Satisfaction with democracy as the evaluation of institutional structure, democratic process and economic performance

A comparative panel study on the sources of political support

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For Silvia and Ella.

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#### **Abstract**

This thesis analyses the sources of public evaluations of democratic regimes from a comparative, a longitudinal perspective and a case study of Spain. The main argument of the dissertation is that people's satisfaction with democracy (SWD) depends to a great degree on the quality of democratic processes and the institutional context. This conclusion does not deny the relevance of the welldocumented relationship, defended by many scholars, between the status of the economy and SWD. The importance of the economy is clearly confirmed by the current dissertation. Instead, this thesis argues that economic factors complement the political ones. As will be shown, the long-term effects of the economy on SWD even depend on the quality of democratic processes and vice versa. This argument is presented in three different papers. In the first study, based on time-series cross-sectional (TSCS) data from 58 democracies between 1990 and 2012 and pooled surveys from the Comparative Study of Electoral Systems, I show that although electoral proportionality increases SWD, fractionalized party systems and coalition governments decrease SWD. In the second study, based on a twofold longitudinal panel analysis of the Spanish case between 1985 and 2015, I show that despite the negative consequences of prolonged economic crisis, political factors, most notably corruption, are equally relevant to explain the decline of SWD within this context. The third article, based on TSCS panel data from 61 democracies between 1980 and 2014, shows that economic performance and democratic quality are equally important explanations to account for both cross-national and cross-time differences in SWD and that both factors are interrelated in their effects on SWD.

# List of original publications

This dissertation consists of three original publications. The author of the current dissertation is the main author of all three publications.

Christmann, Pablo and Mariano Torcal (2017). "The Effects of Government System Fractionalization on Satisfaction with Democracy" *Political Science Research and Methods*, online first, <a href="http://dx.doi.org/10.1017/psrm.2017.23">http://dx.doi.org/10.1017/psrm.2017.23</a>.

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#### 1. Introduction

Under what conditions are people satisfied with democracy? How do people evaluate the working of their political systems? Or, alternatively, what are the criteria that guide citizens' evaluations of the functioning of their democratic regimes? A number of efforts, mainly in the last decade, have been made to answer these questions, yet there is still much to be learned about peoples' evaluations and understandings of democracies. The academic debate has been reopened by the dramatic decline in satisfaction with democracy (SWD) that we can observe in the countries which have been most severely affected by the consequences of the financial crisis in 2008 and subsequent Great Recession. Countries as diverse as Cyprus, Greece, Ireland, Iceland, Italy, Portugal, Spain and Slovakia have suffered a tremendous decline in institutional trust and SWD (Armingeon and Guthmann 2014; Cordero and Simón 2016; Linde and Dahlberg 2016; Quaranta and Martini 2016b; Sousa et al 2014; Torcal 2017; Van Erkel and Van der Meer 2016). For example in Spain, the SWD declined from more than 70 per cent in 2005 to less than 20 per cent in 2015. Although there is no evidence of a worldwide decline in SWD when considering trends from the last three decades (see chapter 4), most Eastern and Central European have also suffered significant losses since the outbreak of the financial crisis (Linde and Dahlberg 2016). So how can we account for national trends in satisfaction with the functioning of democracy?

One obvious explanation for this decline is the status of the economy. That economic conditions have an impact on democracy is a common argument in comparative politics (Dahl 1989; Diamond 1992; Lipset 1994). Yet, while there are some longitudinal studies showing the importance of economic performance on SWD (Armingeon and Guthmann 2014; Halla et al. 2013; Quaranta and Martini 2016a), existing evidence is mostly limited to (Western) European democracies. Yet, what if we include other regions in the world like North and South America, Oceania and South-East Asia? Will this economic argument prevail once we additionally consider more low and middle income economies? Furthermore, what is the picture when we compare individual's perceptions at the respondent level? Can changes in the economic situation of a respondent or

individual's evaluations of the national economy account for changing levels of SWD in the same person over time?

A, second, less prominent explanation connects attitudes towards the functioning of the political system with SWD, emphasising the importance of the political process in shaping people's attitudes toward the democratic regime (Norris 2011). It is a compelling argument that citizens value a good and fair democratic process (Hibbing and Theiss-Morse 2001) but does this also imply that people evaluate the working of their political systems by democratic standards? What is the role of evaluations of the political process compared to economic performance? Do both operate independent of each other or is the effect of political performance contingent upon the status of the economy? Indeed, research conducted at the individual-level presents coherent evidence in favor of a relationship between a respondent's evaluation of the democratic processes and their level of SWD (Aarts and Thomassen 2008; Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Hofferbert and Klingemann 1999; Huang et al. 2008; Kronberg and Clarke 1994). But, does this mean that there is also an effect of democratic quality on SWD at the contextual-level? Do citizens, on average, tend to be more satisfied with democracy in countries that score well on "objective" indices of democratic quality, for example against the Freedom House Index?

Although it is possible to account for even major longitudinal trends in SWD by relying on economic and democratic performance explanations, both factors cannot fully explain the huge differences in SWD we can observe in cross-national comparisons. For example why do people living in Denmark, Luxembourg, Sweden, Norway and Switzerland tend to be much more satisfied with the working of democracy on average than people from Belgium, France, South Korea or Israel when we consider data from the past 30 years? How can we account for the huge contextual differences we observe empirically between different groups of countries? A compelling answer to this question is provided by a second set of political explanations that links the institutional framework of a country with public regime evaluations (Aarts and Thomassen 2008; Anderson et al. 2005; Berggren et al. 2004; Farrell and McAllister 2006; Lijphart 2012; Martini and Quaranta 2014; Quaranta and Martini 2016a; Singh 2014; Karp and Bowler 2001; Weil 1989).

The focus of the existing institutional research lies mostly in explaining persistent cross-national variation in SWD, since the

institutional framework is often rather stable over time. In short, these studies defend the view that people develop attitudes towards democracy through the incentives, disincentives and habits created by the rules of political institutions (Huang et al. 2008). An influential discussion on this topic was framed by Lijphart (1999; 2012), who differentiated between consensual and majoritarian types of democracy. So do institutional frameworks that promote consensualism have any positive impact on SWD? What is the effect of the electoral system, if any? What are the representational consequences at the individual-level? As I will argue, existing studies cannot answer these questions satisfactorily, mainly because the effect of electoral proportionality and party/government fractionalization can have quite distinct effects empirically on SWD.

In summary, this thesis contributes to the academic debate by investigating three different lines of explanations. It studies the effects of the institutional structure, the quality of democratic processes and also the (economic) outputs of the political systems. Contrary to the current dominant paradigm that explains the aggregate evolution of and the individual-level differences in SWD mainly through economic factors, I present evidence that evaluations of the political process are equally relevant to account for both changes in individuals' SWD over time and the evolution of SWD at the national level.

In line with the argument that economic development might intensify demands for democracy (Lipset 1959) and lead to a more critical citizenry (Norris 1999), it shows that the effects of economic performance on SWD are conditional on the democratic quality of regimes and vice versa. Only when a country has both a reasonable level of democratic quality and a good economic record will its citizens be content with the working of democracy in the long-term. It also demonstrates that citizens today are more critical about the economic record of their country than before the Financial Crisis in 2008. Finally, it provides cross-national evidence that proportionality and electoral representation increases SWD while other pluralistic factors such as party/ government system fractionalization produce the opposite effect.

