023
Polarisation *interest in politics*	-0.0038***	Religious cleavage	0.0973*
Voted	-0.0156 ***	GDP	0.0472 ***
Party-ID	-0.0545***	GINI	-0.0021 .
Disproportionality party-ID	0.0020***	ENP	0.0646 °
GINI *party ID*	-0.0013***	ENP-square	-0.0085 *
ENP *Party-ID*	0.0058***	Disproportionality	-0.0021
Left right proximity	-0.1013 °	Polarisation	-0.0403 ***
ENP *left-right proximity*	0.0243***	Months	0.0025 ***
Polarisation *left-right proximity*	0.0422***	Economic sentiment	-0.0012**
Ethnic *left-right proximity*	-0.1607 ***	Constant	0.5863***
N	53533	AIC	-49.71
Groups	90	BIC	394.69

° for p<0.1* for p<0.05, ** for p<0.01, and *** for p<0.001

Appendix I: Glossary of variables

INDIVIDUAL LEVEL:	
Age	Age of the respondent
Education	Age of the respondent when finishing the highest level of education
Social class	The social class of respondent
Religious attendance	Attendance of religious ceremonies
Union member	Member of trade union
Rural area	Rural area or village category of urbanization variable
Small town	Small or middle-size town category of urbanization variable
Big town	Big town category of urbanization variable
Interest	Interest in politics
Voted	Voted at the EU elections
Knowledge	Political knowledge
Trust	Political trust
Party-ID	Strength of party identification
Left-right proximity	Differential of distances between self-placement and parties on the general left-right scale
Extreme left-right	The level of extremism of the respondent on a left-right scale
Issue proximity	Differential of distances between self-placement and parties on the issue left-right scale
Extreme issue	The level of extremism of the respondent on an issue left-right scale
Cross pressure	Cross-pressure of the respondent caused by cleavages
Government Satisfaction	Satisfaction of past government performance
Positive past country economy	Positive evaluation of the past country economic situation
Neutral past country economy	Neutral evaluation of the past country economic situation
Negative past country economy	Negative evaluation of the past county economic situation
Positive past own means	Positive evaluation of the past own economic situation

Neutral past own means	Neutral evaluation of the past own economic situation
Negative past own means	Negative evaluation of the past own economic situation
Positive future country economy	Positive evaluation of future country economic situation
Neutral future country economy	Neutral evaluation of future country economic situation
Negative future country economy	Negative evaluation of future country economic situation
Positive future own means	Positive evaluation of future own economic situation
Neutral future own means	Neutral evaluation of future own economic situation
Negative future own means	Negative evaluation of future own economic situation
Party leader	Differential of the preferences to different party leaders
COUNTRY LEVEL:	
ENP	Effective number of legislative parties
Disproportionality	Disproportionality of electoral system
Polarisation	Polarization of the political system
Ethnic fractionalization	Ethnic fractionalization of the country
Religious fractionalization	Religious fractionalization of the country
GINI	Gini household disposable income
GDP	Gross domestic product per capita
ESI	Economic Sentiment Index
Proximity general elections	Proximity of the general elections

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The Available Voter   Seppe Verheyen

Contemporary research on electoral volatility often focuses on those who switch party preferences, but the switching itself does not inform us about who is available for electoral competition among the parties. Making use of the party preferences of the voters of different parties, we examine voter availability (i.e., the degree of availability of the voter to the electoral competition), the degree that the voter is likely to be persuaded by the different parties. The goal of this research is to answer two main questions: What are the factors that explain voter availability on an individual level? What are the factors that explain voter availability on a country level? To answer these questions, regression analyses are employed on the individual and aggregate levels as well as in a multi-level context where both levels are considered, simultaneously. The data used for those analyses are the cross-national European Election Studies (EES) from 1989 to 2009, as well as national election studies such as the Dutch Parliamentary Election Study (NKO) for 2006 and 2010 and the Irish National Election Study (INES) for 2002 and 2007. Country level variables explaining electoral instability are usually studied with a limited number of countries because of the difficulties in collecting comparable data. Utilizing the cross-national European Election studies from 1989 to 2009, we are able to study these variables in 90 elections across multiple countries, and include them in one single analysis with individual-level variables.

For the first research question concerning individual differences, we examined different voting theories and their implications. While some voting theories such as the sociological voting theory of group membership did not prove useful, others such as the psycho-sociological approach, which states that higher party-ID decreases voter availability, had much stronger predictive power. Rational voting theories of spatial voting, which state that being close to different parties on a left-right scale or being more moderate decreases voter availability, are supported as well. Characteristics such as younger age and higher education are found to increase voter availability. Meanwhile, belonging to a higher social class and living in a more urbanized environment did not show any effect on voter availability. Besides those, political attitudes, party leader preferences, retrospective and prospective voting elements, are all considered as well.

For the second research question, aspects of the context in which the voting takes place, such as a higher effective number of parties, more disproportional voting system, and country development increases the voter availability. Although other effects are less consistent, we still find support for the idea that lower system polarization, time away from the national elections, and lower economic sentiment in the last six months increase voter availability, while the effect of cleavages in society is very limited. The importance of considering the aggregate level variables is shown as well by the cross-level interactions where the aggregate level variables influence the relationship between the individual level variables and voter availability. The aggregate level variables do explain the increasing voter availability over time.