

# Direct Democracy and Representative Government

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# Summary

Direct democracy, an addition to representative democracy allowing citizens to directly vote on substantive issues parliaments usually vote on, has an intuitive appeal in appearing to be the most obvious institutionalization of democracy itself. Increased institutionalization and usage of direct democracy has heightened interest in the topic in political science. In the three papers which make up this dissertation I explore different aspects of the political effects of direct democracy with an aim to provide insights how it affects citizens' representation as well as their behavior and attitudes.

In a first paper I test the claim that referendums are unrepresentative because turnout in referendums is usually lower than in parliamentary elections and tends to be skewed towards citizens of high socio-economic status. The analysis is made possible by a unique feature of Swiss post-referendum surveys which also asked non-voters about their opinion on the referendum's subject. Comparing opinion majorities in the surveys against actual referendum outcomes we show that representativeness increases slightly in turnout as well as over time. On balance we find more representative than unrepresentative outcomes implying that direct democracy, at least in Switzerland, seems to improve representation.

In a second paper I focus on citizens' attitudes towards and actual participation in referendums. Using data from the European Social Survey I find that voting, other forms of political activity and political interest are positively associated with support for direct democracy. Analyzing post-referendum surveys I find the same pattern to hold for actual participation in referendums. Hence, direct democracy, despite its widespread popularity, appears insufficient to bring the politically disengaged back into democratic politics.

In a third and final paper, I investigate whether direct democracy increases citizens' satisfaction with democracy. After all, they give citizens participatory opportunities and promise to offer them more control over policy. Combining aggregate data on satisfaction with democracy from semi-annual Eurobarometer surveys from 1973 to 2013 with data on all national referendums in the same period, I find no evidence for an (average) effect of referendums on democratic satisfaction. While an analysis of individual time-series suggests that referendums may have an effect under certain circumstances, significant positive estimates obtain for two countries, my empirical investigation of possible mechanisms remains inconclusive.

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# Chapter 1

## General introduction

### 1.1 Preliminary remarks

In my dissertation I explore how direct democracy affects citizens' representation as well as their behavior and attitudes. I focus on direct democracy because it is the most prominent, far-reaching and popular of many democratic innovations proposed to provide a deepening and improvement of democracy. As Budge (1996, p. 2) puts it:

“direct democracy, in the sense of the people directly voting on the questions parliaments generally vote on, has a driving appeal in the sense of forming the most obvious institutionalization of democracy itself.”

While the debates around direct democracy are as old as the instrument itself – and many arguments have been oft-repeated – research on the topic has been predominantly descriptive and normative until relatively recently (Lupia and Matsusaka, 2004, p. 464). After all, although its origins lie in the ancient Greek polis direct democracy is still a relatively new addition to many modern day democracies. Consequently, we still know relatively little about how direct citizen decision-making works in and influences predominantly representative systems in the real world. Theoretically, it has many potential benefits and drawbacks.

For instance, direct democracy offers additional opportunities for political participation, but turnout in referendums most often is even lower than in elections and therefore may

worsen political inequality. It promises citizens the possibility to correct decisions made by representatives and make policy makers more responsive. However, it can also open up new venues for populists and special interests to influence politics. Participation is known to breed trust but what effect can it have in the aggregate if those who are most unsatisfied are already the least likely to participate?

My hope is to contribute to the scientific understanding of direct democracy through empirical studies on direct democracy in established representative democracies. The dissertation is made up of three empirical papers which focus on the representativeness of referendums (Chapter 2), potential and actual participation in referendums (Chapter 3) and the effect of referendums' on citizens political support (Chapter 4).

In Chapter 2 my co-author and I test the claim that referendums are unrepresentative because turnout in referendums is usually lower than in parliamentary elections. The analysis is made possible by a unique feature of Swiss post-referendum surveys which also asked non-voters about their opinion. Comparing opinion majorities in the surveys against actual referendum outcomes we show that representativeness increases slightly in turnout.

In Chapter 3 I analyze data from the European Social Survey showing that in most countries politically active citizens are more supportive of direct democracy than those who are not. I also analyze survey data on actual referendums which consistently show that voters in elections are much more likely to vote in referendums than non-voters.

Lastly, in Chapter 4, combining aggregate data on satisfaction with democracy from semi-annual Eurobarometer surveys from 1973 to 2013 with data on all national referendums in the same period, I test whether referendums increase citizen's satisfaction with democracy. I find no evidence for an (average) effect of referendums on democratic satisfaction. This result is robust across various specifications and unlikely to be biased by reverse causality. However, my analysis of individual time-series suggests that referendums may have an effect under certain circumstances as significant positive estimates obtain for two countries.

Preceding the papers, I first provide an introduction (Section 1.2) to the topic and wider debates around it. In doing so the section also provides a definition of the key term of this dissertation – direct democracy – and a comprehensive literature review. The narrative for this chapter is that of a democratic malaise which democratic innovations such as direct democracy may be able to cure. While the diagnosis of a democratic crisis is not undisputed the potential antidote, direct democracy, has relevance even in absence of the disease. I make this point in the subsequent Guide through the Chapters (Section 1.3) and provide brief summaries of the chapters clarifying how each of them relates to the themes of representation, participation and political support. A General Conclusion (Chapter 5) wraps up the dissertation. There, I provide thoughts on policy implications (Section 5.2), limitations (Section 5.3) of the findings presented in the preceding chapters and on further research (Section 5.4).

## 1.2 Introduction

Concerns exist about democratic developments in Europe and beyond.<sup>1</sup> Diagnoses of a democratic recession usually encompass at least the following three symptoms: policy making that is increasingly detached from ordinary citizens and their preferences, a decline in turnout and other forms of political participation and an erosion of trust in government and satisfaction with democracy among citizens, all of which ultimately challenge the legitimacy of democratic institutions. Direct democracy is probably the most popular and far-reaching remedy proposed in response to such diagnoses (Altman, 2012; Leduc, 2002). Few introductory texts on direct democracy fail to make reference to the diagnosis described above. Also, the remedy metaphor is frequently invoked.

In this chapter I provide an assessment of the potentials but also pitfalls of an increased institutionalization and use of direct democracy in the countries of the European Union focusing on the three key aspects identified above. Optimism about the development of democracy, the ‘third wave’ of democratization has given way to concerns that the ensuing expansion of democracy has been followed by a democratic recession (Diamond, 2008) in both new and established democracies. These developments said to have taken place on a global scale during the past decades have been described by scholars of democracy as a ‘rollback’ (Diamond, 2008), ‘hollowing out’ (Mair, 2013) of democracy or establishment of ‘post-democracy’ (Crouch, 2007).

While Diamond (2008) focused on the crumbling and failure of newly established democracies others have been more concerned with developments in established democracies (e.g. Mair, 2013; Crouch, 2007; Dalton, 2004). It is the latter for which many hope direct democracy can be a remedy. There, the formal institutions of democracy remain intact but a process is said to take place that can be described as a mutual retreat of parties and citizens.

Two concurrent developments are commonly identified as driving the democratic de-

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<sup>1</sup>This chapter has been published as a journal article “Direct Democracy in Europe: Potentials and Pitfalls” in *Global Policy* (Leininger, 2015).

cline. Firstly, a process of dealignment whereby societal cleavages dissipate giving way to greater individualism is said to have taken place. Such cleavages used to structure party competition in that parties would be seen as representatives of certain segments of society. Citizens within these segments held strong attachments to the corresponding parties, and were encouraged by strong class-based organizations to vote. As these cleavages disappear the link between citizens and parties and therefore politics more generally weakens. Secondly, globalization and increased supranational governance as for instance embodied by the European Union have challenged the efficacy of national policymaking, so that governments find it increasingly difficult to be responsive to their citizens and citizens become less trusting in their governing institutions. While certain aspects of these diagnoses like decreasing turnout are undisputed, although their interpretation may be, others are more controversial. Yet, my aim here is not to assess the merits of these diagnoses but rather to provide an assessment of the likely effects of an increased institutionalization and use of direct democracy in Europe and beyond.

While satisfaction with and trust in institutions and actors of politics is in decline citizens remain committed to democratic norms and principles (Dalton, 2004). Part of the rise in discontent could thus be explained by increased expectations on the side of citizens. Direct democracy then appears to be a straightforward way of tackling citizens' disaffection by providing more participatory opportunities to 'critical citizens' (Norris, 2011). When asked, citizens in polities with and without direct democracy consistently voice support for direct democracy in substantial majorities, in fact such popular majorities exist in all countries of the European Union.<sup>2</sup>

Improved education and advances in communication technology are said to have increased citizens' capacity and demand for participation. They are often invoked to explain the spread and increase in the institutionalization and usage of direct democracy around the world in recent decades (Altman, 2010; Butler and Ranney, 1994). Support for direct democracy is especially strong among the young and politically in-

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<sup>2</sup>Popular support ranges from 78% approving of direct democracy in the Netherlands and Slovenia to around 89% in Poland, Spain and Cyprus (own calculations based on data from round 6 of the European Social Survey). See also Chapter 3.

terested according to Donovan and Karp (2006), yet a number of studies find political dissatisfaction to be a strong determinant of support for direct democracy. This also resonates with a continued emphasis on participation in the political theory literature whether it be participatory democracy, strong democracy, or deliberative democracy.

But such appeal is not without corresponding fears about detrimental effects of direct democracy. It offers opportunities for political participation beyond the conventional means. Yet, turnout in referendums most often is even lower and therefore prone to be more unequally distributed among segments of the population than in elections. Direct democracy promises citizens the possibility to correct unpopular decisions made by representatives and to make policy makers pay greater heed to public opinion. However, it can also open up a new venue for populists and special interests to influence politics. Participation is known to breed trust but what effect can it have in the aggregate if those who are most unsatisfied are already the least likely to participate? There are many well-argued hopes and fears. The question is what evidence there is to support some and dispel others.

This chapter, based on a comprehensive review of the literature on initiatives and referendums, assesses the potentials and pitfalls for an increased institutionalization and use of direct democracy to address the symptoms of a ‘democratic crisis’ – or, put more sanguinely, how it might affect participation, particularly turnout, representation as well as trust in government and satisfaction with democracy.<sup>3</sup> It thus provides a background of theoretical ideas and empirical findings to the three empirical studies (Chapters 2, 3 and 4) which make up this dissertation.

Although focused on Europe I provide a transatlantic perspective as I draw heavily from experiences with direct democracy in the US as well as, obviously, Switzerland and the scholarly work that has been developed in that context.

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<sup>3</sup>For a more comprehensive introduction to direct democracy covering a greater number of possible ramifications of the instrument see for instance Butler and Ranney (1994) or (Altman, 2010).



### 1.2.1 Direct Democracy in Europe

The term direct democracy as used in this chapter refers to citizens directly voting on substantive issues elected representatives normally vote on. An important distinction is to be made between the citizens' initiative and the referendum. The initiative is the most far-reaching form of direct democracy – it entails citizens proposing a policy and voting on it. If a group of citizens registers a proposal and collects a given number of signatures in a predetermined time frame its proposal is put to a vote. Initiatives may be used to amend the constitution, change or propose laws, or both. A facultative referendum, also called popular or abrogative referendum, is similar to the initiative in that it is initiated by citizens through the collection of signatures. However, it serves to repeal a law passed by the legislature, not to propose new legislation.

A referendum more narrowly signifies the process of citizens voting on a policy. It can be triggered by a citizens' initiative, initiated by the legislative or executive branches of government or required by the constitution for the final passage of certain laws like changes to the constitution. A simple typology of direct democracy can be drawn up along the answers to, firstly, the questions of who triggers the referendum, and secondly, whether the vote will be binding.<sup>4</sup> In keeping with the literature I focus on binding forms of direct democracy. Consultative referendums (also called plebiscites) are either considered to be of lesser importance because governments are not legally bound to follow the citizens' decision (Altman, 2010) or just as consequential as binding votes because of the political ramifications of ignoring a popular vote (LeDuc, 2003).

Then there are also regulations common to all types of direct democracy which are participation or approval quorums and for some polities super-majority requirements. Specific to the initiative and also the facultative referendum are requirements concerning the number and geographical distribution of signatures as well as the time frame in which they are to be collected, all of which determine the effectiveness of the instrument. Some

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<sup>4</sup>For a more exhaustive definition and typology of direct democracy interested readers are referred to Altman (2010) and Hug (2004).

polities also limit the range of topics that can be addressed through an initiative, for instance by excluding budgetary issues.

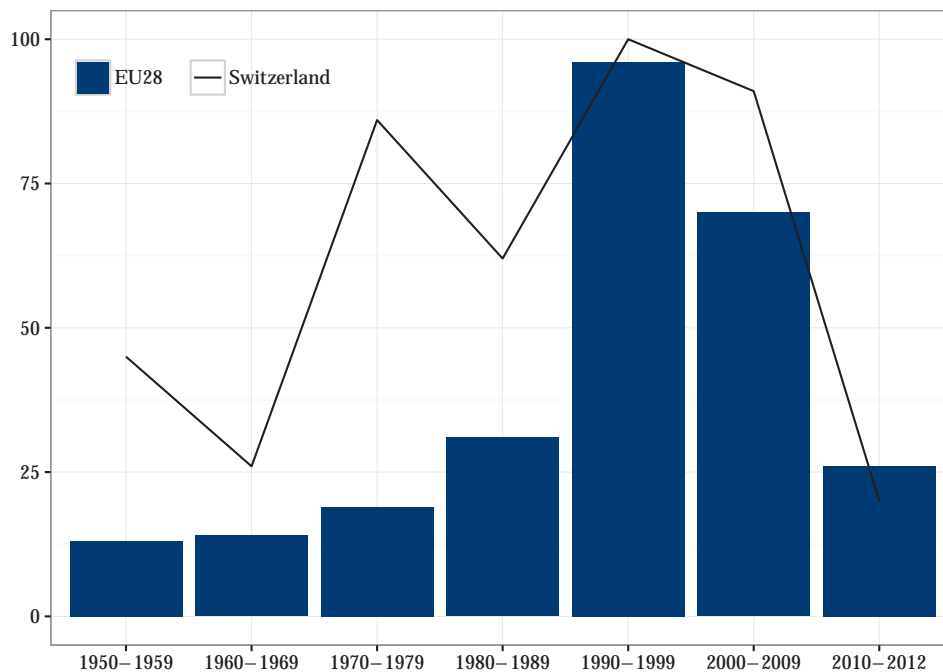
Yet, the crucial defining aspect of direct democracy is that the process must lead to a vote by the citizens. Other forms of citizen involvement that might share certain aspects of direct democracy like petitions, agenda initiatives or mini-publics should not be referred to as direct democracy as they lack the aspect of voting on policy. The European Citizens' Initiative despite its name is therefore not a form of direct democracy.

The usage and institutionalization of direct democracy, so defined, has increased all around the world.<sup>5</sup> It is most prominent in Switzerland and the US. In the latter which is the origin and focus of much of the recent work on direct democracy new states are adopting it at a rate of one state per decade while there has been a rise in the number of initiatives in the past decades (Matsusaka, 2005a). The number of national referendums held in Switzerland has also increased steadily since the 1950s with peaks of usage in the 1970s and 1990s. The pattern is similar to that in the EU (Fig 1.1). Beyond the US and Switzerland the number of countries providing mechanisms of direct democracy has increased as has the usage of those mechanisms in all parts of the world. Among 58 democracies with a population above three million in the world 39 have conducted at least one referendum between 1975 and 2000. Nevertheless, among countries that never saw a referendum at the national level are also established democracies like the United States, India, Japan or Germany (Altman, 2010, p. 29).

27 member states of the EU have held referendums on the national level since World War II. A total of 286 national referendums have been held in EU member states since World War II, compared to 186 in Switzerland in the period 1990-2009 on the national level alone. The US state of California alone has seen 123 referendums in the same period. The use of direct democracy in the EU has increased although not continuously since the 1970s (Figure 1.1). Usage of the initiative is most frequent in Italy (72 referendums since 1945), followed by Ireland (36) while a number of countries have held only one

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<sup>5</sup>More detailed descriptions of this trend can be found in among others Altman (2010), LeDuc (2003), and Butler and Ranney (1994).



**Figure 1.1:** *Number of national referendums per decade in the 28 EU member states and Switzerland (as comparison). Own visualization using data from (Centre for Research on Direct Democracy, 2014) and (Universität Bern, 2014)*

referendum.

23 EU member states have some institutionalized form of direct democracy on the national level. Nine countries have the initiative, the arguably most potent form of direct democracy, while 23 allow for government initiated referendums making it the most common form of direct democracy at the national level in the EU. Lastly, 14 countries have constitutional provisions making the holding of referendums on certain policy issues mandatory (most commonly changes of the constitution).

Belgium, Cyprus, the Czech Republic, Germany and the Netherlands are the only EU members to not have provisions for direct democracy at the national level. Of these only Germany never saw a referendum at that level since World War II. Yet, it has provisions for referendums at the regional and municipal level, like many other European countries do (Table 1.1). While this overview is focused on direct democracy at the national level most of the theoretical arguments and empirical evidence discussed here also apply to

the subnational level. In fact, much of the empirical scholarly research discussed in the following sections focuses on subnational politics.

One of the attractions of direct democracy is that referendums can potentially settle political issues more decisively than the representative process. Not surprisingly then, it is used for far-reaching and potentially contentious issues like accession to the EU. However, a referendum can only fulfill that function if its result is sufficiently clear. If referendum outcomes are close, they might even worsen societal cleavages. Of the 279 national referendums held in Europe since 1945 for which the data is available 39 (14%) had an outcome where the majority was within five percentage-points of 50%.

The EU itself has been the subject of referendums in a number of countries. 15 member states have decided on their accession to the EU by means of a national referendum (Table 1.1). What is striking is that while support for accession was relatively strong in the ten Eastern European countries that joined in 2004 turnout in the respective referendums that were held in eight of them was very low. In these countries there was a broad political and popular consensus about the desirability of EU membership, whereas EU membership was much more controversial in for instance Malta, Sweden, Finland or the UK as evidenced by smaller majorities for accession in these countries' referendums (Szczerbiak and Taggart, 2004). Indeed, turnout and contestation, measured by the share of yes-votes, are negatively related as indicated by a correlation coefficient of  $-0.62$ .

Country	Accession	EU Referendum (Turnout %)	Yes %	National Refer- endums	Types of Referen- dum	Levels of Govern- ment	Avg. Turnout (%)
Austria	1995	66.58 (82.35)		4	G, C	N, R, L	36.6
Belgium	1952	-		1	-	R	92.92
Bulgaria	2007	-		4	I, G	N, L	70.7
Croatia	2013	66.27 (43.51)		7	I, G	N	30.1
Cyprus	2004	-		1	-	-	89.2
Czech Republic	2004	77.33 (55.21)		1	-	-	55.2
Denmark	1973	63.29 (90.41)		18	G, C	N, L	70.7
Estonia	2004	66.83 (64.06)		4	G, C	N, L	70.1
Finland	1995	56.88 (70.40)		1	G	N,L	70.8
France	1952	-		11	G, C	N, R, L	65.3
Germany	1952	-		-	-	R, L	-
Greece	1981	-		5	G	N	78.1
Hungary	2004	83.76 (45.62)		12	I, G, C	N, L	47.2
Ireland	1973	83.10 (70.88)		36	G, C	N	47.8
Italy	1952	-		72	F, G	N, R, L	53.8
Latvia	2004	67.00 (72.50)		10	I, G, C	N, L	45.5
Lithuania	2004	90.97 (63.37)		20	I, G, C	N	50.1
Luxembourg	1952	-		1	F, G, C	N	90.4
Malta	2004	53.64 (90.86)		3	I, G, C	N, R, L	57.8
Netherlands	1952	-		1	-	R, L	63.3
Poland	2004	77.45 (58.85)		12	G	N, R, L	55.7
Portugal	1986	-		3	I, G, C	N, R, L	41.2
Romania	2007	-		6	G, C	N, R, L	37.8
Slovakia	2004	93.71 (52.15)		15	I, G, C	N, R, L	21.2
Slovenia	2004	89.64 (60.44)		21	I, G	N,R, L	40.2
Spain	1986	-		4	G, C	N, R, L	49.1
Sweden	1995	52.74 (83.22)		13	G	N, R, L	70.6
United Kingdom	1973	67.23 (64.03)		2	G	N, R, L	53.1

**Table 1.1:** Institutionalization and use of direct democracy in the EU member states: (1) year of accession to the EU, (2) outcome of and turnout in EU referendum, (3) number of post-World War II referendums held since the country became a democracy, (4) types of direct democracy available at the national level (I = citizens' initiative, F = facultative referendum, G = government or parliament sponsored referendum, C = constitutionally mandated referendum), (5) levels of government at which direct democracy is available (N = national, R = regional, L = local), (6) average turnout in national referendums. Sources: Centre for Research on Direct Democracy (2014), Initiative and Referendum Institute Europe (2014), IDEA (2013), Szczerbiak and Taggart (2004).

### 1.2.2 Representation

Diagnoses of a democratic decline rest on claims that representation, however conceived, has gotten worse. They contend for instance that parties have become less distinguishable on positional issues and that policy and ideology play a lesser role in elections. Representation refers to the extent and means in which governments, parliaments or legislators represent the preferences or interests of their constituents. Representation is fundamental to democracy as, clearly, a democratic government should provide a correspondence between the positions it takes and policies it enacts and the preferences of voters. It is a concept that is, unlike turnout, very difficult to measure and therefore many different ways to operationalize it are used for empirical work. Consequently, diverging opinions about the performance of different institutions, particularly electoral systems, in providing it and about the existence of time trends exist (Golder and Stram-ski, 2010; Thomassen and Ham, 2014).

The introduction of direct democracy, particularly citizen-initiated forms, seems especially attractive to give greater prominence to policy again. In the US where the initiative has brought issues like marijuana legalization, gay marriage or term limits to the fore “policy innovation [in the states] is now being driven as much by voter initiatives as by legislatures and governors” Matsusaka (2005b, p. 162) contends. Yet, the crucial question is whether these changes in policy brought about by the initiative have been in the interest of a majority of citizens.

Direct democracy has appeal because it seems to allow for an unmediated expression of the will of the people. Therefore, by intuition, successful initiatives should by the nature of majority rule lead to outcomes a median voter would prefer to the status quo. However, it is far from clear whether referendums really do improve representation. I seek to contribute to this question in Chapter 2.

Consider the fact that on election day citizens in polities with the referendum are not just confronted with a number of representatives to elect but also a number of ballot

propositions. This puts high cognitive demand on voters who might not possess the information necessary to make an informed decision. Although, a number of studies find that voters can use cues from parties or interest groups to reach the decisions they would have taken had they had more information (Lupia, 1994).

Initiatives are often launched by moneyed interests that use paid signature collectors to obtain the required number of signatures to put their proposition on the ballot. States with heavy initiative use like California have developed a veritable initiative industry. Special interests can also outspend their opponents in referendum campaigns. In a study of 168 referendum campaigns in eight US states Gerber (1999) finds that wealthy interests like industry groups are quite effective in campaigning against unwanted initiatives but are ineffective in staging successful ones themselves.

Turnout for referendums is lower if they are not held in conjunction with regular elections. In this case an unrepresentative minority might impose legislation on a silent majority that would have opposed the proposition were it better informed or the referendum held on an election day. Whether referendums lead to unrepresentative outcomes is an important question regarding the normative desirability of direct democracy. Yet, little systematic evidence to answer this question exists. One study of 60 Swiss national referendums held during the 1980s finds that in 13 referendums the majority of non-voters would have voted differently from how the majority of voters voted. Only a six – ten percent of all the referendums in this period – would full turnout have changed the outcome of the referendums (Di Giacomo, 1993). These are all referendums with a very slim majority, and with especially low levels of participation: around 50%. Lutz (2007b) who studies a greater number of national referendums finds that for half of the referendums voter and non-voters had significantly different opinions on the referendum issues. His econometric simulations suggest that full turnout would have changed the outcome of the referendum by zero to ten percentage points. More research is needed in this area before a more complete picture of the representativeness of referendum outcomes can emerge.

However, even if the referendum is not subverted by vocal and powerful minorities, critiques argue that this essentially majoritarian device tends to work to the disadvantage of minorities. Citizens unlike elected politicians lack accountability and need for public justification of their decisions. As such they are free to follow their prejudices. For instance, Gamble (1997) in an analysis of referendums in the US finds that referendums against minorities pass more often than referendums on other topics.

The impact of direct democracy on minorities is possibly the most contested issue in the scholarly literature on direct democracy. Unfortunately little is known about the issues addressed in referendums. Investigating whether certain issues are more likely to be subjected to a referendum than others is a promising avenue for future research. While this question is still unresolved in the literature, it seems to be a straightforward safeguard to exclude fundamental rights, in particular those of minorities, from the set of policies that can be decided through direct democratic institutions.

Although the number of propositions put on the ballot can sum up to over a dozen a year in very active states that number is still small compared to the number of laws emanating from the legislature. Scholarly work on the topic has invoked game theoretic models that suggest that direct democracy also has an indirect influence through the behavior of forward looking legislators who factor the possibility of initiatives into their decisions (Hug, 2004; Hug and Tsebelis, 2002; Matsusaka and McCarty, 2001; Gerber, 1996).

The intuition of such models is that the initiative, that is the possibility of a citizen initiated referendum, makes legislators more attentive to public opinion on individual issues. They will, to prevent a measure from being proposed in an initiative and adopted, prefer to pass legislation of their own, meeting potential sponsors of an initiative halfway. For instance, it is the Swiss government's stated objective to only put forward 'referendum proof' legislation that is unlikely to be challenged by means of a facultative referendum or citizens' initiative.

Empirical evidence on the effects of direct democracy on representation is still limited,



mixed in its conclusions and subject to discussions (see for instance the exchange between: Matsusaka, 2001; Hagen et al., 2001). Much of the disagreement in the literature centers on the question how to attain valid and comparable measures of public policy and opinion, a longstanding issue in representation research.

I focus here on the studies with a strong claim to internal validity. For instance, Gerber (1996) studies so called parental consent laws which require parents to consent to their underage children to have an abortion which is regulated at the state level in the US. She finds popular approval or disapproval of the measure is more likely to be matched by a corresponding policy in initiative states. Similar results for abortion policy and the death penalty are provided by Hug (2004) and Burden (2005). The most comprehensive evidence is provided by Matsusaka (2010) who assembled a dataset of 10 binary issues over 50 states collected from multiple waves of the American National Election Survey. As these studies focus on one or a small set of highly salient issues, as survey items are only fielded for minimally salient issues, it remains to be seen whether the findings hold beyond the narrow subject area they study.

It is safe to say that the most tangible effect of direct democracy is the direct effect through referendums. One example is California's Proposition 13 that limited the tax raising power of the state and sparked a number of tax cutting propositions as well as legislative activity in other states. Term Limits for state legislatures are another example. They have been introduced by the initiative in all but one of the 16 states that have them. Although politically significant the occurrence of such influential referendums is too irregular and infrequent to be statistically significant in most systematic empirical studies.

In conclusion, the empirical evidence neither supports the great hopes nor the great fears about direct democracy. With regards to representation, disagreement over concepts and measurements translates to disagreement over trends and effects. Representation is probably the most dubious aspect of diagnoses of democratic decline because they rely at least as much on subjective impressions as on systematic evidence. Yet, how

people perceive to be represented is more tangible and also possibly more consequential as disputed ‘objective’ measures of representation. It is also a significant determinant of citizens’ satisfaction with democracy (Aarts and Thomassen, 2008).

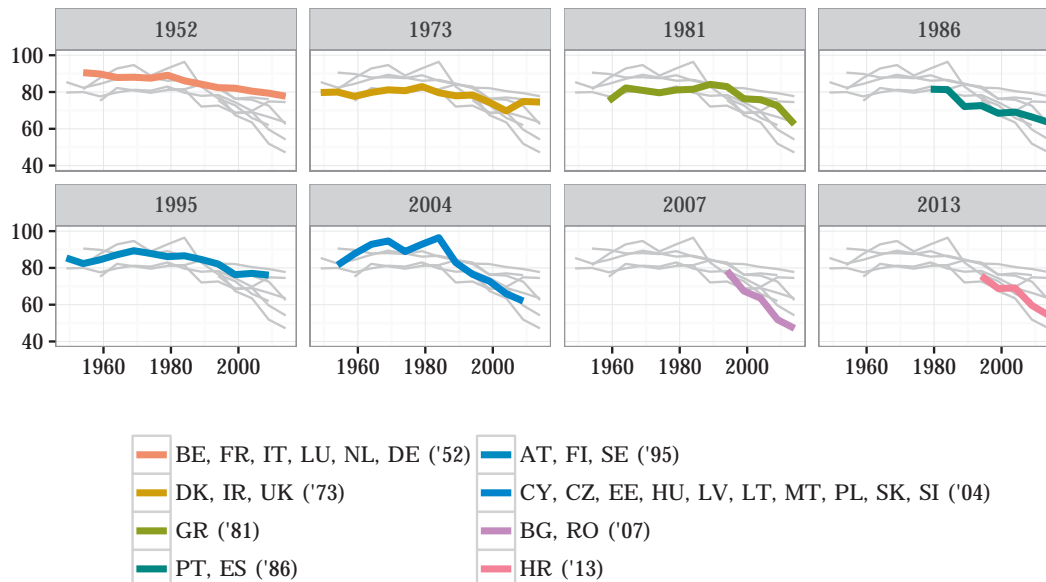
### 1.2.3 Participation

The fact that there has been a secular decline in turnout in all major established democracies in Europe and elsewhere at least since the early 1980s is an undisputed finding in the political science literature (Gray and Caul, 2000). Post-war turnout in current EU member states has declined over the years – by roughly one percentage point per electoral cycle. While there is a small level difference between countries that have held at more than one referendum since 1950 and those that haven’t there is no significant difference in time trends (Figure 1.2). Apparently, there is no obvious relationship between direct democracy and turnout. This section addresses the question which relationship there is if any.

In the 1950s turnout in national parliamentary elections in 28 member states was 81.9% compared to 67.5% in the 2000s – differences in turnout between countries have also widened as the standard deviation of the distribution of turnout across elections has almost doubled from 7%-points in the 1950s to 13%-points in the 2000s. However, there is a disagreement on normative evaluations of that trend. Particularly for countries that see their turnout levels decrease from above average levels to more average levels there is debate whether this trend constitutes a worrisome decline or just a process of normalization. It remains to be seen whether turnout decline will extend into the future or whether turnout will stabilize at a certain point. Yet, the fact remains that current levels of turnout are seen by many as unsatisfactorily low.

Direct Democracy relates to turnout in at least two important ways. Firstly, there is the question “whether direct democracy fosters or undermines the representative game through enlightening citizens or alienating them from participating at representative elections” (Altman, 2012, p. 1). Secondly, direct democracy is criticized for often seeing

lower turnout than elections held on the same level of government which raises questions about the representativity and legitimacy of direct democratic votes.



**Figure 1.2:** *Turnout (5-year averages %) in national parliamentary elections for 28 EU member states, grouped by year of accession. Trend lines indicate linear time trend in turnout in states with one or no referendum since 1950 (dashed line) and states with more than one referendum since 1950 (solid line) controlling for level differences in turnout between states (based on an OLS regression with country fixed-effects) as for instance some states have compulsory voting. Source: IDEA (2013). Centre for Research on Direct Democracy (2014)*

In the EU turnout varies considerably across referendums and countries. In Italy for instance, which with 72 referendums since 1945 has seen the most referendums among all EU members, turnout ranged from 23.5% in a 2009 referendum on electoral reform to 89.1% in a 1946 referendum on the future form of government. Across all referendums average turnout is lowest in Slovakia with 21.2% and highest in Belgium with average turnout of 92.9% – yet Belgium has only held one referendum.<sup>6</sup>

On one hand, referendum campaigns and corresponding media coverage thereof can provide additional information to citizens, potentially raising their interest in politics in general and the election in particular. Referendums can stimulate debate among citizens, leading to increased political efficacy. Lastly, the regular holding of referendums could contribute to a participatory culture where voting is considered a value in itself.

<sup>6</sup> In 1950 Belgians were asked to vote in a referendum on the return of King Leopold III.

On the other hand, referendums take decision over policies out of the hand of parliament which could make elections seem less important. Furthermore, the holding of many referendums could lead to an electoral fatigue among voters that would depress turnout. The available evidence suggests that both arguments have some truth to them. In the short term referendums do indeed stimulate turnout but in the long term they seem to contribute to an electoral fatigue.

Studies on the referendum in US states suggest that holding a referendum in the two years prior to or on election day increases turnout in mid-term elections (Altman, 2012; Tolbert et al., 2009; Tolbert and Smith, 2005). Estimates of average effects range from one to seven percentage-points. For highly salient referendums, as measured by newspaper coverage, the induced increase in turnout can be as high as 30%-points (Lacey, 2005). Effects on presidential elections, where election campaigns are more intense and turnout higher, are much lower with some studies reporting null results (Schlozman and Yohai, 2008). It seems that referendums have a greater effect on less salient so-called second-order elections. For instance, a study of Californian local elections found that if municipalities hold a local referendum in parallel this increased turnout by about four percentage-points (Hajnal and Lewis, 2003).

These are all effects for actual referendums; the simple presence of direct democracy turns out to be inconsequential for turnout. Some studies include a squared term to account for possible decreasing marginal effects of referendums and indeed find the effect of an additional referendum to decrease in the total number of referendums, again lending support to electoral fatigue arguments.

Evidence from Switzerland, where referendums are even more important relative to elections than in the US, supports this intuition. Here, referendums are associated with lower turnout in elections (Altman, 2012). Interestingly, a study distinguishing between referendums held up to six months prior to the general election and referendums held in preceding years finds the latter, more long-term factor to have a stronger negative effect on turnout (Freitag and Stadelmann-Steffen, 2010).

Not only how many citizens but also who turns out to vote in referendums is an important question in its own right as who participates might affect the outcome of such votes (see section 4). Critics of direct democracy are quick to point to low turnout in referendums. They fear that if turnout in a referendum is lower than in elections the voting population will likely be even more unrepresentative of the population at-large. Obviously, this problem is attenuated if a referendum is conducted in conjunction with an election. Butler and Ranney (1994) found that mean turnout in national referendums in 12 established democracies conducted between 1945 and 1993 was up to 30 percentage points lower than turnout in general elections in these countries. In Switzerland where referendums are frequent and a regular part of politics, 192 of 273 (70.3%) referendums held between 1980 and 2012 saw a turnout that was lower than turnout in the preceding national elections. Yet, turnout in Swiss referendums is also subject to high fluctuation, ranging from 30% to 80%. Turnout in national elections is very low, too – mean turnout between 1979 and 2011 was 46.3%, never surpassing 50%. However, research shows that only between 15 and 20% of the Swiss voting population never vote in referendums, whereas around 60% of citizens vote selectively (Bastos, 1993).

A unique study by Dyck and Seabrook (2010) on referendum-only special elections in the US reveals that partisans are more likely than independents to vote in referendums raising doubts whether those more distant to politics will be drawn back to it by direct democracy. The salience of the referendum is important. Kriesi (2007) finds that an individual's awareness of the referendum issues are a strong determinant of the decision to turn out to vote which is itself strongly influenced by referendum campaigns. A cursory glance at Table 1.1 also suggests that turnout for salient referendums like EU membership is most often close to and sometimes even surpasses turnout in elections. Again, short-term forces like referendum campaigns are more important determinants of individual turnout than long-term forces like the 'participatory fervor' of citizens.

Participation in referendums follows similar patterns to voting in an election – with citizens of high socioeconomic status, as well as older and politically interested citizens more likely to vote in referendums (Kriesi, 2007). Surprisingly, unlike in elections there

seems to be no gender gap in referendums as evidence from Switzerland and EU referendums in various countries suggests (Trechsel, 2007) – women seem just as likely as men to vote in referendums.

Another important point regarding turnout in referendums concerns the effect of participation quorums which define a total turnout that needs to be reached for the policy to pass in case of a yes-vote. Participation quorums provide incentives for opponents of a yes-vote to campaign for abstention to make the referendum fail the participation quorum. This is considerably easier than mobilizing a majority to vote no (Altman, 2010). Indeed, in an analysis of all referendums conducted in EU countries between 1970 and 2007 Aguiar-Conraria and Magalhães (2010) find that participation quorums decrease turnout by on average 11%-points. Approval quorums have no such effect – these simply require the number of yes votes to surpass a threshold for the vote to pass and therefore provide no such perverse incentives for proponents of a no-vote.

What these findings suggest is that referendums do indeed have an effect on turnout. That effect seems to be stronger in less salient elections. Also, such an effect is driven by short-term mobilization through campaigns. In the long term having too many referendums can actually depress turnout. Turnout in referendums is highest when held in conjunction with an election or the topic of the referendum is highly salient. In politics where referendums occur frequently turnout is on average lower than in national elections.

#### 1.2.4 Popular support

Democratic regimes rely on the consent of their citizens rather than coercive power to ensure the rule of law. Therefore, citizens' attitudes towards the political system are of key importance to the legitimacy and continuation of a political system (Almond and Verba, 1963). Citizen's often complex and multifaceted attitudes towards politics are summarized under the term political support which conceptually has different levels and objects. It ranges from diffuse support for the political community and political

regime to more specific support for political actors such as parties, courts or parliament (Dalton, 2004). Satisfaction with democracy is one the most often used indicators. In practice, it is the support for the regime performance, located on a medium level of this typology, whereas trust is specific support for actors.

A number of indicators of trust indicate a gradual decline in specific support among citizens for parties, parliaments and governments (Dalton, 2004). Citizens seem to become increasingly critical of key actors of the political system. Although this development is often summarized as a rise in discontentment or disaffection, satisfaction with the way democracy works and other measures of diffuse support have actually been remarkably stable showing just weak signs of decline, if at all (Norris, 2011; Wagner et al., 2009). However, during the financial crisis satisfaction with the way democracy works and trust in parliament have decreased across nearly all European countries, though with some exceptions like Germany or Poland (Armingeon and Guthmann, 2014).

Disillusionment with conventional politics is frequently cited as a key reason for the popularity of direct democracy. If referendums are regarded as the most authoritative expression of ‘the’ popular will, allowing for them might increase popular support for the political system. Frey and Stutzer (2000) suggest that direct democracy should increase citizen satisfaction for two reasons: because it offers them more control over policy and thereby improves representation, as well as more participation which citizens should value for itself independent of political outcomes. As Bowler and Donovan (2002a, p. 376) hypothesize, “both the opportunity to participate, as well as the act of participation on policy decisions, can be expected to promote more positive views about the efficacy of individual political activity.”

However, direct democracy might in the contrary lead to traditional institutions and actors of democratic politics to be looked upon even less favorably – particularly if a government loses a referendum. Also, populists might use it to further their causes and portray political elites as unresponsive to the people. Hence, direct democracy might also further erode the standing of other democratic institutions like parties, parliaments

and governments in public opinion.