Unlike most existing cross-sectional research on the topic, this thesis also focuses on the longitudinal causes for changing levels of SWD. This allows me to study factors that are responsible for the evolution of SWD both within respondents and within countries. This demanding aim is made possible by the combination of multi-

ple datasets and by the use of a new class of multilevel models, which enables the distinguishing of cross-sectional from longitudinal variation within the same models. Furthermore, at the national level I drastically expand the scope of analysis both geographical and temporal, analysing data on 61 democracies between 1980 and 2014, while the regional coverage extends to democracies in East and West Europe, North, South, and Central America, Oceania, South-East Asia and Sub-Saharan Africa. To analyse the causes of changing SWD at the respondent-level, this thesis makes use of the CIUPANEL<sup>1</sup>, a new electoral panel in Spain. Finally, to study the effects of political institutions on SWD and their interplay with voting behaviour, it draws on data from 38 democracies and 96 elections based on surveys from the existing four waves of the Comparative Study of Electoral Systems (CSES).

The remainder of this introductory chapter is structured as follows: First, I will point out the academic relevance of the topic, raising the questions of why it is important to understand people's sources of dissatisfaction and what the potential consequences are if a majority of citizens are dissatisfied with the working of their democracy. Before discussing in depth the existing literature on SWD and the contribution of this thesis to the current academic debate, it is worth addressing the question of what is going to be studied and how we can situate SWD in the larger debate on political support. This will be the content of the second section. Third, I will provide a brief overview of the existing explanations on public regime evaluations; discuss their major shortcomings and how this thesis will contribute to the current debate. Next, I will explain the analytical approach of the thesis and provide a brief overview of the data and methods. The fifth section highlights the main findings of the empirical analysis.

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<sup>&</sup>lt;sup>1</sup> Short for: "Crisis and challenges in Spain: attitudes and political behaviour during the economic and the political representation crisis" (Torcal et. al. 2016)

<sup>&</sup>lt;sup>2</sup> I conducted the search on 11/25/16 with the term "satisfaction with democracy".

<sup>&</sup>lt;sup>3</sup> I conducted the search on 11/29/16 with the term "satisfaction with democracy".

<sup>&</sup>lt;sup>4</sup>I conducted the search on 11/29/16.

<sup>&</sup>lt;sup>5</sup> A similar differentiation can be found in Almond and Verba's (1963) distinction between the "affective" and "evaluative" orientations citizens can have towards

# 1.1. The relevance of satisfaction with democracy and its consequences

The question of how citizens perceive the working of their democracy is of increasing academic interest and at the centre of a current debate on the broader phenomena of political support (compare for a recent discussion Cordero and Simón 2016 and Martini and Quaranta 2014). A search in the Web of Science returns 117 peer-reviewed publications that use the phrase "satisfaction with democracy" either in their title or in the topic description.<sup>2</sup> Figure 1 illustrates the increasing academic importance of the topic, showing the results of a key word search on Google Scholar.<sup>3</sup> In total, Google Scholar finds about 5,470 articles giving reference to "satisfaction with democracy" at least once in their study. While in the 1990s interest in the topic still appeared to be moderate, since 2000 the number of publications referencing to the concept almost doubled every 5 years. Although these numbers probably also reflect the increasing competence of scholars in making their work findable, there should be little doubt about the direction of the general trend.

Furthermore, interest in the topic is by no means limited to the academic profession alone. In fact, it is quite the opposite as it is frequently picked up by media and thus finds its way into the public debate. Entering "satisfaction with democracy" in the keyword search of LexisNexis Academic returns 146 publications in major English speaking newspapers during the last five years alone. Entering the Spanish equivalent "satisfacción con la democracia" or its German counterpart "Zufriedenheit mit der Demokratie" returns 75 Spanish newspaper publication and 47 German publications for the same period.<sup>4</sup>

This increasing attention should not come as surprise. Scholars like Lipset (1994) and Easton (1965) have convincingly argued that both the functioning and endurance of democracy is closely related to peoples' diffuse and specific support for democratic governance. Also, Almond and Verba (1963) argued that political support would be fundamental for the stability of democratic regimes. Understanding what citizens think about the working of democracy is therefore

<sup>&</sup>lt;sup>2</sup> I conducted the search on 11/25/16 with the term "satisfaction with democracy".

<sup>&</sup>lt;sup>3</sup> I conducted the search on 11/29/16 with the term "satisfaction with democracy".

<sup>&</sup>lt;sup>4</sup>I conducted the search on 11/29/16.

an important indicator to determine a democracy's state of health. As Klingemann and Fuchs (1995: 342) put it: "There is no objective criterion by which to determine how widespread satisfaction must be before we can talk of a stable democracy. However, it is implausible to assume that a democracy is in jeopardy if a majority of citizens are content with the system."

Figure 1: Yearly number of publications including "satisfaction with democracy"

Source: Google Scholar (2016).

Linz and Stepan (1996) see political support as crucial for a consolidated democracy. Democracy has to be the "only game in town" attitudinally and they perceive a democracy as consolidated only once "a strong majority of public opinion, even in the midst of major economic problems and deep dissatisfaction with incumbents, holds the belief that democratic procedures and institutions are the most appropriate way to govern collective life" (Linz and Stephan 1996: 16). Diamond (1994, 1999) regards the consolidation of political culture and the building of political support for the regime as a crucial factor in sustaining democracy since it legitimizes the existing political order.

But why is political support so important? Democracies are the only regimes that allow for electoral contestation which challenges the very system. The current wave of populism spreading over the whole European continent and the US is fuelling concerns over the durability of democratic regimes since dissatisfaction with the working of democracy has been identified as a major cause for the rise of populist and extremist parties (Bélanger and Aarts 2006; Bowler et. al 2017; Lubbers and Scheepers 2000; Lubbers and Scheepers 2002; Morlino and Tarchi 1996; Norris 2005; Rooduijn et al. 2016; Schumacher and Rooduijn 2013). If democratic legitimacy disappears, then the acceptance of the majority rule to reach binding decisions might vanish, putting democracy itself at stake. Yet, only when we truly know *why* people are dissatisfied with the working of their democracies, can we find a recipe against the advance of anti-regime parties.

### 1.2. Concept and measurement

The aim of this section is, firstly, to lay out a conceptual framework for analysing satisfaction with democracy in the context of the larger debate about political support (Canache et al. 2001; Dalton 1999; Fuchs et al. 1995; Klingemann 1999; Linde and Ekmann 2003; Norris 1999) and, secondly, to discuss the contributions of the thesis to the comparative analysis of political attitudes.

A lot of empirical research dealing with public attitudes towards the political system has taken David Easton's differentiation between distinct types of political support as a departing point for research. In his seminal work Easton (1965, 1975) asked about the nature of political support and what meaning can be attached to the concept.

Easton distinguished between three objects of the political system people can give support to: the authorities, the regime and the political community. The *political authorities* are the political office holders, the incumbents, or broader, the political elites eligible for government. Political support for authorities refers to attitudes towards particular individuals or groups. Support for *the regime* is directed toward institutions, processes, and principles of government. It includes the constitutional arrangements, the government institutions and the formal and informal rules of the game. Support for the *political community* more generally means identification with the nation-state within its territorial boundaries.

