PhD Politics

Engineering Democracy: The Relationship Between Electoral Rules and Political Engagement

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This thesis is the result of the author's original research. It has been composed by the author and has not been previously submitted for examination which has led to the award of a degree.

Abstract

The issue of low and unequal public engagement in political affairs poses serious concerns for both the overall health of democratic politics, and the extent to which certain groups exert an unequal influence on the political process. This project explores whether electoral rules such as: Compulsory voting, electoral system proportionality, voter registration, and direct democracy, are linked with any increases in overall rates of political engagement, and reduced inequalities of engagement across age, income, and education. As well as exploring the potential for institutional reform to offer solutions to this pressing social issue, the current project also addresses a clear limitation within the current academic literature in this area, as studies tend to research the attitudinal and behavioural aspects of political engagement independently from one another. This project therefore includes a wide range of both electoral and non-electoral political participation, as well as political attitudes, in order to better understand the full range of citizens' interactions with political life. This is tested via a quantitative research design, that makes use of multi-level modelling techniques, and data from the Comparative Study of Electoral Systems (CSES) which contains information on over 100,000 individuals, within 43 countries, between 2001-2016. The results indicate that compulsory voting, and electoral system proportionality display a significant positive relationship across multiple aspects of both overall engagement, and reduced socio-demographic inequalities.

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Chapter 1

Introduction

Citizens becoming dissatisfied with, or entirely alienated from political affairs is a growing issue facing many contemporary democracies. The steady decline of electoral turnout rates, and the persistence of negative attitudes towards the political establishment seen across advanced industrialised democracies in recent decades, only serves to illustrates this trend (Baston and Ritchie, 2004; Dalton, 2006; Franklin et al., 1996; Henn et al., 2007; Lijphart, 1997; Massicotte et al., 2004; Norris, 2011; Putnam, 2000; Warren, 1999). If significant sub-sections of the public view taking part in elections as a waste of time, or feel that the political process is incapable of effectively representing the interests of them, or their communities, this evidently poses severe challenges to the health of a democracy.

One area of political life that has defied this downward trend, however, is participation in non-electoral activities, such as protests and demonstrations (Dalton et al., 2010). While this can be seen as a positive outcome, and perhaps indicates that citizens are simply substituting formal political participation for these alternative types of engagement (Norris, 2011), this pattern also raises some potential issues. One key point is that activities outside of the formal political process, tend to focus on specific sectional interests, and lack mechanisms for balancing a range of viewpoints across the broad spectrum of issues necessary for effective democratic government (Dalton and Klingemann, 2007). The general argument here, is that since voting plays such a unique function in allowing us to hold our governments to account, it can be supplemented

with, but not entirely replaced by, alternative forms of political behaviour.

This project aims to explore these three major components of public engagement in political affairs, namely, electoral turnout, political attitudes, and non-electoral participation, to improve our understanding of how these distinct, yet interrelated areas, contribute to citizens' overall relationship with their political systems. Exploring the factors that influence these types of public engagement can uncover potential improvements to how our democracies operate at a practical level, as well as enhancing our scientific understanding of the inner workings of this phenomena. This project also addresses a clear limitation of the current academic literature in this area: that studies often focus solely on either the behavioural, or attitudinal aspects of political engagement, to the exclusion of the other. This narrow focus taken by much of the previous research on political engagement, has led to a fragmented body of literature that somewhat undermines our ability to examine the full spectrum of citizens' interactions with political life. By including a wide range of both political behaviours and attitudes in this project, it is possible to offer an overarching assessment of how these individual aspects of public interactions with political life fit in with the wider concept of political engagement.

Beyond these general patterns of how the public interact with political life, a second, yet perhaps even more important issue, is that vast inequalities exist between those who are, and those who are not engaged in political affairs. The most socio-economically disadvantaged sections of society also tend to be the most alienated from the political process (Brady et al., 1995*a*; Cancela and Geys, 2016; Henn et al., 2007; Lijphart, 1997; Pateman, 1970: 48). This means that vulnerable groups, who often bear the brunt of the negative impacts of social and economic policy, regularly fail to have their views adequately represented in political discourses. If the voices of certain groups are overrepresented, while others are completely absent from political debate, this clearly undermines the principles of equality, fairness, and representation that underpin the foundations of democratic politics. Examining how levels of public engagement vary at the aggregate level in isolation, can therefore lead to a skewed interpretation of reality. Even if societies can reverse the general downward trends outlined above, and enjoy

relatively high levels of public engagement in political life, this may nonetheless mask significant inequalities if these measures fail to fully integrate underrepresented groups into the political process.

If low and unequal levels of public engagement can seemingly undermine many of the stated goals of democratic politics, then the next logical question is what can be done to address these issues? Of the array of measures that have been proposed, some of the most promising solutions have arisen from a top-down, institutional perspective. It is argued that changing the way in which our political systems are structured, can can significantly influence both public participation, and attitudes toward the political sphere (Cancela and Geys, 2016; Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000).

This project will explicitly focus on four key institutional features of political systems: the use of compulsory voting, the proportionality of electoral systems, voter registration laws, and the use of direct democracy. This will allow me to evaluate whether any clear patterns exist between the ways in which political systems operate at a structural level, and overall rates of engagement, as well as how these specific aspects of political engagement are distributed among different sections of the the population. Similar to the way in which previous studies of political engagement tend to employ a relatively narrow focus, the literature on political institutions also tends to examine single variables in isolation. By including a wide range of electoral laws, this allows me to both control for alternative explanations of political engagement, and provide a more coherent picture of how the broader structure of a political system influences public attitudes and behaviour.

A noteworthy point here is that when countries have actually enacted these types of structural changes to their electoral systems, it tends to be as part of wider reform packages rather than simply changing one aspect of the political process (Contreras et al., 2016; Renwick, 2017; Singh, 2019). In line with the real world pattern of how these rules are typically implemented, it makes sense to take a more comprehensive approach when exploring this topic, as each of these distinct aspects of the electoral process may impact political engagement to varying degrees.

Beyond its relevance to the current academic literature in this area, examining the link between electoral rules and political engagement also has direct implications for policymakers. If certain institutional arrangements are associated with higher overall rates of public engagement, or reduced socio-demographic inequalities, then these policies could prove to be immensely useful tools in strengthening the democratic process. As well as looking for potential solutions to these problems, this project also serves a key purpose in identifying any negative spill-over effects created by these institutional features. Even if certain electoral rules may produce positive effects across one component of engagement, this may be counterproductive if it comes at the cost of other aspects of engagement. Including multiple electoral rules and aspects of engagement in the present analysis, therefore enables us to weigh the costs and benefits of how institutional features impact the full scope of citizens' relationship with the state. In light of both the previous academic literature in this area, and the clear issues facing many contemporary democratic systems outlined above, the central questions this project aims to address are:

- How do electoral rules influence overall levels of political engagement?
- To what extent is political engagement biased along socio-demographic lines?
- Do electoral rules alter these socio-demographic biases?

Examining the impact of these electoral rules across various forms of political engagement, will also allow me to partially address the aforementioned issues within the current academic literature in this area. Evaluating the extent to which these aspects of political engagement differ fundamentally from one another, or share any common characteristics, can provide an extremely useful insight into the relationship between these dimensions of engagement. Comparing my findings across a wide range of variables, will therefore enable me to address:

- To what extent can political attitudes, and political behaviour be considered as part of a broader concept of political engagement?

In order to address these research questions, the project will be structured as follows. Chapter 2 begins with a general overview of the current academic literature on political engagement. Here I will discuss how this concept has been operationalised by different authors, explore the potential issues that arise due to the fragmented nature of much of the current literature on this topic, and examine one of the most prominent theoretical explanations of political engagement, namely the system support model. Critically evaluating this existing literature will allow me to see how previous works have attempted to address my key research questions, as well as highlighting areas that require further development. This literature review also contextualises each of the following chapters that explore specific components of engagement in greater detail, as well as setting out clear theoretical expectations that can test whether the attitudinal and behaviour aspects of public involvement in political affairs can be considered as part of the wider concept of political engagement.

The next three chapters consist of standalone empirical research articles, each of which covers a distinct aspect of political engagement. Exploring these primary components of engagement, namely voting, political attitudes, and non-electoral participation, via a consistent methodological and empirical approach, ultimately allows for a comprehensive assessment of how structural features of political systems impact the full scope of citizens' relationship with political life. Each paper utilises a quantitative research design, and uses cross-national survey data from the Comparative Study of Electoral Systems (CSES) project. This allows me to directly test whether any relationship exists between electoral rules and engagement at the aggregate level, as well as how these rules relate to socio-demographic inequalities. This offers a unique opportunity to evaluate many of the claims of the system support theory discussed in Chapter 2, as previous studies that examine multiple aspects of political engagement tend to only focus on one key electoral rule, and do not explore the issue of political inequality.

Chapter 3 begins with an examination of the relationship between electoral rules and voter turnout, and whether these laws have the potential to alter the socio-demographic characteristics of the electorate. Voter turnout is by far the most widely studied aspect of political engagement. As such, there is a significant body of existing research re-

garding the main effects of electoral rules on this type of political behaviour, with both compulsory voting and more proportional electoral systems being linked with increased electoral turnout rates (Baston and Ritchie, 2004; Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). While this project tests these established findings against updated data sources, one of the key contributions of this Chapter is the introduction of an original dataset on voter registration, alongside novel measurements of direct democracy, that accounts for turnout in referendums themselves. As discussed above, however, even if certain laws are associated with an overall increase in participation, this does not tell us anything about the inequalities that may still exist within these contests. This Chapter therefore focuses more directly on the interactions between these structural variables and socio-demographic characteristics, in order to expand on the much less developed literature surrounding political institutions and political inequality. This project therefore expands on the pre-existing turnout literature by including novel measurements of key electoral rules, as well as breaking new ground in improving our understanding of how these laws relate to inequality of participation.

While electoral politics serves as the cornerstone of democratic government, and is widely considered to be the most important aspect of political engagement, there is a clear need to explore the potential effects of these institutional factors on additional features of political engagement. Persistent public apathy, or even disdain towards the political sphere, for example, may over time lead to entrenched negative orientations that undermine support for the democratic system as a whole (Easton, 1965). Chapter 4 therefore shifts the focus of the project to political attitudes. This approach is of crucial importance, as electoral rules have the potential to directly influence how citizens perceive their political surroundings, as well as how they view their own role in the political process. Moreover, as discussed above, the presence of one type of political engagement without the other, may hide the true nature of citizens' relationship with their political system. Even if certain electoral rules can seemingly help solve the problem of dwindling participation at the polls, this should not be viewed as a cure-all for treating the issue of waning democratic engagement. The key question here is whether any apparent electoral gains come at the expense of other forms

of public engagement, and how these effects are distributed among different sections of society. This is especially important, as many of the socio-economic inequalities present in electoral participation, also manifest themselves across attitudinal aspects of engagement (Bowler et al., 2002; Donovan and Karp, 2017; Howell and Justwan, 2013; Karp and Banducci, 2008). Does increased participation in electoral politics foster a greater attachment to the political process, and more positive attitudes towards the political system in general? Or does being compelled to participate in a system that some view as illegitimate, lead to growing contempt, or even apathy toward the political establishment? These are issues that evidently need to be addressed, if societies wish to pursue the goal of reducing the unequal influence that certain groups exert on the political process. In order to effectively explore these questions, this Chapter will focus on two specific political attitudes: Satisfaction with democracy, and political efficacy. As will be discussed further in Chapter 4, these variables can offer an extremely valuable insight into how citizens perceive political affairs. This Chapter makes a direct contribution to the largely underdeveloped existing literature on political attitudes and electoral institutions, which has primarily focused on the effects of direct democracy and electoral system proportionality. Including a wide range of electoral rules in this analysis, and widening the scope of my research to include political inequality, can help bring our understanding of this phenomena up to par with the vast amount of existing research occupied by electoral institutions and political behaviour.

Chapter 5 tackles the final aspect of political engagement included in this project, non-electoral participation. Involvement in political affairs beyond the simple act of voting, such as attending protests and demonstrations, or contacting elected representatives, has become an increasingly popular means for citizens to express their political preferences (Dalton et al., 2010). One potential cause for concern, however, is that these forms of behaviour tend to be even more socio-economically biased compared to electoral turnout (Brady et al., 1995*a*). While non-electoral participation also enjoys an extensive background within the empirical and theoretical academic literature, the impact of electoral rules on this form of engagement, and in particular, their effects on inequality of participation has received far less attention. Structural changes to the

ways in which our political systems operate, such as the introduction of compulsory voting, or new electoral formulas, are almost exclusively sold on the premise of enhancing rates of electoral turnout, or fostering positive public attitudes toward political affairs. Whether intentional or not, however, changes to the underlying structure of political systems undoubtedly have the potential to alter patterns of political behaviour beyond the ballot box. This project will examine the relationship between electoral rules and three forms of non-electoral behaviour: attending protests and demonstrations, contacting politicians, and working with others to influence government. Including a variety of political activities, as well as multiple electoral rules will allow me to test the claims of previous research in this area that is primarily based on within-country case studies, against up to date, cross-national survey data. Moreover, expanding the focus of this research into how these rules relate to this supposedly more unequal form of political behaviour will allow me to directly address my key research questions with regard to this increasingly popular avenue of political engagement.

Chapter 6 ends with a comprehensive assessment of how the preceding empirical Chapters relate back to the project's core research questions. Having explored how electoral rules influence each component of political engagement in isolation, it is at this point where the findings can be viewed as part of a single overarching framework, and ultimately assess how these rules impact political engagement as a whole. The use of a consistent methodological approach across such a wide range of both institutional features of political systems, and different components of engagement, means that this project is uniquely situated to address these questions: To what extent are socio-demographic biases consistent across different types of engagement? And, do these electoral rules produce similar effects across all three forms of engagement? By reviewing the three preceding analyses, and weighing up the limitations and benefits of my chosen methodological approach, this will enable me to offer direct answers to my key research questions, as well as identifying crucial gaps in our understanding that can be addressed by future research in this area.

While the initial results of my main analyses indicate that certain institutional features of our political systems, namely compulsory voting and proportional electoral

formulas, may be useful tools in tackling the issue of low and unequal levels of political engagement, it is also apparent that no single reform in isolation can hope to address these issues across the full range of political engagement.

Taken as a whole, this project makes a significant contribution to our current scientific understanding of political engagement, and how political inequalities may be related to the ways in which our political systems are structured. In more practical terms, this research can also speak to the potential of certain electoral rules to partially address some of the most pressing issues facing contemporary democracies. What is clear from the complex and multidimensional nature of political engagement, however, is that a great deal of work remains to be done, in order to fully understand the true nature of citizens relationship with political affairs.

Chapter 2

Theory - Political Engagement

One of the primary aims of my research is to investigate whether the concept of political engagement, as it is currently understood, can offer any meaningful insight into the defining characteristics and underlying processes that shape citizens' relationship with their political systems. Exploring how this construct has evolved over time, both in terms of its theoretical underpinnings and practical application, will enable me to assess how well our present explanations of political support measure up to reality, and whether further refinement of this concept is required in order to improve our understanding of the true nature of citizens' relationship with political life.

This chapter will explore the wider trends within the academic literature on political engagement, as well as previous attempts to construct a cohesive theoretical model of political support. This relates directly to my research question regarding: To what extent can political attitudes and behaviour be considered as part of a broader concept of political engagement? Reviewing this literature is a crucial first step in evaluating the previous answers that have been offered to this question, as well as uncovering any underdeveloped areas that may yet offer potential solutions to this research puzzle. Following this chapter's overview of the wider political engagement literature, and its examination of the system support theory, these theoretical expectations will then be tested across the three empirical research articles included in Chapters 3-5, while Chapter 6 provides a final assessment of how these findings relate to this central research question.

At its most basic level, political engagement refers to the ways in which citizens interact with political life. The two most common indicators that are used to reflect this relationship, are the extent to which citizens participate in political activities, such as elections or more unconventional forms of political action, as well as their attitudes towards various political actors and institutions (Easton, 1975: 436). While the general usage of the term encapsulates this wider notion of how individuals participate in and perceive political affairs, an initial examination of the current literature in this area highlights that this concept is in fact a largely contested term. A range of divergent approaches exist as to which specific forms of support contribute to the wider concept of political engagement, as well as how these variables should be operationalised at a more practical level. While there have been previous attempts at constructing a broad, more inclusive conceptualisation of engagement – which will be discussed in greater detail below – perhaps the most notable drawback of much of the research in this field is that citizens' attitudes toward the actors and institutions of government, and their actual participation in political affairs are often studied entirely independently of one another.

This theoretical and empirical distinction can lead to a great deal of confusion when attempting to understand what is meant when citizens are said to be politically engaged, as while there are a common set of indicators found in practically all studies of political engagement: from measures of individual attitudes such as political trust, political efficacy, and satisfaction with democracy (Fisher et al., 2011; Kim, 2015; Linde and Ekman, 2003); as well as behavioural aspects such as electoral turnout and political protest (Blais, 2000; Meyer, 2004; van Aelst and Walgrave, 2001), the term is applied extremely inconsistently to various combinations of these factors.

This tendency to prioritise either attitudinal or behavioural indicators to the exclusion of the other means that researchers often operationalise political engagement extremely narrowly, focusing on only one aspect of citizens' relationship with the state, rather than attempting to construct a more detailed overall picture of how the public actually interacts with the political process. This lack of agreement significantly undermines the ability of the field to move towards a cohesive, centrally agreed upon

framework that can be used to fill in the gaps between the current piecemeal approaches to the study of political support.

As well as lacking an overarching structure to the analytical study of political engagement, the methodological inconsistencies inherent in these studies make comparisons of empirical findings extremely difficult across different contexts. One further consequence of this present situation, is that authors who exclusively study either of these aspects of political support often assume that the presence of one of these attributes is a sufficient indicator of the health of a democratic society (Norris, 2011). Possessing one component of support without the other can hide major signs of discontent among populations, and overlook potential sources of political instability (Easton, 1965; Massicotte et al., 2004). This can result in a skewed interpretation of how citizens interact with political affairs, as participation in and of itself only tells us half the story:

> It is often deeply problematic, indeed foolhardy, to infer psychological orientations from behaviour; citizens may be acting from many complex motives, such as voting out of fear of reprisal or legal sanction, habit, or a sense of duty, without necessarily supporting the regime (Norris, 2011: 20)

Likewise, widespread satisfaction with the status quo which is not accompanied by public participation can be just as problematic, as the mobilising effects of an active opposition and public scrutiny of government policies would thus be absent from political discourse (Di Palma, 1970). This form of subdued acceptance of the political authorities could undermine the key function that elections play in holding governments to account over their policymaking decisions, and the constructive role that political competition performs in informing debate on how best to address the most pressing social and economic issues facing society, effectively severing the direct link between the public and politicians:

> When the system functions smoothly and the rules that guide politics are accepted by all, there may be a decline in participation; politics may be left to the care of the expert and the professional politician (Di Palma, 1970: 45)

In light of these arguments, it would seem that moving towards a more comprehensive measure of political support which takes both of these distinct, yet related aspects of engagement into consideration is essential in order to more accurately reflect citizens' actual relationship with political affairs. One of the main goals of my current research is to help bridge the gap between these two divergent areas of study, and investigate whether political attitudes and behaviour can be better understood as two constituent parts of the broader concept of political engagement. This more inclusive outlook is crucially important, as the ability of democratic governments to function effectively is dependent on a combination of both underlying public support for the system at large, and active participation in its formal processes (Easton, 1965, 1975). No state can hope to enforce its policy goals and expect the public to comply with its demands if its citizens do not view its authority as being legitimate (Easton, 1975: 445), while public participation is essential in order to enhance the representativeness of democratic government, and ensure that those in power respond to the needs and desires of the people (Aarts and Thomassen, 2008). Evidently then, studying either of these aspects of political life in isolation can result in a skewed interpretation of reality. Adopting a revised conceptualisation of political engagement, which acknowledges the multi-dimensional nature of political support, and the ways in which both political attitudes and behaviour interact with one another to strengthen the democratic process is clearly essential in order to improve out understanding of public engagement in political affairs.

Having acknowledged the rather fragmented nature of the academic literature in this area, it is worth taking the time to assess previous attempts at constructing an overarching theory of engagement, that try to reconcile these fundamental differences within the current academic debate. One prominent theoretical framework that has advocated the adoption of a more comprehensive and inclusive approach to political engagement is David Easton's concept of system support. This theory emphasises the multidimensional nature of political engagement, and that political support can take various forms in terms of both how it is formed, and the objects to which it is directed. Although this approach inevitably comes with its own drawbacks, the system support

framework nonetheless provides a solid starting point on which to base any future work on a revised theory of political engagement.

System Support

One of the most influential theoretical frameworks in the field of political engagement is David Easton's concept of system support (Easton, 1965, 1975). In part, what makes this approach so compelling is its explicit linkage between how citizens align themselves in terms of their attitudes towards their political system, as well as the consequences of their actual participation in political affairs. While most empirical studies of political engagement tend to overstate the impact of either attitudinal or behavioural aspects of political support, Easton's framework manages to adopt a more comprehensive approach, and acknowledges the complementary role that both processes have on overall levels of political engagement.

The core argument of this theory centres upon the notion that in order for political systems to survive, they require at least a minimal level of support from their respective publics (Easton, 1965, 1975). Where this approach differs from other theories of political engagement, however, is the emphasis placed on the fact that support can take drastically different forms, each with its own distinct implications for the survival of the state, and that support is directed at a variety of political actors within any given system.

One of the key distinctions within Easton's framework is between specific and diffuse support. Specific support refers to citizens' feelings toward the political system that are a result of the direct benefits they receive from the political decision making process, or in other words:

> Satisfaction members of a system feel they obtain from the perceived outputs and performance of the political authorities (Easton, 1965: 437)

This aspect of support stresses the direct link between public demands and political outputs, and that when the authorities have fulfilled certain needs, they should, in turn, be deserving of a certain degree of support (Easton, 1965). This feature of support by

itself, however, is not sufficient to ensure the survival of a political system. Support which relies on immediate gratification of citizens' demands may undermine the ability of governments to address long-term goals, where the public may not feel the benefits of political decisions for a significant period of time, whilst the competing and often contradictory demands of different sections of society inevitably means that no regime could hope to fulfil the wants and desires of all citizens all of the time (Easton, 1965: 270). In light of the potential pitfalls of relying solely on specific appeals to the interests of certain groups or individuals within society, governments must also appeal to the public via alternative methods such as diffuse support.

Diffuse support, as defined by Easton, embodies a deeper sense of attachment to the political system as a whole (Easton, 1965, 1975). It is this entrenched support for the system at large that enables regimes to survive short-term fluctuations in levels of specific support (Easton, 1965). When publics are dissatisfied with the current performance of those in power, the authorities can thus rely upon this form of diffuse support to ensure that attachment to the system never falls below the minimum threshold for its survival. In this sense, diffuse support:

> Forms a reservoir of favourable attitudes or good will that helps members to accept or tolerate outputs to which they are opposed or the effect of which they see as damaging to their wants (Easton, 1965: 273).

This source of support, which is relatively stable over the longer-term, can be tapped into as and when the authorities require, in order to smooth over any periods of potential instability that may arise when political outputs do not necessary reflect the immediate wants and desires of the public. As such, diffuse support is invaluable to authorities, as it gives them a certain degree of freedom and a greater margin for error if anything should go awry in their current term in office.

It is worth noting that these two aspects of support are held to be largely independent of one another, as even when a system experiences immediate shocks or public backlash against specific policies, this does not necessarily influence people's feelings toward the core principles and institutions of democratic government (Easton, 1975: 438). One notable exception to this principle, however, is where specific support, ei-

ther positive or negative, extends over a significant period of time. Enduring feelings of either satisfaction or discontent with the performance of those in government can eventually translate into more entrenched attitudes toward the system as a whole (Easton, 1965: 275). As such, even though the concept of diffuse support is more intimately related to the overall survival of the political status quo, the relationship between public demands and political outputs still plays a significant role in informing overall levels of political engagement.

The second major aspect of Easton's framework that has influenced much of the proceeding research in this area is the idea that political support is directed at a variety of different actors within any given system. This argument maintains that any approach which assumes that the state is a single entity to which the public either lends their support or disapproves of, fails to accurately represent the political reality, whereby citizens' attitudes toward different aspects of the political system can vary enormously (Easton, 1965). Disdain for individual politicians or even political parties, for example, does not necessarily mean that citizens feel any less supportive of the core tenets of democracy (Easton, 1975: 436). Likewise, members of the public may be distrusting of the political system in general, yet identify strongly with an individual candidate or party leader (Norris, 2011: 20). In order to capture the nuanced nature of public attitudes toward political affairs, Easton argues that a theoretical distinction should be made between three key objects of political support: the political community, the regime, and the authorities.

The political community refers to the existing social relationships within the population that link individual citizens together, allowing them to form cohesive political goals that can then be translated into demands upon the system (Easton, 1965: 189). For the political community to survive, citizens must share at least some degree of faith that by coming together as a group, and each playing their role in the political process, they can effectively address the most pressing issues facing society (Easton, 1965: 172).

The regime can initially be described as the procedures and rules that govern political life (Easton, 1965: 191). Without an established set of practices for how the political decision making process should be conducted, and how responsibilities should

be divided among the political authorities, Easton argues that even relatively simple issues would continually descend into arguments about how outcomes should be decided (Easton, 1965). In order to avoid this confusion, the presence of a regime allows societies to:

> Set up expectations about who is to wield power, the limits within which it is to be used, who are expected to comply, and the conditions under which these obligations arise (Easton, 1965: 192).

At the core of Easton's argument here is that the concept of the regime is essential to political systems, as it sets out a widely agreed upon process by which political outcomes can be accepted as legitimate (Easton, 1965).

The final category of interest, the authorities, refers to the individual occupants of political office, and are distinct from attitudes toward the actual roles themselves (Easton, 1965). Easton goes on to define which types of political actors should be considered as authorities, stating they must meet three criteria, namely: that they engage in the political decision making process, they are recognised as having responsibilities for certain matters, and that their actions are generally accepted as binding by the public, as long as they act within their predefined roles (Easton, 1965: 212). The authorities play a crucial part in the functioning of political systems, as it is the authorities who translate political demands into outputs, and therefore have a direct link to the wider political community. While this relationship between outputs and demands may imply that the authorities are exclusively recipients of specific support, situations may arise where populations do not believe that any set of authorities are up to the job of government, which can act as a primer for the onset of political unrest, or in the most extreme cases, civil conflict (Easton, 1965: 217). This eventuality, while relatively rare in more stable regimes, nevertheless highlights the potential spill-over effects that specific support, or a lack thereof, can have upon the underlying sense of legitimacy that is at the core of all political systems.

In light of the three typologies outlined above, it should be noted that when Easton speaks of political support, he is referring to the net aggregation of citizens' feelings toward each of these distinct components of the political system, whether that be

positive or negative, rather than their attachment to the political system in a more general or abstract sense (Easton, 1965: 169-170). This is one of the major contributions to the current literature that relates directly to my present research, as the finding that political engagement is an inherently multidimensional concept serves as a useful foundation on which to base my own examination of political support.

While the system support theory offers a unique insight into how citizens' relationship with political affairs may be better understood, there are still significant elements of this framework which require further clarification. There are three limitations of this approach in particular that must be addressed before being able to move towards a more comprehensive model of political engagement, namely: the issue of how to operationalise and test this theory in an evidence based research setting, the question of how the attitudinal and behavioural aspects of engagement relate to the overall concept of political support, and how to identify the underlying causal mechanisms that drive levels of diffuse political engagement.

Firstly, applying this theoretical approach to real world data will inevitably require a clearer definition of the actual behaviours and attitudes that form the basis of political of support, as Easton's framework lacks concrete examples of how support should be operationalised in an empirical research setting. This discrepancy is to be somewhat expected, as constructing any kind of overarching framework with this type of broad focus will inevitably come at the expense of the finer details of the process' inner workings. While several aspects of engagement are omitted by this approach, Easton does specify a few ways in which support can be expressed by the public, such as their degree of trust in various aspects of the system and their perceptions of its legitimacy, as well as their overt support via participation in elections (Easton, 1965: 445-446). Nevertheless, this is one of the key areas where a substantial gap exists between theoretical models of political support, and the ability to create testable hypotheses that can evaluated against a diverse range of empirical cases. This current project addresses this issue by including a wide range of political attitudes and behaviours, that can offer a direct assessment of the degree to which patterns of support share any commonalities

across different aspects of engagement.

One further area omitted by this approach is the question of how the individual components of support interact with one another. While one of the major strengths of the system support theory lies in the way in which it conceptualises public engagement as a combination of both citizens' behaviour within and attitudes toward the political system, it remains unclear whether both of these factors are of equal weight, and if they are formed via the same causal paths. Just as Easton maintains that a political system cannot be understood as a single unit in and of itself, without first differentiating between its key actors and institutions, as well as specific and diffuse forms of support, we must also consider that political engagement contains a multitude of distinct, yet interrelated elements that may have different consequences for the stability of democratic regimes. The key question here is whether a society can survive solely via either active public participation in political life, or implicit support for the regime, or whether both taken individually are necessary, but not sufficient conditions for effective government. Even if the latter is true, it remains to be seen whether both of these forms of engagement are equally important, or if they each play a unique role in maintaining support for democratic regimes. It is clear that in order to advance our current understanding of how the public interact with their political systems, it is essential to first explore how the different behavioural and attitudinal orientations toward the system are formed, how they influence one another, and what consequences they have with regards to overall levels of political engagement.

A final point of consideration that arises from this theoretical framework is the question of which factors influence diffuse political support. While the system support approach acknowledges that a feedback loop is present in political systems, whereby demands made by the relevant members of the political community are translated into outputs by the authorities, which in turn alters the environment from which future demands will be made (Easton, 1965), several important questions remain. While the central role that outputs play in this feedback loop can help explain the root causes and formation of specific support, this approach tells us little about how diffuse support can be fostered and maintained. This is one of the key areas I will explore during

the course of my research, as my focus on whether institutional changes to the way a political system operates are linked to levels of public engagement relates more directly to this concept of diffuse support, and thus may help shed some light on the relationship between a political system's structure and more entrenched forms of public support.

Taken as a whole, the system support theory has clearly made an immensely important contribution to the current literature on political engagement, primarily by illustrating that any theory hoping to improve our present understanding of political support must reflect the complex and multidimensional nature of citizens' relationship with their political systems. In the course of my current research I hope to develop this central idea further, and provide an overarching analysis of political engagement that has direct practical applications, and is built upon a firm understanding of the functions played by each of its constituent parts.

Summary

It is evident that the existing literature on political engagement is extensive - which becomes even clearer in each of the subsequent chapters - but has developed in a fragmented manner that somewhat hinders our ability to understand this concept in its entirety. Moving towards an overarching framework that can directly assess how the constituent parts of political engagement interact with one another is clearly needed. One of the most notable attempts at this goal, the system support theory, serves as an extremely useful starting point to address the core research questions posed by the current project. In terms of the first research problem, regarding the conceptualisation of political engagement itself, this theoretical framework will be evaluated against cross-national data across a wide range of political support. Subjecting theoretical explanations of political engagement – that account for several attitudinal as well as behaviour aspects of political support – to empirical testing, makes it possible to move towards a more complete picture of the causal processes that influence political engagement, as opposed to the current piecemeal approach based upon research with a distinctly narrow focus.

The analyses of electoral turnout, political attitudes, and non-electoral participation

conducted in Chapters 3-5, each form part of an overarching methodological framework, which employs consistent measures of key independent variables, and is based upon common data sources. This provides a unique opportunity to compare the findings across different aspects of engagement, and directly address the question of whether political support can be best understood as a single, cohesive concept, or if its constituent parts differ to such a degree that they must be understood as distinct concepts in their own right.

This theory also has clear implications for the remaining research questions regarding political institutions and inequality. In terms of the impact of electoral rules on overall levels of engagement, the central role that diffuse support plays in ensuring the survival of the democratic system, can be used as a clear justification for my analytical focus on electoral institutions. The inherently structural nature of these electoral rules, means that they may be more likely to influence deeper, long-standing attachments to the political system, as opposed to the short-term fluctuations in specific support caused by individual policies, scandals, or political campaigns. Moreover, in practical terms, it is crucially important to examine any potential effects that these laws may have beyond their direct impact on electoral turnout. Even if reforms succeed in increasing overall turnout rates, it is unclear what, if any effects these changes may have on inequality of participation, as well as political attitudes and participation beyond the ballot box. The importance of these questions is underscored by the fact that institutional changes are both relatively rare events, and fundamentally alter how politics operates within a given society, meaning that if any negative unintended consequences arise, it is extremely difficult to reverse these changes once they have been set in motion.

One central area I intend to explore, that is largely omitted by the system support theory, is the inequality of political engagement. If low levels of diffuse support can prove fatal to the health of a democratic society, then what potential problems arise when diffuse support is concentrated within a narrow section of the population? Systems with both low and unequal levels of diffuse support should be even more vulnerable to democratic failure, meanwhile, societies enjoying relatively high overall rates of support, may nonetheless mask persisting inequalities that undermine the foundations of

democratic politics. By including certain key socio-demographic variables at the individual level of analysis, and interacting them with these electoral rules in my current research, this will allow me to directly test the extent to which any such patterns of inequality vary across different forms of engagement.

The following three Chapters explore three major components of political support in greater detail, and focus more directly on the latter three research questions included in this project, namely: How do electoral rules influence overall levels of political engagement? To what extent is engagement in political affairs biased along socio-demographic lines? And, do electoral rules alter these socio-demographic biases?

By taking a consistent methodological approach in exploring electoral turnout, political attitudes, and non-electoral participation, we can therefore compare results across different aspects of engagement to directly test the central claims of the system support theory, and the initial research question regarding political engagement.

In order to provide an meaningful answer to the wider question surrounding the concept of political engagement, a crucial first step is examining each of the component parts of political support in sufficient detail. The following chapter will explore the first of these three aspects, electoral turnout.

Chapter 3

Electoral Rules and Voter Turnout

Over the past few decades a trend has emerged in many modern democracies, that electoral turnout has been in steady decline (Baston and Ritchie, 2004; Dalton, 2006; Franklin et al., 1996; Lijphart, 1997; Massicotte et al., 2004; Norris, 2011; Putnam, 2000; Warren, 1999). This poses serious issues to both the legitimacy of democratic government, and the way in which states can effectively represent the views of society as a whole. This general decline in participation also raises further concerns, as there is an ever increasing gap between those who feel disillusioned with the current state of the political system, compared to those who already play an active role in the political decision-making process.

Of the multitude of ways that policymakers can attempt to combat the issue of turnout inequality, previous research indicates that a top-down approach aimed at institutional level change may be the most effective (Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). Countries that have enacted such electoral reforms in the past, it should be noted, tend to do so as part of broad policy frameworks that alter multiple aspects of the political system, rather than changing one electoral law in isolation (Birch, 2009; Renwick, 2017; Singh, 2019). This emphasises the importance of examining the cumulative impact that various electoral rules can have on voting behaviour, both in terms of overall turnout, and also the way in which

any such effects are distributed among different sections of the population. Even if such institutional changes boost voting rates at the national level, this may still mask persisting inequalities, or even enhance them, if they fail to incorporate the groups who are traditionally most alienated from the political process, namely the young, the less well educated, and the poorest members of society (Hoffman et al., 2017; Lijphart, 1997; Quintelier et al., 2011).

Four central aspects of the electoral rules that govern our political systems are examined here, including: compulsory voting laws, the proportionality of electoral systems, voter registration, and the use of direct democracy. Are any of these processes linked with increases in overall levels of turnout? And if so, how are these effects distributed among different sections of the population?

This paper builds upon existing research in this area by testing the claims of previous studies at both the national and regional level against up to date, large-N cross national data sources. The main dataset is based on waves 2-4 of the Comparative Study of Electoral Systems (CSES), and includes information on 116,000 individuals, in 97 election studies, across 43 countries, between 2001-2016. This project also departs from the wider political behaviour literature's tendency to focus on the impact of individual level determinants of turnout, to the exclusion of structural factors. Here the emphasis is instead placed upon the importance of institutional contexts in explaining inequality of political participation, as opposed to treating these structural factors as mere control variables. Moreover, this approach also takes a wider focus by exploring the societal impact of a wide range of electoral rules, rather than examining one in isolation. Finally, the inclusion of cross-level interactions makes it possible to identify whether there is any particular set of institutional arrangements that can help minimise inequality of participation. In order to address these questions it is essential to begin with a discussion of the state of the current academic literature on political behaviour and electoral rules.

3.1 Theory

Voter Turnout

Electoral turnout is widely considered to be one of the most important indicators of the health of any democracy (Rubenson et al., 2007). The fundamental link that elections foster between the public and those in power separates it from all other forms of political behaviour, as it occupies a unique space in terms of how it directly impacts the formal political process.

High turnout is essential in order to ensure that election results accurately represent the wishes of the entire population, rather than lending more political weight to certain groups (Kelso, 2007; Lijphart, 1997). In countries with low turnout, there is a risk that politicians can simply construct campaign strategies and manifestos with these habitual voters' preferences in mind, neglecting the needs and wants of those who feel somewhat disaffected from the formal electoral process (Baston and Ritchie, 2004; Lijphart, 1997). This situation is especially disconcerting since those who do not vote often come from the most disadvantaged sections of the population, typically the young, the less well educated, and those with less economic resources (Baston and Ritchie, 2004; Brady et al., 1995*a*,*b*; Lijphart, 1997; Pateman, 1970: 37). This highlights the valuable function that voting plays in ensuring that governments represent the wishes of the population at large, since if a broad cross-section of society participates in elections, politicians are forced to take their demands into consideration in order to win their support. The beneficial outcomes associated with high levels of electoral turnout underscores the importance of understanding the various factors that influence this type of political behaviour.

The Socio-demographic Characteristics of Turnout Inequality

Before examining the core institutional factors included in the analysis, it is necessary to outline the key socio-demographic variables that are held to influence turnout at the individual level. These aspects tend to be the greatest source of variation in levels of participation within the population, and illustrate the dividing lines between those who

are already actively engaged in, and those largely alienated from the formal political process. Four of the most influential variables at the individual level are: age, education, political knowledge, and income.

Studies have consistently found that older citizens are far more likely to vote than their younger counterparts (Baston and Ritchie, 2004; Lijphart, 1997; Smets and van Ham, 2013). This effect also tends to follow a curvilinear trend, with middle aged citizens being the most likely to vote, while older age groups are slightly less likely to participate. This divergence between age groups may also lead to a self-reinforcing cycle, as since young people are significantly less likely to vote, politicians will see less value in catering to their needs when campaigning or holding political office. One positive from this model, however, is that if structural changes are successful in encouraging more young people to vote, this may have a knock-on effect on the supply side of the equation, giving politicians a greater incentive to promote policies and manifesto pledges that better address their concerns, effectively reversing the cycle.

A second major factor that has been found to influence voting at the individual level is education. In line with the resource model of political participation, proposed by Brady, Schlozman & Verba (Brady et al., 1995*a*,*b*), education is one of several attributes that are held to reduce the costs of voting. The communication, critical thinking, and social skills developed in the course of education helps to reduce the effort needed to become informed on political issues, and can reinforce social ties and positive orientations toward civic society (Brady et al., 1995*a*; Wolfinger and Rosenstone, 1980). Findings from the academic literature largely support these claims, as a positive link has been found between turnout and both an individual's highest achieved qualification, and the number of years spent in formal education (Lijphart, 1997; Smets and van Ham, 2013). It is important to note, however, that some studies have claimed that the seemingly positive effect that education has on voting may actually be the result of other factors, such as interest, or knowledge in political affairs (Denny and Doyle, 2008). As such, a political information measure will also be included in the analysis in order to determine whether the impact of education remains after controlling for this factor.

Another central claim of the resource model of participation is that income exerts a positive effect of voting, with wealthier citizens being more likely to take part in elections. The empirical findings generally support this notion, as while the influence of income seems to be weaker than that of age and education, it nevertheless produces a small but significant positive impact on turnout (Smets and van Ham, 2013). By including cross level interactions between these variables and the system-level factors discussed below, this allows us to address the key research question of whether there is any combination of electoral rules that are associated with a reduction in the current inequalities of participation in democratic societies.

Electoral Laws

First and foremost, it is worth examining whether there is any evidence to support my analytical focus on electoral laws, in terms of how these policies influence political behaviour. Numerous studies have found that when trying to account for variation in levels of political engagement across different societies, it is the institutional context that plays the biggest role in explaining support rather than differences at the individual level (Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). A noteworthy point here is that when countries have actually enacted these types of structural changes to their electoral systems, it tends to be as part of wider reform packages rather than simply changing one aspect of the political process (Renwick, 2017). For example, Thailand's transition to compulsory voting in 1997 was accompanied by a new electoral system and an entirely new constitution, while in 2012 Chile decided to move from a mandatory to a voluntary voting system, while simultaneously switching from a voluntary registration process to a compulsory one (Contreras et al., 2016; Singh, 2019). In line with the real world pattern of how these rules are typically implemented, it makes sense to take a more comprehensive approach when exploring this topic, as each of these distinct aspects of the electoral process may impact political behaviour to varying degrees. Indeed, focusing on a single aspect of the rules which govern our elections may overstate the relative importance of certain factors, or overlook other potential areas that may be in desperate need of reform (Massicotte et al.,

2004).

While there is significant evidence that institutional change may be a worthwhile route to improving public participation in politics, it is clearly not the only relevant factor. Change at the systemic level can only do so much: introducing new laws does not guarantee that politicians and the public will act any differently. There is, however, some evidence that changes at the structural level can have positive effects beyond their direct impact on the formal electoral process. Renwick (2017), gives New Zealand as an example where electoral reform has had a longstanding impact in both strengthening multi-party competition, and promoting greater gender and ethnic diversity in political society (Renwick, 2017: 13). While electoral reform may be an incomplete answer to the problem of political disengagement, it is nevertheless essential, as it sets the underlying framework through which other cultural and social avenues can also be explored.

Compulsory Voting

Of all the institutional changes that can be enacted in hopes of increasing levels of political involvement, compulsory voting laws are held to be by far the most effective (Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). Compulsory voting refers to the practice of legally requiring citizens to participate in elections, meaning that those who fail to turn out at the polls can potentially face legal sanctions. This policy has been adopted by various nations over the years, and is currently still in place in Australia, Belgium, and much of Latin America (Baston and Ritchie, 2004: 36). It is important to note, however, that not all forms of mandatory voting are created equal, as these policies often differ drastically in terms of how they are put into practice. The most common form of punishment for non-voting is a small monetary fine, as is the case in Australia and Belgium. More extreme penalties include the denial of public services such as the ability to apply for certain public sector jobs, the reissuing of official documents such as passports, disenfranchisement from future elections, or even imprisonment - although this is extremely rare (Quintelier et al., 2011). In the vast majority of countries with compulsory voting, these laws are weakly enforced, if at all. Of the few countries that do systematically enforce these

sanctions, the penalties tend to be relatively minor such as small fines, while those with much harsher penalties tend to be extremely lax, or inconsistent in their enforcement. Despite the relatively weak sanctions for non voting, and the lack of enforcement in many of these countries, compulsory voting nonetheless has had a notable impact on levels of turnout, implying that this relatively minor additional cost to abstention has a significant influence on people's decision whether or not to vote (Lijphart, 1997: 9).

Arguably one of the biggest strengths of compulsory voting laws is its ability to address the issue of inequality of participation. As discussed previously, situations where turnout is relatively low can be problematic, since those who are less likely to vote often come from the most disadvantaged and alienated sections of the population (Lijphart, 1997). Efforts to increase voting can help to address this issue, as a near universal turnout provides all citizens with an equal say in the outcome of an election, and forces politicians to take their concerns into consideration in order to gain their support (Baston and Ritchie, 2004; Lijphart, 1997). As such, adopting this practice can be viewed as one of the most effective methods for reducing the inequality of participation seen among many modern democracies, which leads to my first hypothesis:

> **H1:** The impact of socio-demographic characteristics on turnout will be reduced in elections with compulsory voting compared to voluntary systems.

While all forms of compulsory voting are expected to reduce the salience of the individual level determinants of turnout, the level of enforcement is also of crucial importance. Even in cases where the enforcement of these laws are relatively lax, we should still witness a large enough increase in turnout to effectively reduce the inequality of participation compared to voluntary voting. Laws that are backed by even stricter penalties and enforcement should witness significantly higher turnouts, and in turn, further minimise the degree of variation across different sections of the population. This leads to my next hypothesis, that:

> **H2:** The impact of socio-demographic characteristics on turnout will be reduced as compulsory voting is more strictly enforced.

Including several indicators of compulsory voting in my final analysis makes it possible to test whether having any form of compulsory voting increases participation enough to minimise turnout inequalities, or if a credible threat of legal sanction is necessary for these rules to have any substantive impact.

Electoral System Proportionality

The proportionality of electoral systems not only plays a central role in dictating how easy the electoral process is to take part in, but also impacts the probability of producing certain types of government, as well as shaping voter's perceptions of how likely it is that their vote will have a meaningful impact on the end result.

One of the clearest findings from the empirical research in this area is the positive relationship between the proportionality of an electoral system and levels of voter turnout (Baston and Ritchie, 2004; Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997). It is argued that more proportional systems should witness increased turnout, since the more direct relationship between the percentage of votes gained and the number of seats a party wins means that there are fewer 'wasted votes' – where the result for a particular constituency is a foregone conclusion, rendering a vote for any other candidate practically meaningless – therefore citizens are more likely to feel that their vote can actually make a difference to the end result (Baston and Ritchie, 2004; Lijphart, 1997).

There have been some arguments against the adoption of this practice, however, most of which focus on the relative complexity of many proportional systems compared to single-member districts (Baston and Ritchie, 2004). Despite this concern, the empirical evidence generally points to a significant positive relationship between more proportional electoral systems and higher rates of voter turnout (Baston and Ritchie, 2004; Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997).

What is less clear from the empirical literature, however, is whether electoral systems impact the equality of political participation. It remains to be seen whether the relative complexity of proportional systems may impede certain voters more than others, or whether a resulting increase in political efficacy will help engage the groups tra-

ditionally most alienated from electoral politics. My next hypothesis evaluates whether the supposed positive effects of proportionality on overall turnout rates can also help reduce inequality of participation:

> **H3:** The impact of socio-demographic characteristics on turnout will be reduced under more proportional electoral systems.

Including electoral system proportionality in the current analysis allows for an assessment of whether the representativeness of electoral outcomes play any significant role in influencing the equality of political participation.

Voter Registration

It is argued that how voters are registered can have a significant effect not only on overall turnout levels, but also on the socioeconomic make-up of the electorate itself. Even in cases where turnout is relatively high, if large segments of the population are not registered, then elections can still be won without the participation of the majority of eligible voters (Braconnier et al., 2017).

One recurring pattern in the literature on this area is that states which adopt more accessible registration procedures, such as automatic, or passive registration – meaning that when an individual reaches the required voting age, they do not need to take any further action to ensure that they are on the electoral roll – are associated with increased levels of electoral turnout (Braconnier et al., 2017; Franklin, 2002; Geys, 2006; Lijphart, 1997). Conversely, from a rational choice perspective (Blais, 2000; Downs, 1957), nations that employ active registration procedures, where citizens must voluntarily sign up to be placed on the electoral roll, can be seen as imposing additional costs to the act of voting, and thus should lead to lower turnouts (Geys, 2006). Braconnier et al.'s (2017) study on voter registration, conducted before the 2012 French presidential election, found that the extra costs associated with having to manually register did in fact prevent people from voting, and that these effects were especially pronounced for certain members of the electorate, namely immigrants, the young, and the less educated (Braconnier et al., 2017: 604).

Nevertheless, there is some conflicting evidence with regards to the effects of voter registration practices. Erikson's (1981) study of voting behaviour in the USA compared turnout in states with both strict and relatively lax registration requirements, as well as those where voters did not need to register whatsoever. In line with the research outlined above, he found that states with stricter registration procedures had reduced levels of turnout compared to those with less demanding registration requirements. Interestingly, however, voters in states where registration was not required at all were actually the least likely to vote out of the three groups. These findings imply that while convoluted registration procedures may put some people off voting, the process of having to manually register and take active steps to be placed on the electoral roll might actually make citizens more likely to participate. One potential explanation for this is that those who have gone through the registration process are now more invested in the election, and thus have a 'sunk cost' in the electoral process (Erikson, 1981: 273-274). Failing to vote would now make their previous investment of the time and energy to register all for nothing, and as such, should lead to an increased likelihood of participation.

Despite the findings of this study - which was limited to only a sample of Northern US states, and was conducted in the mid 1960s - the general trend apparent in the literature is that of a positive link between automatic, or passive registration systems and voter turnout. Not only that, but more passive systems tend to reduce the barriers of entry for the most alienated sections of the population. This, in turn, leads to the following hypothesis regarding voter registration and turnout inequality:

> **H4:** The impact of socio-demographic characteristics on turnout will be reduced in elections with passive registration systems, compared to those using active registration.

Including this variable in my analysis will allow me to test whether previous findings still hold up when tested against more recent cross national data.

Referendums

The use of referendums to decide important issues of public concern varies immensely across different political contexts. While some states regularly allow citizens to have a direct input on certain issues via legally binding public votes, others solely rely on the representative function of parliament to convey the wishes of the public. Proponents of direct democracy point to the educative effects that this type of participation may bring, as well as its potential to strengthen system legitimacy and reduce the inequality of participation (Bowler et al., 2002; Pateman, 1970). There are also several arguments against the increasing use of referendums, however, as some contend that these additional votes reduce the salience of national elections, can lead to voter fatigue, and only benefit those who already exert an unequal influence on the political process (Freitag and Stadelmann-Steffen, 2010; Kern and Hooghe, 2018). Each of these approaches have direct implications regarding both overall rates of electoral participation, and the inequalities present in this form of political action.

One of the most prominent arguments for the increased use of referendums is that the additional public involvement required by this type of participation can help socialise citizens into the political system. This relatively low-cost avenue to participation, it is argued, helps to produce more informed members of society who believe that they can have a meaningful impact on the political decision-making process (Gastil and Xenos, 2010; Kim, 2015; Quintelier and van Deth, 2014; van Ingen and Bekkers, 2015). Previous studies which examined direct democracy in both North America and Japan lend support to this line of argument, as their findings suggest that direct democracy has a positive effect on citizens' political knowledge, as well as enhancing both internal and external efficacy (Bowler et al., 2002; Kim, 2015; Mendelsohn and Cutler, 2000; Smith, 2002). Direct democracy can thus be viewed as part of an educative process, where citizens learn more about how their political system operates, become more invested in it, and therefore more likely to participate in the future (Pateman, 1970).

Another supposed benefit of direct democracy is that it may also offer a potential answer to the issue of the declining legitimacy of political actors and institutions, by fostering a closer link between citizens and the political process. If citizens are largely

unsatisfied with the performance of their elected representatives, then offering everyday people a more involved role in the creation and implementation of public policy may lend a degree of legitimacy to the seemingly often far-removed realm of political decision making (Leininger, 2015).

In response to this point, however, critics have noted that instead of enhancing the legitimacy of a political system, increasing reliance on direct democracy initiatives may actually weaken the role of traditional political actors and institutions. If all of the most important issues are put directly to the public, this may reduce the importance placed upon legislative elections, leading to lower rates of electoral turnout (Freitag and Stadelmann-Steffen, 2010; Kern and Hooghe, 2018).

When it comes to the wider empirical literature on this topic, findings on how direct democracy impacts overall rates of electoral turnout are decidedly mixed. Much of the previous research in this area focuses on sub-national groupings, primarily within the US and Switzerland, and also limits its scope to local referendums. While some case studies have uncovered a positive relationship between the frequency of direct democracy ballots and turnout in national elections (Dvořák et al., 2017; Tolbert et al., 2009), the majority of the research in this area suggests that referendums have either a negative effect on turnout, or no have significant impact on voting behaviour whatsoever (Altman, 2013; Freitag and Stadelmann-Steffen, 2010; Ladner and Fiechter, 2012). Altman's (2013) research on the impact of referendum ballots on turnout in Swiss national elections, for instance, found that government initiated, or top down, referendums had a negative impact on participation in future elections, while citizen-led initiatives produced no significant effects. Another study regarding the Swiss case, that instead examined local elections, found that while there was no impact on elections immediately following referendums, there was a significant long-term, negative impact on future electoral participation (Freitag and Stadelmann-Steffen, 2010). These findings are also supported by initial cross-national research which indicates that the increased use of direct democracy instruments is associated with reduced turnout at national elections (Kern and Hooghe, 2018). The current project makes it possible to evaluate these previous findings in light of updated data sources and new measures of referendum

usage.

Aside from the main effect of referendums on voter turnout, the primary focus of the current study is how this electoral feature influences the equality of participation among different groups in society. Proponents of direct democracy maintain that providing alternative means of political involvement to simply voting in elections opens up avenues of behaviour to those who would otherwise not become involved in political affairs (Bowler et al., 2002). One counter-argument, however, is that direct democracy may also be open to abuse from those with more political resources at their disposal, especially when conditions such as signature requirements are needed to propose referendum topics, or when niche issues result in relatively low turnout. The current body of evidence fails to support either approach, however, as studies of direct democracy, particularly in Switzerland, as well as some initial cross-national research, failed to display any significant relationship between direct democracy and inequality of electoral participation (Kern and Hooghe, 2018).

In light of these somewhat mixed findings, several hypotheses have been constructed to evaluate the claims from the literature that referendums are a useful tool for reintegrating those who are traditionally absent from electoral politics. The first hypothesis relates to the notion that direct democracy can act as a low-cost form of participation that plays an educative role, socialising otherwise disengaged citizens back into the formal political process:

> **H5:** The impact of socio-demographic characteristics on turnout will be reduced in elections where at least one referendum took place in the current electoral cycle, compared to those with no referendums.

Another aspect that will be tested by the current project are claims that while holding referendums may have an initial positive effect on turnout rates, their increased use may lead to diminishing returns. Just as citizens can become somewhat disillusioned with politics when they are subjected to several election campaigns over a short period of time – otherwise known as 'voter fatigue' (Lijphart, 1997) – this may also be true of referendums. According to this approach, if voters are constantly asked to become

informed on issues that are up for contention, especially those that are deemed to be trivial, any positive effects of this process on democracy may be significantly reduced, or even reversed. The following hypothesis allows us to directly evaluate these claims:

> **H6:** The impact of socio-demographic characteristics on turnout will be higher when referendums are held more frequently.

A further noteworthy point is that within the wider literature, direct democracy is most often operationalised either as a binary measure of whether referendums are used at all, or a count that indicates how frequently these contests are held. One aspect that I intend to highlight in this project is that the salience of these referendums - or by proxy, their turnout - may be a crucial component in how these contests influence public behaviour. One potential issue with the argument that direct democracy can produce a significant boost in electoral participation is that this is dependent on referendums themselves having relatively high turnouts to begin with. With regard to the equality of participation more specifically, if more frequent public votes are not accompanied by sufficiently high levels of turnout, this may lead to a widening of the disparity in participation among different sections of society (Kim, 2015; Smith, 2002). Referendums with low turnouts may simply act as another means for those already engaged with the political process, to expand their political influence even further, thereby exacerbating the inequality of participation. This leads to the next hypothesis, that:

> **H7a:** The impact of socio-demographic characteristics on turnout will be greater in countries that experienced a low-turnout referendum, compared to those with no referendums.

While, conversely, votes that enjoy a high degree of participation may provide an equalising boost to turnout rates, by incorporating a wider cross-section of society into political affairs:

> **H7b:** The impact of socio-demographic characteristics on turnout will be reduced in countries that experienced a high-turnout referendum, compared to those without referendums.

One of the major aims of the current project is to test previous findings which are predominately based upon regional, sub-national forms of direct democracy, against large-N cross national data. It remains to be seen whether previous results scale up to the state level, or if there something specific to small scale, localised direct democracy that influences future political behaviour. In light of this point, the focus of my research will relate more specifically to the use of referendums at the national level, in order to more accurately assess their impact on turnout in legislative elections. This project will test these previous findings against updated data sources, and explore aspects of direct democracy that have been omitted by past research.