There are few studies to investigate the link between direct democracy and political support. Some studies focus on the political efficacy of citizens instead. For instance, two studies find that citizens' political knowledge (Smith, 2002) and internal efficacy (Bowler and Donovan, 2002a) to be positively associated with initiative usage. However, the former effect only occurs for voters. This might be explained by voters having been more exposed to referendum campaigns than non-voters. In a unique study using a rolling cross-section conducted before the 1992 referendum on the Charlottetown Constitutional Accord in Canada Mendelsohn and Cutler (2000) find that political knowledge among citizens increased during the campaign. Studies using data from the American National Election Study (ANES) find that citizens who are exposed to a greater number of referendums are more likely to perceive government as responsive (Hero and Tolbert, 2004; Bowler and Donovan, 2002a). Again it is actual referendums rather than the simple availability of the institution that matters.

Whether citizens feel that governments are responsive to them should also influence their political support. Indeed, in Switzerland citizens of canton with more intense usage of referendums are more satisfied with the way democracy works (Stadelmann-Steffen and Vatter, 2012). Institutional rules themselves, again, are insignificant. Hug (2005) analyzes cross-sectional and panel data on 19 Eastern and Central European countries finding that citizens in countries with institutions of direct democracy show more confidence in parliament and government and that the introduction of direct democracy raised confidence. Bernauer and Vatter (2012) who study an even broader sample of 26 established democracies rate these along a parties-interest groups, a federal-unitary, and a cabinets-direct democracy scale. They find larger coalitions and direct democracy to be positively associated with satisfaction with democracy.

Yet, as most observational studies these studies face problems of endogeneity. One might just as well hypothesize that citizens who are more efficacious and content participate more in politics, including supporting initiatives. A noteworthy experimental study con-



ducted in 49 Indonesian evades this problem (Olken, 2010). The experiment randomly designated villages to choose a development project through a representative assembly or a referendum. Citizens in villages that held a referendum showed greater knowledge of as well as satisfaction with the development projects. Due to its experimental setup the study provides high internal validity but it remains to be seen whether the results carry over to other contexts like national referendums where outcomes are less tangible than in the case of local public goods provision.

Direct democracy seems to affect citizen's attitudes from diffuse to specific support. However, the evidence is still limited. There are also indications that referendums are associated with citizens being or feeling more competent to participate in politics. As for turnout and representation the actual holding of referendums shows significant effects in some studies, while there is only little evidence for an effect of the institution itself. The mechanism linking direct democracy to citizens' political efficacy is likely the informational effect of referendum campaigns. Which effect if any direct democracy has on diffuse and specific aspects of political support, particularly in the long-term, is less clear and merits further research. I take up this topic in Chapter 4.

### 1.2.5 Conclusions

Taking note of diagnoses of a democratic decline I asked what the likely effects of direct democracy would be on the most commonly attested symptoms: deteriorating representation, a decline in turnout, and an erosion of trust in government and satisfaction with democracy among citizens – all of which ultimately challenge the legitimacy of democratic institutions. As regards the political participation of citizens, the moderate use of referendums can indeed serve to increase turnout, particularly when elections and referendums are held simultaneously. Turnout in stand-alone referendums which tends to be lower than in elections provides another reason for holding referendums concurrently with elections.

As the already politicized are more likely to vote in referendums one should have no

false hopes for the potential of direct democracy to re-politicize disaffected citizens. If referendums occur too frequently a long-term negative effect on turnout might set in. However, this is not an immediate concern as no European country is likely to reach the levels of usage of direct democracy seen in Switzerland or California within the foreseeable future.

Institutional details matter. For direct democracy to be an effective instrument it needs to be used by citizens. Therefore, the barriers to its use should not be set too high, but for it to be legitimate participation in it should not be too low. Participation requirements are therefore necessary to give legitimacy to direct democratic decisions and are best defined in terms of an approval quorum. It seems advisable to set medium to high signature requirements but to allow for long collection periods and not too restrictive rules for signature collection to allow grass-roots organizations to use the instrument. The popular support of an initiative should be measured in terms of the number of people who supported it, not by the effort individuals exerted to sign the petition.

While there is hardly any disagreement on time trends in turnout – although normative assessments might differ – diagnoses of representation are much more ambiguous. An indirect ‘threat’ effect should not be overstated as there still is very little convincing evidence. However, the citizens’ initiative can be an instrument to bring new but salient topics on the political agenda. Direct democracy can sometimes serve as a vehicle for political reform, even against the will of the political elite, as the case of term limits for US states legislatures illustrates. Referendum outcomes do not seem to be more unrepresentative than outcomes under representative democracy. There is no strong evidence that direct democracy gives even more influence to vocal and powerful minorities than they already possess in representative democracy.

Yet, what about the specter of a tyranny of the majority? Whether direct democracy disadvantages minorities is a contested issue in the literature. My answer to this question is that any reform of direct democracy must exclude fundamental rights, in particular those of minorities, from the set of policies that can be decided by that institution. In

some political systems, such as Germany's, which have a strong constitutional system this might be sufficient to prevent discriminatory policies. Yet, in other cases where such constitutional safeguards do not exist, the rules of direct democracy need to be specified to exclude these issues.

Trends in citizens' political attitudes are not as clear-cut as some diagnoses of democratic recession suggest. Nevertheless, direct democracy could affect both diffuse and specific political support. Here it is again the actual use of the institutions rather than its mere presence that matters. Referendum campaigns have the potential to politicize and educate citizens. Yet, governments will be reluctant to stage information campaigns and encourage citizens to vote if a vote is to be held on an initiative directed against the government's policy.

On the individual level, the educational and attitudinal effects of direct democracy seem to particularly accrue to voters. These tend to be those who already participate in regular elections. While direct democracy might on average improve citizens' political abilities and attitudes towards the political system it is ill-suited to reach those already distant to politics. Given the available evidence it seems justified to agree with David Altman's (2010) assessment that "[d]irect democracy does not constitute a panacea for solving problems of current democracies, nor is it something intrinsically wrong to be avoided at any price." The benefits of direct democracy are not to be overstated – at the same time there is little evidence for drastic detrimental effects of direct democracy. Institutional details play an important role as the careful design of direct democratic institutions can prevent or make some of the possible negative effects less likely.

### 1.3 A Guide through the Chapters

As I have outlined in the previous section, diagnoses of a democratic recession are numerous and varied but usually point to a decline in political participation, policy making which is increasingly detached from ordinary citizens, and their preferences and an erosion of trust in government and satisfaction with democracy, all of which ultimately challenge the legitimacy of democratic institutions. While certain aspects like decreasing turnout are undisputed, although their interpretation may be, others are more controversial. Disagreements about diagnoses of a crisis notwithstanding, democratic innovations are increasingly popular. I concentrate on direct democracy as it is the most popular and far-reaching among the democratic innovations that are being debated and introduced in established democracies. Both its institutionalization and usage increase across the world (Altman, 2010; Matsusaka, 2005b; Butler and Ranney, 1994). Hence, I believe that direct democracy as subject of scientific inquiry has merit independent of any crisis narrative.

In my dissertation I explore the functioning and specifically potentials of direct democracy for addressing perceived shortcomings of representative democracy. It consists of three empirical studies of direct democracy which focus on its implications for representation, participation and political support – the three themes established in the preceding section. In the following I briefly summarize the chapters and explain how they relate to the individual themes.

One of the main motivations and normative justifications behind direct democracy is that it supposedly makes representative democracies more responsive towards their citizens. In Chapter 2 I take a look at the representativeness of Swiss national referendums between 1981 and 1999. On balance, referendums seem to improve representation in Switzerland. However, as turnout decreases so do differences in opinion between actual voters and the whole population.

Another impetus for calls for more direct democracy is the hope that it can re-engage

citizens with democratic government. When asked, citizens in polities with and without direct democracy consistently voice support for direct democracy in substantial majorities. However, as I show in Chapter 3 voters and citizens engaging in other forms of political activity and the political interested are more likely to strongly support direct democracy than other citizens. The analysis is based on data from the European Social Survey. Analyzing post-referendum surveys I find the same pattern to hold for actual participation in referendums.

While participation is in decline citizens are also said to have increasingly negative attitudes towards politics. Disillusionment with representative politics is frequently cited as a key reason for the popularity of direct democracy. Conversely, one may think that the holding of referendums should increase popular support for the political system – because they give citizens participatory opportunities and more control over policy. In Chapter 4, combining aggregate data on satisfaction with democracy from bi-annual Eurobarometer surveys from 1973 to 2002 with data on all national referendums in the same period, I test whether referendums increase citizen’s satisfaction with democracy. My analysis provides no evidence for an (average) effect of referendums on democratic satisfaction. This null finding is robust to various specifications.

Beyond their individual research questions the overarching question for the following chapters is whether direct democracy improves representative democracy. I arrive at a cautious assessment of direct democracy’s potential to do so as many of the same mechanism seem to be at work in both representative and direct democracy. The way people participate in direct democracy mirrors how they behave in representative democracy, that it is mostly those who are still politically active support it and participate in it – with possibly detrimental consequences for political equality. Nevertheless, the evidence generated from the Swiss data suggests that referendums have contributed to more representative policy. And finally, evidence from the panel of European countries analyzed in Chapter 4 indicates that national referendums at least in two countries have if only temporarily increased citizens’ satisfaction with democracy in some major European democracies. Put differently, I find no evidence for a negative effect.

## Chapter 2: How representative are referendums?

Representation is at the heart of democracy. The reason democracy is regarded as superior to any other system of governance is because the government is accountable through elections to the citizens it governs. Representation, more precisely substantive representation (Pitkin, 1972), denotes the correspondence between the actions taken and positions held by politicians and the preferences of voters. Representation has been one of the major themes of political science since the inception of the discipline, first larger scale comparative studies (e.g. Miller and Stokes, 1963) appeared later when survey research and computer aided statistical analysis became available.

Some question whether elections are sufficient to provide accountability and responsiveness as low levels of information among voters and the pervasive influence of interest groups and incumbency advantage call into question voters ability to constrain government officials via the ballot box. While there is a substantial connection between public opinion and policy-making, occurrences of policy-opinion incongruence and non-responsiveness are far from trivial (Shapiro, 2011). Also, a considerable number of people feel unable to exert political influence (Anderson and Guillory, 1997).

Direct democracy allows citizens to reverse decisions made by legislatures and even initiate new laws which parliaments are unwilling to pass, thereby, as its proponents argue, leading to more representative policies than would have obtained under a purely representative democracy. Yet, turnout in referendums is usually lower than in parliamentary elections and tends to be skewed towards citizens of high socio-economic status. Consequently, critics of direct democracy argue that referendum outcomes may not be representative of the preferences of the population at large.

I test this assertion using a compilation of post-referendum surveys encompassing 148 national referendums held in Switzerland between 1981 and 1999. Uniquely, these surveys also asked non-voters about their opinion on the referendum's subject. Comparing opinion majorities in the surveys against actual referendum outcomes my co-author and I

show that representativeness increases slightly in turnout as well as over time. However, we find only few cases where the outcome would have been more representative even under full turnout vis-a-vis a counterfactual representative outcome. Thus, our results are in line with research on the turnout effect in elections: Higher turnout would not radically change the outcome of votes. Only when referendums are very close may turnout affect the outcome. Limitations of our data imply that our estimates represent an underestimate of the effect of turnout on referendum outcomes. On balance we find more cases where referendums provided more representative outcomes than cases where the outcome was unrepresentative vis-a-vis representative democracy. Hence, we conclude that, overall, direct democracy seems to have improved representation in Switzerland.

### **Chapter 3: Popular Support for Direct Democracy**

The popularity of direct democracy contrasts with rising disengagement of citizens from politics: participation in conventional forms of political participation from voting to party membership has been in constant decline in recent decades (Dalton and Wattenberg, 2000; Gray and Caul, 2000). In most countries participation both in elections and referendums is lower than support. Furthermore, referendum turnout is usually lower than electoral turnout. While citizens' trust in institutions and actors of politics is in decline citizens are said to remain committed to democratic norms and principles (Dalton, 2004). Part of the rise in discontent can potentially be explained by increased expectations of 'critical citizens' (Norris, 1999) demanding more participatory opportunities. Indeed, some argue that such citizens who support democracy in the abstract but are unsatisfied with how it works in practice are a cause behind the increase in institutionalization and usage of direct democracy. Thus, direct democracy may compensate for declining conventional political participation.

In my second paper I analyze data from the European Social Survey which includes a question asking citizens for their support of national level referendums, both in countries with and without direct democracy. My analysis reveals that in most countries polit-

ically active citizens are more supportive of direct democracy than those who are not, particularly in countries with low turnout. Voting, other forms of political activity and political interest are strongly positively associated with support for direct democracy. Given the lack of survey data, referendums or both in many established democracies I use support for the instrument as second best alternative to measuring actual participation. Interpreting these results as indicative of behavior suggests that direct democracy will be unlikely to attract former abstainers to the ballot.

Additionally, I analyze survey data on actual referendums that consistently show that voters in elections are much more likely to vote in referendums than non-voters. Because the popularity and actual usage of direct democracy are greatest among those still participating direct democracy appears insufficient to bring the politically disengaged back into democratic politics.

#### **Chapter 4: The Elusive Effect of Referendums on Democratic Satisfaction**

Citizens can have complex and multifaceted attitudes towards politics and the political system. These are summarized under the term political support. Because democratic regimes rely on the consent of their citizens rather than coercive power to ensure the rule of law, political support is said to be of key importance to the legitimacy and continuation of a political system (Almond and Verba, 1963). Theoretically political support has different levels and objects which are conceptualized on a continuum from diffuse support for the political community to specific support for, or trust in, political actors such as parties, courts or parliament (Rohrschneider, 2002; Dalton, 2004). Satisfaction with democracy is one the most often used indicators. Its use is not uncontroversial (Linde and Ekman, 2003) although it can be reasonably considered as a summary indicator of peoples' satisfaction with the overall system performance (Clarke et al., 1993).

In my third paper, I study the relationship between referendums and citizens' satisfaction with democracy. Disillusionment with representative politics is frequently cited as a key



reason for the popularity of direct democracy. Conversely, one may think that the holding of referendums, often regarded as the most authoritative expression of ‘the’ popular will, should increase popular support for the political system – because they give citizens participatory opportunities and promise to offer them more control over policy.

Prior research has found a positive relationship between direct democracy and satisfaction with democracy, relying on mostly cross-sectional data along with the usual problems for identification and external validity. In this paper I provide a complementary time-series cross-national perspective. Towards that end I aggregated data on satisfaction with democracy from semi-annual Eurobarometer surveys from 1973 to 2013 and combined them with data on all national referendums in the same period. I provide the strongest test possible with observational data for a causal effect of direct democracy on democratic satisfaction. I find no evidence for an (average) effect of referendums on democratic satisfaction. This null finding is robust to various specifications and unlikely to be biased by reverse causality. While an analysis of individual time-series suggests that referendums may have an effect under certain circumstances, significant positive estimates obtain for two countries, my empirical investigation of possible mechanisms remains inconclusive.



## Chapter 2

# How representative are referendums? Evidence from 20 years of Swiss referendums

Direct democracy allows citizens to reverse decisions made by legislatures and even initiate new laws which parliaments are unwilling to pass, thereby, as its proponents argue, leading to more representative policies than would have obtained under a purely representative democracy. Yet, turnout in referendums is usually lower than in parliamentary elections and tends to be skewed towards citizens of high socio-economic status. Consequently, critics of direct democracy argue that referendum outcomes may not be representative of the preferences of the population at large. We test this assertion using a compilation of post-referendum surveys encompassing 148 national referendums held in Switzerland between 1981 and 1999. Uniquely, these surveys also asked non-voters about their opinion on the referendum's subject. Comparing opinion majorities in the surveys against actual referendum outcomes we show that representativeness increases slightly in turnout as well as over time. We find only few cases where the outcome under full turnout would have been more representative than a counterfactual representative outcome. Thus, our results are in line with research on the turnout effect in elections: Higher turnout would not radically change the outcome of votes. Limitations of our data imply that our estimates represent an underestimate of the effect of turnout on referendum outcomes. On balance we find more cases of representative outcomes than cases where the outcome was unrepresentative vis-a-vis representative democracy. We conclude that, overall, direct democracy improves representation in Switzerland.

## 2.1 Introduction

Proponents of direct democracy claim that it delivers more representative policy outcomes than a purely representative democracy.<sup>1</sup> After all, referendums allow citizens to reverse decisions made by legislatures and even initiate new laws that legislatures are unwilling to pass. However, critics claim precisely the opposite. They argue that, firstly, turnout in referendums tends to be lower than in elections and, secondly, that voters and non-voters have different preferences. Therefore, referendums should lead to unrepresentative policies.

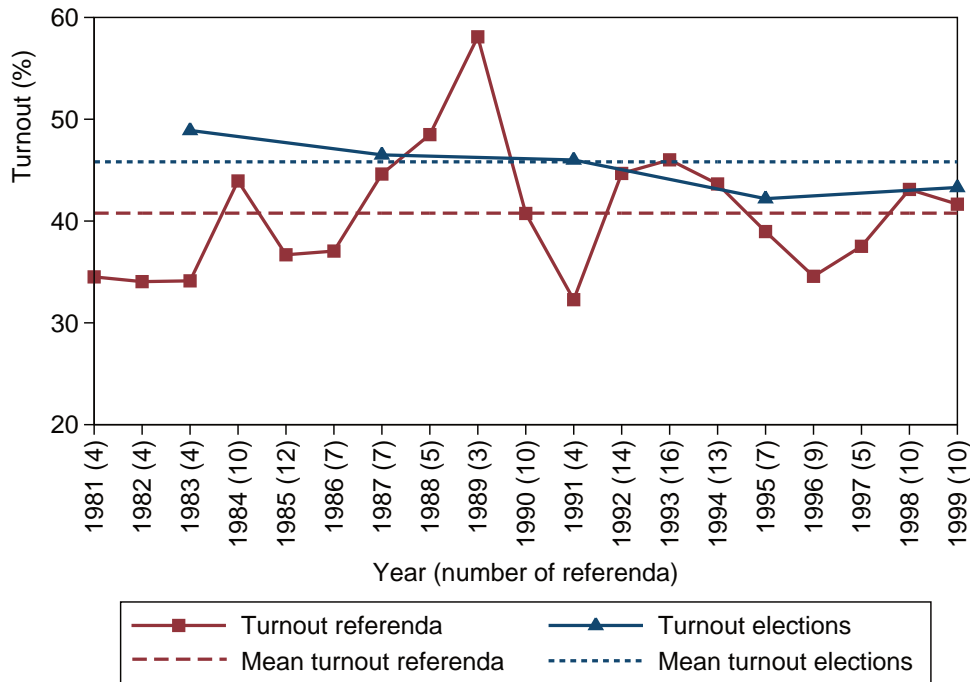
For the Swiss national referendums which we study the first argument holds. Mean turnout in our sample of referendums held between 1981 and 1999 (40.8%) is indeed (slightly) lower than mean turnout in the five national elections held within the same period (45.8%) – see Figure 2.1. Most, that is 112 out of 148, referendums saw lower turnout than the respective preceding national election. Research on elections provides evidence that turnout tends to be skewed towards citizens of high socio-economic status (Armingeon and Schädel, 2015; Nevitte et al., 2009; Lijphart, 1997). If this extends to referendums and leads to differences in opinion between voters and non-voters we should indeed expect a relationship between turnout and the representativeness of referendum votes.

However, research in Switzerland shows that only less than a fifth of the population never vote in referendums, whereas around two thirds of citizens vote selectively and the rest always votes (Sciarini et al., 2016; Bastos, 1993). Again, this raises the question if and how often referendum results are unrepresentative of the population at large. Furthermore, turnout in Swiss referendums is subject to high fluctuation, ranging from 30% to 80%. Recent research suggests that changes in turnout can have a significant impact on electoral (Artés, 2014; Finseraas and Vernby, 2014) but also referendum outcomes (Bechtel et al., 2015). Existing research suggests that higher turnout benefits

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<sup>1</sup>This chapter is based on a joint paper with Lea Heyne, University of Zurich. Both authors contributed equally to all aspects of the paper.

the left (Fowler, 2013; Hansford and Gomez, 2010; Citrin et al., 2003) through the additional mobilization of less well-off voters. These findings provide indirect evidence that representation is improved through higher turnout, although it does not constitute a direct test.



**Figure 2.1:** *Turnout in Swiss national referendums and elections (1981-1999)*

In this chapter my co-author and I directly test for the effect of turnout on the representativeness of referendums. We compare the actual results of Swiss national referendums against the majority *opinion* among the population estimated from post-referendum surveys as well as the *policy* which would have been passed in absence of the referendum, the latter represented by the government's vote recommendation. We focus on Switzerland because referendums are frequently held and there is great variation in turnout. The focus on Swiss national referendums also follows a very practical consideration. All national level referendums in Switzerland are routinely covered by post-referendum surveys. The so-called 'Vox' surveys have a unique feature which we exploit: self-reported non-voters are also asked how they would have voted if they had turned out to vote. Hence, we are able to compare the aggregated answers of both voters and non-voters

combined against the actual referendum outcome.

We find that differences in opinion between actual voters and the whole population as well as the likelihood of mismatches between referendum outcomes and popular opinion decrease in turnout. We find only few cases where the outcome would have been more representative even under full turnout – if we interpret our estimate of the majority opinion as a counterfactual result under full turnout. Our results are in line with research on the turnout effect in elections which shows that higher turnout tends to benefit left parties but would hardly change outcomes (Brunell, 2004; Citrin et al., 2003). There are at least two reasons why this is the case. Most referendums results are not sufficiently close to be affected by the small turnout effect that we find. However, limitations of our data suggest that we underestimate the effect of turnout on referendum outcomes.

Further, representation improves over time, which can potentially be explained by more equal turnout, especially of men and women. Because the referendums analyzed here are not highly unrepresentative of the majority opinion in the sample it is not surprising that we find hardly any further significant predictors of unrepresentative outcomes.

In a purely descriptive assessment of the representativeness of Swiss national referendums we find only a limited number of referendums – 14 out of 148 studied (10%) – where the majority vote deviates from the preferences of the majority of citizens. When taking into consideration the government’s policy this number reduces to 4.3 (2.9%) unrepresentative outcomes. In contrast, we find 26.7 *improvements* over a counter-factual representative outcome. On balance, direct democracy seems to improve representation over a purely representative system.

Referendums can generate strong beliefs in the legitimacy of decisions taken through this procedure (Esaiasson et al., 2012) but the legitimacy of that procedure is also dependent on participation therein, not least because turnout can potentially influence the outcome of popular votes. Hence, whether low and skewed turnout in referendums leads to unrepresentative outcomes is an important question regarding the normative desirability of direct democracy. Our results confirm that turnout has a positive effect

on representativeness of opinions expressed at the ballot. However, the effect is so small than in most cases even under full turnout the result would not change. If high turnout matters, then it should matter more for the perceived legitimacy rather than the outcome of a vote.

## 2.2 Why turnout matters for representation

Low turnout rates are considered as a ‘serious democratic problem’ by political scientists (Lijphart, 1997), politicians and members of the public alike. Many established democracies have experienced a secular decline in turnout in the past decades (Hooghe and Kern, 2016; Gray and Caul, 2000) which is why determinants of turnout, at the individual as well as the aggregate level, are one of the major topics in research in political science (Blais, 2006; Geys, 2006).

However, what we are interested in in this chapter are the consequences of turnout. The argument that we seek to test is that referendums with low turnout are less likely to see outcomes which are representative of the political preferences of the population. This is a familiar argument in the literature on turnout which so far has almost exclusively been applied to elections. The underlying mechanism is that voters are different from non-voters in terms of a number of socio-economic, demographic and attitudinal factors. These differences in turn translate into differences in policy preferences between voters and non-voters. However, these differences should be dependent on turnout. The higher turnout, the more representative of the population will the electorate be – trivially, under full turnout the electorate will equal the population of eligible citizens. Consequently, we expect turnout to have an effect on electoral outcomes and thereby policies.

Inequality in turnout is well documented, as citizens with low income, less education, as well as the young and also ethnic minorities display a lower propensity to vote (Armingeon and Schädel, 2015; Nevitte et al., 2009; Filer et al., 1993; Filer et al., 1991). Further, citizens of low income favor more redistribution (Alesina and La Ferrara, 2005).

As more low income voters are mobilized, left parties tend to profit from higher turnout (Hansford and Gomez, 2010). While some studies report negligible effects of turnout variation on electoral outcomes (Ferwerda, 2014; Lutz, 2007a), other studies document large shifts in electoral outcomes in various contexts (Artés, 2014; Finseraas and Vernby, 2014). Yet, in most cases the change would not be enough to alter the election outcome (Brunell, 2004; Citrin et al., 2003). Nevertheless, there is evidence that higher turnout is associated with greater welfare spending and more egalitarian income distributions (Mueller and Stratmann, 2003; Husted and Kenny, 1997).

To the extent that public policy systematically benefits voters over nonvoters, these problems should be even more acute in referendums as turnout is usually lower than in elections. Indeed, as Linder (2010, 95f) observes, “especially when participation is low, the choir of Swiss direct democracy sings in upper or middle-class tones.” However, little work has been done on the representativeness of referendum outcomes. Prior research on the policy effect of turnout has focused on elections which present voters with parties representing a whole bundle of policies while referendums make voters vote on a single issue. We seek to contribute to the literature by broadening the view to referendums and putting a focus on representation directly. We know of only three studies which have looked at the link between turnout and referendum outcomes.

Early work by Di Giacomo (1993) who studies 60 referendums conducted during the 1980s shows that in 13 referendums the majority of non-voters would have voted differently from how the majority of voters voted. From these 13 referendums with differing opinions among non-voters six would have had a different overall outcome if non-voters had participated too, hence 10% of all the referendums in this period. These are all referendums with a very slim majority and with especially low levels of participation. Di Giacomo concludes that only when turnout is very low (under 40%), the result are favorable to biases, whereas in votes with relatively high shares of participation a bias is very unlikely. These results, however, are only based on a short time period and remain on a descriptive level.



Lutz (2007a) analyses VoxIt surveys for 144 Swiss referendums separately to find out how individual vote choice – or hypothetical vote choice for abstainers – is determined by actual participation and information. He finds a significant correlation between turnout and (hypothetical) vote choice in 52% of the referendums. Using these estimates to provide predictions of how the proportion of yes-votes would have looked under full turnout, Lutz concludes that in 54% of the referendums full turnout would have changed the share of yes-votes by 5-10%, and in the remaining referendums between 0-5%. These results demonstrate that turnout has an impact on the result of a referendum, but is uninformative about representation generally.

Most recently, Bechtel et al. (2015) exploiting the introduction of compulsory voting in the Swiss canton Vaud find that close to universal turnout caused by compulsory voting strengthens electoral support for leftist policy positions by about 80% over the baseline level. They find a similar but weaker pattern for instances of direct legislation in Swiss cantons between 1908 and 1970. While they show that turnout does influence the outcome of a referendum, they do not address the representativeness of that outcome.

We are interested in representation and consequently use a different approach. Concretely, we utilize a question contained in the survey asking non-voters directly how they would have voted had they participated. This allows us to obtain an estimate of the majority opinion on a referendum issue in the wider population. This approach is similar to studies on the effect of direct democracy on representation in US states. These studies test whether policy – on abortion (Gerber, 1996), on fiscal and tax issues (Matsusaka, 2008) as well as range of mostly social issues (Matsusaka, 2010; Lax and Phillips, 2012) – is more likely to match survey-based estimates of majority opinion among citizens in states with direct democracy, even if no referendum was held on the issue. In this chapter we analyze the representativeness of actual referendums using essentially the same approach to obtain estimates of citizens' opinion on the issues at stake. We will test the following hypothesis:

**H1:** The higher turnout in a referendum vote the more representative will its outcome

be.

Our data range from the beginning of the 1980s to the end of the 1990s. Swiss politics have changed in these 20 years, and some of the inequalities between voters and non-voters that are behind the turnout effect have reduced over time or became less relevant. Specifically, turnout became more equal in this period, especially between men and women.<sup>2</sup> Hence, we expect a positive time trend in the representativeness of referendums, both in the whole sample and among non-voters:

**H2:** The later the year of a referendum the more representative it is.

We test these two hypotheses using survey and aggregate data on 148 Swiss national referendums held between 1981 and 1999. We describe the data and our measures of representation in the next section.

### 2.3 The data and what they tell us about the representativeness of referendums

Here, we describe the data used in this chapter – cumulated surveys from the Swiss ‘Vox’ surveys carried out after each national referendum since 1977 (data available for referendums from 1981 on) – and provide descriptive results on the representativeness of the referendums covered by the data.<sup>3</sup> The ‘Vox’ surveys were unique in asking all respondents, also non-voters, for their vote choice which in the case of non-voters is obviously hypothetical: “If you would have gone voting, which would have been your decision on...”<sup>4</sup> With this data, we are able to estimate the distribution of opinions on a referendum vote for the whole population. Beginning with the year 2000, the ‘Vox’

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<sup>2</sup>Female suffrage was introduced as late as 1971 in Switzerland, and the gender gap in turnout slowly decreased over the next decades, cf. Kriesi, 2005.

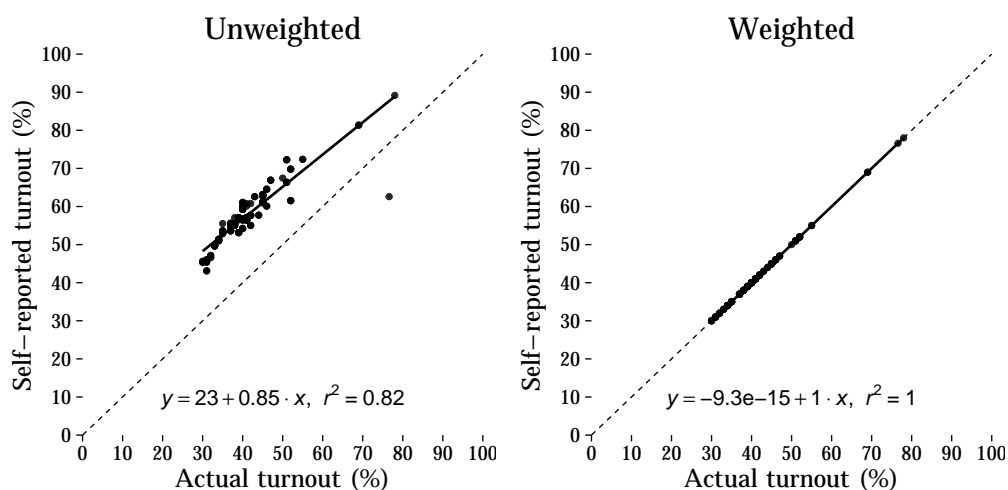
<sup>3</sup>We use a cumulation of ‘Vox’ surveys provided by FORS under the title ‘VoxIt.’

<sup>4</sup>In German: “Wenn Sie an die Urne gegangen wären...wie hätten Sie da abgestimmt, welches wäre Ihre Stellungnahme gewesen zur...”. The survey question does, however, not restate the complete question and wording of the actual referendum in question, but just the title of the initiative, such as “Revision of the unemployment insurance” (in German: “Revision der Arbeitslosenversicherung”). Voters are simply asked how they actually voted.

surveys have unfortunately dropped the question asking non-voters how they would have voted had they participated. Still, this leaves us with a considerable number of referendums of all types: 50 initiatives, 43 referendums, 46 obligatory referendums and 9 counter-initiatives.

Switzerland has a long tradition of direct democracy dating back to the 19th century. Citizens vote on four dates per year with often more than one proposal on the ballot on a single day. Citizens themselves can initiate votes through the initiative for a partial revision of the constitution, which requires the collection of 100,000 signatures. The government may submit a counter-initiative to an initiative. Moreover, citizens can submit a recently passed law to a referendum by collecting 50,000 signatures. Referendums are also obligatory on constitutional changes and international treaties.

For each of the 148 referendums we aggregate the individual-level data to obtain an estimate of the share of yes-votes among the population. We then compare our survey-based estimates against the actual outcomes of the referendum votes to produce the dependent variables for our analysis. Before we specify the operationalization of these variables in greater detail, we describe a number of challenges that the data pose us and how we deal with them.



**Figure 2.2:** Reported against actual turnout before and after weighting. The dashed 45 degree line indicates a perfect fit between actual and reported turnout. Points above the dashed line indicate overreporting of turnout.

One problem with the surveys is that voters are over-represented and turnout is over-reported. Voters are more likely to participate in surveys and some non-voters are prone to lie about their participation due to the social desirability of turnout. Also, response rates in the Vox surveys which tend to correlate with turnout are low. Both turnout and response rates in Switzerland are low in international comparisons. Turnout estimated from the sample is on average 16.5 %-points higher than actual turnout.<sup>5</sup> We calculate weights to give less weight to self-reported voters and more weight to self-reported abstainers so that once we aggregate the data using weights we obtain the same turnout rates which have actually been reported (cf. Figure 2.2). We apply these weights when aggregating yes-shares for the population so that voters are not overrepresented in our aggregates.<sup>6</sup> There is little evidence that estimates of opinions for voters are biased by over-reporting or improved through applying demographic weights (Funk, 2016).

We can assess the accuracy of our estimates of turnout and adjust for discrepancies, but obviously we cannot check the validity of our estimates of majority opinion among non-voters and the population directly, as there is no benchmark to compare them to. What we can do, however, is look at survey-based estimates of opinion among self-reported voters. We do have a benchmark for this group: the actual referendum outcome.

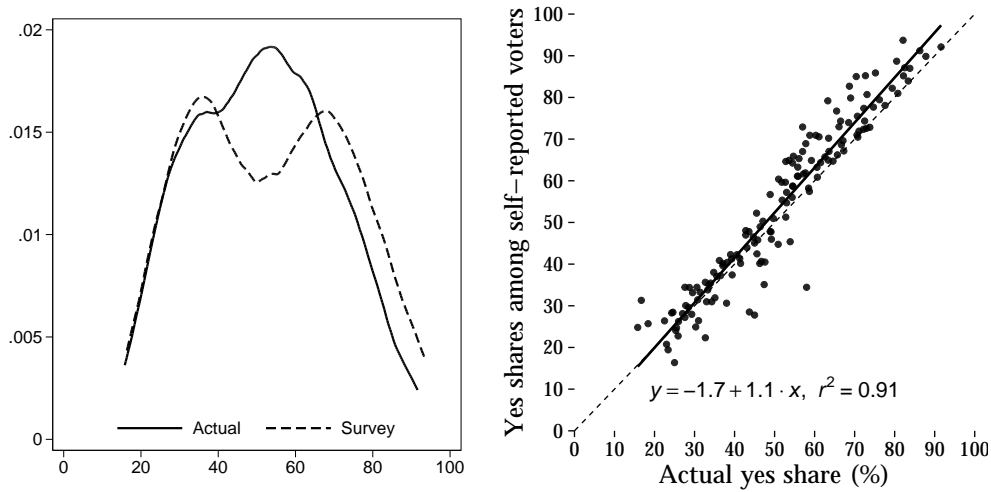
Figure 2.3 (left panel) shows that actual and reported yes shares are similarly distributed, although the reported yes-shares in the survey show a dip around 50 percent indicating a band-wagoning effect. The ‘VoxIt’ surveys are conducted after a referendum so some respondents state having voted for the winning option despite having voted differently or not at all. Consequently, we see less close results in the survey data than actually occurred. Both distributions are fairly similar when it comes to means, standard deviations and confidence intervals.<sup>7</sup> If reported yes shares were perfectly equal to actual yes-shares we would expect all points to be on the 45 degree line. Most points are reasonably close to it (cf. Figure 2.3, right panel). The average difference between actual

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<sup>5</sup>For further summary statistics on over-reporting of turnout see the appendix, Figure 5.1 and Table 5.1.

<sup>6</sup>We also use these weights because we lack consistent provision of weights for the Vox surveys.

<sup>7</sup>See also tables 5.2 and 5.4 in the appendix.

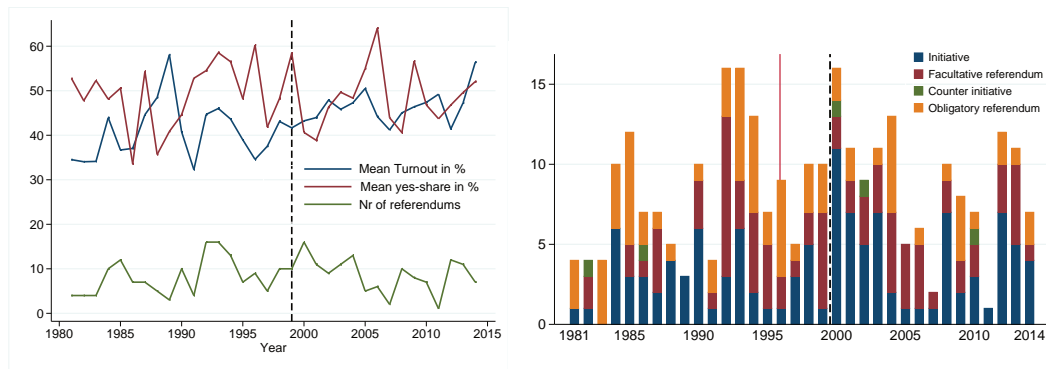


**Figure 2.3:** Left panel: Density of actual yes-shares and yes-shares among self-reported voters in the ‘VoxIt’ sample. Right panel: Scatter plot of actual against reported yes-shares.

and reported yes-shares is just 4.8%-points. Obviously, there need not be a connection between the accuracy of estimates of voters’ opinions and the accuracy of estimates of non-voters’ opinion. However, we are more confident about the quality of the data than we were if estimates of voters’ opinions were very inaccurate.

Another caveat is the fact that self-reported non-voters have not been asked about their hypothetical vote choice anymore since 1999. Can we assume that our results are representative of later and future referendums? When we look at Swiss referendums since 2000 and compare them to those of the period covered by our data, we find that the characteristics of referendums have not changed substantially since then. The number of referendums per year is similar from the 1980s to today. More importantly, mean turnout and yes-shares do not change significantly after 2000 (Figure 2.4, left panel), the same is true for the types of referendums (Figure 2.4, right panel). While it would be preferable to have data on more recent referendums, these comparisons at least do not give us strong reasons to believe that our analysis should not be broadly representative of more recent referendums.