Easton claimed that there are two kinds of political support: specific and diffuse support. Diffuse support "refers to evaluations of what an object is or represents to the general meaning it has for a person – not what it does." (Easton 1975: 444) Diffuse support is more durable and shows fewer fluctuations than specific support, and is normally independent of outputs and performance in the short run. Diffuse support is directed to basic aspects of the system. It is described as a "reservoir of favorable attitudes" (Easton 1975: 444) that allows members of a system to accept or tolerate policy outputs to which they are opposed while maintaining esteem for the democratic principles. Specific support, on the other hand, refers to the satisfaction that members of a given system feel they obtain from the perceived outputs and performance of the political authorities. According to Easton (1975: 437) it is shaped by the political experiences of the citizens and is thus a rather volatile attitude.

By differentiating between diffuse and specific support Easton acknowledges that support is not of one piece. This is most obvious when the author describes the puzzle of how there might be political dissatisfaction and tension on the one hand and the acceptance of basic political arrangements on the other. Thus, political discontent is not necessarily a signal for basic political change. Citizens can oppose the political authorities and throw the incumbent out of office without necessarily questioning the democratic order. Diffuse support on the other hand represents more lasting bonds with the political community and the regime. However, if the discontent with the performance continues over a long time, it may also erode these bonds (Easton 1975: 445). Easton sees the sources of diffuse support in (life-long) socialization and direct experience.

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<sup>&</sup>lt;sup>5</sup> A similar differentiation can be found in Almond and Verba's (1963) distinction between the "affective" and "evaluative" orientations citizens can have towards the political system. While affective beliefs rely on the identification or acceptance of a given political object, evaluative beliefs would be based on judgments about the performance of an object.

<sup>&</sup>lt;sup>6</sup> According to Easton (1975: 456) also diffuse support is modified by experience: "Members do not come to identify with basic political objects only because they have learned to do so through inducements offered by others – a critical aspect of socialization processes. If they did, diffuse support would have entirely the appearance of a non-rational phenomenon. Rather, on the basis of their own experiences, members may also judge the worth of supporting these objects for their own sake. Such attachment may be a product of spill-over effects from evaluations of a series of outputs and of performance over a long period of time. Even though the orientations derive from responses to particular outputs initially,

Still, support for a political system can have other targets that are not fully captured by Easton's framework. Several scholars like Dalton (1999), Norris (1999) and Klingemann (1999) readdressed Easton's classification framework and broadened the targets of support into five types: political community (level 1), regime principle (level 2), regime performance (level 3), regime institutions (level 4) and political actors (level 5). Specifically, they suggest distinguishing between three different objects at the regime level. Support for regime principles refers to how much citizens endorse the general ideals and values of democracy, reflected in people's beliefs that democracy is the best form of government. Regime performance reflects evaluations of the democratic process, while regime institutions refers to confidence or trust in political institutions.

#### 1.2.1. Measurement

The dependent variable investigated in this thesis is citizens' attitudes towards the functioning of their democratic regime, i.e. support for regime performance (level 3). This concept is operationalized throughout my study with a question on how satisfied people are with the working of their democracy. SWD is measured on a 4point scale in response to the following questions: "On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy works in your country?" This is one of the most frequently observed indicators of political support and, with only minor alternations in wording is included in almost every public opinion survey that covers political attitudes. For this thesis I collected and aggregated SWD data from about 1750 representative surveys. This makes it is one of the very few indicators of political support for which trend data is available for many countries over a long period of time (1978 to 2015) and is thus frequently employed both as a dependent and independent variable.

SWD is commonly assumed to be an expression of regime performance (Norris 1999), so it represents an evaluation of the performance of democracy in what the regime delivers and what it refrains from doing (Klingemann 1999), or a measure of the actual process of democratic governance and attitudes towards the "consti-

they become in time disassociated from performance. They become transformed into generalized attitudes towards the authorities or other political objects."

tutional reality" of a country (Fuchs et al. 1995: 328). However, there is not a complete agreement on the meaning of the measure. For instance, Dalton (1999) sees it as an indicator of support for incumbent authorities which tap the output of the actual government. Similarly, Anderson and Guillory (1997) argue that SWD might reflect partisan evaluations and agreement with the incumbent performance. Canache et al. (2001) on the other hand argue that it refers to support for democracy as a general form of government.

This study considers SWD as an expression of citizen's evaluation of how the democratic regime procedures function in practice (Linde and Ekmann 2003), so it reflects a rational response to the working and outputs of political systems (Torcal and Montero 2006). For this interpretation speaks the wording of the item "way democracy works" which strongly refers to the functioning of the regime. Arguably, it does not capture legitimacy or support for the principles of the political system, although continuing negative evaluations and experiences have been argued to undermine diffuse support for the regime principles as well (Easton 1975: 456). The question, however, what the SWD item measures is best addressed empirically. Finding out what factors determine people's satisfaction with the working of their democratic regimes will also help us to clarify the nature of the measure.

# 1.3. Explanations of satisfaction with democracy and contributions of the thesis

Questions about the sources and correlates of SWD, as well as the adequate ways to study these, have been intensely debated for several decades. Why do some citizens show higher levels of satisfaction, while others are more critical? Why are there substantial variations between countries, groups of citizens, and over time?

Explanations can be differentiated between individual-level approaches and country-level approaches. Analyses conducted at the individual-level examine variation between respondents and focus on their socio-economic situations, evaluations and experiences, while the contextual-level approach consider SWD to be essentially an aggregate level construct (see Figure 2) and stress the role of economic performance and development, the quality of

democratic procedures and governance and also institutional rules and electoral outcomes to explain different levels of SWD between countries.

Until the 1990s, research at the individual-level was the norm in the study of SWD and political support more generally. The most common way was to analyse peoples' attitudes based on data from a single representative survey and evidence was limited to advanced Western democracies. This empirical focus was somewhat limited as these studies tended to explain one attitude with another attitude, raising questions about endogeneity, and failing to take into account exogenous factors. However, as Dalton and Klingemann (2007: 18) point out, the most recent generation of research has led to a fundamental expansion of our empirical knowledge, driven by comparative research and focused on cross-national and crosstemporal comparisons. This shift in perspective was facilitated by the proliferation of various international survey programs such as the European Social Survey (ESS) or the Comparative Study of Electoral Systems (CSES), to mention just a few, and the adaptation of new statistical tools for analysing so as to analyse data which combines nested country-level and individual-level information. Today, many researchers have followed the call to multilevel analysis in comparative politics made for example by Anderson and Singer (2008), Curini et al. (2011), Dahlberg and Holmberg (2014), or Huang et al. (2008).

With respect to the literature on satisfaction with democracy, three kinds of explanations dominate the current discussion in the field. Firstly, there are theories that emphasize the role of outcomes of the political system, especially the economic output and other policy performance. Secondly, there are arguments that focus on the working of the political system, i.e. democratic process accounts. Thirdly, there are theories that stress the importance of the institutional structure of political systems and their outcomes at the electoral level. Moreover, all three lines of explanations can be further divided based on their point of references, i.e. the individual and country-level.