3.2 Method

Data

The final working data that forms the main analysis was created by merging three survey waves from the Comparative Study of Electoral Systems (CSES, Modules 2, 3 & 4), leading to a combined dataset that includes over 116,000 individuals, from 97 elections, in 43 countries, between 2001-2016 (CSES, 2017). While the CSES survey data contained all of the relevant variables at the individual level, several other data sources were also used in order to gather the required macro level variables for the final analysis.

Dependent & Independent Variables

The main dependent variable, **voter turnout**, was taken from the CSES survey question that asks respondents whether or not they cast a vote in their country's most recent legislative election. The final dummy variable is coded as either 'did not vote', or 'voted'.

Compulsory voting was operationalised using two different measures. The first is a dummy variable that compares systems with any form of **compulsory voting** against the voluntary voting reference category. The second measure is an ordinal variable that attempts to capture the degree to which compulsory voting laws were enforced

in each country. The original CSES election-level data classifies compulsory voting systems based on the severity of their penalties for non-compliance, and the degree to which these penalties are actually enforced. The CSES coding was cross-referenced against several other sources to check for any inconsistencies (Birch, 2009; Franklin, 2002; IDEA, 2019*a*,*c*; IFES, 2019; Massicotte et al., 2004; Singh, 2015). The categories in the final measure compare voluntary systems against those using either **weakly enforced compulsory voting**, or **strongly enforced compulsory voting**. These two indicators make it possible to test whether having any form of compulsory voting laws is enough to impact levels of electoral turnout, or if a credible threat of legal sanction is necessary for these rules to have any substantive impact.

The effect of electoral system proportionality on turnout was assessed using the Gallagher disproportionality index, which compares the percentage of votes won by each party against the number of seats they received post-election. This provides an effective indicator of how closely the final result mirrored the wishes of the public. The score for the previous legislative election is used, as if citizens are actually influenced by the representativeness of the electoral process, their judgement about the system's efficacy would logically be based on their past experiences with it. The variable is calculated using the least squares method outlined by Gallagher (1991), with additional data for more recent elections sourced from Carey and Hix (2011), Gandrud (2015), or calculated manually using election data (CSES, 2017). In all of the models, the variable is inverted, so as to make the interpretation of interaction effects more intuitive. A higher score on the final variable, which is labelled simply **proportionality**, indicates a more proportional election outcome.

With regard to voter registration, an original dataset was created specifically for the purposes of this project. This was based predominantly on election reports from the Organisation for Security & Co-operation in Europe (OCSE, 2019), and was supplemented with additional information from books, journal articles, and various government websites (Contreras et al., 2016; Massicotte et al., 2004; OCSE, 2019; Power, 2009; Rosenberg and Chen, 2009). The final measure takes the form of a categorical variable, with the passive registration category compared against **active registration**

and **mixed registration** systems. The mixed category includes instances where states are transitioning from active to passive systems, or where registration requires some citizen involvement, but significant resources are put into contacting voters to help them register. The full range of cases included this group are outlined in Appendix A. This newly developed original dataset, which supplements the CSES election data, makes it possible to test whether the extra costs associated with having to manually register has any impact on citizens' decision of whether or not to vote.

Data on the use of referendums was taken from multiple sources, most notably the SUDD Database for Direct Democracy, the Centre for Research on Direct Democracy, and the IDEA Direct Democracy Database (C2D, 2019; IDEA, 2019*b*; SUDD, 2019). Information was gathered on all national referendums that took place between the current election under examination and the most recent election of the same type. This data was then used to construct three final variables. The first is a dummy measure of whether any referendums were held in the previous electoral cycle, coded as either 'no referendums', or 'one or more referendums'. The second variable captures the frequency of these contests, and is a simple count of the number of referendums held in each country since the last election. The final indicator takes the highest recorded turnout of any of the referendums mentioned above, and then applies a threshold of whether the turnout was below, or exceeded that of the previous legislative election. The final variable is coded as follows: 'No referendums held since last election', 'referendum turnout was lower than the previous election', 'referendum turnout was higher than the previous election'. This measure allows for an examination of whether degree of participation, and by proxy, the salience of a referendum, has any meaningful impact on future electoral behaviour. These three variables were labelled simply as **referendum held, referendum frequency,** and **referendum turnout**.

Individual Level Variables

Several individual level measures were included in order to capture the necessary information on each of the key socio-demographic independent variables, and to control for other major influences on turnout. The final variables included in the models, namely:

age, education, political knowledge, household income, and **party identification**, were all taken from the main CSES dataset. While party identification is not included in the main list of socio-demographic variables discussed previously, intuitively, individuals who align with a particular party have more at stake in an election, and thus should be more likely to take part. As such, this measure must be controlled for in order to assess whether the other socio-demographic variables still produce any independent effects on turnout. Turning to how these variables are measured, the respondent's age, in years, is included as an interval-level variable, alongside the squared term, in order to capture any curvilinear effect on turnout. Education is recorded as a dummy variable, indicating whether or not an individual attended university. Party identification is similarly coded, and differentiates between those who do not identify with any political party, and those who identify with at least one. Political information is calculated as the percentage of political knowledge based questions that respondents answered correctly during the survey. Due to the fact that CSES is an aggregation of different national election studies, the specific questions given to respondents to gauge their political knowledge varies by election study. While this cross-national variation could potentially raise issues of comparability, questions tend to centre around core features of the political system, rather than focusing on specific candidates or policies, meaning that this nonetheless serves as a useful measure of generalised political knowledge. Household income is measured in quintiles, with '1' representing the poorest, and '5' the wealthiest. It is worth noting that the survey questions for both income and political knowledge were not included in a select few election studies. As such, the analysis was run both with and without these variables as an additional robustness check.

Control Variables

Several control variables were included at the macro level, ranging from: population size, how long the country had been a democracy, closeness of the election result, level of economic development, degree of economic inequality, number of political parties, and whether multiple elections were held on the same day.

The population variable consists of the natural log of the total population, measured in millions, for each country-year. This was taken from the World Bank World Development Indicators dataset (World Bank, 2019).

How long each country had been democratic was recorded using a dummy variable, with 'old democracies' compared against the 'new democracy' reference category. This variable was calculated based on the Polity IV measure of regime durability (Polity IV Project, 2018), with countries that had been classed by Polity IV as democratic for at least fifty years before the current election coded as 'old' democracies, while those below this threshold were included in the 'new' category.

The competitiveness of elections was measured via the percentage point gap between the winner and runner-up in each contest, and was calculated using the election result variables from the CSES data. Since this indicator is measured as the vote margin between the winner and second place, larger values represent less competitive contests, while lower scores are indicative of closely fought elections.

Economic development is represented by the GDP/capita (current USD) for each country-year. The final variable uses the natural log of the GDP/capita figure for each case, and is sourced from the World Bank World Development Indicators (World Bank, 2019).

Economic inequality is measured using the Gini coefficient, which is a ratio of the wealth distribution of a given population. A score of zero implies complete equality of incomes, while a score of one would mean complete inequality. This is based on combined data from various sources (IFES, 2019; Index Mundi, 2019; LIS, 2019; OECD, 2018; World Bank, 2019). In the final variable coding, a higher value therefore represents greater levels of economic inequality.

The effective number of parties measure follows Laakso & Taagepera's methodology by calculating a score for each election based upon the number of parties that competed, which is then weighted by each party's vote share (Laakso and Taagepera, 1979). This weighting process means that elections with lots of smaller parties that received negligible amounts of votes do not unduly influence the estimate. These figures were taken from several sources to create the final variable of interest (CLEA, 2018; IFES,

2019).

A dummy variable was also included to distinguish between standalone legislative elections, and cases where both legislative and presidential elections were held on the same day. Previous research suggests that holding multiple elections concurrently can have a positive impact on turnout (Cancela and Geys, 2016), as voters are more likely to take an interest in at least one of the contests.

Finally, before being included in the models, all interval-level variables were centred around the group mean, and divided by two standard deviations, following the conventions outlined by Gelman (2008) and Enders and Tofighi (2007). As such, the intercepts for each model refers to the expected value of the outcome when all interval level independent variables are held at the mean for that election study, rather than zero; while the coefficients themselves refer to the unit change in Y for a two standard deviation increase in X. This allows for simpler interpretation of model estimates, as all interval variables follow a similar scale.

Analysis

In order to determine whether the electoral laws outlined above have any significant impact on the degree of equality in voting behaviour, this study employed multi-level logistic regression modelling. Since the dependent variable can only take one of two values - whether or not an individual voted - a binary logistic model is appropriate for this application. Moreover, a multi-level design was used in order to account for the nested structure of the data, since the CSES surveys target individuals clustered within different election studies. Failure to adopt this approach would adversely impact the models' estimates, as respondents from the same country would be treated as independent observations, despite being subject to same political and cultural factors as everyone else from that specific election study. As such, the analysis was conducted using a varying intercept multi-level logistic model.

In terms of the wider cross-sectional approach taken by this study, this inevitably comes with its own limitations and advantages. One drawback is that the ability to determine the direction of causality is severely limited in comparison to longitudinal

studies, where time can be used to see a clear pattern of cause and effect. While the issue of reverse causality is possible - that populations with low turnout, or certain socio-demographic make up are more likely to adopt specific electoral rules - the focus here is on the cross-level interactions between the individual and system level characteristics of interest, in order to see how electoral rules impact different sections of the society. This makes it possible to identify whether there is any particular set of institutional arrangements that can help minimise inequality of participation. While further research that examines the impact of these changes over time, and how they vary across specific contexts is clearly needed, the current approach nevertheless allows for an effective assessment of the research questions at hand.

3.3 Results

The results of the regression analyses that examine the main effects of electoral laws on voter turnout are displayed in Tables 3.1 and 3.2 below. Only the effects of the key structural and socio-demographic variables are included here, while the full output containing all of the coefficients for each control variable can be seen in Appendix A. The 'Electoral Law' predictor in each model refers to the specific institutional variable being examined, and is listed below the model number.

The dependent variable being explored here is whether or not an individual reported voting in their country's most recent legislative election, and coefficients for all models are given in log odds. In Table 3.1, Model 1 uses the dummy compulsory voting measure, while Models 2 and 3 compare both weakly and strictly enforced compulsory voting against the voluntary reference category. Model 4, meanwhile explores the impact of electoral system proportionality. Table 3.2 lists the models that explore voter registration and all of the variables regarding direct democracy.

It is important to note that due to the cross-level interaction terms included in these models, the coefficient for each 'electoral law' variable does not represent the direct effect of that rule on turnout, but rather its effect on turnout *conditional on the*

other individual-level variables included in the interaction. As such, additive models were also run which did not contain any interaction terms. This allows us to see the unconditional main effect of each electoral law on turnout, the results of which are displayed in Table A2 in Appendix A. Aside from extremely minor differences in effect sizes, the substantive interpretation of the results remain the same across both model specifications. As such, the discussion below will make reference to the interactive models.

In terms of compulsory voting, as can be see in Models 1-3 of Table 3.1 both the dummy indicator and the measures of weakly and strongly enforced compulsory voting systems produced positive effects that were statistically significant at the $p<0.001$ level. While this suggests that any form of compulsory voting is associated with a higher likelihood of voting compared to voluntary systems, the effect sizes in Model 2 also imply that strongly enforced compulsory voting has a much greater impact on turnout levels compared to both voluntary and weakly enforced systems. Re-running this model with the weakly enforced category set as the baseline category, rather than voluntary voting, allows for a direct comparison between the two forms of compulsory voting. The positive and statistically significant main effect for strictly enforced compulsory voting listed in Table A.5 in Appendix A confirms this relationship.

Regarding proportionality and Model 4, the coefficient for the inverted Gallagher index of the previous election is also positive and statistically significant at the $p<0.05$ level. This suggests that in cases where the last legislative election produced relatively more proportional outcomes, we should see an overall increase in citizens' likelihood of voting.

Table 3.1: Electoral Laws and Voter Turnout - Interaction Effects

Dependent Variable: Voter Turnout				
	Model 1	Model 2	Model 3	Model 4
Electoral Law	Compulsory Voting (dummy)	Weakly Enforced CV	Strongly Enforced CV	Proportionality
Constant	1.005^{***} (0.122)	1.048^{***} (0.119)	1.048^{***} (0.119)	1.060^{***} (0.121)
Electoral Law	1.497^{***} (0.233)	1.179^{***} (0.256)	2.360^{***} (0.412)	0.420^{*} (0.170)
Age	0.761^{***} (0.020)	0.761^{***} (0.020)	0.761^{***} (0.020)	0.670^{***} (0.018)
Age^2	-0.418^{***} (0.038)	-0.418^{***} (0.038)	-0.418^{***} (0.038)	-0.591^{***} (0.033)
Income	0.437^{***} (0.021)	0.437^{***} (0.021)	0.437^{***} (0.021)	0.364^{***} (0.019)
Political Knowledge	0.804^{***} (0.021)	0.804^{***} (0.021)	0.804^{***} (0.021)	0.735^{***} (0.019)
Education (uni)	0.354^{***} (0.028)	0.354^{***} (0.028)	0.354^{***} (0.028)	0.349^{***}
Electoral Law*Age	-0.344^{***} (0.049)	-0.347^{***} (0.052)	-0.281^{*} (0.123)	-0.159^{***} (0.036)
Electoral Law*Age^2	-0.556^{***} (0.077)	-0.594^{***} (0.083)	-0.344^{*} (0.176)	0.079 (0.063)
Electoral Law*Income	-0.316^{***} (0.051)	-0.338^{***} (0.053)	-0.158 (0.144)	0.107^{**} (0.038)
Electoral Law*Political Knowledge	-0.430^{***} (0.050)	-0.456^{***} (0.053)	-0.225 (0.142)	0.192^{***} (0.037)
Electoral Law*Education (uni)	-0.177^{*} (0.074)	-0.102 (0.081)	-0.593^{***} (0.172)	0.116^{**} (0.045)
Groups	97	97	97	97
Observations	116,298	116,298	116,298	116,298
ICC	0.117	0.11	0.11	0.117
Log Likelihood	−41,160.280	−41,150.140	−41,150.140	−41,289.550
Akaike Inf. Crit.	82,372.560	82,366.280	82,366.280	82,631.100
Bayesian Inf. Crit.	82,623.820	82,685.190	82,685.190	82,882.360

Notes:

*p<0.05; **p<0.01; ***p<0.001

See Appendix A. for full list of control variables included in the models

Proportionality = Inverted Gallagher index score of previous election

Reference categories:

Compulsory Voting (Models 1-3) = 'Voluntary voting'

Table 3.2: Electoral Laws and Voter Turnout - Interaction Effects cont.

Dependent Variable: Voter Turnout					
	Model 1	Model 2	Model 3	Model 4	Model 5
Electoral Law	Active Registration	Referendum Held (dummy)	Referendum Frequency	Low Turnout Referendum	High Turnout Referendum
Constant	1.012^{***} (0.121)	1.110^{***} (0.137)	1.066^{***} (0.121)	1.085^{***} (0.133)	1.085^{***} (0.133)
Electoral Law	0.257 (0.235)	-0.075 (0.175)	-0.560^{***} (0.158)	0.231 (0.195)	-0.656^{*} (0.270)
Age	0.693^{***} (0.021)	0.680^{***} (0.022)	0.675^{***} (0.018)	0.680^{***} (0.022)	0.680^{***} (0.022)
Age^2	-0.497^{***} (0.038)	-0.584^{***} (0.040)	-0.634^{***} (0.033)	-0.584^{***} (0.040)	-0.584^{***} (0.040)
Income	0.437^{***} (0.022)	0.390^{***} (0.024)	0.357^{***} (0.020)	0.390^{***} (0.024)	0.390^{***} (0.024)
Political Knowledge	0.803^{***} (0.021)	0.684^{***} (0.023)	0.706^{***} (0.019)	0.684^{***} (0.023)	0.684^{***} (0.023)
Education (uni)	0.355^{***} (0.029)	0.386^{***} (0.032)	0.343^{***} (0.026)	0.386^{***} (0.032)	0.386^{***} (0.032)
Electoral Law*Age	-0.067 (0.049)	-0.018 (0.038)	0.106^{***} (0.029)	-0.058 (0.048)	0.070 (0.051)
Electoral Law*Age^2	-0.452^{***} (0.081)	-0.062 (0.068)	0.330^{***} (0.052)	-0.523^{***} (0.085)	0.442^{***} (0.090)
Electoral Law*Income	-0.355^{***} (0.050)	-0.089^{*} (0.041)	0.066^{*} (0.030)	-0.179^{***} (0.053)	-0.002 (0.052)
Electoral Law*Political Knowledge	-0.349^{***} (0.049)	0.132^{***} (0.040)	0.205^{***} (0.029)	0.103^{*} (0.051)	0.158^{**} (0.051)
Electoral Law*Education (uni)	-0.090 (0.074)	-0.162^{**} (0.054)	-0.119^{**} (0.039)	-0.068 (0.072)	-0.237^{***} (0.067)
Groups	97	97	97	97	97
Observations	116,298	116,298	116,298	116,298	116,298
ICC	0.117	0.128	0.117	0.123	0.123
Log Likelihood	$-41{,}189.170$	$-41{,}326.340$	$-41{,}272.690$	$-41{,}279.640$	$-41{,}279.640$
Akaike Inf. Crit.	82,442.340	82,704.690	82,597.390	82,625.270	82,625.270
Bayesian Inf. Crit.	82,751.580	82,955.950	82,848.650	82,944.180	82,944.180

Notes: *p<0.05; **p<0.01; ***p<0.001

See Appendix A. for full list of control variables included in the models

Reference categories:

Voter Registration (Model 1) = 'Passive registration'

Referendum Held (Model 2) & Referendum Turnout (Models 4 & 5) = 'No referendums held'

Moving on to Table 3.2, we can see from Model 1 that the voter registration variable failed to produce any significant effects, indicating that the use of passive, active, or mixed registration systems had no bearing on overall voting rates.

With regard to the use of referendums, coefficients for all of the direct democracy variables were negative apart from the use of low turnout referendums, which although positive, was extremely small. Only the frequency of referendums measure, and the use of high turnout referendums were statistically significant at the $p<0.05$ level. While this indicates that holding referendums more often may have a negative impact on voter turnout, and surprisingly, that high turnout referendums may lead to a reduction in participation in future elections, additional robustness checks were necessary.

Three Swiss election studies were included in the dataset, and were notable outliers in terms of how often referendums were held in each electoral cycle, with 45, 26 and 25 referendums taking place before the 2003, 2007, and 2011 elections respectively. In the full sample of cases, the mean number of referendums held before an election was 1.6, with the next closest election to the Swiss cases being Ireland in 2002, which had 8 previous referendums. When the models were re-run without the three Swiss elections (see Appendix A.), this negative effect for both the frequency of referendums, and for contests with higher turnouts were no longer statistically significant. In light of the inconsistency following these additional checks that control for these notable outliers, these results indicate that national referendums have no significant impact on overall

turnout rates.

In terms of the individual level predictors included in the analysis, they all displayed a positive and statistically significant relationship with turnout across each set of models. University education, higher household income, and increased political knowledge were all associated with an increased likelihood of voting in an election. The coefficient for age was also positive, while the squared term was negative, which indicates that as age increases, so does the likelihood of voting, however, this positive effect weakens somewhat when we get to the higher age ranges. These results underline the fact that individual level characteristics play a substantial role in influencing voting behaviour, and that a significant gap exists between those who do and do not participate, which presents itself across clear socio-demographic lines.

The next stage of the analysis involved testing whether the effects of these individual level predictors varied depending on the types of electoral laws being used. This can be explored via the interaction terms between the four main electoral laws of interest, and each of the socio-demographic individual level variables. Tables 3.1 and 3.2 list the main and conditional effects for all of the variables included in the cross level interactions. Again, the 'Electoral Law' predictor in each model refers to the institutional variable included in the interaction term, and is listed below the model number.

Turning first to compulsory voting, Model 1 in Table 3.1 directly addresses H1, comparing any form of mandatory voting against voluntary systems. Here we can see that the interaction terms are all negative and statistically significant at the $p<0.05$ level, allowing us to reject the null hypothesis. Overall, these results demonstrate that the influence of socio-demograpic variables are all reduced under compulsory voting systems in comparison to voluntary voting, thus lending support to H1.

Models 2 and 3 in Table 3.1 can be used to evaluate whether the effect of these laws varies depending on the degree to which they are enforced. The interaction effects in Model 2 regarding weakly enforced compulsory voting compared to voluntary systems, are all negative and statistically significant at the $p<0.001$ level, with the exception of education. Again, this indicates that the impact of almost all of the socio-demographic variables are reduced under compulsory voting, compared to voluntary systems, even

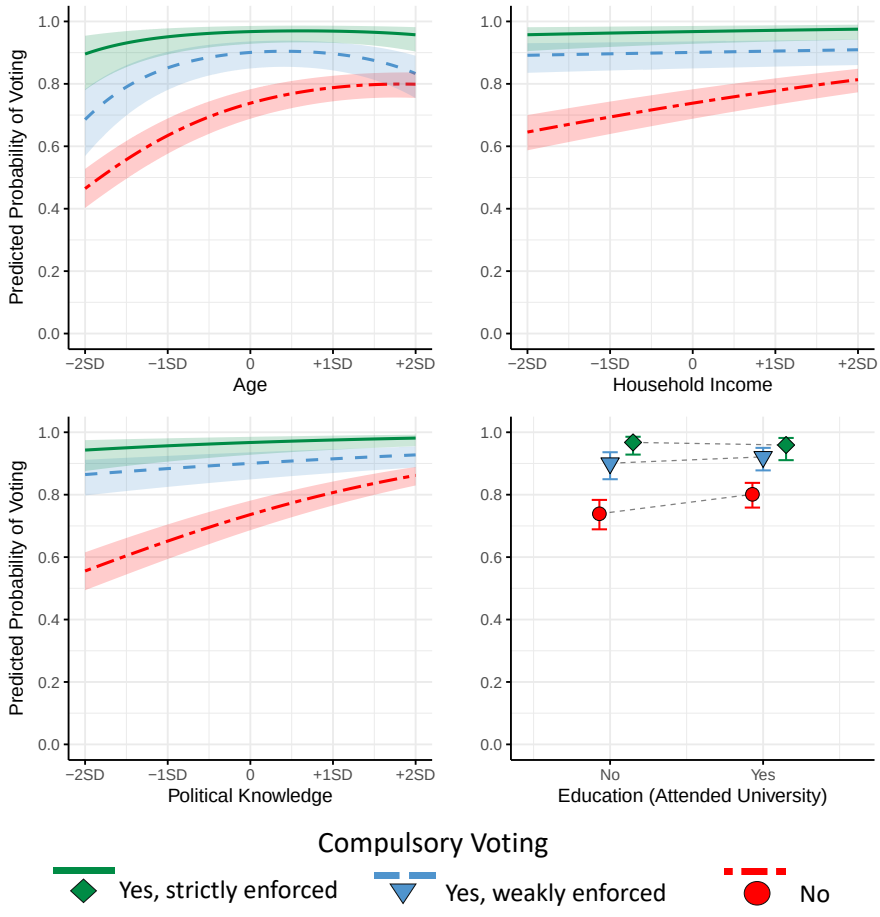
when the enforcement of these laws are relatively lax. Moving on to strongly enforced compulsory voting, the interaction effects listed in Model 3 are again, all negative, meaning that the impact of each factor is reduced under this electoral rule, but only the terms for age, age squared, and education reach any degree of statistical significance. With regard to H2, the results from Table A.5 in Appendix A indicate that the only statistically significant difference in the interaction effects between the two forms of compulsory voting is that of education, with strict enforcement being linked with a greater reduction in this type of inequality.

In order to fully explore this relationship, however, it is necessary to plot the predicted probabilities for each of the cross-level interactions. Figure 3.1, below, displays the interaction effects between the ordinal measure of compulsory voting, and age, income, political knowledge, and education (based on Models 2 and 3 in Table 3.1). In general terms, the height of each plotted line indicates the size of the main effect of the electoral law on turnout, while the slope of each line illustrates the degree to which the relevant individual level variable influences voting behaviour.

From the first plot in Figure 3.1, which looks at age, a clear trend emerges in that compulsory voting more generally, and the strict enforcement of these laws in particular, results in a reduction of the turnout based age gap. Based on the model's estimates, the difference in predicted probability between those least and most likely to vote is 33 per cent in voluntary elections, 20 per cent under weakly enforced compulsory voting, and just 7 per cent with strongly enforced mandatory voting.

A similar pattern can be observed in the other three plots in Figure 3.1, for both income, political knowledge, and education. Again, the average height of the plotted lines represents a notable increase in overall turnout under both weakly and strongly enforced systems, while the flattening of these lines indicates that the impact of these individual level variables are significantly reduced, with the exception of education under weakly enforced systems. Despite the fact that the interaction terms for both income and political knowledge failed to reach statistical significance for the strongly enforced category, here compulsory voting increases overall turnout to such a consid-

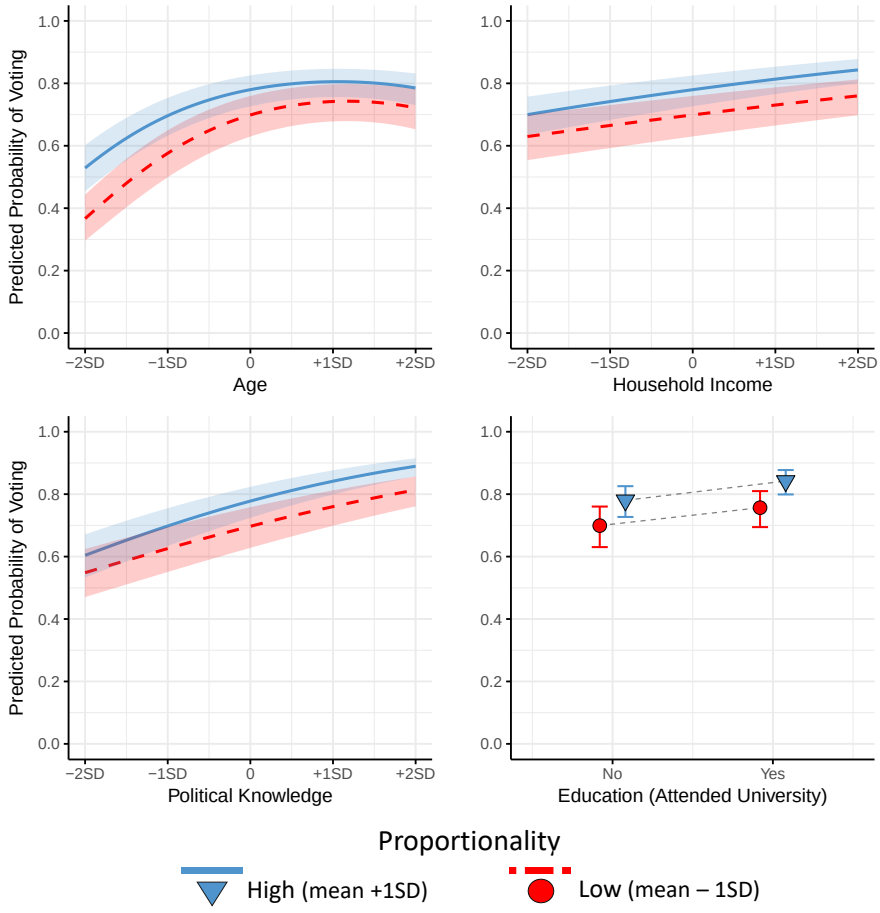
Figure 3.1: Compulsory Voting Interaction Effects



erable extent, that it can effectively suppress the inequality of participation due to these characteristics. With regard to the differences between the two levels of enforcement, the only statistically significant variation is that strict enforcement is associated with reduced educational inequalities. As such, this only lends partial support to the expectations of H2.

In Table 3.1, Model 4 reports the main effects and interaction terms between the individual level variables and electoral system proportionality. In terms of the cross level interactions, we can see that the coefficient for age is negative, while the coefficients for age squared, income, education, and political knowledge are all positive. All of these effects are significant at the $p<0.01$ level, apart from the age squared term. This indicates that while systems that produce more proportional electoral outcomes may see a reduction in the impact of age on turnout, proportionality is also associated with an increase in the influence that income, education and political knowledge exerts on the likelihood of voting. The predicted probabilities for each interaction, based on the output of Model 4, are shown in Figure 3.2. The model predicts that a two standard deviation increase in the proportionality variable, translates to a 10 per cent reduction in the difference between those least and most likely to vote across different age groups.

Figure 3.2: Proportionality Interaction Effects



The other three plots in Figure 3.2 illustrate the impact of proportionality on income, political knowledge, and education. Each tells a similar story, with the more proportional systems witnessing between a 5-10 per cent overall increase in the predicted probability of voting, alongside an extremely marginal increase in the strength of each individual level effect. For all three variables, the percentage point gap between those least and most likely to vote is around 1-2 per cent higher under more proportional systems. These results indicate that ensuring elections are more proportional could substantially reduce the level of age inequality currently seen in electoral politics. As for the other three socio-economic indicators, although proportionality leads to an overall increase in turnout, this has to be weighed against the finding that turnout differences based on income, education, and political knowledge may actually widen

slightly under more proportional systems. As such, these findings fail to fully support the direction outlined by H3, that more proportional election outcomes are associated with reduced turnout inequality.

Moving on to the relationship between voter registration and turnout inequality, the relevant results are displayed in Model 1 in Table 3.2. The 'Electoral Law' variable here refers to the effect of active registration, compared to the passive registration baseline category. Mixed systems are included as a control category, the results for which are displayed in the full model output in Appendix A. In terms of the cross level interactions, all coefficients are negative, but only the age squared, income, and political knowledge variables are statistically significant at the $p<0.001$ level. Plotting the predicted probability of voting across different values of these variables, as displayed in Figure 3.3, provides a clearer indication of how the individual level effects vary across each type of electoral law.

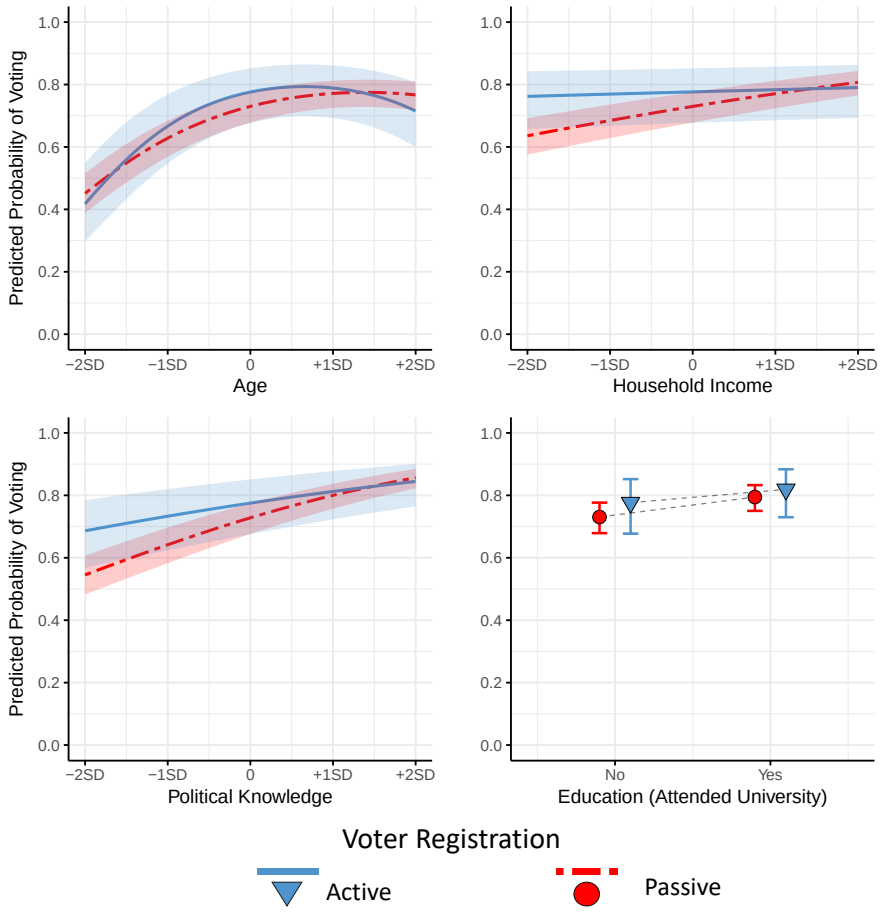
In the first of the four plots, which examines the impact of age, we can see that while there is no significant difference in overall turnout rates (indicated by the average height of each plotted line), the shape of the curve for active systems is substantially altered due to the negative age squared interaction term.

The curvilinear relationship between age and the predicted likelihood of voting is exacerbated somewhat for the active category, as the effect of age is even greater at low to middle age ranges, before levelling off, and then dipping slightly at the higher age values. The next two plots illustrate the influence of income and political knowledge on the likelihood of voting. Both graphs tell a similar story, in that active systems reduce the influence of each resource on voting rates, as can seen by the flattening of the slopes representing active registration.

The model estimates that active systems are associated with a 15 per cent decrease in the difference between those who are least and most likely to vote, compared to passive registration systems across both variables. The final plot, which looks at education, indicates that the effect of this variable on turnout does not vary significantly between each type of electoral law. Overall then, these findings largely contradict the direction outlined in H4, which expected a reduction in the effects of individual level

predictors under more passive registration systems. While this was the case for age, the effects of all other socio-economic variables either remained unchanged, or were actually exacerbated in comparison to active systems.

Figure 3.3: Voter Registration Interaction Effects



Finally, turning to the impact of national referendums on turnout inequality, Models 2-5 in Table 3.2 display the results of the interaction models for the dummy, frequency, and turnout threshold measures of referendum usage. As with the previous analysis which explored the main effects of referendums on turnout, each of the interactions were run both with and without the three Swiss election studies. This made it possible to test whether results were sensitive to the inclusion of these substantial outliers. The models excluding the Swiss cases, and all additional robustness checks can be found in

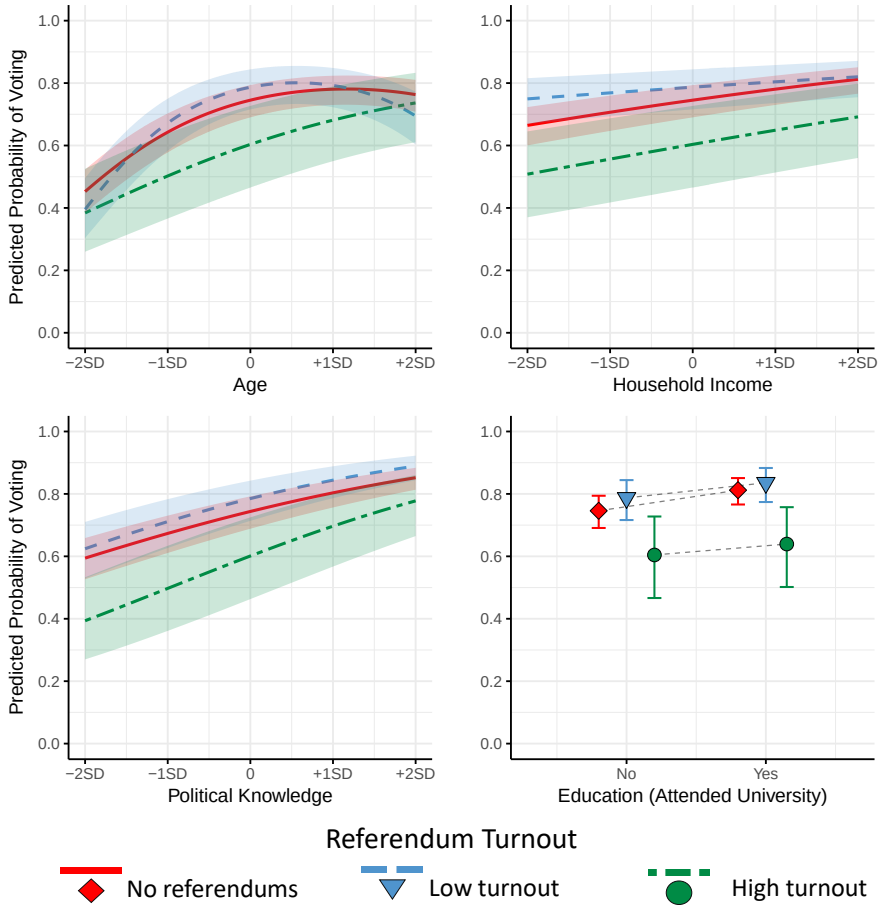
Appendix A.

For the first measure, which relates to whether any national level referendums were held between elections (H5), the results were largely inconsistent across each set of model specifications. Model 2 in Table 3.2 gives the output for the regression with all cases included, where we can see that all interaction effects were negative apart from political knowledge. Only the effects for education, income, and political knowledge were statistically significant at the $p<0.05$ level. When the analysis was re-run without the three Swiss cases, however, the effects across nearly all variables differed both in terms of their direction and degree of significance. The only finding that was consistent across all models, was that the use of referendums was associated with a small but significant reduction in the impact of income on voting. As such, these results only offer minimal support to H5, as all other variables exhibited no consistent dampening effect on turnout inequality.

In terms of the frequency of referendums, the effects of the models again varied almost entirely depending on the presence or omission of the Swiss cases. Model 3 displays the results of the regression containing the full set of cases, where we can see that holding more frequent referendums was associated with a negative overall impact on turnout, while all interaction terms were positive and statistically significant at the $p<0.05$ level, apart from education which had a negative, but nonetheless significant effect. When the analysis was repeated after excluding the three Swiss cases, the main electoral law effect became positive and was no longer statistically significant. More importantly, none of the interaction terms aligned with either the direction or statistical significance of the coefficients from the previous model. These marked inconsistencies indicate that how often referendums were held before each election seems to display no consistent effect on turnout inequality, and therefore does not support the expectations outlined in H6. The results of the final models that explore the impact of referendum turnout on voting behaviour are displayed in Models 4 and 5 in Table 3.2. Looking first at low turnout referendums, the results in Model 4 indicate there is no significant main effect on voting, while the interaction terms were all negative, apart from political knowledge. Only the coefficients for age squared, income, and political knowledge were

significant at the p<0.05 level.

Figure 3.4: Referendum Turnout Interaction Effects



These results imply that the use of referendums, where turnout fails to match that of the previous legislative election, is associated with a marginal decrease in the influence of income on the likelihood of voting, but leads to a slight increase in the salience of political knowledge on future participation. In terms of age, there was no significant linear interaction effect for low turnout referendums, however, the negative age squared term indicates that the curvilinear effect of this variable was even more pronounced in cases with low turnouts, compared to elections with no referendums. As such, middle aged citizens may be even more likely to take part in elections, while the young and old at each end of the curve are slightly less so, compared to the baseline

no referendum category. Overall, these results only lend partial support to H7a, as while the unequal effects of age and political knowledge may be exacerbated when low turnout referendums take place, this form of direct democracy may actually reduce the income gap, and seems to have no effect on the relationship between education and turnout.

Turning next to high turnout referendums, Model 5 in Table 3.2 displays the results of the regression with the full set of cases included in the analysis. The main effect of high turnout referendums was negative and statistically significant at the $p<0.05$ level, while the only significant interaction effects were age squared and political knowledge, which were positive, and education which was negative. All three Swiss elections fell into the high turnout referendum category, and as such, the results varied considerably when these cases were removed. The only interaction term that produced consistent results across both sets of models was education, which was negative and statistically significant at the $p<0.05$ level. Each of the remaining interaction effects changed in terms of their direction, or degree of significance when the Swiss cases were removed. In light of these findings, and the variation between the two sets of models, we cannot confidently reject the null hypotheses in relation to H7b. After controlling for the significant outlier of Switzerland, the only clear influence that high turnout referendums seem to have on electoral participation, is that they may help to partially reduce the unequal impact of education on voting.

3.4 Discussion

In attempting to answer the question of whether electoral laws display any significant relationship with the socioeconomic biases present in many democratic elections, the findings of this project suggest that compulsory voting laws, the proportionality of electoral systems, the way in which voters are registered, and to a lesser extent, referendum usage, are significantly related to turnout inequality. In terms of compulsory voting, the results lend clear support to H1, that any form of mandatory voting is linked with a substantial reduction in turnout inequality across all of the socio-demographic predictors included in the analysis, namely: Age, income, education and political knowledge.

This reinforces the notion that compulsory voting is one of the most effective means of addressing some of the most pressing issues facing modern democracies.

In terms of how these laws are actually put into practice, the severity of enforcement seems to have a notable impact of their effectiveness. Even in cases where the penalties and enforcement of these laws are relatively lax, the results nevertheless indicate that compulsory voting reduces the unequal impact of age, income, and political knowledge. The only variable for which there was no significant interaction effect was education. One potential explanation for this may be that the political knowledge variable already captures much of the theorised effects of education of turnout. The additional robustness checks conducted after the main analysis lend support to this argument, as when the models were re-run without the political knowledge variable, the coefficient for the education interaction effect now becomes statistically significant. As such, it seems that the use of compulsory voting laws, even in cases where these rules are rarely backed up by legal sanction or consistently enforced, nevertheless, have an immense influence on citizens' decision making process when it comes to participating in elections.

In examining cases where these laws are more strictly enforced, the only interaction terms that reached any degree of statistical significance were age and education, the effects of which were both reduced under strongly enforced mandatory voting. While the lack of statistically significant effects for both income and political knowledge are somewhat surprising, there are a few potential explanations for this outcome, the first being the relatively small sample of strongly enforced systems included in the analysis. The final dataset that contained information on all of the individual level variables, included only 5 strongly enforced systems, which could potentially limit the model's statistical inference for this category. One further, and perhaps more relevant, aspect to consider is the impact of ceiling effects on these estimates. Since strongly enforced compulsory voting already exhibits such a substantial positive impact on overall voting rates, with average turnout in these countries regularly exceeding 90 percent, this will inevitably dampen the potential for any variation between different groups in society. As can be seen in Figure 3.1, despite the fact that the interaction terms for both income and political knowledge failed to reach statistical significance, strongly enforced com-

pulsory voting increases overall turnout to such a considerable extent, that it evidently mitigates the inequality of participation among different groups in society. In terms of the differences in how these laws are enforced, the only significant additional benefit of strict enforcement compared to weakly enforced compulsory voting appears to be an even stronger reduction in educational inequalities of participation. Despite this finding however, the lack of significant effects across the remaining socio-demographic features means that this only lends partial support to the expectations of H2.

In terms of electoral systems, more proportional elections saw a significant reduction in the age gap between voters, however, contrary to the expectations of H3, the effects of income, education, and political knowledge were all marginally increased. Taken as a whole, these findings align with many of the key expectations of the resource model (Brady et al., 1995*a*), that more proportional electoral systems have, at best, no effect on the turnout gap regarding education, income and political knowledge, and in the worst instances, may actually increase the salience of these resources. Proportionality does, however, seem to have a positive association with encouraging younger citizens to participate in elections, and may thereby have the potential to significantly reduce the current turnout based age gap across many contemporary democracies. The underlying mechanism behind this specific pattern is still somewhat unclear. It could be the case that one, or a combination of the features of proportional systems that are held to boost turnout have a specific appeal to younger voters, such as the perception of fairness and representativeness that proportional outcomes promote, or the political culture of compromise and political debate fostered by consensus politics.

While registration exhibited no main effect on citizens' likelihood of voting, the interaction models indicated that passive systems were associated with a reduction in the impact of age on turnout, but an increase in the salience of income and political knowledge compared to active registration. As such, these results only lend partial support to the claims of H4. These findings also contradict many of the general expectations from the literature, and instead lend some support to the notion that having to take active steps to register for an election may result in a 'sunk cost', which makes citizens more likely to vote (Erikson, 1981). Citizen initiated active registration, however, seems to

have the unintended consequence of widening the age gap, due to the unequal burden placed on younger voters who are registering for the first time. While automatic registration may help to even out the age gap to a certain degree, and previous research has pointed to its ability to foster participation in some of the most vulnerable sections of society including immigrants and ethnic minority groups (Braconnier et al., 2017), it may nevertheless produce some unintended consequences.

With regard to the use of direct democracy, as with much of the literature in this area, the current findings are still largely inconclusive. After comparing the results of the models both with and without the Swiss outliers, it seems that the use of national referendums has no clear overall effect on average turnout rates. In terms of inequality of participation, the dummy indicator pointed to a marginal reduction in the impact of income on voting when at least one referendum took place, which lends only partial support to H5. Although this effect was substantively extremely small, one potential explanation might be that since direct democracy does not require financial resources in order to effectively participate, and instead places a greater burden on informational and critical skills, low income groups may be more likely to participate and thus be socialised into the political system. The frequency of referendums displayed no significant consistent effect on any of the independent variables, meaning we cannot reject the null hypothesis for H6.

Finally, when examining participation in referendums themselves, only a few findings were consistent across all models. Contests with relatively low turnouts were associated with a marginal increase in the impact of age and political knowledge on voting, alongside a small reduction in the effect of income on future electoral turnout. This therefore only lends partial supports the direction outlined by H7a. Countries that witnessed high turnout referendums were instead associated with a reduction in the effect of education on voting in the following election. The substantively small effect, and the lack of significant interaction with any of the other individual level variable means that we cannot reject the null hypothesis for H7b. While these findings offer limited support to the notion that the impact of direct democracy on turnout inequality is dependent on the degree of initial participation, the inconsistent findings

and extremely small substantive effects do not fully align with the directions outlined by the original hypotheses. Indeed, it is not simply the case that low turnout contests exacerbate inequalities, and high turnout referendums reduce it, but rather that the effects are notably more mixed, and far more muted than might be first expected. The most notable finding here seems to be the immense influence that the unique case of Switzerland, which is so often the focus of smaller scale case studies, exerts on the overall estimates. Future research must evidently be able to disentangle the potential trends that are present in the widespread usage of direct democracy, alongside the specific effects that arise in its the most extreme form of implementation. Other key aspects of the direct democracy literature that can help to address these issues is whether specific ballot topics such as self-determination or contentious social issues are uniquely important, or if the differences between referendums held at different levels of governance, from local to national matter, as well as the long term cultural and social consequences of referendum politics versus its immediate political impact on the issue being voted upon. Taken as a whole, these results indicate that direct democracy has very little, if any, bearing on turnout inequalities. Furthermore, to the extent that these effects are present, they are typically marginal in size, and do not follow a consistent pattern.

When evaluating the overall findings of the project at hand, it is crucially important to reiterate the potential limitations of this research. One key issue is that the dependent variable used here is based upon self-reported survey measures of turnout, which have been shown to consistently overestimate actual voting behaviour when compared to official post-election statistics. This may either be due to unintentional error on the part of the respondent, or the possibility of social-desirability bias influencing the survey process. Nevertheless, lacking any other verifiable voting figures at this disaggregated level of analysis, the CSES survey question seems best suited to the purposes of this study. Another limitation is that while the cross-sectional nature of the data can uncover whether any significant relationship exists between the independent and dependent variables, it cannot tell us the direction of causality between the two. It may well be the case that societies with already relatively high turnout rates are more likely

to then adopt compulsory voting laws, rather than the other way around. Despite these limitations, the ability of this methodological approach to explore cross-level interactions between the key independent variables, and examine a wide array of electoral rules across different political contexts remains well suited to addressing the research questions at hand. Moreover, this study highlights several areas that future research can explore in terms of examining specific cases over time, and using data and methods that can directly address the issue of causality.

3.5 Conclusion

In attempting to answer the question of whether electoral laws can help reduce levels of turnout inequality, it is clear that institutional features such as compulsory voting, electoral system proportionality, and voter registration may play a central role in equalising voter turnout.

In terms of increasing overall voting rates, compulsory voting, and more specifically, strongly enforced compulsory voting, exhibits by far the greatest effect on voter turnout, with the potential for near universal participation. Ensuring that electoral outcomes are more proportional is another key feature that can be used to boost aggregate voting rates. When it comes to voter registration laws and the use of national referendums, these electoral rules seem to have no significant impact on overall turnout levels.

Regarding the specific issue of turnout inequality, and the degree to which individual characteristics such as age, income, education, and political knowledge influence citizens' likelihood of voting, again, institutional features display a significant relationship with voting behaviour. The evidence outlined in the current analysis indicates that compulsory voting may offer the most direct route to combating voter inequality, as even when these laws are relatively weakly enforced, they still significantly equalise electoral participation. When these rules are backed up by more strict enforcement, however, mandatory voting increases turnout to such a high degree that it can effectively suppress voter inequality among different demographic groups.

The results regarding electoral system proportionality are somewhat less clear cut. While systems that produce more proportional electoral outcomes are associated with

both higher overall turnout rates, and a reduction in the turnout based age gap, this has to weighed against the finding that these systems also seem to marginally increase the unequal influence of income, education, and political knowledge on turnout. The question therefore remains as to whether this slight but significant widening of the financial and educational resource gap, is a price worth paying for a substantial boost in overall turnout and increased youth engagement. Future research may be able to directly address this dilemma, and uncover whether any specific form of proportional representation can strike the balance of retaining these positive effects, while minimising the resource based inequalities inherent in adopting more complex electoral formulas.

In terms of voter registration, the results here demonstrate that while automatic registration may help reduce the turnout age gap somewhat, this process also exacerbates the unequal effects of income and political knowledge on voting. Further research into the numerous ways in which registration procedures are implemented in practice, can help determine whether systems that require at least some degree of citizen involvement, but which remain as accessible and transparent as possible can help minimise these forms of turnout inequality.

Finally, with regard to national referendums, the results of this aspect of the analysis were largely inconclusive. While the use of referendums that experienced relatively low turnouts were associated with a reduction in the impact of income on voting, and high turnout referendums were linked with lower educational inequalities, these substantive effects were extremely small. Moreover, the effect of direct democracy on turnout inequality varied substantially depending on whether or not the significant outlier of Switzerland was included in the analysis. These findings suggest that national referendums have very little substantive effect on voter inequality, however, future research that explores specific ballot issues, different levels of government, and that can disentangle the wider patterns present in its general usage versus the effects that are unique to the case of Switzerland, may help to resolve these remaining questions.

While there are some clear limitations to this type of research, including the cross-sectional nature of the methodological approach, as well as the reliability issues associated with self-reported survey data, these findings nevertheless offer a unique insight

into the relationship between electoral laws and voter inequality. The wide range of institutional factors examined here, and the variety of effects that they have shown to exert on different individual level characteristics, also helps illustrate the importance of taking a wider view when exploring institutional change. There is also a clear gap that can be filled by future research that explores the interactions between these often complementary electoral rules. Taken as a whole, these findings suggest that while there is no single policy that can solve the problem of political inequality, by reevaluating certain aspects of the rules that govern out political systems, we can nevertheless help reintegrate many of those who have traditionally been excluded from electoral politics back into the political fold.

Chapter 4

Electoral Rules and Political Attitudes

A growing pattern of public disengagement with political affairs has emerged across many democracies over the past few decades, both in terms of levels of participation in electoral politics, and citizens' attitudes towards the political sphere (Baston and Ritchie, 2004; Dalton, 2006; Franklin et al., 1996; Henn et al., 2007; Lijphart, 1997; Massicotte et al., 2004; Norris, 2011; Putnam, 2000; Warren, 1999). This latter trend in particular is viewed by many as a cause for concern, as at least a certain degree of trust in the core institutions of government is essential for a democratic society to function effectively. Widespread apathy or even disdain for political actors and institutions may also, over time, lead to entrenched negative orientations that undermine support for the democratic system as a whole (Easton, 1965).

Of the array of measures that have been proposed to help address this issue, some of the most promising solutions have arisen from a top-down, institutional perspective. It is argued that changing the way in which our political systems are structured can encourage more supportive attitudes toward the political sphere (Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). This project will examine four of these institutional variables in particular: Compulsory voting, electoral system proportionality, voter registration laws, and the use of direct democracy. Whilst previous research has uncovered a clear positive relationship between compulsory voting, and to a lesser ex-

tent, proportional electoral systems and voter turnout (Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000; Smith, 2018), the impact of these electoral rules on political attitudes remains largely unclear. Understanding how these laws influence citizens' political attitudes is crucially important, as even if altering electoral rules can seemingly help solve the problem of dwindling participation at the polls, this should not be viewed as a cure-all for treating the issue of waning democratic support. The key question here is whether any apparent electoral gains come at the expense of other forms of public support, and how these effects are distributed among different sections of society. Does increased participation in electoral politics foster a greater attachment to the political process, and more positive attitudes towards the political system more generally? Or does being compelled to participate in a system that some view as illegitimate, lead to growing contempt, or even apathy toward the political establishment? In order to address this question, this study will examine two of the core attitudinal components of political support: Satisfaction with democracy, and political efficacy. By exploring the relationship between a comprehensive range of electoral rules and multiple multiple political attitudes, this project can provide a unique insight into whether specific institutional arrangements may have the potential to foster a greater sense of attachment to political society.

As well as exploring the link between these electoral rules and public attitudes at the aggregate level, a second, but perhaps even more important issue, is that levels of political support are not evenly distributed among the population. A growing body of research indicates that citizens with less socio-economic resources are less likely to hold positive attitudes towards the political system (Cancela and Geys, 2016; Henn et al., 2007; Lijphart, 1997; Pateman, 1970: 48). Growing public malaise may therefore result in a political process that is skewed towards the needs and concerns of those already politically engaged, while other sections of the population become wholly alienated from the political decision making process. In order to address this issue, this project will examine the extent to which political support is biased across three key individual level characteristics: Age, education, and income. Widening the scope of the political inequality literature to include more attitudinal components of political support is

essential, in order to determine whether the structural processes that widen or mitigate turnout inequality, also work in the same manner across other forms of engagement. In light of the issues outlined above, this project aims to answer two key research questions: Are certain electoral rules associated with greater feelings of public support towards their political systems? And, if so, how are these effects distributed among different socio-demographic groups?

To address these central research questions, this project employs a quantitative approach, making use of large-N cross national survey data from waves 2-4 of the Comparative Study of Electoral Systems (CSES). The final dataset used in the analysis contains information on 105,846 respondents, across 90 elections, in 43 different countries, between 2001-2016. The CSES data was merged with additional data sources, before being analysed via multi-level binary logistic regression. This allows for an assessment of whether these electoral rules display any significant relationship with public attitudes toward political affairs, as well as whether these relationships vary across different socio-demographic groups.

This study addresses a clear gap in the current academic literature, as although several studies have examined the impact of certain electoral laws on political attitudes, they typically focus on one electoral rule, or one attitude at a time. The complex nature of citizens' attitudinal orientations towards the political sphere, as well as the fact that when electoral reforms actually take place, they tend to be as part of wider reform agendas, rather than changing a single aspect of the political system (Birch, 2009; Renwick, 2017; Singh, 2019), both highlight the need for this revised approach. Another key aspect which is lacking from much of the current literature on this topic, is the impact that these laws have on the inequality of political support. Improving our understanding of which groups are most dissatisfied with the status quo, and why, is a crucial first step in evaluating which methods may be best suited to combat entrenched feelings of apathy and distrust of the political process. Moreover, the fact that these types of long-term structural changes are by their very nature enduring features of political systems, and are often extremely costly and time consuming to implement or rescind, means that societies may be dealing with any unintended consequences of

electoral reforms for decades to come. This project also tests whether the findings of previous research which explored earlier time periods, or conducted within-country case studies, are also present when analysed against updated, large-N cross-national survey data. The inclusion of original data on voter registration also allows us to expand our understanding of the relationship between electoral rules and attitudinal engagement beyond the most commonly used indicators of proportionality and direct democracy. This is essential in order to uncover whether there are any enduring patterns in how these electoral rules relate to political attitudes, as well as evaluating whether any apparent effects are simply a product of characteristics that are unique to specific political systems or points in time.

In order adequately address the aims of this project, it is first necessary to unpack the theory behind how satisfaction with democracy and political efficacy fit in with the wider notion of political engagement. Following on from this, I will outline how the four electoral laws of interest: Compulsory voting, electoral system proportionality, voter registration, and national referendums are implemented in practice, as well as the theoretical and empirical literature that links them to political attitudes. This, in turn, serves as a solid foundation in order to test whether any significant relationship exists between these laws and satisfaction with democracy and political efficacy, as well as whether these effects are distributed equally among different socio-demographic groups.