Lastly, we need to clarify how we treat a third group of respondents: those who do not voice an opinion on an issue. The problem of non-opinions seems particular pertinent in referendums as voting behavior is more volatile than in elections (Leduc, 2002). We



**Figure 2.4:** Left panel: Number, turnout, and yes shares in Swiss referendums on a yearly basis, 1981-2014. Right panel: Types of Swiss referendums per year, 1981-2014. The vertical dashed line indicates where our sample of referendums ends.

aggregate yes-shares only among respondents who voice an opinion, ignoring respondents without an opinion. If we were to calculate yes-shares within the full sample, including missing values on the vote choice variable, our estimates would be considerably lower and, we believe, inaccurate. From a normative point of view we treat respondents who lack an opinion as being indifferent between ‘yes’ and ‘no’. There are many reasons why citizens have no opinion on an issue. One important reason is that they do not care enough about the issue to inform themselves. Finally, note that we simply mirror the same procedure which is used in referendums and elections, too. Here, vote shares are calculated within the set of cast votes – non-voters are ignored and, additionally, invalid and blank ballots are disregarded. On average 23.5% percent of respondents voice no opinion on a ballot proposition. Because we have assigned a weight of zero to respondents not holding an opinion, one may wonder whether we should give less weight to non-voters than to voters when we aggregate across the full sample. Surely, at least some non-voters have weaker preferences than voters which is why they abstained in the first place. This may well be, but we lack a measure of intensity of preferences. In the absence of a convincing measure, we thus decide to stick to a ‘democratic default’ of weighing all opinionated citizens equally.

Having discussed the quality of our data we turn towards a description of the operationalization of our dependent variables. To obtain a quantitative indicator of representation we calculate the differences between actual and reported yes-shares. Furthermore, we

check whether both our survey-based estimate and the actual result indicate the same majorities to arrive at in total six qualitative indicators of representation.<sup>8</sup>

First, we classify a referendum as a *mismatch* if a minority in the survey said ‘no’ but a majority of actual voters said ‘yes’, or vice-versa. This way we simply check for divergences in opinions. However, Swiss direct democracy contains an institutional safeguard. The so called *Ständemehr* requires that for a popular initiative or obligatory referendum to pass a majority of cantons, in addition to a majority of voters nationwide (*Volksmehr*), must vote yes.<sup>9</sup> This gives more weight to more rural and conservative over urban and progressive cantons. For example, a 2013 referendum on improving child care facilities and facilitating the return of women to the labor market was accepted by 54.3% of the population, but rejected by a majority of 13 cantons, notably the rural and conservative ones. According to critics, the *Ständemehr* should thus not really improve representation but rather reinforce the bias that critics of the process expect from referendums in general – pro-conservative, pro-rural.<sup>10</sup> Consequently, we look at the cases of *passed mismatches*, a subset of *mismatches* which excludes cases where a majority voted yes contrary to popular opinion but where that *mismatch* was inconsequential because the *Ständemehr* was not fulfilled.

Even if we find that referendum outcomes diverge from the majority preference of the population at large, we still need to ask ourselves whether the outcome that would have obtained under a purely representative democracy would have been any different. After all, parliamentary elections can also be unrepresentative in the sense that turnout in Switzerland is low and skewed (Rosset, 2013). Furthermore, in most cases the majority of voters tends to follow the government’s recommendation (Trechsel and Sciarini, 1998). To address this question we use the government’s position on the issue. The Swiss government, the *Bundesrat*, issues a vote advice before every referendum vote. In theory we could also use the parliamentary majority instead. The government merely makes

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<sup>8</sup>In addition to the description in the manuscript, the operationalization of the dependent variables of our analysis are summarized in Table 5.4 in the appendix.

<sup>9</sup>A canton is considered to be voting ‘yes’ if a majority of voters in that canton vote ‘yes’.

<sup>10</sup>We provide more background on the *Ständemehr* in the appendix.

a recommendation while parliament casts a deciding vote on the policy with the two not needing to match. In practice, the governmental vote recommendation and the parliamentary majority almost never diverge.<sup>11</sup> We look for *passed mismatches* where the *Bundesrat* on the one hand and the popular majority on the other hand agree but are ‘defeated’ in the referendum by an unrepresentative sample of actual voters. We call such cases *unrepresentative outcomes*.

A fair comparison of direct and representative democracy<sup>12</sup> requires us to also look for cases where a referendum probably led to a more representative outcome than a purely representative democracy. This means that we also need to look at *matches* of opinion majorities among voters and the full population. However, among these matches there may be referendums where majorities of actual voters and the population supported a ‘yes’ but the referendum failed the *Ständemehr*. Analogous to *mismatches*, we call the *matches* that pass the *Ständemehr* *passed matches*. Finally, we identify cases among the *passed matches* where the government issued vote recommendation and majorities within our comparison groups diverge. We call these improvements over a hypothetical policy outcome under a purely representative democracy *representative outcomes*.<sup>13</sup> We then compare the number of *unrepresentative outcomes* and *representative outcomes* to see whether direct democracy on balance worsened or improved representation.

Before we move on to our correlational analyses whether turnout affects representation we provide a brief descriptive assessment of the representativeness of referendums based on the variables we just described. The results of this assessment are provided in Figures 2.6 and 2.7.<sup>14</sup> They provide a distribution of counts of our qualitative indicators across simulated datasets: for each survey we take 1000 random draws from a binomial proba-

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<sup>11</sup>The government recommends and the parliamentary majority almost always vote in favor of referendums. Both tend to reject almost all initiatives. Single parties may diverge from the government vote recommendation, however these parties hardly constitute a majority of all parties in parliament (CVP, SP, SVP, FDP, BDP, Greens) It is mostly the SVP and the Greens that vote for initiatives against the government parole.

<sup>12</sup>By which we of course mean the comparison of representative democracy with and without additional institutions of direct democracy.

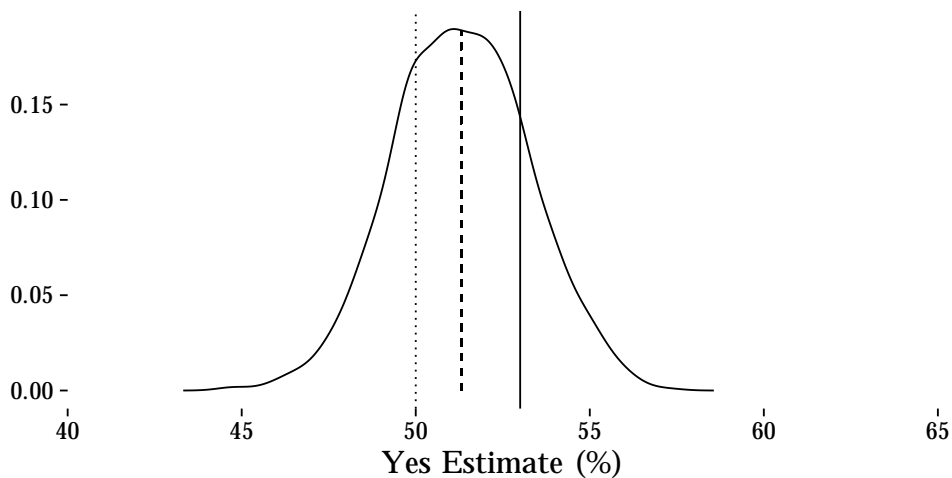
<sup>13</sup>In total we create six indicators of representation which we summarize in Table 5.4 in the appendix.

<sup>14</sup>In the appendix, Figures 5.2 and 5.3, we repeat the exercise for the group of non-voters only. Obviously the extent of misrepresentation is greater for non-voters.



bility distribution with parameters (number of successes, i.e. voters that voted yes, and trials, i.e. sample sizes) obtained from the survey. This gives us not one but a thousand estimates of yes-share among non-voters and in the population for each referendum (see Figure 2.5 for an illustration). For each simulated yes-share we conduct the comparison with the actual result.

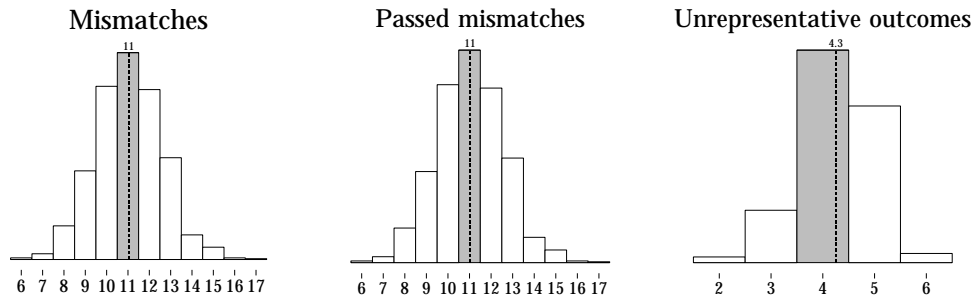
We use this approach to deal with random sampling error which is a necessary component of any survey and of particular relevance in our application. When we calculate 95% confidence intervals for the yes-shares estimated from the surveys, 54 of these include 50 percent. This means that there is a good chance (at least 5 in a 100) that actual population values are on the opposite side of 50 percent relative to our estimate. Hence, we may miss-classify some referendums if the yes-shares estimated from the survey are very close to 50% (see Figure 2.5 for an illustration).



**Figure 2.5:** *Distribution of the simulated yes-shares in the whole population (based on a thousand random draws from a binomial probability distribution) for a 1985 referendum on health policy (“Bb Aufhebung Beitragspflicht Bund im Gesundheitswesen”). The dotted line marks the 50%-threshold, the dashed line indicates the average estimated yes-share and the solid line highlights the actual result.*

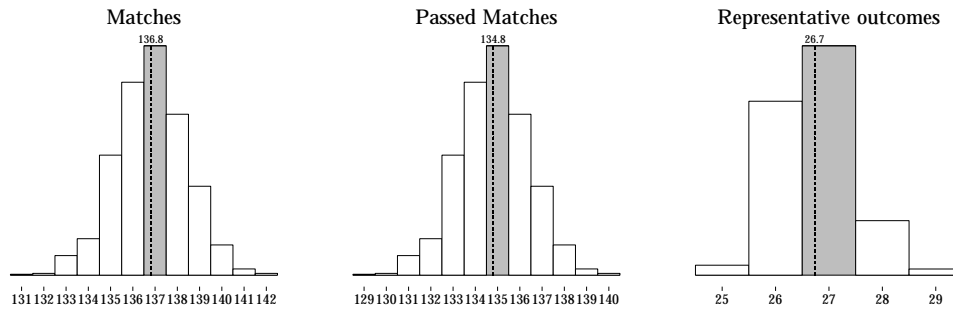
Through our simulation-based approach we obtain a distribution of counts of *mismatches*, *passed mismatches* and *unrepresentative outcomes* which we plot in Figure 2.6. From these distributions we obtain the mean and 95% highest density intervals to describe the uncertainty in our counts. We find on average 11 (7.4%) referendum

votes (with the highest density interval being  $[8, 14]$ ) which did not match with majority opinion among the population and consequently are classified as mismatches. The *Ständemehr* does not affect the number of *mismatches*: all eleven mismatches passed the *Ständemehr* or it did not apply. Next, we look for referendums where the *Bundesrat* and a majority of the population have the same opinion but are ‘defeated’ in the referendum by an unrepresentative sample of voters. We find on average 4.3  $[3, 5]$  such *unrepresentative outcomes*.



**Figure 2.6:** Distribution of estimated number of mismatches, passed mismatches and unrepresentative outcomes between actual referendum outcome and population – based on 1000 simulated survey-based proportions. The median counts are highlighted in gray and means denoted by the vertical dashed lines.

We also investigate whether referendums may in some cases have improved representation (cf. Figure 2.7). First, the number of *matches* by definition is simply the difference between the number of *mismatches* and the total number of referendums. Again, we do not find that number to be affected by the *Ständemehr*. Lastly, we find on average 26.7  $[26, 28]$  *representative outcomes* – cases where a referendum overturned the government which issued a recommendation contrary to the popular majority. What do these results tell us about the representativeness of referendum outcomes in Switzerland? An average 4.3 *unrepresentative outcomes* versus 26.7 *representative outcomes* suggest that on balance referendums have improved representation of the opinion of a majority of the population.



**Figure 2.7:** Distribution of estimated number of matches, passed matches and representative outcomes between actual referendum outcome and population – based on 1000 simulated survey-based proportions. The median counts are highlighted in gray and means denoted by the vertical dashed lines.

## 2.4 Does higher turnout increase the representativeness of referendum outcomes?

This section presents the results of our analysis of the effect of turnout on the representativeness of referendum outcomes. We employ two dependent variables: (1) a quantitative indicator, the difference between the actual and the reported yes share, and (2) and *mismatches*, a qualitative indicator of the representativeness of referendum outcomes.<sup>15</sup> Consequently, we present two sets of models – the first is composed of OLS regression models while the latter, due to the dichotomous nature of the dependent variable, comprises binary logistic regression models. The unit of observation is an individual referendum vote. Because multiple referendums may be held on the same day, some referendums are covered by the same survey. Hence, referendums held on the same day also share the same turnout. This is why we cluster standard errors by survey.

Our key independent variables in both sets of models are the turnout in a referendum and the year of the referendum. We include the unity of the federal government’s parties on the referendum (support of all 7 federal governors = 7, support of none of them = 0)<sup>16</sup>, as well as dummies for the type of referendum (referendum and initiative as opposed to

<sup>15</sup>We do not use *passed mismatches* as dependent variable because its counts do not differ from *mismatches* and we do not use *unrepresentative outcomes* because there are too few positive cases.

<sup>16</sup>We code this variable based on the parties’ paroles. The *Bundesrat* consists of seven members of which in our period of study two were fielded by the Liberals (*FDP*), Conservatives (*CVP*) and Social democrats (*SP*) and one by the populist right party *SVP*.

obligatory referendum as a base category) and the topic of the referendum (foreign and defense policy and immigration policy, as opposed to domestic policy which is the base category) as control variables.

Certain topics may draw more voters, for instance because they are controversial, while others may be uncontroversial and elicit only low turnout. Similarly, obligatory referendums can entail minor changes to the constitution while initiatives most often are controversial. Hence, we control for the type of referendum to not wrongly attribute the effect of the type to turnout. When it comes to party unity, following Trechsel and Sciarini (1998), we assume that the more the federal government's parties agree on their vote recommendation for the referendum, the more likely voters are to follow this majority opinion. We expect greater unity and lower turnout in uncontroversial referendums. Hence, we would underestimate the effect of turnout if we were to omit party unity. A similar argument applies to the topics, as more controversial topics (i.e. immigration) should be associated with higher turnout and more mismatches between government policy and popular opinion.

We first look at the degree of (mis)representation. Table 2.1 provides the results for models with the difference in yes-shares as dependent variable. Turnout is negatively correlated with the gap in actual and reported yes-shares across all models. This implies that the higher turnout the more representative the referendum. This relationship is robust to the inclusion of our battery of control variables (models 2 to 4). Consistently a one-unit increase in turnout is associated with a decrease in the gap of opinions of a tenth of a percentage point. This translates to a one standard deviation increase in turnout (8%-points) decreasing the gap in yes-shares by roughly one percentage point, a decrease of 17% over the average yes-share difference.

As outlined in section 2.2 we expected to see this relationship because the population of voters becomes more similar to the full population as turnout increases. Consequently, we see a stronger convergence between expressed opinions of voters and the opinion of the population at-large. Research has shown that most Swiss voters are selective voters

	(1)	(2)	(3)	(4)
Turnout	-0.13*	-0.12*	-0.12*	-0.13*
	(0.05)	(0.05)	(0.05)	(0.05)
Year		-0.21*	-0.21**	-0.21**
		(0.08)	(0.07)	(0.07)
Party unity		0.01	0.14	0.12
		(0.19)	(0.25)	(0.26)
Referendum			1.54	1.94
			(1.27)	(1.21)
Initiative			1.35	1.35
			(1.54)	(1.59)
Foreign & Defense				1.49
				(1.22)
Immigration				-2.88
				(1.74)
Intercept	11.58***	421.38*	434.60**	435.35**
	(2.15)	(159.30)	(146.81)	(146.11)
<i>N</i>	148	148	148	148
<i>R</i> <sup>2</sup>	0.038	0.077	0.090	0.115
<i>AIC</i>	903.54	901.43	903.35	903.20
<i>BIC</i>	909.54	913.42	921.33	927.18

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 2.1:** Results of OLS regressions regressing the difference between actual and reported yes-share on turnout, the year of a referendum and controls.

while only a few are always or never voters respectively (Sciarini et al., 2016; Dermont, 2016). We suspect that as turnout increases more selective voters are drawn to the polls while never-voters stay at home and that the latter are more different from regular voters than selective voters. Hence, non-voters will always be different from voters independent of turnout. Indeed, using only the non-voters as a comparison for mismatches we find hardly any relationship between turnout and our outcome of interest.<sup>17</sup> The year of the referendum is also negatively correlated with the differences in yes-shares. The type as well as the topic of the referendum, however, do not show significant associations with the outcome, neither does party unity.

Next we focus on *mismatches*. These mark potentially consequential differences in opinion because the vote choice preferred by a majority differs between the groups. The dependent variable here is a dummy, where 0 indicates no mismatch and 1 indicates a mismatch. As described earlier, we find that out of 148 referendums in our sample, 22 (15%) referendum votes did not match with majority opinion among non-voters. Our key independent variables are again turnout and the year of the vote. We employ the same controls as before.

Table 2.2 displays the results for *mismatches*. Turnout is again positively correlated with our indicator of misrepresentation but not significant in any model this time. The year of the referendum has a negative coefficient, meaning that over time referendums become less likely to be unrepresentative. This correlation, however, is not significant. Party unity again shows no significant coefficient, neither do type and topic of referendums (model 3).

Generally, the results presented here are not surprising in light of our descriptive assessment presented above. The referendums analyzed here are not highly unrepresentative of the majority opinion in the sample, and thus there are little effects of other factors on their representativeness. As we expected, higher turnout reduces unrepresentativeness, if only slightly. Further, the representativeness of referendums increases over time. We

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<sup>17</sup>See Tables 5.5 and 5.6 in the appendix.

	(1)	(2)	(3)	(4)
Turnout	0.04 (0.04)	0.05 (0.04)	0.04 (0.03)	0.02 (0.03)
Year		-0.11 (0.06)	-0.10 (0.06)	-0.10 (0.06)
Party unity		0.06 (0.15)	-0.08 (0.18)	-0.01 (0.22)
Referendum			-1.06 (0.80)	-1.55 (0.93)
Initiative			-1.07 (0.98)	-1.03 (1.09)
Foreign & Defense				1.46 (0.97)
Immigration				2.12 (1.09)
Intercept	-3.95* (1.75)	210.16 (120.95)	196.29 (114.04)	187.12 (112.50)
<i>N</i>	148	148	148	148
<i>AIC</i>	90.64	91.59	93.72	92.63
<i>BIC</i>	96.64	103.57	111.70	116.61

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 2.2:** Results of logistic regressions regressing the occurrence of a mismatch on turnout, the year of a referendum and controls.

can only speculate about possible explanations here – one may be more equal turnout over time, especially of men and women.

As discussed in section 2.3, the ‘Vox’ data come along with some problematic aspects for our analysis: over-reporting of turnout, bandwagoning and random sampling error. The important question is whether these features of the data lead to a bias in our estimates. The over-reporting of turnout can be countered by weighting the data. Without weighting, non-voters would be underrepresented and hence the extent of misrepresentation underestimated. Consequently, the coefficient estimates on turnout would also be biased downwards. Since we weight the data this problem should at least be alleviated. Bandwagoning – the tendency of some respondents to indicate their agreement with the majority opinion leading to an overestimation of the vote share of the winning option – should also result in an underestimation of misrepresentation. This would lead our coefficient estimates on turnout to be biased towards zero. Bandwagoning generally indicates weak opinions among some respondents. To us, bandwagoning does not actually imply a misrepresentation of people’s true opinion but it is simply a function of some people’s opinion being rather weak. Random sampling error, lastly, introduces random noise to our dependent variables because these are derived from our estimates of popular opinion. Hence, we would again expect an attenuation bias.

This means that if there are problems with the data quality they would rather lead to an attenuation bias in our turnout estimates. Hence, we believe that the estimates of a turnout effect we present are conservative estimates because our approach of measuring representation tends to underestimate the extent of misrepresentation.

## 2.5 Conclusion

Direct democracy is popular because having the people directly vote on policies seems like the most obvious institutionalization of democracy itself (Budge, 1996, p. 2). It allows citizens to reverse decisions made by legislatures and even initiate new laws which



parliaments are unwilling to pass, thereby, as its proponents argue, leading to more representative policies than would have been obtained under a purely representative democracy. Referendums are regarded as particularly important in the Swiss context which we study where they allow citizens to overturn the super-sized governing coalition which makes up the *Bundesrat*.

However, direct democracy also has many critics who fear that referendums may in fact worsen representation. Turnout in referendums is lower than in parliamentary elections – 40.8% between 1981 and 1999 as compared to 45.8% in national elections in Switzerland. Given that turnout tends to be skewed towards citizens of high socio-economic status, critics of direct democracy argue that if participation is low, as is the case in the average Swiss referendum, referendum outcomes are not representative of the preferences of the population at large.

We tested this assertion using a compilation of post-referendum surveys encompassing 148 national referendums held in Switzerland between 1981 and 1999. We focus on Switzerland because referendums are frequently held and there is great variation in turnout. These national level referendums in Switzerland were covered by surveys which uniquely asked non-voters for their hypothetical vote choice had they participated.

Comparing opinion majorities in the surveys against actual referendum outcomes we show that higher turnout increases representativeness. Further, we find representativeness to increase over time which can potentially be explained by more equal turnout especially of men and women. Our results confirm critics' arguments that the representativeness of referendums is a function of turnout. The effect is not very strong, but we believe our estimates based on the Swiss data to be a conservative estimate of the turnout effect. Overall, the referendums analyzed here are not highly unrepresentative of the majority opinion in the sample. A purely descriptive assessment of the representativeness of referendums revealed 4.3 (2.9%) *unrepresentative outcomes* versus 26.7 *representative outcomes*, suggesting that on balance referendums were beneficial rather than detrimental to representation.

However, we find only few cases where the outcome would have been more representative even under full turnout vis-a-vis a counterfactual representative outcome. Thus, our results are in line with research on the turnout effect in elections which indicates that higher turnout would not radically change the outcome of votes. For instance, Citrin et al. (2003) find that nonvoters are more Democratic than voters in US Senate elections but that the structure of electoral competition weakens the effect of turnout on results considerably. However, the general lack of competitiveness of Senate races means that there are few cases where higher turnout could have realistically changed the outcome. Brunell (2004) obtains similar results for US presidential election. Hence, only when referendums are very close may turnout affect the outcome. However, in our sample only nine out of 148 referendum results (6 %) are within two percentage points of the ‘tipping point’: 50 percent.

Our results can be regarded as a proxy for a referendum outcome under full turnout – however, caution should be applied when doing so. As Lijphart (1997, p. 4) has pointed out, “nonvoters who are asked their opinions on policy and partisan preferences in surveys are typically citizens who have not given these questions much thought, who have not been politically mobilized, and who, in terms of social class, have not developed class consciousness. It is highly likely that, if they were mobilized to vote, their votes would be quite different from their responses in opinion polls.” In that regard, it would be interesting to run a survey prior to a referendum which asks respondents for their likelihood to participate in the vote and their hypothetical vote choice if they were to go.

Further research should also focus on referendums beyond Switzerland. What this study does provide is an alternative way to study the representativeness of referendums, which we believe can fruitfully be applied not just in Switzerland but elsewhere, too. Kriesi (2005) refers to Switzerland’s system of direct democracy as the “Swiss laboratory” which in a certain sense it is with all the usual benefits and drawbacks. The Swiss political system provides us with a unique setting to study the representativeness of referendums, however it may be hard to generalize these results to other systems. Con-

cretely, one may suspect that direct democracy compares quite favorably in this setting because of very low turnout in national elections, particularly as turnout in referendums is usually not much lower. In countries with larger differences in turnout we may find even stronger turnout effects.



## Chapter 3

# Popular Support for Direct Democracy: Critical but not compensatory

The popularity of direct democracy contrasts with rising disengagement of citizens from politics. However, as most citizens remain committed to democratic principles part of the rise in discontent can potentially be explained by increased expectations of ‘critical citizens’. Such citizens are said to demand more participatory opportunities. Hence, direct democracy may compensate for declining conventional political participation. Using data from the European Social Survey I find critical citizens to be more supportive of direct democracy but no more likely to vote in elections. However, voting, other forms of political activity and political interest are strongly associated with support for direct democracy. Analyzing post-referendum surveys I find the same pattern to hold for actual participation in referendums. Because the popularity and actual usage of direct democracy are greatest among those still participating direct democracy appears insufficient to bring the politically disengaged back into democratic politics.

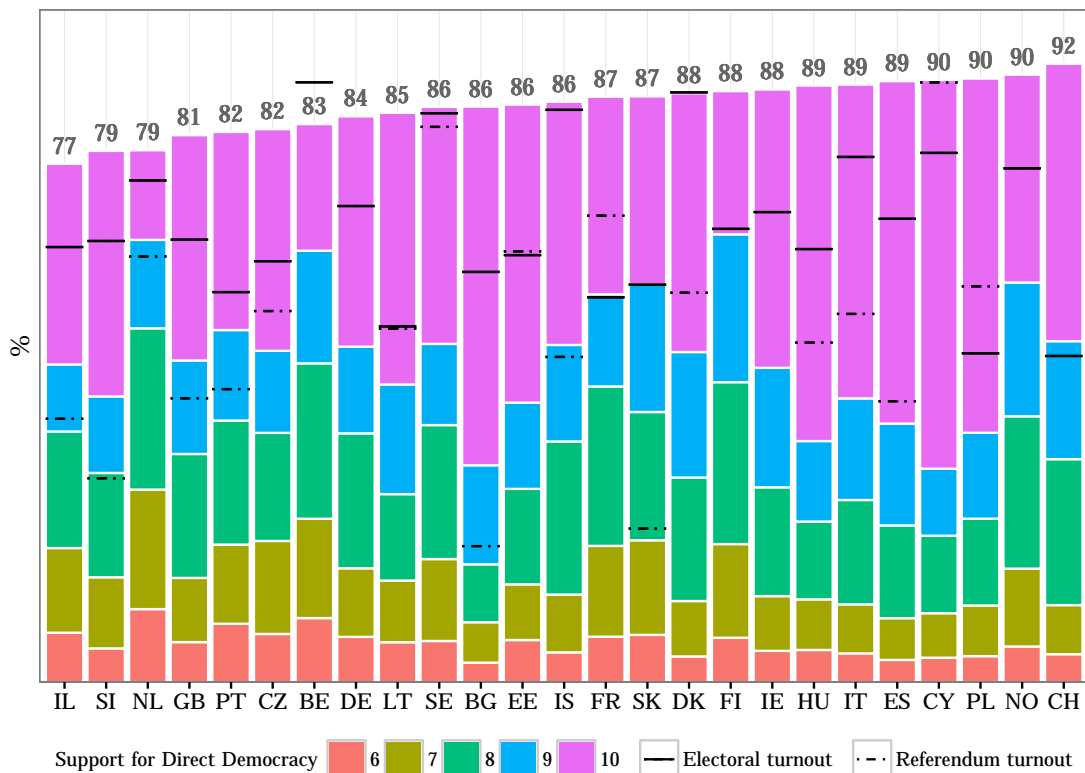
### 3.1 Introduction

When asked, citizens in polities with and without direct democracy – institutional arrangements that allow citizens to directly vote on policy themselves – consistently voice support for it in substantial majorities (Donovan and Karp, 2006; Bowler et al., 2007).<sup>1</sup> The popularity of direct democracy, that is an institution of participatory democracy, stands in contrast to low and declining participation in conventional forms of political participation from voting to party membership (Gray and Caul, 2000; Dalton and Wattenberg, 2000). In the sample studied in this chapter support for direct democracy ranges from 77 to 92 percent; in most countries participation in both elections or referendums is lower than support, and referendum turnout lower than electoral turnout (see Figure 3.1).

While citizens' trust in institutions and actors of politics is in decline citizens are said to remain committed to democratic norms and principles (Dalton, 2004). Measures of diffuse support have actually been remarkably stable showing just weak signs of decline, if at all (Norris, 2011; Wagner et al., 2009). Part of the rise in discontent could thus be explained by increased expectations on the side of 'critical citizens' (Norris, 2011) or 'dissatisfied democrats' (Klingemann, 2014) demanding more participatory opportunities. Indeed, some argue that such citizens who support democracy in the abstract but are unsatisfied with how it works in practice desire more participatory opportunities and consequently are a cause of the increase in institutionalization and usage of direct democracy. Such an interpretation of the empirical trends suggests that what is needed to revert the trajectory towards political apathy is an extension and deepening of democracy. The idea is that new forms of political participation could compensate for the decline in conventional means of political participation (Rosanvallon, 2008).

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<sup>1</sup>Part of this work was carried out during a research stay at the EUROLAB at GESIS - Leibniz Institute for the Social Sciences. I thank Armin von Schiller, Bernhard Weßels, Enrique Hernández, Henrik Serup Christensen, Lea Heyne, Mark Kayser and Simon Hug as well as colloquium participants at the Hertie School of Governance and participants in the 2015 ECPR Joint Sessions workshop "What Citizens Want From Democracy: Popular Attitudes to Existing Political Processes and their Alternatives" organized by Åsa von Schoultz and Ben Syd for very helpful comments and suggestions.



**Figure 3.1:** Respondents approving of direct democracy (% , by country using design weights) – i.e. choosing answers 6 to 10 on an 11-point scale with higher numbers indicating greater importance accorded to referendums in answering to the question “And still thinking generally rather than about [country], how important do you think it is for democracy in general that citizens have the final say on the most important political issues by voting on them directly in referendums?” Solid horizontal lines indicate turnout in the last national election before the survey and dot-dashed horizontal lines indicate turnout in the last national referendum before the survey if one was held within ten years before the survey.

The aim of this chapter is to test whether direct democracy can fulfill this expectation on a comprehensive set of individual and aggregate level data. Direct democracy is probably the most prominent and arguably the farthest reaching remedy to political dissatisfaction and declining participation (Bowler and Donovan, 2002a; Cronin, 1999). By allowing citizens to directly vote on substantive issues parliaments generally vote on, direct democracy has a driving appeal in the sense of forming the most obvious institutionalization of democracy itself (Budge, 1996). While direct democracy provides new means for citizen participation using them comes with prerequisites. Voting in a referendum is cognitively demanding, more so than voting in elections, because subjects often involve complex and sometimes technical matters (see e.g. Broder, 2001). Empir-

ically, some have provided evidence to argue that many citizens can make competent decisions (Bowler, 2015; Colombo, 2016) while others have highlighted the importance of cues (Lupia, 1994; Bowler and Donovan, 2002b).

Can direct democracy really compensate for other possibly less complex forms of political participation such as voting? To answer this question I begin with a comprehensive analysis of support for direct democracy in 25 established democracies which I see as a second-best alternative to evaluating behavior. In the absence of actual opportunities for referendum voting in many countries support for direct democracy may be indicative of potential behavior. For instance, Dyck and Baldassare (2009) find that supporters of direct democracy are more likely to vote “yes” on a ballot measure than skeptical citizens, independent of policy content. Short of viewing attitudes as proxy for behavior it is interesting by itself to analyze demand for the institution. Given the widespread lack of (regular) experience with direct democracy and the corresponding uncertainty about its effects, it is interesting to better understand public support for an institution that is not yet well understood by scholars, policy makers and the public alike. Particularly as broad public support stands in an interesting contrast to more skeptical assessments of scholars and political elites. The latter tend to be less enthusiastic because they are not happy to give up control over the political agenda (Bowler et al., 2002).

The scholarly literature on direct democracy hypothesizes cognitive mobilization, such as rising education levels, to be a driving force behind the increased institutionalization and use of direct democracy. In doing so, it implicitly sometimes explicitly makes references to the ‘dissatisfied democrats’ thesis. For instance Schuck and Vreese (2011, p. 183) quoting Norris (1999) write: “Indeed, some research suggests that the increasing demand for the use of direct democracy stems predominantly from citizens who hold a more critical or sometimes even cynical attitude towards politics while at the same time they remain committed to democratic principles.”

This explanation has hitherto remained an untested juxtaposition. Consequently, I investigate whether dissatisfied citizens show stronger support for direct democracy. I



thereby seek to understand whether critical citizens do indeed demand more participatory politics, in the form of direct democracy. In the absence of actual opportunities for referendum voting in many countries support for direct democracy may be considered indicative of potential behavior in those countries. But attitudes are also interesting by themselves as strong popular support contrasts with more skeptical assessments of societal elites. I use that perspective to ask whether direct democracy can compensate for the decline in conventional political participation. I do so by relating attitudes and behavior to attitudes toward direct democracy and actual participation in referendums. As for instance Rosanvallon (2008) argues, citizens may not abstain from political participation per se but shift their political activities to new forms of participation, such as direct democracy. These could then compensate for a decline in conventional political participation – by bringing people back into politics or encouraging those that have never participated politically outside of elections to make their voices heard. While different forms of participation are in principal complementary – one can vote in elections, protest, sign petitions and vote in referendums – some might treat them as alternatives.

To summarize, I analyze three separate sets of data to provide an empirical basis to speculations whether the introduction of (more) direct democracy can compensate for a decline in conventional political participation. Firstly, I use the European Social Survey Round 6, the most recent comprehensive cross-national survey (fielded in 2012) which includes an item asking respondents about their support for national referendums. In addition, I analyze further national surveys that have asked respondents about their participation in actual referendums. Finally, I complement this with an analysis of aggregate data on national referendums.

As support for direct democracy is concerned, so called ‘critical citizens’ are more likely to support it than other citizens. The concept of the ‘critical citizen’, however, seems largely orthogonal to conventional political participation. When looking at indicators of political involvement – turnout, other political activities and interest – those who are more involved are on average stronger supporters of direct democracy. This tendency is even more pronounced for actual participation. Voters and politically interested citizens

are much more likely to participate in actual referendums than are other citizens. This translates to a positive relationship between electoral and referendum turnout at the aggregate level. The results presented in this chapter suggest that direct democracy is not an alternative but complementary form of political participation. Because the popularity and actual usage of direct democracy are greatest among those still participating direct democracy appears insufficient to bring the politically disengaged back into democratic politics.

### 3.2 Who supports direct democracy?

There is little doubt about the popularity of direct democracy but our understanding of the deeper meaning and causes of its popularity is still limited. The first studies on popular support for direct democracy have contrasted a ‘new politics’ (Dalton et al., 2001) or ‘cognitive mobilization’ (Craig et al., 2001) explanation with a ‘political disaffection’ explanation, a dichotomy also found in other political sociology literatures. The former derives from the work of Dalton (1984) and Inglehart (1977) suggesting that direct democracy should resonate with a post-materialist electorate. It predicts that younger, well-educated and politically interested citizens should be most supportive of direct democracy. The disaffection hypothesis in contrast posits that it is primarily citizens dissatisfied with the government or democracy in their country more generally that support direct democracy. Multivariate results based on a question fielded in the 1998 German national election study indicate support for the latter (Bürklin et al., 2001).

Donovan and Karp (2006) extended the analysis to six other established democracies, however they estimate separate models for each country and each theory (twelve models in total). Political interest is positively associated in three countries, but negatively or not all associated with support for direct democracy in three others. Political dissatisfaction is positively associated with support for direct democracy in all countries except for Switzerland. In a subsequent paper covering sixteen countries included in the 2004

ISSP they obtain broadly similar results (Bowler et al., 2007). Schuck and Vreese (2011) in a study on an EU referendum in the Netherlands similarly find more support for political disaffection. Finally, Schuck and Vreese (2015) in a study of 21 EU members, based on the 2009 European Election Campaign Study, find political cynicism but also civic duty to be positively related to support for referendums on matters of European integration.

The aforementioned studies identify dissatisfaction as a strong predictor of support for direct democracy. As the disaffected tend to be at the periphery of politics authors in this line of research raise doubts whether support for direct democracy indicates a true commitment to more participation. However, the political disaffection and cognitive mobilization explanations are not necessarily contradictory. Empirically, cognitive mobilization and disaffection have been concurrent trends contradicting the theoretical dichotomy. One may even go so far as to view a lack of participatory opportunities as reason for disaffection and thereby support for direct democracy. This is what a proponent of the ‘critical citizens’ literature would argue and indeed some scholars have invoked this line of reasoning to explain the recent rise of direct democracy (Altman, 2010; Schuck and Vreese, 2011).

In this line of thought, ‘critical citizens’ are dissatisfied because of deficits of the political system and demand reforms like direct democracy. Yet, there are also contradictory perspectives. This may for instance not be the case for ‘stealth democrats’ (Hibbing and Theiss-Morse, 2002) who are dissatisfied with representative democracy, want it to function better but without the need for more citizen involvement. Subsequent studies employing the same item battery to measure stealth democratic attitudes in Finland (Bengtsson and Mattila, 2009) and the Netherlands (Coffé and Michels, 2014) found that predictors for support for direct democracy also predict support for ‘stealth democracy.’<sup>2</sup> Stealth democrats hold the idea that there are ideal solutions to societal problems and

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<sup>2</sup>Unfortunately these authors do not report how many respondents have high values for both stealth and direct democracy indicators. It would also have been interesting to put all concepts into a multinomial choice model to test whether common predictors are able to arbitrate between supporters for different concepts.

that the political process is merely about finding this solution. This is how direct democrats and stealth democrats may be conceived of as similar. Direct democracy therefore appears as an instrument with which ‘the’ people can impose such solutions against ‘the’ elites.<sup>3</sup>

For instance, a recent study finds British citizens who are more critical of politicians to favor a greater role for the public in decision-making and also see a greater difference between their demand for and the systems supply of participatory opportunities (Allen and Birch, 2014). Yet, it is important to note that there are different types of dissatisfaction and, surely, being dissatisfied does not imply being critical (Geissel, 2008). However, few studies have considered ‘critical citizens’ directly. Webb (2013) explicitly contrasts ‘stealth democrats’ with ‘dissatisfied democrats’ (another label for ‘critical citizens’) using Neblo et al.’s (2010) ‘sunshine democracy’ item battery to measure the latter. Based on an Internet survey of British citizens he classifies two thirds as ‘dissatisfied democrats’ and one third as ‘stealth democrats.’ While the latter are more likely to support referendums but neither ‘party-electoral participation’, nor ‘non-party participation’ or ‘deliberative democracy’, dissatisfied democrats approve of all.

### 3.3 Understanding the popularity of direct democracy

The cognitive mobilization and political disaffection explanation for popular support of direct democracy are not necessarily contradictory neither theoretically nor empirically. Citizens may be cognitively mobilized and dissatisfied at the same time. I focus here on the critical citizens argument as it features prominently, whether explicitly or implicitly referenced, in the literature on direct democracy. In the same vein it is also often suggested that democratic innovations, such as referendums, can compensate for a decline in more conventional forms of political participation, most prominently voting.

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<sup>3</sup>Hence, it is no surprise that populists of all colors are supporters of direct democracy. Direct democracy, at tool that allows citizens to disagree with their governments on select issues, fits their Manichean distinction of a corrupt elite from the good people.

'Critical citizens' are defined as citizens who are strongly committed to democratic values but are critical of current institutions and practices of representative government. Norris (1999) coined the term 'Critical Citizens' while Klingemann (1999, p. 32) has proposed the term 'Dissatisfied Democrats' to describe essentially the same set of people: citizens who "clearly approve of democracy as a mode of governance, but [who] are discontented with the way their own system is currently operating." I will use both terms interchangeably. The more descriptive term 'Dissatisfied Democrats' describes the operationalization of the concept used in this chapter well. In this line of thought, 'dissatisfied democrats' are dissatisfied because of deficits of democratic systems.