Although seldom considered together by the existing literature (a notable exception is Huang et al. 2008), it is important to note that the basic arguments of these three lines of explanations are not in a logical conflict since they are all based on evaluative assessments of the structure, process and outcomes of political systems. These explanations have in common that they are "endogenous" to

the working of the democratic system, so political attitudes are assumed to be shaped by political factors like people's experiences, expectations and evaluations of political authorities and institutions (Torcal and Montero 2006: 12).

In this regard, the research on SWD can also be linked to the broader discussion on the formation of political attitudes as to whether their character is "cultural" or "rational" (Torcal and Montero 2006). Referring to the origins of political trust, Mishler and Rose (2001) differentiated between two different models in the literature: cultural theories and institutional theories.

Cultural models posit that political attitudes change slowly since they are supposed to be cultural traits that depend on longterm processes of socialization which tend to reproduce over time (Almond and Verba 1963; Lerner 1992). Accordingly, these theories see the origins of political attitudes outside the political sphere as caused by "exogenous" factors. Thus, people's beliefs and attitudes would be based on cultural norms acquired during early-life socialization (Mishler and Rose 2001). For example, scholars like Putnam (1993) argue that political trust would be a consequence of interpersonal trust. Current research at the aggregate level focuses on explaining the persistent cross-national differences in political trust between Southern European and post-communist countries in contrast to other regions with higher levels of trust, for example the Nordic countries (Mishler and Rose 2001; Hooghe and Zmerli 2011; Torcal 2006). However, these cultural explanations are not well suited for explaining cross-time variation and the current trends in political trust in Europe (Torcal 2017).

Indeed, when we consider the existing body of research, a rational-culturalist model (Lane 1992) or institutional model (Mishler and Rose 2001) of the formation of political attitudes appears to hold the biggest analytical leverage for the study of SWD. According to Torcal and Montero (2006: 10) the rational-culturalist model posits that attitudes can change quickly "as a result of political or economic events, as a consequence of experience or conflicts, and as an outcome of institutional performance evaluation in distinctive institutional settings, as well as through rational adaptation and even adult learning." This model assumes that political support is driven by politically endogenous factors such as institutional settings, institutional performance, political corruption, economic conditions and (frustrated) expectations (Torcal and Montero 2006: 12), much in line with the argumentation of neo- institutionalism. In this sense,

people evaluate the working of their regime more or less rationally. Political systems that do not perform well generate dissatisfaction; democracies that perform well generate satisfaction. On the other hand it acknowledges that political attitudes are not entirely "rational" phenomena as distinct political cultures provide the "goals" on which rational assessments are based (Lane 1992: 374f.).

Rational perspective Institutional perspective Individual Level Evaluations of economic well-being Evaluations of Voting and (egocentric, socio-Democratic Process Representation tropic) Country Level Institutional Structure Quality of Democratic **Economic Performance** and Electoral Process Outcomes

Figure 2: Dominant explanations of SWD by level of analysis

Turning to the individual level, it has often been argued that especially the linkage between economic and democratic evaluations and SWD rests on a rationality assumption about the way respondents evaluate the functioning of their political system. The case for a rational evaluation has been most clearly formulated in regard to economic self-interest. Here, Waldron-Moore (1999: 38) note: "It is generally accepted that economic evaluations affect political perceptions. Advocates of rational behavior argue that individuals evaluate their past, current, and future circumstances and calculate what serves their best interests [...] Such calculations influence preferences [...] Individuals may prefer and support democracy because it satisfies their best interests."

Following this line of thought, we can also relate perceptions of national democratic performance to SWD. As Huang et al. (2007: 51) have argued: "Involving a broader interpretation of rational choice theory [...] not only do citizens compare the economic per-

formance of different political systems, they also compare the production of political goods. [...] the subjective evaluation of the quality of democratic governance, including the maintenance of political order, the defense of human rights, freedom of association, corruption, trust indemocratic institutions, and the performance of the democracy, or personal feelings over the responsiveness of democracy to their needs, are all important determinants in the rationality of citizens [...]." Similarly, Mattes and Bratton (2007: 197f.) state that a strict form of rational choice theory, where persons are motivated primarily by (economic) short-term self-interest, is limited and rather naive. Instead they argue that citizens judge democracy not only by its economic performance but also by the delivery of political goods.

The neo-institutionalist perspective, on the other hand, posits that people develop attitudes towards democracy as "a consequence of the organizing principles of formal and informal institutions: specifically, the incentives, disincentives and habits created by the rules embedded in differing forms of political institutions" (Huang et al. 2008: 50). North (1993: 360) describes institutions as "humanly devised constraints that structure human interaction. They are made up of formal constraints (e.g., rules, laws, constitutions), informal constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct), and their enforcement characteristics." According to Powell (1989) institutions organize and constrain peoples' political experience by mediating preferences, offering choices and providing opportunities.

## 1.3.1. Economic performance

The challenges that democracies face today are mostly performance related. While support for democratic values remains universally high and stable throughout European democracies (Weßels 2015), political dissatisfaction is spreading, especially since the onset of the financial crisis in 2008. So how can we account for national trends in satisfaction with democracy? In the last decade, research on SWD increasingly advocates explanations that stress the importance of economic and policy outputs for shaping democratic regime evaluations. For countries that had formally been under the European Stability Mechanism (ESM) or under IMF Conditionality such as Greece, Ireland, Italy, Portugal or Spain, where people suf-

fered considerably from consequences of the Great Recession, the literature mainly attributes the decreasing levels of SWD to the persistent economic crisis in these countries (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016b; Sousa et. al 2014).

That economic conditions have an impact on democracy is a common argument in comparative politics and many scholars see economic performance as crucial for democratic consolidation and endurance (Barro 1996; Burkhart and Lewis-Beck 1994; Bollen 1979; Dahl 1989; Diamond 1992; Lipset 1994; Narayan et al. 2011; Przeworski and Limongi 1997). From this perspective, an economic crisis is likely to undermine citizen's satisfaction with the working of democracy. Indeed, when the economy is going badly, citizens are far more critical about the regime performance, resulting in political turbulence and demands for political change (Morlino and Tarchi 1996; Morlino 2011). But is there really an effect of the economy on public evaluations of regime performance or is this issue mostly salient during times of crisis as a recent publication by Singer (2011) suggests? Can we observe similar relationships at the individual level? If so, what matters more, ego-tropic evaluations of respondent's economic well-being or socio-tropic evaluations of the national economy?

Empirical studies conducted at the *individual-level* have repeatedly shown that people's perceptions of the past, present and current state of the economy shape their evaluations about the functioning of their democratic system (Armingeon and Guthmann 2014; Bratton and Mattes 2001; Huang et al. 2008; Waldron-Moore 1999). Pointing in the same direction, the economic well-being of a respondent appears to be a good predictor of his or her SWD as well: richer, working individuals who evaluate their financial situation favourably, tend to be more satisfied than poorer, unemployed respondents (Anderson and Singer 2008; Anderson and Tverdova 2003; Farrell and McAllister 2006; Huang et al. 2007; Kronberg and Clarke 1994; Norris 2011; Schäfer 2012; Stockemer and Sundström 2011). Moreover, there is also evidence of a link with evaluations of policy outputs in areas such as health care, social protection and education (Bratton and Mattes 2007; Huang et al. 2008; Lühiste 2014; Stockemer and Sundström 2013).