Following this research design can therefore improve our understanding of the mechanics that underline citizens' relationship with their political systems, and whether structural changes may have the potential to foster closer links between the public and democratic politics.

4.1 Theory

Political Attitudes

While the concept of political engagement has received a substantial amount of attention over the past few decades, the term itself is often rather vaguely defined. In its broadest sense, political engagement refers to both citizens' participation in, and

attitudes toward the political sphere (Easton, 1975: 436). These core aspects of engagement are typically operationalised using a common set of indicators: from measures of individual attitudes such as political trust, political efficacy, and satisfaction with democracy (Fisher et al., 2011; Kim, 2015; Linde and Ekman, 2003); to behavioural components including electoral turnout and political protest (Blais, 2000; Meyer, 2004; van Aelst and Walgrave, 2001). One notable issue in this field of research, however, is that the term 'political engagement' is often applied extremely inconsistently to various combinations of these factors. Moreover, many studies tend to employ extremely narrow definitions of the concept, and often prioritise either the behavioural or attitudinal components of engagement to the exclusion of the other. One major consequence of this approach is that authors who exclusively study either aspect of political support often assume that the presence of just one of these attributes is a sufficient indicator of the health of a democratic society. This notion is problematic, as possessing one component of support without the other can hide major signs of discontent among populations, and overlook potential sources of political instability (Norris, 2011). Participation in elections, in and of itself, for example, is not necessarily indicative of a satisfied and supportive public (Norris, 2011: 20). Likewise, widespread satisfaction with the status quo, which is not accompanied by public participation, can be just as detrimental, as the mobilising effects of an active opposition and public scrutiny of government policies may be absent from political discourse (Di Palma, 1970).

These points emphasise that fact that a wide array of behaviours and attitudes contribute to the broader concept of political support. The approach taken by this project, is that there is a clear need to redress the weight currently afforded to each of these constituent parts. Shifting the emphasis towards political attitudes can help bring our understanding of this phenomena up to par with the vast amount of existing research occupied by electoral institutions and political behaviour. While this paper directly focuses on the attitudinal aspects of political support, it is under the explicit understanding that these factors can only ever paint a partial picture of citizen engagement with political life, and are just one set of the many distinct, yet interconnected, features that contribute to political engagement. In a similar way in which political

engagement is a multidimensional concept, the same can also be said of political attitudes themselves, as a variety of indicators are used to capture the full range of citizens' attitudes towards political life. Two of these core attitudinal variables will be the focus of this present study, namely satisfaction with democracy, and political efficacy.

Satisfaction with Democracy

One of the most common ways of gauging citizens' political support is by asking how satisfied they feel with the way that democracy currently works in their country. Satisfaction with democracy can be defined most simply as: 'An expression of approval of the democratic process' (Singh et al., 2012: 205). This broad and rather abstract concept, however, may not be exactly what is captured when this question is provided to survey respondents. Linde and Ekman (2003), emphasise that satisfaction with democracy, as it is currently operationalised in survey research, more accurately reflects citizens' assessments of how well the institutions and processes of the state put democratic ideals into action, rather than more abstract beliefs in the core tenets of democracy (Linde and Ekman, 2003: 405). This implies that this indicator can play a key evaluate role, and directly relate to how well governments are functioning in the eyes of the people. As such, satisfaction with democracy is held to be a useful measure of public support in the overall legitimacy of the political system, and its presence seen as being indicative of a stable and effective regime (Howell and Justwan, 2013). Satisfaction with democracy also directly fits into the claims of the system support theory, proposed by David Easton (1965; 1975). In Easton's view, political support refers to a combination of different public orientations and behaviours toward the political system, that can be directed at various political actors and institutions. He also argues that political support can take two distinct forms: specific, and diffuse support.

Specific support refers to citizens' feelings toward the political system that are a result of the direct benefits they receive from the political decision making process (Easton, 1965). This aspect of support stresses the direct link between public demands and political outputs, and that when the authorities have fulfilled certain needs, they should, in turn, be deserving of a certain degree of support (Easton, 1965).

Diffuse support, however, embodies a deeper sense of attachment to the political system as a whole (Easton, 1965, 1975). It is this entrenched support for the system at large that enables regimes to survive short-term fluctuations in levels of specific support (Easton, 1965). When publics are dissatisfied with the current performance of those in power, the authorities can thus rely upon this form of diffuse support to ensure that attachment to the system never falls below the minimum threshold for its survival.

Satisfaction with democracy can therefore serve as a useful indicator of diffuse political support, due to its focus on how the system operates as a whole, rather than capturing attitudes towards individual actors and institutions that may be better explained by short-term fluctuations in specific support. This is beneficial to the current project in two key ways. First, since diffuse support is held to be the more important factor of the two, in terms of ensuring the stability of the regime, understanding the potential drivers of these attitudes is crucial to the survival of democratic systems. While a lack of specific support may lead to negative outcomes if it persists for a significant period of time, the more direct threat that low levels of diffuse support pose to democratic systems, clearly justifies the project's focus on this feature of political engagement. A second point is that electoral rules, by their very nature, have the ability to fundamentally alter how our political systems are structured, and therefore may be more likely to significantly impact diffuse support, compared to other more short-term government policies. In light of these points, it is clear that public satisfaction with the democratic process can serve as an extremely useful indicator of citizens' relationship with political life, and give us a clear insight into how electoral rules relate to diffuse forms of political support, that are so essential to democratic politics.

Political Efficacy

As well as assessing citizen's satisfaction with how well their democracy works, other concepts can more accurately reflect how citizen's view their own role in the democratic process. Political efficacy can generally be defined as: 'The feeling that individual political action does have, or can have, an impact on the political process' (Campbell et al., 1954: 187). This concept is built upon the notion that participation in political

affairs is a worthwhile activity, and that citizens can have a meaningful input on the process (Mortimer and Gill, 2004). A further theoretical distinction is often made between different types of efficacy, the two most popular being internal and external efficacy.

Internal efficacy refers to an individual's perception that they possess the required skills and resources to effectively influence the political system, while external efficacy concerns the belief that government elites and institutions are responsive to citizens' attempts to exert this political influence (Clarke and Acock, 1989: 552; Kim, 2015: 53-54). These two aspects of efficacy are often considered to be distinct concepts in their own right. Internal efficacy is more concerned with an individual's self-perception, and is generally considered to be shaped by longstanding personality traits which are largely unaffected by external factors (Clarke and Acock, 1989: 552). External efficacy, on the other hand, directly addresses citizens' attitudes regarding government responsiveness to public needs and desires, and taps into broader feelings of confidence in the political system. Moreover, a lack of this type of efficacy may be indicative of a certain degree of alienation from the formal political process. Several studies have unearthed empirical evidence which supports this link, noting that not only is external efficacy intricately related to participation in elections, but it is one of the strongest indicators of this type of behaviour (Mortimer and Gill, 2004; Pateman, 1970).

External efficacy is also the most likely of the two forms of efficacy to be influenced by the structural features examined in the current study. Altering how elections operate, and the rules that govern how the public and politicians participate in the system, can evidently impact a society's ability to meet the representation and accountability goals of democratic politics. In light of the close relationship between efficacy and many of the behavioural aspects of political engagement, as well as the manner in which this concept can help reflect citizens' feelings of alienation from society, this broader notion of external efficacy plays a central role in the current study of political attitudes and the examination of how this factor relates to a wider sense of engagement in political affairs.

Inequality of Political Support

One of the clearest findings from the wider political engagement literature is that political support is not equally distributed among different sections of society. Certain characteristics are held to have a substantial impact on different forms of political support, ranging from socio-economic indicators such as income and education, to demographic characteristics such as age. In terms of turnout, there is a clear body of evidence that citizens from more disadvantaged backgrounds are less likely to participate in elections (Lijphart, 1997; Smets and van Ham, 2013).

Previous findings indicate that this may also the case for many of the attitudinal aspects of political engagement. Research has shown that higher levels of both education and income are linked with more positive political outlooks, in terms of satisfaction with democracy, and feelings of political efficacy (Bowler et al., 2002; Donovan and Karp, 2017; Howell and Justwan, 2013; Karp and Banducci, 2008). Similarly, citizens who are more interested or knowledgeable about political affairs have been found to exhibit more positive evaluations of the political process (Donovan and Karp, 2017; Ikeda et al., 2008).

These empirical findings align with many of the claims of the resource theory of political engagement. While this this theory is more specifically concerned with political behaviour, the same processes may also apply to many of these attitudinal forms of political support. The central argument of this approach is that different forms of political participation require various resources in order to effectively take part (Brady et al., 1995*a*,*b*). Resources here can refer to money, time, or civic skills, which include the communication and social skills developed through formal education and the workplace (Brady et al., 1995*a*,*b*). If some citizens are better equipped to maximise their influence on the political process, intuitively this should lead to more positive views regarding how the system works, as their interests will be better represented by those in power. Citizens' that lack these resources, however, may view politics as a somewhat distant activity, where the barriers to entry effectively limit their ability to influence political affairs. The key argument here is that the unequal distribution of these resources within society inevitably produces a similarly unequal political system, where

the most vulnerable subsections of the population are less able to make their voices heard. Evidently then, it is essential to include measures of each of these relevant resources, such as education and household income, in order to evaluate whether a clear socio-economic bias exists across the attitudinal dimensions of political support.

Another characteristic that is thought to have a notable impact on political engagement is age. While there is a clear pattern linking age and electoral turnout, with younger citizens being far less likely to vote that older age groups (Baston and Ritchie, 2004; Lijphart, 1997; Smets and van Ham, 2013), the relationship between age and political attitudes is far less clear-cut. Previous cross-national research has produced some initial evidence that age may be positively related with both political efficacy (Karp and Banducci, 2008), and satisfaction with democracy (Howell and Justwan, 2013). More recent studies have cast some doubt on this relationship, however, either finding evidence of a negative relationship between age and these two political attitudes (Donovan and Karp, 2017; Ikeda et al., 2008), or failing to uncover any significant effects whatsoever (Bowler et al., 2002). This project therefore offers an extremely valuable opportunity to evaluate these mixed findings from the current literature, against updated cross-national data sources.

In any case, including this variable in the present analysis is clearly necessary, as different electoral rules may alter the incentives or barriers to participation for certain age groups more than others. Countries that do not use automatic voter registration, for example, may place an unequal burden on younger voters, who have to manually apply to be added to the electoral register when they first become eligible, while older voters have no such concerns. Furthermore, if certain electoral rules alter the incentives of political elites, or influence the way in which campaigns are fought, this may have a knock-on effect on the salience of specific issues that are important to different age groups. The fact that older citizens are more likely to vote, means that politicians will often promote policies that cater to the needs of this age group by, for example, ensuring the security of public pensions. If the demographics of the electorate are altered due to widespread structural changes, however, parties' policy priorities may similarly shift to attract this newly introduced section of the electorate.

The central question here is whether electoral laws can help to reduce these existing inequalities, or if certain institutional arrangements have the unintended consequence of exacerbating these issues. Including these variables in the current analysis allows for an clear assessment of how individual characteristics influence political attitudes, as well as how their influence on support is affected by the structure of political systems.

Electoral Rules

Compulsory Voting and Political Attitudes

Compulsory voting is widely held to be the single most important factor in influencing levels of voter turnout at the aggregate level (Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). The question remains, however, as to how this resulting shift in behaviour impacts citizens' attitudes towards their political system. Compulsory voting refers to the practice of legally requiring citizens to participate in elections, meaning that those who fail to turn out at the polls can potentially face legal sanctions.

Some have argued that the effect of compulsory voting on political attitudes runs in tandem with its positive impact on political participation. Turnout in countries that strictly enforce compulsory voting laws, such as Belgium and Australia, regularly exceed 90 per cent (IFES, 2019), which demonstrates that these rules can serve as an effective means of reducing voter inequality. With a more representative sample of the electorate participating in these contests, this also means that politicians have to take the considerations of a much broader section of society into account when campaigning for political office. The end result of this chain of events, may be that citizens who would be otherwise absent from political affairs, and therefore overlooked by policymakers, would now be more likely to hold positive political outlooks as their interests are finally acknowledged by those in power.

Another potential consequence of higher turnout rates, is that election outcomes may better reflect the views of the electorate as a whole. The legitimacy of democratic government is undoubtedly strengthened when elections command close to full turnout, in comparison to cases where the number of people that did not vote outnumbers those

who supported the winning party (Birch, 2009; Quintelier et al., 2011). In the 2019 UK General Election, for example, the Conservative party won a majority of seats with a total of 13.9 million votes, while 15.5 million citizens on the electoral register chose not to take part (BBC, 2019). If electoral reform can help to integrate this vast swathe of the population into the political process, this could have a significant knock-on effect on both public evaluations of how well their system works, as well as their ability to play an active role in shaping it. When viewed as a whole, it would seem that the wider effects compulsory voting can have on these aspects of political culture and campaigning, as well as ensuring that elections are a more inclusive experience, should intuitively lead to more positive evaluations of the political system.

There are several arguments against the use of compulsory voting, however, one of the most prominent being that forcing people to participate in elections fundamentally goes against the core values and ideals of liberal democracy. Supporters of this view claim that mandatory voting impinges on an individual's civil liberties, and that elections can only be legitimate when citizens are free to decide whether they want to take part. Furthermore, while the wider population may somewhat begrudge being forced to participate in elections, even if they planned on doing so anyway, this effect is likely to be felt more acutely by citizens who already hold negative political outlooks (Singh, 2016). Being forced, under the threat of legal sanction, to take part in a process that you view as illegitimate, or as being incapable of effectively representing the needs of you and your community, may only serve as to further alienate the most disaffected sections of society from political life.

A final supposed limitation of compulsory voting is that by forcing all citizens to vote, this undoubtedly leads to more spoiled ballots and wasted votes. Citizens who are unhappy about being compelled to vote as discussed above, or who are simply uninterested in politics, may be more likely to spoil their ballot, or act without taking the time to become informed on the options that are available to them. Previous research has shown that systems with compulsory voting indeed tend to witness higher rates of spoiled ballots, however, in the majority of cases these figures are similar to, if not less than the typical rates of non-voting seen in voluntary systems (Birch, 2009).

Furthermore, if citizens know that they will have to participate in any case, this may encourage more people to read up on the relevant issues at hand, compared to if they had the option to simply opt out.

In terms of the empirical literature on this subject, some studies have uncovered a positive link between compulsory voting and satisfaction with democracy (Birch, 2009). More recent research has cast some doubt on this link, however, as Singh (2016) found that mandatory voting in fact exhibited a negative relationship with satisfaction with democracy, which was largely driven by citizens who held more negative views towards the democratic system being even more unsatisfied under compulsory as opposed to voluntary voting systems. It is worth noting that the few studies that have examined the effects of compulsory voting on political attitudes have almost exclusively looked at satisfaction with democracy, and to a lesser extent political trust. Expanding this research to include indicators of political efficacy will allow for an examination of whether the impact of this law varies across different aspects of support. While there are two main competing theoretical frameworks that attempt to explain the impact of compulsory voting on political attitudes, it would seem likely that the unmistakable positive effect that this factor has on turnout could lead to a subsequent increase in feelings of political support, which leads to the follow hypothesis:

> **H1a:** Citizens' will hold more positive political outlooks in elections with compulsory voting, compared to those in voluntary systems.

Alongside this relationship with overall levels of political attitudes, the fact that mandatory voting encourages people that would otherwise not have taken part in elections to participate, means that this may act as a unique opportunity for disengaged citizens to become socialised into the political process. As such, if there is any socialising effect at play, this should also help to reduce the unequal nature of political support, or in other words:

> **H1b:** The impact of socio-demographic factors on political attitudes will be reduced in elections with compulsory voting, compared to voluntary systems.

With regard to the degree to which these laws are enforced, and how this influences political attitudes, there are two countervailing schools of thought. Imposing harsher penalties for non-compliance may only serve as to further alienate citizens that are already dissatisfied with the status quo, while conversely, if there is any socialising effect at play, this should be even stronger where these laws are more effectively enforced. Based on the strength of the of the latter argument, the clear positive effect of these laws on aggregate turnout rates, and the somewhat inconclusive existing empirical evidence, I expect that stricter enforcement should amplify the positive effects discussed above, namely that:

> **H2a:** Citizens' will hold more positive political outlooks in elections with strictly enforced compulsory voting, compared to systems with weakly enforced compulsory voting.

It this proves to be the case, then we would also expect that the ability of this electoral rule to mitigate existing inequalities should also be enhanced, leading to a reduction in the effects of the socio-demographic determinants of political attitudes:

> **H2b:** The impact of socio-demographic factors on political attitudes will be reduced in elections with strictly enforced compulsory voting, compared to weakly enforced compulsory voting systems.

The project at hand presents a unique opportunity to test these competing theoretical claims, and lend support to either side of the current divide in the empirical research in this area. The use of more recent data sources and a larger sample of cases also makes it possible to examine whether previous finding are potentially an artefact of specific regions or time periods. Moreover, the inclusion of a broad range of electoral rules and multiple indicators of political attitudes also makes it possible to disentangle the effect of compulsory voting from other institutional features, as well as exploring its relationship across multiple aspects of political support. Perhaps the key benefit of this multi-level approach, is that this also allows for the exploration of how this law relates to political inequality. Even if there is a clear link between compulsory voting and political attitudes at the aggregate level, does this impact all groups in society

equally, or alter the current levels of inequality of political support? The inclusion of this variable within the current project means that we can directly address these key questions.

Electoral System Proportionality and Political Attitudes

The impact of electoral system design is one of the institutional-level features that has received a great deal of attention within studies of political attitudes. It is generally argued that more proportional systems should witness increased levels of engagement, since the more direct relationship between the percentage of votes gained and the number of seats a party wins means that there are fewer wasted votes. Wasted votes occur when the result for a particular constituency is a foregone conclusion, rendering a vote for any other candidate practically meaningless. By reducing the probability of these one-side contests, citizens may be more likely to feel that their vote can actually make a difference to the end result, thus enhancing feelings of political efficacy (Baston and Ritchie, 2004; Lijphart, 1997). There have been some arguments against the adoption of this practice, however, most of which focus on the relative complexity of many proportional systems compared to single-member districts (Baston and Ritchie, 2004).

In terms of the wider political engagement literature, previous findings generally point to the existence of a positive link between proportionality and political support, in terms of both turnout (Baston and Ritchie, 2004; Franklin, 2002; Franklin et al., 1996; Geys, 2006), and political attitudes (Aarts and Thomassen, 2008; Karp and Banducci, 2008). The empirical research in more recent years, however, has cast some doubt on the nature of this relationship.

Regarding satisfaction with democracy, Aarts and Thomassen (2008) found that proportional systems were associated with lower levels of satisfaction compared to majoritarian ones. Furthermore, while Donovan and Karp (2017) initially found that proportionality was associated with increased levels of satisfaction with democracy, this effect was significantly reduced after controlling for both political corruption and economic inequality. These findings seem to imply that much of the theorised effects of proportionality on political attitudes may actually be due to the omission of key ex-

planatory variables at the system level. Analysing this variable alongside a wide range of electoral rules, and controlling for other relevant predictors of political support, can therefore help mitigate this issue.

Turning next to the impact of proportionality on political efficacy, the findings from the empirical literature are somewhat more consistent here. Both Aarts and Thomassen (2008), and Karp and Banducci (2008) found that proportionality had a significant positive effect on citizen's feelings of political efficacy. This lends some initial weight to the argument that the enhanced representativeness that these systems provide, may be able to alter citizens perceptions of their role within the political process.

These somewhat mixed findings demonstrate the importance of including multiple indicators of political support in the present analysis, as the effects of these electoral rules may vary across different attitudinal aspects of engagement. Taking these broader findings into consideration, the ability of more proportional electoral systems to enhance the representativeness of government and mitigate the issue of wasted votes, should intuitively lead to more positive evaluations from the public. This, accompanied by the albeit partial support for this view within the empirical literature leads to the following hypothesis:

> **H3a:** Citizens' will hold more positive political outlooks in systems where electoral outcomes are more proportional.

In terms of how proportionality influences the inequality of political support, however, the added complexity of proportional systems in comparison to simple majoritarian contests, implies that these rules may impose additional barriers to citizens with less resources at their disposal. Thus, the potential to enhance political support via improved representativeness, must be weighed against any costs that may disproportionately affect citizens that are already less likely to be engaged in political affairs. The following hypothesis will allow me to test whether there is any merit to these reservations:

> **H3b:** The impact of socio-demographic factors on political attitudes will be higher in systems where electoral outcomes are more proportional.

The present study allows us to test whether the improved representation mechanisms associated with proportional systems are associated with a more satisfied public, or whether its added complexity may actually widen the inequalities in public support.

Voter Registration and Political Attitudes

The vast majority of research on the effects of voter registration procedures on political engagement has been squarely focused on electoral turnout. A clear gap exists in the academic literature in exploring how voter registration methods may impact citizens' views toward the political regime. Voter registration rules vary significantly between countries, with different procedures governing when a citizen can register, who is eligible, and how easy this process it to complete. The feature most commonly used to differentiate between registration systems, is whether it is the state or citizens themselves that are responsible for initiating the registration process. In systems that use passive, or automatic registration, voters do not have to take any active steps to be included on the electoral roll (Rosenberg and Chen, 2009). As soon as citizens reach the eligible voting age, they are automatically added onto the electoral register, with no participation necessary on their part. Conversely, in active registration systems, it is up to citizens to initiate the registration process, often having to fill in certain forms or attend registration centres in person.

While the academic literature in this sub-field almost exclusively focuses on the impact of registration laws on turnout rates, many of the underlying theoretical arguments have both direct and indirect implications regarding political attitudes. One of the main claims from the turnout literature is that passive registration systems can help reduce some of the existing barriers to voting, and therefore increase overall turnout rates. This approach is grounded in the rational choice theory of political behaviour, where a citizen's decision to participate in elections is viewed as a product of their own internal cost-benefit analysis (Downs, 1957). Costs in this sense can refer to having to become informed on relevant political issues, to simply getting to the polling station on the day of the election. The primary benefit associated with voting, on the other

hand, is the chance to have an impact on the outcome of the election. Passive registration may therefore reduce these costs somewhat, by entirely removing the barrier of having to register. This, in turn, should lead to increased participation rates, which if accompanied by more representative political discourses, or socialisation into politics more broadly, may translate into more positive evaluations of the political process.

Another key point here is that barriers to voting, such as registration requirements, tend to disproportionately impact citizens from more disadvantaged backgrounds. The study conducted by Braconnier et al. (2017) on voter registration before the 2012 French presidential election, found that the extra costs associated with having to manually register did in fact prevent people from voting, and that these effects were especially pronounced for younger, and less educated citizens.

Nevertheless, there is some conflicting evidence with regard to the effects of voter registration practices. Erikson's (1981) study of voting behaviour in USA found that states with stricter registration procedures had reduced levels of turnout compared to those with less demanding registration requirements. Interestingly, however, voters in states where registration was not required at all were actually the least likely to vote out of the three groups being examined. These findings imply that while convoluted registration procedures may put some people off voting, the process of having to manually register and take active steps to be placed on the electoral roll might actually make citizens more likely to become involved in politics. One potential explanation for this is that those who have went through the registration process are now more invested in the election, and thus already have a 'sunk cost' in the process (Erikson, 1981). Despite the findings of this study - which was limited to only a sample of Northern US states, and was conducted in the mid 1960s - the general trend apparent in the turnout literature at least, is that of a positive link between automatic, or passive registration systems and political engagement. Including this electoral rule in the current analysis makes it possible to test whether these effects on turnout also carry over to the attitudinal components of political support. If this is the case, and this supposed positive impact on voting results in enhanced evaluations of the political process, then we would expect to see the following:

> **H4a:** Citizens' will hold more positive political outlooks in elections that use passive voter registration, compared to active systems.

Furthermore, if passive registration also effectively reduces the barriers to participation that disproportionately impact more disadvantaged groups, this should lead to an improved perception of how the system operates from these sections of society, thus reducing inequality of support. Using the following hypothesis, we can therefore test whether this pattern occurs across different national contexts:

> **H4b:** The impact of socio-demographic factors on political attitudes will be reduced in elections that use passive voter registration compared to active systems.

Incorporating registration rules into the study of political attitudes is a clear step forward in improving our understanding of how electoral rules influence the essential components of political support beyond turnout.

Direct Democracy and Political Attitudes

Previous research on the impact of direct democracy on political engagement has been broadly guided by two key theoretical perspectives. The first of these is the educative approach, which argues that direct democracy can act as a low-cost form of participation to help socialise citizens into the political process, which in turn fosters greater feelings of personal efficacy (Bowler et al., 2002; Pateman, 1970). Similarly, it is claimed that if a major component of public disaffection arises from feelings that the public are not being listened to by the authorities, referendums can serve as a direct expression of the public will, and therefore should lead to more positive attitudes due to this public input on key issues (Bowler et al., 2002).

The opposing theoretical viewpoint, however, notes that increased use of referendums may actually undermine the legitimacy of elections and the traditional political process. If the most important social issues of the day are decided via referendums,

rather than conventional legislative politics, this will inevitably have a knock-on effect on the salience of elections themselves. Rather than relying on the representative function provided by party politics, citizens can instead offer their direct support to political issues, thereby lowering the stakes of election outcomes (Freitag and Stadelmann-Steffen, 2010; Kern and Hooghe, 2018).

The empirical literature on the impact of referendums is somewhat mixed in relation to both turnout and political attitudes. The majority of the studies in this field focus on local level direct democracy and take a within-country approach. Switzerland and the United States are the two cases that have received the most attention. While some projects have examined the issue cross-nationally, this is far less common, especially when it comes to political attitudes. Moreover, of those that do explore the attitudinal aspects of support, they tend to focus solely on political efficacy. This project can therefore serve a key purpose in expanding this literature to include a wider range of political engagement, and study how this relates to direct democracy.

One of the few studies that specifically focuses on political attitudes, is the work conducted by Mendelsohn and Cutler (2000) on the impact of the 1992 constitutional referendum in Canada. Here they found that as a result of the increased media coverage throughout the referendum campaign, there was a small but significant boost in citizen's feelings of political efficacy. Similarly, Bowler and Donovan's (2002) research on US state-level direct democracy also uncovered a positive relationship between referendum use and increased political efficacy. Finally, Kim (2015) also found evidence of a positive relationship between referendum use and political efficacy in their study of Japanese local government. While these findings provide some initial optimism regarding the potential benefits referendums may bring, it is unclear whether these projects that focused on within-country case studies, and predominantly examined local level direct democracy, are indicative of a wider cross-national pattern.

The current project therefore aims to build on this existing literature, and test whether these results hold up against updated cross-national data sources, in terms of national rather than local referendums, and across multiple indicators of political support. In line with the initial positive findings with regards to efficacy, I expect to

find that:

> **H5a:** Citizens' will hold more positive political outlooks in countries that held at least one national referendum since the previous election.

With regard to how referendums relate to socio-demographic inequalities, this project can address a clear gap in our current understanding of this phenomena, as this issue has been relatively unexplored. Direct democracy may have the potential to engage otherwise disenfranchised individuals, due to both the theorised educative effect of referendums, and their ability to allow citizens to directly voice their support for political issues irrespective of their previous experience of electoral participation. As such, I would expect that by offering additional avenues of participation to groups that are traditionally absent from formal party politics, this could help reduce the disparity in political engagement across different socio-demographic groups. This can be tested using the following hypothesis:

> **H5b:** The impact of socio-demographic factors on political attitudes will be reduced in countries where at least one referendum has taken place since the previous election.

One important point to note here is that while the use of direct democracy instruments may have the potential to promote more supportive political attitudes, even if this is the case, the overuse of this tool may lead to diminishing returns. Just as citizens can present signs of 'voter fatigue' when several elections are held within a relatively short time-period (Lijphart, 1997), being constantly asked to become informed on relevant issues, and vote on referendum ballots, may similarly alienate some voters from political affairs. This also relates to the earlier discussion regarding how the overuse of referendums may reduce the salience of legislative elections. As such, I expect that as referendums are held more often, we should witness a negative effect on both levels of satisfaction with democracy, and political efficacy. This leads to hypothesis H6a:

> **H6a:** Citizens' will hold more negative political outlooks in countries that hold national referendums more frequently.

Finally, if the increased use of direct democracy does in fact lead to some degree of voter fatigue, it would be expected that only the most politically engaged citizens would continue to take part. As such, only the groups that are most likely to vote, and have the most resources at their disposal would gain the supposed benefits associated with political participation, which leads to the final hypothesis:

H6b: The impact of socio-demographic factors on political attitudes will be greater in countries that hold national referendums more frequently.

Including these measures in the present analysis makes is possible to expand on previous research by examining a broader range of political attitudes, making use of new and updated data sources, and exploring how this factor relates to inequality of political support.

4.2 Method

In order to address the central research questions of the current project, the analysis takes a quantitative approach, making use of large-N cross national survey data from waves 2-4 of the Comparative Study of Electoral Systems (CSES, 2017). The final dataset used in the analysis contains information from 105,846 respondents, across 90 elections, in 43 different countries, between 2001-2016. The CSES data was merged with additional micro and macro-level data sources, and then analysed via multi-level binary logistic regression. This allows for an assessment of whether these electoral rules have any overall relationship with public attitudes toward political affairs, as well as whether these effects are distributed equally among different socio-demographic groups. The following section will outline how each of the key dependent and independent variables are operationalised, as well as any additional control variables. I will then discuss the type of statistical model being used, before evaluating the relative advantages and limitations of how well this methodological approach allows us to address the core research questions at hand.

Dependent Variables

The two central variables used to capture citizen's attitudes towards political affairs both come from the CSES dataset, and reflect citizens' levels of satisfaction with democracy and political efficacy. In terms of satisfaction with democracy, respondents were asked a standardised question in order to gauge their views on how well democracy currently operates in their country:

> *On the whole, are you very satisfied, fairly satisfied, not satisfied, or not at all satisfied with the way democracy works in your country?*

The responses were coded across a five-point range between: 'Not at all satisfied', 'Not very satisfied', Neither satisfied nor dissatisfied', Fairly satisfied', and 'Very satisfied'. The middle neutral category was only available to respondents from certain election studies, due to differences in the data collection process implemented at the national level. The few election studies that contained this option were removed from the analysis in order to maintain consistency among the full response set. The remaining four point scale was aggregated to create a dummy variable, which compares those who answered that they were either fairly or very satisfied, against those who were not, or not at all satisfied. While this binary indicator may lose some of the fine-grained detail of the original ordinal measure, the reason for this decision is due to the statistical model used in the analysis, which will be discussed in greater detail at the end of this section. The final variable therefore takes two discrete values, differentiating between those who are satisfied with how democracy works in their country, and those who are not. The question on political efficacy included in the CSES surveys asked respondents:

> *Some people say that no matter who people vote for, it won't make any difference to what happens. Others say that who people vote for can make a big difference to what happens.*
>
> *Using the scale on this card, (where ONE means that voting won't make any difference to what happens and FIVE means that voting can make a big difference), where would you place yourself?*

This type of question is often used as a standard indicator for external efficacy. This is because it taps into the responsiveness of the system to citizens' input, as opposed to the individual's self-perception of their ability to participate, which instead relates more to the notion of internal efficacy. This variable was again aggregated to create a final binary measure. Responses from 1 to 3 on the original scale were combined to create a category that represents citizens who feel that voting does not make any difference to what happens, up to and including those who picked the central category which reflects a neutral response. Those who chose either of the options in the top half of the response scale (4 and 5) were similarly combined in order to create a dummy variable that compares those with relatively high levels of external efficacy against those with low-to-moderate levels of this attitude.

Independent Variables

Moving on to the first of the key institutional variables, compulsory voting was operationalised using two different measures. The first is a dummy variable, indicating whether or not any form of compulsory voting was in place during that election. The reference category here is voluntary voting, and the treatment group is simply labelled **compulsory voting**. The second measure is an ordinal variable that attempts to capture the degree to which compulsory voting laws were enforced in each country. The original CSES election-level data classifies compulsory voting systems based on the severity of their penalties for non-compliance, and the degree to which these penalties are actually enforced. The CSES coding was cross-referenced against several other sources to check for any inconsistencies (Birch, 2009; Franklin, 2002; IDEA, 2019*a*,*c*; IFES, 2019; Massicotte et al., 2004; Singh, 2015). The categories in the final measure include the voluntary voting reference group, alongside **weakly enforced compulsory voting**, and **strictly enforced compulsory voting**. These two indicators make it possible to test whether having any form of compulsory voting is linked with more positive and equal political attitudes, or if a credible threat of legal sanction is necessary for these rules to display any substantive effects.

The effect of electoral system proportionality on attitudes was assessed using the

Gallagher disproportionality index, which compares the percentage of votes won by each party against the number of seats they received post-election. This in turn, provides an effective indicator of how closely the final result mirrored the wishes of the public. Since the Gallagher index score for the current election is actually a post-hoc measure, this does not necessarily reflect whether citizens were influenced by previous political outcomes. Including a lagged measure that gives the score of the most recent election of the same type is therefore more appropriate, since if citizens are actually influenced by the representativeness of the electoral process, their judgement about the system's efficacy would logically be based on their past experiences with it. In light of this point, the Gallagher score for the previous election is used in each of the models below. The variable is calculated using the least squares method outlined by Gallagher (1991), with additional data for more recent elections sourced from Carey and Hix (2011), Gandrud (2015), or calculated manually using election data (CSES, 2017; IFES, 2019). Since the Gallagher index is actually a measure of disproportionality, in all of the models the variable is inverted, so as to make the interpretation of interaction effects more intuitive. A higher score on the final variable, which is simply labelled **proportionality**, indicates a more proportional election outcome.

With regard to voter registration, an original dataset was created specifically for the purposes of this project. This was based predominantly on election reports from the Organisation for Security and Co-operation in Europe (OCSE, 2019), and was supplemented with additional information from books, journal articles, and various government websites (Contreras et al., 2016; Massicotte et al., 2004; OCSE, 2019; Power, 2009; Rosenberg and Chen, 2009). The indicator takes the form of a categorical variable, which compares active systems against the passive baseline category, but also contains a 'mixed' category to control for cases that do not neatly fit either of the other groups. This measure is labelled simply as **active registration**. The mixed category includes instances where states are transitioning from active to passive systems, but the new automation has not been fully put into practice, as well as instances where the system is mostly active but significant state resources are put into registering new voters. This newly developed original dataset, which supplements the CSES election data,

makes it possible to test whether the extra costs associated with having to manually register have any impact on citizens' political attitudes.

Data on the use of referendums was taken from multiple sources, most notably the SUDD Database for Direct Democracy, the Centre for Research on Direct Democracy, and the IDEA Direct Democracy Database (C2D, 2019; IDEA, 2019*b*; SUDD, 2019). Information was gathered on all national referendums that took place between the current election under examination and the most recent election of the same type. This data was then used to construct two final variables. The first is a dummy measure of whether any referendums were held in the previous electoral cycle, which compared the baseline group where no referendums took place against the cases where at least one referendum was held. This variable is labelled **referendum held**. The second variable captures the frequency of these contests, and is a simple count of the number of referendums held in each country since the last election, which is labelled **referendum freq**. The distribution of each of these key electoral law variables within the dataset are listed in Appendix B.

Socio-demographic Variables

Several individual level measures were included in order to capture the necessary information for each of the key socio-demographic independent variables. The final variables included in the models, namely: age, education, and household income were all taken from the main CSES dataset. Turning to how these variables are measured, the respondent's age, in years, is included as an interval-level variable. Education is recorded as a dummy variable, indicating whether or not an individual attended university. Household income is measured in quintiles, with '1' representing the poorest, and '5' the wealthiest. Including these variables are essential in order to facilitate an effective assessment of how socio-demographic characteristics influence political attitudes, and whether specific electoral rules further moderate this relationship. By including these variables in cross-level interactions, we can therefore determine the extent to which a socio-demographic bias exists in terms of political support, as well as how this is influenced by political institutions.

Controls

Several control variables were included at the macro level, ranging from: population size, how long the country had been a democracy, the degree of economic inequality, and level of political corruption.

The population size variable consists of the natural log of the total population, measured in millions, for each country-year. This was taken from the World Bank World Development Indicators dataset (World Bank, 2019).

How long each country had been democratic was recorded using a dummy variable, with the reference group for newer democracies being compared against old democracies. This variable was calculated based on the Polity IV measure of regime durability (Polity IV Project, 2018), with countries that had been classed by Polity IV as democratic for at least fifty years before the current election coded as 'old' democracies, while those below this threshold were included in the 'new' category.

Economic inequality is measured using the Gini coefficient, which is a ratio of the wealth distribution of a given population. A score of zero implies complete equality of incomes, while a score of one would mean complete inequality. The ratio was converted to a 0-100 percentage scale for the final variable, and is based on combined data from various sources (IFES, 2019; Index Mundi, 2019; LIS, 2019; OECD, 2018; World Bank, 2019). In the final variable coding, a higher value therefore represents greater levels of economic inequality.

The level of corruption present in a society was measured using the Varieties of Democracy (VDEM) political corruption index (VDEM, 2020). The VDEM project produces regularly updated datasets, which are created with the use expert coders to assign countries values across a wide range of political variables. The corruption index takes the form of an aggregated score for each country-year, that reflects the degree of corruption across a variety of political institutions. The final variable is measured at the interval level, and can fall anywhere between 0 and 1, with higher values representing greater levels of political corruption.

Finally, before being included in the models, all interval-level variables were centred around the group mean, and divided by two standard deviations, following the

conventions outlined by Gelman (2008) and Enders and Tofighi (2007). As such, the intercepts for each model refers to the expected value of the outcome when all interval level independent variables are held at the mean for that election study, rather than zero; while the coefficients themselves refer to the unit change in Y for a two standard deviation increase in X. This allows for simpler interpretation of model estimates, as all interval variables follow a similar scale.

Data and Analytical Approach

Due to the ordinal nature of the two outcome variables, the first model consideration for the analysis was ordinal logistic regression, which would make use of all the available information captured by the survey questions. Initial tests, however, indicated that the proportional odds assumption - that the effect of each predictor is consistent across each of the thresholds in the response variable - was violated for several of the independent variables included in the model. While a partial proportional odds model can be used to compensate for some predictors that fail this test, this approach was not appropriate since the vast majority of variables did not meet the proportional odds assumption.

The final model specification used in the analysis was binary logistic regression, with both outcome variables being recoded to represent either; satisfaction or dissatisfaction with the way democracy works; and whether or not it makes a big difference who people vote for. This practice of aggregating responses into two binary indicators does, however, come with its own inherent limitations. This approach lacks the ability to explore how electoral rules interact with political attitudes at different levels of support beyond this one-dimensional divide. It may be the case that certain variables have a particularly strong effect on citizens at either extreme of the response scale, compared to those who are say, fairly satisfied or dissatisfied. While this approach comes at the cost of losing some of this fine-grained detail, the binary logistic model nonetheless allows me to directly address my central research questions. The response scales for both dependent variables each contain clear divides that can be used to separate those who hold more positive political attitudes, and those who do not. Furthermore, the interaction between electoral rules and socio-demographic variables is the core focus of

the current project, rather than examining whether these effects vary at the extremes of each attitude.

Beyond the operationalisation of the dependent variable, a multi-level design was used in order to account for the nested structure of the data, since the CSES surveys include individuals clustered within different election studies. Failure to adopt this approach would adversely impact the models' estimates, as respondents from the same country would be treated as independent observations, despite being subject to same electoral laws and other unmeasured social and cultural factors as everyone else from that specific election study. As such, the analysis was conducted using a varying intercept multi-level binary logistic model.

In terms of the wider cross-sectional approach taken by this study, this inevitably comes with its own limitations and advantages. One drawback is the inability to test the direction of causality, in comparison to longitudinal studies, where time can be used to see a clear pattern of cause and effect. While the issue of reverse causality is possible - that populations with more supportive citizens, or a certain socio-demographic make up are more likely to adopt specific electoral rules - the key benefit here is the ability to explore cross-level interactions between the individual and system level characteristics of interest, and test whether any significant link exists between electoral rules and inequality of engagement. This makes it possible to identify whether there is any particular set of institutional arrangements that may have the potential to minimise inequality of support. While the existing body of theoretical literature can give an indication of the potential causal mechanisms at play, further longitudinal research is evidently needed to address this issue more directly.

An added justification of my current cross-sectional approach, as opposed to examining cases where electoral reforms have occurred over time, is that instances of major constitutional or institutional change are relatively rare events. The long-term, structural nature of these laws means that in order to maintain some degree of stability, major overhauls of the rules that govern elections are notably infrequent. Moreover, the fact that when these laws do change, multiple aspects are usually altered simultaneously, makes disentangling the causal paths behind any individual law extremely

difficult. While further research that examines the impact of these changes over time, and how they vary across specific contexts is clearly needed, the current approach nonetheless allows for an effective assessment of the research questions at hand, in terms of identifying these underlying patterns of engagement.

In order to adequately address the key aims of the project regarding how certain electoral rules relate to attitudinal engagement, and how these effects are distributed among different sections of society, the analysis was conducted in the following order. The statistical models which explore satisfaction with democracy were conducted first, followed by those regarding political efficacy. Separate models were run which included interaction terms between each of the four main electoral rules, and the key individual-level variables: Age, education, and income. This allows for an examination of whether any significant relationship exists between each electoral law and these political attitudes, while the interaction terms makes it possible to test whether the influence of each individual level predictor varies depending on the type of electoral laws in use. This ultimately allows us to directly address the question of whether or not different electoral rules are associated with reduced inequalities in attitudinal support. The results of this analysis will be discussed in more detail below.

4.3 Results

Satisfaction with Democracy

The results of the logistic regression models which examine satisfaction with democracy are displayed in Tables 4.1 and 4.2 below. These tables show the regression coefficients for the conditional main effects for each electoral law, and the three socio-demographic variables, alongside the interaction effects between the two. The full regression output for each model, that includes all control variables is listed in Appendix B. In both tables, the coefficients for the 'electoral law' variable represents the effects of the rule listed below the model number. For example, in Model 1 of Table 4.1, the electoral law coefficient refers to the main effect of compulsory voting, in comparison to the voluntary voting reference category.

It is important to note that due to the cross-level interaction terms included in these models, the coefficient for each 'electoral law' variable does not represent the direct effect of that rule on satisfaction with democracy, but rather its effect *conditional on the other individual-level variables included in the interaction.* As such, in order to appropriately address my first set of hypotheses, additive models were also run which did not contain any interaction terms. This allows us to see the unconditional main effect of each electoral law on satisfaction, the results of which are displayed in Table B4 in Appendix B. Aside from extremely minor differences in effect sizes, the substantive interpretation of the results remain the same across both model specifications, and thus the findings from the models below can still be used to address hypotheses H1-6a.

Examining this electoral law variable for Models 1-3 in Table 4.1 and Models 1-4 in Table 4.2, allows us to test whether these rules have any significant direct relationship with satisfaction levels. Across both tables we can see that none of the electoral laws displayed any significant link with citizens' likelihood of being satisfied with democracy, with the sole exception of electoral system proportionality. In Model 1 of Table 4.2, we can see that the coefficient for proportionality is both positive and statistically significant at the $p<0.01$ level. Based on this model's estimates, a 2SD increase in the proportionality measure, was associated with a 13.8 per cent increase in the probability

of being in the satisfied category. This allows us to reject the null hypothesis for H3a, and supports the initial expectation that citizens' are more likely to feel satisfied with how their democracy works when election outcomes are more proportional. The lack of statistically significant effects for the remaining variables, means that we cannot reject the null hypotheses for H1-2a and H4-6a, at least in terms of satisfaction with democracy.

The next step in the analysis examines the role that each of the socio-demographic characteristics play in influencing satisfaction with democracy. As can be seen from main effects across Tables 4.1 and 4.2, age has very little, if any impact on satisfaction levels. The main effect for age only reached statistical significance at the $p<0.05$ level in around half of the models, while the direction of this effect varied considerably between models. Even in the model specifications where age exerted a significant influence on satisfaction, these effects were extremely small, with the biggest gap in the predicted probability of feeling satisfied between young and old citizens being 1 per cent. Taken as a whole, the analysis indicates that age has extremely little, if any bearing on satisfaction with democracy.

The effects of education and income were consistent across all of the satisfaction models, with both variables producing positive coefficients that were statistically significant at the $p<0.001$ level. In terms of the effect sizes, the difference in predicted probabilities of belonging to the satisfied group, was 4 per cent higher for those with a university education, while higher incomes were associated with an 8 per cent increase. These findings support much of the previous literature on the unequal impact of socio-economic resources on various forms of political engagement (Brady et al., 1995*a*). For satisfaction with democracy at least, there appears to be a clear engagement gap that presents itself across socio-economic lines, with non-university educated individuals, and those on lower incomes being significantly less likely to feel satisfied with how their democracy currently operates.

Interaction Effects

The next stage of the analysis makes use of cross-level interactions, in order to test whether different electoral rules moderate this relationship between socio-demographic characteristics and political attitudes. Our first hypothesis (H1b) refers to compulsory voting, and can be addressed using Model 1 in Table 4.1. Here we can see that all three interaction effects were statistically significant at the $p<0.01$ level, with the coefficient for age being positive, while education and income produced negative effects. This implies that the use of compulsory voting is associated with an even greater age gap in terms of satisfaction with democracy, while the unequal impact of education and income are significantly reduced here in comparison to voluntary systems. While this allows us to reject the null hypothesis here, the direction of these effects only lend partial support to H1b.

Table 4.1: Interactive Regression Models - Satisfaction with Democracy and Electoral Rules

Dependent Variable: Satisfaction with Democracy				
	Model 1	Model 2	Model 3	Model 4
Electoral Law	Compulsory Voting (dummy)	Weakly Enforced CV	Strictly Enforced CV	Strictly Enforced CV
Intercept	−0.271* (0.128)	−0.286* (0.125)	−0.286* (0.125)	−0.472 (0.302)
Electoral Law	0.161 (0.237)	−0.186 (0.301)	0.575 (0.320)	0.761 (0.409)
Age	−0.005 (0.017)	−0.005 (0.017)	−0.005 (0.017)	0.234*** (0.038)
Education (uni)	0.167*** (0.021)	0.168*** (0.021)	0.168*** (0.021)	0.013 (0.056)
Income	0.335*** (0.017)	0.335*** (0.017)	0.335*** (0.017)	0.071 (0.039)
Electoral Law*Age	0.259*** (0.033)	0.239*** (0.041)	0.295*** (0.047)	0.056 (0.058)
Electoral Law*Education (uni)	−0.143** (0.044)	−0.155** (0.060)	−0.155** (0.059)	0.0001 (0.079)
Electoral Law*Income	−0.131*** (0.035)	−0.264*** (0.042)	0.072 (0.051)	0.336*** (0.062)
Groups	90	90	90	90
Observations	105,846	105,846	105,846	105,846
ICC	0.14	0.13	0.13	0.13
Log Likelihood	−60,619.730	−60,601.170	−60,601.170	−60,601.170
Akaike Inf. Crit.	121,273.500	121,244.300	121,244.300	121,244.300
Bayesian Inf. Crit.	121,436.100	121,445.300	121,445.300	121,445.300

Reference category for electoral law variable: *p<0.05; **p<0.01; ***p<0.001
Models 1-3 = Voluntary voting
Model 4 = Weakly enforced compulsory voting

Table 4.2: Interactive Regression Models - Satisfaction with Democracy and Electoral Rules cont.

Dependent Variable: Satisfaction with Democracy				
	Model 1	Model 2	Model 3	Model 4
Electoral Law	Proportionality	Active Registration	Referendum Use (dummy)	Referendum Frequency
Intercept	−0.266* (0.128)	−0.261* (0.128)	−0.258 (0.135)	−0.265* (0.128)
Electoral Law	0.542** (0.192)	0.060 (0.237)	−0.006 (0.180)	−0.053 (0.150)
Age	0.054*** (0.015)	0.028 (0.017)	0.061*** (0.017)	0.060*** (0.015)
Education (uni)	0.138*** (0.018)	0.116*** (0.021)	0.107*** (0.021)	0.134*** (0.018)
Income	0.304*** (0.015)	0.351*** (0.017)	0.295*** (0.017)	0.302*** (0.015)
Electoral Law*Age	−0.151*** (0.028)	0.116** (0.037)	−0.003 (0.033)	−0.035 (0.028)
Electoral Law*Education (uni)	0.095** (0.033)	0.108* (0.049)	0.095* (0.041)	0.059 (0.049)
Electoral Law*Income	−0.033 (0.028)	−0.216*** (0.037)	0.028 (0.034)	0.043 (0.030)
Groups	90	90	90	90
Observations	105,846	105,846	105,846	105,846
ICC	0.14	0.14	0.14	0.14
Log Likelihood	−60,657.680	−60,649.530	−60,675.020	−60,675.030
Akaike Inf. Crit.	121,349.400	121,339.100	121,384.000	121,384.100
Bayesian Inf. Crit.	121,512.000	121,530.400	121,546.700	121,546.700
Note:				*p<0.05; **p<0.01; ***p<0.001

Although compulsory voting is linked with a reduction in the impact of the two socio-economic factors on satisfaction levels, the finding that it is linked with exacerbated age based differences runs counter to the expected relationship.

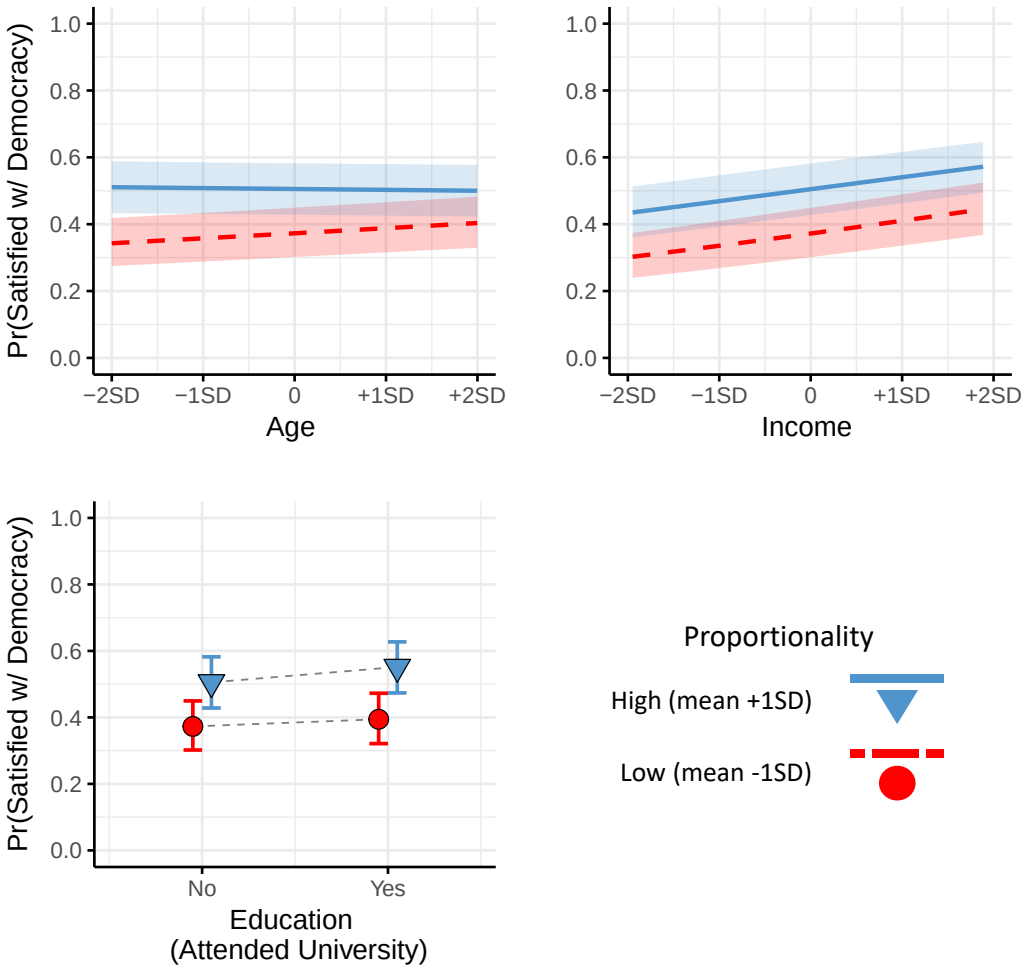
Models 2 and 3 in Table 4.1 display the coefficients for weakly and strictly enforced compulsory voting, in comparison to the voluntary voting reference category. The results indicate that both weakly and strictly enforced compulsory voting are associated with a reduction in the education gap, and exacerbate the effect of age, when it comes to citizens' likelihood of being satisfied with democracy in comparison to voluntary elections. With regard to income, however, it appears the the weakly enforced category is solely responsible for the apparent equalising effect of compulsory voting displayed in Model 1, while strictly enforced laws displayed no impact on income inequality.

While these results can tell us how each level of enforcement compares against voluntary systems, an additional test is necessary to assess whether there are any significant differences between the two forms of compulsory voting. Model 4 again explores the impact of strictly enforced compulsory voting on satisfaction with democracy, but this time using weakly enforced compulsory voting, rather than voluntary systems as the reference category. As we can see from the interaction effects in Model 4, there is no significant difference between the two forms of mandatory voting in terms of how they moderate the effects of age and education, while the positive and statistically significant coefficient for income runs in the opposite direction expected by H2b. As such, we

can reject the null hypothesis for H2b in terms of age and education, while for income, it appears that it is weakly, rather than strictly enforced systems that are linked with a lower levels of inequality. Overall, it would seem that the stricter enforcement of these laws does not necessarily equate to less socio-demographic inequalities in terms of satisfaction with democracy.

The next electoral rule to be examined is electoral system proportionality. Although this structural feature is linked with more positive overall attitudes, H3b expects that the added complexity of proportional electoral systems may lead to a widening of the socio-demographic inequalities present in support. From the interaction terms in Model 1 of Table 4.2, we can see that proportionality had no significant effect on the relationship between income and satisfaction with democracy. In terms of the other two individual level variables, the impact of age appears to be slightly reduced when electoral outcomes are more proportional, however, the positive effect of education is slightly exacerbated in comparison to less proportional elections.The predicted probabilities of belonging to the satisfied category across a range of values for each of the individual level predictors are displayed in Figure 4.1. Here we can see that the age gap is reduced by 2.5 per cent, while the education gap is widened by a similar amount under more proportional, compared to less proportional systems.

Figure 4.1: Satisfaction with Democracy and Proportionality Interaction Effects



These results therefore only lend limited support to relationship outlined by H3b, as although proportionality is associated with a marginal widening of the education gap, proportionality seems to actually reduce the effect of age on the likelihood of being satisfied with democracy.