Both authors, Norris and Klingemann, agree that these citizens should be considered forces for democratic reform and innovation. Empirically, Qi and Shin (2011) show that in a cross-section of 43 countries the share of critical democrats and the level of democracy, as measured by Polity IV, are positively correlated concluding that critical democrats drive democratization. Of course based on these results one may also conclude that more established democracies have more critical citizens. Nevertheless, Norris (1999, p. 9) with regards to critical citizens explicitly mentions "advocates of direct democracy, [who think that] the forms of governance in the nation-state need to evolve to allow more opportunities for citizen decision-making than an election for government every few years." Scholars of direct democracy have approvingly referenced this line of reasoning to explain the recent rise of direct democracy which they study. Consequently, I test whether critical citizens are more favorably disposed towards direct democracy than other citizens. With the available data in mind, described in the next section, I formulate the following hypothesis:

**H 1** *'Dissatisfied democrats' are more likely to strongly support direct democracy than other citizens.*

However, this does not necessarily say much about the potential of direct democracy to counter the decline in political participation. 'Dissatisfied democrat' is an attitudi-

nal not a behavioral concept. A ‘dissatisfied democrat’ is defined by their (catch-all) evaluation of the political system and abstract support for democracy. Foreshadowing results presented in section 3.5, overall and within most country samples, there is no relationship between ‘dissatisfied democrats’ and turnout. Hence, if one is to evaluate the argument that direct democracy is compensatory one needs to look at a separate dimension.

As described before, some argue that if citizens were given new and alternative means of participation political engagement would overall remain the same – that is people do not give up political engagement but shift their activities to other channels. If those channels are not available some citizens will no longer participate but would potentially do so again if given the opportunity. On an attitudinal level, those who do not vote should be more positively disposed towards direct democracy. Many countries in the sample do not have direct democracy, at least not at the national level, hence analyzing support for direct democracy seems the only way to form expectations about potential (and hypothetical) participation in referendums. Consequently, I will test the following hypothesis:

**H 2** *Politically disengaged citizens are more supportive of direct democracy than politically engaged citizens.*

If one looks at participation rates in actual referendums one finds that these are often lower than in actual elections. While theoretically voters in elections and voters in referendums, when turnout is very low, could be two completely separate camps it is much more likely that there is a great overlap between the two. From the literature on political participation we know that those who engage in more demanding forms of political participation also tend to vote. In descriptive terms party membership, signing a petition or participating in a demonstration may be seen as a sufficient condition for voting. Approaching this relationship from a different angle one can view electoral participation as a necessary condition for voting in referendums. Voters in elections are

also most likely to be voters in referendums.

An alternative perspective describes voting as a learned habit. It stipulates that by voting citizens acquire a habit of voting and thus are more likely to vote in subsequent elections (Dinas, 2012). Given the regularity of elections one can also argue that it is rational for voters to recall their past decision to make a choice about participating in the upcoming election, or referendum. An observable implication of this line of reasoning is that citizens who voted in the national election are also more likely to turn out in referendums than citizens who did not participate in the national election. This line of reasoning translates into the following hypothesis:

**H 3** *Politically engaged citizens are more likely to participate in referendums than politically disengaged citizens.*

I rely on a number of national surveys that cover national referendums held in the past two decades in the countries of the sample from Round 6 of the European Social Survey (ESS6) sample to test this hypothesis. I will focus on turnout in the preceding national election and political interest as these variables are consistently available in most post-referendum surveys. The third hypothesis about an expected relationship at the individual level implies that one will see higher turnout in referendums where turnout in elections is higher. This observable implication is testable on a broader set of referendums and countries. Therefore, the final hypothesis to be tested is:

**H 4** *At the national level, higher turnout in elections is associated with higher turnout in referendums.*

The specification of empirical tests for these hypotheses is detailed in the next section.

### 3.4 Research Design

This study uses data from Round 6 of the European Social Survey containing the module “Europeans’ understandings and evaluations of democracy” and various post-referendum surveys. The survey covers 29 countries of which I consider electoral democracies that have been stable for at least the past ten years.<sup>4</sup> The substantive reason for restricting the sample is that the arguments to be tested in this chapter relate to established democracies. Direct democracy is seen as an instrument which can reinvigorate functional and democratic representative democracies. Similarly, the concept of critical citizens has primarily been developed with advanced industrialized democracies in mind.<sup>5</sup>

The data encompass observations on 47515 respondents in 25 countries with an average sample size per country of 1901 respondents ( $s$ : 512). ESS6 is the most recent cross-nationally administered surveys to include a specific question on direct democracy:

“And still thinking generally rather than about [country], how important do you think it is for democracy in general that citizens have the final say on the most important political issues by voting on them directly in referendums?”

The question provides an easily understandable definition of direct democracy without using the term explicitly. Thus, the item strikes a balance between generality required for cross-national and -cultural comparison and specificity to provide a meaningful measurement of the underlying concept. It is not too vague to allow misunderstandings, as the term ‘direct democracy’ may mean different things to different people. At the same time it does not include unnecessary technicalities that would inhibit a respondent’s understanding of the question. Yet, the questionnaire does make the important

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<sup>4</sup>The formal criterion for excluding countries was that they had an average Freedom House score of above 3, an average Polity score of above 8 or both in the past 10 year prior to the survey. Respondents from the following countries were therefore dropped from the dataset: Albania, Kosovo, Russia and Ukraine.

<sup>5</sup>Furthermore, the interpretation of responses from survey respondents from unstable democracies or from autocracies is particularly problematic. Respondents from such countries often indicate strong support for principles of democracy but given the limited experience of these countries with democracy the interpretation of these statements of support is less straightforward.



qualification of citizens casting a decisive not merely consultational vote on policies.<sup>6</sup> On average 96.3% ( $s: 1.7$ ) of respondents per country answered this question indicating that almost all respondents were able to comprehend the question and provide an answer. Respondents answer this question by choosing a value from a scale from zero (“Not at all important”) to ten (“Extremely important”). If one takes all answers above the neutral point of five as support for direct democracy it is apparent that there is little difference in levels of support across countries. This is in line with results from other surveys (see for instance Donovan and Karp, 2006). There is more variance in the distribution of respondents across chosen answer categories but overall the distribution of support is strikingly homogeneous across countries – even though there are many differences between countries in cultural and institutional terms, particularly in terms of the institutionalization and use of direct democracy itself. This is one of the reasons why the analysis in this chapter will mainly be focused on the individual level.

The ESS’s 11-point scale may or may not be considered an improvement over simple yes-no statements or standard four or five-point Likert scales as it allows for greater nuance. However, the ideal would be to have multiple items on direct democracy available to allow the researcher to differentiate unequivocal supporters of direct democracy from those that like it in principle but are skeptical of certain aspects (Dyck and Baldassare, 2009). Yet, for the purpose of a cross-national analysis the ESS6 data are the best available. In nearly all countries a plurality of supporters of referendums place themselves in the highest possible category of support. In other words, the dependent variable is highly left-skewed as is the case for most other items in the survey designed to measure citizens’ democratic expectations.

To model support for direct democracy I therefore collapse the variable into a ‘strong support’ dummy variable.<sup>7</sup> In doing so I follow the approach of Kriesi et al. (2014) who

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<sup>6</sup>It is this form of direct democracy that is at the heart of the political and academic debate. In fact, most definitions put great emphasis on the bindingness of a vote.

<sup>7</sup>1 = respondents that chose ten on the eleven-point scale, 0 = respondents that chose a lower number. In the appendix, I report results for an alternative operationalization (1 = respondents that chose ten or nine on the eleven-point scale, 0 = respondents that chose a lower number) which are substantially the same. See Figures 5.7, 5.8 and 5.9 as well as Tables 5.12, 5.16 and 5.17

argue that “only the set of criteria for which a respondent chooses the maximum value corresponds to the necessary and sufficient set of criteria that define democracy for him or her.” In their view democracy is an essentialist concept (Goertz, 2006) which implies that democracy is defined by a number of necessary and jointly sufficient conditions. Using Mokken scaling they show that respondents’ answers, when interpreted as indicating necessary conditions, can be hierarchically ordered by how extensive their demands are. The items themselves can be ordered from essential to less essential but more demanding criteria. The former are considered necessary by almost all respondents while the latter are considered necessary by fewer respondents.

The other key independent and dependent variables are measured as follows. The classification of ‘Dissatisfied Democrats’ is based on two questions: one ask citizens about the importance of living in a democracy and the other is the classic question on satisfaction with the way democracy works. Those who consider it important to live in a democracy but are dissatisfied with the current state of their democracy are coded as ‘dissatisfied democrats.’ Turnout in elections, appearing as independent variable in some models and dependent variable in others, is a dummy variable indicating participation in the last national election. Similarly, political activity is a dummy variables which takes on the value of one for all respondents who have engaged in at least one of the following activities: having contacted a politician, worked in an organization, having worn a campaign badge, signed a petition or having taken part in a demonstration. Political interest is a dichotomized version of the classic Likert-scale political interest question.

I model respondents’ answers as a function of individual characteristics and attitudes. I use two-level (individual and country level) random intercepts and random effects models because respondents are clustered into countries and correlations may vary by country. In the random effects models I allow the coefficient on the key independent variable to vary by country. This serves as robustness check to provide information whether and where the estimated relationship holds.<sup>8</sup> I include the gender, age and education

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<sup>8</sup>Of course, this entails the assumption that the effect of being a dissatisfied democrat is normally distributed across countries which may not necessarily be the case. As an additional robustness check I estimate logistic regression models mirroring the specification of the RE model separate by country.

of respondents, the latter both measured in years, as control variables. Continuous predictors (age, education and national level turnout) are z-transformed to improve the maximum-likelihood estimation of the random effects models. This is the methodology chosen for the analysis for the ESS6 data providing comprehensive data on the political attitudes and behavior of citizens of 25 established democracies.

As there is no cross-national survey that asks about participation in referendums I rely on separate surveys covering national referendums held in Iceland, Ireland, the Netherlands, Scotland, Spain and the UK between 1997 and 2011.<sup>9</sup> I focus on turnout in the preceding national election and political interest as determinants of turnout in referendums. Both variables appear frequently in most post-referendum surveys. I correlate turnout in referendums with these two variables by means of bivariate logistic regression models. Survey weights are applied if available.

Hence, I am able to provide evidence on the link between electoral and referendum participation on the individual level. However, the evidence is limited to only a few referendums and fewer countries. As a second-best solution to observing individual level behavior I can observe levels in turnout for elections and referendums in my sample of countries. Given the patterns at the individual level I expect to find a positive correlation between electoral and referendum turnout on the aggregate level as well. I have data on all referendums between 1945 and 2015 in my sample of 25 countries of which 22 held at least one referendum in this time-period.<sup>10</sup> I estimate OLS and fixed-effects models to test whether electoral turnout predicts referendum turnout.

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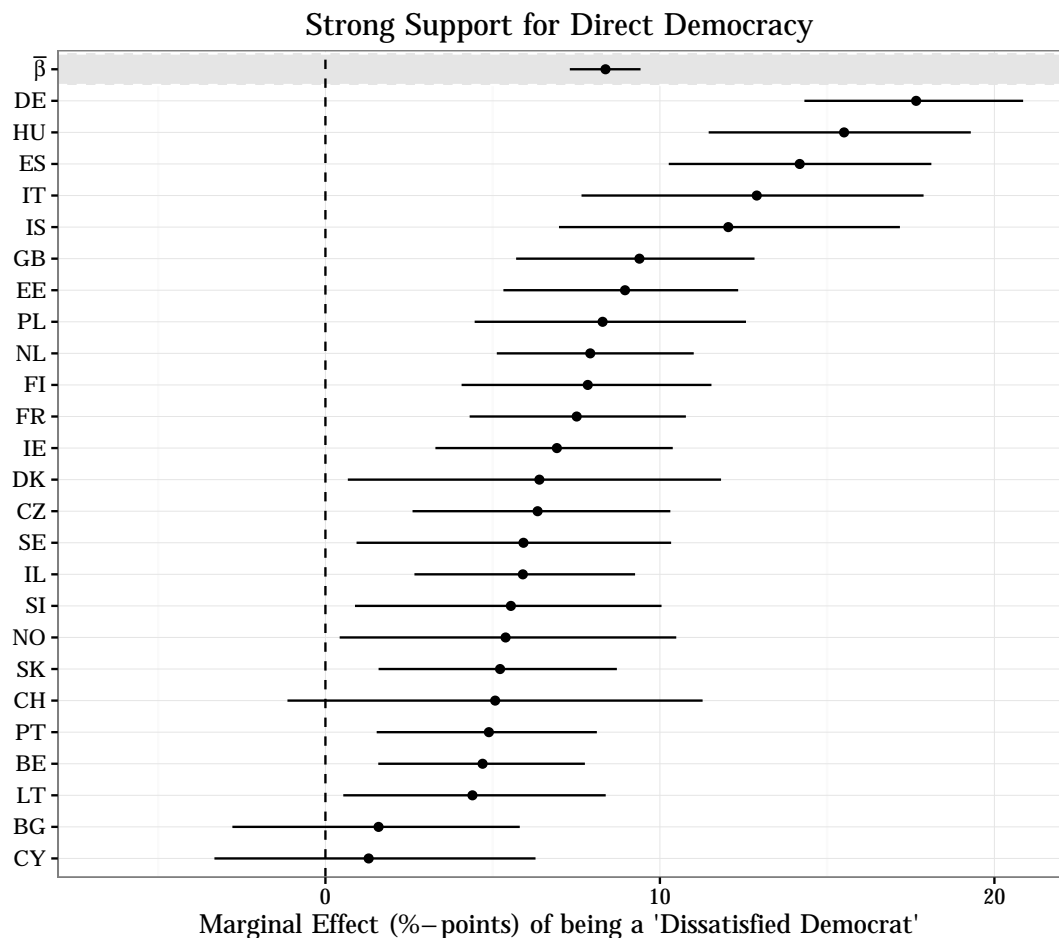
The differences between estimates which I report in the appendix are in all cases negligible. See Tables 5.13, 5.14 and 5.15.

<sup>9</sup>A full list of the post-referendum surveys utilized is provided in the appendix – Table 5.19.

<sup>10</sup>Germany and Israel never held a national referendum. In Switzerland they are so frequent, that if Swiss referendums were to be included they would make up more than half of the sample and drive the results. Switzerland is therefore excluded as well.

### 3.5 Critical...

‘Dissatisfied Democrats’ as theory suggests are indeed more likely to strongly support direct democracy as the results presented in Table 3.1 and 3.2 indicate. The average partial correlation between being a dissatisfied democrat and strongly supporting direct democracy is substantially and statistically significant. This assessment does not change when one allows the coefficient for ‘Dissatisfied Democrat’ to vary by country, however there are a few countries for which there are no differences between ‘dissatisfied democrats’ and other citizens.



**Figure 3.2:** Coefficient estimates with 95% confidence intervals for overall ( $\bar{\beta}$ ) and country-specific associations between being a ‘Dissatisfied Democrat’ and strongly supporting direct democracy – expressed as first differences (%-points) in the predicted probabilities. In most countries ‘dissatisfied democrats’ are significantly more likely to strongly support direct democracy than other types of citizens.

As regression coefficients in logistic models do not lend themselves to straightforward interpretation I plot the key coefficients in terms of average marginal effects (Fig, 3.2): as first differences in predicted probabilities. The corresponding confidence intervals have been obtained through simulation. The first row of figure 3.2 displays the average effect across the whole sample obtained from model 1 (Table 3.1), subsequent rows represent the country-specific effects derived from model 2 (Table 3.1) which includes ‘Dissatisfied Democrat’ as a random coefficient. The variances of the random terms are denoted by  $\sigma$  while the subscript  $i$  indicates the individual and  $j$  the country-level.

‘Dissatisfied Democrat’ is a dummy variable formed by crossing two variables: the importance respondents assign to living in a democracy and their satisfaction with how democracy works in their country. Hence, one may wonder whether the difference between ‘dissatisfied democrats’ and other citizens is driven primarily by support for or satisfaction with democracy. This question is addressed by model M3 (Table 3.1) which includes two further dummy variables for ‘Satisfied Democrats’ and ‘Dissatisfied Non-Democrats’ – ‘Satisfied Non-Democrats’ are the omitted base category.<sup>11</sup>

The greatest difference in marginal effects is between ‘Dissatisfied Democrats’ and ‘Satisfied Non-Democrats’ (the base category) which represent opposite extremes on both variables, ‘importance of living in a democracy’ and ‘satisfaction with democracy.’ If one looks at differences in marginal effects between types which share the same value on one of the two variables one sees that the ‘importance of living in a democracy’ seems to be the more important variable. Comparing satisfied and dissatisfied citizens (that is satisfied democrats with dissatisfied democrats or satisfied non-democrats with dissatisfied non-democrats) the difference in marginal effects is smaller than if one compares democrats with non-democrats (satisfied democrats with satisfied non-democrats or dissatisfied democrats with dissatisfied non-democrats).

This finding may lead one to question how critical ‘dissatisfied democrats’ really are

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<sup>11</sup>Note that this question cannot be investigated through an interaction model because an interaction forces symmetry on the conditional effect. That is in an interaction of say  $x_1$  and  $x_2$ ,  $x_2$  has the same condition effect on  $x_1$  as  $x_1$  has on  $x_2$  which as the results for model 3 indicate is clearly not the case.

	M1 (RI)	M2 (RE)	M3 (RI)
Dissatisfied Democrat	0.358*** (0.022)	0.345*** (0.046)	1.011*** (0.100)
Satisfied Democrat			0.719*** (0.100)
Dissatisfied Non-Democrat			0.470*** (0.105)
Age	0.050*** (0.011)	0.050*** (0.011)	0.048*** (0.011)
Gender (female)	-0.033 (0.020)	-0.034* (0.020)	-0.031 (0.020)
Education	-0.016 (0.011)	-0.015 (0.011)	-0.027** (0.011)
(Intercept)	-0.625*** (0.100)	-0.618*** (0.104)	-1.288*** (0.141)
AIC	56252.931	56207.816	55889.503
BIC	56305.125	56277.407	55959.050
Log Likelihood	-28120.466	-28095.908	-27936.751
$N_i$	44306	44306	44068
$N_j$	25	25	25
$\sigma_j$	0.243	0.261	0.249
$\sigma_i$		0.038	
$\sigma_{i,j}$		-0.032	

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

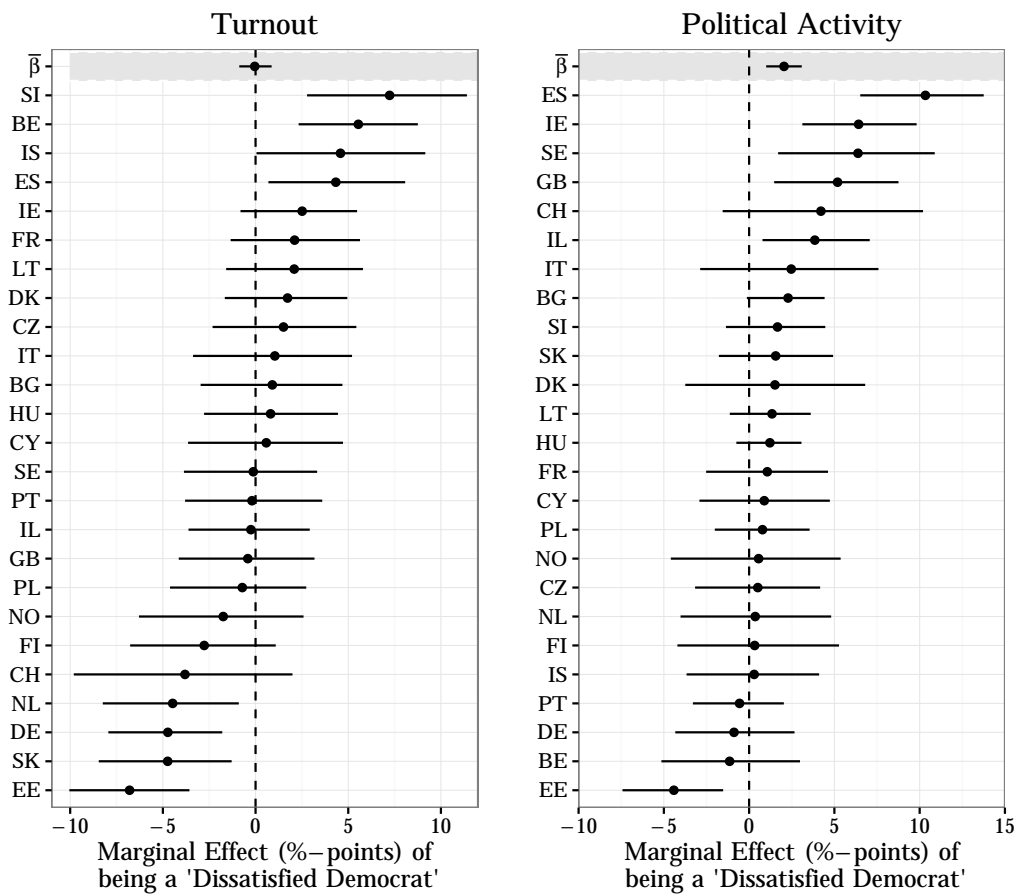
**Table 3.1:** *Multilevel logistic models of being a strong supporter of direct democracy, given status as ‘dissatisfied democrat’ or other type – modeled with a random intercept (RI) or random effect (RE) for ‘dissatisfied democrat.’*

as the largest part of the difference between ‘dissatisfied democrats’ and other citizens seems to stem from their strong support for democracy not their critical evaluation of the status quo. However, one should note that almost all people consider it very important to live in a democracy whereas the distribution of satisfaction with democracy is much more spread out.<sup>12</sup> Hence, the large difference between democrats and non-democrats is relativized by it being a comparison of a very large with a rather small group.

‘Dissatisfied Democrats’ seem to be the strongest supporters of direct democracy among different types of citizens. At least part of the support for direct democracy could then be credibly construed as demand for this institution. But ‘Dissatisfied democrats’ are not more or less likely to vote in elections than other types of citizens (Figure 3.3). Hence, the concept ‘dissatisfied democrat’ is in a sense orthogonal to conventional political

<sup>12</sup>See Figure 5.6 in the appendix.

participation which is not necessarily surprising. The concept implies that ‘critical citizens’ are more critical of current institutions and demand democratic innovations – it formulates no expectations about their behavior in established political procedures. The question then is whether direct democracy can really re-engage citizens with democracy or whether it is simply another means to participate for those who are still actively participating. I address this question in the next section



**Figure 3.3:** Left panel: Coefficient estimates with 95% confidence intervals for overall ( $\bar{\beta}$ ) and country-specific associations between being a ‘Dissatisfied Democrat’ and having voted in the national election. Right panel: Coefficient estimates with 95% confidence intervals for overall ( $\bar{\beta}$ ) and country-specific associations between being a ‘Dissatisfied Democrat’ and having been politically active. In both cases marginal effects are expressed as first differences in the predicted probabilities of voting. Models underlying the coefficient plots are reported in Table 5.7 in the appendix.

## 3.6 ...but not compensatory

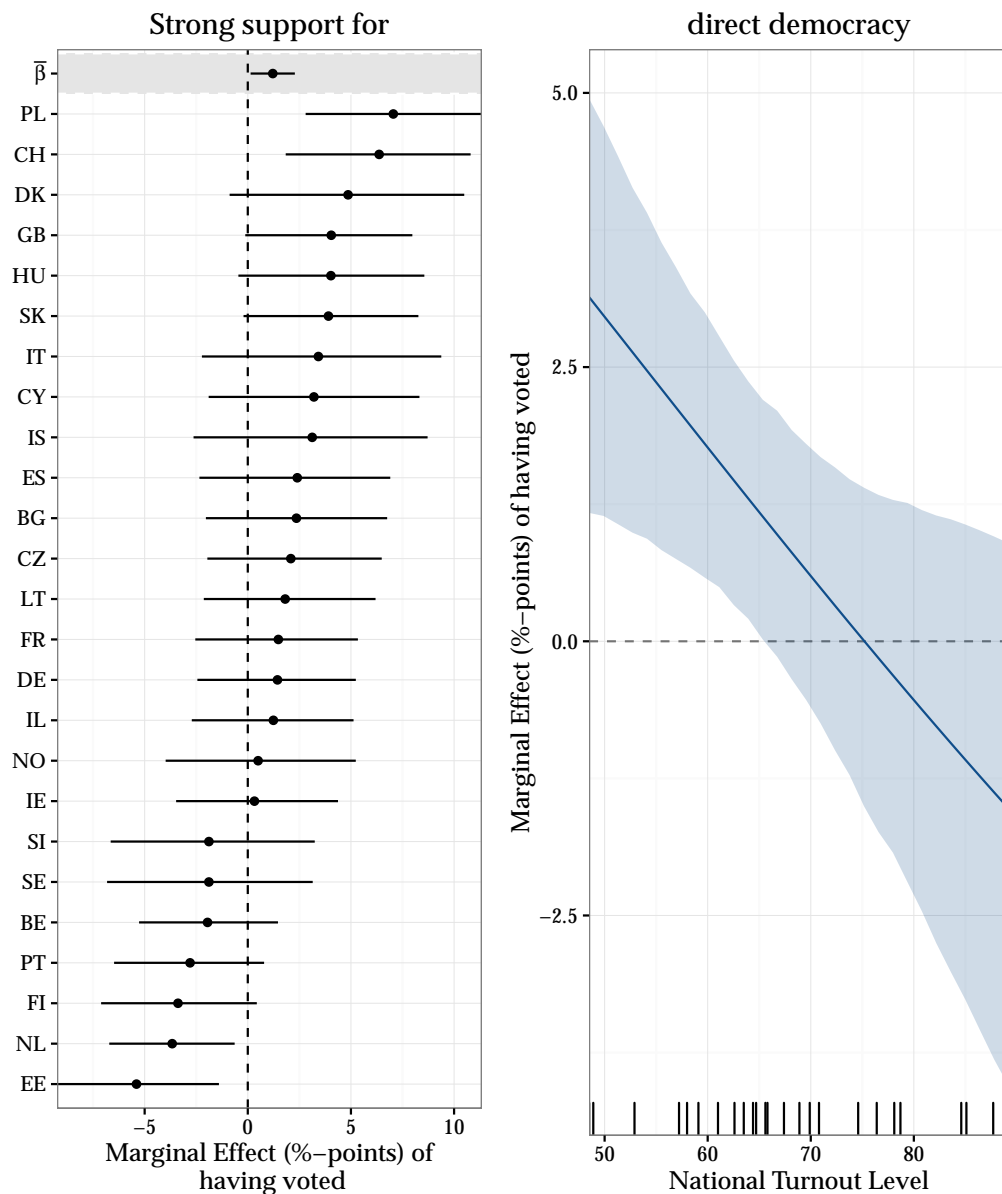
### 3.6.1 Evidence on attitudes

To answer this question I compare voters to non-voters, politically active citizens to inactive citizens and the politically interested to the disinterested. If direct democracy is indeed compensatory, that is it can make up for a decline in conventional political participation, then we should find the politically disengaged to be more favorably disposed towards direct democracy.

The results presented here point in an opposite direction. The difference between voters and non-voters is small but positive (Table 3.2). This may be a conservative estimate because over-reporting of turnout is endemic in surveys. There are hardly any (significant) differences between voters and non-voters in many countries (Figure 3.4, left panel). This difference seems to depend on the overall turnout rate as can be seen in the right panel of Figure 3.4 which plots the coefficient for the individual turnout decision against the turnout in the last national election preceding the field work of the ESS6 survey. The results for an interaction model which interacts individual turnout decisions with the national turnout level confirm this (Table 3.2, M3). The difference between voters and non-voters is largest where overall turnout is low (Figure 3.4). This may be considered indicative evidence that where many citizen have opted out of representative politics they have done so out of disinterest or disaffection with politics more broadly – otherwise, they should be more supportive not less.

Voting is the least demanding and most frequently used form of conventional political participation. To get a more complete picture of the participatory potential of direct democracy I also looked at political activity and political interest. Both are positively associated with strongly supporting direct democracy, although again with great variance in effects between countries (Figure 3.5). The differences in predicted probabilities are larger than for turnout. This is not necessarily surprising as political activity and to a lesser degree political interest are indicative of extensive political engagement. Di-





**Figure 3.4:** *Left panel: Coefficient estimates with 95% confidence intervals for overall ( $\bar{\beta}$ ) and country-specific associations between having voted and strongly supporting direct democracy – expressed as first differences (%-points) in the predicted probabilities. In some countries voters are significantly more likely to strongly support direct democracy while in others voters are significantly less likely to have voted. Right panel: Marginal effect of having voted on strongly supporting direct democracy conditional on the official turnout rate in the last national election – expressed as first differences (%-points) in the predicted probabilities. The lower turnout the greater the difference between voters and non-voters in supporting direct democracy.*

rect democracy is a demanding form of participation. Thus, it should not surprise that those who likely are competent participants are more favorably disposed towards the instrument.

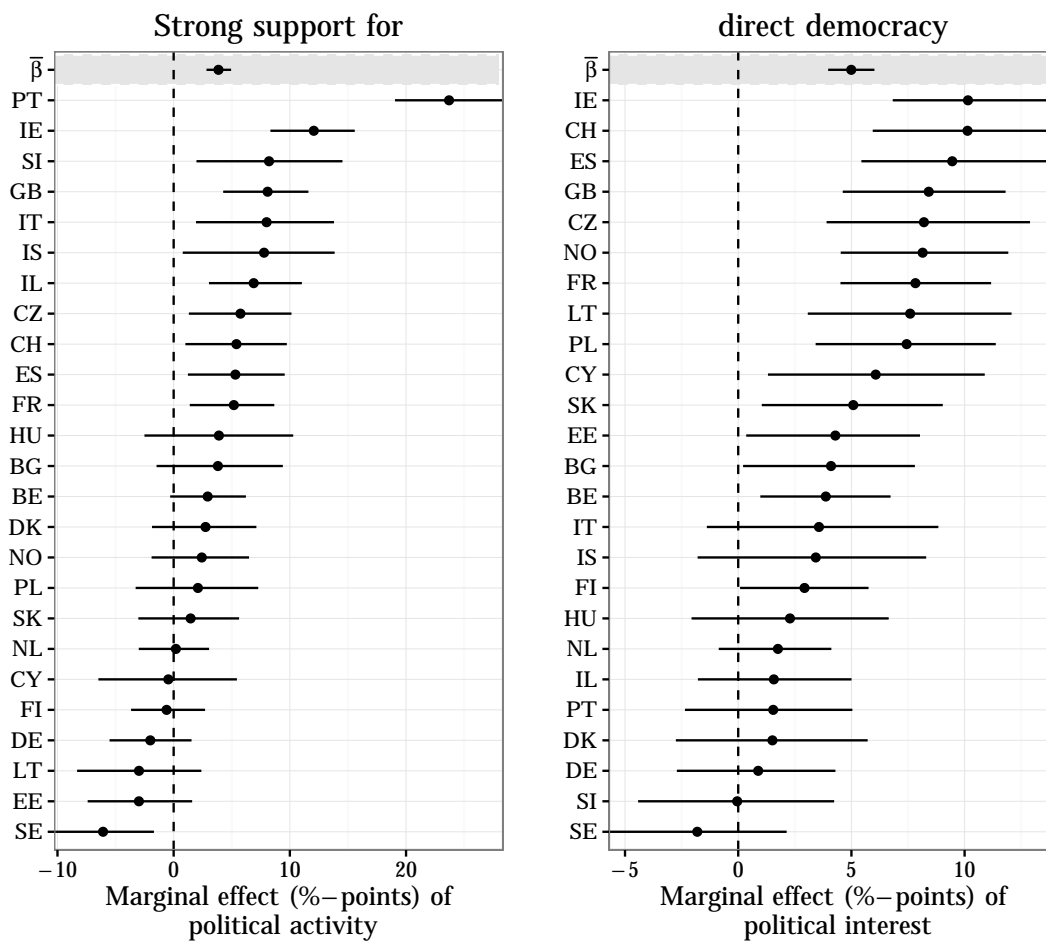
	M1 (RI)	M2 (RE)	M3 (RI)
Voted	0.051 (0.024)**	0.047 (0.043)	0.041 (0.024)*
Turnout			-0.069 (0.098)
Voted $\times$ Turnout			-0.053 (0.024)**
Age	0.046 (0.011)***	0.045 (0.011)***	0.047 (0.011)***
Gender (female)	-0.021 (0.020)	-0.019 (0.020)	-0.021 (0.020)
Education	-0.018 (0.011)*	-0.018 (0.011)*	-0.017 (0.011)
(Intercept)	-0.513 (0.108)***	-0.510 (0.097)***	-0.492 (0.106)***
AIC	57521.355	57494.627	57519.003
BIC	57573.648	57564.350	57588.726
Log Likelihood	-28754.678	-28739.313	-28751.501
$N_i$	45043	45043	45043
$N_j$	25	25	25
$\sigma_j$	0.277	0.220	0.263
$\sigma_i$		0.030	
$\sigma_{ij}$		0.026	

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 3.2:** *Multilevel logistic models of being a strong supporter of direct democracy, given having voted in the last national election – modeled with a random intercept (RI) or random effect (RE) for ‘Voted’*

The insights gleaned from the ESS6 data suggest that direct democracy cannot compensate for a decline in conventional participation. Dissatisfied Democrats are more likely to be strong supporters of direct democracy. This conforms with the critical citizens literature which claims that these types of citizens have higher expectations of what kind of opportunities democracy should offer. However, critical citizens or dissatisfied democrats are a purely attitudinal concept which is why I also focus on more tangible concepts: voting and other political activities – that is actual, albeit reported, behavior.

I find that those still engaged are more likely to support direct democracy and, hence, potentially use were it introduced. Rather than promising to remedy the democratic malaise direct democracy may threaten to worsen political inequality. It seems that support for direct democracy is critical – dissatisfied democrats are more likely to be strong supporters than other types – but not compensatory – those who do participate in elections are less likely to support this new form of participation.



**Figure 3.5:** Coefficient estimates with 95% confidence intervals for overall ( $\bar{\beta}$ ) and country-specific associations between having engaged in at least one other political activity (left panel) or being politically interested (right panel) respectively and strongly supporting direct democracy – expressed as first differences (%-points) in the predicted probabilities of strongly supporting direct democracy.

### 3.6.2 Evidence on behavior

What does support for national referendums actually imply? It may be a desire for increased participation or just the wish to have the possibility to intervene if necessary. Obviously, actual participation is not strictly necessary for voicing demand as one might sincerely desire the opportunity to participate but chose not participate due to idiosyncratic reasons – for instance if one is not interested in the subject of a referendum. Yet, strong support among already engaged segments of society coupled with low participation rates raises concerns that direct democracy might actually increase political

inequalities. Are voters who voted in an election more likely to vote in a referendum?

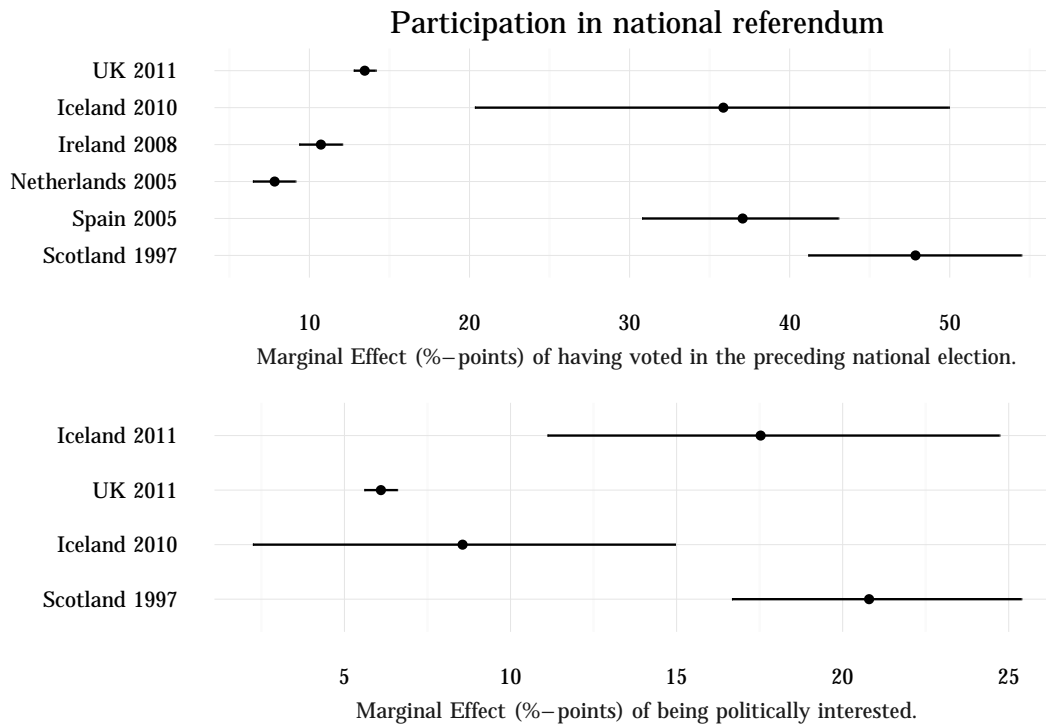
Results of simple bivariate logistic regressions, again depicted as marginal effects in terms of first differences in predicted probabilities (Figure 3.6), reveal quite substantial differences in referendum voting. Voters in elections are also much more likely to be voters in referendums than non-voters in elections. Similarly, the politically interested are much more likely to participate than the disinterested. This holds for all referendums considered – first differences range from 6.1% to 20.8%. Note that all referendums considered deal with salient topics.<sup>13</sup> The referendums are the 2011 referendum on electoral reform in the UK, EU referendums in Ireland (2008), Spain and Netherlands (both 2005) and the referendum on devolution of powers to a Scottish parliament held in Scotland in 1997. Even for these highly salient referendums great differences between voters and non-voters appear which might be even greater in less salient referendums.

Finally, I analyze how electoral and referendum turnout covary. Is referendum turnout higher where electoral turnout is higher? This is a weak test of the hypothesis that voters in elections are more likely to be voters in referendums as well. It is a test of the observable implication of the individual level results which can only contradict but not confirm our expectation. If there were no relationship between electoral and referendum turnout this would contradict that the relationship holds beyond the sample studied (Figure 3.6).

The results in Table 3.3 are broadly as one should expect them to be given the results presented in Figure 3.6. There is a strong positive relationship between electoral turnout and referendum turnout which is not due to level differences in turnout between countries as the result holds in the FE model. These results also hold when controlling for the well-known negative timed trend in turnout. One percentage point change in electoral turnout is associated with a .6 to .9 percentage point change in the same direction in referendum turnout. The coefficient on electoral turnout is slightly lower than one

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<sup>13</sup>This is the reason why there was a survey on the referendum at all. While there is a scientific post-election study for basically every national election, many national referendums have no comparable post-referendum survey.