Despite these seemingly consitstent correlations at the individual level, it must be noted that evidence comes mainly from cross-sectional analysis between respondents. This thesis will contribute

to the literature by carrying out a longitudinal analysis on the causes of changing SWD in respondents (see Figure 3), something which is currently missing. So, do changes in the economic wellbeing of a respondent lead to changes in satisfaction over time? Furthermore, what is the effect of changes in respondent's evaluations of the national economy? Can we observe a similar effect for evaluations of other policy performance?

Figure 3: Economic performance – research questions and contributions

	Longitudinal research questions	Contributions	
Individual-level	Do changes in the economic well-being of a respondent lead to changes in SWD over time?	Individual-level panel analysis in Spain (chapter 4)	
Individ	Do changes in the perceptions of the national economy lead to changes in SWD within respondents?		
e	Do changes in the national economic performance lead to changes in SWD within countries over time?	TSCS panel analysis of 61 democracies between 1980- 2014 (chapter 3)	
Country-level	What is the effect of prolonged economic crisis on the evolution of SWD?	Multilevel analysis of pooled surveys from Spain between 1985 and 2014 (chapter 4)	
		Usage of the Economic Performance Index (EPI)	

At the *contextual-level*, a number of longitudinal studies have presented evidence that economic growth, price inflation and especially unemployment are exogenous causes of SWD over time (Armingeon and Guthmann 2014; Halla et al. 2013; Quaranta and Martini 2016a). While economic growth might have a positive effect on SWD because more citizens are benefiting from the improving economic situation and prosperity, the opposite may occur in the bad times when unemployment and the erosion of disposable incomes through rising prices might diminish people's satisfaction with their lives and the evaluations of the incumbent political authorities (Clarke et al. 1993: 1000f.).

Somewhat paradoxically in the light of the previous evidence, the economic record of a country appears not to be well suited to explain persistent differences between countries. For one, cross-country comparisons report no relationship between unemployment rates and SWD (Anderson and Singer 2008; Dahlberg and Holmberg 2014; Schäfer 2012). Other studies, considering average consumer prices, could not detect a relationship between inflation rates and SWD (Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010). There is more evidence for the notion that people are content with democracy in countries characterized by high levels of economic growth (Anderson and Tverdova 2003; Curini et al. 2011; Guldbrandtsen and Skaaning 2010; Schäfer 2012; Singh 2014) and high standards of living (Anderson and Tverdova 2003; Norris 2011; Singh 2014), but this finding is also not unanimous (Anderson and Singer 2008; Lühiste 2013; Stockemer and Sundström 2011).

So why do longitudinal studies report a strong relationship between economic performance and SWD, while cross-country comparisons indicate little or mixed effects? Part of the problem could be that many studies usually include two or three economic covariates in their analyses. This increases the risk of collinearity among the macro-economic indicators which are likely to influence each other (Quaranta and Martini 2016b: 8). Furthermore, the examined samples in the exiting literature suffer from a regional selection bias, since most cases belong to economically developed, Western democracies. This thesis contributes by providing *longitudinal and* cross-sectional evidence in favour of the economic performance explanation based a time-series cross-sectional (TSCS) panel dataset of 61 democracies between 1980 and 2014. Moreover, it crossvalidates this finding at the individual-level, based on the longitudinal analysis of three decades of Spanish democracy, and by a crosssectional analysis of the existing four waves of the Comparative Study of Electoral Systems (CSES).

## 1.3.2. Quality of democratic processes

Is it plausible to argue that only the status of the economy should matter? A second, less prominent explanation connects attitudes related to the functioning of the political system with SWD, showing the importance of the political process in shaping people's attitudes towards the democratic regime. As Huang et al. (2007: 51) argue: "not only do citizens compare the economic performance of

different political systems, they also compare the production of political goods." Norris (2011: ch.10, p.3) makes a similar point: citizens focus upon the intrinsic quality of democratic governance when evaluating regime performance but also take into account several aspects of the decision making process. In this line of reasoning, judgements of regime performance would be based on "evaluations of the quality of underlying democratic procedures, exemplified by the perceived fairness of elections, the responsiveness and accountability of elected representatives, and the honesty and probity of public officials" (Norris 2011: ch.10, p.1).

Research conducted at the *individual-level* presents coherent evidence in favor of a substantial relationship. Respondents tend to be more satisfied with democracy when they feel represented, perceive their representatives as accountable and responsive, and believe that their individual freedoms and political rights are protected (Aarts and Thomassen 2008; Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Hofferbert and Klingemann 1999; Huang et al. 2008; Kronberg and Clarke 1994). Similarly, there is evidence that negative perceptions of corruption are associated with lower SWD (Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Huang et al. 2008; Linde 2012; Peffley and Rohrschneider 2014).

While we can be rather confident that individuals' perceptions of the democratic process are indeed related to the way respondents evaluate their regime, little effort has been devoted to study the linkage between objective measures of democratic quality and SWD at the *contextual-level*. It is also problematic that all empirical evidence at the contextual-level comes only from cross-country comparisons. An improved test of the causal effects of the variable would be to study if changes in the democratic status of a country can also lead to changes in the level of SWD over time (see Figure 4).

Furthermore, most aggregate-level evidence comes only from studies that are mainly concerned with features belonging to the governance of a country, showing substantial associations between the rule of law, corruption, effective public administration and SWD (Anderson and Tverdova 2003; Ariely 2013; Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010; Norris 2011; Peffley and Rohrschneider 2014; Stockemer and Sundström 2011). Paradoxically, studies employing objective measures of the democratic process, such as the Freedom House Index (FHI), return only

insignificant or inconsistent results (Anderson and Tverdova 2003; Ariely 2013; Guldbrandtsen and Skaaning 2010; Listhaug et al. 2009; Norris 2011; Singh 2014).

Figure 4: Democratic process performance – research questions and contributions

	Longitudinal research questions	Contributions
Individual-level	Do changes in the perceptions of the democratic process lead to changes in SWD within respondents?	Individual-level panel analysis in Spain (chapter 4)
-level	Do changes in the quality of democracy lead to changes in SWD within countries over time?	TSCS panel analysis of 61 democracies between 1980-2014 (chapter 3)
Country-level	Can we observe an increasing importance of democratic performance over time?	Multilevel analysis of pooled surveys from Spain between 1985 and 2014 (chapter 4)

As I will show in this thesis, democratic quality is in fact a good predictor both for explaining lasting differences between countries but also to account for the evolution of SWD within countries over time. As I will demonstrate, existing studies suffer from a regional selection bias since most cases belong to established, Western democracies. This empirical focus makes it difficult to analyze the performance of democracies, because there are few deviate cases for comparison. This situation is further aggravated by the usage of "democratization" measures and their inability to track differences in the quality of already established democracies. This thesis contributes by comparing various different measures of democratic quality but also provides the first longitudinal analysis on the topic, based on a sample of 61 democracies between 1980 and 2014, which allows me to address the question whether democratic performance has gained more relevance for explaining SWD over the course of time.