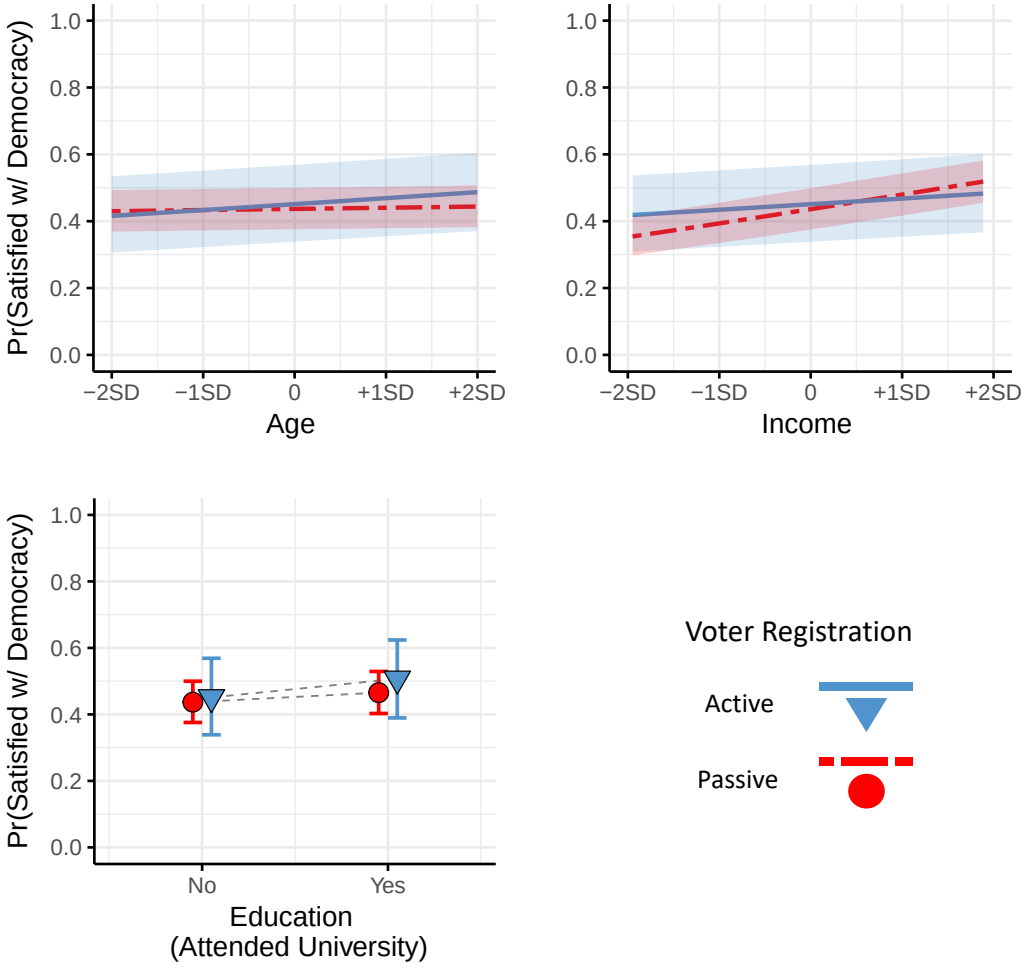
Hypothesis H4b expects that the use of active registration systems will exacerbate the impact of the key socio-demographic predictors, compared to passive registration. Model 2 in Table 4.2 allows us to directly address this claim. Here we can see that all three interaction effects were statistically significant at the $p<0.05$ level, with positive coefficients for both age and education, while the interaction term for income was negative. In terms of H4b, both the age and education gap were indeed widened

under active registration compared to passive systems, however, active systems were also associated with a reduction in the income based satisfaction gap. The predicted probabilities of belonging to the satisfied group based on the model's estimates are displayed in Figure 4.2. Here we can see that the difference in predicted probability of being satisfied, that is associated with a one unit increase in the individual level variables, is around 2.8 per cent wider for both age and education in active systems, whereas the effect of income is reduced by 5.3 per cent here in comparison to passive registration. As such, while this allows us to reject the null hypothesis, these findings only lend partial support to the direction outlined by H4b, since passive registration seemingly exacerbates, rather than reduces the income gap.

The final two models included in Table 4.2 focus on how referendum usage relates to attitudinal inequalities in political support. H5b expects that the use of any national referendums compared to cases with no direct democracy, should be associated with reduced socio-demographic inequalities. While H6b claims that as the frequency of these contests increase, these effects will be reversed. For both the dummy measure of whether any referendums were held since the previous election (Model 3), as well as the count of how frequently these contests were held (Model 4), only one of the interaction terms reached any degree of statistical significance.

The positive coefficient for education and the dummy referendum measure in Model 3, indicates that on average, the education gap was wider in systems where at least one referendum has been held, compared to those with no referendums. The difference in predicted probability of belonging to the satisfied group, between those with and without a university education, was 2.7 per cent greater for systems that had held referendums, compared to those that experienced no direct democracy. In terms of H5b, we therefore cannot reject the null hypothesis regarding both age and income, while the effect of referendum usage runs counter to the direction outlined by the original hypothesis. Finally, the lack of any significant interaction effects for the referendum frequency model, means that we also cannot reject the null hypothesis for H6b. Taken as a whole, the use of direct democracy appears to have very little, if any, relationship with satisfaction with democracy.

Figure 4.2: Satisfaction with Democracy and Voter Registration Interaction Effects



Political Efficacy

The results of the logistic regression models for the political efficacy variable are displayed in Tables 4.3 and 4.4. Again, in order to appropriately address my first set of hypotheses, additive models were run which did not contain any interaction terms. This allows us to see the unconditional main effect of each electoral law on efficacy, the results of which are listed in Table B5 in Appendix B. As with the previous dependent variable, the substantive interpretation of the results remain the same across both model specifications, meaning the findings from the models below can still be used to address hypotheses H1-6a.

In terms of the main effects of each electoral rule on efficacy, only electoral system

proportionality, and the dummy referendum measure produced significant results. The positive coefficients for the electoral law variables in Models 1 and 3 in Table 4.4, illustrate that both of these factors were linked with more positive evaluations of the electoral process. All else being held equal, citizens in countries where the previous election produced more proportional outcomes were 4.4 percent more likely to feel that it makes a big difference who people vote for, compared to those from less proportional systems. In terms of direct democracy, citizens in systems that held at least one referendum since the last election, were 4.8 per cent more likely to belong in the higher efficacy category, compared to those in countries where no referendums took place whatsoever. It is also worth noting that this positive effect for the dummy measure remained even after re-running the analysis with the notable outlier of Switzerland removed from the case selection. As such, these findings allow us to reject the null hypotheses here, and support the claims of H3a and H5a, that on average, more proportional electoral systems, and countries that make use of national referendums, are associated with higher overall rates of political efficacy. The lack of significant effects for the remaining rules, however, means that we cannot reject the null hypotheses for H1-2a, H4a, and H6a, that relate to compulsory voting, voter registration, and referendum frequency.

Before discussing the interaction terms included in the models, it is worth taking the time to explore the main effects for each of our three key individual level variables. All three variables displayed a positive and statistically significant relationship with political efficacy, that was consistent across the full range of models. The difference in predicted probability of belonging to the high efficacy group associated with a one unit increase in each of the socio-demographic variables was; 3.8 per cent for age; 8.2 per cent for education; and 5.5 per cent for income. This means that all else being held equal, older citizens, and those with greater socio-economic resources, were more likely to feel that voting makes a big difference to political affairs.

Table 4.3: Interactive Regression Models - External Efficacy and Electoral Rules

Dependent Variable: Political Efficacy				
	Model 1	Model 2	Model 3	Model 4
Electoral Law	Compulsory Voting (dummy)	Weakly Enforced CV	Strictly Enforced CV	Strictly Enforced CV
Intercept	0.591*** (0.061)	0.593*** (0.061)	0.593*** (0.061)	0.669*** (0.147)
Electoral Law	0.067 (0.112)	0.076 (0.146)	0.067 (0.155)	−0.009 (0.198)
Age	0.168*** (0.016)	0.168*** (0.016)	0.168*** (0.016)	0.014 (0.038)
Education (uni)	0.380*** (0.020)	0.380*** (0.020)	0.380*** (0.020)	0.127* (0.056)
Income	0.235*** (0.016)	0.235*** (0.016)	0.235*** (0.016)	0.134*** (0.039)
Electoral Law*Age	−0.129*** (0.032)	−0.154*** (0.042)	−0.093* (0.045)	0.061 (0.057)
Electoral Law*Education (uni)	−0.188*** (0.043)	−0.252*** (0.059)	−0.148** (0.055)	0.105 (0.076)
Electoral Law*Income	−0.015 (0.033)	−0.102* (0.042)	0.097* (0.047)	0.199*** (0.059)
Groups	90	90	90	90
Observations	106,724	106,724	106,724	106,724
ICC	0.03	0.03	0.03	0.03
Log Likelihood	−64,798.730	−64,789.630	−64,789.630	−64,789.630
Akaike Inf. Crit.	129,631.500	129,621.300	129,621.300	129,621.300
Bayesian Inf. Crit.	129,794.300	129,822.400	129,822.400	129,822.400

Reference category for electoral law variable: *p<0.05; **p<0.01; ***p<0.001
Models 1-3 = Voluntary voting
Model 4 = Weakly enforced compulsory voting

Table 4.4: Interactive Regression Models - External Efficacy and Electoral Rules cont.

Dependent Variable: Political Efficacy				
	Model 1	Model 2	Model 3	Model 4
Electoral Law	Proportionality	Active Registration	Referendum Use (dummy)	Referendum Frequency
Intercept	0.597*** (0.061)	0.591*** (0.062)	0.547*** (0.062)	0.598*** (0.061)
Electoral Law	0.195* (0.092)	0.217 (0.113)	0.211* (0.083)	0.032 (0.071)
Age	0.136*** (0.014)	0.152*** (0.016)	0.116*** (0.016)	0.138*** (0.014)
Education (uni)	0.344*** (0.018)	0.370*** (0.020)	0.354*** (0.020)	0.340*** (0.018)
Income	0.228*** (0.014)	0.250*** (0.016)	0.228*** (0.017)	0.229*** (0.014)
Electoral Rule*Age	−0.123*** (0.027)	−0.130*** (0.038)	0.088** (0.032)	0.048 (0.026)
Electoral Rule*Education (uni)	0.060 (0.032)	−0.190*** (0.053)	−0.057 (0.041)	0.022 (0.043)
Electoral Rule*Income	−0.093*** (0.028)	−0.140*** (0.039)	0.003 (0.032)	−0.0001 (0.027)
Groups	90	90	90	90
Observations	106,724	106,724	106,724	106,724
ICC	0.03	0.03	0.03	0.03
Log Likelihood	−64,799.620	−64,791.610	−64,807.000	−64,813.290
Akaike Inf. Crit.	129,633.200	129,623.200	129,648.000	129,660.600
Bayesian Inf. Crit.	129,796.100	129,814.800	129,810.800	129,823.400
Note:				*p<0.05; **p<0.01; ***p<0.001

Interaction Effects

Table 4.3 lists the interaction effects for all of the models regarding compulsory voting and political efficacy. Model 1 compares systems with any form of compulsory voting against those with voluntary elections. The negative and statistically significant interaction effects for age and education indicates that compulsory voting is linked with a reduction in the unequal impact of these factors on political efficacy. The influence of income on efficacy, meanwhile, does not appear to be significantly affected by the use of compulsory voting. Based on the model's estimates, the difference in predicted probability of belonging to the high efficacy group in terms of age, is reduced by 2.9 per cent in compulsory compared to voluntary systems, while the education gap is reduced by 4.1 per cent. This lends partial support to the claims of H1b, as although we cannot reject the null hypothesis for income, the use of any form of compulsory voting compared to voluntary systems, is associated with a small, but significant reduction in the age and education based inequalities across political efficacy.

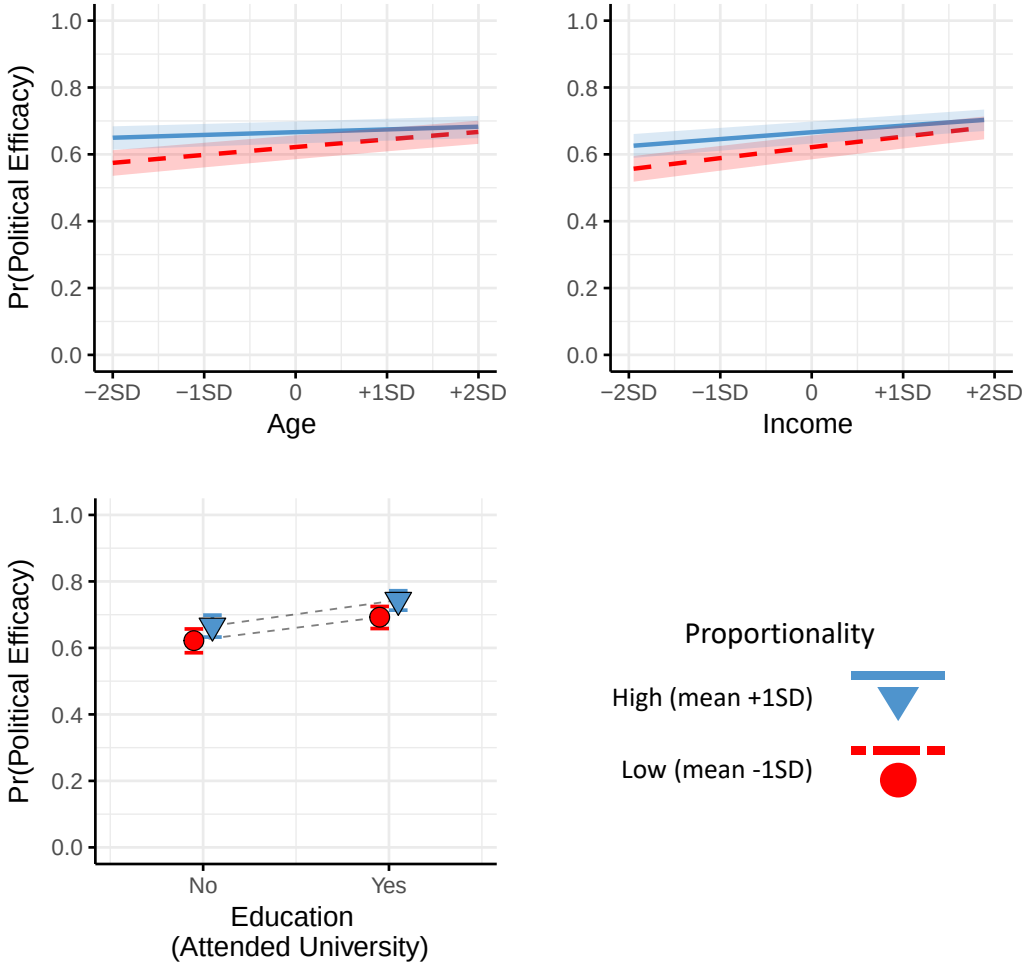
Models 2 and 3 display the interaction terms for both weakly and strictly enforced compulsory voting groups, in comparison to the voluntary voting reference category. Here we can see that while both groups are linked with a significant reduction in the impact of age and education on efficacy, these effects are actually stronger under weakly, rather than strictly enforced systems. Moreover, when it comes to the unequal effect of

household income on efficacy rates, this effect is reduced in weakly enforced systems, but is slightly exacerbated when these laws are strictly enforced. It would appear that the weakly enforced category is therefore responsible for the much of the effect outlined by the dummy compulsory voting measure.

In order to address H2b, and test whether the degree to which these laws are enforced impacts their relationship with socio-demographic inequalities, Model 4 includes the interaction terms for strictly enforced compulsory voting, with weak enforcement set as the reference category. As with the previous dependent variable, there were no significant differences between weakly and strictly enforced compulsory voting in terms of how they moderate the impact of age and education, while it was weakly, rather than strictly enforced systems that were linked with the biggest reduction in income inequality. As such, we cannot reject the null hypothesis in for H2b in terms of age and education, while the effect of income runs in the opposite direction expected by the hypothesis. Again, it would appear that stricter enforcement of these laws does not necessarily translate into additional reductions in socio-demographic inequalities.

The impact of electoral system proportionality on efficacy was tested via Model 1 in Table 4.4. H3b expects that more proportional electoral outcomes should be associated with a widening of socio-demographic inequalities in efficacy rates. The negative and

Figure 4.3: External Efficacy and Proportionality Interaction Effects



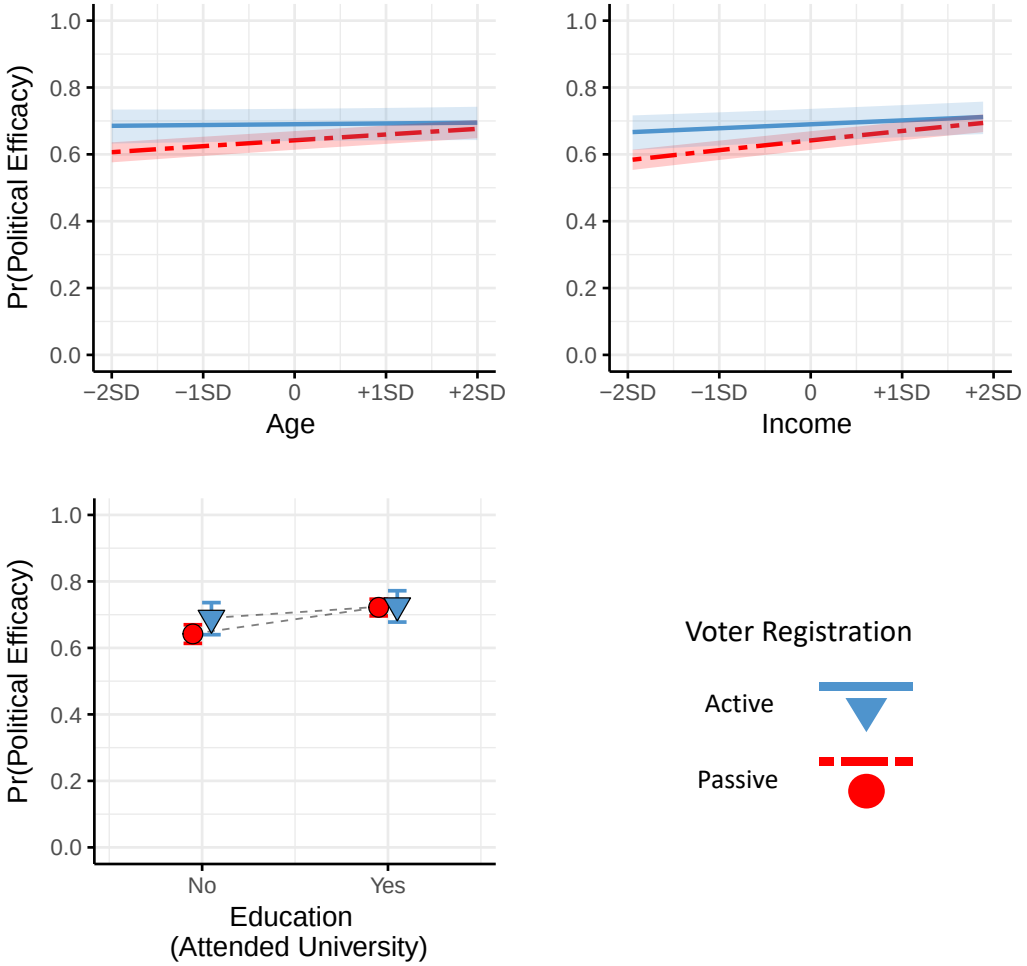
statistically significant interaction terms at the $p<0.001$ level for age and income here, indicates that more proportional systems are linked with a reduction in the influence these variables exert on efficacy. The effect of education, however, does not appear to be significantly related to electoral system proportionality. The predicted probabilities based on this model are displayed in Figure 4.3, which illustrate this reduction in age and income inequalities via the flattening of the high proportionality regression line, compared to less proportional systems. This means that we cannot reject the null hypothesis for H3a in terms of education, while the effects of age and income run counter to the expectations of H3b. Rather than exacerbating socio-demographic inequalities across efficacy rates, proportionality instead appears to reduce the unequal

effects of both age and education on this political attitude.

The next hypothesis, regarding voter registration (H4b), can be evaluated using Model 2 in Table 4.4. All three interaction terms were negative and statistically significant at the $p<0.001$ level. This means that all else being held constant, active registration is linked with a reduction in the unequal effect of age, education, and income, on political efficacy, in comparison to passive registration systems. As can be seen in the three plots included in Figure 4.4, the gap in predicted probability of belonging to the high efficacy category is reduced by 3.1 per cent for age, 3.7 per cent for education, and 3.4 per cent in terms of income. These results allow us to reject the null hypothesis for H4b, however, the direction of all three effects run counter to our initial expectations. It seems that it is active, rather than passive systems that minimise socio-demographic inequalities in terms of efficacy.

The final two hypotheses regarding the use of at least one referendum vote (H5b), and the frequency of these contests (H6b), can be assessed via Models 3 and 4 in Table 4.4. As with the previous dependent variable, it is expected that holding at least one referendum may reduce socio-demographic inequalities, however, as the frequency of these contests increase, this effect may be reversed. Looking at the interaction effects in both models, we can see that the only significant coefficient was for age and the dummy measure of referendum usage. This positive and statistically significant effect at the $p<0.01$ level, indicates that referendum usage is linked with an increase in the impact of age on efficacy, in comparison to cases where no referendums were held whatsoever. The size of this effect is notably small, however, with a 1.7 per cent widening of the age gap in terms of the predicted probability of belonging to the high efficacy group. Regarding the relevant hypotheses, this interaction effect with age runs in the opposite direction expected by H5b, while we cannot reject the null hypotheses in terms of income and education. With regard to referendum frequency, we cannot reject the null hypothesis for H6b across any of the socio-demographic variables. It seems the only significant link between referendum use and efficacy, is that compared having no referendums, these votes are associated with an overall increase in efficacy rates, but a very slight widening of age inequalities.

Figure 4.4: External Efficacy and Voter Registration Interaction Effects



4.4 Discussion

The results outlined above indicate that several significant relationships may be present between electoral rules and both satisfaction with democracy and political efficacy. Before discussing the electoral rules themselves, however, it is necessary to examine how both types of support are influenced by socio-demographic variables at the individual level. These findings point to the existence of a clear divide in levels of engagement, that presents itself across socio-economic, and to a lesser extent, age based inequalities. Education and income were positively associated with both political attitudes. The relative importance of each variable, however, varied significantly between the two

dependent variables. It would appear that education plays a bigger role in citizens' perceptions of the responsiveness of the system, while wealth plays a larger role in feeling satisfied with how the current system operates. These patterns further validate the decision to examine multiple aspects of political support simultaneously, as the impact of these individual characteristics seem to vary across different aspects of citizens' relationship with the state. In terms of how this relates to the wider political engagement literature, these findings lend support to many of the claims of the resource theory, that political support is biased along socio-economic lines. Interestingly, however, the clear age gap that is present across electoral turnout, does not necessarily translate into a similar divide in terms of political attitudes. While older citizens were more likely to feel that voting makes a big difference, this effect was relatively small, and age appeared to have no impact on satisfaction rates. As well as studying multiple political attitudes, these findings also highlight the need to examine both the attitudinal and behavioural components of engagement, as the source of political inequalities do not appear to be entirely consistent across different forms of support.

In order to address the project's central research questions, I will refer to each electoral law in turn. First, turning our attention to compulsory voting, none of the mandatory voting variables displayed any significant relationship with the overall rates of satisfaction with democracy or political efficacy. This implies that the immense impact that these laws exert on turnout rates, does not necessarily carry over to attitudinal forms of political engagement. In terms of how these rules relate to socio-demographic inequalities, any form of compulsory voting was associated with a significant reduction in the effect of education on satisfaction with democracy and efficacy, in comparison to voluntary voting. Regarding income, weakly enforced compulsory voting was linked with a reduction of the impact of this variable on both satisfaction and efficacy. Strict enforcement, however, displayed no significant relationship with income and satisfaction, and actually exacerbated the unequal effect of this variable on efficacy rates. The results for age, also varied somewhat, but this time across the two dependent variables. Both weakly and strictly enforced compulsory voting were linked with a significant increase in age inequality regarding satisfaction with democracy, but a reduction in the

unequal impact of age on political efficacy. Compulsory voting more generally then, may offer some potential in addressing the educational inequalities across both attitudinal aspects of support, as well as reducing the effect of income on efficacy rates. It terms of how these laws are enforced, however, contrary to the expectations from much of the literature, stricter enforcement does not necessarily equate to additional reductions in inequalities, and if anything, weakly enforced mandatory voting minimised the impact of socio-demographic variables most. This offers a useful insight for policymakers, as it would appear that the mere presence of compulsory voting laws, even if not backed up by strict enforcement or sanctions, may be able to somewhat mitigate the education and income based inequalities inherent in attitudinal aspects of support. This has to be balanced against the finding, however, that these laws do not seem to be linked with increases in overall rates of attitudinal engagement, as they are with electoral turnout, and may also widen age inequalities across certain political attitudes. Overall, while compulsory voting is linked with some clear benefits to democratic support, these effects are far more muted in comparison to its undeniable impact on electoral turnout, and may also come with some potential downsides.

The next structural feature being examined was electoral system proportionality. The proportionality of electoral outcomes displayed a clear positive link with both of the political attitudes included in the analysis. This lends direct support to many of the claims from the existing literature, regarding the ability of proportional electoral formulas to foster more positive attitudes towards the political system (Aarts and Thomassen, 2008; Karp and Banducci, 2008). In terms of how this feature interacts with the socio-demographic predictors of engagement, the results are somewhat more mixed. Although the original hypothesis expected that any overall increase in attitudinal support may come at the cost of increased inequalities, more proportional systems were actually associated with a significant reduction in the age gap present across both satisfaction with democracy, and political efficacy. When it came to education, proportionality slightly widened the positive effect of this variable on satisfaction with democracy, but displayed no significant relationship with political efficacy. Finally, regarding income, proportionality displayed no significant interaction effect with

income and satisfaction, while the income gap in political efficacy was slightly reduced under more proportional systems. Taken as a whole, these results indicate that election outcomes which more closely mirror the public vote share, are linked with more overall positive political outlooks, reduced age inequalities, and may partially address income inequalities across political efficacy. One potential downside of more proportional systems, however, is that they are linked with a marginal widening of educational inequalities in terms of citizens' satisfaction with the political process. On balance, it could be argued that as long as additional resources are put towards educating citizens whenever these laws are introduced, adopting more proportional electoral systems may be an attractive option for improving, and equalising citizens relationship with their political system.

The next electoral rule being examined was voter registration. Based on these results, the use of either active or passive registration systems does not display any significant relationship with overall rates of satisfaction with democracy, or political efficacy. In terms of how they relate to socio-demographic inequalities, the prevailing arguments from the literature suggest that active systems exacerbate the unequal effect of these variables, in comparison to passive registration. The results from the model on satisfaction with democracy lend some support to this approach, as active registration was linked with a small but significant increase in the impact of age and education on political support. Somewhat surprisingly, however, when it came to income, active registration was actually linked with a reduction of the impact of this variable on satisfaction. This unexpected trend continued for the efficacy models, as active registration was associated with a reduction in the effect of age, education, and income, on political efficacy, compared to passive registration systems. In light of these findings, this evidence lends only minimal support to my initial hypothesis. It would appear that the potential benefits that passive registration brings to electoral turnout by removing some of the barriers to entry, does not necessarily translate into increased and more equal attitudinal support. These results suggest that the use of automatic registration as a blanket approach to enhance political engagement, may ultimately fall short of current expectations. Rather, further research into the grey area between

these two extremes, that can evaluate how these rules are put into practice, and the level of support offered by the state in active systems, may provide potential solutions to current inequalities in support.

The final aspect of political systems evaluated in the current project was the use of national level direct democracy. In terms of the relationship between referendums and overall rates of satisfaction with democracy, neither holding at least one referendum in the previous election cycle, nor the frequency of these contests, seemed to have any significant impact on attitudes. For political efficacy, however, citizens likelihood of belonging to the high efficacy group was increased in elections that had experienced at least one referendum, compared to those where direct democracy was not used at all. This finding is in line with the claims from the literature regarding the educative role that referendums play in socialising citizens into the political process (Bowler et al., 2002; Pateman, 1970). One potential explanation may be that the additional experience of voting on key issues of contention, enhances individuals' view of the power of their vote. In terms of how referendum use relates to inequalities of support, the use of at least one referendum was linked with a slight increase in the impact of age on efficacy, and the impact of education on satisfaction with democracy. These effects were extremely small in size, however, and none of the other interactions reached any degree of statistical significance. This indicates that any positive relationship with overall efficacy rates, was not accompanied by more equal distributions of political support. With regard to how frequently these contests are held, the lack of any significant relationship with political attitudes implies that holding referendums more often does not bring about any increased benefits in terms of engagement, but neither does it lead to widespread voter fatigue or more negative political outcomes. Viewed in its entirety, the link between referendum usage and political attitudes appears to be notably weak, with a slight positive relationship with higher overall efficacy rates, but a widening of the age and education gaps across political attitudes. As such, the use of direct democracy does not appear to be a leading candidate for addressing low and unequal rates of political support.

When evaluating the findings discussed above, it is essential that the limitations

of the current project are also taken into consideration. One initial drawback of the approach taken by this study, is the inevitable loss of detail that comes with the use of large-N cross national survey data. In order to ensure comparability between nations, only questions that are asked across all studies can be included, meaning that many of the more nuanced or multi-faceted questions from specific national elections are lost once the surveys are complied into the final CSES dataset. One relevant example of this, would be questions relating to political trust. The degree to which citizens trust specific political actors and institutions has a direct bearing on how they relate to politics at a wider level, and is even named by Easton as one of the key ways in which individuals express specific and diffuse support. As such, satisfaction with democracy, and external efficacy, while extremely useful indicators, can only ever paint a partial picture of citizens' attitudinal orientation towards political affairs. Future research that looks at an even broader range of political attitudes can test whether the relationships outlined above, are also present across other key aspects of political support.

It is worth noting that this limitation, however, also runs in tandem with some clear benefits in other areas of the research design. The loss of some of the more detailed survey indicators is simply part and parcel of aggregating such a large number of national election surveys. What we gain, on the other hand, is a massively increased sample size, which significantly boosts the external validity of the study compared to those which examine single elections. Indeed, one of the major contributions of this approach, it its ability to test previous findings at the national or local level, against updated, cross-national comparative data.

In terms of the statistical models used in the analysis, the decision to use binary logistic regression also comes with some potential drawbacks. Aggregating the dependent variables into more simplistic dummy indicators means that we lose some of the extra information captured by the survey questions. The use of additional data sources, or alternative model specifications may allow future analyses to test how these patterns of inequality vary across different ranges of each political attitude. Despite this limitation, however, the models used in the current analysis still allow for a direct test of the central hypotheses, and can be used to effectively answer my key research questions

regarding political inequalities.

Perhaps the biggest limitation of my chosen approach is the inability to tackle the issue of causality. While these results can point to the existence of clear relationships between each set of variables, this does not allow us to rule out the possibility of reverse causality. Rather than certain electoral rules resulting in changes to how citizens' perceive their political systems, it could be the case that more satisfied societies are in turn more likely to adopt certain institutional arrangements. Future research that makes use of panel data, and can test the effects of these electoral rules over time, is clearly needed in order to directly address this issue of causality. While this study can only rely on the existing theoretical literature in order to justify the underlying causal mechanism behind these patterns, simply identifying that relationships between these key variables exist, nevertheless allows me to address my central research questions. Moreover, this approach also grants me the ability to explore the interactions between electoral rules and socio-demographic characteristics, that would be extremely difficult to disentangle if I instead examined recent real world instances of electoral reform.

4.5 Conclusion

The primary goal of this research project was to explore whether certain electoral rules: Compulsory voting, electoral system proportionality, voter registration laws, and direct democracy, display any significant link with attitudinal forms of political support. Answering this question, and exploring how these effects are distributed across different sections of the population, can act as a useful first step towards identifying electoral reforms that may be able to foster more positive and equal support towards the political system.

Two attitudes in particular were examined in order to reflect citizens' perceptions of political affairs, namely satisfaction with democracy, and political efficacy. In terms how the institutional features mentioned above relate to overall levels of support, electoral system proportionality was the only variable that displayed any significant positive effect across across both aspects of engagement. The relationship was far stronger for satisfaction with democracy, in comparison to efficacy. None of the other electoral rules

displayed any significant link with overall satisfaction rates, while the use of national referendums was associated with increased feelings of political efficacy. With regard to the issue of low levels of public support seen across many contemporary democracies, these findings indicate that the use of more proportional electoral systems, and to a lesser extent, the use of national referendums may be promising avenues that can be explored by policymakers.

The second question this paper addressed, was whether these rules are associated with any changes in the way that support is distributed among different sections of society. One of the clearest findings from this analysis is that political support is unequally weighted in favour of those with greater socio-economic resources. Wealthier and more educated citizens were both significantly more likely to be satisfied with the way democracy works in their country, as well as feel that voting makes a big difference to what happens. The final individual level characteristic being examined was age. While age is one of the strongest predictors of electoral turnout, this factor did not appear to have any impact of levels of satisfaction with democracy, although older citizens were notably more likely to feel that their vote makes a difference.

In terms of how electoral rules relate to these existing inequalities, compulsory voting, but more specifically, weakly enforced compulsory voting was linked with significant reductions across both educational and income inequality. This challenges the notion that these laws must be strictly enforced in order to being about significant political benefits to society. Proportionality, meanwhile, was associated with a significant reduction in the age gap present across political attitudes, but slightly widened educational differences in satisfaction levels. The somewhat complementary nature of these findings, suggest that adopting a combination of compulsory voting laws, alongside more proportional electoral formulas, may offer a potential route to reducing socio-demographic inequalities across the attitudinal aspects of support. With regard to the final two variables, direct democracy appeared to have very little, if any effect on the equality of political engagement. Voter registration produced some mixed, but rather surprising results, which suggest that automatic registration is not necessarily always linked with reduced socio-demographic inequalities.

While further research is evidently required in order to improve our current understanding of the causes and consequences of political attitudes, this project nonetheless lends supporting evidence to the claims that political institutions may offer potential solutions to the issues of both low and unequal levels of political support across many contemporary democracies.

Chapter 5

Electoral Rules and Non-electoral Participation

While certain aspects of political engagement, such as electoral turnout or trust in political institutions, have witnessed a steady decline across many advanced industrialised democracies in recent years, the popularity of non-electoral activities has went largely in the opposite direction (Dalton et al., 2010). This trend is often attributed to a shift in public opinion toward more open and direct means of political expression (Franklin et al., 1996; Inglehart, 1997, 1999; Lijphart, 1997; Norris, 1999). An increase in non-electoral participation, however, has the potential to produce some less than desirable outcomes, as these forms of participation tend to be more unequal in terms of the socio-economic background of those who take part (Brady et al., 1995*a*).

Structural changes to the ways in which our political systems operate, such as the introduction of compulsory voting, or new electoral formulas, are almost exclusively sold on the premise of enhancing rates of electoral turnout, or fostering positive public attitudes toward political affairs. Due the supposed patterns of inequality outlined above, it is also clear that these policies should be evaluated with regard to their impact on citizens relationship with non-electoral participation.

While the causes and consequences of non-electoral participation enjoys an extensive background within the empirical and theoretical academic literature, the impact of electoral rules on this form of engagement, and in particular, their effects on inequality

of participation has received far less attention. Whether intentional or not, however, changes to the underlying structure of political systems undoubtedly have the potential to alter patterns of political behaviour beyond the ballot box.

In light of these issues, this project will examine two key research questions: To what extent do electoral rules display any significant relationship with overall rates of non-electoral participation? And, do these laws influence the socio-demographic inequalities inherent in these political activities?

In order to address these issues, this paper will employ a quantitative research design, making use of multi-level regression modelling and data from Wave 2 of the Comparative Study of Electoral Systems (CSES). With regard to the specific variables being assessed, this project will explore the relationship between four key electoral rules: Compulsory voting, electoral system proportionality, voter registration, and direct democracy; and and three forms of non-electoral behaviour: Attending protests and demonstrations, contacting politicians, and working with others to influence government. Examining the direct relationship between these key variables, as well as how they interact with socio-demographic inequalities across age, income, and education, will therefore allow me to assess whether these rules are associated with any significant spill-over effects on non-electoral participation.

Including a variety of political activities, as well as multiple electoral rules will allow me to test the claims of previous research in this area that is primarily based on within-country case studies, against up to date, cross-national survey data. Moreover, expanding the focus of this research into how these rules relate to this supposedly more unequal form of political behaviour will allow me to directly address my key research questions with regard to this increasingly popular avenue of political engagement.

5.1 Theory

In order to explore these patterns further, and assess whether electoral institutions play any meaningful role in shaping the relationship between demographic characteristics and participation beyond voting, the existing theoretical explanations of political participation and its relationship with socio-economic inequalities must be examined in

greater detail. The following section will therefore examine two of the most prominent theoretical approaches in this area, namely the grievance and resource models, before accounting for the ways in which different political activities are classified within the academic literature, and outlining the specific aspects of non-electoral participation included in this analysis. Following on from this, I will then provide a brief overview of the political opportunity structure theory, and explore the state of the current literature regarding the relationship between electoral rules and alternative forms of political participation.Setting out the relevant underlying theoretical frameworks, and evaluating the current body of empirical evidence on this subject, allows for the construction of clear and testable hypotheses, that can directly address the central research questions at hand.

The Grievance Model of Non-electoral Participation

Grievance based theories of political participation centre around the idea that involvement in political activities are motivated by feelings of dissatisfaction and anger toward the current political system (Gurr, 1968, 1970). The psychological basis of this approach maintains that when individuals identify a disconnect between their wants and desires compared to what they actually have, this leads to anger and resentment toward the status quo, which in turn spurs contentious political action. It is also worth noting that this concept is largely subjective, being based upon an individual's perception of a disparity between their value expectations and capabilities, rather than any single objective measure of deprivation (Gurr, 1970: 24). As such, grievances can be operationalised in a vast number of ways, from circumstances where citizens live in abject poverty, to cases where relatively slight material inequalities exist, but are nonetheless perceived to be of immense importance to certain sections of society.

With regard to my present research questions, if the claims of the grievance approach are correct, this would imply that any increases in non-electoral participation may help mobilise the most disadvantaged and alienated sections of society to become more involved in political affairs at a general level, thus helping to combat the issue of inequality of participation currently plaguing many democratic societies. It is also

worth noting, however, that the explanatory ability of this approach may be largely dependent on the type of behaviour under study. Grievance based theories are most often used when attempting to account for the most extreme, and usually violent forms of political behaviour, such as revolutions, riots, and acts of terrorism (Gurr, 1968). Boycotts, demonstrations and strikes, however, are also included in much of the academic literature in this area (Dalton et al., 2010). The empirical evidence supports this distinction, as while some authors have found that relative deprivation, at both the state and the individual level, may help somewhat explain outbreaks of political violence (Gurr, 1970; Ponticelli and Voth, 2011), the explanatory ability of the grievance approach often falls short of the mark when examining unconventional political action that does not surpass the threshold of political violence (Dalton et al., 2010; McCarthy and Zald, 2009). As such, the effectiveness of this theory in accounting for more conventional forms of political behaviour may be somewhat limited. Other competing theoretical models have been adopted in an attempt to account for the null findings produced by much of the grievance literature, with one of the most compelling being the resource mobilisation theory.

The Resource Model of Non-electoral Participation

The resource model of participation emphasises the role of resources such as income, time, and civic skills, in enabling citizens to effectively participate in political affairs (Brady et al., 1995*a*,*b*; Lijphart, 1997). The fact that these resources are not equally distributed among the population, however, inevitably means that political behaviour is biased along socio-economic lines. Of all the forms of political participation, voting is held to be the most equalising, as the relative costs of participating in elections are nominal in terms of the money or skills required to take part, time constraints are minimal, and individuals each have an equal opportunity to participate (Brady et al., 1995*b*; Lijphart, 1997; Parry et al., 1992). Non-electoral activities, on the other hand, are inherently biased toward citizens who possess these types of resources: greater income allows individuals to fund political campaigns and lend financial support to their preferred causes, education and civic skills enhance a person's ability to persuade others

and convey their political views to their elected representatives, whilst involvement in social organisations and the workplace can be used to promote certain political viewpoints and influence others (Brady et al., 1995*b*; Lijphart, 1997; Parry et al., 1992).

The central claim of the resource theory is that individuals whom are already invested in the current political system, and actively take part in its formal political processes, are also more likely to participate in unconventional forms of political action, while those with less resources may remain largely cut off from any form of political expression whatsoever. In relation to the research questions of the present study, each approach has direct implications with regards to inequality of political participation. According to the grievance model, any overall increase in levels of non-electoral participation may be due to citizens who feel dissatisfied with the current system expressing their political voice. These groups tend to be the most underrepresented in more traditional forms of political affairs, implying that this is one area that could have an equalising effect on political influence. If the resource model is accurate, however, any increase in overall rates of political activity beyond voting may only serve as to enhance the influence of those who are already engaged in the political process.

Classifying Non-electoral Participation

In order to test the explanatory ability of each of these theories, it is clear that a range of non-electoral activities must be analysed. It is important, therefore, to understand how these various forms of political action are classified within the current academic literature.

One of the most useful models for classifying different types of political behaviour is the threshold framework (Dalton, 2006; Dalton et al., 2010). Here political participation is conceptualised as being part of a continuum, with the most institutionalised forms of behaviour, i.e. voting, placed at one end of the spectrum, and more extreme or unorthodox acts of political expression such as political violence at the other. An activity's position on this scale can have a significant impact on its relationship with citizens' attitudes towards political affairs, as well as the inequality of participation.

As well as this conventional/unconventional distinction, another useful typology is

the social dimension of each form of participation. Activities such as participating in protest movements, or campaigning for political parties are inherently social endeavours. Interacting with both like minded individuals and the wider public, means that individuals' are far more likely to be exposed to a range of viewpoints and issues that have the potential to significantly shape their political outlook, in comparison to citizens whose only entry into political affairs is voting, if anything at all. The communal nature of these activities may require social skills that are developed through education or involvement in non-political organisations, and thus may under represent more socially isolated individuals (Brady et al., 1995*a*,*b*; Putnam, 2000). At the other end of the spectrum, activities such as boycotting goods for ethical reasons, or donating to political causes are far more individualised in nature, and do not require the social involvement inherent in other forms of political behaviour. As such, the social nature of specific forms of political action may have further consequences regarding the types of resources required to effectively take part, that are not necessarily captured by the threshold model alone.

Exploring a range of behaviours across each set of defining criteria is therefore essential in order to ensure that the influence of political institutions on the full spectrum of public interaction with the political system is explored. The availability of suitable cross-national data on these activities, however, requires a specific focus on a few key areas. The three primary aspects of non-electoral behaviour that will be included in this study are involvement in protests and demonstrations, contacting politicians or other elected officials, and working with others to influence government.

Protest, Contacting Officials, and Working with Others

The first dependent variable included in the current analysis is participation in protests and demonstrations. In recent decades protest has become one of the most popular and influential avenues of political expression available to citizens, as individuals are increasingly likely to resort to non-electoral forms of political expression (Inglehart, 1997, 1999; Norris, 1999). Recent examples of this trend range from the youth Climate Strikes inspired by Greta Thunberg, to the Black Lives Matter protests against racial

discrimination and police brutality held during 2019-2020.

Historically, protest was considered to be an activity that fell outwith the accepted bounds of political behaviour, with protesters viewed as irrational actors attempting to subvert the democratic process (Meyer, 2004; Norris, 2007; van Aelst and Walgrave, 2001). This perception of protest politics as an underground, disruptive activity aimed at societal upheaval has gradually been replaced by more accepting attitudes, which view protests and demonstrations as beneficial to the health of a democracy (Meyer, 2004: 127). As a result of this shift, protest has transitioned from a tactic favoured largely by those who consider themselves to be outsiders, and maligned by the current political system, to a form of participation that has been accepted as a legitimate means of political expression by both mass publics and officeholders alike (van Aelst and Walgrave, 2001). It is argued that this normalisation of protest now places this form of collective action firmly within the realm of conventional politics, shifting it away from its traditional revolutionary aims, toward movements more interested in reform from within the bounds of the current political system (Dalton, 2006). Nevertheless, protest is still at its core a form of contentious action, and although it has undoubtedly permeated the mainstream political landscape, the continued use of this tactic by radical populist groups, and the violent suppression of peaceful protests by security forces underscore the fact that this activity has consequences and causes that differ markedly from more conventional acts, such as voting.

In terms of the empirical research on this area, van Aelst and Walgrave's (2001) study of social movements in Belgium largely supports the notion that protest is becoming more normalised, with the demographics of those involved now being more likely to mirror that of the general population, as opposed to an active minority of disaffected citizens. They also discovered, however, that a certain degree of inequality nonetheless remains between those who take part in this form of behaviour and those who do not, with the well-educated and those involved in social organisations consistently overrepresented at these events. Several other studies have supported this finding, noting that citizens with greater resources at their disposal tend to be more likely to participate in protests and demonstrations compared to more disadvantaged

citizens (Dalton, 2006; Dalton et al., 2010). Beyond these socio-economic factors, one of the most consistent findings from the turnout literature is that older citizens are far more likely to vote, compared to their younger counterparts (Baston and Ritchie, 2004; Lijphart, 1997; Smets and van Ham, 2013). When it comes to protesting, however, the the impact of age seems to go in the opposite direction, as it tends to be younger individuals who are more likely to engage in protest behaviour (Fatke and Freitag, 2013; Solt, 2015). While this implies that protest could act as a means of including younger citizens that do not engage in more formal aspects of political life, other studies suggest that the effect of age may actually be more muted that previously thought. Both van der Meer et al. (2009), and Córdova and Rangel (2017) for example, found that age actually exerted a marginal positive effect on protest participation, which again points to the normalisation of the protester. When viewed as a whole, the empirical research in this area seems to support the notion that rather than protest serving as means to mobilise the most alienated groups in our society, this type of collective action simply acts as another method that the resource rich use to exert their political influence. These findings therefore illustrate the potential problem that any increase in this type of behaviour may have, as although protests and demonstrations provide citizens with alternative avenues to express their political views, this may not sufficiently engage those who are already somewhat alienated from the political process.

The second form of political action included in the analysis is contacting politicians or other elected officials. This activity is situated far closer to the institutionalised, or conventional end of the threshold model, in comparison to protest behaviour. Rather than taking to the streets to express their views, citizens following this mode of action make use of the existing representative framework within the current system. As such, this form of behaviour may require a baseline level of trust, or belief in the ability of the current political system to address their needs. While these are characteristics that are also shared with electoral participation, the key difference is that the equalising effects of voting are not present here, namely the dictum of one person one vote (Brady et al., 1995*a*,*b*). Crucially, the prerequisites for participation are also greater here than they are for voting: Citizens must hold clear issue preferences, be able identify the

appropriate actor responsible for this area, and have both the time and communication skills necessary to correspond with their representative (Brady et al., 1995*a*,*b*). In terms of the aforementioned theoretical approaches, when citizens resort to contacting an elected official, there is almost always an issue they are seeking to address, or in other words, a grievance. Nevertheless, due to the proximity of this activity to the formal political process, I would expect that the resource approach is better suited in explaining participation in this area. Grievances may be a necessary, but not sufficient condition for participation, as even if citizens have a clear issue preference, they still require the necessary resources in order to effectively participate (Tarrow, 1998). As such, this form of behaviour would be expected to exacerbate the influence of those already largely engaged in the formal political process, i.e. more educated, and older citizens. Previous research in this area tends to support this assumption, as both age and education have been found to exert a significant positive effect on the likelihood of contacting representatives (Carreras, 2016; Córdova and Rangel, 2017; van der Meer et al., 2009), while income has been found to exhibit a similar, if somewhat weaker link with participation rates (Córdova and Rangel, 2017; van der Meer et al., 2009). This more institutionalised form of behaviour therefore seems to reinforce the inequalities present in electoral politics, while also lacking the potential to engage younger citizens offered by protest action.

The final dependent variable being examined in this project is working with others to influence government. This is a far broader category of political action compared to the other two behaviours, and is perhaps the most explicitly social activity of the three. This may serve as a useful intermediary category, as while this does not fall within the scope of the traditional party political framework to the same extent as contacting politicians, it is nevertheless a less contentious form of action in comparison to protests and demonstrations. Previous studies that have included this form of behaviour have found a somewhat similar trend to the other forms of non-electoral participation noted above, in that wealthier, more educated, and older citizens are more likely to take part (van der Meer et al., 2009).

The inclusion of these three types of political action makes it possible to explore

how socio-demographic inequalities manifest themselves across different forms of political expression, and in turn, whether this can be mitigated by different institutional contexts. This project will focus on inequalities across three key variables at the individual level, namely education, income, and age. These characteristics can be used to assess the claims of the resource theory regarding the unequal influence of financial and educational resources on non-electoral participation, as well as compare the impact of arguably the most important predictor of electoral turnout, age, on other aspects of engagement. This in turn raises the question of whether the implementation of policies that aim to increase overall levels of electoral turnout or political attitudes, via top-down changes to how our political systems operate, also have consequences in terms of who chooses to pursue alternative forms of political action. This link between electoral institutions and political engagement, will now be explored in greater detail.

Political Opportunity Structure

The political opportunity structure is one of the most influential theories regarding how the underlying features of a political system can shape political behaviour. This framework, that developed primarily from the social movement literature, argues that while individual actions and specific events play an important role in determining the fate of political movements, it is the underlying structure of the political system itself, that ultimately shapes their strategies and likelihood of success (Meyer, 2004). Central to this model, is the idea that the actions and decisions of political actors are moderated by the social and political context they find themselves in (Meyer, 2004). According to this approach, the most important structural factor that influences political actors, is the 'openness' of a political system. Openness generally refers to the degree to which citizens posses 'routine and meaningful avenues for access' (Meyer, 2004: 128) to political decision making, while a lack of openness entails the repression of certain communities' ability to influence the political process.

In terms of how this constrains citizens' preferred method of political expression, if a system is extremely open and responsive to citizens' needs, then individuals should no longer need to resort to more unconventional forms of political participation to fulfil

their political goals (Fatke and Freitag, 2013; Meyer, 2004). At the other extreme, repressive regimes that do not allow any legitimate or meaningful ways to influence political decision making, may drive citizens to more extreme measures, such as protests, riots or revolutions in order to ensure their voices are heard (Dalton et al., 2010). As such, a system's degree of political openness encourages different forms of political behaviour, with more open systems making institutionalised, formal political activities more appealing, while more repressive circumstances force citizens into more unconventional forms of action.

In relation to the project at hand, the political opportunity structure underscores the importance of institutional features to political systems, and the influential role they play in shaping citizens' relationship with political affairs. Moreover, any effects of these structural features on rates of participation should be felt more acutely when these institutions alter the openness of the political system itself.

One major limitation of this approach, however, is that the rather broad definition of system openness means that there is no consensus how to operationalise this variable in an empirical context. A range of factors, from whether systems are considered to be consensual or majoritarian, whether they offer additional avenues of participation such as the use of referendums, the extent to which executive power is decentralised, and the level of legal protections given to dissenting voices, have all been used as indicators of political openness (Fatke and Freitag, 2013; Meyer, 2004; van der Meer et al., 2009). By including a broad range of electoral rules in the present analysis, this makes it possible to provide an overarching view of how political institutions shape political behaviour. Furthermore, rather than simply testing the impact of these rules on overall participation rates, this project also enables us to explore whether these rules have consequences for the inequality across different forms of political engagement. The specific electoral rules being examined, namely, compulsory voting, electoral system proportionality, voter registration, and referendum usage will now be discussed in greater detail below.

Electoral Rules

Compulsory Voting and Non-electoral Participation

The first electoral rule being examined is compulsory voting, which refers to the practice of legally requiring citizens to participate in elections. While several states make use of these laws, in practice, relatively few countries actually penalise citizens for failing to participate. Even in countries where these rules are strictly and consistently enforced, the penalties for non-compliance tend to be minor, such as a small monetary fine, as is the case in Belgium and Australia (Baston and Ritchie, 2004). In instances where penalties are more severe, such as potential imprisonment or the withholding of public services, these punishments tend to be rarely if ever enforced (Quintelier et al., 2011). Despite the relatively minor costs typically imposed by these rules, there is nonetheless a significant body of evidence that mandatory voting laws exert a huge influence on electoral participation (Cancela and Geys, 2016; Franklin, 2002; Franklin et al., 1996; Geys, 2006; Lijphart, 1997; Norris, 2000). It is less clear, however, whether this also produces a spillover effect and leads to an uptake in other forms of political involvement.

One of the primary arguments for the existence of such an effect, is that since compulsory voting brings citizens to the polls who would have otherwise not have participated, this acts as an opportunity to socialise these individuals into political affairs more generally. Additionally, if citizens know that ultimately they are going to have to participate, they may be more likely to seek out information on political issues and party platforms (Carreras, 2016). Furthermore, the act of voting itself, may instil a certain sense of attachment to the political process, as voting has been linked with increased feelings of political efficacy (Pateman, 1970). The general premise of these arguments is that more socially and economically disadvantaged groups, who are traditionally alienated from most forms of political participation, can be engaged into the political process via compulsory voting laws, and that their experiences of the electoral process may spur on further participation in alternative forms of political expression.

It is worth noting, however, that the opposite pattern may also be true, that the use of compulsory voting could suppress participation in more unconventional forms of

political behaviour. Being compelled to vote in elections may only serve as to further alienate, rather than engage citizens who are already somewhat disillusioned with the political establishment (Singh, 2016). Additionally, the higher rates of wasted votes seen in states with compulsory voting (Hill and Young, 2007), might indicate that being forced to vote does not necessarily lead to more interest or desire to participate in political affairs. If mandatory voting only serves as a means to artificially inflate voting rates, and does not address the underlying causes of public apathy and disengagement with politics, then we would not expect to find any additional uptake in non-electoral forms of participation.

In terms of the link between compulsory voting and overall rates of non-electoral participation, previous studies in this area have produced largely inconsistent results. Research by van der Meer et al. (2009), found that the effect of mandatory voting on participation varied considerably across different types of activities, and that results were not robust across different model specifications. Córdova and Rangel (2017), meanwhile, found that compulsory voting exerted a very small positive effect on some forms of participation, such as contacting officials, however, the vast majority of non-electoral activities displayed no significant relationship with mandatory voting. The study by Carreras (2016), made use of Americas barometer data, and thus included a sample with a large concentration of Latin American states with both strictly and weakly enforced compulsory voting. Their findings again indicated that there is no significant relationship between mandatory voting and non-electoral forms of political behaviour, such as contacting politicians. In light of these previous findings, there seems to be little evidence that compulsory voting impacts non-electoral participation, at least at the aggregate level. The key finding that the influence of this electoral rule varies significantly across different forms of behaviour, however, means that it is nevertheless worth examining how this factor impacts the specific activities included in the present study. As such, the null hypotheses will be tested against the following proposition:

H1a: Citizens are more likely to have participated in non-electoral activities in systems with compulsory voting, compared to voluntary voting.

Moreover, if compulsory voting does in fact produce a positive spill-over effect on non-electoral participation, I would expect that this would be strengthened in cases where these laws are more strictly enforced:

> **H2a:** Citizens are more likely to have participated in non-electoral activities in systems with strictly enforced compulsory voting, compared to weakly enforced compulsory voting.

In terms of inequality of participation, the same arguments outlined above could result in a change in the demographics of those who take part, without necessarily leading to an increase in overall rates of participation. If almost all citizens take part in elections, then those with more resources at their disposal, and whose voices were previously overrepresented by electoral politics, may choose to also take up additional forms of expression to maintain their level of political influence. Conversely, if compulsory voting laws are successful in politically mobilising groups who are traditionally alienated from the electoral process, namely the young, those with lower incomes, and those with less time in education (Hoffman et al., 2017; Lijphart, 1997; Quintelier et al., 2011), then if any spillover effects are at play, we would expect to see these groups being better represented across other forms of political engagement. As with the findings regarding overall rates of participation, the empirical research on how compulsory voting impacts inequality of non-electoral participation is somewhat mixed. Carreras (2016) found that while the positive relationship between education and political participation was exacerbated under compulsory voting, the size of this effect was tiny in substantive terms. Meanwhile, van der Meer et al. (2009) examined the impact of compulsory voting on the ideology of protesters, but found that the models did not produce consistent estimates due to the small sample of states included with compulsory voting laws. This project can add to this relatively underdeveloped research area, and directly explore whether this rule influences inequality of participation across a range of socio-demographic factors. In order to address this question, it is necessary to evaluate the null hypothesis in relation to the expectations from the literature, to see whether mandatory voting has the potential to produce more equal rates of participation, or in other words, that:

> **H1b:** The effects of socio-demographic factors on non-electoral participation will be reduced where voting is compulsory, compared to voluntary systems.

As with the main effects, if compulsory voting does exert an equalising effect on participation rates, then we would expect this to be even stronger in instances where these rules are more strictly enforced:

> **H2b:** The effects of socio-demographic factors on non-electoral participation will be reduced where compulsory voting is strictly enforced, compared weakly enforced compulsory voting.