**Figure 3.6:** Coefficient estimates with 95% confidence intervals for binary logistic regressions modeling participation in a referendum as a function of electoral participation and political interest.

reflecting the fact that turnout in referendums generally is lower than in elections. This is also reflected in the negative intercept in the OLS model. Independent of the height of electoral turnout referendum turnout is on average at least eleven percentage points lower.<sup>14</sup> In my sample only 21 (8.8%) of 240 referendums saw a higher turnout than the preceding national election.

Of course, one would commit an ecological fallacy if one were to make inference about the individual level based on these results. Nonetheless, it is comforting, at least for the argument put forward in this chapter, that the results based on aggregate data do not contradict the hypothesized mechanism at the individual level.

<sup>14</sup>There is no intercept in the fixed-effects model.

	(1) OLS	(2) OLS	(3) FE	(4) FE
Electoral Turnout	0.83*** (0.17)	0.58** (0.19)	0.91** (0.31)	0.78* (0.32)
Year		-0.44*** (0.11)		-0.13 (0.12)
(Intercept)	-10.85 (12.13)	892.17*** (227.12)		
R <sup>2</sup>	0.21	0.31	0.94	0.94
Adj. R <sup>2</sup>	0.20	0.31	0.93	0.93
Num. obs.	240	240	240	240
RMSE	17.04	15.89	14.83	14.80

\*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$

**Table 3.3:** *The correlation of turnout in elections and referendums based on 240 referendums in 22 countries. OLS (model 1) and fixed-effects (2) estimation with standard errors clustered by election.*

### 3.7 Conclusion

Direct democracy seems to be very popular among citizens of established democracies. Survey after survey citizens consistently voice support for it in large numbers. This contrasts with a decline in turnout and other forms of political participation as well as a perceived erosion of trust and satisfaction with regards to political actors and the system. At the same time, citizens are said to remain committed to democratic norms and principles of democracy. ‘Dissatisfied democrats’, citizens who support democracy in the abstract but are unsatisfied with how it works in practice, supposedly demand more participatory opportunities. Hence, a popular argument is that what is needed is an extension and deepening of democracy towards more participation. This thinking implies that new forms of political participation could compensate for the decline in conventional means of political participation.

Noting the similarity in arguments I developed four hypotheses from these arguments and tested them with survey data: firstly, that ‘dissatisfied democrats’ are more likely to strongly support direct democracy than other citizens, secondly, that politically disengaged citizens are more supportive of direct democracy than engaged citizens, thirdly, that politically engaged citizens are more likely to participate in referendums than politically disengaged citizens, and finally, that electoral turnout is therefore positively

correlated with referendum turnout. To test these hypotheses I analyzed data from the European Social Survey round 6's module "Europeans' understandings and evaluations of democracy", a number of national post-referendum surveys as well as aggregate turnout data on elections and referendums.

My results support the first, dispute the second and, lastly, support the third and fourth hypotheses. 'Dissatisfied Democrats' are indeed more likely than other types of citizens to regard direct democracy as important for democracy. However, so do the politically active and interested while being classified as 'dissatisfied democrat' and turning out to vote are hardly correlated. The difference between voters and non-voters is relatively small and decreases in the overall level of turnout. This may be considered indicative evidence that where many citizen have opted out of representative politics they have done so out of disinterest or disaffection with politics more broadly. Political activity and interest matter slightly more for strongly supporting direct democracy. With regards to actual behavior I find that voters and the politically interested are also more likely to actually participate in national referendums. This extends to a more general pattern that high electoral turnout at the national level is associated with higher turnout in referendums as well.

Direct democracy, while it is supported by critical citizens, does not appear to be compensatory. Stronger support among already engaged citizens along with low turnout in referendums raises concerns that direct democracy may actually increase political inequalities. Because the popularity and actual usage of direct democracy are greatest among those still participating in representative politics direct democracy appears insufficient to bring the politically disengaged back into democratic politics. To those who still participate in representative politics direct democracy provides yet another means to make their interests heard while the disenfranchised also tend to miss out on this new opportunity.





## Chapter 4

# The Elusive Effect of Referendums on Democratic Satisfaction

Does direct democracy increase citizens' satisfaction with democracy? Disillusionment with representative politics is frequently cited as a key reason for the popularity of direct democracy. Conversely, one may think that referendums should increase popular support for the political system – because they give citizens participatory opportunities and promise to offer them more control over policy. Combining aggregate data on satisfaction with democracy from semi-annual Eurobarometer surveys from 1973 to 2013 with data on all national referendums in the same period, I provide the strongest test possible with observational data for a causal effect of direct democracy on democratic satisfaction. I find no evidence for an (average) effect of referendums on democratic satisfaction. This null finding is robust to various specifications and unlikely to be biased by reverse causality. While an analysis of individual time-series suggests that referendums may have an effect under certain circumstances, significant positive estimates obtain for two countries, my empirical investigation of possible mechanisms remains inconclusive.

## 4.1 Introduction

Disillusionment with representative politics is frequently cited as a key reason for the popularity of direct democracy. Should one then expect that, conversely, the holding of referendums, often regarded as the most authoritative expression of ‘the’ popular will (Budge, 1996), increases popular support for the political system? Direct democracy may increase citizens’ satisfaction for at least two reasons (Frey and Stutzer, 2000). Firstly, because it offers them more control over policy and thereby improves representation, and secondly, because it provides additional opportunities for political participation which citizens may value for themselves independent of political outcomes.

Prior research has found a positive relationship between direct democracy and satisfaction with democracy, relying primarily on cross-sectional data (Bernauer and Vatter, 2012; Hug, 2005; Stadelmann-Steffen and Vatter, 2012). Yet, such cross-sectional designs are prone to omitted variable bias because direct democracy will likely be correlated with other institutions, political culture or both.<sup>1</sup> It is even more difficult to address reverse causality – the fact that the institutionalization and usage of direct democracy may just as well be a function of democratic satisfaction – in such a setting.

In this chapter I provide a time-series cross-sectional perspective by combining aggregate data on satisfaction with democracy from Eurobarometer (EB) surveys from 1973 to 2013 with data on all national referendums in the same period. In absence of a (quasi-)experiment I provide the strongest possible test for a causal effect of direct democracy on democratic satisfaction. I go beyond prior studies by ruling out time-constant confounders, controlling for key time-varying confounders and explicitly addressing the issue of reverse causality.

Careful analysis of the time-series cross-sectional data provides no evidence for an effect of referendums on democratic satisfaction. This null finding is robust to various

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<sup>1</sup>For instance, Switzerland with its high frequency of referendums at the national as well as other levels of government has a unique political culture which is both a result and cause of its intense usage of referendums.

specifications. Although the coefficient estimate for the key independent variable is consistently positive across different specifications it is substantially small and does not reach statistical significance. I rule out reverse causality as possible source of bias. While an analysis of individual time-series suggests that referendums may have an effect under certain circumstances, significant positive estimates obtain for two countries, my empirical investigation of possible mechanisms remains inconclusive. Neither the number of referendums, turnout or the margin between losing and winning side provide a convincing account of heterogeneity in the referendum ‘effect.’

My results presented in this chapter stand in contrast to prior findings in the literature. However, testing whether national referendums are associated with an increase in satisfaction with democracy at the aggregate level implies a difference in focus compared to prior research. I focus on the usage of the institution – not the institution, independent of usage, itself. While from a theoretical perspective the existence of institutions of direct democracy alone should be sufficient to lead to improved representation (Besley and Coate, 2008; Hug, 2004; Gerber, 1996), the literature on direct democracy and life satisfaction stresses participation as main channel (Stutzer and Frey, 2003). The focus on actual referendums also follows the very practical consideration that some countries covered in this study have seen national referendums despite having no constitutional provisions for them. Focusing on institutional rules would miss out on the effect that such irregular occurrences of referendums may have. Lastly, focusing on events rather than institutions, which are more or less constant once introduced, allows me to eliminate bias from omitted time-constant variables.

The results call into question democratic innovations’ ability to positively influence citizens evaluation of their political system, at least in the short term. If salient events such as national referendums seem to have no impact how should other, less salient, democratic innovations have a sizable effect? Nevertheless, my results do not rule out the possibility that the availability of these institutions may have an effect as some authors argue (e.g. Hug, 2005). Certainly, more research is needed to understand when and how democratic innovations make a difference.

## 4.2 What we know about the effect of referendums on political attitudes

Empirical studies on the relationship between direct democracy and satisfaction with democracy are rare. The few studies that I am able to review here have analyzed the question using mostly cross-sectional data and found direct democracy to be associated with greater satisfaction. To provide a fuller picture of the attitudinal consequences of direct democracy, I mention related studies on the effect of direct democracy on other attitudinal outcomes. The key finding from this latter set of studies is that actual referendums seem to matter more than the mere availability of the instrument.

Bernauer and Vatter (2012) provide one of two studies which explicitly study the causal relationship between direct democracy and democratic satisfaction in a cross-national comparative perspective. They use a sample of respondents from 26 established democracies which they rate along a parties-interest groups, a federal-unitary and a cabinets-direct democracy scale. They find larger coalitions and direct democracy to be positively associated with satisfaction with democracy. However, their measure conflates direct democracy with super-sized coalitions both of which are prominent features of Swiss direct democracy which make it stand out among other European countries. Similarly, Hug (2005) analyses cross-sectional data on 19 Eastern and central European countries. He finds no differences in average confidence in parliament, government, the European Union and the armed forces between countries with and without provisions for direct democracy. Stadelmann-Steffen and Vatter (2012) exploit differences between cantons in their institutionalization and usage of direct democracy. They find citizens living in Swiss cantons with more intense usage of referendums to be more satisfied with the way democracy works. Interestingly, institutional features, independent of their usage, are not significantly associated with democratic satisfaction.

Most research on direct democracy's effect on political attitudes is based on cross-sectional, some-times even sub-national, data – except for Hug (2005) and Christin and Hug (2002) – with the usual caveats. In cross-sectional studies, the threat of omit-

ted variable bias is always present because many institutions coexist, possibly even to the point of collinearity, with direct democracy. Also, these studies do not address the issue of reverse causality.

Hug's (2005) use of time-series cross-sectional data for the time-periods 1990-1997 represents a step forward in that regard. His results indicate that the introduction of direct democracy increased average levels of satisfaction with the development of democracy. However, these are based on a pooled model. Therefore, the threat of omitted variables bias is the same as in a purely cross-sectional study. The same applies to some of the models in Christin and Hug's (2002) study of a time-series cross-section of nine European countries between 1973 and 1997, just as this study based on aggregated EB data. Using a pooled model they find constitutional provisions for referendums to be positively associated with support for the EU. Their finding that support increased following a referendum on European integration is a strong finding because it is based on a fixed-effects model. Nevertheless, both studies do not explicitly consider reverse causality. For instance, one might just as well hypothesize that citizens who are more efficacious and content participate more in politics, including demanding a referendum.

This brief review already exhausts the literature on referendums and satisfaction with democracy. I conclude with a brief discussion of related studies which focus on direct democracy's effect on other attitudinal and behavioral outcomes. Frey and Stutzer (2003; 2002; 2000) find a positive correlation between the extent of direct democracy in Swiss cantons and citizens' reported life satisfaction. Additionally, they show that this correlation is stronger for citizens than non-Swiss residents – a finding which suggest that the effect is procedural, incurred primarily by respondents who can participate in the process. However, Fischer (2005) using more recent data finds no link between direct democracy and life satisfaction once cultural differences between cantons, proxied by language, are controlled for.

Two further studies, based on the 1992 American National Election Study, find citizens' political knowledge (Smith, 2002) and internal political efficacy (Bowler and Donovan,

2002a) to be positively associated with initiative usage. However, that effect only occurs for voters – a finding which may be explained by voters having been more exposed to referendum campaigns than non-voters. In a unique study using a rolling cross-section conducted before the 1992 referendum on the Charlottetown Constitutional Accord in Canada Mendelsohn and Cutler (2000) find that political knowledge among citizens increased during the referendum campaign. Finally, Hero and Tolbert (2004) also find a positive effect of referendums on perceived responsive of governments.

### 4.3 Why referendums should increase satisfaction with democracy

There are a number of reasons why one might think that (the usage of) direct democracy increases citizens' satisfaction with democracy. Two principal arguments, summarized succinctly by Frey and Stutzer (2000), are that, firstly, participation and, secondly, improved representation through direct democracy increase citizen's satisfactions with democracy.<sup>2</sup> The participatory view, on the one hand, focuses primarily on the process independent of outcomes. The representational view, on the other hand, is much more focused on outcomes, which citizens should care about independent of whether they participated or not.

As participation is concerned “both the opportunity to participate, as well as the act of participation on policy decisions, can be expected to promote more positive views about the efficacy of individual political activity” (Bowler and Donovan, 2002a, p. 376). This argument rests on the assumption that citizens value participation for itself independent of political outcomes. In this view, established possibilities of participation are no longer regarded as sufficient. This argument is made prominently in the literature on ‘critical citizens’ spawned by Norris (1999). She defines ‘critical citizens’ as citizens “who feel that existing channels for participation fall short of democratic ideals, and who want to

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<sup>2</sup>These authors even extend the theoretical argument to citizen's life satisfaction and empirically show citizens in Swiss cantons with more intense usage of direct democracy to report greater satisfaction with their lives.

improve and reform the institutional mechanisms of representative democracy” (p. 27). In summary, the participatory view implies that opportunities for participation are in demand and if provided this improve citizen’s satisfaction with the system. Furthermore, referendum campaigns can educate citizens and raise interest in politics.

In the representational view, citizens may value direct democracy because it offers them more control over policy and thereby improves representation of citizens’ opinion. The evidence on this is still limited, mixed in its conclusions and subject to discussions (Leininger, 2015). Much of the disagreement in the literature centers on the question how to attain valid and comparable measures of public policy and opinion, a longstanding issue in representation research (Bafumi and Herron, 2010; Jessee, 2016). In this view even the mere availability of the institution should be sufficient (Besley and Coate, 2008; Feld et al., 2001; Gerber, 1996). However, actual referendums will be particularly effective in making citizens aware that setting policies through direct democracy is possible. Concretely, if a majority passes or rejects a policy in a referendum this should lead to a very visible case of improved representation and hence increased democratic satisfaction. Work by Stutzer and Frey (2003) and Frey and Stutzer (2000) on life satisfaction suggests that most of the increase in life satisfaction induced by direct democracy can be attributed to what they call ‘procedural utility’ which citizens obtain through the process not the outcome. Thus, the hypothesis to be tested is that *the occurrence of a referendum increases citizens’ satisfaction with democracy.*

If such an effect exists I expect that *the effect is only short-lived and that satisfaction will tend to revert back to pre-referendum levels.* This latter expectation is almost commonsensical because otherwise satisfaction with democracy would be ‘going through the roof’, which it obviously does not, if many referendums are held – particularly in countries with a great frequency of referendums such as Ireland, Italy (in the sample studied) or Switzerland (not in the sample studied). Research on the economic vote shows that voters are myopic (Healy and Lenz, 2014; Wlezien, 2015). Similarly, one can expect that citizens will only consider fairly recent referendums in their assessment of democracy in their country.

## 4.4 Research Design

Differences which appear in cross-sectional settings may well be genuine – results of long-lasting effects or a cumulation of effects from multiple referendums – but may also be due to correlation with other unobserved time-constant variables or reverse causality. The latter also poses a threat to validity in time-series cross-sectional studies. Experimental studies which could circumvent these problems are almost impossible. For ethical and practical reasons institutions can almost never be randomly assigned. A noteworthy exception is a study by Olken (2010) who randomly designated 49 Indonesian villages to choose a development project through a representative assembly or a referendum. Citizens in villages that held a referendum showed greater knowledge of as well as satisfaction with the development projects. The study provides high internal validity but it remains to be seen whether the results carry over to other contexts like national referendums.

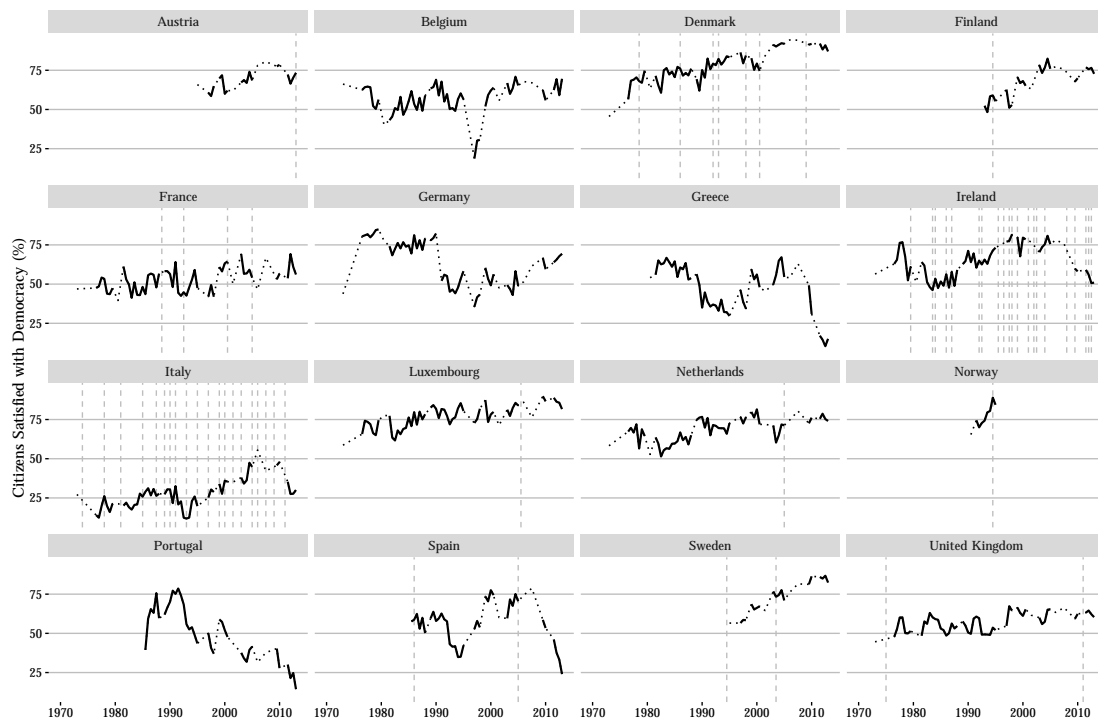
This provides the point of departure for the analysis presented in this chapter. I investigate whether cross-sectional differences can plausibly be traced back to individual referendums. Towards that end, I assembled a dataset on national level referendums from the C2D database<sup>3</sup> and public opinion from the Eurobarometer surveys. The EB is not a true panel but repeated cross-sections are conducted regularly so that a time-series of aggregated cross-sections can be created. I use a cumulation of EB surveys available through the Eurobarometer Trend File (Schmitt et al., 2008) which covers core European countries from 1973, some from later on, until 2002. I extended this time-series by adding EB surveys from 2003 up until 2013. For each country I aggregated the data on a semi-annual basis as the EB survey is usually conducted twice a year – once in spring, once in autumn. I combine the aggregated survey data with data on the occurrence of referendums. The independent variable indicates whether at least one referendum has been held in a half-year in a given country.<sup>4</sup> Figure 4.1 plots both

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<sup>3</sup>C2D “Centre for Research on Direct Democracy” database, <http://c2d.ch/votes.php?table=votes> (5 October 2015)

<sup>4</sup>Note that I focus on national referendums only. There are some countries, such as Germany, with no or few national referendums but more frequent usage of direct democracy at the national level. While





**Figure 4.1:** *The development of satisfaction with democracy (share of satisfied citizens in %), the dependent variable, over time. Solid line indicates observed values, dotted line indicates interpolated values. Referendums, the independent variable, are denoted by vertical dashed lines. (Panels with gray background indicate countries without national referendums which are currently not used in the analysis).*

the share of satisfied citizens (as horizontally sloping lines) and referendums (as vertical dashed lines).

The expectation to be tested is that referendums lead citizens to evaluate their political system more favorably. Making this question empirically tractable entails some conceptual challenges. Support for democracy is a multidimensional concept which is not easily captured by a single variable. It can be conceptualized to reach from diffuse to specific support (Rohrschneider, 2002). While the latter should reflect the performance of the system the former should indicate support for the principles of democracy. Ideally, I would like to analyze these different dimensions separately however for pragmatic

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regional referendums certainly should have an effect on people living in the region where a referendum has been held there is no reason why it should affect people outside the region – they cannot participate nor are they affected by the outcome. It is for this reasons that I do not consider regional referendums in this chapter.

reasons of data availability I focus on satisfaction with democracy.<sup>5</sup> Its use is not uncontroversial (Linde and Ekman, 2003) although it can be reasonably considered as a summary indicator of peoples' satisfaction with the overall system performance (Clarke et al., 1993). Hence, the dependent variable is citizens' satisfaction with democracy. Respondents are asked the standard question:

“On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the way democracy works in [country]?”

Respondents answer on a 4-point scale to indicate agreement or disagreement with the statement. There is no neutral category. In the aggregate analysis I use the share of (either very or fairly) satisfied respondents as it lends itself best to substantive interpretation. This captures a switch of citizens from satisfaction to dissatisfaction but ignores changes within these general categories – for example, citizens moving from very dissatisfied to dissatisfied would be ignored by this measure. As a robustness check I also estimate models with mean satisfaction scores, as well as the share of very satisfied citizens and very dissatisfied citizens.<sup>6</sup>

Unfortunately, satisfaction with democracy is not always observed semi-annually in all countries. 30% of all theoretically observable combinations of countries and half-years are not observed. The reason for this is that the question has not been included in some waves of the Eurobarometer study. Save two exceptions, Germany in the second half of 1990 and Norway in the first half of 1991, missing values occur across all countries observed within a point in time. Missing values did not occur for more than three consecutive periods in all but one case, most often only a single EB wave did not include the question on democratic satisfaction.<sup>7</sup> Because the surveys are commissioned by the European commission it is unlikely that the inclusion of the question on satisfaction with democracy on the national level is related to levels of satisfaction or national referendums

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<sup>5</sup>There is simply no other question on political attitudes which has been asked consistently for as long and often as the democratic satisfaction question has.

<sup>6</sup>Results for these additional models are reported in Tables 5.33 to 5.37 in the appendix.

<sup>7</sup>See Fig. 1 in the appendix for an overview of missing values.

within member states. Hence, the unobserved values are best conceived of as missing at random (MAR) or even missing completely at random (MCAR). Of course, this cannot be proved because the true values of democratic satisfaction are unobserved. However, I am able to show that the likelihood of a referendum does not differ between periods where democratic satisfaction is observed and where it is not observed.<sup>8</sup> Missing values are a nuisance when lag structures are incorporated in time-series analysis as quite a few observations would be lost to list-wise deletion. Therefore, I linearly interpolated the missing data. The first two moments of the time-series remain substantially and statistically unchanged following interpolation.<sup>9</sup>

The purpose of this analysis is to test whether aggregate satisfaction increases in the wake of a referendum. Because individual time-series experience multiple events standard methods of analyzing events in time-series cross-sectional data are not applicable (Allison, 1994).<sup>10</sup> Instead, I estimate a fixed-effects model with multiple dummies, including lags and leads of the explanatory variable, indicating the occurrence of a referendum. This approach is preferable over other approaches such as dividing country time-series up into multiple time-series with only one event each (Sandler and Sandler, 2014). Lags of the independent variable capture whether an effect of a referendum, if there is one, lasts for more than one period. Leads account for a possible effect of the announcement of the event. This approach has been used successfully in other political science applications, such as analyzing the effect of moving to a different constituency on voters' political preferences (Gallego et al., 2016).

The raw time-series of democratic satisfaction exhibits time trends with significant variation in the strength of the time trends.<sup>11</sup> This implies that the dependent variable will on average be higher after a referendum than before, simply because of the trend.

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<sup>8</sup>See Table 5.22 in the Appendix.

<sup>9</sup>Tests for differences in means and standard deviations between original and interpolated time-series are provided in Table 5.23 in the appendix.

<sup>10</sup>For instance, calculating a long run multiplier based on a lagged dependent variable is not appropriate because it represent the long run effect of a constant change in the explanatory variable. However, a referendum is only a temporary event limited to one single period.

<sup>11</sup>The time trends are positive and significant in the time-series cross-section as well as in eleven of the 16 countries studied (three countries exhibit a significant negative time trend), see Table 5.28 in the appendix.

Because most of the referendums are rather late in the time-series not controlling for the time trend will lead to a positive bias in the estimates of the referendum effect. I control for time trends by including a common trend and, in another model, allowing that trend to vary by country. Even when controlling for a linear time-trend the dependent variable still exhibits significant autocorrelation. Hence, in a third specification I difference the original time-series to effectively remove the time trend, auto-correlation as well as any time-constant differences between states.<sup>12</sup>

Time-varying variables if omitted may still lead to biased estimates. In all models, I additionally control for national parliamentary elections and economic growth. Both should be positively correlated with democratic satisfaction. I control for the effect of elections by including a dummy variable indicating the occurrence of a national parliamentary election. Elections allow citizens to participate in democracy and remind them that they influence who governs. The timing of referendums is in most cases determined by the government which may place it strategically in the electoral calendar. If referendums are held in the vicinity of elections one may misattribute the effect of elections to referendums. Additionally, I control for economic growth. This variable is not differenced as it already captures change (in GDP). Many citizens have an instrumental view of democracy. For them, democracy is not just about fair procedures but also about societal outcomes, the most prominent of these being the economy. A large literature on economic voting demonstrates that economic conditions do indeed influence electoral results. Hence, a government may time a referendum based on the economic situation.

I also explicitly test for reverse causality by switching dependent and independent variable. To predict the occurrence of referendums based on aggregate satisfaction with democracy I estimate binary logistic models with fixed effects. These models are estimated on a sample of countries which saw at least one referendum.<sup>13</sup> Following the

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<sup>12</sup>Linear time trends and auto-correlation in the dependent variable are documented in Tables 5.24, 5.28, 5.29 and 5.30 in the appendix. Time trends differ significantly by country as can be seen in Table 5.24. Serial correlation of errors persists when controlling for a time trend – see Table 5.27 and 5.28. Finally, Table 5.26 documents that differencing the time-series removes the time trend.

<sup>13</sup>Having at least one event in a time-series is necessary for the estimation of the logit models (Beck, 2011). Consequently, the sample size of the models presented in Table 4.2 in the manuscript – and Tables 5.34, 5.36 and 5.38 in the appendix – is lower than of those presented in Table 4.1.

approach advocated by Beck et al. (1998) I include temporal dummies indicating the time passed between referendums to account for temporal dependence between events. However, this reduces the degrees of freedom in the model quite a bit and may provide overly conservative estimates.<sup>14</sup> In a third model I chose a simpler approach: I include a linear time trend. A last consideration concerns the use of lags. Because a referendum is usually the end point of a long political process it makes little sense to assume that democratic satisfaction in one semester should be causal for a referendum in that very same semester. Hence, I let the lag structure in these models begin with the first lag.

## 4.5 Time-Series Cross-Sectional Evidence

This section summarizes the results of the analysis of the time-series cross-sectional data. Coefficient estimates presented in Table 4.1 represent the average change (in percentage points) in the share of citizens satisfied with democracy. The estimated instantaneous effect is small but consistent across models. A referendum is associated with a positive change of about two to one percentage points in satisfaction with democracy in the half-year that it is held in.<sup>15</sup> However, the level or change in democratic satisfaction in the immediate wake of a referendum is statistically indistinguishable from other periods. This ‘instantaneous effect’ might be an underestimate as for some observations a referendum may take place during the field work of the survey or even predate it. This means that a part of the sample has not been subjected to the referendum and the aggregates calculated from it also partly or fully capture pre-referendum satisfaction.

The lags and leads are by and large substantially smaller than the instantaneous effect but also insignificant. Therefore, one should not make too much of the pattern in the coefficient estimates which suggests an immediate effect of a referendum on satisfaction

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<sup>14</sup>Although some of the temporal dummies are significant, overall, the model with temporal dummies does not fit the data significantly better as indicated by a likelihood ratio test:  $\chi^2(36) = 45.69, p = 0.13$

<sup>15</sup>This result is more or less in line with the finding by (Christin and Hug, 2002) that the occurrence of a referendum on EU integration increases the share of citizens supportive of European integration by four percentage points.

	Model 1	Model 2	Model 3
Referendum <sub>t+2</sub>	-1.05 (1.42)	-0.95 (1.14)	-0.66 (0.68)
Referendum <sub>t+1</sub>	0.26 (1.42)	-0.32 (1.15)	0.25 (0.67)
Referendum	1.65 (1.43)	0.90 (1.16)	0.84 (0.67)
Referendum <sub>t-1</sub>	-0.03 (1.42)	-0.77 (1.16)	-1.54** (0.67)
Referendum <sub>t-2</sub>	0.27 (1.44)	-0.41 (1.17)	0.78 (0.68)
Referendum <sub>t-3</sub>	-0.61 (1.42)	-0.98 (1.15)	-0.59 (0.68)
Election	1.23 (0.91)	1.43** (0.72)	1.66*** (0.46)
Growth	1.06*** (0.12)	0.93*** (0.10)	0.17*** (0.06)
(Intercept)			-0.52** (0.22)
R <sup>2</sup>	0.13	0.46	0.03
Adj. R <sup>2</sup>	0.13	0.44	0.02
Num. obs.	999	999	999
RMSE			4.95

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 4.1:** Time-series cross-sectional models regressing democratic satisfaction on referendum dummy variables and controls. Model 1 regresses the share of satisfied citizens on the referendum dummies and includes a common time trend along with fixed effects. Model 2 allows the time trend to vary by country. Time trend estimates are omitted for readability of the table. Models 1 and 2 are fixed-effects models. Model 3 regresses the first differences in the share of satisfied citizens on referendum dummies.

after which satisfaction reverts back to pre-referendum levels in the period after the referendum.<sup>16</sup> Readers may be worried that the inclusion of so many leads and lags induces multicollinearity in the explanatory variables. However, in models only including a single dummy the instantaneous effect is substantially unchanged and still insignificant.<sup>17</sup> As expected, elections and growth are positively and in most specifications significantly correlated with democratic satisfaction. This may in itself be considered an interesting finding, however, as it is not the main focus of this chapter I do not discuss it further.

Table 4.2 presents results for the tests for reverse causality where I regress the referendum dummy on democratic satisfaction. Model 1 is a fixed-effects model without any time variable. This specification does not account for potential temporal dependence between referendums and hence the power of the test may be too high. Yet, in a sense this provides a more conservative test because coefficients are more likely to be significant. Model 2 includes temporal dummies as suggested by Beck et al. (1998). These use up quite a few degrees of freedom. As an alternative, I use first differences in satisfaction to get rid of the time trend in that variable (Model 3). The coefficient estimates for the key independent variables are statistically indistinguishable from each other and from zero in all models.<sup>18</sup> They translate to average marginal effects of just one percentage point in the predicted probabilities for a ten percentage point change in democratic satisfaction.<sup>19</sup> Hence, there is no indication that the results presented in Table 4.1 are biased by reverse causality.

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<sup>16</sup>Furthermore, results are not consistent across different specifications of the dependent variable. When using average satisfaction as dependent variable the coefficient estimates are minuscule and insignificant (Table 5.33 in the appendix). Coefficient in models with the share of very satisfied citizens as dependent variable carry the wrong sign but are also insignificant (Table 5.35). For the share of very dissatisfied citizens the sign on the referendum coefficients point in the expected direction but, again, are insignificant (Table 5.37).

<sup>17</sup>See Table 5.31 in the appendix.

<sup>18</sup>Again, these results hold when using alternative operationalizations of democratic satisfaction – see Tables 5.34, 5.36 and 5.38 in the appendix.

<sup>19</sup>See Figure 5.12 in the appendix for a graphical depiction of the average marginal effects and confidence intervals.

	Model 1	Model 2	Model 3
Satisfaction <sub>t-1</sub>	0.01 (0.03)	-0.00 (0.03)	
Satisfaction <sub>t-2</sub>	-0.03 (0.03)	-0.03 (0.04)	
Satisfaction <sub>t-3</sub>	0.03 (0.03)	0.04 (0.03)	
ΔSatisfaction <sub>t-1</sub>			-0.01 (0.03)
ΔSatisfaction <sub>t-2</sub>			-0.03 (0.03)
ΔSatisfaction <sub>t-3</sub>			-0.02 (0.03)
Election	-0.48 (0.47)	-0.52 (0.49)	-0.38 (0.45)
Growth	-0.03 (0.05)	-0.01 (0.05)	0.00 (0.05)
(Intercept)	-2.77** (1.25)	-3.65** (1.45)	-2.31*** (0.19)
AIC	376.75	403.06	417.47
BIC	449.88	640.75	444.66
Log Likelihood	-172.37	-149.53	-202.73
Deviance	344.75	299.06	405.47
Num. obs.	714	714	687

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 4.2:** Time-series cross-sectional models regressing the referendum dummy on democratic satisfaction and controls. Model 1 is a simple fixed effects model. Model 2 adds temporal dummies – these are omitted for readability of the table. Model 3 regresses the referendum dummy on the first differences in the share of satisfied citizens.



## 4.6 Discussion

The results presented in Section 4.5 provide no evidence for an (average) effect of referendums on democratic satisfaction. Furthermore, tests for reverse causality provided negative results suggesting that this issue is not a source of bias. Here, I propose and describe further tests which serve to probe the robustness of the estimates as well as help to trace possible mechanisms. For an ‘average treatment effect’ may be obscured by heterogeneity in the effect.

First, I estimate separate time-series models on the individual country time-series. The instantaneous effects are positive in eight out of eleven cases with positive coefficient estimates ranging between .12 and 11.9 percentage points. Yet, significant positive effects only materialize themselves for Norway, which only saw a single referendum and represents a very short time-series<sup>20</sup> and Italy<sup>21</sup> which also saw a great frequency of referendums. Only seven country time-series exhibit an instantaneous effect larger than the coefficient of the first lag while four time-series exhibit the reverse pattern.<sup>22</sup> The latter finding provides only weak evidence for a referendum effect which is followed by a reversion to the mean following a referendum. Overall, there is little evidence to support hypotheses one and two.

The analysis of individual country time-series reveals quite some heterogeneity in the association between referendums and satisfaction. In the remainder of this section I discuss some possible mechanisms which could condition the magnitude of the referendum effect.

I first consider the frequency of votes. Referendums increase the number of democratic choices. However, having more decisions to take can induce ‘decision fatigue’ (Danziger

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<sup>20</sup>Norway, which is not a member of the European Union, was covered by the Eurobarometer from the early 1990s on because it was negotiating EU membership. However, Norwegian voters rejected membership in the 1994 referendum. Eurobarometer coverage of Norway ceased soon after.

<sup>21</sup>While the results for Italy are consistent across different lag structures, coefficient estimates only attain statistical significance in a two-lags specification.

<sup>22</sup>The results for individual time-series are summarized in Tables 5.39 to 5.44 in the appendix. The set of time-series is obviously limited to the countries which held at least one referendum in the period of study.

et al., 2011). For instance, consumers are more likely to abstain from buying when faced with many choices (Iyengar and Lepper, 2000) and more likely to chose the default option when having already made a number of choices (Levav et al., 2010). Decision fatigue has also been shown to exist in referendums: voters do not vote or vote for the status quo the further down the ballot a proposition is (Augenblick and Nicholson, 2016; Selb, 2008; Bowler et al., 1992).

While these works demonstrate ‘decision fatigue’ within a single election day, ‘decision fatigue’ may extend across multiple elections or, in this case, referendums. Evidence from Switzerland suggests that a greater number of referendums is associated with lower turnout in elections (Altman, 2012). Interestingly, differentiating between referendums held up to six months before the general election and referendums held in preceding years Freitag and Stadelmann-Steffen (2010) find the latter, more long-term factor to have a stronger negative effect on turnout.

Hence, I consider ‘decision fatigue’ as one possible conditioning factor of the effect of referendums. I test this by replacing the referendum dummy with a count of referendums per half-year. I include a squared term to test the expectation that the effect of referendums diminishes as the number of referendums increases. While there is a significant decrease in the effect of a referendum as the number of referendums increases, the overall effect, even for a single referendum, is still null. I also consider the idea that the effect of a referendum depends on the history of the usage of direct democracy in a country. For this purpose I estimate a model with a count of referendums in prior years and an interaction of this variable with the referendum dummy. Lastly, I note that some countries saw consecutive periods of referendums. In such a case an effect on satisfaction may only accrue to the first referendum in a sequence of referendums. I test this idea by using first differences in the independent variable and a simple coding of the first referendum in a consecutive series of referendums. Taken together the results of these different models (presented in detail in the appendix) provide at most suggestive evidence that each referendum decreases the marginal utility of the next referendum – signs on the coefficient estimates point in the expected direction – but are mostly

statistically inconclusive.<sup>23</sup>

As another mechanism I consider participation. For referendums it seems to hold that a great share of the eligible population, often a majority, are apparently not interested (or informed) enough to cast a vote.<sup>24</sup> If referendums do indeed provide procedural utility differential participation rates could explain heterogeneity in the referendum effect. I estimate two separate sets of models. Firstly, I estimate models with an ‘interaction’ of referendum and turnout to let the strength of the ‘treatment’ vary as advised by Sandler and Sandler (2014).<sup>25</sup> As an alternative, I reduce the dataset to the first differences in satisfaction from a half-year with a referendum to the prior period. I then model variation in these first differences as a function of turnout and the usual control variables. Both models provide no evidence that the effect of a referendum on democratic satisfaction increases in turnout.<sup>26</sup>

Finally, another possible mechanism relates to the outcome of a referendum which splits the interested citizenry into winners and losers. While a referendum may satisfy those who win, citizens on the losing side of the referendum may be less satisfied with the way democracy works in their country. After all, in the absence of direct democracy their preferred outcome may have prevailed. Such a relationship is well documented for elections: supporters of losing parties are less satisfied, particularly in majoritarian systems (Anderson and Guillory, 1997). In the absence of data which identifies winners and losers of a referendum I look at the margin between the winning and losing side in the aggregate results. For instance, if a result is very close the aggregate effects of

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<sup>23</sup>Only one of the coefficient estimates reported in Tables 5.45 to 5.47 attains statistical significance at conventional levels.

<sup>24</sup>Only 12 out 114 (10.5%) referendums within the sample of this study (eight countries observed from 1973 to 2002) saw higher turnout than the preceding national election. This is visualized in Figure 5.13 in the appendix.

<sup>25</sup>Note that these models – presented in Table 5.48 in the appendix – only incorporate the interaction of the two variables but not the variables themselves. Because turnout is only observed for referendums, turnout (which is zero in periods without a referendum) is highly correlated with the referendum dummy. A fully specified interaction model could not be estimated because of collinearity. Of course, it is well known that estimating an interaction model which is not fully specified is problematic (Brambor et al., 2005). I therefore also present an alternative approach in which I focus only on occurrences of referendums.