#### 1.3.3. Institutional structure

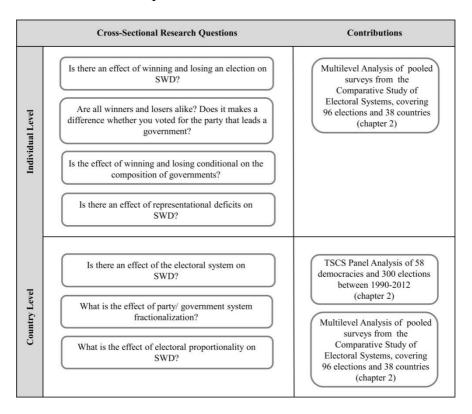
Although I find that both economic and democratic performance are good explanations to account for the longitudinal evolution of SWD within countries over time, both factors cannot fully explain the huge and lasting differences in SWD we can observe cross-nationally. For instance, why do people living in Denmark, Luxembourg, Sweden, Norway and Switzerland tend to be much more satisfied with the working of democracy on average over the last 20 years than people from Argentina, France, Spain, Greece or South Korea? As I will point out later, only 25 percent of the variation in SWD is attributable to changes over time, while about 75 percent of the variation is attributable to cross-country differences. In other words, societies do not change as much attitudinally as the differences that exist between them. So how can we account for these big contextual differences when we compare SWD between countries?

A compelling answer to this question is provided by a second set of political explanations that links the institutional structure and electoral outcomes with public regime evaluations (Aarts and Thomassen 2008; Anderson et al. 2005; Berggren et al. 2004; Farrell and McAllister 2006; Lijphart 2012; Martini and Quaranta 2014; Quaranta and Martini 2016a; Singh 2014; Karp and Bowler 2001; Weil 1989). When it comes to studying the effect of institutions on public opinion, research on the attitudinal consequences of institutions face important limitations as the nature of their explanatory variables is often rather stable over time, like, for example, the electoral rules of democracies. As such, the "most appropriate evidence concerns cross-national comparisons which maximize the variance in types of institutions" (Norris 2011: Ch. 10, p. 19). So how than can we account for the lasting differences in SWD we can observe between many democratic countries? Do institutional frameworks that promote consensualism have any positive impact on SWD? What is the effect of the electoral system, if any?

An influential discussion on this topic was framed by Lijphart (2012), who differentiated between consensual and majoritarian types of democracy. According to Lijphart, consensual democracies seek to maximize decision-making majorities and can be characterized in terms of inclusiveness, bargaining and compromise. Majoritarian democracies, on the other hand, concentrate political power

and can be described as exclusive, competitive and adversarial. Yet, recent empirical analyses find no evidence of a positive effect of consensual democracies on SWD (Bernauer and Vatter 2011), prompting some to argue that the "difference between majoritarian and consensus institutions is not particularly important for popular perceptions of a regime" (Peffley and Rohrschneider 2014, 16). Moreover, the literature on SWD returns inconsistent results regarding the effects of electoral, party and governmental systems – so the most important defining characteristics of the consensual-majoritarian dichotomy. Yet, how plausible is it that structural features of the electoral process appear to have no effect on citizen's satisfaction with democracy?

Figure 5: Institutional structure and electoral outcomes – research questions and contributions



In this thesis, I contribute to the on-going debate by unbundling the effect of this set of "institutions" and argue that electoral proportionality and party/government fractionalization are distinct outcomes of the electoral rules (Lijphart 1994; Taagepera 2003) that have different effects on SWD (see Figure 5). Furthermore, I test the extent to which electoral institutions affect the utility of the most important form of political participation at the individual-level: voting behavior. Democracy is about winning and losing elections (Przeworski 1991: 10). Losers will comply with electoral defeat because they believe that the institutional framework of democratic competition will permit the inclusion of their preferences in the future (Przeworski 1991: 12).

Indeed, there is a history of studies showing that electoral winners are on average more satisfied with the working of democracy (Anderson and Tverdova 2001; Anderson et al. 2005; Blais and Gélineau 2007; Curini et al. 2011; Singh et al. 2011). In this thesis I contribute by further distinguishing electoral winners between those who have voted for the party of the Prime Minister (PM) or president – therefore the party that leads the government – and those winners who have voted for the other government parties and by testing the effects of over/underrepresentation of voters in the legislature and their interplay with electoral outcomes at the contextual-level.

# 1.4. Analytical approach, data and methodological considerations

This section provides an overview of the research design, some common methodological considerations applying to all empirical analysis, as well as discussing an introduction to the data sets used in the thesis. In the first section, I distinguish between two distinct levels of analysis, the individual level and the contextual-level. In the second part, I illustrate that both levels can be studied either cross-sectionally or longitudinally (over time), leading to four distinct types of variations in SWD. As I will show this variation can be best analysed by using a combination of comparative analysis at the contextual-level and by employing panel analysis at the individual-level. Here, I also discuss the underlying theoretical assumptions when testing hypothesis either by cross-sectional and longitudinal data. Furthermore, I provide an overview of the four different data sets used in the thesis and describe the rules for case selection which have only been very briefly addressed in the articles due to

limitations of space. However, as with any research based on observational survey data, there are also several caveats. The fifth section discusses two endogeneity issues concerning the empirical analysis presented in this book: omitted variable bias and reverse causation.

## 1.4.1. Level of analysis

In the study of public opinion scholars often deal with two levels of analysis, the individual and the aggregate level. It is important to notice that each level of analysis might require different though often related explanations: Whereas people's perceptions of the national economy might be apt to explain differences of SWD within a given country, economic indicators like GDP growth or unemployment rates help us to understand differences in levels of SWD between countries. Since we are dealing with two levels of analysis, we must be aware of the ecological fallacy that prohibits generalizing from the aggregate to the individual level (Robinson 1950). According to Inglehart and Welzel (2005: 231ff.) the relationship between two variables may not even work in the same directions at two levels of analysis, and thus we should not decide whether a relationship is substantial or spurious based on cross-level inference.

Besides the issue of ecological fallacy, Inglehart and Welzel (2005) also point out that democracy is essentially a macro-level phenomenon and, as such, can best be studied at the country level. It is also problematic to equate individual perceptions of democracy or the economy with the actual quality of democracy or the objective well-being of the economy, because we can never exclude the possibility of perceptual biases. As Coppedge et al. (2012: 15) have put it: "It is of course interesting to know whether citizens regard their country as democratic, whether they support democratic institutions and practices, and whether they subscribe to democratic norms such as tolerance. But it is not clear whether such attitudes make a country more or less democratic." Thus, if we seek to examine the effects of "objective" economic performance, democratic quality or the institutional framework, we need to shift the focus of analysis to the societal-level as a whole. On the other hand, if we are interested in the perceptional consequences of respondent's evaluations, the study of individual-level data is warranted.

## 1.4.2. Four types of variation

Public opinion research and the literature on SWD in particular, usually exploit two types of static information (compare Table 1): variation between individuals at a given point of time, which I label as type 1 variation, and variation of aggregated values of SWD between countries (type 2). Indeed, almost all existing studies on the topic have either engaged in a cross-sectional comparison between respondents or between countries – increasingly often in a multilevel framework where individuals are nested within countries. I do not challenge this approach; social science should be concerned with understanding the world as it is. But what is mostly amiss in the academic debate, and where this thesis will contribute, is the question of what factors can explain changes of SWD over time. In fact, there are two more sources of variations we can explore if we have longitudinal data: variation in SWD within individuals across time (type 3) and variation within countries over time (type 4).