Including multiple indicators of compulsory voting therefore makes it possible to test the theoretical expectations from the literature, across a wide range of political behaviours.

Electoral System Proportionality and Non-electoral Participation

The proportionality of electoral systems is the aspect that perhaps fits closest with the concept of political openness touted by the political opportunity model. The way in which votes are translated into legislative seats can immensely impact the degree to which election results mirror public attitudes, the types of governments they produce, and the ways in which politics is conducted by both the public and political elites.

In line with the primary argument of the political opportunity model, the use of more proportional electoral systems should supposedly lead to a greater degree of political openness within a society. Enhanced proportionality has been linked with greater feelings of political efficacy (Aarts and Thomassen, 2008; Karp and Banducci, 2008), and as such, may promote the perception that political decision makers are both responsive to, and reflective of the citizens they are supposed to represent. The culmination of this argument is that if citizens are more satisfied with the how their needs are addressed via the formal electoral process, they have less of an incentive to resort to alternative forms of political action (Meyer, 2004).

Conversely, however, proportional electoral formulas are inherently linked with more consensual forms of political decision making, which emphasise the inclusion of a

range of voices in the political process. The higher likelihood of groups that represent marginalised, or minority interests to be meaningfully included in political discourses in these types of systems, may therefore act as an incentive for increased non-electoral political action. Rather than the decision to vote or participate in more unconventional activities being a zero-sum game, citizens may opt to maximise their political voice through all avenues available to them (Dalton et al., 2010). As such, we would expected to see an increase in both electoral, as well as non-electoral participation.

In terms of the previous empirical work in this area, the results tend to support the former approach. Studies by both van der Meer et al. (2009) and Solt (2015) found that proportionality was negatively associated with overall rates of non-electoral participation. In light of these previous findings, we would would expect to find that:

H3a: Citizens are less likely to have participated in non-electoral activities when their country's electoral outcomes are more proportional.

The next question is how this electoral rule relates to inequality of non-electoral participation. Again, there are competing theoretical frameworks that attempt to explain this relationship. As noted above, the greater emphasis that more proportional systems place on the representative function of government, may lead to groups who are typically marginalised by majoritarian systems being included in the political process. If this does in fact lend a voice to those who are traditionally alienated from electoral politics, we would expect that this would similarly encourage engagement in others aspects of political affairs.

There are, however, some arguments that imply that proportionality may actually lead to a widening of the participation gap in non-electoral activities. One key point is that the added complexity of proportional voting systems, compared to formulas such as first-past-the-post, may lead to higher rates of spoiled ballots from citizens with less education, or experience with the electoral process (Baston and Ritchie, 2004). Furthermore, the emphasis that proportional electoral systems place on representation may come at the cost of accountability. Since proportional systems are more likely to produce multi-party governments, it may often be the case that legislative outcomes are decided behind closed doors during inter-party talks, resulting in policies that do

not resemble any of the platforms electors actually voted on (Ladner and Milner, 1999). This lack of accountability may alienate some voters from politics more generally, with only the most engaged still being willing to participate in future contests. Despite these competing assumptions, there is very little research on the specific issue of inequality of non-electoral participation and this feature of electoral systems. Nevertheless, this study allows us to test these competing claims using cross-national empirical data. As the main effect on participation is theorised to be a negative one, we would expect that this would lead to a widening of the participation gap:

> **H3b:** The effects of socio-demographic factors on non-electoral participation will be greater where electoral outcomes are more proportional.

Including this variable in the analysis alongside the socio-demographic predictors of non-electoral participation, in turn makes it possible to assess which of these theoretical explanations of electoral systems and political engagement are supported by the empirical evidence.

Voter Registration and Non-electoral Participation

The manner in which states register citizens for elections can have a significant impact on the barriers that citizens face when attempting to express their political voice. Reducing these barriers of entry to electoral politics may allow those who would otherwise be excluded from political affairs, to gain first hand experience with the political process. The academic literature on voter turnout, points to the ability of passive - otherwise known as automatic - voter registration to increase both overall rates of participation, and include more individuals from disadvantaged groups into electoral politics (Braconnier et al., 2017; Franklin, 2002; Geys, 2006; Lijphart, 1997). Passive registration refers to instances where governments are responsible for initiating the registration process, and citizens are automatically enrolled onto the electoral register when they reach the requisite age. This is in comparison to active systems, where registration is initiated by citizens themselves, and requires them to either submit specific forms, or attend in person to verify their eligibility to vote (Braconnier et al., 2017).

Current studies of the consequences of voter registration rules are almost exclusively limited to its impact on electoral turnout. A clear gap therefore exists in our knowledge of whether this institutional policy has any wider implications for other forms of political engagement. As with some of the other electoral rules being studied, if they lead to an increase in turnout rates, this may also spill over into greater involvement in other forms of political behaviour. The core of this argument is that participation can have an educative or mobilising effect, as the act of voting may lead to increased feelings of personal efficacy, or civic duty, which may in turn spur on involvement in other forms of political participation (Pateman, 1970). In light of this approach, it is expected that automatic, or passive registration systems should be associated with higher rates of non-electoral participation:

> **H4a:** Citizens are more likely to have participated in non-electoral activities where voter registration is passive, rather than active.

In terms of how this electoral rule influences the inequality of participation, this again depends on the extent to which these supposed effects on electoral turnout carry over to other forms of participation. If this is the case, we would expect that under passive registration systems, the introduction of socially disadvantaged groups into electoral politics, who are also more likely to be alienated from the political process, should also lead to these groups being better represented in alternative forms of participation. The additional barriers associated with active registration, meanwhile, may mean that any educative effects of voting would be concentrated in those who are already politically active, and thus carry over this form of inequality into non-electoral activities. If either of these arguments are correct, we would expect to find that:

> **H4b:** The effects of socio-demographic factors on non-electoral participation will be reduced where voter registration is passive, rather than active.

Including this variable in the current study allows for a direct assessment of whether the effects of this rule on electoral turnout has any implications for inequality across other forms of political participation.

Direct Democracy and Non-electoral Participation

Referendums can provide citizens with an opportunity to directly influence the political decision making process on key issues, and provide political agency beyond simply casting a vote once every election cycle. Its argued that referendums can serve as an alternative avenue for socialising those who are less likely to participate in electoral politics, into wider political society (Bowler et al., 2002). As with electoral system proportionality, the use of referendums is held to enhance the degree of political openness in a society (Fatke and Freitag, 2013). Offering a formal, institutionalised method of influencing specific political issues in a direct manner, may fulfil the role that more unconventional forms of participation play in systems that lack direct democracy. As such, we would expect countries where referendums are more frequently held to be associated with lower levels of participation in more unconventional forms of action. One competing theoretical approach, however, points to the ability of the supposed educative effect of this alternative avenue of participation to enhance citizens' feelings of political efficacy and interest in political affairs, which should in turn, spur on further political involvement (Bowler et al., 2002; Pateman, 1970).

The majority of the previous research in this area, however, does not lend outright support to either of these approaches. Kern and Hooghe (2018), for instance, found that the use of referendums exerted no significant effect on overall rates of non-electoral participation. To the extent that any significant relationship has been found, it tends to be in line with the former approach. The study conducted by Fatke and Freitag (2013) on regional level direct democracy in Switzerland, found a significant negative relationship between referendum usage and protest participation. These findings imply that if direct democracy has any bearing on participation in non-electoral politics, it is likely to be a suppressive effect. Exploring this issue using large-N cross national data, and multiple indicators of referendum usage makes it possible to test whether previous findings that rely on either aggregated indexes of direct democracy, or are focused on the notable outlier of Switzerland, persist across different political contexts. If these negative patterns of behaviour do extent beyond the case study mentioned above, we would expect to find that:

> **H5a:** Citizens are less likely to have participated in non-electoral activities in countries where at least one referendum has been held since the previous election.

As well as comparing countries where any referendums took place against those with no form of direct democracy, we can also test whether the frequency of these contests has any meaningful impact on participation rates. If referendum usage in general is associated with a negative effect on alternative forms of participation, then we would also expect this effect to be exacerbated when referendums are held more frequently, or in other words:

> **H6a:** Citizens are less likely to have participated in non-electoral activities in countries where referendums are held more frequently.

In terms of the impact of direct democracy on inequality of participation, again there are competing explanations within the academic literature. As with the main effect on participation rates, the educative role that direct democracy can play, may serve as a means of introducing otherwise alienated individuals into the political process (Bowler et al., 2002). Referendums may also produce beneficial effects due to the increased media coverage, and availability of political information during referendum campaigns, as well as the reduced information costs associated with only needing to be informed on the relevant issue under contention, rather than broad party platforms in national elections (Kern and Hooghe, 2018; Mendelsohn and Cutler, 2000). This means that citizens from more disadvantaged backgrounds, who are less likely to participate politically whatsoever, may have an alternative, low cost entry route into political affairs (Kern and Hooghe, 2018).

On the other hand, increased use of referendums may also lead to a widening of the inequality gap in terms of non-electoral participation. As with legislative elections, if contests are held too often, a degree of voter fatigue may impact citizens, and put off all of those but the most engaged in political affairs (Kern and Hooghe, 2018; Lijphart, 1997). Similarly, the overuse of referendums may also reduce the salience of other forms of political involvement. If issues can be directly influenced via direct democracy, there

is less of an incentive for citizens to both vote in elections, or participate in more unconventional forms of behaviour, as this is not where decisions on key issues are made (Kern and Hooghe, 2018). These consequences may therefore lead to citizens being turned off from politics altogether, and will again leave only those already fully engaged with the political process.

As with the previous literature on the main effects of direct democracy on participation, the limited number of studies that include this variable in cross-level interactions also point to the existence of a negative effect on inequality. In the cross-national study conducted by Kern and Hooghe (2018), they found that direct democracy was associated with an increase in inequality of non-institutionalised participation, across both income and education. In light of this finding, and the theoretical approaches outlined above, we would expect referendum usage to be associated with a widening of the participation gap in these forms of behaviour:

> **H5b:** The effects of socio-demographic factors on non-electoral participation will be increased when at least one referendum has been held since the previous election.

Furthermore, we would expect this negative effect to even stronger in cases where referendums are held more frequently, or in other words:

> **H6b:** The effects of socio-demographic factors on non-electoral participation will be increased when referendums are held more frequently.

Including referendum usage in the present analysis enables us to test whether direct democracy has any impact on overall rates of non-electoral participation, as well as the socio-demographic inequalities associated with these forms of behaviour. Moreover, by including multiple indicators of direct democracy, we can test whether the previous findings of a negative effect between this electoral rule and participation remain when any direct democracy instruments are used, or if the frequency of these votes makes any significant impact. By expanding on previous work that largely focuses on regional level referendums, and controlling for alternative predictors of non-electoral participation, we can thereby directly address the research questions at hand.

5.2 Method

Data

The primary working data is made up of national elections surveys from the Comparative Study of Electoral Systems (CSES) project. CSES Module 2 (CSES, 2017) was used in order to ensure that each election survey contained the necessary questions on the key dependent variables. The final dataset therefore includes information on 29,000 individuals, across 25 election studies, in 24 countries, between 2001-2006. While the CSES survey data contained all of the relevant variables at the individual level, several other data sources were also used in order to gather the required macro level variables for the final analysis.

Dependent Variables

This study examines three different forms of non-electoral political participation: Attending protests and demonstrations, contacting politicians or other elected officials, and working with other to influence government. Information on these variables were taken from the survey questions included in the CSES Module 2, worded as follows:

> 'Over the past five years or so, have you done any of the following things to express your views about something the government should or should not be doing?
>
> 1. Contacted a politician or government official either in person, or in writing, or some other way?
> 2. Taken part in a protest, march or demonstration?
> 3. Worked together with people who shared the same concern?'

Responses for each of the three questions were coded separately, and take the form of a binary outcome, indicating whether or not an individual had participated in that activity over the past five years. One benefit of this indicator is that the question asks about actual past behaviour, rather than the likelihood of future participation. When the latter is used, responses tend to significantly overestimate levels of non-electoral

participation when compared against aggregate participation rates. Additionally, the five year timescale used in the question is well suited to the aims of the current project, as the key independent variables are structural in nature, and thus their effects on participation should be detectable over the medium to long-term. This can effectively control for any short-term fluctuations in participation rates that are in response to specific events such as political scandals or media campaigns. The three dummy indicators are labelled simply as **protest**, **contacting politicians**, and **working with others**.

Independent Variables

Compulsory voting was operationalised using two different measures. The first is a dummy variable that compares systems with any form of **compulsory voting** against the voluntary voting reference category. The second measure is an ordinal variable that attempts to capture the degree to which compulsory voting laws were enforced in each country. The original CSES election-level data classifies compulsory voting systems based on the severity of their penalties for non-compliance, and the degree to which these penalties are actually enforced. The CSES coding was cross-referenced against several other sources to check for any inconsistencies (Birch, 2009; Franklin, 2002; IDEA, 2019*a*,*c*; IFES, 2019; Massicotte et al., 2004; Singh, 2015). The categories in the final measure compare voluntary systems against those using either **weakly enforced compulsory voting**, or **strictly enforced compulsory voting**. These two indicators make it possible to test whether having any form of compulsory voting laws may be enough to impact levels of non-electoral participation, or if a credible threat of legal sanction is necessary for these rules to display any substantive effect.

The relationship between electoral system proportionality and alternative forms of participation was assessed using the Gallagher disproportionality index, which compares the percentage of votes won by each party against the number of seats they received post-election. This provides an effective indicator of how closely the final result mirrored the wishes of the public. The score for the previous legislative election is used, as if citizens are actually influenced by the representativeness of the electoral

process, their judgement about the system's efficacy would logically be based on their past experiences with it. The variable is calculated using the least squares method outlined by Gallagher (1991), with additional data for more recent elections sourced from Carey and Hix (2011), Gandrud (2015), or calculated manually using election data (CSES, 2017). In all of the models, the variable is inverted, so as to make the interpretation of interaction effects more intuitive. A higher score on the final variable, which is labelled **proportionality**, indicates a more proportional election outcome.

With regard to voter registration, an original dataset was created specifically for the purposes of this project. This was based predominantly on election reports from the Organisation for Security & Co-operation in Europe (OCSE, 2019), and was supplemented with additional information from books, journal articles, and various government websites (Contreras et al., 2016; Massicotte et al., 2004; OCSE, 2019; Power, 2009; Rosenberg and Chen, 2009). The final measure takes the form of a dummy variable, with the passive registration category compared against **active registration**. As an additional robustness check, a further variable was created which also includes a **mixed registration** category. The mixed group includes instances where states are transitioning from active to passive systems, or where registration requires some citizen involvement, but significant resources are put into contacting voters to help them register. In Module 2 of the CSES data, the only case included in this group is the British 2005 election study, which is classed as an 'active' system in the dummy registration variable. This newly developed original dataset, which supplements the CSES election data, makes it possible to test whether the extra costs associated with having to manually register has any impact on citizens' decision to participate in activities beyond voting.

Data on the use of referendums was taken from multiple sources, most notably the SUDD Database for Direct Democracy, the Centre for Research on Direct Democracy, and the IDEA Direct Democracy Database (C2D, 2019; IDEA, 2019*b*; SUDD, 2019). Information was gathered on all national referendums that took place between the current election under examination and the most recent election of the same type. This data was then used to construct two final variables. The first is a dummy measure

of whether any referendums were held in the previous electoral cycle, coded as either 'no referendums', or 'one or more referendums' and labelled as **referendum held**. The second variable captures the frequency of these contests, and is a simple count of the number of referendums held in each country since the last election, and is labelled **referendum frequency**. It is important to note that Switzerland is a huge outlier in terms of how often they hold national referendums, with the Swiss 2003 experiencing 45 votes since the previous legislative election. The election study with the second highest number of referendums is Ireland in 2002 with just 8 votes, while the vast majority of cases had no referendums whatsoever. As an additional robustness check, all of the analyses were therefore run both with and without this Swiss election study.

Individual Level Variables

Several individual level measures were included in order to capture the necessary information on each of the key socio-demographic independent variables, and to control for other major influences on turnout. The final variables included in the models, namely: **age, education, household income**, political knowledge, party identification, and left-right self placement were all taken from the main CSES dataset.

Party identification, and left-right self placement were included as control variables, as previous research has linked belonging to political and social groups (Dalton et al., 2010), and identifying as left-wing (Fatke and Freitag, 2013; van der Meer et al., 2009), with certain forms of non-electoral behaviour. Political knowledge, meanwhile, allows us to test whether education has any significant effect on participation rates after controlling for this factor, as some research has suggested that political information may responsible for much of the supposed effect of education on political behaviour (Denny and Doyle, 2008).

Turning to how these variables are measured, the respondent's age, in years, is included as an interval-level variable. Education is recorded as a dummy variable, indicating whether or not an individual attended university. Party identification is similarly coded, and differentiates between those who do not identify with any political party, and those who identify with at least one. Political information is calculated

as the percentage of political knowledge based questions that respondents answered correctly during the survey. Due to the fact that CSES is an aggregation of different national election studies, the specific questions given to respondents to gauge their political knowledge varies by election study. While this cross-national variation could potentially raise issues of comparability, questions tend to centre around core features of the political system, rather than focusing on specific candidates or policies, meaning that this nonetheless serves as a useful measure of generalised political knowledge. Household income is measured in quintiles, with '1' representing the poorest, and '5' the wealthiest. Left-right ideological self placement is measured by asking respondents to place themselves on a 0-10 scale, where a score of 0 means 'left', and 10 means 'right'. It is worth noting that the survey question on income was not included in the Belgian 2003 election study. As such, the analysis was run both with and without this variable as an additional robustness check, since Belgium is one of the few countries in the dataset that uses strictly enforced compulsory voting.

Control Variables

Several control variables were included at the macro level, ranging from: economic development, degree of economic inequality, number of political parties, how long the country had been a democracy, and whether the country is a parliamentary or presidential system.

Economic development is represented by the GDP/capita (current USD) for each country-year. The final variable uses the natural log of the GDP/capita figure for each case, and is sourced from the World Bank World Development Indicators (World Bank, 2019).

Economic inequality is measured using the Gini coefficient, which is a ratio of the wealth distribution of a given population. A score of zero implies complete equality of incomes, while a score of one would mean complete inequality. This is based on combined data from various sources (IFES, 2019; Index Mundi, 2019; LIS, 2019; OECD, 2018; World Bank, 2019). In the final variable coding, a higher value therefore represents greater levels of economic inequality.

The effective number of parties measure follows Laakso & Taagepera's methodology by calculating a score for each election based upon the number of parties that competed, which is then weighted by each party's vote share (Laakso and Taagepera, 1979). This weighting process means that elections with lots of smaller parties that received negligible amounts of votes do not unduly influence the estimate. These figures were taken from several sources to create the final variable of interest (CLEA, 2018; IFES, 2019).

How long each country had been democratic was recorded using a dummy variable, with 'old democracies' compared against the 'new democracy' reference category. This variable was calculated based on the Polity IV measure of regime durability (Polity IV Project, 2018), with countries that had been classed by Polity IV as democratic for at least fifty years before the current election coded as 'old' democracies, while those below this threshold were included in the 'new' category.

A dummy variable was also included to distinguish between presidential and parliamentary systems, which was taken from the CSES data. Finally, before being included in the models, all interval-level variables were centred around the group mean, and divided by two standard deviations, following the conventions outlined by Gelman (2008) and Enders and Tofighi (2007). As such, the intercepts for each model refers to the expected value of the outcome when all interval level independent variables are held at the mean for that election study, rather than zero; while the coefficients themselves refer to the unit change in Y for a two standard deviation increase in X. This allows for simpler interpretation of model estimates, as all interval variables follow a similar scale.

Analytical Approach

In order to determine whether the electoral laws outlined above display any significant relationship with alternative forms of political participation, this study employed multi-level logistic regression modelling. Since the dependent variable can only take one of two values - whether or not an individual participated in the relevant activity - a binary logistic model is appropriate for this application. Moreover, a multi-level design

was used in order to account for the nested structure of the data, since the CSES surveys target individuals clustered within different election studies. Failure to adopt this approach would adversely impact the models' estimates, as respondents from the same country would be treated as independent observations, despite being subject to same political and cultural factors as everyone else from that specific election study. As such, the analysis was conducted using a varying intercept multi-level logistic model.

In relation to the dataset used in the current analysis, it is worth noting that collating a large number of national election surveys inevitably brings up issues of comparability across cases. Significant effort is put into ensuring that survey questions are asked in a consistent manner across different social and cultural contexts, as well as in different languages. The more relevant issue here, however, is that while questions on topics such as electoral turnout are asked across every wave of the CSES modules, questions on specific non-electoral activities are only included in Module 2. The reduced sample size from only using one wave of the CSES data means that for the compulsory voting measure in particular, there are relatively few cases that fall into the weakly and strictly enforced categories. In the final dataset these groups contain 3 cases each, in comparison to the 28 elections that use voluntary voting. While this low sample size means that any outliers in these groups may unduly impact the models' estimates, the inclusion of the aggregated dummy measure of compulsory voting helps to mitigate this issue.

Finally, in terms of the wider cross-sectional approach taken by this study, this inevitably comes with its own limitations and advantages. One drawback is that the ability to determine the direction of causality is severely limited in comparison to longitudinal studies, where time can be used to see a clear pattern of cause and effect. While the issue of reverse causality is possible - that societies containing specific patterns of participation, or certain a socio-demographic make up are more likely to adopt specific electoral rules - the focus here is on the cross-level interactions between the individual and system level characteristics of interest, in order to see how electoral rules impact different sections of society. This makes it possible to identify whether there is any particular set of institutional arrangements are associated with reduced inequality of

participation. While further research that examines the impact of these changes over time, and how they vary across specific contexts is clearly needed, the current approach nevertheless allows for an effective assessment of the research questions at hand.

5.3 Results

In order to address my central research questions, I conducted a range of regression models that included both main effects and interaction terms between each of my key key dependent and independent variables. Regarding the interpretation of the below results, it is important to note that due to the cross-level interaction terms included in these models, the coefficient for each electoral law variable does not represent the direct effect of that rule on each form of non-electoral participation, but rather its effect *conditional on the other individual-level variables included in the interaction.* As such, in order to appropriately address hypotheses H1-6a, additive models were also run which did not contain any interaction terms. This allows us to see the unconditional main effect of each electoral law on the three dependent variables, the results of which are displayed in Table C1, C2, and C3 in Appendix C. Aside from extremely minor differences in effect sizes (full details listed in Appendix C.), the substantive interpretation of the results remain the same across both model specifications, and thus the findings from the models below can still be used to address hypotheses H1-6a. The results of these models will now be discussed in greater detail below, examining each of my dependent variables: Protests and demonstrations, contacting politicians, and working with others to influence government, in turn.

The interaction tables listed below only include the conditional main effects for each electoral rule and the key socio-demographic indicators, as well as the interaction terms between the two. The full model outputs, which include the control variable coefficients can be seen in Appendix C. For each of the interaction models shown in Tables 5.1, 5.2, and 5.3, the 'electoral law' variable refers to the institutional variable listed above the model number.

Protests and Demonstrations

Turning our attention first to attendance at protests and demonstration, Table 5.1 includes the results of all the interactive models for each electoral law. The inclusion of relevant control variables in these models allow us to test whether electoral rules impact overall rates of participation after accounting for alternative explanations of

protest behaviour. From each of the 'electoral law' coefficients in Table 5.1, we can see that a significant positive relationship exists between protest and strictly enforced mandatory voting, as well as the dummy measure of compulsory voting. The main effects for the remaining electoral rules and protest failed to reach any degree of statistical significance. While these models can tell us about the relationship between compulsory voting in comparison to voluntary systems, rerunning the models with weakly enforced compulsory voting set as the reference category allows us to test whether the difference between the two levels of enforcement is statistically significant. The results listed in Table C.6 in Appendix C, demonstrate that this difference between strictly and weakly enforced compulsory voting did not reach any degree of statistical significance. As such, we cannot reject the null hypothesis for H2a. These results indicate that in terms of protest behaviour and hypotheses H1-6a, we can only reject the null hypotheses for H1a: that compulsory voting in general is associated with an increased likelihood of citizens having attended protests or demonstrations, compared to voluntary voting systems.

Across all seven protest models, the three primary socio-demographic variables all produced consistent main effects. Age exhibited a strong negative impact on citizens' likelihood of protesting, which was significant at the $p<.001$ level. The effect of university education ran in the opposite direction, producing a positive and statistically significant effect on the likelihood of participation. Income, however, displayed no significant influence on citizens' likelihood of taking part in protest activities. These findings indicate that while there did not seem to be a notable income gap between those who attended protests and those who did not, nevertheless, both the young, and the better educated were significantly more likely to have taken part in this type of activity.

In order to test the second set of hypotheses included the study (H1-6b), it is necessary to examine the interaction terms between each electoral rule and the three socio-demographic variables of interest. Turning first to H1b, in Model 1 of Table 5.1 we can see that the interaction term between compulsory voting and age is positive and statistically significant at the $p<.001$ level. The interaction terms for both education

and income did not reach any degree of statistical significance in this model, nor any of the other protest models. These findings indicate that age has a weaker effect on predicting participation in this activity in compulsory, compared to voluntary systems, thus lending partial support to H1b.

Models 2 and 3 allow us to explore whether the enforcement of these laws has any noticeable impact on levels of protest behaviour. In Model 2 we can see that despite the lack of any main effect from this electoral rule, the interaction term for weakly enforced mandatory voting and age was positive and statistically significant at the $p<.05$ level. This implies that in comparison to voluntary systems, weakly enforced compulsory voting with a slight reduction in the effect of age on predicting the likelihood of participation.

Table 5.1: Interactive Regression Models - Protest and Electoral Rules

	Dependent variable: Protest						
	CV(dummy)	Weak CV	Strict CV	Gal Idx	Active Reg	Ref Freq	Ref Dum
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	-2.641^{***}	-2.667^{***}	-2.667^{***}	-2.594^{***}	-2.551^{***}	-2.586^{***}	-2.564^{***}
	(0.200)	(0.197)	(0.197)	(0.198)	(0.198)	(0.197)	(0.199)
Electoral Law	1.210^{***}	0.679	1.641^{***}	0.153	-0.105	-0.018	-0.106
	(0.318)	(0.459)	(0.418)	(0.231)	(0.289)	(0.170)	(0.315)
Age	-0.786^{***}	-0.786^{***}	-0.786^{***}	-0.601^{***}	-0.632^{***}	-0.567^{***}	-0.501^{***}
	(0.055)	(0.055)	(0.055)	(0.047)	(0.053)	(0.047)	(0.051)
Income	0.094	0.094	0.094	0.047	0.049	0.035	0.061
	(0.052)	(0.052)	(0.052)	(0.045)	(0.051)	(0.046)	(0.050)
Education	0.634^{***}	0.634^{***}	0.634^{***}	0.617^{***}	0.587^{***}	0.617^{***}	0.625^{***}
	(0.056)	(0.056)	(0.056)	(0.049)	(0.055)	(0.049)	(0.053)
Electoral Law*Age	0.717^{***}	0.384^{*}	0.944^{***}	-0.302^{**}	0.215	-0.232^{***}	-0.523^{***}
	(0.103)	(0.125)	(0.125)	(0.098)	(0.112)	(0.066)	(0.125)
Electoral Law*Income	-0.196	-0.140	-0.195	0.145	-0.036	-0.014	-0.125
	(0.106)	(0.151)	(0.136)	(0.094)	(0.110)	(0.061)	(0.117)
Electoral Law*Education	-0.022	-0.068	0.020	0.003	0.146	-0.023	-0.057
	(0.115)	(0.178)	(0.138)	(0.098)	(0.119)	(0.078)	(0.136)
Groups	25	25	25	25	25	25	25
Observations	25,929	25,929	25,929	25,929	25,929	25,929	25,929
ICC	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Log Likelihood	$-8{,}016.438$	$-7{,}999.876$	$-7{,}999.876$	$-8{,}041.265$	$-8{,}041.330$	$-8{,}038.233$	$-8{,}036.579$
Akaike Inf. Crit.	16,078.880	16,059.750	16,059.750	16,128.530	16,128.660	16,122.470	16,119.160
Bayesian Inf. Crit.	16,266.630	16,304.650	16,304.650	16,316.280	16,316.410	16,310.220	16,306.910

*p<0.05; **p<0.01; ***p<0.001

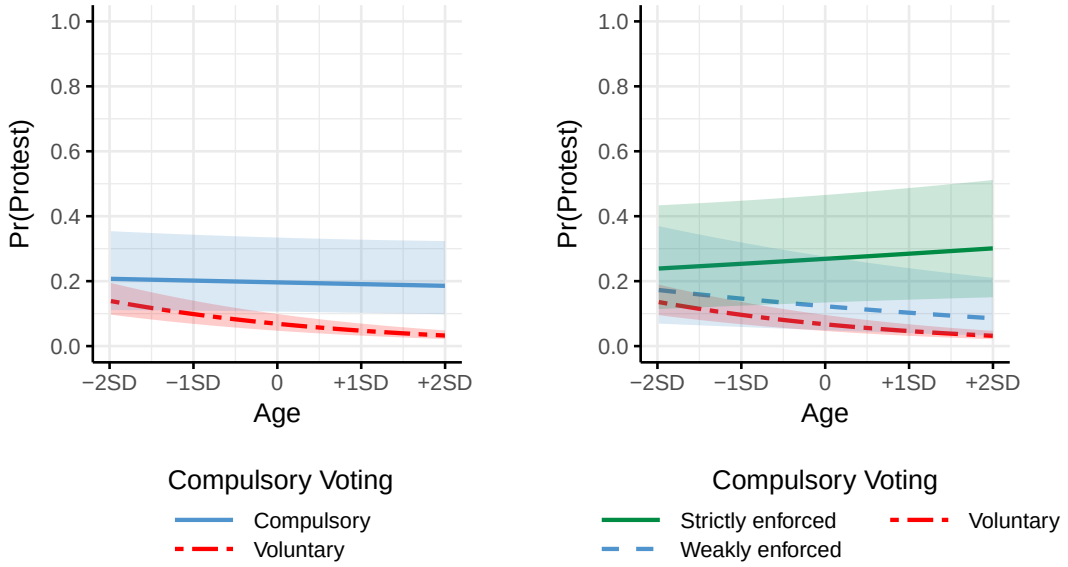
Moving on to strictly enforced mandatory voting, from Model 3 we can see that both the main electoral law effect and interaction term with age are positive and statistically significant at the p<.001 level. This suggests that citizens are both more likely to participate in protests when when compulsory voting is strictly enforced, and that the negative effect of age on the likelihood of participation is significantly reduced. The results listed in Table C.6 in Appendix C, allow us to test the extent to which the effects of these two forms of compulsory voting vary, and thus directly evaluate H2b. The results here demonstrate that strictly enforced compulsory voting is associated with a significant reduction in the impact of age on participation, in comparison to weakly enforced mandatory voting. The coefficients for income and education, meanwhile, were not statistically significant.

In order to better illustrate the substantive effect sizes of these interactions, the predicted probabilities were calculated for each compulsory voting category across a range of values for age. Plots for both the dummy and ordinal compulsory voting measures are displayed in Figure 5.1 below. In the left-hand plot, we can see from the line for compulsory voting being both higher and closer to horizontal than the voluntary category, that the negative impact of age on protest participation is significantly reduced. The difference in predicted probability associated with a 2SD increase in age is 5 per cent under voluntary voting, and just 1 percent for compulsory systems.

The plot on the right-hand side of Figure 5.1 provides some further insight into this relationship. Here we can see that while the impact of age on the likelihood of protesting is marginally reduced under weakly enforced, compared to voluntary systems, it seems that the strictly enforced category is responsible for the bulk of the effect identified by the previous dummy measure. In terms of the difference between age groups, a 2SD increase in age produces an participation gap of 5 percent under voluntary systems, reducing slightly to 4 per cent with weak compulsory voting, and just 3 percent under strictly enforced compulsory voting. Despite the relatively small difference in the participation gap, it is worth noting that in strictly enforced systems, the model predicts that the direction of the effect of age on protest is reversed, with older citizens being slightly more likely to take part. Taken as a whole, these findings lend only partial

support to the claims of H1b and H2b. While the use of compulsory voting, and in particular the strict enforcement of these rules, is associated with a reduction of the age gap present in protest participation compared to voluntary systems, these rules do not reduce the unequal impact that education exerts on this type of political activity.

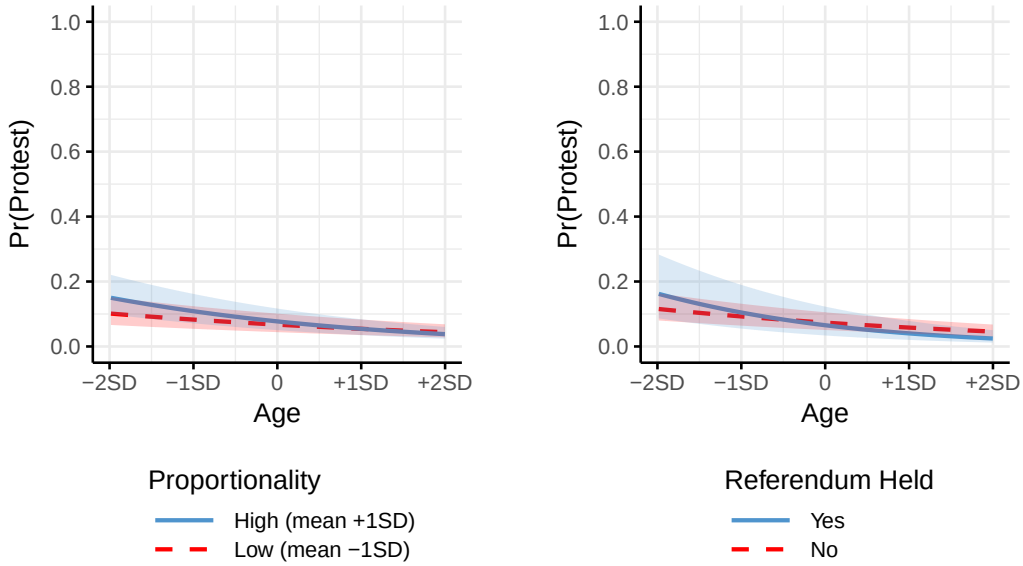
Figure 5.1: Electoral Rules and Age Interaction Effects: Compulsory Voting



Moving on to electoral system proportionality, the results in Model 4 of Table 5.1 show that the interaction term between proportionality and age was negative and statistically significant at the p<.01 level. As with all of the other protest interaction models, the interaction terms for both income and education did not reach any degree of statistical significance. While this result indicates that the negative relationship between age and protest participation is exacerbated under more proportional election outcomes, the substantive effect sizes here are relatively small. As can be seen from the left-hand plot in Figure 5.2, comparing elections with less proportional outcomes (mean -1SD), and those with more proportional results (mean +1SD), the difference in predicted probabilities of protesting associated with a 2SD increase in age is 3 percent in

less proportional systems, rising to just 5 percent in more proportional contexts. These results mean that we cannot reject the null hypothesis for H3b in terms of income or education. With regards to age, although the interaction term with proportionality is statistically significant, the substantive effect is marginal, and therefore only lends minimal support H3b.

Figure 5.2: Electoral Rules and Age Interaction Effects: Proportionality and Referendums



In terms of voter registration, Model 5 indicates that the use of active or passive registration systems had no significant impact on either overall participation rates, or any of the three socio-demographic variables. As such, the null hypothesis cannot be rejected for H4b in terms of voter registration and protest behaviour.

Moving on to the use of national referendums, the results here largely mirror that of electoral system proportionality. As can be seen from Models 6 and 7 in Table 5.1, both referendum frequency and the dummy measure of referendum use produced no significant main effects on protest behaviour, however, the interaction terms between

each electoral rule and age were negative and statistically significant at the p<.001 level. These findings imply that all else being equal, the negative relationship between age and protest participation is slightly stronger in countries where more referendums have taken place. The full range of predicted values for the dummy referendum model are displayed in the right-hand side plot in Figure 5.2. As with proportionality, the effect sizes here are notably small, with a 2-3 percent widening of the participation gap in terms of age for a one unit increase in both the dummy and count measure of referendum usage. Again, these results mean that we cannot reject the null hypotheses for H5b and H6b in terms of income or education, while the statistically significant interaction terms between referendum usage and age are are both substantively small.

Contacting Politicians

The next set of interactive models, which are displayed in Table 5.2, relate to citizens' likelihood of contacting politicians or other elected officials. In terms of hypothesis H1-6a regarding the main effects of the electoral rules, the coefficient for the dummy compulsory voting measure in Model 1 is positive and statistically significant at the p<.01 level. This allows us to reject the null hypothesis for H1a, as all else being held constant, citizens' likelihood of contacting politicians is greater under compulsory, compared to voluntary voting systems. Moving on to H2a, from Models 2 and 3 we can see that it is actually the weakly enforced compulsory voting category that is responsible for much of the effect of the previous dummy measure. The results listed in Table C.6 in Appendix C, however, indicate that this difference between the two forms of compulsory voting is not statistically significant. For each of the remaining electoral rules, the coefficients failed to reach any degree of statistical significance, meaning that we cannot reject the null hypotheses for H2-6a, in relation to proportionality, registration, and the use of national referendums.

As with the protest models, the coefficients for the three key socio-demographic variables were consistent across all seven electoral rule models. All three variables had a positive and statistically significant effect on participation rates, with older, wealthier, and more educated citizens being more likely to have contacted politicians.

The substantive effect sizes for these predictors, however, were extremely small. For education, which has the largest effect size of the three variables, there was just a 2.5 percent difference in the predicted probability of contacting politicians between those with and without a university education.

Moving on to H1-6b, and how electoral rules interact with the individual level predictors, Model 1 in Table 5.2 shows that despite the positive main effect for compulsory voting, there were no significant interactions between this rule and any of the three socio-demographic variables. As such, we cannot reject the null hypothesis for H1a.

Models 2 and 3 in Table 5.2 allow us to evaluate the claims of H2a, that stricter enforcement of compulsory voting reduces the impact of individual level predictors. None of the interaction terms reached any degree of statistical significance across both models, with the sole exception of strictly enforced compulsory voting and age.

The positive coefficient here would imply that the impact of age on participation is even greater under this electoral rule. While the regression analysis that compared each level of enforcement outlined in Table C.6 in Appendix C indicates that this difference is statistically significant, it runs in the opposite direction expected by H2b. Moreover, when the analysis was re-run during the additional robustness checks, with the income variable removed (which increased the number of strictly enforced systems by 1), this effect was no longer statistically significant. In light of the lack of significant interaction terms, and the inconsistency regarding age and strictly enforced compulsory voting, we therefore cannot reject the null hypothesis for H2a in terms of contacting politicians.

Moving on to H3b and electoral system proportionality, in Model 4 the only significant interaction term is that of age, which is negative. This runs counter to the direction expected by H3b, and indicates that more proportional outcomes are associated with a reduction in the influence of age on contacting politicians. In practical terms, however, the substantive impact of this effect is marginal. After calculating the predicted probability of participation across a range of age values, a 2SD increase in the proportionality measure only leads to a 1 per cent reduction in the participation gap based on a 2SD increase in age.

Table 5.2: Interactive Regression Models - Contacting Politicians and Electoral Rules

	Dependent variable: Contacting Politicians						
	CV(dummy)	Weak CV	Strict CV	Gal Idx	Active Reg	Ref Freq	Ref Dum
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	-3.091^{***}	-3.064^{***}	-3.064^{***}	-3.076^{***}	-3.065^{***}	-3.051^{***}	-3.041^{***}
	(0.169)	(0.166)	(0.166)	(0.169)	(0.170)	(0.168)	(0.171)
Electoral law	0.744^{**}	1.002^{**}	0.561	-0.153	0.184	-0.264	-0.208
	(0.263)	(0.375)	(0.350)	(0.188)	(0.238)	(0.145)	(0.265)
Age	0.199^{***}	0.199^{***}	0.199^{***}	0.211^{***}	0.237^{***}	0.239^{***}	0.308^{***}
	(0.046)	(0.046)	(0.046)	(0.041)	(0.046)	(0.040)	(0.045)
Income	0.317^{***}	0.317^{***}	0.317^{***}	0.323^{***}	0.291^{***}	0.306^{***}	0.357^{***}
	(0.045)	(0.045)	(0.045)	(0.040)	(0.046)	(0.040)	(0.045)
Education	0.469^{***}	0.469^{***}	0.469^{***}	0.477^{***}	0.437^{***}	0.462^{***}	0.460^{***}
	(0.049)	(0.049)	(0.049)	(0.044)	(0.049)	(0.043)	(0.048)
Electoral Law*Age	0.116	-0.129	0.361^{**}	-0.169^{*}	-0.029	-0.163^{**}	-0.370^{***}
	(0.092)	(0.124)	(0.124)	(0.075)	(0.092)	(0.063)	(0.098)
Electoral Law*Income	-0.052	0.058	-0.132	0.112	0.052	-0.016	-0.241^{*}
	(0.097)	(0.130)	(0.132)	(0.074)	(0.094)	(0.063)	(0.098)
Electoral Law*Education	-0.046	-0.083	-0.004	0.135	0.091	-0.014	0.008
	(0.106)	(0.154)	(0.133)	(0.078)	(0.103)	(0.078)	(0.116)
Groups	25	25	25	25	25	25	25
Observations	26,004	26,004	26,004	26,004	26,004	26,004	26,004
ICC	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Log Likelihood	$-9{,}885.584$	$-9{,}877.878$	$-9{,}877.878$	$-9{,}874.233$	$-9{,}887.467$	$-9{,}878.034$	$-9{,}878.615$
Akaike Inf. Crit.	19,817.170	19,815.760	19,815.760	19,794.470	19,820.940	19,802.070	19,803.230
Bayesian Inf. Crit.	20,004.990	20,060.740	20,060.740	19,982.280	20,008.750	19,989.890	19,991.050

*p<0.05; **p<0.01; ***p<0.001

As such, this electoral rule seems to exert no significant influence on the role that income and education play in contacting politicians, and produces a statistically significant, but practically negligible impact on age.

In terms of H4b, again voter registration produced no significant interaction effects with any of the three socio-demographic variables, meaning we cannot reject the null hypothesis.

With regards to the use of national referendums, as can be seen from Models 6 and 7, the coefficient for age was negative and statistically significant at the $p<.01$ level for both the dummy and count referendum measure. The direction of these effects contradict the expectations of H5-6b, and the substantive impact is again extremely small, with just a 1 per cent reduction in the age gap associated with a one unit increase across either variable. In terms of income, again both interaction effects are negative, however only the coefficient for the dummy referendum measure is statistically significant. The predicted probabilities mirror the previous effects on age, with just a 1 per cent reduction in the income participation gap associated with countries that held at least one referendum since the last election. Neither of the interaction terms for education reached any degree of statistical significance. Overall then, in terms of referendum usage and the likelihood of contacting politicians, we cannot reject the null hypothesis for either measure and education. And although the interaction terms for age, and to some extent income were statistically significant, in practical terms referendum usage had almost no noticeable impact on the socio-demographic predictors of this activity.

Working with Others

The final dependent variable, which measures citizens' likelihood of working with others to influence government is assessed via Models 1-7 in Table 5.2. In relation to H1-6a and the main effects for each electoral law on this form of political behaviour, none of the institutional variables had any significant influence on overall rates of participation. As such, we cannot reject the null hypotheses for H1-6a.

Table 5.3: Interactive Regression Models - Working with Others and Electoral Rules

	Dependent variable: Working with Others						
	CV(dummy)	Weak CV	Strict CV	Gal Idx	Active Reg	Ref Freq	Ref Dum
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	-2.221^{***}	-2.237^{***}	-2.237^{***}	-2.190^{***}	-2.184^{***}	-2.176^{***}	-2.158^{***}
	(0.233)	(0.234)	(0.234)	(0.233)	(0.233)	(0.232)	(0.235)
Electoral law	0.681	0.419	0.937	0.119	0.208	0.003	-0.114
	(0.360)	(0.537)	(0.496)	(0.265)	(0.332)	(0.199)	(0.367)
Age	-0.177^{***}	-0.177^{***}	-0.177^{***}	-0.123^{***}	-0.102^{*}	-0.117^{**}	-0.082^{*}
	(0.041)	(0.041)	(0.041)	(0.036)	(0.041)	(0.036)	(0.040)
Income	0.222^{***}	0.222^{***}	0.222^{***}	0.190^{***}	0.197^{***}	0.179^{***}	0.193^{***}
	(0.040)	(0.040)	(0.040)	(0.036)	(0.041)	(0.036)	(0.040)
Education	0.374^{***}	0.375^{***}	0.375^{***}	0.408^{***}	0.347^{***}	0.404^{***}	0.365^{***}
	(0.045)	(0.045)	(0.045)	(0.040)	(0.045)	(0.040)	(0.044)
Electoral Law*Age	0.235^{**}	0.103	0.362^{***}	-0.173^{*}	-0.050	-0.014	-0.177^{*}
	(0.083)	(0.111)	(0.109)	(0.074)	(0.083)	(0.049)	(0.088)
Electoral Law*Income	-0.184^{*}	-0.184	-0.176	0.106	-0.092	0.035	-0.042
	(0.087)	(0.115)	(0.118)	(0.073)	(0.084)	(0.049)	(0.088)
Electoral Law*Education	0.165	0.258	0.109	-0.032	0.254^{**}	0.040	0.249^{*}
	(0.098)	(0.142)	(0.123)	(0.078)	(0.095)	(0.066)	(0.106)
Groups	25	25	25	25	25	25	25
Observations	25,911	25,911	25,911	25,911	25,911	25,911	25,911
ICC	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Log Likelihood	$-11{,}805.180$	$-11{,}801.620$	$-11{,}801.620$	$-11{,}816.280$	$-11{,}813.820$	$-11{,}817.340$	$-11{,}812.970$
Akaike Inf. Crit.	23,656.360	23,663.240	23,663.240	23,678.550	23,673.630	23,680.690	23,671.940
Bayesian Inf. Crit.	23,844.100	23,908.110	23,908.110	23,866.290	23,861.370	23,868.430	23,859.680

*p<0.05; **p<0.01; ***p<0.001

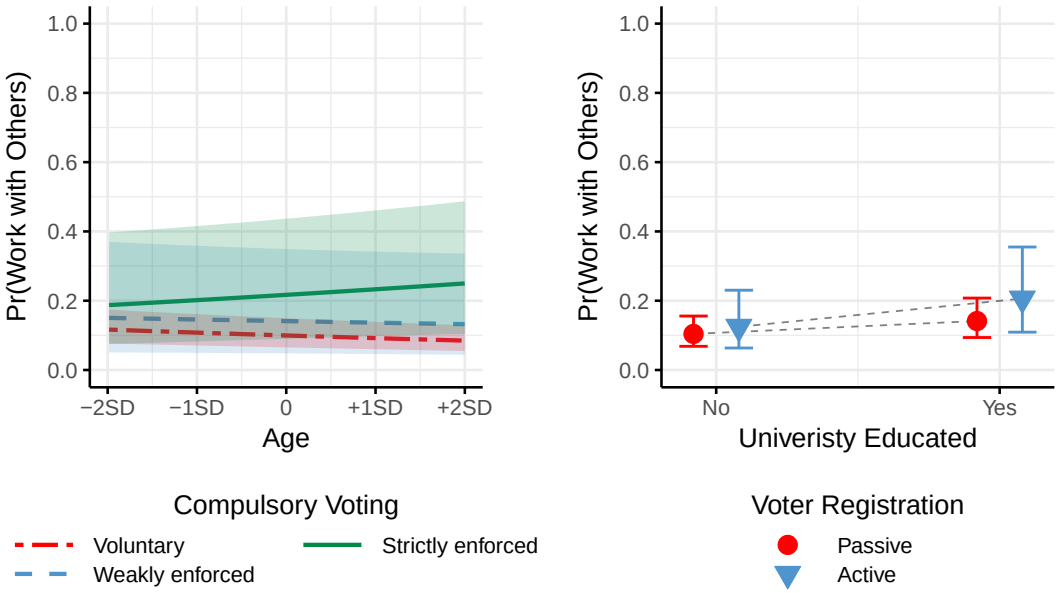
In terms of the individual level predictors, all three variables had a significant impact on the likelihood of participation, with age exhibiting a negative effect, while income and education were positively associated with involvement in this activity.

After calculating predicted probabilities for each of the socio-demographic variables, it is clear that these effect sizes are relatively small, with a one unit increase in each of the individual level variables being associated with a participation gap of just 2 per cent for both age and income, and a 4 per cent gap for university education.

Moving on to the interactive hypotheses, H1b is tested via Model 1 in Table 5.2. Here we can see that the interaction effect for age is positive and statistically significant at the $p<.01$ level, while the coefficient for income is negative and significant at the $p<.05$ level. The final interaction term between compulsory voting and education did not produce any significant results. These results imply that all else being held equal, the negative effect of age, and the positive influence of income on the likelihood of of participation are both reduced under compulsory voting, compared to voluntary systems. While this lends partial support to the claims of H1b, the substantive impact of the interaction terms are extremely small. The reduction of the participation gap in terms of predicted probabilities of participation between the voluntary and compulsory voting categories is just 0.5 per cent in terms of age, and a 1.5 per cent reduction in terms of income.

Next, we can explore the impact of how these rules are enforced via Models 2 and 3 in Table 5.2. The only interaction term to reach any degree of statistical significance was the positive coefficient for strictly enforced compulsory voting and age. The predicted probabilities of participation for different levels of enforcement are shown in the left-hand plot in Figure 5.3. From the upward slope of the line representing strictly enforced compulsory voting, we can see that rather than reducing the influence of age on participation, stronger enforcement actually leads to a slight increase in the age gap, but this time in the opposite direction. When the link between each form of compulsory voting and age was tested directly in Table C.6 in Appendix C, it appeared that this difference in the coefficients for age across both forms of enforced was not statistically significant. As such, this means that we cannot reject the null hypothesis for H2b.

Figure 5.3: Working With Others - Compulsory Voting and Voter Registration



Model 4 in Table 5.2 can be used to evaluate the claims of H3b regarding electoral system proportionality. The only interaction term which reaches statistical significance here is that of age, which is negative. This indicates that the negative relationship between age on the likelihood of working with others is exacerbated under more proportional systems. In terms of the difference in predicted probability associated with a 2SD increase in age, again the size of these effects were notably small, with the age gap widening by just 2 per cent when electoral outcomes were more proportional (mean +1SD), compared to less proportional systems (mean -1SD). In light of these results, we cannot reject the null hypothesis for electoral system proportionality and income or education, meanwhile, the significant interaction term between this variable and age follows the direction outlined by H3b but is notably small.

The next electoral rule, voter registration, is explored via Model 5 in Table 5.2, which allows us to test the claims of H4b. In terms of both age and income, the interaction effects failed to reach any degree of statistical significance, meaning we

cannot reject the null hypotheses. The interaction term for education, however, was positive and statistically significant at the $p<.01$ level. This implies that, all else being equal, the positive relationship between education and likelihood of participation is even greater in active registration systems, as opposed to passive ones. As can be seen from the right-hand plot in Figure 5.3, the difference in predicted probability of participation between those with and without a university education increases from 4 per cent in passive registration systems, up to 8 per cent when registration is active. Additional robustness checks also demonstrate that this effect remains even after controlling for the 'mixed' registration category. As such, these findings lend partial support to the expectations of H4b, as while we cannot reject the null hypothesis in terms of age and income, passive registration is nevertheless associated with a reduction in the effect that education exerts on this form of participation.

The final two hypotheses, H5-6b, relate to the use of national referendums. As can be seen in Model 6 of Table 5.2, the interaction terms for the referendum frequency variable produced no significant effects, meaning we cannot reject the null hypothesis for H5b. For the dummy measure of referendum usage, which is shown in Model 7 of Table 5.2, again the interaction term for income failed to reach statistical significance. The interaction term for age, meanwhile, was negative and statistically significant at the $p<.05$ level, while the coefficient for education and referendum usage was positive and also statistically significant. These results imply that the effects of age and education on predicting the likelihood of participation are even stronger when at least one referendum has been held since the previous election, compared to those without any referendums whatsoever. Both of these effects, however, are similarly small, with a 1.5 per cent increase in both the age and educational participation gaps associated with referendum usage. Taken as a whole, these findings imply that the use of national referendums have very little, if any, impact on inequality of participation.

5.4 Discussion

The initial question this project aimed to address is to what extent are political institutions related to political behaviour, beyond their immediate links with electoral turnout? The results indicate that for the majority of the electoral rules being examined, there were no associated spillover effects on aggregate levels of non-electoral participation. In terms of electoral system proportionality, the models indicated that proportionality displayed no significant relationship with overall participation rates. This runs counter to the general claims of the political opportunity theory, that measures to improve the openness of a society should in turn influence non-electoral participation rates, as well as previous findings of a negative relationship between proportionality and non-electoral participation (Solt, 2015; van der Meer et al., 2009). One potential explanation for these differing results, may be due to the operationalisation of this independent variable, as the two studies referenced above used either a broad index that differentiates between consensual and majoritarian systems, or relied upon indicators of district magnitude, rather than the Gallagher index adopted by the present study.

Regarding voter registration, the inclusion of this variable builds upon previous work that has exclusively focused on the impact of registration rules on electoral turnout. The current findings, however, do not lend any support to the notion that the use of passive, or active registration systems has any bearing on overall levels of participation beyond voting.

Moving on to direct democracy, again the models indicate that referendum usage has no significant link with aggregate rates of non-electoral behaviour. As such, this fails to support the arguments regarding the educative effect of direct democracy, and how this can spur on further political action beyond the ballot box (Pateman, 1970). This is, however, in line with the findings of Kern & Hooghe's (2018) study of direct democracy using cross-national data, which also failed to uncover any significant relationship between referendum use and overall rates of non-electoral participation. Other research in this area tends to take the form of within-country case studies, such as Fatke and Freitag's (2013) project on Swiss regional direct democracy. While they found that referendum usage exerted a negative effect on non-electoral participation,

these results arguably reinforce the notion that the unique case of Switzerland should perhaps be studied in tandem with, rather than as part of, current examinations of wider cross-national patterns of direct democracy.

The one exception to the wider trend regarding electoral rules and overall participation rates was compulsory voting. All else being held constant, mandatory voting was associated with around a 10 percent increase in the predicted probability of having protested, and a 4.5 per cent increase in the likelihood of contacting politicians. The only activity for which there was no significant effect was working with others to influence government.

In terms of how these laws are enforced, the results are somewhat mixed. The low sample size for both of the compulsory voting categories, can lead to estimates that are overly sensitive to the inclusion or exclusion of specific cases. With regard to contacting politicians, it was actually weakly, rather than strictly enforced systems that were more likely to witness higher participation rates, thus undermining the argument that enforcement has any clear linear effect on participation. Again, this result may be due to the small number of cases included in the weakly enforced category. These results largely align with the previous literature on this topic, as while Córdova and Rangel (2017) found a positive relationship between compulsory voting and contacting politicians, these laws had little to no effect on other forms of participation. Past research has also been plagued with similar issues surrounding sample size, and both van der Meer et al. (2009) and Carreras (2016) found that the effects of compulsory voting on participation were both inconsistent across different model specifications, as well as the types of behaviour being examined. When viewed as a whole, the findings of the current study support the notion that compulsory voting in general, has a significant positive effect on some forms of non-electoral participation, namely, protest and contacting politicians. The lack of consistency from the models that explore how these laws are enforced, however, means that further research which contains a wider range of cases, with different levels of enforcement, is evidently needed to paint a clearer picture of how the implementation of this electoral rule impacts political participation. Overall, apart from the slight boost that compulsory voting may have on protest rates

and contacting politicians, electoral rules do not seem to influence aggregate levels of non-electoral participation.

The second key area explored by this study was to what extent are socio-demographic biases inherent in these political activities? The results indicate that there were several significant, but relatively minor effects at play. Common across all three activities was the finding that more educated citizens are over represented in each form of behaviour. This lends support to the claims of the resource mobilisation theory, regarding the role that education plays in equipping people with the necessary communication and social skills needed to participate in political affairs, especially when it comes to participation beyond the ballot box (Brady et al., 1995*a*,*b*).