<sup>26</sup>The relevant coefficient estimates in both sets of models, Tables 5.48 and 5.51 in the appendix, are basically zero.

outcome utility for winners and losers may cancel each other out. I can only provide very weak evidence that the effect of a referendum should depend on the balance of winners and losers – coefficients carry the expected sign but are substantially small and statistically insignificant.<sup>27</sup>

## 4.7 Conclusion

Disillusionment with representative politics is frequently cited as a key reason for the popularity of direct democracy. Should one then expect that referendums will increase popular support for the political system? In this study I provided a time-series cross-sectional analysis of the effects of national level referendums on political support. For this purpose I combined aggregate data on satisfaction with democracy from Eurobarometer surveys from 1973 to 2013 with data on all national referendums in the same period. I estimated time-series cross-sectional models to test for an effect of national-level referendums on satisfaction with democracy.

My analysis of the time-series cross-sectional data provided no evidence for an (average) effect of referendums on democratic satisfaction. This null finding remained robust to various specifications. Conversely, democratic satisfaction does not predict referendums, nor do the control variable, ruling out reverse causality as a possible source of bias. While the coefficient estimate for the key independent variables, a dummy variables denoting the occurrence of a referendum, is consistently positive across different specifications it is substantially small – around one to two percentage points depending on the specification – and does not reach statistical significance. There is also hardly any evidence for the second hypothesis that a positive instantaneous effect is followed by a reversion.

The analyses of individual time-series revealed great heterogeneity between countries and provided only weak evidence at best for a referendum effect within single countries. Most interestingly, the only significant coefficients in the individual time-series were

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<sup>27</sup>I use the same two approaches I applied when analyzing whether participation conditions a turnout effect. Results for the margin variable are presented in Tables 5.50 and 5.51 in the appendix.

found in a high (Italy) and a low usage context (Norway). These results would seem to suggest that direct democracy ‘works’ in a wide variety of contexts – low and high frequency usage – if it were not for insignificant results for all other countries.<sup>28</sup>

These results may hint at other factors beyond the frequency of referendums shaping the referendum effect. However, the tentative tests which I presented in the previous section provide no conclusive evidence. Neither turnout nor the margin between losing and winning side contribute to significantly explaining the observed heterogeneity in the referendum ‘effect.’ There is merely suggestive evidence for the ‘decision fatigue’ argument which would merit further research.

Do these results contradict prior cross-sectional research which has found a positive relationship between direct democracy and satisfaction with democracy? Not necessarily: at least two interpretations lend themselves to the explanation of the contrast between results from cross-sectional work and the time-series cross-sectional approach presented here. On the one hand, a cross-sectional association of direct democracy with democratic satisfaction may simply be an instance of spurious correlation – that is differences in democratic satisfaction between countries, or subnational entities, have other roots than direct democracy. On the other hand, the results of cross-sectional studies may just as well be genuine. They may reflect long-standing differences in political culture which have accumulated over decades. Nevertheless, it is perfectly well possible that while no individual referendum affects democratic satisfaction in the long run that the repeated occurrence of referendums over time establishes a culture of direct citizen decision-making that is then reflected in citizens’ attitudes. My results certainly do not rule out the possibility that the availability of these institutions has an effect on political support as some authors argue (e.g. Hug, 2005).

While this chapter has established that there is no sweeping effect of referendums on democratic satisfaction, more research is needed to understand when and how democratic

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<sup>28</sup>Of course, one needs to acknowledge that these unstable results may also be due to the obvious shortcomings of the data which are an unbalanced panel with some very short country time-series – and of course its aggregated nature which may obscure mechanisms at the individual level.

innovations might make a difference. The results from the time-series analysis suggest that a focus on individual referendums would be a worthwhile endeavor. Particularly, as the mechanisms behind a potential referendum effect are best addressed on the basis of individual-level data. Such data would allow researchers to identify participants and non-participants in as well as winner and losers of referendums.

# Chapter 5

## General conclusion

### 5.1 Concluding remarks

This General Conclusion wraps up the dissertation. Having summarized the results of the individual papers already in the General Introduction (Chapter 1) I will only do so briefly in the following section in which I consider policy implications which can be derived from the different chapters (Section 5.2). I then discuss the limitations and weaknesses (Section 5.3) of the research to put results in perspective, followed by some thoughts on further research motivated by the thesis (Section 5.4).

### 5.2 Policy implications

While descriptive findings presented in Chapter 2 suggest that referendums do in fact improve representation, results from the regression analysis call for a more cautious assessment. Representation is positively correlated with turnout and hence may indeed be threatened when turnout is low. However, there are both methodical and substantive reasons to think that the estimates obtained from the Swiss case are conservative estimates. Hence, the policy recommendation is clear: governments and parties need to make efforts to increase turnout in referendums.

Obviously, this policy recommendation may seem redundant as high turnout is always desirable. However, what the analysis has shown is that turnout does indeed matter for the representativeness of the outcome, not just the more abstract legitimacy of the

procedure.

Chapter 3 is probably more informative about what should not be done than what should be done. Concretely, one should not put great hopes in direct democracy to re-engage citizens who do not or no longer participate in established forms of political participation. As regards support for and actual participation in referendums the same patterns seem to be at work. Hence, direct democracy may risk increasing political inequalities. Some may read this as an argument against direct democracy. I would suggest a more cautious interpretation as we do not know exactly whether political inequalities in referendums are actually greater than for elections. However, it should be clear that when mobilizing for turnout more not less effort than in elections is needed for referendums.

Speaking of a diagnosis of a ‘democratic malaise’ as I do in Chapter 1 evokes some medical metaphors. Seeing direct democracy as a potential remedy what the findings presented in Chapter 4 suggest then is that referendums are only a placebo. However, there is weak but suggestive evidence that as with all medicines proper dosage is key. Firstly, the effect of an individual referendum is smaller when multiple referendums are held at roughly the same time. It would be advisable then to avoid holding multiple votes at roughly the same time. This would also help to avoid ‘decision fatigue.’ Secondly, Chapter 4 also presents indicative evidence that a prior history of referendums diminishes the effect of an individual referendum. Although a single referendum has no significant effect on democratic satisfaction, ‘the more, the better’ does not seem to apply to referendums.

### 5.3 Limitations

Research is never finished: there is always room for further research because no individual study can be definitive. This dissertation is certainly no exception. Hence, I briefly highlight the limitations and weaknesses of the research projects that are part of this



dissertation. In a sense this section naturally leads up to the next section on Further Research (Section 5.4).

As stated in the introduction, I have set out to study the effects of direct democracy on citizens' representation as well as their behavior and attitudes. The word effect implies causality and is too often used too generously in the social sciences. Therefore I should explicitly acknowledge one obvious caveat in this dissertation. All three studies are based on observational data, in two cases cross-sectional data, with all the usual drawbacks. While great care has been taken to control for potential confounders the estimates I present are not strictly speaking causal estimates. Hence, results should be interpreted cautiously.

Further caveats include the following. In Chapter 2 I find a weak but significant correlation between turnout and the representativeness of referendums. Due to over-reporting of turnout, bandwagoning and random sampling error the estimate is likely an underestimate of the true strength of the relationship. Additionally, in the Swiss case turnout in elections is low as well which may be another reason why referendum outcomes compare favorably against the counter-factual representative outcome I posit based on governmental vote recommendations. Therefore, one should be cautious in concluding that low turnout is not problematic.

Another concern is the quality of public opinions that the referendums are matching. If these are ill-informed and likely to improve if exposed to better information then referendums may or may not match the informed preferences of the general public. Citizens, when taking the decision to vote, surely inform themselves about the issues at hand and exert more effort than non-voters. This means that is likely that the quality of public opinion is different under high turnout. We cannot say whether this will imply a swing for or against government policy. Hence, our estimate of popular opinion are only an imperfect proxy for a hypothetical referendum outcome under full turnout.

In Chapter 3 I seek an answer to the question whether direct democracy can re-engage citizens with democracy. The causal question is whether the provision of instruments

of direct democracy would make people participate who would not have participated politically otherwise. However, lacking survey data, experience with actual referendums or both in many countries I rely on support for the instrument as proxy for actual participation. My analysis shows that voting, other forms of political activity and political interest are strongly associated with support for direct democracy. I obtain similar results for actual participation in referendum. This latter finding substantiates the claim that patterns found for support are indicative of behavior. However, the latter set of models does not constitute a direct test whether support for direct democracy predicts participation in referendums. We simply lack survey data which provide information on both support for direct democracy and participation in referendums.

Obviously, the fact that voting is correlated with referendum support and participation does not imply that voting causes these. Although this may well be as voting is habit forming and has a casual influence on voting at future elections (Dinas, 2012). Whether voting in referendum encourages further political participation beyond elections is a topic for further research.

The biggest shortcoming of Chapter 4 is that it presents an aggregate level analysis to understand what is actually at the heart of it an individual level relationship: how do referendums affect (individual) citizens? My usage of aggregate data is due to a lack of good and comprehensive individual level-data. Nevertheless, while the theoretical discussion has highlighted procedure as one important channel, the paper cannot answer whether actual participation is necessary for a referendum to have an effect. Concretely, does the referendum effect only accrue to voters or is the opportunity to participate sufficient? I have discussed this issue and correlated turnout rates with satisfaction. However, individual level data would be necessary to address this issue more thoroughly.

Aggregation also induces coarseness in the data as the timing of the ‘treatment’ is concerned. A referendum and a survey are treated as concurrent in the analysis if they happened within the same six-month window. However, for some observations a referendum may take place during the field work of the survey or even predate it. This means

that a part of the sample has not been subjected to the referendum and the aggregates calculated from it also partly or fully capture pre-referendum satisfaction. Consequently, the null effect which I estimate may possibly be an underestimate. Furthermore, with the available data I cannot distinguish between the campaign and referendum as mechanisms.

## 5.4 Further research

The work on this thesis has inspired many ideas for further research projects which build on and extend the themes of this dissertation. As regards my future research endeavors I will for the sake of brevity mention only two ‘puzzles’ which I hope to be able to address.

The first puzzle is that direct democracy – or in fact other democratic innovations as well – although widening the possibility for political participation, may increase political inequality because citizens self-select into these opportunities. Direct democracy offers additional opportunities for political participation, but turnout in referendums most often is even lower than in elections and therefore may worsen political inequality. But there is as of yet no evidence on whether participation in referendums is unequally distributed among different socio-economic strata of the population.

Hence, in one project I aim to document the extent of political inequality in direct democratic participation. As survey data on referendums are rare, I focus on precinct-level referendum returns. I take a multilevel-modeling approach to estimating the relationship between turnout and unemployment rates and the variance of that relationship across different referendums. I will initially focus on German and US state-level as well as Swiss national referendums. I also intend to obtain returns for elections held at the same level of government to analyze whether political inequality is greater in referendums than in regular elections.

In another project I focus on turnout in German state level referendums. More than half of these referendums saw lower turnout than the preceding state election. This

translates to situations where a majority in a referendum is smaller than the number of people backing the government threatening the legitimacy of referendums. I argue that holding referendums concurrently with elections is the single-most effective measure to increase turnout in referendums and empirically establish the turnout effect of concurrency. On average concurrency is associated with a 24 percentage point increase in turnout, holding other factors constant. The policy implication of this research seems to be that referendums should be held concurrently with elections whenever possible. However, the desirability of this policy also depends on its consequences for the outcome of referendums – another subject for further research.

The obvious solution to social selectivity through self-selection in new democratic procedures is to have the conveners of such procedures select and incentivize participants. This has been done for a citizen's conference on health policy organized by my co-author Claudia Landwehr. While citizens of high socio-economic status, who also tended to be older, were indeed more likely to volunteer to participate they in fact appeared less influential in discussions than other participants. My co-author and I aim to, in a first step, show the usual patterns in self-selection into political participation and, in a second and more important step, show through the use of quantitative text analysis of the minutes of the meeting that participants of high socio-economic status were actually not the most influential participants.

A second puzzle I will focus on is that the introduction of a new policy maker, namely citizens, may in fact lead to less not more policy change. Because citizens are less well informed than legislators they are therefore more prone to vote for the status quo. Hence, the question I seek to investigate further is whether referendums are biased towards the status quo and whether thereby direct democracy hinders change.

By their very nature referendums are an opportunity for citizens to effectively disagree with their government. As referendums impose considerable demands on voters' informational capacities, voters may simply reject new policies since existing policies are better known. I want to test whether voters are indeed biased towards the status quo. I

focus on the question whether referendums targeted at keeping the status quo are more successful than referendums targeted at changing the status quo. While a limited number of referendums can be hand-coded, such as state-level referendums in Germany or national referendums in Switzerland, a larger number – for instance over a 1000 municipal referendums in the German state of Bavaria or close to 800 in US states 1990-2010 – would require tools of quantitative text analysis to classify referendums.

Referendums frequently deal with infrastructure and construction projects. Although such projects benefit a wider public they are often opposed by those living in the ultimate vicinity of projects – a phenomenon referred to as NIMBYism (not in my backyard). While such a problem can be mitigated in representative politics – as voters vote for parties which bundle many issue positions – in a direct democratic context vocal minorities might use the initiative to blockade policy making. For instance, citizens may be principally in favor of building wind turbines for sustainable energy production but not anywhere close to them and thereby no wind turbines get build. The proposed project aims to assess to what extent a NIMBY problem exists in referendum voting. I, again, would leverage precinct-level returns and test whether precincts that are geographically close to the project exhibit higher turnout and vote shares against the project.

Direct democracy, to paraphrase the introductory quote by (Budge, 1996), by allowing citizens to directly vote on substantive issues representatives usually vote on has intuitive appeal in the sense of forming the most obvious institutionalization of democracy itself. Yet, once one begins to look closer at the functioning of real world implementations of direct democracy one realizes that it may in fact have unanticipated consequences. Beyond this dissertation, my aim continues to be contributing to a scientific understanding of direct democracy through empirical studies.



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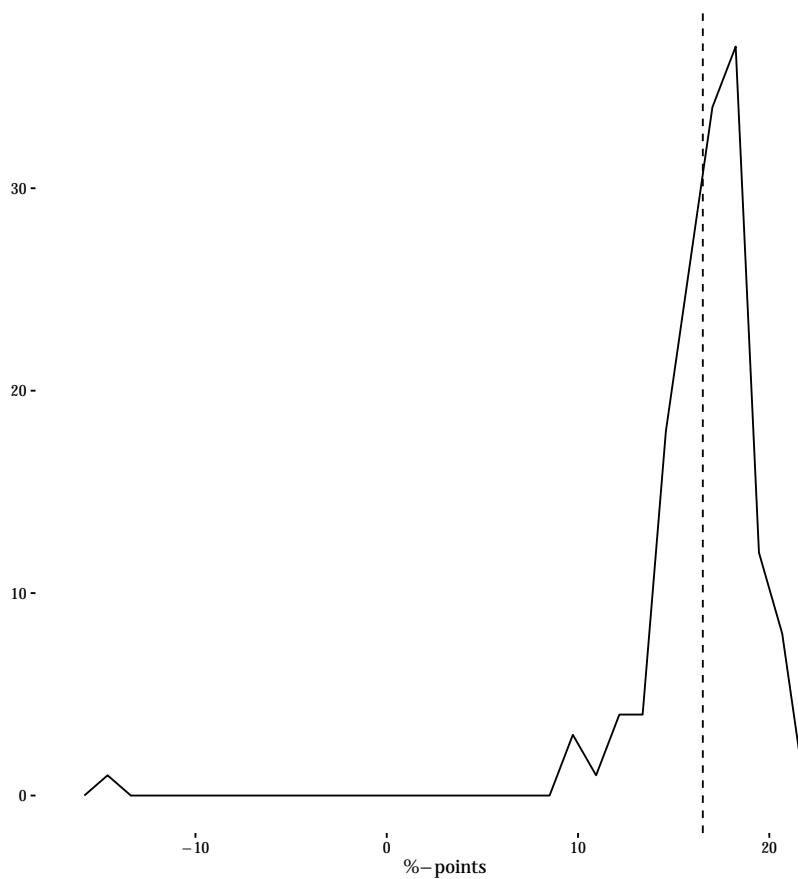
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# Appendices

## Appendix to Chapter 2

Additional tables and figures appear in the order they are referenced in the paper.



**Figure 5.1:** *Difference between actual and reported turnout.*

	Mean	SD	Min	Max
Difference between reported and actual turnout	16.52	3.40	3.40	3.40

**Table 5.1:** *Summary statistics for the difference between actual and estimated turnout.*

	Yes share Official result	Yes share Voters sample
<b>Obs</b>	148	148
<b>Mean</b>	51.29527	53.75658
<b>Std. Dev.</b>	17.76976	20.08366
<b>Variance</b>	315.7643	403.3534
<b>Skewness</b>	0.0895879	0.090364
<b>Kurtosis</b>	2.152457	1.841661
<b>Percentiles</b>		
<b>1%</b>	16.7	19.42446
<b>5%</b>	24.6	24.80889
<b>10%</b>	27.6	27.77357
<b>25%</b>	36.35	35.27115
<b>50%</b>	52.3	55.03014
<b>75%</b>	65.05	70.50554
<b>90%</b>	74.7	80.97826
<b>95%</b>	82.1	85.87756
<b>99%</b>	87.8	92.11823

**Table 5.2:** *Distribution of real yes shares and yes shares amongst voters in the Voxit sample*

Project	Year	Yes(%)	Yes(%) Sur- vey
Änderung Bg Geschäftsverkehrsgesetz	1992	58	34.4
Bb Aufhebung Bundesbeiträge Bahnhofpark- platzanlagen	1996	53.9	45.4
Bb Energieartikel in der Bundesverfassung	1983	50.9	44.7
Bb Europäischer Wirtschaftsraum (EWR)	1992	49.7	50.9
Bb für eine koordinierte Verkehrspolitik	1988	45.5	52.2
EV Ausstiegsinitiative	1990	47.1	50.3
EV Kleinbauern-Initiative	1989	48.9	56.7

**Table 5.3:** *Referendums where the actual yes share and the yes share amongst voters are on different sides of the 50% threshold.*

## The Ständemehr

It was introduced originally with the federal constitution of 1848, to account for the needs of the cantons and ensure federalism. the *Ständerat* as an institution however goes back to the 14th century and the first helvetic confederation. The Ständemehr applies to every referendum concerning a (partial) revision of the constitution (via popular initiative, counter initiative or via an obligatory referendum), as well as the adherence to international organisations, treaties etc. For facultative referendums the popular majority suffices. In praxis, *Volksmehr* (the majority of the popular vote across the nation) and *Ständemehr* usually match, only 9 referendums since 1848 failed because of the Ständemehr (8 obligatory referendums and 1 PI).<sup>1</sup> From a theoretical perspective, the *Ständemehr* is potentially problematic as it gives more weight to smaller, rural, and rather conservative cantons of German speaking Eastern and Central Switzerland, while disadvantaging the urban agglomerations and the French speaking Romandie which tend to be more progressive. For example, a vote from the canton Appenzell Innerhoden with 15.000 inhabitants and 0.5 *Stände*-votes counts 41 times more than a vote from Zurich with 1.23 million inhabitants and 1 *Stände*-vote. However, changing this practice seems unlikely as this would require a constitutional revision that would need again a *Ständemehr* to pass. Hence, it is mostly a historically grown practice that is part of the Swiss federal system. Generally, we can expect rather more conservative outcomes from the *Ständemehr* intervention.

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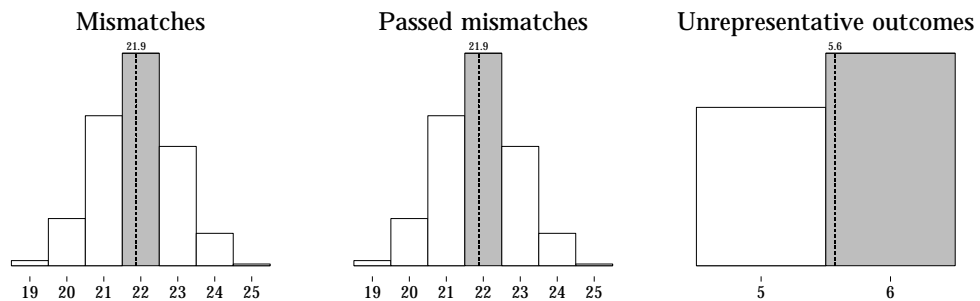
<sup>1</sup>Swiss federal administration (Schweizer Bundeskanzlei), [https://www.admin.ch/ch/d/pore/va/vab\\_2\\_2\\_4\\_4.html](https://www.admin.ch/ch/d/pore/va/vab_2_2_4_4.html)

## Summary of qualitative indicators

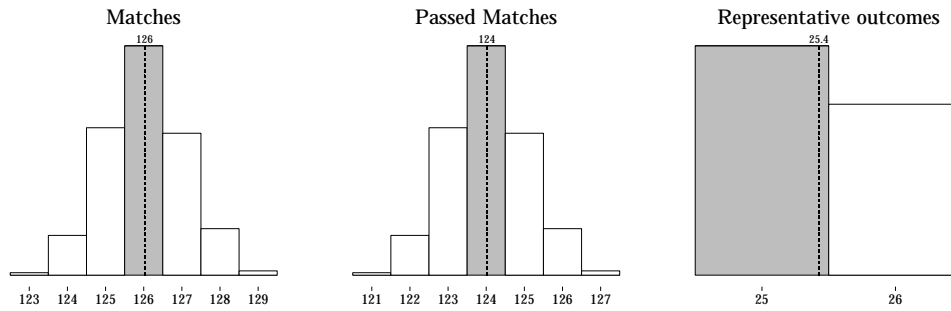
Indicator	Criteria
Mismatch	$(actual\ yes\ share > 50 \ \& \ reported\ yes\ share < 50) \mid$ $(actual\ yes\ share < 50 \ \& \ reported\ yes\ share > 50)$
Passed Mismatch	$(Mismatch \ \& \ St\ a\ n\ d\ e\ m\ e\ h\ r = passed) \mid$ $(Mismatch \ \& \ St\ a\ n\ d\ e\ m\ e\ h\ r \ not\ applicable)$
Unrepresentative outcome	$Passed\ mismatch \ \& \ (government\ vote\ recommendation = population\ majority\ opinion)$
Match	$(actual\ yes\ share > 50 \ \& \ reported\ yes\ share > 50) \mid$ $(actual\ yes\ share < 50 \ \& \ reported\ yes\ share < 50)$
Passed Match	$(Match \ \& \ St\ a\ n\ d\ e\ m\ e\ h\ r = passed) \mid$ $(Match \ \& \ St\ a\ n\ d\ e\ m\ e\ h\ r \ not\ applicable)$
Representative outcome	$Passed\ match \ \& \ (government\ vote\ recommendation \neq population\ majority\ opinion)$

**Table 5.4:** Six qualitative indicators of representation. The last three indicate potential improvements through direct democracy over representative referendums.

## Comparisons for non-voters only



**Figure 5.2:** Distribution of estimated number of mismatches, passed mismatches and unrepresentative outcomes between actual referendum outcome and non-voters – based on 1000 simulated survey-based proportions. The median counts are highlighted in grey and means denoted by the vertical dashed lines.



**Figure 5.3:** *Distribution of estimated number of matches, passed matches and representative outcomes between actual referendum outcome and non-voters – based on 1000 simulated survey-based proportions. The median counts are highlighted in grey and means denoted by the vertical dashed lines.*

### Regressions for non-voters only

	(1)	(2)	(3)	(4)
Turnout	-0.10 (0.07)	-0.10 (0.07)	-0.10 (0.08)	-0.13 (0.08)
Year		-0.14 (0.11)	-0.14 (0.12)	-0.13 (0.12)
Party unity		-0.10 (0.26)	0.14 (0.41)	0.12 (0.41)
Referendum			1.53 (1.51)	2.12 (1.52)
Initiative			1.96 (2.10)	1.99 (2.06)
Foreign & Defense				3.56 (2.07)
Immigration				-3.98 (2.42)
Intercept	13.21*** (3.00)	287.45 (228.17)	282.20 (236.41)	280.91 (232.91)
$N$	148	148	148	148
$R^2$	0.013	0.025	0.034	0.076
$AIC$	991.76	994.03	996.68	994.11
$BIC$	997.75	1006.02	1014.66	1018.09

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 5.5:** *Results of OLS regressions regressing the difference between actual and reported yes-share (for non-voters in the sample) on turnout, the year of a referendum and controls.*

	(1)	(2)	(3)	(4)
Turnout	0.05 (0.03)	0.05 (0.03)	0.05 (0.03)	0.04 (0.03)
Year		-0.11* (0.05)	-0.11* (0.05)	-0.11* (0.05)
Party unity		-0.03 (0.11)	-0.11 (0.18)	-0.10 (0.19)
Referendum			-0.24 (0.67)	-0.32 (0.69)
Initiative			-0.59 (0.91)	-0.56 (0.93)
Foreign & Defense				0.78 (0.75)
Immigration				0.65 (0.92)
Intercept	-3.71*** (1.12)	210.76* (101.43)	217.62* (105.80)	213.71* (105.86)
<i>N</i>	148	148	148	148
<i>AIC</i>	125.25	124.35	127.91	130.57
<i>BIC</i>	131.25	136.34	145.90	154.55

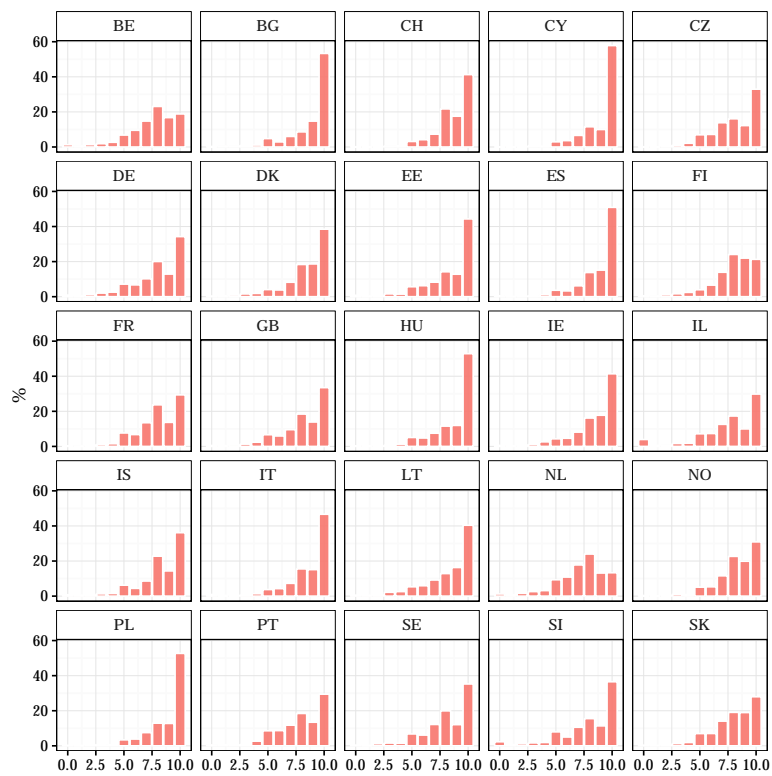
Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

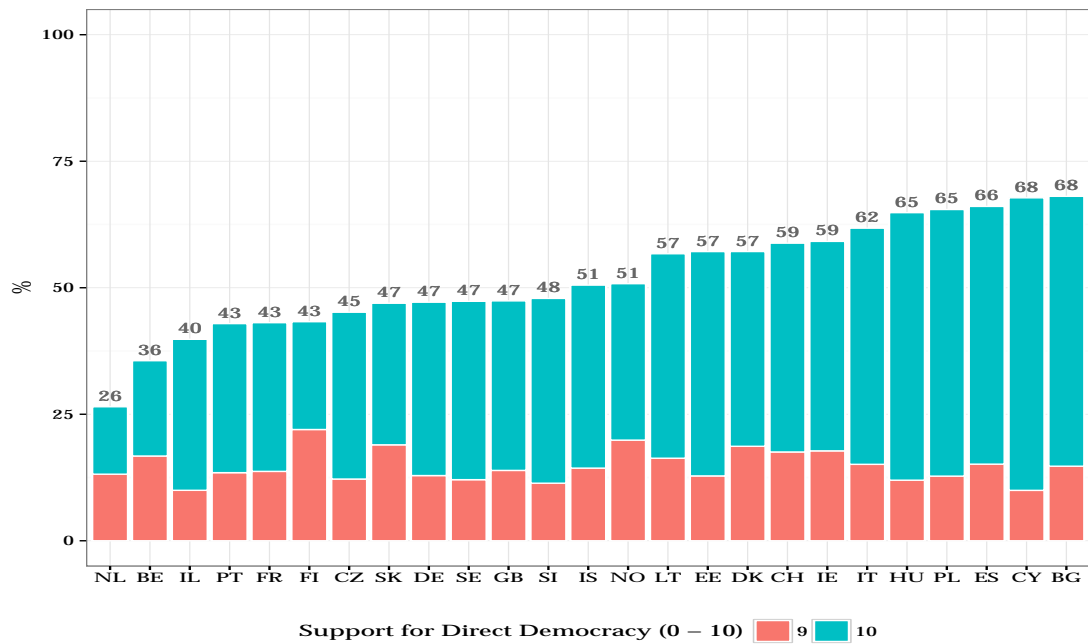
**Table 5.6:** Results of logistic regressions regressing the occurrence of a mismatch (for non-voters in the sample) on turnout, the year of a referendum and controls.

## Appendix to Chapter 3

Additional tables and figures appear in the order they are referenced in the paper.



**Figure 5.4:** *Distribution of support for direct democracy by country (in %, applying design weights).*



**Figure 5.5:** Respondents strongly supporting direct democracy (% by country using design weights) – i.e. choosing answers 9 or 10 on an 11-point scale with higher numbers indicating greater importance accorded to referendums in answering to the question “And still thinking generally rather than about [country], how important do you think it is for democracy in general that citizens have the final say on the most important political issues by voting on them directly in referendums?”



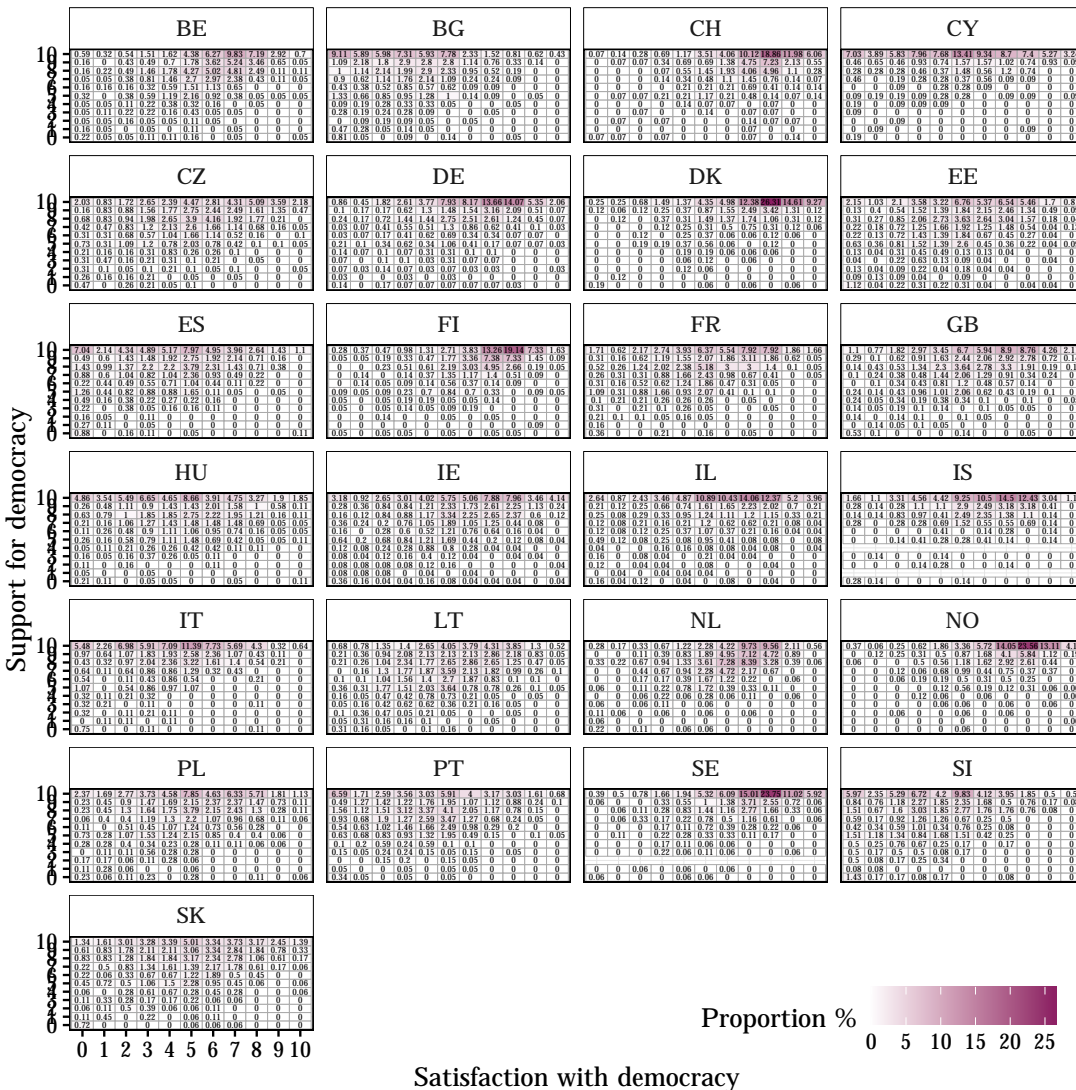


Figure 5.6: Distribution of Satisfaction with Democracy and Importance of Living in a Democracy by country – proportions within countries sum to 100%. Most respondents consider it to be very important to live in a democracy but satisfaction with the way democracy works is much more varied.

	M1 (RI)	M2 (RE)
(Intercept)	1.189 (0.089)***	1.174 (0.088)***
Age	0.883 (0.013)***	0.885 (0.013)***
Gender (female)	-0.076 (0.023)***	-0.074 (0.023)***
Education	0.583 (0.014)***	0.583 (0.014)***
Dissatisfied Democrat	-0.002 (0.025)	0.015 (0.053)
AIC	46651.715	46611.207
BIC	46704.022	46680.949
Log Likelihood	-23319.858	-23297.603
$N_i$	45152	45152
$N_j$	25	25
$\sigma_j$	0.188	0.184
$\sigma_i$		0.052
$\sigma_{i\dot{j}}$		0.001

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.7:** Models underlying Figure 3 in the paper. Multilevel logistic models of having voted (M1) and having engaged in 'Political Activity' predicted by being a 'Dissatisfied Democrat' and other covariates.

### Comparisons of Random Effects estimates against separate country-by-country regressions

Country	RE	Logit	Difference
CY	0.06	-0.06	0.12
BG	0.06	-0.01	0.08
LT	0.18	0.17	0.01
CH	0.20	0.10	0.11
SI	0.24	0.20	0.04
PT	0.24	0.20	0.03
NO	0.24	0.15	0.09
SK	0.25	0.22	0.03
SE	0.26	0.21	0.05
DK	0.26	0.20	0.07
IL	0.27	0.26	0.02
CZ	0.28	0.25	0.03
IE	0.29	0.28	0.01
BE	0.30	0.25	0.05
PL	0.34	0.34	0.00
EE	0.36	0.35	0.02
FR	0.37	0.38	-0.01
GB	0.41	0.43	-0.02
FI	0.44	0.44	-0.00
IS	0.52	0.55	-0.03
IT	0.52	0.64	-0.12
ES	0.57	0.64	-0.06
NL	0.60	0.71	-0.10
HU	0.63	0.70	-0.07
DE	0.74	0.78	-0.04
Average	0.35	0.33	0.01

**Table 5.8:** Comparison of Random Effects estimates (RE) against separate country-by-country regressions (Logit) for Model M2 in Table 1 in the manuscript, coefficient estimates are also displayed in Figure 2 in the manuscript.

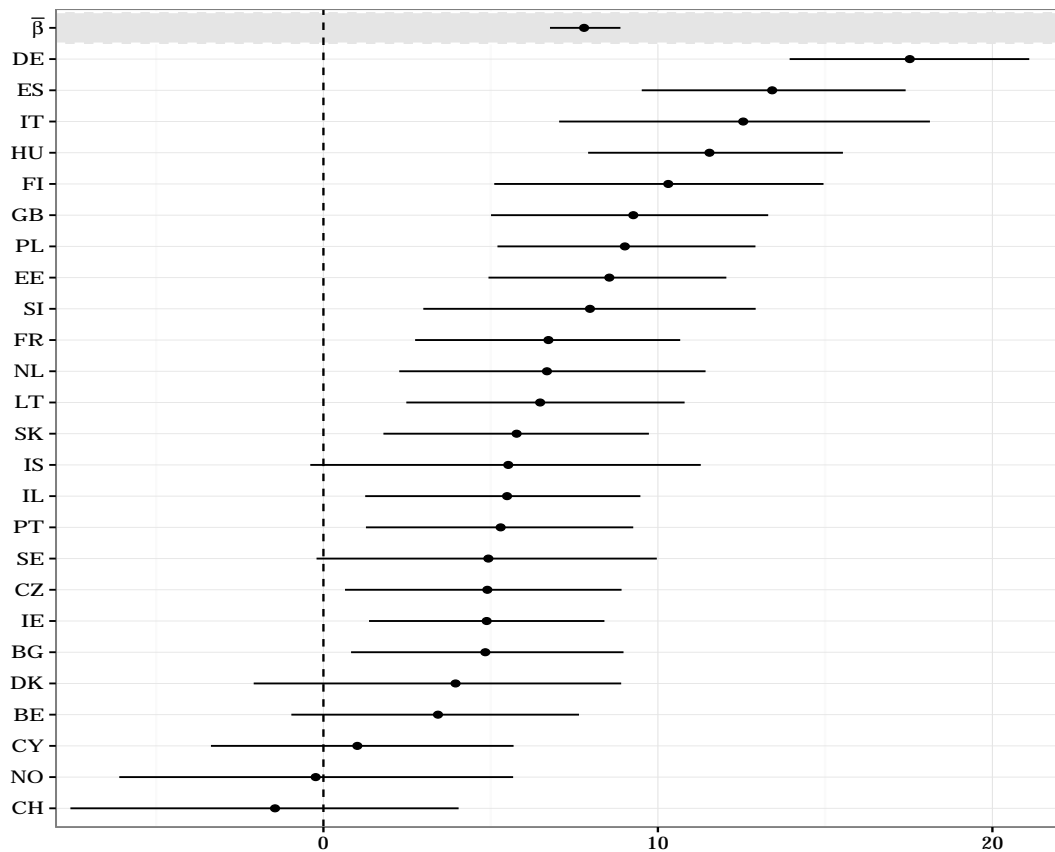
Country	RE	Logit	Difference
EE	-0.34	-0.30	-0.04
NL	-0.30	-0.41	0.11
DE	-0.28	-0.34	0.06
SK	-0.28	-0.32	0.05
CH	-0.18	-0.25	0.07
FI	-0.17	-0.31	0.14
NO	-0.10	-0.23	0.13
PL	-0.04	-0.05	0.01
GB	-0.03	-0.04	0.01
SE	-0.01	-0.06	0.05
PT	-0.01	-0.02	0.01
IL	-0.01	-0.01	0.00
CY	0.03	0.12	-0.09
HU	0.04	0.04	-0.00
BG	0.05	0.08	-0.03
IT	0.06	0.01	0.06
CZ	0.08	0.17	-0.10
LT	0.09	0.14	-0.05
FR	0.11	0.14	-0.02
IE	0.13	0.15	-0.02
DK	0.17	0.23	-0.05
ES	0.24	0.36	-0.12
IS	0.32	0.42	-0.11
BE	0.38	0.54	-0.16
SI	0.40	0.52	-0.13
Average	0.01	0.02	-0.01

**Table 5.9:** Comparison of Random Effects estimates (RE) against separate country-by-country regressions (Logit) for Figure 3 (left panel) in the manuscript.