Although we are used to speaking of panel data in situations where we have data on repeated observations of the same respondents over time, we can also think of time-series cross-sectional (TSCS) data as a panel when we move our focus to the societal level (Fairbrother 2014: 122). Analysing these two types of longitudinal variation can help us to refine our theoretical understanding on the matter as it allows for addressing the causally more interesting questions on how we can account for the evolution of SWD in individuals but also within countries over time.

In this thesis, I am going to exploit all four types of variation to answer my research questions (compare Table 2). However, there is no single dataset that would allow us to analyse all four types of variations simultaneously in one model. This would require comparable data from individual-level panel surveys where the same respondents are interviewed over the course of decades, for example the German Socio-Economic Panel (SOEP) but across a large number of countries. This source of data is not and will not be available in the near future. However, as this thesis will demonstrate, public opinion research can already exploit all four types of variation by combining analysis of different datasets.

First, chapter 2 makes use of individual-level data collected by the Comparative Study of Electoral Systems (CSES). It includes individual level survey information for 38 countries, making it possible to analyze the cross-sectional variation of type 1 and type 2 in a multilevel framework. Second, chapter 2 as well as chapter 4 makes use of a time-series cross-sectional panel dataset (TSCS), based on aggregated time-series public opinion data from about 60 countries. This enables me to make comparisons between countries (type 2) but also allows me to analyze the evolution of national trends in SWD (type 4). While chapter 2 and chapter 4 are comparative studies, chapter 3 focuses on the longitudinal analysis of SWD in Spain.

Table 1: Four types of variation in public opinion research

#### Time

		Cross-Sectional	Longitudinal
Analysis	Individual Level	Comparison between individuals  Type 1	Changes within individuals over time  Type 3
Level of Analysis	Country Level	Comparison between countries  Type 2	Changes within countries over time  Type 4

In a single country case study on the other hand, we have the option to analyse the type 1, 3 and 4 variation but not type 2 which requires a comparison between different countries. In detail, chapter 3 rests on the analysis of an individual-level panel dataset, the CIUPANEL, enabling me to study change in SWD within the same respondents (type 3) but also to compare between respondents in a cross-sectional manner (type 4). However, in order to study the type 4 variation, the evolution of SWD within Spain over a longer period of time, I also relied on a sample of repeated cross-sectional surveys from the Eurobarometer and Latinobarómetro. Thus, I have used four different combinations of cross-sectional and longitudinal variations in SWD which I analysed by using the multilevel toolkit.

This distinction between longitudinal and cross-sectional variation is not only interesting from a methodological perspective. It has also implications for theorizing because cross-sectional and longitudinal hypothesis might rely on different assumptions on what basis people actually make their comparisons (Van Erkel and Van der Meer 2016). In many cases we probably simply wish to observe similar cross-sectional and longitudinal relationships, yet this is not necessarily the case. On many occasions we might expect to observe just either one or the other: a longitudinal or a cross-sectional relationship between two variables.

Table 2: Research design

#### Time

		Cross-Sectional	Longitudinal
lysis	Individual Level	Chapter 2: Proportionality and Party/ Government Fractionalization  Chapter 3: Political and Economic Performance in Spain  Type 1	Chapter 3: Political and Economic Performance in Spain  Type 3
Level of Analysis	Country Level	Chapter 2: Proportionality and Party/ Government Fractionalization  Chapter 4: Economic Performance and Democratic Quality  Type 2	Chapter 2: Proportionality and Party/ Government Fractionalization  Chapter 3: Political and Economic Performance in Spain  Chapter 4: Economic Performance and Democratic Quality  Type 4

For example, in chapter 2 I find that countries with a more disproportional electoral system tend to have lower SWD. Despite observing this substantive cross-sectional effect, I find no significant longitudinal effect when studying change within countries. Nevertheless, the absence of a within effect does not undermine the cross-sectional results since we might expect to find larger effects when comparing between countries (different electoral systems). As will be shown, one plausible explanation for the absence of a longitudinal relationship is lack of variation, i.e. the same electoral rules tend

to produce similar levels of disproportionality over time within most of the countries.

Another good example has recently been provided by Van Erkel and Van der Meer (2016). Surprised by the mixed empirical evidence in the literature on the linkage between macroeconomic performances and political trust, the authors discuss the theoretical assumptions underlying longitudinal and cross-sectional explanations. Quite similar to the case of SWD, they find that many empirical analyses on political trust are based on cross-country comparisons only. As Van Erkel and Van der Meer (2016: 178) argue, this approach implicitly assumes that citizens evaluate economic performance in comparison to other countries (or some absolute standard).

Yet, the authors point out that in the case of economic performance, citizens might likely base their comparisons on prior experiences within their own countries. So as a standard for the evaluation they use a longitudinal comparison with past economic performance. The authors point out that this standard of comparison could vary from country to country, so for example an unemployment rate of 10 per cent could be judged positively if it were 15 per cent before or negatively if it were 5 per cent before (Van Erkel and Van der Meer 2016: 180). Testing the longitudinal argument with timeseries data from 15 countries between 1999 and 2011 the authors find that various measures of economic performance such as GDP per capita or unemployment are strongly related to changes of political trust within countries.

Based on the analysis of different datasets, this thesis reconfirms the economic finding with regard to SWD. In all chapters I find measures of macro-economic performance to be the most important predictors to explain changing levels of SWD within countries. Yet, while I also observe mixed evidence resulting from cross-country analysis in the literature on SWD, I do not attribute this to the theoretical assumption that citizens would not evaluate their economy based on comparisons with other countries. Instead, I argue that the mixed evidence is likely a result of small sample sizes combined with a high degree of collineartity in the models, especially when testing multiple macroeconomic indicators together. Expanding the sample sizes under consideration, I also find strong and consistent "between" effects in various analyses in chapters 2 and 4, leading to the interpretation that people base their economic

judgements on past performance within their country and also on comparisons with other countries.

#### 1.4.3. Data

This thesis makes use of four different datasets to test the effects of economic performance, of the democratic process and the intermediate effect of electoral institutions on SWD (see Table 3). All countries included in the analysis must pass an electoral litmus test which I will describe in the following section. To test the effects of the economy, democratic performance, electoral proportionality and party/government system fractionalization on SWD at the aggregate level, I am using is a time-series cross-sectional panel dataset that I have compiled for the purpose of this thesis. For this I have aggregated information from about 1,750 representative surveys. In its latest version, it includes data on 61 democracies between 1980 and 2014 and its regional coverage extends to democracies in East and West Europe, North, South, and Central America, Oceania, South-East Asia and Sub-Saharan Africa.

Second, to further probe into the effects of electoral institutions and their interplay with citizens' voting behaviour, I have merged information from the four existing rounds of the CSES, which provides us with information from 38 democracies, 96 elections, and 84,000 voters. Third, to test the contextual effects of economic and political performances on the evolution of SWD over time in Spain, I have constructed a dataset based on 92 representative surveys by the Eurobarometer and Latinobarómetro. This includes individual-level information from more than 70,000 respondents covering a time span between 1986 and 2014. Finally, I am analysing the effects of political and economic *perceptions* on SWD from a longitudinal perspective using individual-level panel data for Spain: the CIUPANEL (Torcal et al. 2016).