In terms of age, these results highlight that different forms of non-electoral participation each contain unique characteristics their own right, and that the predictors and consequences of these types of behaviour can vary significantly. Referring back to the threshold model of political participation, these findings seem somewhat intuitive, as the activity most aligned with the traditional party-political framework, contacting politicians, is favoured by older citizens, while the more unconventional, and social forms of participation, such as protest and working with others, are more likely to be taken up by younger individuals. It is worth noting that the impact of age seems to be greater in the most unconventional form of involvement, protesting, as there is a participation gap of 5 percent associated between the young and old age groups here, but only 1-2 per cent across the other two dependent variables.

Consistent with much of the previous literature in this area, income seems to have a weaker effect on participation compared to the other two variables. While there was no significant income gap in terms of protest participation, there was a small difference of 1-2 percent across both contacting politicians and working with others. This is also in line with previous research, which found that the impact of income varied depending on the non-electoral activity are being examined (Córdova and Rangel, 2017; Solt, 2015; van der Meer et al., 2009). In terms of resources and these specific forms of behaviour, it appears that education plays a bigger role in influencing participation compared to income. It may be an entirely different story, however, when it comes to political

activities that more directly rely on financial resources, such as donating to political parties or causes, as well as buying or boycotting goods for ethical reasons. Further research that incorporates a wider range of political behaviour can evidently help to address these remaining empirical questions regarding income inequalities.

The previous two questions lead directly to the central research puzzle of the project, namely, whether electoral rules may have the potential to significantly alter the relationship between these key socio-demographic predictors and non-electoral participation. Taken as a whole, the results of the analyses indicate that electoral institutions have a very minor impact, if any, on inequality of non-electoral participation.

In terms of the specific electoral rules under examination, compulsory voting appeared to have the greatest influence on political involvement. For both protest and working with others, compulsory voting was associated with a significant reduction in the age gap compared to voluntary systems, although this size of this effect was far more pronounced for the protest category. In terms of the other two independent variables, there does not appear to be any significant relationship between compulsory voting, and the effect of income and education on participation. Regarding whether stricter enforcement of these laws enhances the apparent equalising effect on age, the results were somewhat inconsistent. Although strict enforcement reduced the age gap present in protest behaviour, there was no consistent effect on working with others, and it actually widened the age gap slightly in terms of contacting politicians. This largely mirrors the findings of previous works (Carreras, 2016; van der Meer et al., 2009), that failed to uncover any clear patterns that were consistent across different model specifications using these types of cross-level interactions. Taken as a whole, these findings suggest that the use of compulsory voting in general, may have some minor benefits in reducing the age gap present some forms of non-electoral participation, but has no impact on educational and income based inequalities. Furthermore, the relatively small number of cases across each of the compulsory voting categories, means that further research is evidently needed in order to better understand the relationship between how these laws are implemented and their impact on inequality of participation.

With regard to electoral system proportionality, the degree to which electoral out-

comes mirror the public vote does not seem to have much effect on alternative forms of participation. None of the interaction terms proved to be significant, apart from the practically negligible impact this rule exerted on the relationship between age and participation, the direction of which varied across each type of behaviour. The supposed boosts in political efficacy and satisfaction with democracy that arise when the public will is more closely represented by political outcomes, does not seem to significantly alter the demographics of who participates in politics beyond voting. Similarly, the evidence does not support the counter-argument that the added complexity of proportional electoral systems exacerbates educational inequalities related to political participation. Instead, these results imply that electoral system proportionality produces little to no spillover effects on non-electoral forms of participation. Future research may be able to test additional aspects of this concept, however, by exploring specific proportional electoral formulas, rather than the proportionality of electoral outcomes themselves. This would allow for an evaluation of whether any one voting system can find a balance between representativeness and complexity that can best engage citizens in electoral politics, and thus have the highest likelihood of spilling over into other forms of participation.

The way in which states choose to register their citizens to vote produced almost no impact on non-electoral forms of political participation. Somewhat surprisingly, however, the only exception to this pattern was the finding that passive registration appeared to reduce the unequal effect of education on working with others to influence government. This finding aligns with some of the previous turnout literature regarding the ability of automatic registration to reduce the barriers to participation for less educated citizens (Braconnier et al., 2017). It is still somewhat unclear why this trend was only present for this activity, however, and not for protest and contacting politicians. While not being statistically significant, the interaction effects for protest and contacting politicians did follow the same direction as the working with others category. Further research that includes both a wider spectrum of political behaviour, as well as multiple indicators of voter registration may be better equipped to address this issue. Alongside the active versus passive distinction, issues such as how strict the

registration requirements in active systems are, whether registration takes place within specific time-windows or runs right up to election day, and the ease in which citizens can re-register after changing address, could all significantly alter the relationship between this electoral rule and political inequality.

The use of national referendums was the final institutional variable included in the analysis. While the majority of the cross-level interactions produced no significant results, the direction of the few significant effects varied across different forms of participation. For the two non-institutionalised activities, protest and working with others, referendum usage was linked with a very small widening of the age gap, and marginally exacerbated educational inequalities. These results somewhat align with the findings of Kern and Hooghe (2018), that direct democracy was associated with greater levels of financial and educational inequality across non-institutionalised political participation. The different types of behaviour included as dependent variables, however, may be responsible for the different findings regarding age and income, even if the general trends are largely similar. For contacting politicians, the effect went in the opposite direction, implying that direct democracy reduces the effect of age and income on contacting elected representatives. One thing all these effects share in common, however, is that substantively they are extremely small, producing at most a 1-2 per cent difference in the participation gap. As such, these results lend very little support to either side of the debate in terms of how direct democracy influences inequality of participation. Further research which examines a wider range of political behaviours, as well as comparisons of the impact of referendums at different levels of governance may shed some more light on this area.

When evaluating these findings, it is essential that the potential weaknesses and advantages of my chosen research design are taken into account. The main limitations of the current project are primarily methodological in nature. The first issue to consider is the limited sample size resulting from the survey questions on non-electoral behaviour only being included in one wave of the CSES data. This means that the respective sub-samples for each variable are similarly reduced, which is particularly apparent for the compulsory voting measure. For strictly enforced compulsory voting

especially, there are just three election studies in the sample that fall into this category, and one of these is excluded from the base interaction model due to missing data regarding income. This in turn, led to the largely inconsistent results regarding compulsory voting enforcement and political participation, as robustness checks indicated that effects varied considerably across different model specifications. Future research that can draw upon a larger sample of election studies is clearly needed, in order to reinforce the external validity of the current findings.

Furthermore, one issue that is common to much of the literature in this area is the sheer variety of dependent variables included in studies of non-electoral participation. The fact that some studies use aggregated indexes of overall participation rates, or various combinations of specific behaviours, makes comparability of results extremely difficult. Identifying suitable data sources that offer a wide range of dependent variables, without sacrificing the number of election studies being included, is evidently the next step in assessing whether the present results are also applicable to other forms of non-electoral behaviour.

Another key limitation of this study is that due to the cross-sectional approach being used, we cannot rule out the possibility of reverse causation. Rather than electoral rules leading to changes in non-electoral participation, it could also simply be the case that countries with preexisting high or more unequal rates of protest, for example, are more likely to then adopt certain electoral rules. Longitudinal research that can examine cases over time with panel data may be the only way of truly addressing this issue. Despite this drawback, we can nonetheless rely on the theoretical expectations from the literature to give us an indication at the likely causal directions. Moreover, this project is more concerned with identifying patterns of inequality associated with these electoral rules, and thus can still directly address the core research questions at hand.

Despite these limitations, this project nonetheless directly contributes to the political institutions, political behaviour, and political inequality literature. There is a very limited body of research that tackles the specific area where these three concepts intersect. Existing studies on the impact of electoral rules on inequality of unconventional participation, almost exclusively focus on either a single electoral law, or one individual

level variable. The current project presents an overarching framework in to which to evaluate previous research in this area against new data sources, as well as expand its horizons to include new institutional features.

Moreover, exploring the potential consequences of structural changes to the way our political system operate, and how this relates to the current inequalities in political influence is an issue of clear social concern. Being structural in their very nature, the impact of any changes to electoral design may be felt for years beyond its initial implementation. This emphasises the importance of understanding the impact that these rules may have on already unequal forms of political action, as their effects, whether deliberate or unintentional, may be extremely difficult to reverse.

5.5 Conclusion

This project was conducted in order to answer the question of whether the design of our political systems influences both overall rates of non-electoral participation, as well as the socio-demographic biases present in these political activities. The final analysis explored the impact of: Compulsory voting, electoral system proportionality, voter registration, and direct democracy, on levels of protest, contacting politicians, and working with others to influence government.

With regard to the first question concerning aggregate participation rates, in general terms, electoral rules appear to have an extremely limited direct effect on non-electoral participation. Three of the electoral laws had no influence on participation rates whatsoever, while compulsory voting had a positive impact on two out of the three activities. As such, there is little evidence of the effects these rules have on turnout, spilling over to non-electoral forms of participation. These findings do, however, point to the potential of mandatory voting to influence citizens' relationship with politics beyond elections, however, further research is clearly needed to explore how the actual enforcement of these rules may influence this relationship.

The results of the analysis also confirmed many of the expectations from the academic literature regarding the socio-demographic inequalities present in non-electoral political participation. More educated citizens were overepresented across all three

forms of political action, while wealthier citizens were more likely to both contact officials and work with others to influence government. Age also had a clear impact on participation, but this varied depending on the type of activity being examined. Older citizens were more likely to contact politicians, while younger individuals were more likely to take part in the two more unconventional forms of participation. This highlights the importance of including a broad range of indicators in any study of political behaviour, and that certain activities may lend an unequal voice to specific sub-sections of the population.

The final research question examined whether electoral rules alter these existing inequalities in any meaningful way. From the current analysis we can see that in the vast majority of cases, these institutional variables had no impact on political inequality, while in the few instances where a significant relationships were present, they were not consistent across each type of behaviour, and their substantive impact was extremely small. The largest effect again seemed to be that of compulsory voting, and its ability to reduce the age gap present in protest participation by around 4 per cent. Taken as a whole, these findings imply that although compulsory voting may have some limited potential to influence participation beyond voting, electoral rules more generally seem to have little, to no effect on inequality of non-electoral participation.

Finally, with regard to the wider concept of political engagement, it would seem that pushes toward enacting certain electoral design choices in efforts to enhance voter turnout, or greater feelings of support towards the political system, would not face any major unintended consequences in terms of their effects on non-electoral political action.

Chapter 6

Conclusion

The previous three Chapters have explored the relationship between electoral laws and several of the individual components of political engagement, namely electoral turnout, political attitudes, and non-electoral participation. One of the central benefits of researching these topics via a consistent methodological approach, is that this provides a unique opportunity to evaluate how these structural features impact the full range of citizens relationship with political life. This concluding Chapter will therefore contextualise the existing empirical findings in light of the broader concept of political engagement, in order to answer the following central research questions: Are electoral rules related to overall levels of political engagement? To what extent is political engagement biased along socio-demographic lines? And, do electoral laws alter these socio-demographic biases?

Electoral Rules and Overall Levels of Political Engagement

In order to address this first question of whether electoral rules may have the potential to combat low turnout and public dissatisfaction with political affairs, as well how they relate to overall rates of non-electoral participation, I will consider each of the four key electoral laws in turn: Compulsory voting; electoral system proportionality; voter registration; and direct democracy. First, with regard to compulsory voting, it is well established that this rule, even if not backed up by strict penalties or enforcement, is associated with a notable increase in electoral turnout. Indeed, the findings

from Chapter 3 reinforce this general pattern, as both weakly and strictly enforced compulsory voting were linked with higher rates of electoral participation. What remains to be seen, however, is whether this positive effect also extends to other aspects of political support. Based on the findings outlined in Chapter 4, when it comes to political attitudes, it does not appear that compulsory voting fosters more supportive public perceptions of political life. Compulsory voting did not display any significant link with either satisfaction with democracy, or citizens' feelings of external efficacy. Contrary to the expectations from both sides of the debate within the academic literature, increased electoral participation does not appear to bring about closer attachment to the political process (Birch, 2009), but nor does it lead to an aggrieved population who feel disillusioned with politics because they have been forced to participate (Singh, 2016).

In terms of how this practice relates to non-electoral forms of political behaviour, the use of any form of compulsory voting in comparison to voluntary systems was linked with higher rates of both protesting, and contacting politicians, but displayed no effect on working with others to influence government. What is clear from Chapter 5, however, is that the degree to which these laws are enforced had a significant impact on this relationship. Only the strict enforcement of these laws was associated with increased protest rates, while it was weakly enforced compulsory voting that alone displayed a positive link with contacting politicians. These somewhat mixed findings, indicate that the undeniable boost in participation these laws have on voting rates, does not translate into a similar increase across other forms of political action. While certain non-electoral activities are indeed more popular in systems that use compulsory voting, this relationship is much weaker than its direct effect on turnout, and varies substantially depending on the level to which these laws are enforced.

In terms of the potential for electoral reform in this area to tackle the issue of political disengagement, while compulsory voting is by far the most effective means of increasing electoral turnout, it does not appear to have a similar positive effect across the remaining aspects of engagement.

The next structural feature being examined was the proportionality of election outcomes. In terms of its relationship with overall rates of engagement, more proportional outcomes were linked with both higher turnouts, and more positive evaluations of the political process. This aspect, however, did not display any relationship with non-electoral forms of political behaviour. Proportionality had by far the greatest impact on political attitudes across any of the electoral rules included in the analysis. This lends support to the claims within the academic literature that the ability of proportional electoral systems to mitigate the issue of wasted votes, and enhance the representativeness of electoral politics, can foster more positive attitudes toward one's political system (Aarts and Thomassen, 2008; Karp and Banducci, 2008). When electoral outcomes more closely reflect the public vote share, this seems to be linked with more satisfied citizens, who view their vote as a valuable tool with which to shape their political future. This positive trend is further reinforced by the fact that as well as proportionality being linked with more positive perceptions of the political process, citizens are also more likely to turn this into action, and actually use their vote in future elections.

With regard to participation outside of electoral politics examined in Chapter 5, the lack of significant effects here may be partially explained by the political opportunity theory. If citizens interests are more effectively represented through the use of proportional electoral systems, this may mitigate the need to resort to alternative forms of political action in order to make their voices heard. Moreover, the lack of any negative relationship with non-electoral participation would indicate that citizens are more likely to supplement non-electoral political action with other forms of engagement, rather than using one at the expense of the other.

Relating to engagement as a whole then, although more proportional electoral systems are not associated with a marked increase in non-electoral participation, ensuring that election results more closely reflect the public vote may be an extremely valuable tool in both increasing participation in elections, as well as fostering more positive attitudes towards the political process.

The ways in which voters are registered for elections varies immensely both within and across different national contexts. One of the clearest dividing lines within this wide range of possibilities, is the distinction between active, and passive registration systems. When this variable was included in the analyses in Chapters 3-5, it became clear that the use of either form of registration had no bearing on overall rates of engagement, across either political attitudes or behaviour. Even for the act of voting itself, the prerequisite of registration was not linked with any significant changes in overall turnout rates. In practical terms then, if a state's goal is to increase overall levels of engagement in political affairs, changing the current way in which citizens are registered should not be their first port of call.

The final structural component of political systems explored by this project was the use of direct democracy. Multiple variables were included across the three analyses in Chapters 3-5 in order to capture this concept. The two indicators that featured in all of the studies explored whether the use of at least one national referendum, as well the frequency of these contests, displayed any significant relationship with overall engagement in political affairs.

Regarding the first measure, which assessed the impact of holding at least one referendum in the previous election cycle, compared to cases with no experience of direct democracy whatsoever, the results indicate this aspect of direct democracy has very little impact on overall engagement. While referendum usage was associated with a slight increase overall rates of political efficacy, there was no significant relationship between this variable and satisfaction with democracy, voter turnout, or non-electoral participation. These results therefore lend extremely limited support to the claim that referendums act an alternative form of participation that socialises citizens into the wider political process. As to why this only seems to impact political efficacy, it may be the case that the direct link that referendums forge between individual votes and tangible policy outputs, since they lack the party-political middle man found in legislative elections, alters citizens perceptions regarding the power of their vote.

The second key indicator of direct democracy measured how often these contests

were held. The existing literature on this area was largely divided in terms of the theorised link between referendum usage and engagement. On the one hand, if referendums produce an educative effect, and can socialise citizens into politics more generally, then we would expect this positive effect to be even greater the more often these contests are held (Bowler et al., 2002; Pateman, 1970). Conversely, in the same way voters may become disinterested with politics if multiple elections are held within a relatively short space of time, this same type of voter fatigue may occur when referendum votes are held too frequently. The findings from Chapters 3-5, however, did support either of these approaches. Instead, the analyses indicated that there was no significant link between the frequency of referendums and any of the forms of political engagement. The only result that reached any degree of statistical significance was the negative link between referendum frequency and electoral turnout, however, this effect was almost exclusively driven by the three Swiss election studies included in the dataset, and was not consistent across different model specifications. This additional robustness test, does raise a noteworthy point, however, as the influence of these extreme cases illustrates that it may be useful to conduct separate research into the effects of direct democracy across the majority of cases where this tool is occasionally used, as opposed to the unique instances where referendums serve as the backbone of political decision making. If both types of cases are examined together, the unequal weighting of these extreme outliers may mask general trends that are apparent in the wider usage of this tool.

Chapter 3 also presented a useful opportunity to evaluate additional indicators of direct democracy. As the link between referendum use and electoral turnout is somewhat more established within the current academic literature compared to the other features of political support, and as this Chapter only examined one dependent variable, this was the most appropriate point to include any additional indicators. Building upon the previous theoretical arguments in this area, it would seem intuitive that any supposed benefits associated with the use of direct democracy, would be wholly dependent on the degree to which people actually take part in these contests. Even if it is the case that referendum votes provide citizens with an additional avenue into political affairs, which in turn fosters wider engagement in future elections, this effect

would only be of benefit to those who took part in the referendum in the first place (Smith, 2002: 894). As such, we would expect that in referendums which experience high turnout rates, these positive effects will be shared across a wide cross-section of society, while if turnouts are low, these effects will only be felt by those who are already somewhat engaged in political affairs. In terms of the empirical evidence discussed in Chapter 3, the analysis did not allow us to reject the null hypothesis for this theory. After controlling for the impact of the Swiss election studies on the models, the results indicated that the level of participation in referendums themselves did not display any significant relationship with overall electoral turnout rates. In light of the lack of significant effects for the previous dummy indicator of referendum use, it is not surprising that this turnout threshold failed to produce any notable findings. Evidently then, for high turnout referendums to have any hope of enhancing the positive effects of referendum use, there has to be a significant positive effect to begin with.

Taking all of these findings into consideration, my analyses indicate that the use of direct democracy has practically no relationship with overall public engagement in political affairs, across either the attitudinal, or behaviour components of support. While the impact that statistical outliers exerted on the models' estimates perhaps indicates that more attention should be spent on whether the extreme overuse of these contests may lead to negative outcomes, it would appear that claims regarding the ability of direct democracy to boost various aspects of political support, are largely unfounded.

After outlining these general patterns, what does all of this mean with regard to my first research question: Are certain electoral rules linked with overall levels of political engagement? If viewed from the perspective of policymakers seeking to maximise public participation and support toward political affairs, two key areas demonstrate some potential in this regard. Compulsory voting, unsurprisingly, exhibits by far the greatest impact on turnout rates of any of the institutional features. If a state's goal is solely to increase participation in elections, then the introduction of mandatory voting, and especially if strictly enforced, is without doubt the most effective course of action. If policy goals extend beyond this single aspect of engagement, however, then the scope of

this tool is far more limited. This measure, that fundamentally alters the way in which elections work, does not appear to address the issue of waning attitudinal support for political affairs. Its somewhat inconsistent links with non-electoral participation, again indicate that the impact of compulsory voting is generally limited to electoral turnout. The second major feature of electoral systems - that may be perhaps more palatable to the public and political elites across a wider range of political contexts - is the move towards electoral formulas that more closely reflect the public vote share received by each party. Although the effects were much weaker here compared to the impact of compulsory voting on turnout rates, more proportional elections were nonetheless associated with a significant boost in the overall likelihood of voting. Furthermore, citizens in more proportional elections were also more likely to feel satisfied with how their democracy works, as well as that their vote makes a big difference to what happens in their country. The remaining two electoral rules, voter registration, and the use of national referendums, displayed extremely little, if any relationship with political engagement. Perhaps the biggest takeaway from these findings is that for governments seeking potential avenues to increase public participation, and foster more positive attitudes towards political affairs, is that there does not appear to be any one institutional feature that has a universally positive effect across all aspects of engagement. From the extremely potent, but narrow impact of compulsory voting on turnout, to the somewhat more muted but wide ranging effects of proportionality on both voting and political attitudes, although they do not appear to boost other forms of political behaviour beyond voting, these are evidently two key areas that should be explored further in attempts to potentially enhance overall levels of political engagement.

Socio-demographic Inequalities Within Political Engagement

Beyond examining electoral rules in hopes of identifying potential avenues of enhancing overall rates of political support, the issue of how political engagement is distributed across different societal groups is also of central importance to the health of a democratic society (Easton, 1965). Even if countries enjoy relatively high rates of electoral turnout, or widespread support towards the political system, this may mask persisting

inequalities if these aspects of political influence are biased along socio-demographic lines.

The claims of the resource model of political participation (Brady et al., 1995*a*,*b*), maintain that both electoral and non-electoral political behaviour is biased in favour of those with more educational and financial resources at their disposal. Including measures of both education and household income in my present analysis allows for an overarching assessment of how these resources impact each aspect of political participation, as well as if they have similar effects on political attitudes. As well as these socio-economic factors, one of the strongest predictors, and in turn, sources of inequality in electoral participation identified by past research, is age. Again, the benefit of employing such a wide range of indicators regarding political engagement, means that I can test whether the pattern of younger citizens being less likely to engage in electoral politics, also extends to other forms of political engagement.

Moreover, before we can move towards potential solutions to this issue, the first logical step should be identifying the extent to which these socio-economic and demographic divides exist across different aspects of political engagement. After taking all of the results from Chapters 3-5 into consideration, perhaps the clearest finding is that substantial socio-economic inequalities exist across the full range of citizen engagement with political affairs. Citizens with a university education, were significantly more likely to vote, display positive attitudes towards their political system, and participate in other political activities beyond voting, compared to those who did not attend university. A similar pattern emerged in terms of household income. Wealthier citizens were again more likely to be engaged in political affairs across all of the variables included in the study, with the sole exception of protest participation.

In terms of the age gap in engagement, the results from Chapter 3 regarding electoral turnout fully support the notion that age has an extremely prominent effect on voting. This manifests itself as a curvilinear effect, with older citizens being significantly more likely to participate than younger electors, while this relationship weakens somewhat at the highest age ranges. The remaining two analyses in Chapters 4 and 5, however, indicated that this age gap is only present across a few aspects of non-

electoral engagement. Age displayed a positive, but far weaker relationship with both political efficacy, and contacting politicians compared to turnout, while it was actually younger citizens who were more likely to take part in protests, and work with others to influence government. With regard to the other attitudinal variable, satisfaction with democracy, age did not display any significant relationship with this feature. It is interesting to note that the aspects of engagement which are more closely aligned to formal electoral politics are the ones that display a positive link with age. Voting in elections, believing that voting makes a big difference to what happens, and contacting politicians, are all intimately tied to elections and traditional party politics. Participating in protests and demonstrations, or working with others to influence government, on the other hand, are far less institutionalised activities, that generally operate outside of the traditional political establishment. When it comes to the impact of age on citizens' interactions with political affairs, it would appear that the nature of this relationship depends almost entirely on the specific aspect of engagement being examined.

When viewed as a whole, the comprehensive range of variables included in the three preceding Chapters allows for a unique opportunity to evaluate how inequality of political influence presents itself across the full range of political engagement. While the impact of age on engagement appears to vary depending on the specific component of support under consideration, the remaining socio-economic variables display remarkably consistent results. It appears that the educational and income based inequalities that are a persistent feature of electoral politics, are also present across nearly all other forms of political engagement. This is clearly a worrying pattern, as it is groups with less resources at their disposal, who already bear the brunt of the negative effects of social and economic policy, who tend to be the most alienated from all aspects of the political decision making process. This wide ranging inequality of political influence, highlights the importance of casting our attention beyond the immediate factors that impact overall rates of political engagement, and instead shifting our focus towards what can be done to equalise these forms of political support.

Electoral Rules and Inequality of Political Engagement

My next research question attempts to directly address this point. Do electoral rules alter these socio-demographic biases present in political engagement? Throughout Chapters 3-5 I have evaluated the extent to which each of my key structural level variables share any significant relationship with the socio-demographic inequalities discussed above. Identifying patterns of engagement where these differences are minimised, can therefore serve as a crucial first step in offering potential institutional solutions to the issue of inequality of political influence. The following section will discuss each of my four electoral rules in turn, and evaluate their relationship with political inequalities across the full range of political engagement.

The first key electoral rule evaluated in relation to inequality of engagement was compulsory voting. While this electoral rule has an undeniable impact on overall rates of electoral turnout, it is unclear whether this also leads to more equal participation in elections, as well as the extent to which these effects carry over into political attitudes and non-electoral participation.

With regard to the findings of Chapter 3 on turnout inequality, any form of compulsory voting was associated with a substantial reduction in the unequal effects of age, education, and income on voting rates, in comparison to voluntary systems. When the way in which these laws were enforced was taken into consideration, the only significant difference between weakly and strictly enforced systems was that strict enforcement of these laws was linked with an even greater reduction in educational inequalities.

The results regarding political attitudes were somewhat more mixed, but again largely positive. Any form of compulsory voting was linked with a reduction in the age and education gaps across political efficacy, however, its relationship with income inequality varied depending on the degree to which these laws were enforced. For the satisfaction with democracy measure, again both forms of mandatory voting were linked with a significant reduction in educational inequalities, but this time also exacerbated the effect of age, with older citizens being more likely to feel satisfied with the way democracy works. While the relationship between compulsory voting and age and in-

come based inequalities in political attitudes are somewhat mixed, this rule nonetheless appears to be linked with a significant reduction in the education gap present across this aspect of political engagement.

When it comes to participation beyond the ballot box, the only consistent relationship between both forms of compulsory voting and engagement was a slight reduction in the age gap within protest participation. Apart from this relatively minor effect, compulsory voting appeared to have practically no relation to socio-demographic inequalities in non-electoral activities.

Taking all of these results into consideration, it would appear that compulsory voting demonstrates a great deal of promise in attempts to reduce socio-demographic inequalities across both electoral turnout and attitudinal support. It is worth noting, however, that the relationship between compulsory voting and political attitudes is somewhat less stable than its link with turnout rates, as the reduction in inequalities here were slightly more muted, and varied depending on both the level of enforcement, and type of attitude being examined. Interestingly, the supposed positive impact of compulsory voting on turnout rates did not seem to extend to most of the other forms of non-electoral participation. Future research that examines a wider range of non-electoral behaviour, and particularly those related to campaigning, or political parties, that are more intimately tied to electoral politics, may be able to further validate these findings. So based on these results, should all countries be working towards implementing compulsory voting laws? These largely positive findings should clearly be tempered by the political realities that surround this electoral rule. The immense upheaval that would be associated with the move from voluntary to compulsory elections may mean that this is not necessarily a viable political option for many policymakers to put to the public. Indeed there may be additional important social or cultural factors that are necessary conditions for the successful introduction of this practice. Countries with widespread dissatisfaction, or little trust in the political establishment for example, are unlikely to view the perceived restriction of individual liberty - whether unfounded or not - associated with compulsory voting as a price worth paying for a more equal political process. This highlights the need to explore other potential avenues of electoral

reform, which can either be used as an alternative, or perhaps even a precursor to the introduction of these laws, for cases where compulsory voting is not a viable policy option.

The second structural component being assessed in relation to socio-demographic inequalities was electoral system proportionality. One of the clearest findings from the models exploring proportionality within Chapters 3-5, was the link between more proportional electoral outcomes, and increased youth engagement. Proportionality was linked with a significant reduction in age inequalities, across turnout, the two attitudinal variables, and contacting politicians. While this relationship was significantly stronger for electoral turnout compared to the other variables, nevertheless, the positive correlation between age and engagement was reduced under more proportional electoral outcomes. Furthermore, although proportionality was associated with a marginal widening of age inequalities across both protest participation and working with others, the main effect between age and these forms of engagement was negative. This means that younger citizens were, on average, more likely to take part in these activities in the first place, and were even more likely to do so in more proportional electoral systems. One potential explanation may be that younger voters resonate with many of the features associated with proportional electoral outcomes, such as the enhanced representativeness of electoral politics, and the more consensual political approach that emphasises power sharing, political compromise, and decentralised political authority. Another factor may be that younger voters have weaker attachments the major political parties, and more proportional electoral systems therefore allow them to better express their political views by lending their support to smaller parties that align more closely with their own viewpoints. Furthermore, as less votes are wasted in proportional systems compared to instances where single-member constituencies are a forgone conclusion, the reduced need for strategic voting may also make voting more approachable for younger citizens, who have less experience with the electoral process. While the specific causal mechanisms at play here are not entirely self-evident, what is clear is that more proportional election outcomes share a clear link with engaging young people

across a broad range of political engagement.

Moving on to education, due to the supposed complexity of proportional electoral systems in comparison to majoritarian contests, we might expect that this feature would exacerbate educational inequalities across engagement. While the empirical evidence from Chapters 3-5 indeed found that proportionality was linked with a widening of the education gap in terms of voter turnout and satisfaction with democracy, these effects were substantively extremely small, and this electoral rule displayed no significant interaction effects across any of the other dependent variables. These findings therefore provide little, if any evidence that proportionality is linked with a widening of education inequalities.

Since the additional costs of adopting a more complex proportional electoral system are held to be primarily educational in nature, it was not expected that this feature would have any major impact on income inequality. Indeed, proportionality displayed no significant relationship with income across four out of the six dependent variables, while it had a marginal widening effect on turnout inequality, and slightly reduced income differences across political efficacy. In line with these initial expectations, proportionality seems to have very little relationship with income inequalities across political engagement.

After examining these findings then, how do they relate to the wider issue of addressing inequalities across the full range of political engagement? The clear link between more proportional electoral outcomes and youth engagement across both the attitudinal and behavioural features examined in this project, as well as its positive correlation with overall turnout rates and political attitudes, indicates that this may be an extremely valuable tool for policymakers in tackling socio-demographic inequalities in political affairs. While proportionality appears to have positive links across a number of features of political life, it is essential to note that this institutional feature does not demonstrate any clear links with reduced income inequalities, and to the extent that any relationship exists with disparities in education, this appears to be an extremely small, but negative link. While the move to more proportional electoral systems may boost overall rates of engagement, and help integrate more young people into political

affairs, it is clear that this feature cannot address the full range of current inequalities facing democratic systems. After examining the balance of these effects, however, it seems evident that the potential benefits outweigh any costs. The use of this practice, alongside additional institutional features that can address these remaining areas, or even if simply accompanied by adequate civic education programmes, however, clearly shows promise as a potential means of tackling political inequality.

The next institutional feature being examined was voter registration. The prevailing viewpoint within the academic literature in this area is that passive - otherwise known as automatic - registration should be associated with reduced socio-demographic inequalities across political engagement. Intuitively, adopting an electoral system where citizens are automatically added to the voting register, removes one of the potential barriers to participation that tend to disproportionately hinder younger, and less educated citizens from voting. While this argument primarily applies to electoral turnout, this current project also allows us to test whether any potential increase in participation, or reduction in inequality also carriers over to other forms of political engagement.

The findings from Chapters 3-5 lend some partial support to this approach, as passive registration is linked with a reduction in the unequal effect of age on both voting and satisfaction with democracy, as well as mitigating the impact of education on both working with others to influence government, and satisfaction with democracy. It is worth noting that the size of these effects are relatively small, however, and that voter registration appears to have no bearing on socio-demographic inequalities across any of the other forms of non-electoral behaviour. Although these findings generally support the notion that passive registration is associated with reduced socio-demographic inequalities, or at worst is a relatively benign feature of electoral systems, the analysis nonetheless produced some interesting findings that contradict this wider pattern.

Perhaps the most unexpected set of results was that active registration was linked with a significant reduction in the unequal effect of age and education on levels of political efficacy, as well as reduced income inequalities across voting, satisfaction with democracy, and efficacy. One potential explanation for this pattern is that the ad-

ditional barriers of active registration systems tend to be administrative, rather than financial, and thus may not necessarily increase the impact of income inequalities. Furthermore, the positive association between active registration and political efficacy in particular, ties back directly to the notion of 'sunk costs' discussed by Erikson (1981). If citizens must go through the additional effort of registering in the first place, those who have invested their time and effort in going through this process, may have a more positive evaluation of the power of their vote.

If we can take anything from this notably mixed set of results, it is that automatic registration does not appear to have the universally positive effects initially expected by the literature in this area. While passive registration was linked with reduced inequalities across turnout and satisfaction with democracy, it fared significantly worse compared to active systems when it came to income inequalities within political efficacy. These findings therefore suggest that a more complex relationship exists between voter registration and political inequalities than first thought. Future research that explores the differences in how active systems implement these laws, may be able to uncover if a sweet-spot exists between completely passive systems, and the unwieldy, complex bureaucracy present in some active systems. While complex registration procedures may impose additional barriers to participation, fully automatic systems also miss out on a useful opportunity to interact with citizens. Informing and educating citizens, especially young and first-time voters about the practicalities of the electoral process, and making registration as positive an experience as possible, could act as a small first step towards socialising citizens into political affairs. The act of having to register, if implemented in the above manner, could offer a low-cost interaction with the political process, that can act as a primer for future participation, and attitudinal support. In summary, these results suggest that the assumption that automatic registration necessarily leads to positive political outcomes should be replaced by a more thorough exploration of the specific ways in which registration procedures are put into practice.

The final link between electoral institutions and inequalities across political en-

gagement, focused on the use of direct democracy. The first key measure of referendum usage compared cases where at least one national referendum had been held since the previous legislative election, against systems with no experience of direct democracy over the same time period. When viewed as whole, the results from these models do not display any consistent relationship between referendum use and political inequality. While it may be expected that the use of referendums, and the need to become informed on additional political issues may widen educational inequalities, only two out of the six aspects of support displayed any significant link with direct democracy. Even these increases in the education gap across satisfaction with democracy, and working with others to influence government, however, were extremely small in size. The interaction with income produced a similar pattern, but this time in the opposite direction. Referendum use was associated with a marginal reduction in income inequalities across both turnout and contacting politicians, but failed to display any significant impact across any of the other aspects of engagement. Finally, with regard to age, while the interaction terms for political efficacy and all three non-electoral participation models produced statistically significant results, these effects never rose above 1-2 percent differences in participation, and followed no consistent pattern across each form of engagement.

In a similar vein, the frequency of these contests also appeared to have extremely little, if any impact on any of the forms of political engagement included in the analysis. The results in Chapter 3 regarding turnout inequality were extremely inconsistent, and varied almost entirely depending on whether or not the Swiss election studies were included in the analysis. Referendum frequency displayed no significant relationship with political attitudes whatsoever. While two out of the nine interaction effects regarding non-electoral participation were statistically significant, in practical terms the size of these effects were negligible.

The final aspect of direct democracy that was examined in Chapter 3, was the impact of turnout in referendums themselves on socio-demographic inequalities within legislative elections. As with the main effects of referendum usage on engagement discussed above, the initial hypotheses expected that low turnout referendums would be

associated with less equal participation in legislative elections, while high turnout votes would distribute the supposed educative effect of referendums across a wider subset of the population, thus reducing socio-demographic inequalities of participation. In terms of the empirical findings, while low turnout referendums were in fact linked with an increase in age inequality, and high turnout contests slightly reduced the education gap in legislative elections, these effect sizes were again extremely small. Moreover, the remaining interaction effects across the turnout models did not align with the hypotheses outlined above, and either failed to reach any degree of statistical significance, or were inconsistent once any outliers in the sample were accounted for. As with the main effects of referendum turnout on overall rates of engagement, there is very little, if any evidence to support the notion that low turnout referendums are linked with more unequal turnout rates in future elections, or that high turnout referendums reduce these inequalities.

Taking all of these findings into consideration, the empirical evidence suggests that direct democracy as a whole has very little impact on the socio-demographic inequalities present in political engagement. In the few instances where referendums display any significant relationship with political inequalities, these effects are extremely small, and do not tend to follow any consistent pattern. In terms of its policy implications, this project does not provide much evidence that the increased use of referendums may be a useful means of reducing the unequal impact that certain groups exert across political affairs. This does not mean that direct democracy should be completely overlooked, however, as several important questions remain that cannot be directly addressed by this project. While this research focuses on the impact of direct democracy at the national level, there may be something specific to small-scale, regional referendums that has a greater impact on citizen engagement when these contests take place at the community level. Moreover, as this study examines the use of referendums since the previous election included in each election study, this only capture information on referendum usage in last five or so years. It may be the case that direct democracy displays a significant impact on political engagement when viewed over the longer term, as gradual shifts in citizens' perceptions of how representative politics should

be put into practice may be more relevant than the direct impact of referendums on engagement immediately after they are held. A final area that may be useful to explore in future research, is the impact that specific referendum issues can have on levels of engagement. While the use of referendums in general seem to display little relationship with inequalities of political engagement, it may be the case that divisive political issues, such as self-determination, or contentious social issues, have more potent effects in comparison to more technical, or routine referendum topics. In summary then, while there is a great deal left to explore regarding how direct democracy relates to inequalities in political engagement, the current analysis does not support the notion that this is an effective tool for addressing this pressing social issue.

The Relationship Between the Behavioural and Attitudinal Components of Political Engagement

My final research question relates to whether the separate behavioural and attitudinal aspects of public involvement in political life discussed above, can be considered as constituent parts of the wider concept of political engagement. Evaluating my findings across all of the empirical analyses in Chapters 3-5 allows me explore whether these aspects of political support fundamentally differ from one another, or share any core characteristics.

The first step in answering this question requires that I compare my findings against the existing approaches to the study of political engagement within the current academic literature. Perhaps the most notable drawback of much of the research in this field is that citizens' attitudes toward the actors and institutions of government, and their actual participation in political affairs are often studied entirely independently of one another. While there are a common set of indicators found in practically all studies of political engagement: from measures of individual attitudes such as political trust, political efficacy, and satisfaction with democracy (Fisher et al., 2011; Kim, 2015; Linde and Ekman, 2003); as well as behavioural aspects such as electoral turnout and political protest (Blais, 2000; Meyer, 2004; van Aelst and Walgrave, 2001), the term is applied extremely inconsistently to various combinations of these factors. This

tendency to prioritise either attitudinal or behavioural indicators to the exclusion of the other means that researchers often operationalise political engagement extremely narrowly, focusing on only one aspect of citizens' relationship with the state, rather than attempting to construct a more detailed overall picture of how the public actually interacts with the political process. Furthermore, the methodological inconsistencies inherent in these studies make comparisons of empirical findings extremely difficult across different contexts. One further consequence of this situation, is that authors who exclusively study either of these aspects of political support often assume that the presence of one of these attributes is a sufficient indicator of the health of a democratic society (Norris, 2011).

In terms of my empirical results, while the remarkable consistency in the impact of socio-economic characteristics across both political attitudes and participation, might imply that any effects on one aspect of support are indicative of what happens across the full range of citizens relationship with political affairs, this does not tell the full story. Although income and education had an unequal effect across nearly all forms of engagement, the size of these effects varied significantly depending on the specific activities or attitudes being examined, while the relationship between age and engagement was even more volatile. These results therefore make it clear that examining patterns of engagement across just one aspect of political support, may misrepresent wider patterns of behaviour and attitudes towards political life. The interconnectedness of these aspects of engagement, coupled with their own unique implications in terms of both inequality of support and their links with political institutions, highlights that we cannot necessarily infer the true nature of the relationship between the public and their political systems based on a single indicator.

If the current piecemeal approach to studying political engagement is somewhat problematic, then what alternative options are available to scholars? The system support theory outlined by David Easton, offers an extremely useful framework with which to explore the concept of political engagement. My current project allows me to test several of the theoretical assumptions of this approach against up to date, cross-national empirical data, as well as examine areas that this approach fails to adequately address.

One of the key contributions of my current analysis, is the exploration of the potential causes of diffuse support, which relates to deeper, underlying attachments to the political system, in comparison to short-term fluctuations in specific support. Although my methodological approach does not allow me to directly test the direction of causality, it nevertheless can uncover whether any clear links exist between my key structural variables and these diffuse forms of political engagement. The significant relationship found between compulsory voting and electoral system proportionality in relation to both overall rates of voter turnout and political attitudes, as well as inequalities within these phenomena, lends significant support to the expectations of the system support model. This link is an important step forward in improving our understanding of the factors that have the potential to influence this aspect of support that is held to be so essential for the survival of democratic regimes.

Perhaps the most important issue omitted by the system support approach, however, is the problem of inequality of political influence. The results outlined in the previous sections make clear that a significant gap exists across practically all forms of political engagement, wherein political attitudes and participation are consistently biased against those with less socio-economic resources. Thus, as well as addressing the issue of overall levels of political disengagement, the inequality of political support should also be of direct concern to both scholars and policymakers alike. If Easton claims that low levels of diffuse support can prove fatal to the health of a democratic society, then surely this threat will be magnified even further when diffuse support is concentrated within a narrow section of the population. Systems with both low and unequal levels of diffuse support should therefore be even more vulnerable to democratic failure, meanwhile, societies enjoying relatively high overall rates of support, may nonetheless mask persisting inequalities that undermine the foundations of democratic politics. While the current project explores the potential of electoral institutions to address this issue of political inequality, it is clear that this relationship should receive a great deal more attention than it currently does.

The central takeaway from these findings, is that the relationship between the public and their political systems is an inherently multi-dimensional and complex one.

Attempts to understand this phenomena that either only explore narrow aspects of the full scope of citizens engagement with political life, or fail to acknowledge the unequal distribution of these relationships, will inevitably fail to paint the full picture of how citizens interact with political affairs.

Limitations

When evaluating the overall findings of the project at hand, it is crucially important to reiterate the potential limitations of this research. Beyond the specific drawbacks associated with each of the three analyses that are outlined in more detail in Chapters 3-5, there are two major areas that pose some issues with regard to my findings.

One initial drawback of the approach taken by this study, is the inevitable loss of detail that comes with the use of large-N cross national survey data. While this project explores a wide range of both political attitudes and behaviours, some key aspects of citizens' interactions with political life are not included due to lack of data across the full range of cases. In terms of attitudes, political trust is perhaps the most important variable that was omitted from the current analysis, while the examination of political behaviour does not include activities such as signing petitions, ethical consumerism, or working/donating to political parties. Future research that makes use of a more restricted sample size, may be able to rely on a wider range of survey questions that include these key aspects of political support, and can better reflect the multidimensional nature of citizens relationship with political life. As such, even though this project cannot examine every aspect of political engagement, it nevertheless serves as a complementary methodological approach alongside previous works that employ somewhat more detailed indicators across a smaller sample of cases.

Perhaps the biggest limitation of my chosen approach is the inability to directly address the issue of causality. While these results can point to the existence of clear relationships between each set of variables, this does not allow us to rule out the possibility of reverse causality. Rather than certain electoral rules resulting in changes to how citizens' perceive or take part in their political systems, it could be the case that more satisfied, or more participatory societies are in turn more likely to adopt certain

institutional arrangements. Future research that makes use of panel data, and can test the effects of these electoral rules over time, is clearly needed in order to directly address this issue of causality. Despite this drawback, we can nonetheless rely on the theoretical expectations from the literature to give us an indication at the likely causal directions. Moreover, as this project is also concerned with identifying patterns of inequality associated with these electoral rules, this approach can still directly address the core research questions at hand.

Contribution

Despite these limitations, this project nevertheless makes a significant contribution to our current scientific understanding of electoral laws and political engagement in several key ways. First, although the link the between electoral rules and overall voting rates has received a great deal of attention in the current academic literature, this project greatly expands the scope of this research agenda to explore the far more underdeveloped link between electoral rules and political attitudes, and non-electoral behaviour. Exploring the broader impact of any potential structural reforms is of crucial importance, as even if certain rules are associated with higher rates of electoral turnout, this is only beneficial to democratic societies if it does not come at the cost of other aspects of engagement. Moreover, the fact that these types of long-term structural changes are by their very nature enduring features of political systems, and are often extremely costly and time consuming to implement or rescind, means that societies may be dealing with any unintended consequences of electoral reforms for decades to come.

A second area where this project makes a significant contribution is its focus on how institutional features interact with political inequalities. This relationship is one of the clearest gaps in the current literature across all three types of political engagement examined by this project. While many of the socio-demographic biases that plague democratic systems have been studied for decades, institutional features are often included as mere control variables in these analyses, and when they are the focus of attention, this is typically limited to their impact on aggregate rates of engagement,

rather than differences across societal groups. Examining how levels of public engagement vary at the aggregate level in isolation, can lead to a skewed interpretation of reality, as if the voices of certain groups are overrepresented, while others are completely absent from political debate, this clearly undermines the principles of equality, fairness, and representation that underpin the foundations of democratic politics. Expanding the focus of the electoral institutions literature more directly toward social inequalities, is therefore a crucially important step in improving our understanding what potential solutions political systems can offer to this enduring issue.

Perhaps the most important contribution of this project, is the comparability that comes with the use of a consistent methodological approach across such a wide range of institutional features and political interactions. While a vast amount of literature exists that examines various combinations of my key independent and dependent variables, they typically examine the impact of either a single electoral rule on engagement, or focus exclusively on either political behaviour or attitudes. Simply aggregating the array of findings within the literature, however, does not allow us to construct a clear picture of the full scope of citizens relationship with politics, due to the wild inconsistencies in terms of the cases and data selection used, the statistical models applied in the analysis, as well as both the specific variables being included, and how they are operationalised. This project offers a unique opportunity to explore the relationship between these key variables, in a manner that more accurately reflects the political realities of how our political systems are structured, as well as the complexity of citizens relationship with political life.

Another added contribution of this project is the introduction of an original dataset on voter registration, which allows for the exploration of the impact of this institutional feature beyond its immediate effects on electoral turnout. Furthermore, the creation of a novel measurement of referendum usage that can account for turnout in these contests themselves, is another development that can be applied to future research on direct democracy across both cross-national and country-specific research designs.

One further benefit of the project at hand, is that the use large-N cross national survey data makes it possible test the external validity of previous work based on

within-country case studies, or small scale experimental research. Research on direct democracy and voter registration in particular, tend to focus primarily on unique cases such as Switzerland and the United States, which offer a great deal of variation at both the state or regional levels. My research therefore makes it possible to test whether any patterns of behaviour within these specific contexts are applicable across democratic societies more generally. Moreover, the findings of this project also contribute to this cycle of building upon existing scientific knowledge, as the broader cross-national trends uncovered here, can help us contextualise previous work in this area, and sets a clear foundation for future work that makes use of more detailed case studies.

Finally, this project also has wide ranging implications beyond the scientific literature in this area. Uncovering the broader patterns behind the relationship between our political systems and both overall rates of engagement, and the socio-demographic inequalities within political support is also of direct relevance to policymakers. These results can offer guidance toward areas that may have potential in addressing the pressing social issues of political disengagement, and the alienation of the most disadvantaged sections of the population from political affairs.

Conclusion

Alongside the remaining questions regarding the causal direction behind the patterns uncovered by this project, my research also points a wide range of areas that can be explored by future research. One such case, is that since some of these electoral rules appear to influence multiple aspects of engagement, it may also be worth exploring how these structural features interact with one another. The impact of any of these laws may be moderated by the presence of one or more additional rules. Compulsory voting for example, may lead to different political outcomes depending on the type of registration procedure, or the specific electoral formula in use.

Moreover, the range of potential tools available to policymakers attempting to combat inequality of political engagement are not limited to the four electoral rules examined in the current project. Other key aspects of political systems, such as the use of electronic voting, the level of devolution or federalism within a country, as well as the

specific types of electoral formulas that are used within consensual electoral systems, may all offer valuable insights into how best to tackle this pressing social issues.

Another potential area that deserves further attention, is evaluating previous instances where electoral reforms have been enacted in order to see whether there are any underlying patterns that can predict the success or failure of these policies. To what extent are there any necessary or sufficient conditions in a country's cultural, social, and political landscape for these types of reforms to be effective? With regard to specific reforms, is there, for example, a minimal baseline level of trust towards the political system required for compulsory voting laws to be effective? Or do certain electoral or party systems contain a built-in biases that make the passing of reforms less likely?

While this project is primarily focused on how individual citizens respond to structural changes to their political system, the ways in which political elites respond these changes is also of great interest. Do institutional changes that alter the degree of participation in electoral politics, have a resulting impact on the preferences of political elites? Or do the patterns of behaviour that currently alienate many citizens from political affairs continue to exist, irrespective of structural changes? This is especially relevant since the demographic make-up of the electorate can be fundamentally altered following the implementation (or revocation) of compulsory voting rules, or changes to the way voters are registered. It remains to be seen how political elites would respond to this type of expansion of the electorate. It would be interesting to test whether the campaigning methods, manifesto pledges, political discourse, and policy goals of political parties shift to appeal to these newly engaged voters. This research agenda is centrally important to the wider electoral institutions literature, as even if changes such as compulsory voting can boost rates of participation, unless the other side of the public-politician relationship changes to better reflect the wants and needs of these newly enfranchised groups, this may nevertheless lead to further political disengagement.

In summation, while it appears that certain institutional features of our political systems, such as compulsory voting, and proportional electoral formulas can be useful

tools in tackling the issue of low and unequal levels of political engagement, it is clear that there is no single reform that can hope to address these issues across all aspects of engagement. Lacking any such magic bullet, it is evident that a range of avenues must be explored in order to address the issue of political disengagement.

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Appendix A

Voter Turnout

Appendix A. Voter Turnout

Case Selection

The units of analysis in the project are individual survey respondents nested within election studies (or country-years). Survey waves 2-4 of the Comparative Study of Electoral Systems were used to create the final dataset which contains information on 116,000 individuals, in 97 election studies, across 43 countries, between 2001-2016.

Some election studies were removed from the original sample of cases included in CSES for various reasons listed below. First, any non-democratic regimes were excluded. The Polity IV combined democracy measure was used to identify any non-democratic regime, with election-studies with a score of below 6 being removed. This included Belarus 2008 (-7), Thailand 2007 (-1), Kyrgyzstan 2005 (3), and Turkey 2015 (2).

Cases with a significant degree of missing information across any of the key independent and dependent variables were then removed. This included: Hong Kong 2004 & 2008 - missing gini, Gallagher index, and district magnitude data; Canada 2008, 2011 & 2015 - large amount of missing information for party identification and turnout variables; Romania 2004 - missing large amount of data for the turnout variable; Philippines 2004, 2010 & 2016 - missing information on vote share and seats won in previous elections; Albania 2005 - unreliable turnout data, reported turnout values differed from official post-election figures by upwards of 30 per cent.

In order to ensure for an appropriate comparison across the effective number of parties, closeness of the election, and proportionality variables, only legislative elections were included in the final case selection. CSES election studies that only provided data on presidential contests were removed, with the following cases being excluded for this reason: Brazil 2006 France 2002, France 2012, Romania 2009, Romania 2014, Russia 2004, Taiwan 2004, Taiwan 2008, United States of America 2004, United States of America 2008, United States of America 2012.

Robustness Checks

Missing Data

In the full CSES data there were some studies that did not include questions on household income or political knowledge. Of the 108 election studies included in the full dataset, 97 contained information on all the variables included in the interactive models. In order to test whether the omission of these cases had any direct impact on the model estimates, each interactive model was run with: all variables included; with income excluded from the analysis; and with income and political knowledge excluded from the analysis. This makes it possible to see whether the main and interaction effects are consistent across each sample.

Table A.1: Electoral Laws Frequency Table

Electoral Law		**Full set of CSES Cases**		**Cases with all Key Variables**	
		N	**%**	**N**	**%**
Compulsory Voting	Voluntary Voting	84	(77.8%)	77	(79.4%)
	Weakly Enforced CV	16	(14.8%)	15	(15.4%)
	Strongly Enforced CV	8	(7.4%)	5	(5.2%)
Voter Registration	Passive	84	(77.8%)	75	(77.3%)
	Mixed	6	(5.6%)	5	(5.2%)
	Active	18	(16.6%)	17	(17.5%)
Referendum Turnout	No Referendums Held	74	(68.5%)	68	(70.1%)
	$\leq$ Last Election	24	(22.2%)	21	(21.6%)
	$>$ Last Election	10	(9.3%)	8	(8.3%)
	Total Cases	108		97	

Variable Coding

Voter Registration

Active voter registration refers to cases where the registration process is initiated by the voters themselves, and requires their active participation in order to be placed on

the electoral roll. This usually involves either simply filling out an application form, or visiting a government registry office.

Passive systems are those where the voter registration process is fully automatic, requiring practically no additional input from citizens. These registers are created and regularly updated via either public canvassing, or existing national population registers.

The mixed category includes instances where states are transitioning from active to passive systems, but the new automation has not been fully put into practice. One such case is France, where following a change in the law in 2006, voters are now required to be registered and citizens are automatically entered on to the system on their 18th birthday (OCSE, 2019). In the first few years following this amendment, however, the laws were often applied inconsistently, and unregistered citizens over the age of 18 nevertheless still had to manually register (Braconnier et al., 2017; Massicotte et al., 2004; OCSE, 2019).

States where registration is generally active and requires citizen involvement, but significant resources are put into contacting voters to help register them were also coded as 'mixed' systems. This includes South Africa, where although registration is citizen initiated, tens of thousands of workers are hired during every election cycle to take part in nationwide registration drives (Rosenberg and Chen, 2009: 30). Likewise, the registration system in Britain still requires some citizen input, but the government annually canvasses households in an attempt to register new voters (OCSE, 2019; Rosenberg and Chen, 2009).

The final case included in this 'mixed' category is Thailand, where individuals are issued a 'house book' by their municipality which enables them to take part in elections. The initial application process for this document is not government-led, however, but rather is taken up by housing developers as and when new projects are completed, or by citizens who have recently moved address (Thai Law Online, 2019). This newly developed original dataset, which supplements the CSES election data, makes it possible to test whether the extra costs associated with having to manually register has any impact on citizens' decision of whether or not to vote.

Election Win Margin

The closeness of the election result variable refers to the current election being examined. While this is obviously a post-hoc figure, it is theorised that the perceived closeness of the election would be expressed through media reports and/or polling beforehand, and that voters would be more likely to take part in tighter contests, since there is a greater chance of their vote being a decisive one (Geys, 2006).

Additive Models

The following table displays the output for the models which contain all of the key independent and dependent variables, but with no interaction terms. When cross-level interaction terms are added, the effect of each electoral law is conditional on the individual level variable included in the interaction. Running these additive models therefore allows us to directly examine the unconditional main effect of each electoral rule on turnout.

As can be seen by comparing the output of Models 1-4 with the interactive models below, the coefficients for the electoral rules and individual level variables are consistent across both model specifications. For all of the key independent variables, the coefficients match up exactly in terms of their direction and statistical significance, with extremely marginal changes in the effect sizes.