Country	RE	Logit	Difference
EE	-0.27	-0.38	0.11
BE	-0.05	-0.10	0.05
PT	-0.04	-0.12	0.08
DE	-0.03	-0.04	0.00
NL	0.01	-0.01	0.02
FI	0.02	-0.02	0.04
IS	0.02	-0.24	0.25
CZ	0.02	0.02	0.00
NO	0.03	-0.03	0.06
FR	0.05	0.03	0.02
PL	0.05	0.04	0.01
CY	0.05	0.08	-0.03
DK	0.07	-0.04	0.11
SK	0.08	0.09	-0.01
IT	0.11	0.17	-0.05
LT	0.12	0.12	-0.01
SI	0.14	0.16	-0.02
HU	0.15	0.20	-0.05
CH	0.18	0.25	-0.08
BG	0.22	0.34	-0.12
IL	0.22	0.25	-0.03
GB	0.22	0.25	-0.03
IE	0.29	0.33	-0.04
SE	0.29	0.29	0.00
ES	0.46	0.59	-0.12
Average	0.10	0.09	0.01

**Table 5.10:** Comparison of Random Effects estimates (RE) against separate country-by-country regressions (Logit) for Figure 3 (right panel) in the manuscript.

## Alternative operationalization of the dependent variable



**Figure 5.7:** Country-specific associations between being a 'Dissatisfied Democrat' and strongly supporting direct democracy ( $\geq 9$ ) – expressed as first differences (%-points) in the predicted probabilities. In most countries 'dissatisfied democrats' are significantly more likely to strongly support direct democracy than other types of citizens.

	M1 (RI)	M2 (RE)	M3 (RI)
(Intercept)	0.004 (0.090)	0.005 (0.088)	-0.747 (0.126)***
Age	0.016 (0.010)	0.015 (0.010)	0.012 (0.010)
Gender (female)	0.058 (0.020)***	0.057 (0.020)***	0.062 (0.020)***
Education	-0.015 (0.011)	-0.016 (0.011)	-0.035 (0.011)***
Dissatisfied Democrat	0.317 (0.021)***	0.288 (0.047)***	1.051 (0.088)***
Satisfied Democrat			0.846 (0.088)***
Dissatisfied Non-Democrat			0.370 (0.093)***
AIC	58954.363	58908.965	58401.344
BIC	59006.556	58978.556	58470.891
Log Likelihood	-29471.182	-29446.483	-29192.672
$N_i$	44306	44306	44068
$N_j$	25	25	25
$\sigma_j$	0.194	0.187	0.203
$\sigma_i$		0.042	
$\sigma_{ij}$		-0.007	

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.11:** *Multilevel logistic models of being a strong supporter of direct democracy ( $\geq 9$ ), given status as ‘dissatisfied democrat’ or other type – modeled with a random intercept (RI) or random effect for ‘dissatisfied democrat.’*

	M1 (RI)	M2 (RE)	M3 (RI)	M4 (RE)
(Intercept)	-0.542*** (0.109)	-0.542*** (0.109)	-0.591*** (0.109)	-0.587*** (0.109)
Age	0.053*** (0.010)	0.055*** (0.010)	0.030*** (0.011)	0.031*** (0.011)
Gender (female)	-0.019 (0.020)	-0.016 (0.020)	0.004 (0.020)	0.005 (0.020)
Education	-0.032*** (0.011)	-0.034*** (0.011)	-0.040*** (0.011)	-0.039*** (0.011)
Political Activity	0.165*** (0.023)	0.175*** (0.060)		
Political Interest			0.213*** (0.022)	0.210*** (0.040)
AIC	57553.070	57456.510	57626.122	57594.307
BIC	57605.373	57526.247	57678.437	57664.061
Log Likelihood	-28770.535	-28720.255	-28807.061	-28789.154
Num. obs.	45123	45123	45219	45219
Num. groups: centry	25	25	25	25
Var: centry (Intercept)	0.287	0.289	0.286	0.286
Var: centry polactTRUE		0.074		
Cov: centry (Intercept) polactTRUE		-0.031		
Var: centry polintrdTRUE				0.028
Cov: centry (Intercept) polintrdTRUE				-0.007

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.12:** Models underlying Figure 5 in the paper. Multilevel logistic models of being a strong supporter of direct democracy given political activity (M1 and M2) or political interest (M3 and M4) – modeled with a random intercept (RI) or random effect (RE) for the coefficients of interest.



### Comparisons of Random Effects estimates against separate country-by-country regressions

Country	RE	Logit	Difference
NL	-0.29	-0.32	0.03
EE	-0.22	-0.40	0.18
FI	-0.19	-0.09	-0.10
PT	-0.13	-0.16	0.03
BE	-0.12	-0.16	0.05
SI	-0.08	-0.19	0.11
SE	-0.07	0.07	-0.14
IE	0.01	0.08	-0.06
NO	0.02	0.08	-0.06
IL	0.06	0.01	0.05
DE	0.06	-0.04	0.10
LT	0.07	0.18	-0.10
FR	0.08	0.19	-0.11
CZ	0.09	0.07	0.02
BG	0.10	0.09	0.01
ES	0.10	0.01	0.09
IS	0.13	0.26	-0.12
CY	0.13	0.13	0.01
IT	0.14	0.18	-0.04
HU	0.17	0.18	-0.01
GB	0.18	0.39	-0.21
SK	0.19	0.35	-0.17
DK	0.20	0.32	-0.12
CH	0.26	0.29	-0.04
PL	0.28	0.24	0.04
Average	0.05	0.07	-0.02

**Table 5.13:** Comparison of Random Effects (RE) estimates against separate country-by-country regressions (Logit) for Model M2 in Table 2 in the manuscript, coefficient estimates are also displayed in Figure 4 (left panel) in the manuscript.

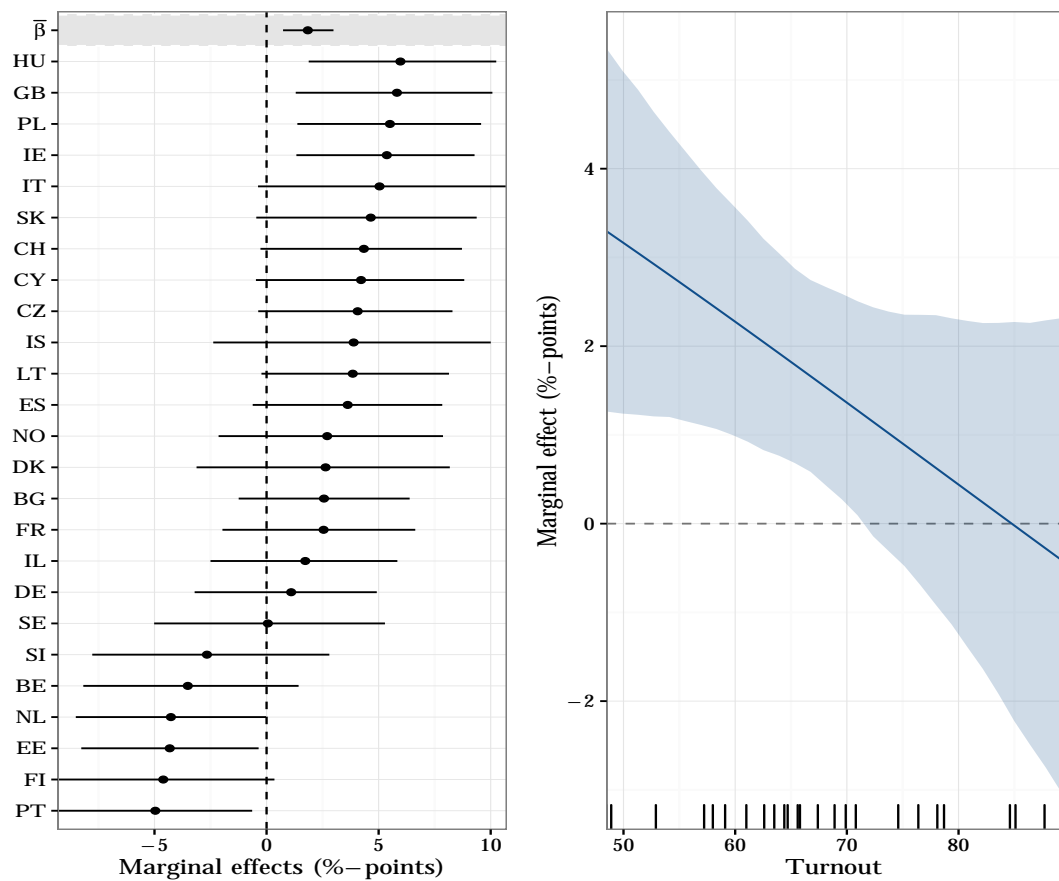
Country	RE	Logit	Difference
SE	-0.26	-0.30	0.04
EE	-0.13	-0.15	0.02
LT	-0.12	-0.24	0.12
DE	-0.09	-0.04	-0.05
FI	-0.04	0.01	-0.04
CY	-0.02	-0.08	0.06
NL	0.02	0.03	-0.01
SK	0.07	0.05	0.02
PL	0.08	0.02	0.06
NO	0.11	0.11	-0.00
DK	0.12	0.12	-0.00
BG	0.15	0.21	-0.06
HU	0.16	0.16	-0.01
BE	0.18	0.19	-0.01
ES	0.21	0.19	0.02
CH	0.22	0.22	0.01
CZ	0.24	0.25	-0.00
FR	0.25	0.22	0.02
IL	0.31	0.35	-0.04
IT	0.33	0.40	-0.07
SI	0.33	0.39	-0.06
GB	0.35	0.42	-0.06
IS	0.35	0.53	-0.17
IE	0.49	0.46	0.03
PT	1.03	1.14	-0.10
Average	0.17	0.19	-0.01

**Table 5.14:** Comparison of Random Effects estimates (RE) against separate country-by-country regressions (Logit) in Figure 5 (left panel) in the manuscript.

Country	RE	Logit	Difference
SE	-0.08	-0.07	-0.01
SI	-0.00	-0.12	0.12
DE	0.03	-0.08	0.11
DK	0.06	-0.01	0.08
IL	0.07	0.01	0.06
PT	0.08	-0.10	0.17
HU	0.09	0.02	0.07
IT	0.14	0.08	0.06
IS	0.15	0.11	0.04
NL	0.16	0.25	-0.10
BG	0.17	0.19	-0.02
EE	0.17	0.11	0.06
FI	0.17	0.29	-0.11
SK	0.23	0.28	-0.05
BE	0.25	0.27	-0.02
CY	0.25	0.28	-0.03
PL	0.31	0.23	0.07
LT	0.32	0.46	-0.14
CZ	0.35	0.39	-0.04
GB	0.37	0.47	-0.10
FR	0.38	0.42	-0.04
NO	0.38	0.52	-0.14
ES	0.38	0.39	-0.01
IE	0.42	0.49	-0.07
CH	0.42	0.47	-0.05
Average	0.21	0.21	-0.00

**Table 5.15:** Comparison of Random Effects estimates (RE) against separate country-by-country regressions (Logit) in Figure 5 (right panel) in the manuscript.

## Alternative operationalization of the dependent variable

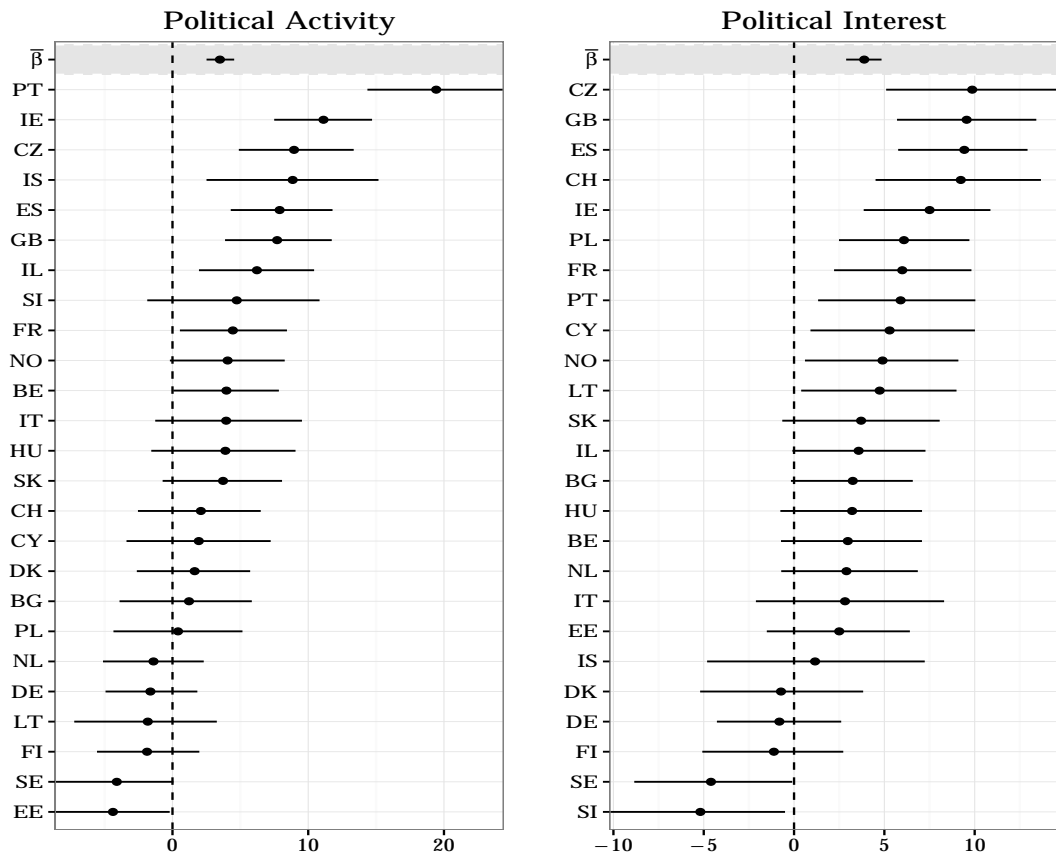


**Figure 5.8:** Left panel: Country-specific associations between having voted and strongly supporting direct democracy ( $\geq 9$ ) – expressed as first differences (%-points) in the predicted probabilities. In some countries voters are significantly more likely to strongly support direct democracy while in others voters are significantly less likely to have voted. Right panel: Marginal effect of having voted on strongly supporting direct democracy ( $\geq 9$ ) conditional on the official turnout rate in the last national election – expressed as first differences (%-points) in the predicted probabilities. The lower turnout the greater the difference between voters and non-voters in supporting direct democracy.

	M1 (RI)	M2 (RE)	M3 (RI)
(Intercept)	0.080 (0.095)	0.080 (0.083)	0.095 (0.094)
Age	0.008 (0.011)	0.008 (0.011)	0.010 (0.011)
Gender (female)	0.066 (0.019)***	0.068 (0.019)***	0.065 (0.019)***
Education	-0.021 (0.011)*	-0.020 (0.011)*	-0.020 (0.011)*
Voted	0.075 (0.023)***	0.077 (0.043)*	0.069 (0.024)***
Turnout			-0.056 (0.087)
Voted $\times$ Turnout			-0.041 (0.023)*
AIC	60130.909	60092.461	60130.656
BIC	60183.201	60162.184	60200.379
Log Likelihood	-30059.455	-30038.231	-30057.328
$N_i$	45043	45043	45043
$N_j$	25	25	25
$\sigma_j$	0.213	0.159	0.205
$\sigma_i$		0.032	
$\sigma_{ij}$		0.024	

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.16:** *Multilevel logistic models of being a strong supporter of direct democracy ( $\geq 9$ ), given having voted in the last national election – modeled with a random intercept (RI) or random effect for ‘Voted’*



**Figure 5.9:** Country-specific associations between having engaged in at least one other political activity (left panel) or being politically interested (right panel) respectively and strongly supporting direct democracy ( $\geq 9$ ) – expressed as first differences (%-points) in the predicted probabilities of strongly supporting direct democracy ( $\geq 9$ ).

	M1 (RI)	M2 (RE)	M3 (RI)	M4 (RE)
(Intercept)	0.076 (0.095)	0.075 (0.095)	0.049 (0.095)	0.056 (0.093)
Age	0.020* (0.010)	0.022** (0.010)	0.003 (0.010)	0.005 (0.010)
Gender (female)	0.067*** (0.019)	0.069*** (0.019)	0.082*** (0.020)	0.085*** (0.020)
Education	-0.028*** (0.011)	-0.030*** (0.011)	-0.033*** (0.011)	-0.034*** (0.011)
Political Activity	0.143*** (0.022)	0.153*** (0.053)		
Political Interest			0.158*** (0.021)	0.161*** (0.044)
AIC	60204.276	60126.956	60310.698	60264.510
BIC	60256.579	60196.694	60363.014	60334.264
Log Likelihood	-30096.138	-30055.478	-30149.349	-30124.255
Num. obs.	45123	45123	45219	45219
Num. groups: centry	25	25	25	25
Var: centry (Intercept)	0.220	0.218	0.219	0.207
Var: centry polactTRUE		0.057		
Cov: centry (Intercept) polactTRUE		-0.022		
Var: centry polintrdTRUE				0.036
Cov: centry (Intercept) polintrdTRUE				0.005

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.17:** *Multilevel logistic models of being a strong supporter of direct democracy ( $\geq 9$ ), given political activity or political interest – modeled with a random intercept (RI) or random effect for the coefficients of interest.*

## Participation in referendums

Country	Year	Referendum	Survey	Electoral Turnout	Political Interest
United Kingdom	2011	Use of the “Alternative Vote” system for elections in the United Kingdom	BES Alternative Vote Referendum Study	Yes	Yes
Iceland	2011	State guarantee for the Icesave-compensation fund	2011 ICELAND SURVEY (Curtis)	No	Yes
Ireland	2008	Ratification of the Treaty of Lisbon	Flash Eurobarometer 245 (Post-referendum Survey in Ireland: Preliminary Results)	Yes	No
Spain	2005	Referendum on the EU Constitution	Flash Eurobarometer 168 (The European Constitution: Post-Referendum in Spain)	Yes	No
Netherlands	2005	Treaty establishing a Constitution for Europe	Flash Eurobarometer 172 (The European Constitution: Post-Referendum in the Netherlands)	Yes	No
Scotland	1997	Devolution Referendum	The Scottish Referendum Study: 1997	Yes	Yes

Table 5.19: *Post-referendum surveys*



	UK 2011	Iceland 2010	Ireland 2008	Netherlands 2005	Spain 2005	Scotland 1997
Voted	0.58*** (0.01)	1.58*** (0.33)	2.20*** (0.14)	1.54*** (0.13)	1.59*** (0.14)	2.31*** (0.16)
(Intercept)	0.26*** (0.01)	-0.41 (0.32)	-0.52*** (0.12)	0.70*** (0.09)	-0.50*** (0.12)	-0.48*** (0.15)
Deviance	2532.26	942.64	1849.40	1486.26	1938.92	1945.00
Dispersion	0.14					
Num. obs.	18410	853	1982	1787	1666	2296
AIC		946.64	1853.40	1490.26	1942.92	1949.00
BIC		956.14	1864.58	1501.23	1953.76	1960.47
Log Likelihood		-471.32	-924.70	-743.13	-969.46	-972.50

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.20:** *Models underlying Figure 6 (Political Interest) in the paper.*

	Iceland 2011	UK 2011	Iceland 2010	Scotland 1997
Voted	1.57*** (0.25)	0.28*** (0.01)	0.43*** (0.16)	1.22*** (0.11)
(Intercept)	1.19*** (0.19)	0.58*** (0.01)	0.78*** (0.13)	0.67*** (0.09)
AIC	457.23		992.34	2058.50
BIC	466.55		1001.89	2069.98
Log Likelihood	-226.61		-494.17	-1027.25
Deviance	453.23	2365.08	988.34	2054.50
Num. obs.	782	16060	875	2296
Dispersion		0.15		

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

**Table 5.21:** *Models underlying Figure 6 (Turnout) in the paper.*

## Appendix to Chapter 4

### Research Design

#### Missing values

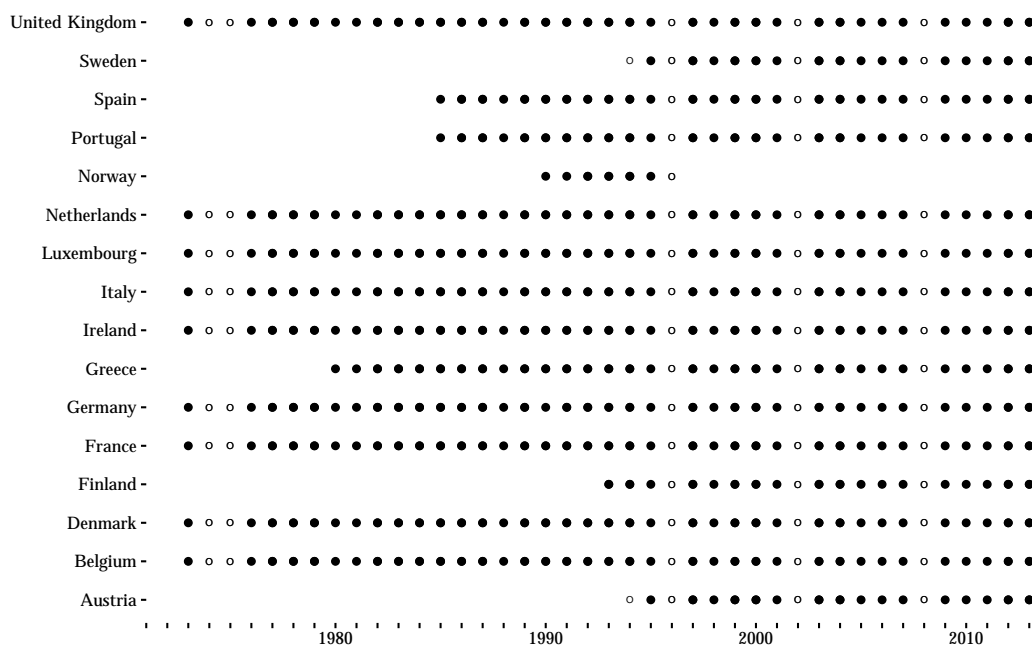


Figure 5.10: Observed (solid dots) and missing values (circles).

Missing	Referendums
No	0.07
Yes	0.05
Difference	-0.01 (0.43)

Table 5.22: Comparison of the share of referendums among missing and non-missing observations on the variable democratic satisfaction (p-value in parentheses).

	Mean	Standard Deviation
Raw	59.84	17.08
Interpolated	60.08	16.83
Difference	-0.24	0.25
p-value	0.77	0.83

**Table 5.23:** *Comparison of means and standard deviations for raw and interpolated time-series of satisfaction with democracy.*

## Tests for time trends

	Model 1	Model 2
Year	0.25 (0.03) <sup>***</sup>	0.83 (0.24) <sup>***</sup>
Belgium		-0.68 (0.26) <sup>***</sup>
Denmark		0.13 (0.26)
Finland		0.32 (0.32)
France		-0.53 (0.26) <sup>**</sup>
Germany		-1.32 (0.26) <sup>***</sup>
Greece		-1.51 (0.27) <sup>***</sup>
Ireland		-0.53 (0.26) <sup>**</sup>
Italy		-0.22 (0.26)
Luxembourg		-0.33 (0.26)
Netherlands		-0.40 (0.26)
Norway		3.18 (1.76) <sup>*</sup>
Portugal		-2.44 (0.28) <sup>***</sup>
Spain		-0.81 (0.28) <sup>***</sup>
Sweden		0.94 (0.35) <sup>***</sup>
United Kingdom		-0.43 (0.26) <sup>*</sup>
R <sup>2</sup>	0.07	0.40
Adj. R <sup>2</sup>	0.07	0.39
Num. obs.	1047	1047

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.24:** Time-series cross-sectional models of the time trend. In Model 2, the time trend is allowed to be different by country by interacting the time variable with country dummies. Both models are fixed-effects models.

	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Year	1.0*** (0.1)	1.2*** (0.1)	0.3*** (0.1)	0.3*** (0.1)	0.6*** (0.1)	0.5*** (0.0)	0.4*** (0.0)	4.0*** (0.8)	0.0 (0.2)	1.8*** (0.1)	0.4*** (0.0)
(Intercept)	-1834.3*** (100.6)	-2239.6*** (272.3)	-542.1*** (115.3)	-527.4*** (175.1)	-1188.6*** (131.4)	-925.2*** (91.5)	-784.2*** (97.4)	-7914.8*** (1543.8)	22.8 (435.5)	-3478.7*** (165.9)	-732.5*** (82.2)
R <sup>2</sup>	0.8	0.6	0.2	0.1	0.5	0.6	0.5	0.8	0.0	0.9	0.5
Adj. R <sup>2</sup>	0.8	0.6	0.2	0.1	0.5	0.6	0.5	0.7	-0.0	0.9	0.5
Num. obs.	82	42	82	82	82	82	82	10	57	38	82
RMSE	5.4	5.3	6.2	9.4	7.1	4.9	5.2	3.7	13.5	2.8	4.4

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.25:** *Estimates of time trends within country time-series. Observational units are half-years.*

	AT	BE	DK	FI	FR	DE	GR	IR	IT	LU	NL	NO	PT	ES	SE	UK
Time	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	-0.1	-0.0	-0.0	-0.0	-0.0	-0.4	-0.2	-0.1	-0.1	-0.0
	(0.1)	(0.1)	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)	(1.2)	(0.1)	(0.1)	(0.1)	(0.0)
(Intercept)	31.9	-74.3	77.2	81.2	31.6	46.0	124.8	79.4	12.9	52.7	41.0	762.7	305.2	250.1	105.8	40.0
	(216.9)	(113.8)	(82.5)	(228.6)	(123.7)	(101.6)	(154.0)	(98.0)	(83.7)	(83.6)	(86.3)	(2397.6)	(204.0)	(181.7)	(162.7)	(68.0)
R <sup>2</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. R <sup>2</sup>	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.1	0.0	0.0	-0.0	-0.0
Num. obs.	37	81	81	41	81	81	66	81	81	81	81	9	56	56	37	81
RMSE	3.5	6.0	4.4	4.3	6.5	5.4	6.0	5.2	4.4	4.4	4.6	4.7	6.2	5.5	2.6	3.6

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.26:** *Estimates of time-trends in first-differenced data within country time-series. Observational units are half-years.*

## Tests for serial correlation of errors

	Model 1
Residuals $_{t-1}$	0.85*** (0.02)
(Intercept)	-0.00 (0.16)
R <sup>2</sup>	0.73
Adj. R <sup>2</sup>	0.73
Num. obs.	1046
RMSE	5.28

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.27:** *Time-series cross-sectional models of autocorrelation in residuals from the time-trend model, based on a fixed-effects model.*



	AT	BE	DK	FI	FR	DE	GR	IR	IT	LU	NL	NO	PT	ES	SE	UK
Residuals $_{t-1}$	0.7*** (0.1)	0.8*** (0.1)	0.6*** (0.1)	0.7*** (0.1)	0.5*** (0.1)	0.9*** (0.0)	0.9*** (0.1)	0.8*** (0.1)	0.8*** (0.1)	0.6*** (0.1)	0.6*** (0.1)	-0.0 (0.4)	0.6*** (0.1)	0.9*** (0.1)	0.5*** (0.2)	0.7*** (0.1)
(Intercept)	-0.2 (0.6)	-0.1 (0.6)	0.1 (0.4)	0.1 (0.6)	-0.1 (0.6)	0.5 (0.6)	-0.2 (0.7)	-0.2 (0.6)	-0.3 (0.5)	0.1 (0.4)	-0.0 (0.5)	0.1 (0.7)	0.4 (0.7)	-0.6 (0.8)	-0.1 (0.4)	-0.0 (0.4)
R <sup>2</sup>	0.5	0.7	0.4	0.5	0.2	0.8	0.8	0.7	0.6	0.3	0.4	0.0	0.5	0.8	0.2	0.4
Adj. R <sup>2</sup>	0.5	0.7	0.4	0.4	0.2	0.8	0.8	0.7	0.6	0.3	0.4	-0.1	0.5	0.8	0.2	0.4
Num. obs.	37	81	81	41	81	81	66	81	81	81	81	9	56	56	37	81
RMSE	3.5	5.7	3.9	3.9	5.6	5.1	5.9	5.3	4.3	3.9	4.1	2.1	5.4	6.1	2.5	3.3

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.28:** *Time-series models of autocorrelation in the residuals from the time-trend models.*

**Tests for dependence**

<hr/>	
	Model 1
<hr/>	
Satisfaction <sub><i>t</i>-1</sub>	0.83*** (0.02)
R <sup>2</sup>	0.72
Adj. R <sup>2</sup>	0.71
Num. obs.	1044
<hr/>	

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.29:** *Time-series cross-sectional models of autocorrelation in the dependent variable.*

	AT	BE	DK	FI	FR	DE	GR	IR	IT	LU	NL	NO	PT	ES	SE	UK
Satisfaction <sub>t-1</sub>	0.9*** (0.1)	0.8*** (0.1)	0.9*** (0.0)	0.9*** (0.1)	0.6*** (0.1)	0.9*** (0.0)	0.9*** (0.1)	0.9*** (0.1)	0.9*** (0.0)	0.8*** (0.1)	0.8*** (0.1)	0.7** (0.2)	1.0*** (0.1)	1.0*** (0.1)	0.9*** (0.0)	0.8*** (0.1)
(Intercept)	9.7 (5.9)	9.3** (3.6)	7.9*** (2.9)	10.4** (5.1)	21.7*** (4.8)	6.1** (2.8)	2.2 (2.6)	8.3** (3.7)	2.7* (1.5)	15.0*** (4.6)	14.2*** (4.6)	21.5 (16.3)	1.7 (2.7)	1.4 (3.5)	4.7 (3.1)	10.0*** (3.4)
R <sup>2</sup>	0.8	0.7	0.9	0.8	0.3	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.8	0.8	0.9	0.7
Adj. R <sup>2</sup>	0.7	0.7	0.9	0.8	0.3	0.8	0.8	0.7	0.8	0.7	0.6	0.6	0.8	0.8	0.9	0.7
Num. obs.	37	81	81	41	81	81	66	81	81	81	81	9	56	56	37	81
RMSE	3.4	5.8	4.2	4.1	5.8	5.2	5.9	5.0	4.3	4.2	4.3	4.3	6.3	5.6	2.6	3.4

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.30:** *Time-series models of autocorrelation in the dependent variable.*

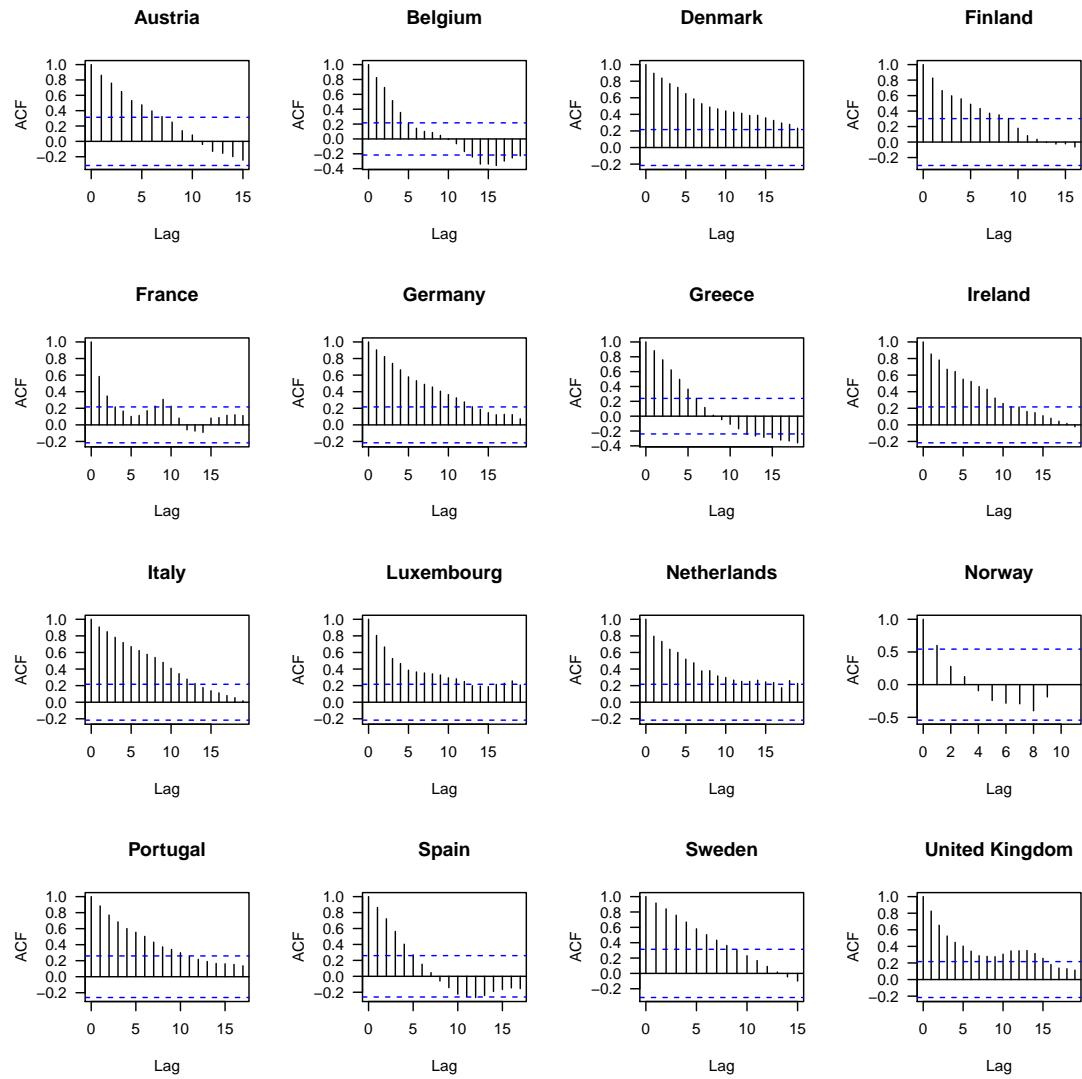


Figure 5.11: Autocorrelation functions for individual country time-series.