Table A.2: Electoral Rules and Turnout - Full Additive Models

	Model 1	Model 2	Model 3	Model 4
Intercept	1.062*** (0.121)	1.103*** (0.120)	1.136*** (0.137)	1.110*** (0.133)
Compulsory Voting (dummy)	1.257*** (0.230)		1.240*** (0.247)	1.229*** (0.240)
Weakly Enforced Compulsory Voting		0.960*** (0.256)		
Strictly Enforced Compulsory Voting		2.027*** (0.391)		
Proportionality	0.457** (0.169)	0.546** (0.169)	0.418* (0.180)	0.439* (0.175)
Mixed Registration	0.447 (0.372)	0.657 (0.374)	0.488 (0.391)	0.487 (0.381)
Active Registration	0.024 (0.233)	0.256 (0.248)	0.073 (0.249)	0.014 (0.243)
Referendum Frequency	−0.507** (0.157)	−0.480** (0.154)		
Referendum Held			−0.143 (0.173)	
Low Turnout Referendum				0.064 (0.191)
High Turnout Referendum				−0.617* (0.269)
Population (log)	−0.204 (0.178)	−0.149 (0.176)	−0.200 (0.189)	−0.128 (0.185)
Win Margin	0.047 (0.174)	0.047 (0.170)	0.063 (0.184)	0.074 (0.179)
GDP/Capita (log)	0.088 (0.262)	0.130 (0.259)	0.057 (0.278)	−0.082 (0.272)
Gini	−0.285 (0.225)	−0.327 (0.222)	−0.311 (0.236)	−0.315 (0.229)
ENP	−0.252 (0.178)	−0.172 (0.177)	−0.308 (0.188)	−0.282 (0.183)
Concurrent elections	0.877* (0.442)	0.491 (0.461)	0.947 (0.484)	0.696 (0.481)
Old Democracy	0.787*** (0.223)	0.636** (0.229)	0.726** (0.235)	0.836*** (0.231)
Age	0.677*** (0.018)	0.677*** (0.018)	0.677*** (0.018)	0.677*** (0.018)
Age Squared	−0.607*** (0.033)	−0.607*** (0.033)	−0.606*** (0.033)	−0.606*** (0.033)
Education (uni)	0.328*** (0.026)	0.328*** (0.026)	0.329*** (0.026)	0.329*** (0.026)
Party ID	1.030*** (0.020)	1.029*** (0.020)	1.030*** (0.020)	1.031*** (0.020)
Income	0.359*** (0.019)	0.359*** (0.019)	0.359*** (0.019)	0.359*** (0.019)
Political Knowledge	0.730*** (0.019)	0.730*** (0.019)	0.730*** (0.019)	0.730*** (0.019)
Groups	97	97	97	97
Observations	116,298	116,298	116,298	116,298
ICC	0.118	0.112	0.129	0.122
Log Likelihood	−41,334.050	−41,331.210	−41,338.620	−41,336.160
Akaike Inf. Crit.	82,708.090	82,704.420	82,717.240	82,714.320
Bayesian Inf. Crit.	82,901.370	82,907.360	82,910.520	82,917.260

*p<0.05; **p<0.01; ***p<0.001

Full Interactive Models

The following tables display the output for the full interactive models for each electoral law. For the compulsory voting, proportionality, and voter registration tables: Model 1 includes all individual level variables, while Model 2 is excludes the household income variable, and Model 3 has both income and political knowledge removed.

For the referendum tables: Model 1 includes the full range of cases. Model 2 has all three Swiss election studies removed.

Table A.3: Compulsory Voting (Dummy Measure) and Turnout - Full Models

	Model 1	Model 2	Model 3
Intercept	1.005*** (0.122)	0.916*** (0.114)	0.887*** (0.107)
Compulsory Voting	1.497*** (0.233)	1.649*** (0.211)	1.608*** (0.192)
Proportionality	0.451** (0.169)	0.453** (0.157)	0.422** (0.144)
Mixed Registration	0.407 (0.372)	0.334 (0.350)	0.258 (0.318)
Active Registration	0.013 (0.234)	−0.049 (0.211)	−0.058 (0.198)
Referendum Frequency	−0.513** (0.157)	−0.492** (0.151)	−0.466** (0.144)
Population (log)	−0.208 (0.178)	−0.280 (0.161)	−0.237 (0.152)
Win Margin	0.052 (0.173)	0.126 (0.156)	0.042 (0.145)
GDP/Capita (log)	0.105 (0.261)	0.124 (0.225)	0.105 (0.214)
Gini	−0.283 (0.224)	−0.231 (0.204)	−0.218 (0.190)
ENP	−0.259 (0.177)	−0.338* (0.167)	−0.340* (0.156)
Concurrent elections	0.849 (0.441)	1.220** (0.382)	1.209*** (0.357)
Old Democracy	0.804*** (0.223)	0.792*** (0.201)	0.751*** (0.191)
Age	0.761*** (0.020)	0.822*** (0.019)	0.719*** (0.016)
Age Squared	−0.418*** (0.038)	−0.561*** (0.036)	−0.711*** (0.030)
Education (uni)	0.354*** (0.028)	0.505*** (0.027)	0.624*** (0.022)
Party ID	1.094*** (0.022)	1.188*** (0.021)	1.228*** (0.018)
Income	0.437*** (0.021)	0.551*** (0.020)	
Political Knowledge	0.804*** (0.021)		
CV*Age	−0.344*** (0.049)	−0.370*** (0.047)	−0.278*** (0.041)
CV*Age Squared	−0.556*** (0.077)	−0.490*** (0.073)	−0.362*** (0.064)
CV*Education (uni)	−0.177* (0.074)	−0.279*** (0.070)	−0.300*** (0.060)
CV*Party ID	−0.387*** (0.051)	−0.438*** (0.048)	−0.479*** (0.043)
CV*Income	−0.316*** (0.051)	−0.333*** (0.048)	
CV*Political Knowledge	−0.430*** (0.050)		
Groups	97	105	108
Observations	116,298	130,198	163,440
ICC	0.12	0.11	0.10
Log Likelihood	−41,160.280	−45,711.240	−59,931.020
Akaike Inf. Crit.	82,372.560	91,470.470	119,906.000
Bayesian Inf. Crit.	82,623.820	91,705.110	120,126.100

Note: *p<0.05; **p<0.01; ***p<0.001

Proportionality = Inverted Gallagher index score of previous election

Appendix A. Voter Turnout

Table A.4: Compulsory Voting (Ordinal Measure) and Turnout - Full Models

	Model 1	Model 2	Model 3
Intercept	1.048*** (0.119)	0.957*** (0.110)	0.930*** (0.106)
Weak CV	1.179*** (0.256)	1.294*** (0.230)	1.258*** (0.225)
Strict CV	2.360*** (0.412)	2.576*** (0.343)	2.389*** (0.293)
Proportionality	0.545** (0.168)	0.549*** (0.154)	0.476*** (0.143)
Mixed Registration	0.631 (0.371)	0.559 (0.343)	0.396 (0.314)
Active Registration	0.269 (0.246)	0.204 (0.219)	0.162 (0.213)
Referendum Frequency	−0.484** (0.152)	−0.461** (0.145)	−0.432** (0.142)
Population (log)	−0.146 (0.173)	−0.192 (0.157)	−0.173 (0.151)
Win Margin	0.053 (0.168)	0.104 (0.151)	0.021 (0.142)
GDP/Capita (log)	0.156 (0.254)	0.167 (0.217)	0.166 (0.209)
Gini	−0.326 (0.219)	−0.285 (0.198)	−0.244 (0.187)
ENP	−0.170 (0.175)	−0.247 (0.162)	−0.305* (0.153)
Concurrent elections	0.418 (0.458)	0.713 (0.400)	0.871* (0.375)
Old Democracy	0.642** (0.225)	0.646** (0.200)	0.612** (0.192)
Age	0.761*** (0.020)	0.822*** (0.019)	0.719*** (0.016)
Age Squared	−0.418*** (0.038)	−0.561*** (0.036)	−0.711*** (0.030)
Education (uni)	0.354*** (0.028)	0.505*** (0.026)	0.624*** (0.022)
Party ID	1.094*** (0.022)	1.188*** (0.021)	1.227*** (0.018)
Income	0.437*** (0.021)	0.551*** (0.020)	
Political Knowledge	0.804*** (0.021)		
Weak CV*Age	−0.347*** (0.052)	−0.377*** (0.050)	−0.302*** (0.045)
Weak CV*Age Squared	−0.594*** (0.083)	−0.494*** (0.080)	−0.290*** (0.070)
Weak CV*Education (uni)	−0.102 (0.081)	−0.197* (0.078)	−0.242*** (0.066)
Weak CV*Party ID	−0.408*** (0.053)	−0.447*** (0.051)	−0.467*** (0.046)
Weak CV*Income	−0.338*** (0.053)	−0.377*** (0.051)	
Weak CV*Political Knowledge	−0.456*** (0.053)		
Strict CV*Age	−0.281* (0.123)	−0.320** (0.103)	−0.188* (0.086)
Strict CV*Age Squared	−0.344* (0.176)	−0.489** (0.149)	−0.664*** (0.128)
Strict CV*Education (uni)	−0.593*** (0.172)	−0.661*** (0.147)	−0.536*** (0.122)
Strict CV*Party ID	−0.218 (0.144)	−0.399** (0.124)	−0.568*** (0.107)
Strict CV*Income	−0.158 (0.144)	−0.042 (0.121)	
Strict CV*Political Knowledge	−0.225 (0.142)		
Groups	97	105	108
Observations	116,298	130,198	163,440
ICC	0.11	0.10	0.09
Log Likelihood	−41,150.140	−45,700.760	−59,921.340
Akaike Inf. Crit.	82,366.280	91,461.520	119,896.700
Bayesian Inf. Crit.	82,685.190	91,754.830	120,166.800

Note: *p<0.05; **p<0.01; ***p<0.001

Proportionality = Inverted Gallagher index score of previous election

Table A.5: Compulsory Voting and Turnout - Enforcement Level Hypothesis Test

	Model 1
Intercept	2.227^{***} (0.240)
CV: Voluntary Voting	-1.179^{***} (0.254)
CV: Strictly Enforced	1.181^{*} (0.461)
Proportionality (lagged)	0.545^{**} (0.167)
Mixed Registration	0.630 (0.369)
Active Registration	0.269 (0.246)
Referendum Frequency	-0.484^{**} (0.152)
Population (log)	−0.145 (0.173)
Win Margin	0.053 (0.168)
GDP/Capita (log)	0.155 (0.254)
Gini	−0.326 (0.218)
ENP	−0.169 (0.175)
Concurrent elections	0.417 (0.458)
Old Democracy	0.642^{**} (0.225)
Age	0.413^{***} (0.048)
Age Squared	-1.012^{***} (0.074)
Education (uni)	0.251^{***} (0.076)
Party ID	0.686^{***} (0.048)
Income	0.099^{*} (0.049)
Political Knowledge	0.348^{***} (0.048)
Voluntary Voting*Age	0.347^{***} (0.052)
Voluntary Voting*Age Squared	0.594^{***} (0.083)
Voluntary Voting*Education (uni)	0.102 (0.081)
Voluntary Voting*Party ID	0.408^{***} (0.053)
Voluntary Voting*Income	0.338^{***} (0.053)
Voluntary Voting*Political Knowledge	0.456^{***} (0.053)
Strict CV*Age	0.066 (0.130)
Strict CV*Age Squared	0.250 (0.187)
Strict CV*Education (uni)	-0.490^{**} (0.186)
Strict CV*Party ID	0.191 (0.150)
Strict CV*Income	0.180 (0.151)
Strict CV*Political Knowledge	0.231 (0.149)
Groups	97
Observations	116,298
ICC	0.11
Log Likelihood	−41,150.140
Akaike Inf. Crit.	82,366.280
Bayesian Inf. Crit.	82,685.190

Note: *p<0.05; **p<0.01; ***p<0.001

Reference category = Weakly enforced compulsory voting

Table A.6: Electoral System Proportionality and Turnout - Full Models

	Model 1	Model 2	Model 3
Intercept	1.060*** (0.121)	0.976*** (0.113)	0.938*** (0.106)
Compulsory Voting	1.260*** (0.230)	1.345*** (0.208)	1.301*** (0.189)
Proportionality	0.420* (0.170)	0.382* (0.158)	0.373* (0.146)
Mixed Registration	0.466 (0.371)	0.417 (0.349)	0.342 (0.317)
Active Registration	0.022 (0.233)	−0.027 (0.211)	−0.035 (0.199)
Referendum Frequency	−0.507** (0.157)	−0.485** (0.150)	−0.463** (0.145)
Population (log)	−0.199 (0.177)	−0.269 (0.161)	−0.225 (0.153)
Win Margin	0.050 (0.173)	0.119 (0.156)	0.032 (0.145)
GDP/Capita (log)	0.096 (0.260)	0.105 (0.222)	0.084 (0.212)
Gini	−0.286 (0.224)	−0.240 (0.204)	−0.231 (0.190)
ENP	−0.249 (0.177)	−0.321 (0.167)	−0.313* (0.156)
Concurrent elections	0.873* (0.444)	1.227** (0.381)	1.199*** (0.361)
Old Democracy	0.783*** (0.222)	0.774*** (0.200)	0.745*** (0.190)
Age	0.670*** (0.018)	0.728*** (0.017)	0.655*** (0.014)
Age Squared	−0.599*** (0.033)	−0.725*** (0.031)	−0.825*** (0.026)
Education (uni)	0.349*** (0.026)	0.486*** (0.025)	0.596*** (0.021)
Party ID	1.032*** (0.020)	1.116*** (0.019)	1.150*** (0.017)
Income	0.364*** (0.019)	0.479*** (0.018)	
Political Knowledge	0.735*** (0.019)		
Proportionality*Age	−0.159*** (0.036)	−0.118*** (0.034)	−0.103*** (0.030)
Proportionality*Age Squared	0.079 (0.063)	0.126* (0.060)	0.003 (0.051)
Proportionality*Education (uni)	0.116** (0.045)	0.167*** (0.043)	0.205*** (0.038)
Proportionality*Party ID	0.024 (0.038)	0.043 (0.036)	0.035 (0.033)
Proportionality*Income	0.107** (0.038)	0.141*** (0.036)	
Proportionality*Political Knowledge	0.192*** (0.037)		
Groups	97	105	108
Observations	116,298	130,198	163,440
ICC	0.12	0.11	0.10
Log Likelihood	−41,289.550	−45,822.210	−60,035.000
Akaike Inf. Crit.	82,631.100	91,692.410	120,114.000
Bayesian Inf. Crit.	82,882.360	91,927.060	120,334.100

Note: *p<0.05; **p<0.01; ***p<0.001
Proportionality = Inverted Gallagher index score of previous election

Table A.7: Voter Registration and Turnout - Full Models

	Model 1	Model 2	Model 3
Intercept	1.012*** (0.121)	0.930*** (0.114)	0.893*** (0.106)
Compulsory Voting	1.231*** (0.229)	1.303*** (0.208)	1.261*** (0.189)
Proportionality	0.453** (0.168)	0.460** (0.157)	0.433** (0.144)
Mixed Registration	0.503 (0.375)	0.487 (0.353)	0.441 (0.320)
Active Registration	0.257 (0.235)	0.239 (0.213)	0.226 (0.201)
Referendum Frequency	−0.508** (0.157)	−0.486** (0.151)	−0.462** (0.144)
Population (log)	−0.208 (0.177)	−0.278 (0.161)	−0.233 (0.152)
Win Margin	0.041 (0.174)	0.117 (0.157)	0.032 (0.145)
GDP/Capita (log)	0.074 (0.260)	0.090 (0.227)	0.068 (0.211)
Gini	−0.279 (0.224)	−0.224 (0.206)	−0.227 (0.192)
ENP	−0.255 (0.177)	−0.328* (0.167)	−0.320* (0.155)
Concurrent elections	0.884* (0.442)	1.252** (0.382)	1.229*** (0.364)
Old Democracy	0.803*** (0.222)	0.787*** (0.202)	0.756*** (0.188)
Age	0.693*** (0.021)	0.747*** (0.019)	0.645*** (0.016)
Age Squared	−0.497*** (0.038)	−0.655*** (0.036)	−0.801*** (0.030)
Education (uni)	0.355*** (0.029)	0.499*** (0.027)	0.631*** (0.023)
Party ID	1.136*** (0.023)	1.227*** (0.022)	1.256*** (0.019)
Income	0.437*** (0.022)	0.550*** (0.021)	
Political Knowledge	0.803*** (0.021)		
Mixed Reg*Age	0.255** (0.096)	0.309*** (0.092)	0.312*** (0.072)
Mixed Reg*Age Squared	0.183 (0.160)	0.244 (0.157)	0.140 (0.115)
Mixed Reg*Education (uni)	−0.130 (0.106)	−0.166 (0.102)	−0.287*** (0.084)
Mixed Reg*Party ID	−0.294** (0.092)	−0.331*** (0.090)	−0.218** (0.075)
Mixed Reg*Income	−0.116 (0.097)	−0.152 (0.093)	
Mixed Reg*Political Knowledge	−0.267** (0.092)		
Active Reg*Age	−0.067 (0.049)	−0.089 (0.047)	0.019 (0.040)
Active Reg*Age Squared	−0.452*** (0.081)	−0.348*** (0.078)	−0.165* (0.066)
Active Reg*Education (uni)	−0.090 (0.074)	−0.125 (0.071)	−0.200*** (0.060)
Active Reg*Party ID	−0.473*** (0.049)	−0.519*** (0.048)	−0.512*** (0.042)
Active Reg*Income	−0.355*** (0.050)	−0.381*** (0.048)	
Active Reg*Political Knowledge	−0.349*** (0.049)		
Groups	97	105	108
Observations	116,298	130,198	163,440
ICC	0.12	0.11	0.10
Log Likelihood	−41,189.170	−45,735.300	−59,958.890
Akaike Inf. Crit.	82,442.340	91,528.610	119,969.800
Bayesian Inf. Crit.	82,751.580	91,812.140	120,229.900

Note: *p<0.05; **p<0.01; ***p<0.001

Proportionality = Inverted Gallagher index score of previous election

Table A.8: Referendum Usage (Dummy) and Voter Turnout - Full Models

	Model 1	Model 2
Intercept	1.110*** (0.137)	1.101*** (0.128)
Compulsory Voting	1.230*** (0.247)	1.254*** (0.237)
Proportionality	0.420* (0.181)	0.480** (0.174)
Mixed Registration	0.506 (0.391)	0.440 (0.377)
Active Registration	0.083 (0.248)	0.007 (0.240)
Referendum Held	−0.075 (0.175)	0.153 (0.175)
Population (log)	−0.199 (0.188)	−0.172 (0.185)
Win Margin	0.060 (0.185)	0.024 (0.182)
GDP/Capita (log)	0.055 (0.278)	0.094 (0.262)
Gini	−0.311 (0.237)	−0.246 (0.234)
ENP	−0.307 (0.188)	−0.279 (0.182)
Concurrent elections	0.944 (0.486)	0.776 (0.466)
Old Democracy	0.727** (0.236)	0.788*** (0.228)
Age	0.680*** (0.022)	0.680*** (0.022)
Age Squared	−0.584*** (0.040)	−0.584*** (0.040)
Education (uni)	0.386*** (0.032)	0.386*** (0.032)
Party ID	1.044*** (0.025)	1.044*** (0.025)
Income	0.390*** (0.024)	0.390*** (0.024)
Political Knowledge	0.684*** (0.023)	0.684*** (0.023)
Ref Held*Age	−0.018 (0.038)	−0.066 (0.043)
Ref Held*Age Squared	−0.062 (0.068)	−0.377*** (0.075)
Ref Held*Education (uni)	−0.162** (0.054)	−0.102 (0.062)
Ref Held*Party ID	−0.039 (0.042)	−0.112* (0.048)
Ref Held*Income	−0.089* (0.041)	−0.167*** (0.046)
Ref Held*Political Knowledge	0.132*** (0.040)	−0.0002 (0.045)
Groups	97	94
Observations	116,298	108,597
ICC	0.13	0.12
Log Likelihood	−41,326.340	−37,433.690
Akaike Inf. Crit.	82,704.690	74,919.390
Bayesian Inf. Crit.	82,955.950	75,168.870

Note: *p<0.05; **p<0.01; ***p<0.001
Model 1 = All cases
Model 2 = Swiss cases removed

Table A.9: Referendum Frequency and Voter Turnout - Full Models

	Model 1	Model 2
Intercept	1.066*** (0.121)	1.142*** (0.120)
Compulsory Voting	1.250*** (0.229)	1.248*** (0.232)
Proportionality	0.458** (0.168)	0.467** (0.172)
Mixed Registration	0.448 (0.372)	0.434 (0.376)
Active Registration	0.023 (0.233)	0.013 (0.237)
Referendum Frequency	−0.560*** (0.158)	0.086 (0.149)
Population (log)	−0.202 (0.177)	−0.194 (0.187)
Win Margin	0.045 (0.173)	0.041 (0.183)
GDP/Capita (log)	0.081 (0.261)	0.101 (0.261)
Gini	−0.284 (0.223)	−0.255 (0.234)
ENP	−0.251 (0.177)	−0.257 (0.184)
Concurrent elections	0.872* (0.441)	0.835 (0.454)
Old Democracy	0.785*** (0.223)	0.789*** (0.227)
Age	0.675*** (0.018)	0.663*** (0.019)
Age Squared	−0.634*** (0.033)	−0.694*** (0.034)
Education (uni)	0.343*** (0.026)	0.356*** (0.027)
Party ID	1.025*** (0.020)	1.008*** (0.021)
Income	0.357*** (0.020)	0.341*** (0.020)
Political Knowledge	0.706*** (0.019)	0.684*** (0.020)
Referendum Freq*Age	0.106*** (0.029)	−0.095** (0.037)
Referendum Freq*Age Squared	0.330*** (0.052)	−0.482*** (0.067)
Referendum Freq*Education (uni)	−0.119** (0.039)	−0.082 (0.054)
Referendum Freq*Party ID	0.080** (0.030)	−0.136** (0.046)
Referendum Freq*Income	0.066* (0.030)	−0.198*** (0.040)
Referendum Freq*Political Knowledge	0.205*** (0.029)	0.011 (0.039)
Groups	97	94
Observations	116,298	108,597
ICC	0.12	0.12
Log Likelihood	−41,272.690	−37,413.540
Akaike Inf. Crit.	82,597.390	74,879.070
Bayesian Inf. Crit.	82,848.650	75,128.550

Note: *p<0.05; **p<0.01; ***p<0.001
Model 1 = All cases
Model 2 = Swiss cases removed

Table A.10: Referendum (Turnout Compared to Last Election) and Voter Turnout - Full Models

	Model 1	Model 2
Intercept	1.085^{***} (0.133)	1.096^{***} (0.128)
Compulsory Voting	1.219^{***} (0.240)	1.249^{***} (0.237)
Proportionality	0.441^{*} (0.175)	0.478^{**} (0.174)
Mixed Registration	0.502 (0.381)	0.447 (0.376)
Active Registration	0.022 (0.243)	0.00003 (0.240)
Low Turnout Referendum	0.231 (0.195)	0.217 (0.192)
High Turnout Referendum	-0.656^{*} (0.270)	−0.017 (0.345)
Population (log)	−0.123 (0.185)	−0.158 (0.187)
Win Margin	0.069 (0.179)	0.027 (0.183)
GDP/Capita (log)	−0.084 (0.274)	0.057 (0.274)
Gini	−0.315 (0.230)	−0.253 (0.234)
ENP	−0.283 (0.183)	−0.274 (0.182)
Concurrent elections	0.698 (0.482)	0.733 (0.475)
Old Democracy	0.837^{***} (0.232)	0.812^{***} (0.231)
Age	0.680^{***} (0.022)	0.680^{***} (0.022)
Age Squared	-0.584^{***} (0.040)	-0.584^{***} (0.040)
Education (uni)	0.386^{***} (0.032)	0.386^{***} (0.032)
Party ID	1.044^{***} (0.025)	1.044^{***} (0.025)
Income	0.390^{***} (0.024)	0.390^{***} (0.024)
Political Knowledge	0.684^{***} (0.023)	0.684^{***} (0.023)
Low Turnout Ref*Age	−0.058 (0.048)	−0.058 (0.048)
Low Turnout Ref*Age Squared	-0.523^{***} (0.085)	-0.523^{***} (0.085)
Low Turnout Ref*Education (uni)	−0.068 (0.072)	−0.068 (0.072)
Low Turnout Ref*Party ID	−0.042 (0.056)	−0.041 (0.056)
Low Turnout Ref*Income	-0.179^{***} (0.053)	-0.179^{***} (0.053)
Low Turnout Ref*Political Knowledge	0.103^{*} (0.051)	0.103^{*} (0.051)
High Turnout Ref*Age	0.070 (0.051)	−0.105 (0.072)
High Turnout Ref*Age Squared	0.442^{***} (0.090)	−0.013 (0.125)
High Turnout Ref*Education (uni)	-0.237^{***} (0.067)	-0.203^{*} (0.099)
High Turnout Ref*Party ID	−0.028 (0.053)	-0.226^{**} (0.074)
High Turnout Ref*Income	−0.002 (0.052)	−0.145 (0.074)
High Turnout Ref*Political Knowledge	0.158^{**} (0.051)	-0.241^{**} (0.074)
Groups	97	94
Observations	116,298	108,597
ICC	0.12	0.12
Log Likelihood	−41,279.640	−37,411.920
Akaike Inf. Crit.	82,625.270	74,889.850
Bayesian Inf. Crit.	82,944.180	75,206.490

Note: *p<0.05; **p<0.01; ***p<0.001
Model 1 = All cases
Model 2 = Swiss cases removed

Electoral Law Coding

Table A.11: Distribution of Electoral Rules Across Election Studies

Election Study	Compulsory Voting	Gallagher Index	Voter Registration	Ref Frequency	Ref Turnout
Argentina 2015	Weak	4.82	Passive	0	–
Australia 2004	Strict	9.37	Passive	0	–
Australia 2007	Strict	8.60	Passive	0	–
Australia 2013	Strict	11.29	Passive	0	–
Austria 2008	None	2.80	Passive	0	–
Austria 2013	None	2.92	Passive	1	Low
Belgium 2003*	Strict	2.99	Passive	0	–
Brazil 2002	Weak	3.57	Active	3	Low
Brazil 2010	Weak	3.00	Active	4	Low
Brazil 2014	Weak	2.50	Active	0	–
Bulgaria 2001**	None	3.94	Passive	0	–
Bulgaria 2014	None	10.88	Passive	0	–
Canada 2004	None	13.56	Passive	0	–
Chile 2005	Weak	5.12	Active	0	–
Chile 2009	Weak	6.79	Active	0	–
Croatia 2007	None	9.60	Passive	0	–
Czechia 2002	None	5.55	Passive	0	–
Czechia 2006	None	5.78	Passive	1	Low
Czechia 2010	None	5.72	Passive	0	–
Czechia 2013	None	8.76	Passive	0	–
Denmark 2001**	None	0.42	Passive	2	High
Denmark 2007	None	1.76	Passive	0	–
Estonia 2011	None	3.43	Passive	0	–
Finland 2003	None	3.24	Passive	0	–
Finland 2007	None	3.16	Passive	0	–
Finland 2011	None	3.20	Passive	0	–
Finland 2015	None	2.95	Passive	0	–
France 2007	None	21.95	Mixed	1	High
Germany 2002	None	4.69	Passive	0	–
Germany 2005	None	4.43	Passive	0	–
Germany 2009	None	2.16	Passive	0	–
Germany 2013	None	3.40	Passive	0	–
Greece 2009	Weak	6.99	Passive	0	–
Greece 2012	Weak	7.29	Passive	0	–
Greece 2015	Weak	9.96	Passive	0	–
Hungary 2002	None	10.88	Passive	0	–
Iceland 2003**	None	1.06	Passive	0	–
Iceland 2007	None	1.85	Passive	0	–
Iceland 2009	None	3.49	Passive	0	–
Iceland 2013	None	2.58	Passive	8	Low

Table A.11 cont.

Election Study	Compulsory Voting	Gallagher Index	Voter Registration	Ref Frequency	Ref Turnout
Ireland 2002	None	6.55	Passive	8	Low
Ireland 2007	None	6.62	Passive	2	Low
Ireland 2011	None	5.85	Passive	2	Low
Israel 2003	None	2.22	Passive	0	–
Israel 2006	None	2.53	Passive	0	–
Israel 2013	None	1.61	Passive	0	–
Italy 2006	None	10.22	Passive	7	Low
Japan 2004	None	11.26	Passive	0	–
Japan 2007	None	7.36	Passive	0	–
Japan 2013	None	10.45	Passive	0	–
Kenya 2013	None	12.30	Active	1	High
Latvia 2010*	None	4.77	Passive	4	Low
Latvia 2011	None	2.80	Passive	1	Low
Latvia 2014**	None	2.76	Passive	1	High
Mexico 2003	Weak	6.70	Active	0	–
Mexico 2006	Weak	4.47	Active	0	–
Mexico 2009	Weak	6.34	Active	0	–
Mexico 2012	Weak	10.46	Active	0	–
Mexico 2015	Weak	6.87	Active	0	–
Montenegro 2012	None	6.64	Passive	0	–
Netherlands 2002	None	1.28	Passive	0	–
Netherlands 2006	None	1.05	Passive	1	Low
Netherlands 2010	None	1.03	Passive	0	–
New Zealand 2002	None	2.97	Active	0	–
New Zealand 2008	None	1.13	Active	0	–
New Zealand 2011	None	3.84	Active	1	Low
New Zealand 2014	None	2.38	Active	1	Low
Norway 2001	None	3.44	Passive	0	–
Norway 2005	None	3.22	Passive	0	–
Norway 2009	None	2.67	Passive	0	–
Norway 2013	None	3.01	Passive	0	–
Peru 2006	Strict	8.87	Passive	0	–
Peru 2011	Strict	13.95	Passive	1	Low
Peru 2016**	Strict	10.23	Passive	0	–
Poland 2001	None	10.63	Passive	0	–
Poland 2005	None	6.33	Passive	1	High
Poland 2007	None	6.67	Passive	0	–
Poland 2011	None	4.67	Passive	0	–
Portugal 2002	None	4.90	Active	0	–
Portugal 2005	None	4.64	Active	0	–
Portugal 2009	None	5.75	Passive	1	Low
Portugal 2015	None	5.68	Passive	0	–
Rep. Korea 2004	None	13.38	Passive	0	–
Rep. Korea 2008	None	12.11	Passive	0	–

Table A.11 cont.

Election Study	**Compulsory Voting**	**Gallagher Index**	**Voter Registration**	**Ref Frequency**	**Ref Turnout**
Romania 2012	None	3.32	Passive	3	High
Serbia 2012	None	1.49	Passive	0	–
Slovakia 2010	None	5.53	Passive	0	–
Slovakia 2016	None	9.77	Passive	3	Low
Slovenia 2004	None	1.51	Passive	7	Low
Slovenia 2008**	None	4.79	Passive	2	Low
Slovenia 2011	None	3.89	Passive	6	Low
South Africa 2009*	None	0.26	Mixed	0	–
South Africa 2014	None	0.30	Mixed	0	–
Spain 2004	None	6.10	Passive	0	–
Spain 2008	None	4.25	Passive	1	Low
Sweden 2002	None	0.97	Passive	0	–
Sweden 2006	None	1.52	Passive	1	High
Sweden 2014	None	1.25	Passive	0	–
Switzerland 2003	None	3.17	Passive	45	High
Switzerland 2007	None	2.47	Passive	26	High
Switzerland 2011	None	2.56	Passive	25	High
Taiwan 2001	None	7.05	Passive	0	–
Taiwan 2012	None	16.89	Passive	2	Low
Thailand 2011	Weak	8.29	Mixed	0	–
Turkey 2011**	Weak	11.76	Passive	2	Low
UK 2005	None	17.77	Mixed	0	–
UK 2015	None	15.10	Mixed	1	Low
Uruguay 2009**	Strict	1.32	Active	0	–

Notes:
* *Missing income survey question*
** *Missing political knowledge survey question*
Gallagher Index = Gallagher index of the previous election
Ref Frequency = Number of national referendums held since the previous election
Ref Turnout = Was the highest referendum turnout greater than previous election turnout?

Appendix B

Political Attitudes

Descriptive Statistics

Table B.1: Electoral Laws Frequency Table

Electoral Law		**Election Studies**	
		N	**%**
Compulsory Voting	Voluntary Voting	71	(78.9)
	Weakly Enforced CV	12	(13.3)
	Strongly Enforced CV	7	(7.8)
Voter Registration	Passive	70	(77.8)
	Mixed	5	(5.5)
	Active	15	(16.7)
Referendum Turnout	No Referendums Held	65	(72.2)
	≥1 Referendum Held	25	(27.8)
	Total Cases	90	

Gallagher Index Score			
Min	**Max**	**Mean**	**SD**
0.3	21.96	6.0	4.4
Referendum Frequency			
Min	**Max**	**Mean**	**SD**
0	45	1.2	5.0

Table B.2: Satisfaction With Democracy

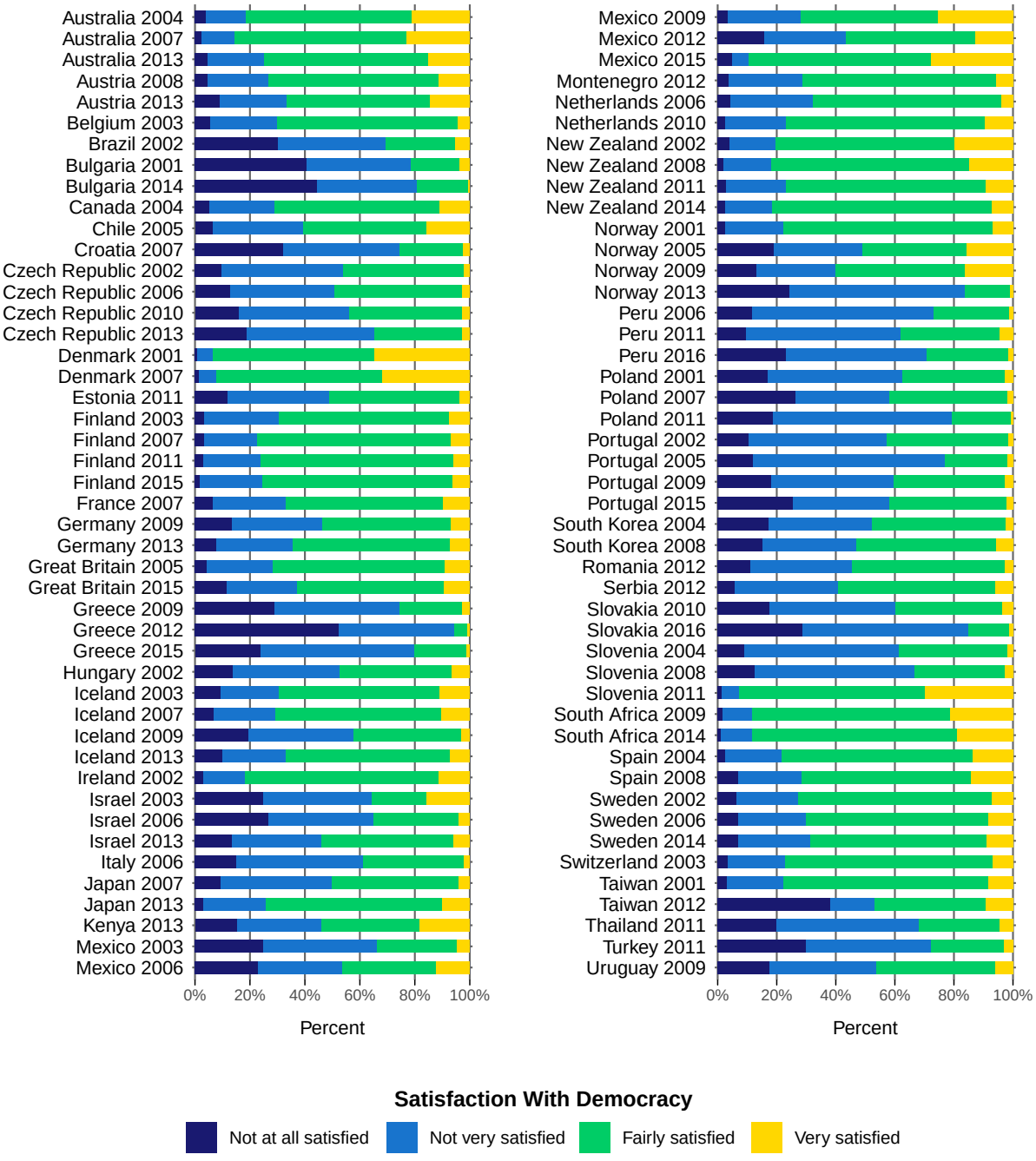
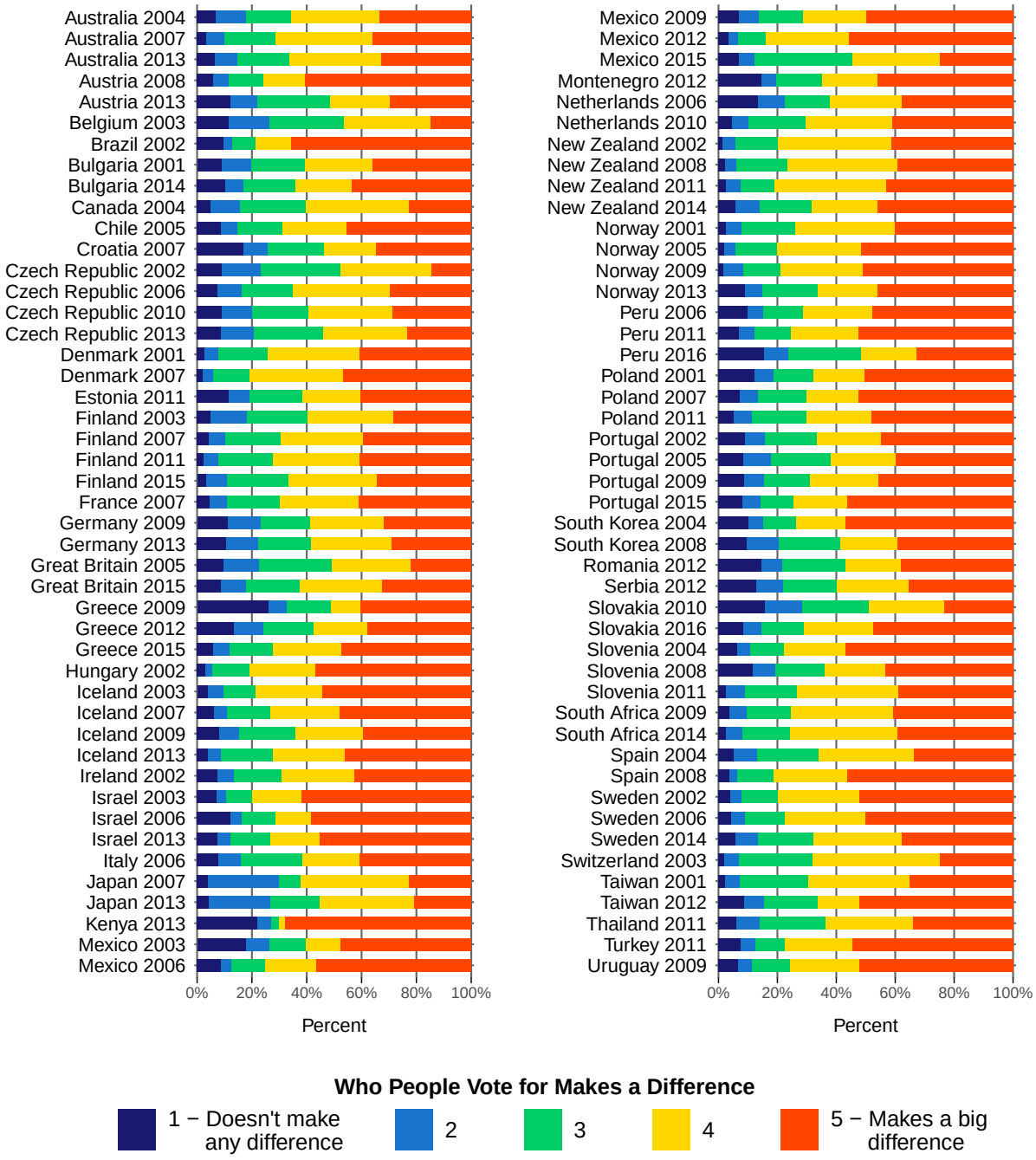


Table B.3: External Efficacy - Who People Vote for Makes a Difference to What Happens



Additive Models

The following tables display the output for the models which contain all of the key independent and dependent variables, but with no interaction terms. When cross-level interaction terms are added, the effect of each electoral law is conditional on the individual level variable included in the interaction. Running these additive models therefore allows us to directly examine the unconditional main effect of each electoral rule on satisfaction with democracy and efficacy.

As can be seen by comparing the output of Models 1-3 with the interactive models below, the coefficients for the electoral rules and individual level variables are consistent across both model specifications. For all of the key independent variables, the coefficients match up exactly in terms of their direction and statistical significance, with extremely marginal changes in the effect sizes.

Table B.4: Additive Binary Logistic Regression - Satisfaction with Democracy

	DV: Satisfaction With Democracy		
	(Model 1)	(Model 2)	(Model 3)
Intercept	−0.265* (0.128)	−0.280* (0.126)	−0.266* (0.134)
Compulsory Voting (dummy)	0.117 (0.235)		0.125 (0.242)
Weakly Enforced CV		−0.238 (0.299)	
Strictly Enforced CV		0.528 (0.319)	
Proportionality	0.566** (0.191)	0.664*** (0.195)	0.566** (0.194)
Mixed Registration	0.806* (0.387)	0.969* (0.389)	0.811* (0.388)
Active Registration	0.084 (0.234)	0.241 (0.246)	0.085 (0.236)
Referendum Frequency	−0.050 (0.149)	−0.042 (0.146)	
Referendum Held(dummy)			0.016 (0.178)
Population(log)	0.482* (0.199)	0.582** (0.201)	0.482* (0.199)
Old Democracy	1.101*** (0.214)	1.085*** (0.209)	1.087*** (0.214)
Corruption	−0.442 (0.244)	−0.282 (0.253)	−0.455 (0.247)
Gini	−0.376 (0.228)	−0.547* (0.241)	−0.372 (0.228)
Age	0.060*** (0.015)	0.060*** (0.015)	0.060*** (0.015)
Education (uni)	0.132*** (0.018)	0.132*** (0.018)	0.132*** (0.018)
Income	0.302*** (0.015)	0.302*** (0.015)	0.302*** (0.015)
Groups	90	90	90
Observations	105,846	105,846	105,846
ICC	0.14	0.13	0.14
Log Likelihood	−60,678.900	−60,677.190	−60,678.950
Akaike Inf. Crit.	121,385.800	121,384.400	121,385.900
Bayesian Inf. Crit.	121,519.800	121,527.900	121,519.900

*p<0.05; **p<0.01; ***p<0.001

Table B.5: Additive Binary Logistic Regression - Political Efficacy

	DV: Political Efficacy		
	(Model 1)	(Model 2)	(Model 3)
Intercept	0.598*** (0.061)	0.597*** (0.061)	0.551*** (0.062)
Compulsory Voting (dummy)	0.014 (0.112)		0.064 (0.111)
Weakly Enforced CV		0.002 (0.146)	
Strictly Enforced CV		0.027 (0.155)	
Proportionality	0.212* (0.091)	0.215* (0.095)	0.239** (0.089)
Mixed Registration	−0.098 (0.185)	−0.093 (0.190)	−0.104 (0.179)
Active Registration	0.179 (0.112)	0.184 (0.120)	0.156 (0.109)
Referendum Frequency	0.033 (0.071)	0.033 (0.071)	
Referendum Held(dummy)			0.199* (0.083)
Population(log)	−0.098 (0.094)	−0.095 (0.098)	−0.095 (0.092)
Old Democracy	0.195 (0.102)	0.194 (0.102)	0.162 (0.099)
Corruption	0.060 (0.116)	0.065 (0.124)	0.010 (0.115)
Gini	0.234* (0.109)	0.229 (0.118)	0.247* (0.106)
Age	0.138*** (0.014)	0.138*** (0.014)	0.138*** (0.014)
Education (uni)	0.340*** (0.018)	0.340*** (0.018)	0.340*** (0.018)
Income	0.228*** (0.014)	0.228*** (0.014)	0.228*** (0.014)
Groups	90	90	90
Observations	106,724	106,724	106,724
ICC	0.03	0.03	0.03
Log Likelihood	−64,815.160	−64,815.150	−64,812.460
Akaike Inf. Crit.	129,658.300	129,660.300	129,652.900
Bayesian Inf. Crit.	129,792.400	129,804.000	129,787.000

*p<0.05; **p<0.01; ***p<0.001

Table B.6: Binary Logistic Regression - Compulsory Voting and Satisfaction with Democracy

	DV: Satisfaction With Democracy	
	(Model 1)	(Model 2)
Intercept	−0.271* (0.128)	−0.286* (0.125)
Compulsory Voting	0.161 (0.237)	
Weak CV		−0.186 (0.301)
Strict CV		0.575 (0.320)
Proportionality	0.562** (0.192)	0.659*** (0.195)
Mixed Registration	0.796* (0.388)	0.959* (0.391)
Active Registration	0.073 (0.235)	0.229 (0.245)
Referendum Frequency	−0.049 (0.148)	−0.042 (0.146)
Population(log)	0.480* (0.198)	0.579** (0.202)
Old Democracy	1.098*** (0.214)	1.082*** (0.209)
Corruption	−0.451 (0.244)	−0.293 (0.253)
Gini	−0.374 (0.228)	−0.544* (0.241)
Age	−0.005 (0.017)	−0.005 (0.017)
Education (uni)	0.167*** (0.021)	0.168*** (0.021)
Income	0.335*** (0.017)	0.335*** (0.017)
CV*Age	0.259*** (0.033)	
CV*Education (uni)	−0.143** (0.044)	
CV*Income	−0.131*** (0.035)	
Weak CV*Age		0.239*** (0.041)
Weak CV*Education (uni)		−0.155** (0.060)
Weak CV*Income		−0.264*** (0.042)
Strict CV*Age		0.295*** (0.047)
Strict CV*Education (uni)		−0.155** (0.059)
Strict CV*Income		0.072 (0.051)
Observations	105,846	105,846
Log Likelihood	−60,619.730	−60,601.170
Akaike Inf. Crit.	121,273.500	121,244.300
Bayesian Inf. Crit.	121,436.100	121,445.300

*p<0.05; **p<0.01; ***p<0.001

Note: Voluntary voting used as reference category

Table B.7: Binary Logistic Regression - Compulsory Voting and Satisfaction with Democracy cont.

	DV: Satisfaction With Democracy
	(Model 1)
Intercept	0.669*** (0.147)
CV: Voluntary Voting	−0.076 (0.145)
CV: Strictly Enforced	−0.009 (0.198)
Proportionality	0.206* (0.094)
Mixed Registration	−0.103 (0.188)
Active Registration	0.164 (0.119)
Referendum Frequency	0.033 (0.070)
Population(log)	−0.105 (0.097)
Old Democracy	0.187 (0.101)
Corruption	0.049 (0.122)
Gini	0.234* (0.117)
Age	0.014 (0.038)
Education (uni)	0.127* (0.056)
Income	0.134*** (0.039)
CV: Voluntary Voting*Age	0.154*** (0.042)
CV: Voluntary Voting*Education (uni)	0.252*** (0.059)
CV: Voluntary Voting*Income	0.102* (0.042)
CV: Strictly Enforced*Age	0.061 (0.057)
CV: Strictly Enforced*Education (uni)	0.105 (0.076)
CV: Strictly Enforced*Income	0.199*** (0.059)
Observations	106,724
Log Likelihood	−64,789.630
Akaike Inf. Crit.	129,621.300
Bayesian Inf. Crit.	129,822.400

*p<0.05; **p<0.01; ***p<0.001

Note: Weak compulsory voting used as reference category

Table B.8: Binary Logistic Regression - Proportionality and Satisfaction with Democracy

	DV: Satisfaction With Democracy
	(Model 1)
Intercept	−0.266* (0.128)
Compulsory Voting	0.121 (0.236)
Proportionality	0.542** (0.192)
Mixed Registration	0.816* (0.387)
Active Registration	0.081 (0.234)
Referendum Frequency	−0.048 (0.149)
Population(log)	0.484* (0.198)
Old Democracy	1.098*** (0.212)
Corruption	−0.447 (0.241)
Gini	−0.376 (0.229)
Age	0.054*** (0.015)
Education (uni)	0.138*** (0.018)
Income	0.304*** (0.015)
Proportionality*Age	−0.151*** (0.028)
Proportionality*Education (uni)	0.095** (0.033)
Proportionality*Income	−0.033 (0.028)
Observations	105,846
Log Likelihood	−60,657.680
Akaike Inf. Crit.	121,349.400
Bayesian Inf. Crit.	121,512.000
Note:	*p<0.05; **p<0.01; ***p<0.001

Table B.9: Binary Logistic Regression - Voter Registration and Satisfaction with Democracy

	DV: Satisfaction With Democracy	
	(Model 1)	(Model 2)
Intercept	−0.262* (0.130)	−0.261* (0.128)
Compulsory Voting	0.013 (0.233)	0.121 (0.237)
Proportionality	0.453* (0.182)	0.567** (0.191)
Mixed or Active Registration	0.234 (0.217)	
Mixed Registration		0.795* (0.389)
Active Registration		0.060 (0.237)
Referendum Frequency	−0.054 (0.152)	−0.050 (0.149)
Population(log)	0.501* (0.202)	0.484* (0.197)
Old Democracy	1.168*** (0.214)	1.101*** (0.214)
Corruption	−0.419 (0.249)	−0.442 (0.243)
Gini	−0.341 (0.234)	−0.376 (0.229)
Age	0.028 (0.017)	0.028 (0.017)
Education (uni)	0.116*** (0.021)	0.116*** (0.021)
Income	0.351*** (0.017)	0.351*** (0.017)
Mixed or Active Reg*Age	0.131*** (0.034)	
Mixed or Active Reg*Education (uni)	0.086* (0.043)	
Mixed or Active Reg*Income	−0.197*** (0.034)	
Mixed Registration*Age		0.185** (0.065)
Mixed Registration*Education (uni)		0.024 (0.077)
Mixed Registration*Income		−0.128 (0.067)
Active Registration*Age		0.116** (0.037)
Active Registration*Education (uni)		0.108* (0.049)
Active Registration*Income		−0.216*** (0.037)
Observations	105,846	105,846
Log Likelihood	−60,652.320	−60,649.530
Akaike Inf. Crit.	121,336.600	121,339.100
Bayesian Inf. Crit.	121,489.800	121,530.400

Note: *p<0.05; **p<0.01; ***p<0.001
Model 1 uses a dummy variable that compares the passive registration reference category against all other registration systems (mixed and active)

Table B.10: Binary Logistic Regression - Referendum Use and Satisfaction with Democracy

	DV: Satisfaction With Democracy	
	(Model 1)	(Model 2)
Intercept	−0.258 (0.135)	−0.265* (0.128)
Compulsory Voting	0.127 (0.242)	0.118 (0.237)
Proportionality	0.564** (0.195)	0.566** (0.192)
Mixed Registration	0.800* (0.394)	0.805* (0.388)
Active Registration	0.080 (0.237)	0.084 (0.236)
Referendum Held (dummy)	−0.006 (0.180)	
Referendum Frequency		−0.053 (0.150)
Population(log)	0.483* (0.198)	0.483* (0.199)
Old Democracy	1.086*** (0.216)	1.100*** (0.214)
Corruption	−0.456 (0.248)	−0.444 (0.245)
Gini	−0.369 (0.230)	−0.375 (0.230)
Age	0.061*** (0.017)	0.060*** (0.015)
Education (uni)	0.107*** (0.021)	0.134*** (0.018)
Income	0.295*** (0.017)	0.302*** (0.015)
Referendum Held (dummy)*Age	−0.003 (0.033)	
Referendum Held (dummy)*Education (uni)	0.095* (0.041)	
Referendum Held (dummy)*Income	0.028 (0.034)	
Referendum Frequency*Age		−0.035 (0.028)
Referendum Frequency*Education (uni)		0.043 (0.030)
Referendum Frequency*Income		0.059 (0.049)
Observations	105,846	105,846
Log Likelihood	−60,675.020	−60,675.030
Akaike Inf. Crit.	121,384.000	121,384.100
Bayesian Inf. Crit.	121,546.700	121,546.700
Note:	*p<0.05; **p<0.01; ***p<0.001	

Table B.11: Binary Logistic Regression - Compulsory Voting and Political Efficacy

	DV: Political Efficacy	
	(Model 1)	(Model 2)
Intercept	0.591*** (0.061)	0.593*** (0.061)
Compulsory Voting	0.067 (0.112)	
Weak CV		0.076 (0.146)
Strict CV		0.067 (0.155)
Proportionality	0.206* (0.091)	0.206* (0.094)
Mixed Registration	−0.106 (0.184)	−0.103 (0.189)
Active Registration	0.165 (0.112)	0.164 (0.119)
Referendum Frequency	0.033 (0.070)	0.033 (0.070)
Population(log)	−0.103 (0.094)	−0.105 (0.097)
Old Democracy	0.191 (0.101)	0.187 (0.101)
Corruption	0.050 (0.115)	0.049 (0.123)
Gini	0.235* (0.109)	0.234* (0.117)
Age	0.168*** (0.016)	0.168*** (0.016)
Education (uni)	0.380*** (0.020)	0.380*** (0.020)
Income	0.235*** (0.016)	0.235*** (0.016)
CV*Age	−0.129*** (0.032)	
CV*Education (uni)	−0.188*** (0.043)	
CV*Income	−0.015 (0.033)	
Weak CV*Age		−0.154*** (0.042)
Weak CV*Education (uni)		−0.252*** (0.059)
Weak CV*Income		−0.102* (0.042)
Strict CV*Age		−0.093* (0.045)
Strict CV*Education (uni)		−0.148** (0.055)
Strict CV*Income		0.097* (0.047)
Observations	106,724	106,724
Log Likelihood	−64,798.730	−64,789.630
Akaike Inf. Crit.	129,631.500	129,621.300
Bayesian Inf. Crit.	129,794.300	129,822.400
Note:		*p<0.05; **p<0.01; ***p<0.001

Table B.12: Binary Logistic Regression - Proportionality and Political Efficacy

	DV: Political Efficacy
	(Model 1)
Intercept	0.597*** (0.061)
Compulsory Voting	0.017 (0.113)
Proportionality	0.195* (0.092)
Mixed Registration	−0.092 (0.185)
Active Registration	0.177 (0.112)
Referendum Frequency	0.034 (0.071)
Population(log)	−0.096 (0.094)
Old Democracy	0.193 (0.102)
Corruption	0.057 (0.116)
Gini	0.234* (0.109)
Age	0.136*** (0.014)
Education (uni)	0.344*** (0.018)
Income	0.228*** (0.014)
Proportionality*Age	−0.123*** (0.027)
Proportionality*Education (uni)	0.060 (0.032)
Proportionality*Income	−0.093*** (0.028)
Observations	106,724
Log Likelihood	−64,799.620
Akaike Inf. Crit.	129,633.200
Bayesian Inf. Crit.	129,796.100
Note:	*p<0.05; **p<0.01; ***p<0.001

Table B.13: Binary Logistic Regression - Voter Registration and Political Efficacy

	DV: Political Efficacy	
	(Model 1)	(Model 2)
Intercept	0.591*** (0.062)	0.591*** (0.062)
Compulsory Voting	0.047 (0.110)	0.006 (0.113)
Proportionality	0.253** (0.086)	0.209* (0.092)
Mixed or Active Registration	0.148 (0.103)	
Mixed Registration		−0.073 (0.187)
Active Registration		0.217 (0.113)
Referendum Frequency	0.035 (0.072)	0.033 (0.071)
Population(log)	−0.105 (0.096)	−0.100 (0.095)
Old Democracy	0.171 (0.101)	0.197 (0.103)
Corruption	0.050 (0.118)	0.058 (0.117)
Gini	0.219* (0.111)	0.232* (0.110)
Age	0.152*** (0.016)	0.152*** (0.016)
Education (uni)	0.370*** (0.020)	0.370*** (0.020)
Income	0.250*** (0.016)	0.250*** (0.016)
Mixed or Active Reg*Age	−0.070* (0.034)	
Mixed or Active Reg*Education (uni)	−0.163*** (0.045)	
Mixed or Active Reg*Income	−0.094** (0.035)	
Mixed Registration*Age		0.114 (0.064)
Mixed Registration*Education (uni)		−0.102 (0.076)
Mixed Registration*Income		0.051 (0.065)
Active Registration*Age		−0.130*** (0.038)
Active Registration*Education (uni)		−0.190*** (0.053)
Active Registration*Income		−0.140*** (0.039)
Observations	106,724	106,724
Log Likelihood	−64,801.770	−64,791.610
Akaike Inf. Crit.	129,635.500	129,623.200
Bayesian Inf. Crit.	129,788.800	129,814.800

Note: *p<0.05; **p<0.01; ***p<0.001
Model 1 uses a dummy variable that compares the passive registration reference category against all other registration systems (mixed and active)

Table B.14: Binary Logistic Regression - Referendum Use and Political Efficacy

	DV: Political Efficacy	
	(Model 1)	(Model 2)
Intercept	0.547*** (0.062)	0.598*** (0.061)
Compulsory Voting	0.063 (0.111)	0.014 (0.113)
Proportionality	0.239** (0.089)	0.212* (0.091)
Mixed Registration	−0.097 (0.179)	−0.098 (0.185)
Active Registration	0.159 (0.109)	0.179 (0.112)
Referendum Held (dummy)	0.211* (0.083)	
Referendum Frequency		0.032 (0.071)
Population(log)	−0.095 (0.092)	−0.098 (0.095)
Old Democracy	0.161 (0.099)	0.195 (0.102)
Corruption	0.010 (0.114)	0.059 (0.116)
Gini	0.246* (0.106)	0.234* (0.109)
Age	0.116*** (0.016)	0.138*** (0.014)
Education (uni)	0.354*** (0.020)	0.340*** (0.018)
Income	0.228*** (0.017)	0.229*** (0.014)
Referendum Held (dummy)*Age	0.088** (0.032)	
Referendum Held (dummy)*Education (uni)	−0.057 (0.041)	
Referendum Held (dummy)*Income	0.003 (0.032)	
Referendum Frequency*Age		0.048 (0.026)
Referendum Frequency*Education (uni)		−0.0001 (0.027)
Referendum Frequency*Income		0.022 (0.043)
Observations	106,724	106,724
Log Likelihood	−64,807.000	−64,813.290
Akaike Inf. Crit.	129,648.000	129,660.600
Bayesian Inf. Crit.	129,810.800	129,823.400
Note:	*p<0.05; **p<0.01; ***p<0.001	

Figure B.1: Satisfaction with Democracy and Compulsory Voting Interaction Effects

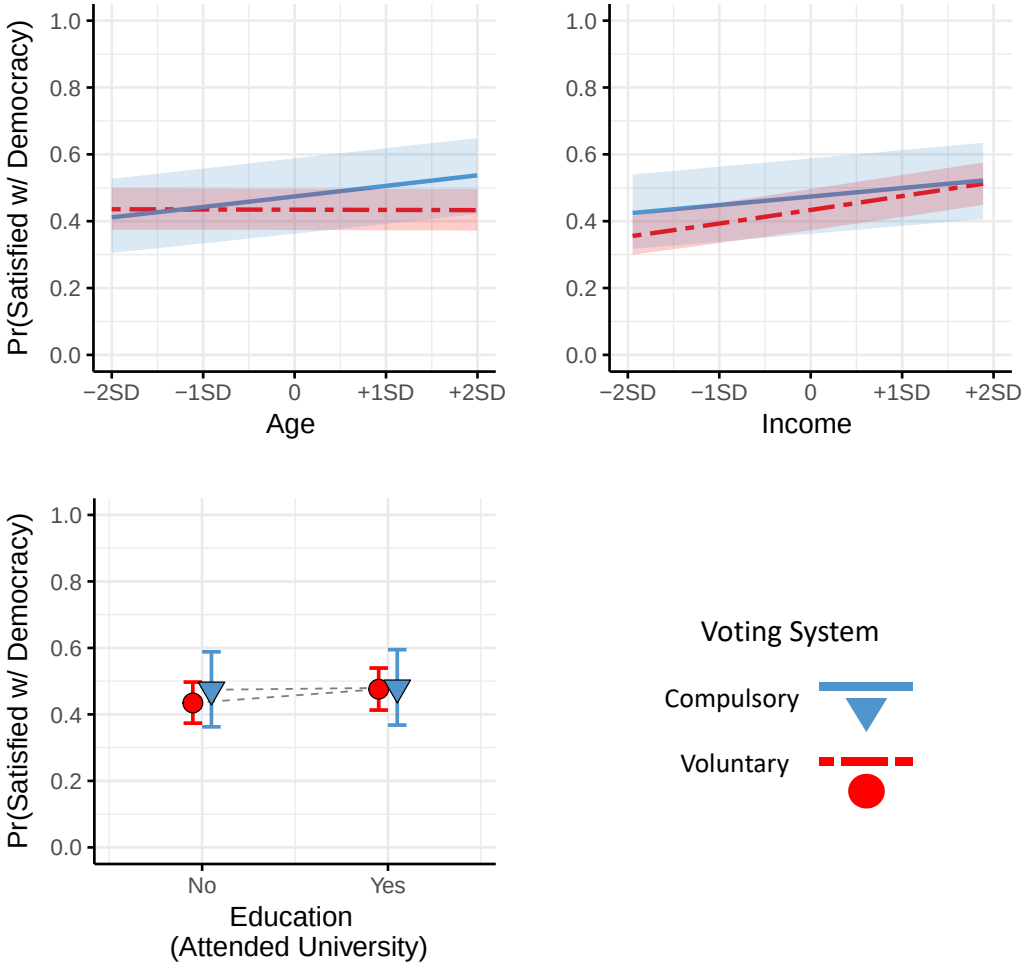


Figure B.2: Satisfaction with Democracy and Compulsory Voting Interaction Effects cont

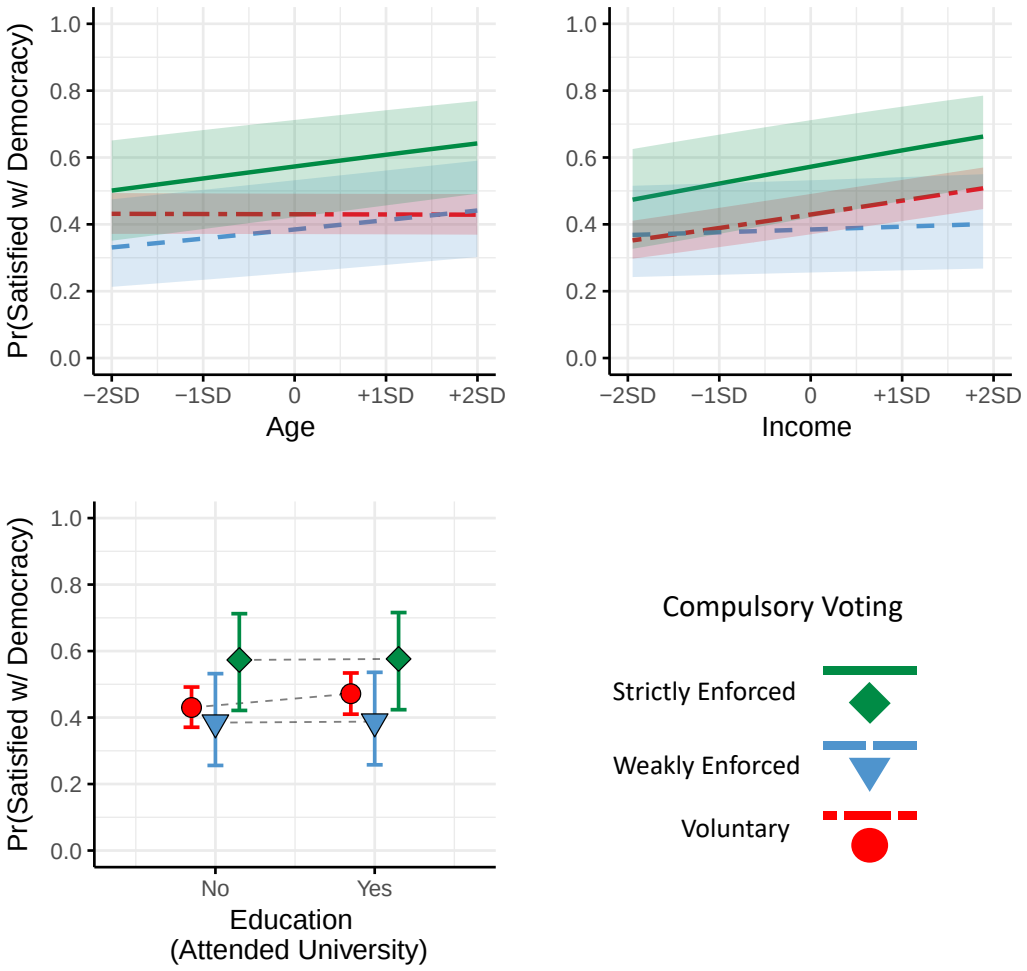


Figure B.3: Satisfaction with Democracy and Proportionality Interaction Effects

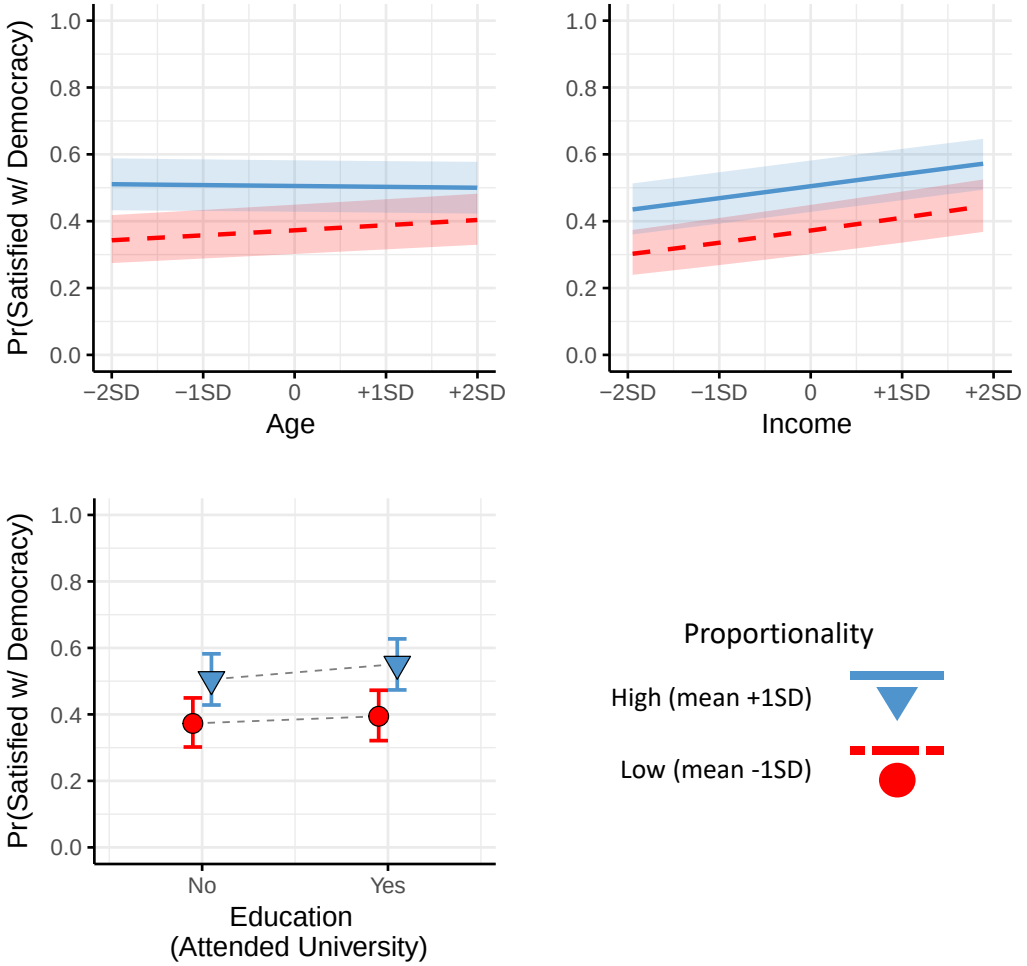


Figure B.4: Satisfaction with Democracy and Voter Registration Interaction Effects

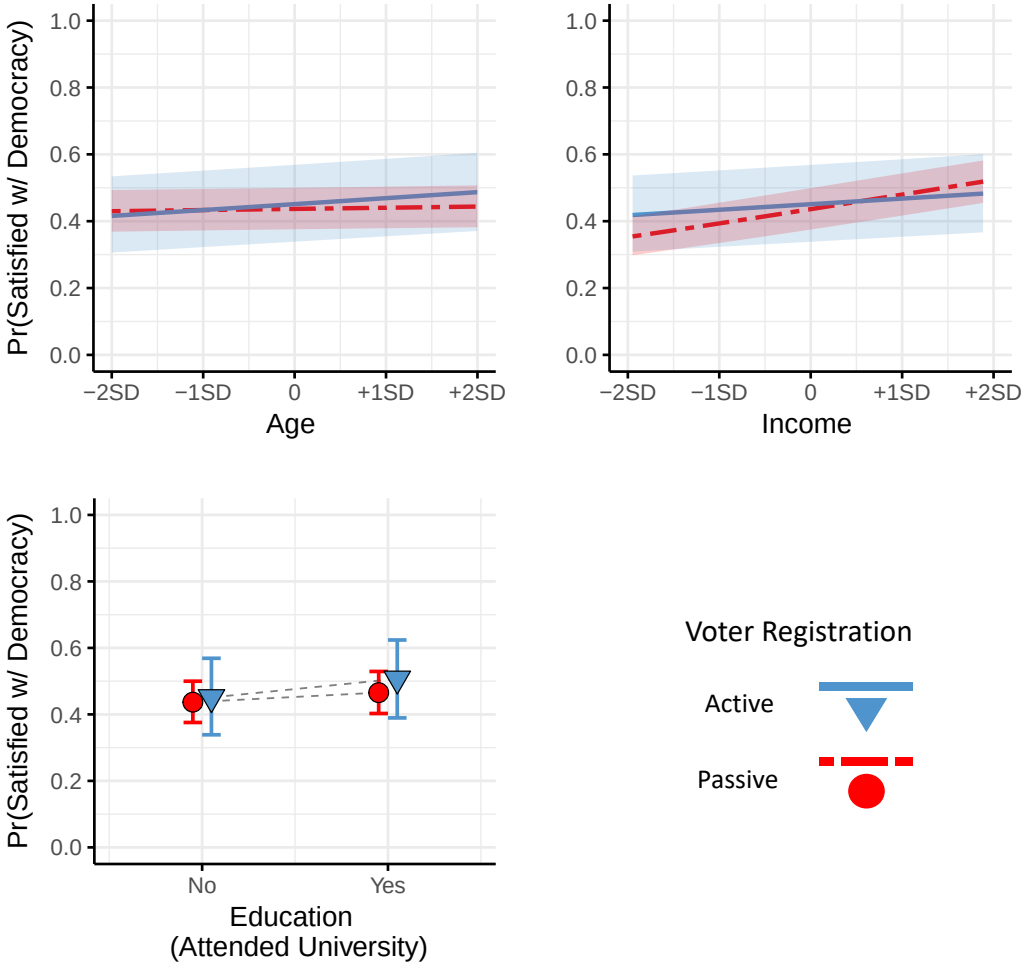


Figure B.5: Political Efficacy and Compulsory Voting Interaction Effects

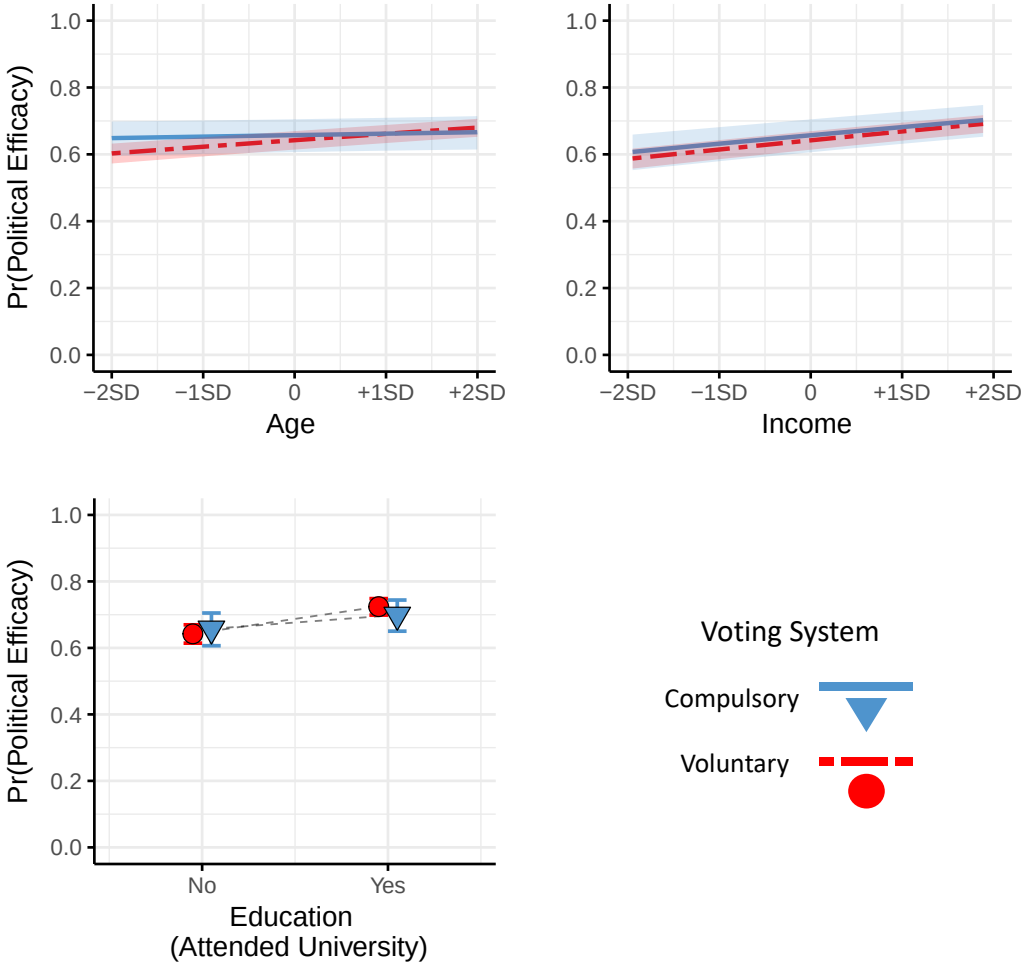


Figure B.6: Political Efficacy and Compulsory Voting Interaction Effects cont.

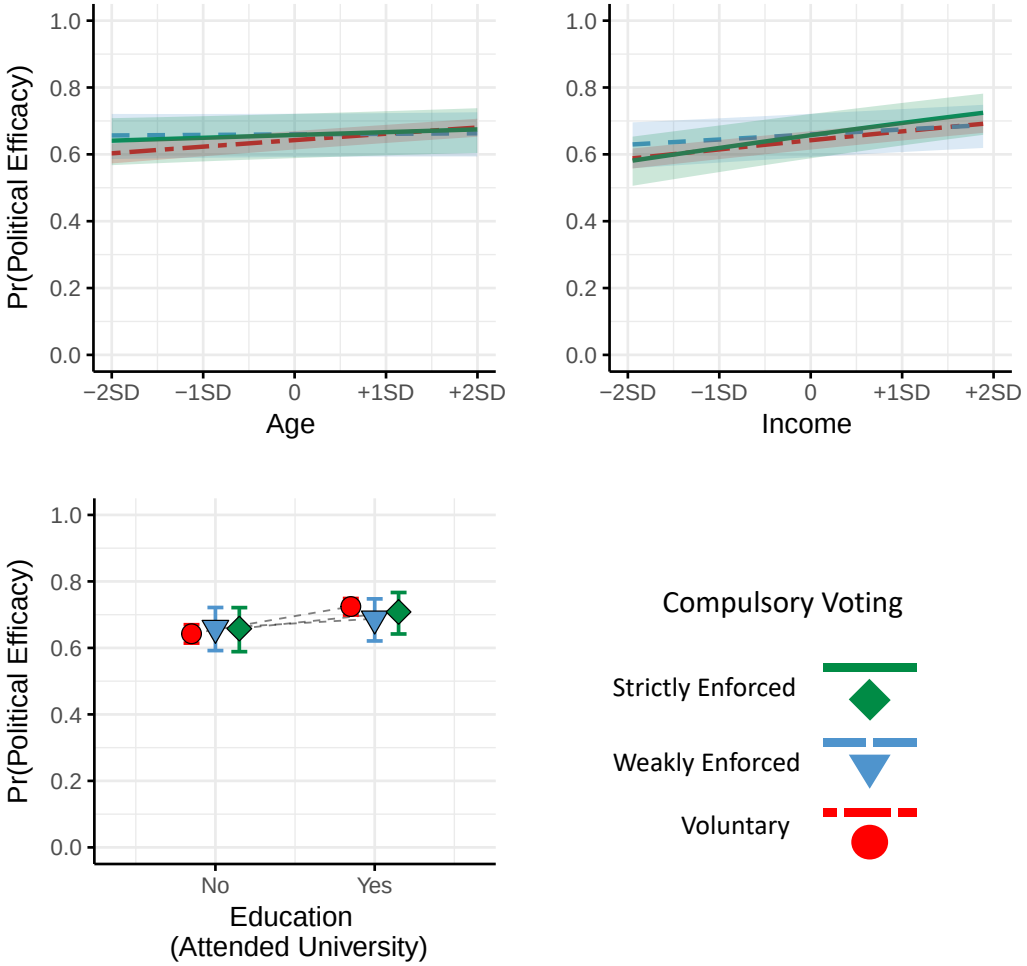


Figure B.7: Political Efficacy and Proportionality Interaction Effects

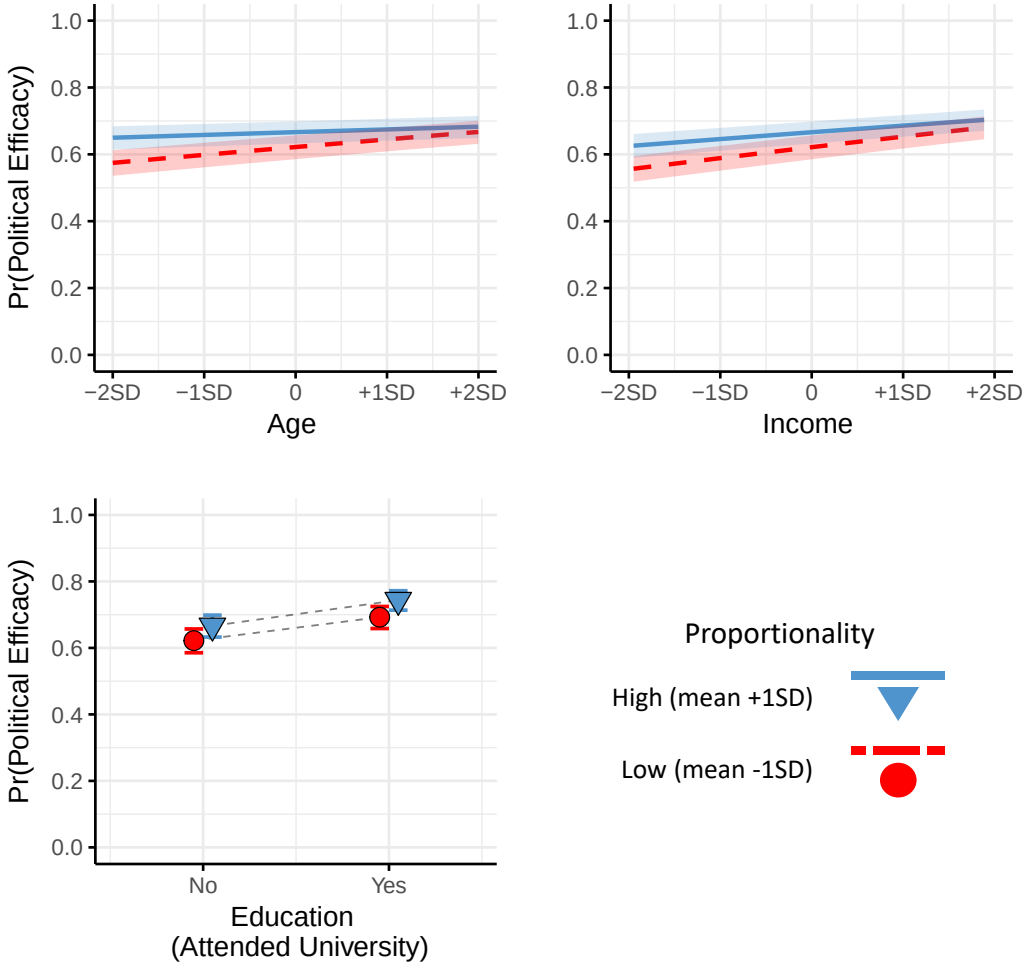
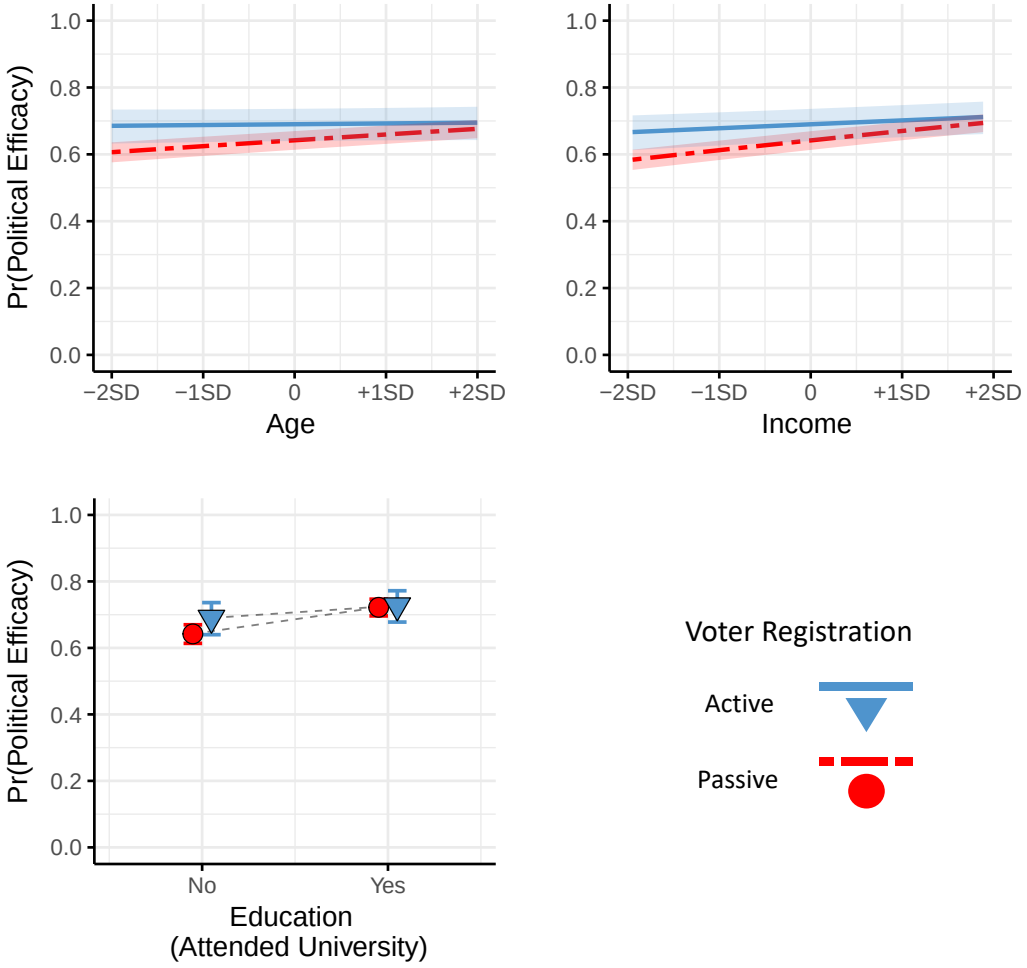


Figure B.8: Political Efficacy and Voter Registration Interaction Effects



Appendix C

Non-Electoral Participation

Additive Regression Models

The following tables display the output for the models which contain all of the key independent and dependent variables, but with no interaction terms. When cross-level interaction terms are added, the effect of each electoral law is conditional on the individual level variable included in the interaction. Running these additive models therefore allows us to directly examine the unconditional main effect of each electoral rule on the three dependent variables: protest participation, contacting politicians, and working with others to influence government.

As can be seen by comparing the output of the three additive tables with the interactive models below, the coefficients for the electoral rules and individual level variables are consistent across both model specifications. While there are marginal differences in the effect sizes across the two types of models, and the coefficients for referendum use and protest change direction (The referendum variables are still not statistically significant, and substantively extremely small), the interpretation of the main findings remains the same.

Across both the additive and interactive models, the only significant electoral rule effects are: The dummy and the strictly enforced compulsory voting measures for protest participation, which are both positive; the dummy and the weakly enforced compulsory voting measures for contacting officials, which are again, both positive; while there are no significant main effects for any electoral rules in terms of working with others.

Table C.1: Additive Models - Electoral Rules and Protest Participation

	Dependent Variable: Protest		
	(Model 1)	(Model 2)	(Model 3)
Intercept	-2.589^{***} (0.198)	-2.614^{***} (0.197)	-2.591^{***} (0.199)
Compulsory Voting (dummy)	1.054^{***} (0.305)		1.061^{***} (0.305)
Weakly Enforced CV		0.753 (0.444)	
Strictly Enforced CV		1.305^{**} (0.407)	
Proportionality (lagged)	0.191 (0.223)	0.169 (0.221)	0.194 (0.228)
Active Registration	0.054 (0.279)	0.286 (0.374)	0.055 (0.284)
Referendum Frequency	0.066 (0.166)	0.070 (0.163)	
Refendum Held (dummy)			0.032 (0.306)
GDP/Capita (log)	1.085^{*} (0.424)	1.090^{**} (0.418)	1.113^{**} (0.427)
Gini	-0.028 (0.265)	-0.166 (0.301)	-0.036 (0.268)
ENP	0.311 (0.352)	0.474 (0.389)	0.327 (0.401)
Old Democracy	-0.602 (0.312)	-0.666^{*} (0.315)	-0.603 (0.313)
Presidential	-0.558^{*} (0.235)	-0.559^{*} (0.231)	-0.561^{*} (0.246)
Age	-0.591^{***} (0.047)	-0.591^{***} (0.047)	-0.591^{***} (0.047)
Income	0.040 (0.045)	0.040 (0.045)	0.040 (0.045)
Political Knowledge	0.326^{***} (0.046)	0.326^{***} (0.046)	0.326^{***} (0.046)
Education (uni)	0.614^{***} (0.049)	0.614^{***} (0.049)	0.614^{***} (0.049)
Party ID	0.576^{***} (0.044)	0.575^{***} (0.044)	0.576^{***} (0.044)
Ideology (right)	-0.870^{***} (0.042)	-0.870^{***} (0.042)	-0.870^{***} (0.042)
Observations	25,929	25,929	25,929
Log Likelihood	$-8{,}051.286$	$-8{,}050.875$	$-8{,}051.359$
Akaike Inf. Crit.	16,136.570	16,137.750	16,136.720
Bayesian Inf. Crit.	16,275.340	16,284.690	16,275.490

*p<0.05; **p<0.01; ***p<0.001

Table C.2: Additive Models - Electoral Rules and Contacting Politicians

	Dependent Variable: Contacting Politicians		
	(Model 1)	(Model 2)	(Model 3)
Intercept	-3.059^{***} (0.168)	-3.033^{***} (0.165)	-3.052^{***} (0.170)
Compulsory Voting (dummy)	0.588^{*} (0.252)		0.577^{*} (0.255)
Weakly Enforced CV		0.888^{*} (0.365)	
Strictly Enforced CV		0.336 (0.334)	
Proportionality (lagged)	−0.074 (0.183)	−0.056 (0.178)	−0.095 (0.188)
Active Registration	0.158 (0.229)	−0.071 (0.304)	0.175 (0.235)
Referendum Frequency	−0.117 (0.138)	−0.122 (0.134)	
Refendum Held (dummy)			−0.174 (0.258)
GDP/Capita (log)	0.372 (0.354)	0.368 (0.344)	0.361 (0.358)
Gini	0.036 (0.223)	0.174 (0.250)	0.032 (0.227)
ENP	−0.077 (0.293)	−0.240 (0.320)	−0.026 (0.335)
Old Democracy	0.884^{***} (0.263)	0.948^{***} (0.262)	0.889^{***} (0.265)
Presidential	0.085 (0.195)	0.084 (0.189)	0.118 (0.204)
Age	0.231^{***} (0.040)	0.231^{***} (0.040)	0.231^{***} (0.040)
Income	0.305^{***} (0.040)	0.305^{***} (0.040)	0.305^{***} (0.040)
Political Knowledge	0.403^{***} (0.041)	0.403^{***} (0.041)	0.403^{***} (0.041)
Education (uni)	0.459^{***} (0.043)	0.460^{***} (0.043)	0.460^{***} (0.043)
Party ID	0.582^{***} (0.039)	0.582^{***} (0.039)	0.582^{***} (0.039)
Ideology (right)	−0.062 (0.036)	−0.062 (0.036)	−0.062 (0.036)
Observations	26,004	26,004	26,004
Log Likelihood	−9,889.490	−9,888.894	−9,889.616
Akaike Inf. Crit.	19,812.980	19,813.790	19,813.230
Bayesian Inf. Crit.	19,951.800	19,960.780	19,952.050

*p<0.05; **p<0.01; ***p<0.001

Table C.3: Additive Models - Electoral Rules and Working with Others to Influence Government

	Dependent Variable: Working with Others		
	(Model 1)	(Model 2)	(Model 3)
Intercept	-2.189^{***} (0.232)	-2.207^{***} (0.234)	-2.190^{***} (0.234)
Compulsory Voting (dummy)	0.529 (0.360)		0.537 (0.361)
Weakly Enforced CV		0.321 (0.531)	
Strictly Enforced CV		0.705 (0.488)	
Proportionality (lagged)	0.082 (0.261)	0.068 (0.261)	0.083 (0.267)
Active Registration	0.224 (0.327)	0.383 (0.442)	0.229 (0.333)
Referendum Frequency	0.097 (0.197)	0.101 (0.196)	
Refendum Held (dummy)			0.022 (0.362)
GDP/Capita (log)	0.422 (0.498)	0.423 (0.494)	0.469 (0.501)
Gini	−0.109 (0.313)	−0.204 (0.358)	−0.124 (0.317)
ENP	0.223 (0.415)	0.334 (0.462)	0.262 (0.474)
Old Democracy	0.057 (0.370)	0.014 (0.376)	0.054 (0.371)
Presidential	−0.257 (0.275)	−0.258 (0.274)	−0.257 (0.288)
Age	-0.116^{**} (0.035)	-0.116^{**} (0.035)	-0.116^{**} (0.035)
Income	0.182^{***} (0.036)	0.182^{***} (0.036)	0.182^{***} (0.036)
Political Knowledge	0.284^{***} (0.036)	0.284^{***} (0.036)	0.284^{***} (0.036)
Education (uni)	0.405^{***} (0.040)	0.405^{***} (0.040)	0.405^{***} (0.040)
Party ID	0.614^{***} (0.034)	0.614^{***} (0.034)	0.614^{***} (0.034)
Ideology (right)	-0.272^{***} (0.033)	-0.272^{***} (0.033)	-0.272^{***} (0.033)
Observations	25,911	25,911	25,911
Log Likelihood	−11,824.870	−11,824.730	−11,824.990
Akaike Inf. Crit.	23,683.740	23,685.460	23,683.980
Bayesian Inf. Crit.	23,822.500	23,832.380	23,822.740

*p<0.05; **p<0.01; ***p<0.001

Interactive Models

Table C.4: Non-electoral Participation and Compulsory Voting (Dummy)

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	-2.641^{***} (0.200)	-3.091^{***} (0.169)	-2.221^{***} (0.233)
Compulsory Voting	1.210^{***} (0.318)	0.744^{**} (0.263)	0.681 (0.366)
Proportionality	0.197 (0.225)	−0.072 (0.183)	0.089 (0.262)
Active Registration	0.055 (0.281)	0.150 (0.229)	0.220 (0.328)
Referendum Frequency	0.065 (0.167)	−0.118 (0.138)	0.095 (0.198)
GDP/Capita (log)	1.089^{*} (0.428)	0.381 (0.354)	0.438 (0.499)
Gini	−0.034 (0.267)	0.042 (0.223)	−0.095 (0.313)
ENP	0.318 (0.355)	−0.086 (0.293)	0.220 (0.416)
Old Democracy	−0.607 (0.314)	0.890^{***} (0.263)	0.060 (0.371)
Presidential	-0.570^{*} (0.237)	0.086 (0.195)	−0.260 (0.276)
Age	-0.786^{***} (0.055)	0.199^{***} (0.046)	-0.177^{***} (0.041)
Income	0.094 (0.052)	0.317^{***} (0.045)	0.222^{***} (0.040)
Political Knowledge	0.364^{***} (0.053)	0.425^{***} (0.047)	0.359^{***} (0.041)
Education (uni)	0.634^{***} (0.056)	0.469^{***} (0.049)	0.374^{***} (0.045)
Party ID	0.583^{***} (0.051)	0.619^{***} (0.044)	0.664^{***} (0.039)
Ideology (right)	-0.963^{***} (0.050)	−0.050 (0.042)	-0.248^{***} (0.037)
CV*Age	0.717^{***} (0.103)	0.116 (0.092)	0.235^{**} (0.083)
CV*Income	−0.196 (0.106)	−0.052 (0.097)	-0.184^{*} (0.087)
CV*Political Knowledge	−0.076 (0.106)	−0.085 (0.098)	-0.300^{***} (0.085)
CV*Education (uni)	−0.023 (0.115)	−0.046 (0.106)	0.165 (0.098)
CV*Party ID	0.021 (0.102)	−0.179 (0.095)	-0.218^{**} (0.082)
CV*Ideology (right)	0.324^{***} (0.095)	−0.059 (0.086)	−0.128 (0.077)
Groups	25	25	25
Observations	25,929	26,004	25,911
ICC	0.06	0.04	0.08
Log Likelihood	−8,016.438	−9,885.584	−11,805.180
Akaike Inf. Crit.	16,078.880	19,817.170	23,656.360
Bayesian Inf. Crit.	16,266.630	20,004.990	23,844.100

Note: *p<0.05; **p<0.01; ***p<0.001

Table C.5: Non-electoral Participation and Compulsory Voting (Ordinal)

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	−2.667*** (0.197)	−3.064*** (0.166)	−2.237*** (0.234)
CV Weak	0.679 (0.459)	1.002** (0.375)	0.419 (0.537)
CV Strict	1.641*** (0.418)	0.561 (0.350)	0.937 (0.496)
Proportionality	0.177 (0.220)	−0.051 (0.178)	0.079 (0.261)
Active Registration	0.284 (0.373)	−0.084 (0.304)	0.363 (0.442)
Referendum Frequency	0.068 (0.162)	−0.123 (0.134)	0.097 (0.196)
GDP/Capita (log)	1.110** (0.417)	0.386 (0.344)	0.446 (0.494)
Gini	−0.184 (0.301)	0.185 (0.250)	−0.179 (0.359)
ENP	0.468 (0.389)	−0.259 (0.320)	0.316 (0.462)
Old Democracy	−0.673* (0.314)	0.956*** (0.262)	0.022 (0.376)
Presidential	−0.575* (0.230)	0.081 (0.189)	−0.264 (0.274)
Age	−0.786*** (0.055)	0.199*** (0.046)	−0.177*** (0.041)
Income	0.094 (0.052)	0.317*** (0.045)	0.222*** (0.040)
Political Knowledge	0.364*** (0.053)	0.426*** (0.047)	0.359*** (0.041)
Education (uni)	0.634*** (0.056)	0.469*** (0.049)	0.375*** (0.045)
Party ID	0.582*** (0.051)	0.619*** (0.044)	0.664*** (0.039)
Ideology (right)	−0.963*** (0.050)	−0.050 (0.042)	−0.248*** (0.037)
CV Weak*Age	0.384* (0.152)	−0.129 (0.124)	0.103 (0.111)
CV Weak*Income	−0.140 (0.151)	0.058 (0.130)	−0.184 (0.115)
CV Weak*Political Knowledge	−0.080 (0.149)	−0.191 (0.128)	−0.315** (0.111)
CV Weak*Education (uni)	−0.068 (0.178)	−0.083 (0.154)	0.258 (0.142)
CV Weak*Party ID	0.418** (0.149)	−0.086 (0.120)	−0.121 (0.106)
CV Weak*Ideology (right)	0.602*** (0.132)	−0.020 (0.114)	−0.065 (0.101)
CV Strict*Age	0.944*** (0.125)	0.361** (0.124)	0.362*** (0.109)
CV Strict*Income	−0.195 (0.136)	−0.132 (0.132)	−0.176 (0.118)
CV Strict*Political Knowledge	−0.043 (0.136)	0.036 (0.134)	−0.269* (0.117)
CV Strict*Education (uni)	0.020 (0.138)	−0.004 (0.133)	0.109 (0.123)
CV Strict*Party ID	−0.280* (0.129)	−0.315* (0.138)	−0.330** (0.115)
CV Strict*Ideology (right)	0.117 (0.121)	−0.106 (0.116)	−0.190 (0.103)
Groups	25	25	25
Observations	25,929	26,004	25,911
ICC	0.06	0.04	0.08
Log Likelihood	−7,999.876	−9,877.878	−11,801.620
Akaike Inf. Crit.	16,059.750	19,815.760	23,663.240
Bayesian Inf. Crit.	16,304.650	20,060.740	23,908.110

Note: *p<0.05; **p<0.01; ***p<0.001

Table C.6: Non-electoral Participation and Compulsory Voting (Level of Enforcement Hypothesis Test)

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	−1.990*** (0.511)	−2.062*** (0.421)	−1.819** (0.605)
CV: Voluntary Voting	−0.677 (0.458)	−1.001** (0.376)	−0.419 (0.537)
CV: Strictly Enforced	0.964 (0.617)	−0.440 (0.512)	0.519 (0.732)
Proportionality	0.177 (0.220)	−0.051 (0.178)	0.079 (0.261)
Active Registration	0.286 (0.373)	−0.084 (0.304)	0.363 (0.443)
Referendum Frequency	0.068 (0.162)	−0.123 (0.134)	0.097 (0.196)
GDP/Capita (log)	1.110** (0.417)	0.385 (0.345)	0.445 (0.494)
Gini	−0.184 (0.300)	0.185 (0.250)	−0.179 (0.359)
ENP	0.469 (0.388)	−0.259 (0.321)	0.316 (0.462)
Old Democracy	−0.673* (0.314)	0.956*** (0.262)	0.022 (0.376)
Presidential	−0.575* (0.230)	0.081 (0.189)	−0.264 (0.274)
Age	−0.402** (0.142)	0.070 (0.115)	−0.075 (0.103)
Income	−0.046 (0.141)	0.375** (0.122)	0.038 (0.108)
Political Knowledge	0.284* (0.139)	0.235* (0.119)	0.044 (0.103)
Education (uni)	0.566*** (0.169)	0.386** (0.146)	0.633*** (0.135)
Party ID	1.000*** (0.140)	0.533*** (0.111)	0.543*** (0.099)
Ideology (right)	−0.361** (0.122)	−0.070 (0.106)	−0.314*** (0.094)
Voluntary*Age	−0.383* (0.152)	0.129 (0.124)	−0.102 (0.111)
Voluntary*Income	0.140 (0.151)	−0.058 (0.130)	0.184 (0.115)
Voluntary*Political Knowledge	0.080 (0.149)	0.191 (0.128)	0.315** (0.111)
Voluntary*Education (uni)	0.068 (0.178)	0.083 (0.154)	−0.258 (0.142)
Voluntary*Party ID	−0.418** (0.149)	0.086 (0.120)	0.121 (0.106)
Voluntary*Ideology (right)	−0.602*** (0.132)	0.020 (0.114)	0.066 (0.101)
CV Strict *Age	0.561** (0.181)	0.491** (0.163)	0.259 (0.144)
CV Strict *Income	−0.055 (0.189)	−0.190 (0.174)	0.008 (0.155)
CV Strict *Political Knowledge	0.036 (0.187)	0.227 (0.173)	0.046 (0.151)
CV Strict *Education (uni)	0.087 (0.211)	0.079 (0.191)	−0.149 (0.177)
CV Strict *Party ID	−0.698*** (0.183)	−0.229 (0.172)	−0.209 (0.146)
CV Strict *Ideology (right)	−0.485** (0.164)	−0.085 (0.151)	−0.125 (0.135)
Groups	25	25	25
Observations	25,929	26,004	25,911
ICC	0.06	0.04	0.08
Log Likelihood	−7,999.876	−9,877.878	−11,801.620
Akaike Inf. Crit.	16,059.750	19,815.760	23,663.240
Bayesian Inf. Crit.	16,304.650	20,060.740	23,908.110

Note: *p<0.05; **p<0.01; ***p<0.001

Reference category = Weakly enforced compulsory voting

Table C.7: Non-electoral Participation and Proportionality

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	−2.594*** (0.198)	−3.076*** (0.169)	−2.190*** (0.233)
Compulsory Voting	1.064*** (0.305)	0.600* (0.253)	0.525 (0.360)
Proportionality	0.153 (0.231)	−0.153 (0.188)	0.119 (0.265)
Active Registration	0.039 (0.279)	0.130 (0.230)	0.221 (0.328)
Referendum Frequency	0.065 (0.165)	−0.113 (0.139)	0.097 (0.198)
GDP/Capita (log)	1.089* (0.424)	0.359 (0.355)	0.418 (0.498)
Gini	−0.022 (0.265)	0.050 (0.224)	−0.106 (0.313)
ENP	0.300 (0.352)	−0.105 (0.294)	0.221 (0.415)
Old Democracy	−0.603 (0.312)	0.897*** (0.264)	0.059 (0.370)
Presidential	−0.553* (0.235)	0.094 (0.195)	−0.256 (0.276)
Proportionality*Age	−0.601*** (0.047)	0.211*** (0.041)	−0.123*** (0.036)
Proportionality*Income	0.047 (0.045)	0.323*** (0.040)	0.190*** (0.036)
Proportionality*Political Knowledge	0.327*** (0.046)	0.395*** (0.041)	0.282*** (0.036)
Proportionality*Education (uni)	0.617*** (0.049)	0.477*** (0.044)	0.408*** (0.040)
Proportionality*Party ID	0.577*** (0.044)	0.589*** (0.039)	0.613*** (0.034)
Proportionality*Ideology (right)	−0.875*** (0.043)	−0.082* (0.037)	−0.280*** (0.033)
Proportionality*Age	−0.302** (0.098)	−0.169* (0.075)	−0.173* (0.074)
Proportionality*Income	0.145 (0.094)	0.112 (0.074)	0.106 (0.073)
Proportionality*Political Knowledge	−0.195* (0.097)	−0.118 (0.075)	−0.014 (0.074)
Proportionality*Education (uni)	0.003 (0.098)	0.135 (0.078)	−0.032 (0.078)
Proportionality*Party ID	0.023 (0.091)	0.110 (0.070)	−0.071 (0.070)
Proportionality*Ideology (right)	−0.126 (0.088)	−0.209** (0.068)	−0.157* (0.066)
Groups	25	25	25
Observations	25,929	26,004	25,911
ICC	0.06	0.04	0.08
Log Likelihood	−8,041.265	−9,874.233	−11,816.280
Akaike Inf. Crit.	16,128.530	19,794.470	23,678.550
Bayesian Inf. Crit.	16,316.280	19,982.280	23,866.290

Note: *p<0.05; **p<0.01; ***p<0.001

Table C.8: Non-electoral Participation and Voter Registration (dummy)

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	-2.551^{***} (0.198)	-3.065^{***} (0.170)	-2.183^{***} (0.233)
Compulsory Voting	1.066^{***} (0.303)	0.585^{*} (0.254)	0.534 (0.359)
Proportionality	0.184 (0.223)	−0.070 (0.184)	0.087 (0.261)
Active Registration	−0.105 (0.289)	0.184 (0.238)	0.208 (0.331)
Referendum Frequency	0.063 (0.165)	−0.118 (0.139)	0.095 (0.197)
GDP/Capita (log)	1.095^{**} (0.423)	0.375 (0.356)	0.434 (0.496)
Gini	−0.032 (0.264)	0.048 (0.224)	−0.094 (0.312)
ENP	0.319 (0.351)	−0.082 (0.294)	0.222 (0.414)
Old Democracy	-0.615^{*} (0.311)	0.885^{***} (0.264)	0.050 (0.369)
Presidential	-0.565^{*} (0.234)	0.087 (0.196)	−0.253 (0.275)
Age	-0.632^{***} (0.053)	0.237^{***} (0.046)	-0.102^{*} (0.041)
Income	0.049 (0.051)	0.291^{***} (0.046)	0.197^{***} (0.041)
Political Knowledge	0.314^{***} (0.052)	0.423^{***} (0.047)	0.301^{***} (0.041)
Education (uni)	0.587^{***} (0.055)	0.437^{***} (0.049)	0.347^{***} (0.045)
Party ID	0.515^{***} (0.050)	0.604^{***} (0.045)	0.638^{***} (0.040)
Ideology (right)	-0.932^{***} (0.049)	−0.047 (0.042)	-0.211^{***} (0.038)
Active Reg*Age	0.215 (0.112)	−0.029 (0.092)	−0.050 (0.083)
Active Reg*Income	−0.036 (0.110)	0.052 (0.094)	−0.092 (0.084)
Active Reg*Political Knowledge	0.064 (0.111)	−0.087 (0.094)	−0.077 (0.083)
Active Reg*Education (uni)	0.146 (0.119)	0.091 (0.103)	0.254^{**} (0.095)
Active Reg*Party ID	0.273^{**} (0.105)	−0.083 (0.088)	−0.096 (0.078)
Active Reg*Ideology (right)	0.259^{**} (0.099)	−0.061 (0.084)	-0.250^{***} (0.075)
Groups	25	25	25
Observations	25,929	25,929	25,929
ICC	0.06	0.06	0.06
Log Likelihood	−8,041.330	−9,887.467	−11,813.820
Akaike Inf. Crit.	16,128.660	19,820.940	23,673.630
Bayesian Inf. Crit.	16,316.410	20,008.750	23,861.370

Note: *p<0.05; **p<0.01; ***p<0.001

Table C.9: Non-electoral Participation and Referendum Frequency

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	-2.586^{***} (0.197)	-3.051^{***} (0.168)	-2.176^{***} (0.232)
Compulsory Voting	1.054^{***} (0.304)	0.589^{*} (0.252)	0.532 (0.359)
Proportionality	0.189 (0.223)	−0.073 (0.182)	0.084 (0.261)
Active Registration	0.054 (0.278)	0.152 (0.229)	0.220 (0.327)
Referendum Frequency	−0.018 (0.170)	−0.264 (0.145)	0.003 (0.199)
GDP/Capita (log)	1.089^{*} (0.423)	0.377 (0.353)	0.424 (0.496)
Gini	−0.029 (0.264)	0.038 (0.222)	−0.107 (0.312)
ENP	0.315 (0.351)	−0.078 (0.292)	0.218 (0.414)
Old Democracy	−0.601 (0.311)	0.882^{***} (0.262)	0.055 (0.369)
Presidential	-0.551^{*} (0.234)	0.093 (0.194)	−0.256 (0.275)
Age	-0.567^{***} (0.047)	0.239^{***} (0.040)	-0.117^{**} (0.036)
Income	0.035 (0.046)	0.306^{***} (0.040)	0.179^{***} (0.036)
Political Knowledge	0.333^{***} (0.047)	0.394^{***} (0.041)	0.284^{***} (0.036)
Education (uni)	0.617^{***} (0.049)	0.462^{***} (0.043)	0.404^{***} (0.040)
Party ID	0.572^{***} (0.044)	0.569^{***} (0.039)	0.598^{***} (0.035)
Ideology (right)	-0.845^{***} (0.043)	−0.068 (0.037)	-0.278^{***} (0.033)
Ref Freq*Age	-0.232^{***} (0.066)	-0.163^{**} (0.063)	−0.014 (0.049)
Ref Freq*Income	−0.014 (0.061)	−0.016 (0.063)	0.035 (0.049)
Ref Freq*Political Knowledge	−0.056 (0.059)	0.045 (0.061)	−0.028 (0.047)
Ref Freq*Education (uni)	−0.023 (0.078)	−0.014 (0.078)	0.040 (0.066)
Ref Freq*Party ID	0.042 (0.061)	0.224^{***} (0.064)	0.158^{**} (0.048)
Ref Freq*Ideology (right)	-0.174^{**} (0.058)	0.140^{*} (0.055)	0.081 (0.044)
Groups	25	25	25
Observations	25,929	26,004	25,911
ICC	0.06	0.04	0.08
Log Likelihood	−11,817.340	−11,817.340	−11,817.340
Akaike Inf. Crit.	23,680.690	23,680.690	23,680.690
Bayesian Inf. Crit.	23,868.430	23,868.430	23,868.430

Note: *p<0.05; **p<0.01; ***p<0.001

Table C.10: Non-electoral Participation and Referendum Held (dummy)

Dependent Variable	Protest	Contacting Officials	Working with Others
	(Model 1)	(Model 2)	(Model 3)
Intercept	−2.564*** (0.199)	−3.041*** (0.171)	−2.158*** (0.235)
Compulsory Voting	1.059*** (0.305)	0.577* (0.255)	0.544 (0.362)
Proportionality (lagged)	0.199 (0.229)	−0.091 (0.188)	0.087 (0.268)
Active Registration	0.035 (0.284)	0.165 (0.235)	0.220 (0.334)
Referendum Held (dummy)	−0.106 (0.315)	−0.208 (0.265)	−0.114 (0.367)
GDP/Capita (log)	1.126** (0.428)	0.367 (0.360)	0.478 (0.504)
Gini	−0.038 (0.269)	0.035 (0.227)	−0.122 (0.318)
ENP	0.308 (0.402)	−0.037 (0.336)	0.254 (0.476)
Old Democracy	−0.612 (0.313)	0.885*** (0.266)	0.052 (0.373)
Presidential	−0.543* (0.246)	0.124 (0.205)	−0.253 (0.289)
Age	−0.501*** (0.051)	0.308*** (0.045)	−0.082* (0.040)
Income	0.061 (0.050)	0.357*** (0.045)	0.193*** (0.040)
Political Knowledge	0.374*** (0.051)	0.418*** (0.046)	0.309*** (0.041)
Education (uni)	0.625*** (0.053)	0.460*** (0.048)	0.365*** (0.044)
Party ID	0.523*** (0.049)	0.547*** (0.044)	0.574*** (0.039)
Ideology (right)	−0.883*** (0.047)	−0.084* (0.041)	−0.324*** (0.037)
Ref Held*Age	−0.523*** (0.125)	−0.370*** (0.098)	−0.177* (0.088)
Ref Held*Income	−0.125 (0.117)	−0.241* (0.098)	−0.042 (0.088)
Ref Held*Political Knowledge	−0.248* (0.116)	−0.068 (0.099)	−0.113 (0.087)
Ref Held*Education (uni)	−0.057 (0.136)	0.008 (0.116)	0.249* (0.106)
Ref Held*Party ID	0.291** (0.113)	0.151 (0.093)	0.196* (0.083)
Ref Held*Ideology (right)	0.089 (0.107)	0.114 (0.089)	0.259** (0.079)
Groups	25	25	25
Observations	25,929	26,004	25,911
ICC	0.06	0.04	0.08
Log Likelihood	−8,036.579	−9,878.615	−11,812.970
Akaike Inf. Crit.	16,119.160	19,803.230	23,671.940
Bayesian Inf. Crit.	16,306.910	19,991.050	23,859.680

Note: *p<0.05; **p<0.01; ***p<0.001