## Time-Series Cross-Sectional Evidence

	Model 1	Model 2	Model 3
Referendum	1.70 (1.39)	1.17 (1.13)	0.60 (0.64)
Election	1.12 (0.88)	1.19* (0.71)	1.56*** (0.45)
Growth	1.01*** (0.12)	0.89*** (0.10)	0.16*** (0.05)
(Intercept)			-0.54** (0.21)
R <sup>2</sup>	0.13	0.45	0.02
Adj. R <sup>2</sup>	0.13	0.44	0.02
Num. obs.	1047	1047	1031
RMSE			4.95

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

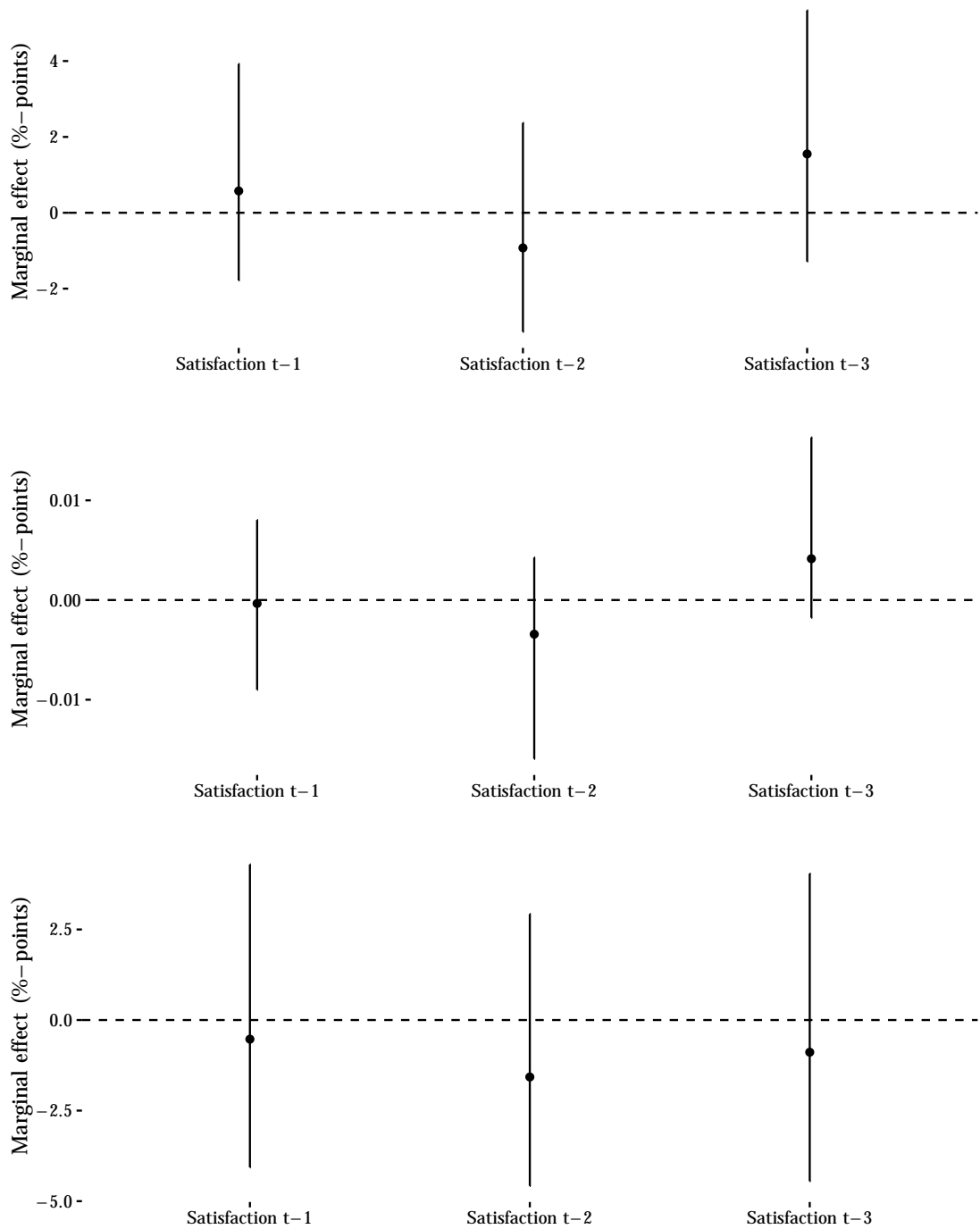
**Table 5.31:** *Time-series cross-sectional models regressing the share of satisfied citizens on a single referendum dummy meant to capture the instantaneous effect of a referendum. Model 1 regresses the the share of satisfied citizens on the referendum dummy and includes a common time trend along with fixed effects. Model 2 allows the time trend to vary by country. Time trend estimates are omitted for readability of the table. Model 3 regresses the first differences in the share of satisfied citizens on a referendum dummy. Models 1 and 2 are fixed-effects models.*

	Model 1	Model 2
Satisfaction <sub>t-1</sub>	0.01 (0.03)	-0.00 (0.03)
Satisfaction <sub>t-2</sub>	-0.03 (0.03)	-0.03 (0.04)
Satisfaction <sub>t-3</sub>	0.03 (0.03)	0.04 (0.03)
Election	-0.48 (0.47)	-0.52 (0.49)
Growth	-0.03 (0.05)	-0.01 (0.05)
$\kappa_1$		0.93 (0.49)*
$\kappa_2$		1.27 (0.55)**
$\kappa_3$		-0.23 (0.86)
$\kappa_4$		1.74 (0.66)***
$\kappa_5$		1.63 (0.84)*
$\kappa_6$		1.30 (0.97)
$\kappa_7$		1.45 (1.20)
$\kappa_8$		2.44 (1.00)**
$\kappa_9$		2.76 (1.31)**
$\kappa_{10}$		-14.15 (2780.94)
$\kappa_{11}$		-13.87 (2899.37)
$\kappa_{12}$		-13.88 (2880.83)
$\kappa_{13}$		-13.74 (2916.76)
$\kappa_{14}$		-13.77 (2928.07)
$\kappa_{15}$		3.25 (1.34)**
$\kappa_{16}$		-13.25 (3256.09)
$\kappa_{17}$		-13.22 (3277.78)
$\kappa_{18}$		-13.26 (3294.87)
$\kappa_{19}$		4.51 (1.52)***
$\kappa_{20}$		-12.49 (4365.34)
$\kappa_{21}$		-12.32 (4352.32)
$\kappa_{22}$		-12.42 (4347.21)
$\kappa_{23}$		-12.42 (4356.59)
$\kappa_{24}$		-12.51 (4371.58)
$\kappa_{25}$		-12.44 (4357.71)
$\kappa_{26}$		-12.25 (4343.09)
$\kappa_{27}$		-12.62 (4361.25)
$\kappa_{28}$		-12.57 (4347.11)
$\kappa_{29}$		-12.50 (4366.65)
$\kappa_{30}$		-12.27 (4349.75)
$\kappa_{31}$		-12.59 (4328.99)
$\kappa_{32}$		6.87 (1.72)***
$\kappa_{33}$		-12.25 (7603.63)
$\kappa_{34}$		-12.41 (7603.93)
$\kappa_{35}$		-12.08 (7573.98)
$\kappa_{36}$		27.01 (10754.01)
Finland	-1.36 (1.10)	-1.93 (1.31)
France	-0.49 (0.76)	-0.81 (0.83)
Ireland	1.48 (0.54)***	1.79 (0.59)***
Italy	1.52 (0.87)*	1.73 (0.97)*
Luxembourg	-2.03 (1.09)*	-3.78 (1.72)**
Netherlands	-2.02 (1.09)*	-3.21 (1.54)**
Norway	0.09 (1.13)	0.47 (1.17)
Spain	-1.53 (1.13)	-2.27 (1.29)*
Sweden	-0.45 (0.84)	-0.93 (0.91)
United Kingdom	-1.24 (0.88)	-3.82 (1.84)**
(Intercept)	-2.77 (1.25)**	-3.65 (1.45)**
AIC	376.75	403.06
BIC	449.88	640.75
Log Likelihood	-172.37	-149.53
Deviance	344.75	299.06
Num. obs.	714	714

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.32:** Models 1 and 2 from Table 2 in the manuscript – with temporal dummies ( $\kappa_t$ ) and country dummies shown.

The result of and likelihood ratio test of the two models against each other is  $\chi^2(36) = 45.69, p = 0.13$  .



**Figure 5.12:** Marginal effects of the key coefficients from Models 1, 2 and 3 in Table 1 in the manuscript. The first panel depicts, based on Model 1, the marginal effect for the three referendum dummies corresponding to a 10 %-point increase in democratic satisfaction. The second panel depicts, based on Model 2, the marginal effect for the three referendum dummies corresponding to a 10 %-point increase in democratic satisfaction. The third panel depicts, based on Model 3, the marginal effect for the three referendum dummies corresponding to an average change in democratic satisfaction.



## Average satisfaction

	Model 1	Model 2	Model 3
Referendum <sub>t+2</sub>	-0.04 (0.03)	-0.04 (0.03)	-0.01 (0.01)
Referendum <sub>t+1</sub>	-0.01 (0.03)	-0.02 (0.03)	0.01 (0.01)
Referendum	0.01 (0.03)	0.01 (0.03)	0.02 (0.01)
Referendum <sub>t-1</sub>	-0.01 (0.03)	-0.02 (0.03)	-0.03** (0.01)
Referendum <sub>t-2</sub>	-0.01 (0.03)	-0.01 (0.03)	0.01 (0.01)
Referendum <sub>t-3</sub>	-0.02 (0.03)	-0.01 (0.03)	-0.01 (0.01)
Election	0.03 (0.02)	0.03* (0.02)	0.04*** (0.01)
Growth	0.01*** (0.00)	0.01*** (0.00)	0.00*** (0.00)
(Intercept)			-0.01 (0.00)
R <sup>2</sup>	0.39	0.54	0.03
Adj. R <sup>2</sup>	0.38	0.52	0.02
Num. obs.	999	999	999
RMSE			0.10

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.33:** Time-series cross-sectional models regressing average democratic satisfaction on referendum dummy variables and controls. Model 1 regresses average democratic satisfaction on the referendum dummies and includes a common time trend along with fixed effects. Model 2 allows the time trend to vary by country. Time trend estimates are omitted for readability of the table. Model 3 regresses average democratic satisfaction on referendum dummies. Models 1 and 2 are fixed-effects models.

	Model 1	Model 2	Model 3
Mean Satisfaction <sub>t-1</sub>	1.32 (1.36)	0.83 (1.47)	
Mean Satisfaction <sub>t-2</sub>	-1.79 (1.68)	-1.81 (1.78)	
Mean Satisfaction <sub>t-3</sub>	0.75 (1.13)	0.98 (1.21)	
$\Delta$ Mean Satisfaction <sub>t-1</sub>			0.16 (1.43)
$\Delta$ Mean Satisfaction <sub>t-2</sub>			-0.88 (1.46)
$\Delta$ Mean Satisfaction <sub>t-3</sub>			-1.59 (1.47)
Election	-0.47 (0.47)	-0.52 (0.49)	-0.41 (0.45)
Growth	-0.03 (0.05)	-0.02 (0.05)	0.00 (0.05)
(Intercept)	-3.08** (1.53)	-3.37* (1.77)	-2.29*** (0.18)
AIC	376.42	403.94	416.97
BIC	449.56	641.62	444.17
Log Likelihood	-172.21	-149.97	-202.49
Deviance	344.42	299.94	404.97
Num. obs.	714	714	687

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.34:** *Time-series cross-sectional models regressing the referendum dummy on mean democratic satisfaction and controls. Model 1 is a simple fixed effects model. Model 2 incorporates temporal dummies – these are omitted for readability of the table. Model 3 regresses the referendum dummy on the first differences in the average satisfaction. Models 1 and 2 are fixed-effects models.*

## Share of very satisfied citizens

	Model 1	Model 2	Model 3
Referendum <sub>t+2</sub>	-2.49 (1.94)	-2.47 (1.79)	-0.15 (0.64)
Referendum <sub>t+1</sub>	-1.80 (1.95)	-1.86 (1.81)	0.58 (0.66)
Referendum	-1.67 (1.95)	-0.94 (1.82)	0.94 (0.67)
Referendum <sub>t-1</sub>	-1.74 (1.95)	-1.17 (1.82)	-1.28* (0.71)
Referendum <sub>t-2</sub>	-1.63 (1.97)	-0.40 (1.83)	0.19 (0.69)
Referendum <sub>t-3</sub>	-1.49 (1.95)	0.05 (1.80)	-0.33 (0.74)
Election	1.33 (1.24)	1.37 (1.13)	1.03** (0.48)
Growth	-0.54*** (0.16)	-0.44*** (0.15)	0.13** (0.07)
(Intercept)			-0.73*** (0.26)
R <sup>2</sup>	0.56	0.64	0.03
Adj. R <sup>2</sup>	0.54	0.61	0.01
Num. obs.	999	999	549
RMSE			3.84

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.35:** Time-series cross-sectional models regressing the share of very satisfied citizens on referendum dummy variables and controls. Model 1 regresses the share of very satisfied citizens on the referendum dummies and includes a common time trend along with fixed effects. Model 2 allows the time trend to vary by country. Time trend estimates are omitted for readability of the table. Model 3 regresses the first differences in the share of very satisfied citizens on referendum dummies. Models 1 and 2 are fixed-effects models.

	Model 1	Model 2	Model 3
Very Satisfied <sub>t-1</sub>	0.04 (0.03)	0.04 (0.03)	
Very Satisfied <sub>t-2</sub>	-0.04 (0.04)	-0.04 (0.04)	
Very Satisfied <sub>t-3</sub>	0.01 (0.02)	0.01 (0.02)	
$\Delta$ Very Satisfied <sub>t-1</sub>			0.01 (0.06)
$\Delta$ Very Satisfied <sub>t-2</sub>			-0.05 (0.07)
$\Delta$ Very Satisfied <sub>t-3</sub>			-0.12** (0.06)
Election	-0.49 (0.47)	-0.54 (0.49)	-0.32 (0.65)
Growth	-0.02 (0.05)	-0.02 (0.06)	-0.04 (0.10)
(Intercept)	-2.37*** (0.48)	-3.31*** (0.71)	-1.98*** (0.36)
AIC	376.06	403.72	181.11
BIC	449.20	641.40	202.09
Log Likelihood	-172.03	-149.86	-84.55
Deviance	344.06	299.72	169.11
Num. obs.	714	714	244

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.36:** *Time-series cross-sectional models regressing the referendum dummy on the share of very satisfied citizens and controls. Model 1 is a simple fixed effects model. Model 2 incorporates temporal dummies – these are omitted for readability of the table. Model 3 regresses the referendum dummy on the first differences in the share of very satisfied citizens. Models 1 and 2 are fixed-effects models.*

## Share of very dissatisfied citizens

	Model 1	Model 2	Model 3
Referendum <sub>t+2</sub>	0.56 (0.73)	0.70 (0.66)	0.49 (0.59)
Referendum <sub>t+1</sub>	-0.37 (0.74)	-0.07 (0.66)	-0.57 (0.61)
Referendum	-1.01 (0.74)	-0.55 (0.67)	-0.31 (0.61)
Referendum <sub>t-1</sub>	-0.29 (0.74)	0.08 (0.67)	0.69 (0.65)
Referendum <sub>t-2</sub>	-0.54 (0.74)	-0.03 (0.67)	-1.34** (0.64)
Referendum <sub>t-3</sub>	0.02 (0.74)	0.47 (0.66)	0.87 (0.68)
Election	-0.45 (0.47)	-0.52 (0.42)	-0.95** (0.44)
Growth	-0.59*** (0.06)	-0.57*** (0.06)	-0.12** (0.06)
(Intercept)			0.56** (0.24)
R <sup>2</sup>	0.13	0.33	0.03
Adj. R <sup>2</sup>	0.13	0.31	0.02
Num. obs.	999	999	549
RMSE			3.53

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.37:** Time-series cross-sectional models regressing the share of very dissatisfied citizens on referendum dummy variables and controls. Model 1 regresses the share of very dissatisfied citizens on the referendum dummies and includes a common time trend along with fixed effects. Model 2 allows the time trend to vary by country. Time trend estimates are omitted for readability of the table. Model 3 regresses the first differences in the share of very dissatisfied citizens on referendum dummies. Models 1 and 2 are fixed-effects models.

	Model 1	Model 2	Model 3
Very Dissatisfied <sub>t-1</sub>	-0.04 (0.05)	-0.02 (0.05)	
Very Dissatisfied <sub>t-2</sub>	0.05 (0.06)	0.05 (0.06)	
Very Dissatisfied <sub>t-3</sub>	-0.02 (0.05)	-0.04 (0.05)	
$\Delta$ Very Dissatisfied <sub>t-1</sub>			0.02 (0.06)
$\Delta$ Very Dissatisfied <sub>t-2</sub>			0.05 (0.06)
$\Delta$ Very Dissatisfied <sub>t-3</sub>			0.05 (0.06)
Election	-0.48 (0.47)	-0.51 (0.49)	-0.38 (0.66)
Growth	-0.03 (0.05)	-0.02 (0.05)	-0.03 (0.10)
(Intercept)	-2.15*** (0.42)	-3.35*** (0.64)	-1.93*** (0.35)
AIC	377.09	404.27	184.13
BIC	450.22	641.96	205.11
Log Likelihood	-172.55	-150.14	-86.06
Deviance	345.09	300.27	172.13
Num. obs.	714	714	244

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.38:** *Time-series cross-sectional models regressing the referendum dummy on the share of very dissatisfied citizens and controls. Model 1 is a simple fixed effects model. Model 2 incorporates temporal dummies – these are omitted for readability of the table. Model 3 regresses the referendum dummy on the first differences in the share of very dissatisfied citizens. Models 1 and 2 are fixed-effects models.*

## Discussion

## Time-Series Evidence

## Models with time trends

	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Referendum	1.6 (2.1)	1.2 (5.4)	1.6 (3.2)	-0.7 (1.8)	2.2 (1.8)	2.5 (5.1)	-2.6 (4.8)	9.4** (3.1)	3.6 (7.7)	2.4 (2.8)	-1.5 (3.2)
Election	1.1 (1.5)	2.1 (2.5)	1.9 (2.1)	-1.1 (2.2)	-1.1 (2.3)	0.2 (1.8)	0.6 (1.5)	2.6 (3.0)	3.5 (4.1)	2.0 (1.5)	1.3 (1.5)
Growth	0.5* (0.3)	0.6** (0.3)	0.8* (0.5)	1.7*** (0.2)	0.8** (0.3)	0.1 (0.1)	1.2*** (0.3)	0.4 (0.7)	4.2*** (0.7)	0.2 (0.2)	0.3 (0.2)
Year	1.0*** (0.1)	1.3*** (0.1)	0.3*** (0.1)	0.4*** (0.1)	0.7*** (0.1)	0.5*** (0.0)	0.5*** (0.0)	3.1*** (0.7)	0.7*** (0.2)	1.8*** (0.1)	0.4*** (0.0)
Constant	-1883.2*** (103.3)	-2513.8*** (296.9)	-625.1*** (124.7)	-658.3*** (138.1)	-1357.8*** (153.8)	-920.0*** (93.4)	-887.9*** (91.7)	-6173.1*** (1370.1)	-1347.1*** (396.7)	-3555.2*** (173.0)	-747.4*** (83.0)
R <sup>2</sup>	0.8	0.7	0.3	0.5	0.6	0.6	0.6	0.9	0.4	0.9	0.6
Adj. R <sup>2</sup>	0.8	0.7	0.3	0.5	0.5	0.6	0.6	0.9	0.4	0.9	0.5
Num. obs.	82	42	82	82	82	82	82	10	57	38	82
RMSE	5.4	5.1	6.2	7.1	6.9	5.0	4.7	2.7	10.4	2.7	4.4

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.39:** Time-series models regressing the share of citizens satisfied with the way democracy works in their country on a referendum dummy and a linear time trend.

	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Referendum	1.5 (2.1)	0.8 (5.4)	1.5 (3.2)	-0.9 (1.8)	2.9 (1.9)	2.7 (5.0)	-2.6 (4.8)	11.5* (4.0)	4.2 (7.6)	2.4 (2.8)	-1.5 (3.2)
Referendum <sub>t-1</sub>	0.3 (2.1)	-8.1 (6.0)	-1.8 (3.2)	-3.1 (1.8)	1.5 (1.9)	2.9 (5.0)	-2.6 (4.9)	4.9 (4.9)	10.2 (7.5)	0.6 (2.1)	-0.9 (3.2)
Election	0.9 (1.5)	3.7 (2.8)	2.3 (2.2)	-1.2 (2.3)	-0.6 (2.3)	0.1 (1.8)	0.6 (1.5)	3.5 (3.4)	4.2 (4.0)	2.0 (1.5)	1.2 (1.5)
Growth	0.6** (0.3)	0.5* (0.3)	0.8* (0.5)	1.7*** (0.2)	0.7** (0.3)	0.1 (0.1)	1.2*** (0.3)	0.7 (0.8)	4.2*** (0.7)	0.2 (0.2)	0.4 (0.2)
Year	1.0*** (0.1)	1.2*** (0.2)	0.3*** (0.1)	0.4*** (0.1)	0.7*** (0.1)	0.5*** (0.0)	0.5*** (0.0)	2.1 (1.3)	0.8*** (0.2)	1.8*** (0.1)	0.4*** (0.0)
Constant	-1837.0*** (101.4)	-2398.2*** (336.8)	-624.7*** (126.9)	-707.5*** (143.2)	-1376.8*** (155.9)	-881.9*** (95.0)	-881.4*** (94.3)	-4042.4 (2515.5)	-1496.7*** (410.0)	-3562.5*** (177.2)	-726.6*** (84.3)
R <sup>2</sup>	0.8	0.7	0.3	0.5	0.6	0.6	0.6	0.9	0.5	0.9	0.5
Adj. R <sup>2</sup>	0.8	0.6	0.2	0.5	0.5	0.6	0.6	0.8	0.4	0.9	0.5
Num. obs.	81	41	81	81	81	81	81	9	56	38	81
RMSE	5.2	5.2	6.2	7.0	6.8	4.9	4.8	3.0	10.3	2.8	4.4

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.40:** *Time-series models regressing the share of citizens satisfied with the way democracy works in their country on a referendum dummy, its first lag and a linear time trend.*



	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Referendum	1.2 (2.0)	-0.4 (5.5)	1.3 (3.3)	-0.8 (1.8)	3.7* (1.9)	2.8 (5.0)	-2.6 (4.9)	11.9 (4.7)	5.1 (10.8)	2.6 (2.8)	-1.5 (3.2)
Referendum <sub>t-1</sub>	0.5 (2.0)	-9.2 (6.0)	-2.0 (3.2)	-3.2* (1.8)	3.0 (2.1)	3.0 (5.0)	-2.7 (4.9)	5.7 (6.0)	10.4 (7.6)	1.7 (2.8)	-1.0 (3.2)
Referendum <sub>t-2</sub>	1.7 (2.0)	-2.9 (5.4)	-3.0 (3.2)	-3.1 (1.9)	3.5* (2.0)	-0.4 (5.0)	-2.4 (4.9)		2.8 (7.7)	2.6 (2.1)	-1.0 (3.2)
Election	1.6 (1.5)	3.8 (2.8)	2.1 (2.2)	-1.4 (2.3)	-1.2 (2.3)	-0.1 (1.8)	0.5 (1.5)	3.4 (4.0)	4.4 (4.3)	2.3 (1.6)	1.1 (1.5)
Growth	0.6** (0.3)	0.4 (0.3)	0.9* (0.5)	1.7*** (0.2)	0.6* (0.4)	0.2 (0.1)	1.3*** (0.3)	0.8 (1.0)	4.2*** (0.7)	0.2 (0.2)	0.4* (0.2)
Year	0.9*** (0.0)	1.1*** (0.2)	0.3*** (0.1)	0.4*** (0.1)	0.7*** (0.1)	0.5*** (0.0)	0.5*** (0.0)	1.7 (1.7)	0.8*** (0.2)	1.8*** (0.1)	0.4*** (0.0)
Constant	-1790.7*** (99.1)	-2141.7*** (379.8)	-632.0*** (129.2)	-766.5*** (149.3)	-1326.5*** (156.5)	-850.2*** (97.1)	-878.4*** (97.6)	-3262.8 (3446.9)	-1486.7*** (431.9)	-3586.4*** (183.9)	-707.9*** (86.4)
R <sup>2</sup>	0.8	0.7	0.3	0.6	0.6	0.6	0.6	0.9	0.5	0.9	0.5
Adj. R <sup>2</sup>	0.8	0.6	0.2	0.5	0.6	0.5	0.6	0.7	0.4	0.9	0.5
Num. obs.	80	40	80	80	80	80	80	8	55	37	80
RMSE	5.0	5.1	6.3	7.0	6.7	4.9	4.8	3.5	10.5	2.8	4.4

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.41:** Time-series models regressing the share of citizens satisfied with the way democracy works in their country on a referendum dummy, its first and second lag and a linear time trend.

First Differences Models

	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Referendum	0.12 (1.73)	-0.07 (4.48)	0.37 (3.20)	1.56 (1.28)	0.89 (1.15)	1.02 (4.45)	-0.36 (4.61)	7.76 (4.54)	-2.92 (3.78)	-4.19 (2.55)	0.47 (2.61)
Election	2.07 (1.25)	1.83 (2.13)	7.15*** (2.21)	0.38 (1.66)	2.19 (1.44)	2.37 (1.57)	1.17 (1.44)	4.56 (4.67)	1.42 (1.99)	1.75 (1.39)	1.54 (1.23)
Growth	0.07 (0.22)	0.09 (0.22)	0.33 (0.44)	0.29* (0.15)	0.02 (0.19)	-0.02 (0.13)	0.25 (0.25)	-0.05 (1.07)	0.95*** (0.27)	0.15 (0.17)	0.04 (0.18)
Constant	0.02 (0.67)	0.20 (0.89)	-1.46 (1.18)	-1.80* (0.99)	-0.55 (0.69)	0.07 (0.70)	-0.58 (0.80)	0.93 (4.04)	-2.99*** (1.00)	0.30 (0.58)	-0.13 (0.59)
R <sup>2</sup>	0.04	0.03	0.12	0.06	0.03	0.03	0.02	0.41	0.19	0.16	0.02
Adj. R <sup>2</sup>	-0.00	-0.05	0.09	0.02	-0.00	-0.01	-0.02	0.06	0.15	0.08	-0.02
Num. obs.	81	41	81	81	81	81	81	9	56	37	81
RMSE	4.35	4.38	6.20	5.11	4.40	4.41	4.58	4.25	5.12	2.51	3.61

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.42:** Time-series models regressing first differences in the share of citizens satisfied with the way democracy works in their country on a referendum dummy.

	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Referendum	-0.01 (1.74)	-0.12 (4.38)	0.18 (3.19)	1.60 (1.26)	0.41 (1.22)	1.03 (4.47)	-0.34 (4.64)	6.87 (4.07)	-2.84 (3.79)	-4.18 (2.59)	0.50 (2.63)
Referendum <sub>t-1</sub>	-1.26 (1.76)	-7.84 (4.80)	-4.34 (3.18)	-2.50* (1.28)	-1.36 (1.22)	1.08 (4.47)	1.57 (4.64)	-6.24 (4.08)	2.73 (3.72)	0.26 (2.60)	0.52 (2.64)
Election	1.93 (1.26)	3.37 (2.28)	7.44*** (2.21)	0.16 (1.63)	1.86 (1.47)	2.38 (1.58)	1.19 (1.45)	3.73 (4.18)	1.52 (2.01)	1.76 (1.42)	1.56 (1.24)
Growth	0.06 (0.22)	0.11 (0.21)	0.33 (0.44)	0.27* (0.15)	0.01 (0.19)	-0.02 (0.13)	0.24 (0.25)	-0.10 (0.95)	0.94*** (0.28)	0.14 (0.17)	0.05 (0.18)
Constant	0.19 (0.71)	0.16 (0.87)	-1.27 (1.18)	-1.08 (1.04)	-0.04 (0.83)	0.06 (0.70)	-0.60 (0.81)	2.00 (3.66)	-3.07*** (1.01)	0.30 (0.59)	-0.16 (0.61)
R <sup>2</sup>	0.04	0.09	0.14	0.10	0.05	0.03	0.02	0.63	0.20	0.16	0.02
Adj. R <sup>2</sup>	-0.01	-0.01	0.10	0.06	-0.00	-0.02	-0.03	0.26	0.14	0.05	-0.03
Num. obs.	81	41	81	81	81	81	81	9	56	37	81
RMSE	4.37	4.29	6.17	5.01	4.39	4.44	4.60	3.77	5.14	2.55	3.63

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.43:** *Time-series models regressing first differences in the share of citizens satisfied with the way democracy works in their country on a referendum dummy and its first lag.*

	DK	FI	FR	IR	IT	LU	NL	NO	ES	SE	UK
Referendum	-0.15 (1.75)	-0.16 (4.44)	0.11 (3.24)	1.55 (1.28)	0.55 (1.25)	1.00 (4.52)	-0.31 (4.70)	7.46 (4.32)	-5.25 (5.21)	-4.12 (2.63)	0.54 (2.66)
Referendum <sub>t-1</sub>	-1.08 (1.77)	-7.82 (4.86)	-4.39 (3.23)	-2.51* (1.29)	-0.95 (1.32)	1.04 (4.52)	1.61 (4.70)	-5.65 (4.32)	2.42 (3.73)	0.33 (2.64)	0.56 (2.67)
Referendum <sub>t-2</sub>	2.27 (1.75)	1.30 (4.42)	-0.88 (3.22)	0.83 (1.30)	1.30 (1.26)	-3.19 (4.52)	1.44 (4.71)		-4.87 (3.75)	0.83 (1.91)	1.03 (2.64)
Election	1.85 (1.31)	3.30 (2.32)	7.39*** (2.24)	0.25 (1.65)	1.48 (1.51)	2.35 (1.60)	1.22 (1.47)	4.28 (4.42)	0.98 (2.09)	1.85 (1.45)	1.60 (1.26)
Growth	0.06 (0.22)	0.09 (0.22)	0.34 (0.46)	0.28* (0.15)	0.05 (0.20)	-0.02 (0.13)	0.23 (0.26)	-0.07 (0.99)	0.99*** (0.28)	0.13 (0.18)	0.05 (0.19)
Constant	0.01 (0.72)	0.29 (0.90)	-1.23 (1.22)	-1.31 (1.11)	-0.49 (0.95)	0.09 (0.71)	-0.60 (0.82)	1.30 (3.92)	-2.91*** (1.01)	0.27 (0.60)	-0.20 (0.62)
R <sup>2</sup>	0.06	0.10	0.14	0.11	0.06	0.04	0.02	0.68	0.23	0.16	0.02
Adj. R <sup>2</sup>	0.00	-0.04	0.09	0.05	-0.00	-0.03	-0.04	0.26	0.15	0.03	-0.04
Num. obs.	80	40	80	80	80	80	80	8	55	37	80
RMSE	4.37	4.34	6.24	5.07	4.41	4.48	4.66	3.94	5.14	2.58	3.67

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.44:** Time-series models regressing first differences in the share of citizens satisfied with the way democracy works in their country on a referendum dummy and its first and second lag.

## Decision Fatigue

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
$\Delta$ Referendum	0.83 (0.92)	0.77 (0.73)	1.11** (0.46)			
Referendum onset				2.26 (1.43)	1.78 (1.14)	0.73 (0.68)
Election	1.08 (0.89)	1.35* (0.70)	1.55*** (0.44)	1.13 (0.89)	1.39** (0.70)	1.57*** (0.45)
Growth	1.03*** (0.12)	0.91*** (0.10)	0.17*** (0.05)	1.03*** (0.12)	0.91*** (0.10)	0.17*** (0.05)
Year	0.30*** (0.03)	0.95*** (0.23)		0.30*** (0.03)	0.93*** (0.23)	
(Intercept)			-0.50** (0.21)			-0.54** (0.21)
R <sup>2</sup>	0.13	0.46	0.03	0.13	0.46	0.02
Adj. R <sup>2</sup>	0.13	0.45	0.02	0.13	0.45	0.02
Num. obs.	1033	1033	1031	1033	1033	1031
RMSE			4.94			4.95

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.45:** *Regression models regressing the share of satisfied citizens on a first-differenced referendum dummy (Models 1 to 3) and a referendum denoting only the first in a series of referendums (Models 4 to 6). Models 1 and 4 include a common time trend. Models 2 and 5 let the linear time trend vary by country. The dependent variable for Models 3 and 6 is the first differences in democratic satisfaction. Models 1, 2, 4 and 5 are fixed-effects models.*

	Model 1	Model 2	Model 3
Referendums	1.75*	1.30	0.63
	(1.02)	(0.83)	(0.48)
Referendums <sup>2</sup>	-0.26**	-0.22**	-0.08
	(0.12)	(0.10)	(0.06)
Election	1.09	1.16	1.56***
	(0.88)	(0.71)	(0.45)
Growth	1.01***	0.89***	0.17***
	(0.12)	(0.10)	(0.05)
Year	0.31***	0.93***	
	(0.03)	(0.23)	
(Intercept)			-0.53**
			(0.21)
R <sup>2</sup>	0.14	0.45	0.02
Adj. R <sup>2</sup>	0.13	0.44	0.02
Num. obs.	1047	1047	1031
RMSE			4.95

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

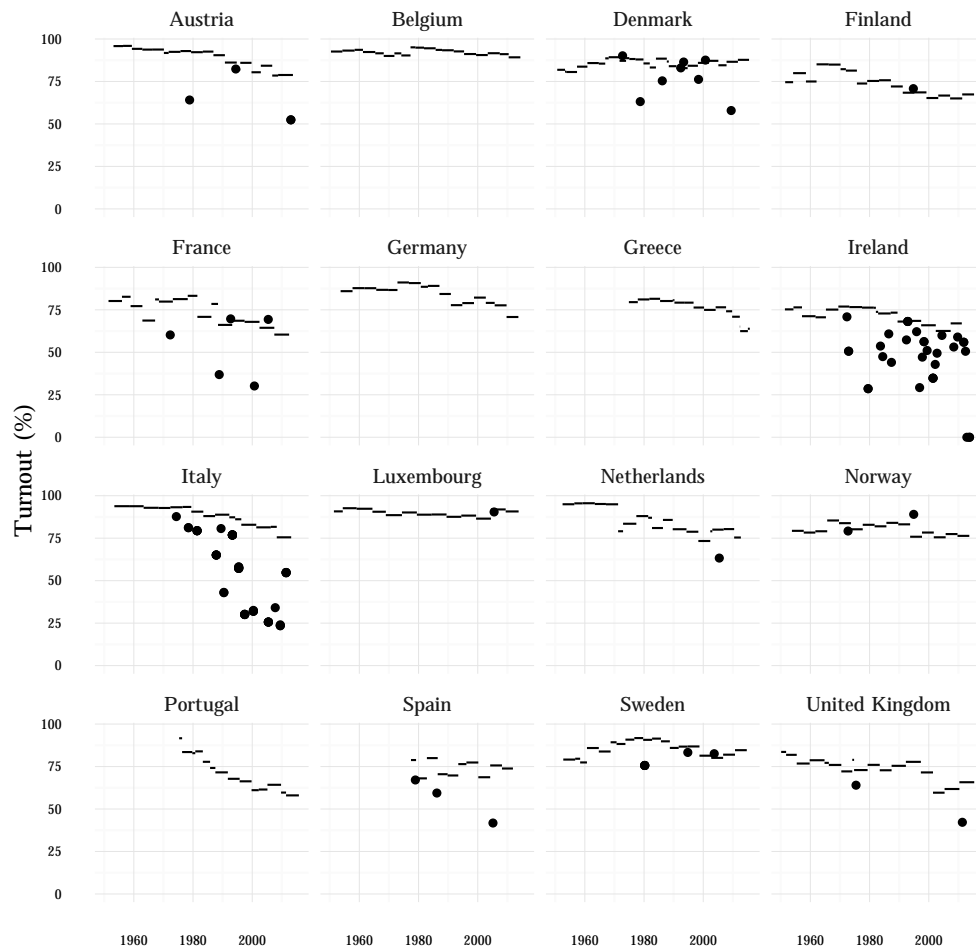
**Table 5.46:** *Regression models regressing the share of satisfied citizens on the quadratic polynomial of the count of referendums in a semester. Model 1 includes a common time trend, Model 2 lets the time trend vary by country and Model 3 replaces the dependent variable with its first differences. Models 1 and 2 are fixed-effects models.*

	Model 1	Model 2	Model 3
Referendum	2.72 (1.82)	2.27 (1.47)	1.19 (0.92)
# Referendums in 2y	-0.22 (0.34)	-0.67** (0.28)	0.11 (0.17)
Referendum × ...s in 2y	-0.20 (0.45)	-0.03 (0.36)	-0.17 (0.22)
Election	1.12 (0.88)	1.22* (0.71)	1.57*** (0.45)
Growth	1.01*** (0.12)	0.90*** (0.10)	0.17*** (0.06)
Year	0.31*** (0.03)	0.95*** (0.23)	
R <sup>2</sup>	0.13	0.46	0.02
Adj. R <sup>2</sup>	0.13	0.44	0.02
Num. obs.	1047	1047	1031

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.47:** *Time-series cross-sectional models including an interaction of the referendum dummy with the number of referendums in the last two years. Model 1 includes a common time trend, Model 2 lets the time trend vary by country and Model 3 replaces the dependent variable with its first differences. Models 1 and 2 are fixed-effects models.*

## Turnout



**Figure 5.13:** Turnout in national elections (line) and as comparison turnout in referendums (one point per referendum). Mean turnout in the referendums considered in this paper was 60.9%, while it was 81.2% in the same period for national elections and it was lower than mean election turnout in all countries considered but Norway.



	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Referendum $\times$ Turnout) $_{t+2}$	-0.03 (0.02)		-0.02 (0.02)		-0.01 (0.01)	
(Referendum $\times$ Turnout) $_{t+1}$	-0.02 (0.02)		-0.01 (0.02)		0.01 (0.01)	
Referendum $\times$ Turnout	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.01)	0.01 (0.01)
(Referendum $\times$ Turnout) $_{t-1}$	-0.02 (0.02)		-0.01 (0.02)		-0.02** (0.01)	
(Referendum $\times$ Turnout) $_{t-2}$	-0.01 (0.02)		-0.01 (0.02)		0.01 (0.01)	
(Referendum $\times$ Turnout) $_{t-3}$	-0.03 (0.02)		-0.02 (0.02)		-0.02 (0.01)	
Election	1.10 (0.89)	1.10 (0.88)	1.15 (0.71)	1.18* (0.71)	1.55*** (0.45)	1.56*** (0.45)
Growth	1.02*** (0.12)	1.01*** (0.12)	0.89*** (0.10)	0.89*** (0.10)	0.17*** (0.05)	0.16*** (0.05)
Year	0.32*** (0.03)	0.31*** (0.03)	1.01*** (0.26)	0.94*** (0.23)		
(Intercept)					-0.44** (0.22)	-0.53** (0.21)
R <sup>2</sup>	0.14	0.13	0.45	0.45	0.03	0.02
Adj. R <sup>2</sup>	0.13	0.13	0.44	0.44	0.02	0.02
Num. obs.	1043	1047	1043	1047	1028	1031
RMSE					4.95	4.95

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.48:** *Time-series cross-sectional models including interactions of the referendum dummy with turnout in the referendum, following (Sandler and Sandler, 2014). Models 1 and 2 include a common time trend, Models 3 and 4 let the time trend vary by country and Models 5 and 6 replace the dependent variable with its first differences. Models 1 to 4 are fixed-effects models.*

	Model 1
Turnout	-0.00 (0.03)
Growth	0.05 (0.15)
Election	2.41 (1.75)
(Intercept)	0.35 (1.69)
R <sup>2</sup>	0.03
Adj. R <sup>2</sup>	-0.02
Num. obs.	63
RMSE	4.07

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.49:** *Regression of satisfaction on the turnout in a referendum, based on a reduced sample of only the first-differences of semesters with a referendum.*

## Margin

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Referendum $\times$ Margin) $_{t+2}$	0.05 (0.06)		0.01 (0.05)		-0.04 (0.03)	
(Referendum $\times$ Margin) $_{t+1}$	0.08 (0.06)		0.03 (0.05)		-0.00 (0.03)	
Referendum $\times$ Margin	0.11* (0.06)	0.10 (0.06)	0.05 (0.05)	0.05 (0.05)	0.03 (0.03)	0.03 (0.03)
(Referendum $\times$ Margin) $_{t-1}$	0.05 (0.06)		-0.00 (0.05)		-0.04 (0.03)	
(Referendum $\times$ Margin) $_{t-2}$	0.08 (0.06)		0.03 (0.05)		0.03 (0.03)	
(Referendum $\times$ Margin) $_{t-3}$	0.04 (0.06)		-0.00 (0.05)		-0.04 (0.03)	
Election	1.19 (0.89)	1.15 (0.88)	1.19* (0.71)	1.21* (0.71)	1.59*** (0.45)	1.56*** (0.45)
Growth	1.01*** (0.12)	1.01*** (0.12)	0.89*** (0.10)	0.89*** (0.10)	0.16*** (0.06)	0.15*** (0.06)
Year	0.30*** (0.03)	0.31*** (0.03)	0.95*** (0.26)	0.92*** (0.24)	-0.01 (0.01)	-0.02 (0.01)
(Intercept)					27.47 (28.19)	30.55 (28.06)
R <sup>2</sup>	0.14	0.13	0.45	0.45	0.03	0.02
Adj. R <sup>2</sup>	0.13	0.13	0.43	0.44	0.02	0.02
Num. obs.	1043	1047	1043	1047	1028	1031
RMSE					4.96	4.95

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.50:** *Time-series cross-sectional models including interactions of the referendum dummy with the margin (absolute) between yes- and no-vote in a referendum, following (Sandler and Sandler, 2014). Models 1 and 2 include a common time trend, Models 3 and 4 let the time trend vary by country and Models 5 and 6 replace the dependent variable with its first differences. Models 1 to 4 are fixed-effects models.*

Model 1	
Margin	0.04 (0.04)
Growth	0.11 (0.15)
Election	2.40 (1.90)
(Intercept)	-0.77 (1.10)
R <sup>2</sup>	
	0.04
Adj. R <sup>2</sup>	
	-0.01
Num. obs.	
	57
RMSE	
	3.96

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 5.51:** *Regression of satisfaction on the margin between yes- and no-vote in a referendum, based on a reduced sample of only the first-differences for half-years with a referendum.*