The usage of the different datasets offers a number of benefits: First, I am able to test my arguments not only cross-sectionally but also longitudinally. Furthermore, it allows me to test them at different levels of analysis: the aggregate level and the individual-level. Again, I am able to study both the aggregate and the individual-level from a longitudinal perspective which is a major asset since most existing studies only make use of cross-sectional information.

Finally, I am able to cross-validate my findings by relying on empirical information from four completely different data sources.

Table 3: Datasets used in the thesis

#### Time

		Cross-Sectional	Longitudinal
Level of Analysis	Individual Level	Chapter 2: Comparative Study of Electoral Systems (CSES) Chapter 3: CIUPANEL, Eurobarometer/ Latinobarómetro	Chapter 3: CIUPANEL  Type 3
	Country Level	Chapter 2: Comparative Study of Electoral Systems (CSES), TSCS dataset  Chapter 4: TSCS dataset  Type 2	Chapter 2: TSCS dataset  Chapter 3: Eurobarometer/ Latinobarómetro  Chapter 4: TSCS dataset  Type 4

### 1.4.4. Case selection

The question on SWD needs to be meaningful in its context; otherwise it cannot be used for cross-country comparison. It appears difficult to imagine what people will answer when asked about SWD when they objectively do not live under democratic rule (Curini et al. 2011; Dahlberg and Holmberg 2014; Peffley and Rohrschneider 2014). Second, it appears to be sensible to differentiate democracies from non-democracies before asking about the quality of democracy (Altman and Pérez-Liñán 2002; Ringen 2007; Levine and Molina 2011). For these two reasons I only select countries into the sample that fulfill a number of minimal democratic criteria.

One prominent empirical approach to distinguish between democracy and dictatorship has been proposed by Alvarez et al. (1996: 4), who define democracy as a "regime in which some governmental offices are filled as a consequence of contested elec-

tions". This definition has two main features: offices and contestation. Alvarez et al. (1996) argue that in democratic states both the members of the lower house and the chief executive must be elected on a regular basis, where two or more parties compete for these offices. Alvarez et al. (1996: 5) also stress the importance of alternation in office; thus "contestation occurs when there exists an opposition that has some chance of winning office as a consequence of elections". In this study all countries need to pass this electoral litmus test in order to be selected in the sample. Data comes from Cheibub et al. (2010).

Yet democracy requires more than voting and alternation in power: Political contestation is only meaningful in the presence of a certain minimum of civil rights, most notably freedom of organization, expression and freedom of press and a minimum of choice (Dahl's 1971). Also elections need to be free and fair: citizens should cast their ballot free of pressures and have their vote counted accurately (Munck 2009: 55). Approximating these standards, all countries in my study need to be classified as an "Electoral Democracy" and as at least "partly free" by Freedom House as well.<sup>8</sup>

#### 1.4.5. Limitations

At this point a word of caution appears to be warranted. Although I seek to avoid the use of causal language when discussing the results of my empirical models, especially when analysing cross-sectional variation, I often make use of directional vocabulary when studying change over time: For example, in chapter 2 I claim that increasing fractionalization of the party system *leads* to increasing SWD within countries over time. In chapter 3 I argue that the increasing salience of political corruption has led to decreasing lev-

<sup>&</sup>lt;sup>7</sup> Alvarez et al. (1996) classify states as either being a democracy or a dictatorship by the following rules (taken from Cheibub et al. 2010: 69): 1. The chief executive must be chosen by popular election or by a body that was itself popularly elected. 2. The legislature must be popularly elected. 3. There must be more than one party competing in the elections. 4. An alternation in power under electoral rules identical to the ones that brought the incumbent to office must have taken place. Following a multiplicative aggregation rule, states are considered a democracy when they meet all these four criteria.

<sup>&</sup>lt;sup>8</sup> Documentation under: <a href="http://www.freedomhouse.org/">http://www.freedomhouse.org/</a>, data on electoral democracies can be obtained upon request at info@freedomhouse.org

els of SWD in Spain. In chapter 4 I observe that increases in democratic and economic performance leads to increases in regime evaluations. However, as with most research based on observational survey data, there are several caveats we need to keep in mind for the interpretation of the empirical results. In this section I will discuss the extent to which the conducted empirical analysis can help us to discern causal relationships and where are its limitations.

In order to make a causal claim we need to rule out other explanations for a correlation between X and Y. With non-randomized, observational data there are two broad endogeneity concerns affecting causal analysis: omitted variables and selection bias. Omitted variable bias refers to the situation where individuals' differences on X are related to other causes of Y. Selection bias on the other hand describes the possibility that individuals select X on the basis of expectations about Y (Firebaugh 2008: 129), so the causal direction between two variables might not be obvious.

In order to avoid omitted variable bias in regression analysis, we need to be sure that we control for all potential causes that are correlated to both the X and the Y. If a variable is related to the dependent variable but not related to the independent variable, we do not need to include it in the model. Yet, if we fail to account for important variables that are jointly related to X and Y, the strength of the coefficients will be biased, so they will be either too high or too low. It is important to notice that the employed statistical methods of this thesis, mostly multilevel modelling, do not insulate against omitted-variable bias. Despite its virtues – model contextual effects and show the conditionality of effects across different settings – multilevel regression models also need to be carefully specified before drawing conclusions on the relationship between X and Y. In terms of theoretical accounts, this thesis provides an extensive review of existing studies on SWD. Nevertheless, there is a chance that there might be other unobserved factors not considered in the models.

To lessen this concern, this thesis combines the analysis of cross-sectional data with longitudinal data wherever possible. As discussed in the previous sections, this thesis makes use of both individual- and aggregate-level panel datasets to test many of its arguments. This allows studying how *changes* in X are related to *changes* in Y over time (either in individuals or in the general population). By the decomposition of time-changing explanatory variables in a so called "within-between" random effects model (Bell and

Jones 2015; Schmidt-Catran and Fairbrother 2016), the multilevel models yield "within" estimates which are equivalent to those obtained by fixed-effects (FE) models. Thus, we can exclude the possibility that some unobserved *time-invariant variables* at the higher level are biasing the "within" coefficients. Unlike random effects (RE) models which make the exogeneity assumption that the errors  $\mu_j$  are uncorrelated with each explanatory variable in all time periods, FE models allow for a correlation between the residuals and the explanatory variable, for which "FE is widely thought to be a more convincing tool for estimating an ceteris paribus effects" (Wooldridge 2009: 493).

A second endogeneity concern is the possibility of reverse causation and selection bias. For example, individuals might select an X on the basis of their expectations about Y. So might the dependent variable affect any of the independent variables? When relying on observational data most applications of regression analysis involve some ambiguity about the direction of the effects. As with omitted-variable bias the problem of reverse causation is one of varying degree. This concern is probably most significant when we seek to explain one political attitude with another political attitude. Given the potential for endogeneity among some primary variables of interest, for example between trust in representative institutions, evaluations of government performance and satisfaction with democracy, we need to be more cautious when interpreting the results of the models (for example Table 17 in chapter 3.5).

Yet what does this imply and how can we account for it? First, we can be more descriptive and conservative in the interpretation of the results. For example, we can see the presented evidence from chapter 3.5. as suggestive of strong associations between this set of individual-level variables only. Second, multiple regression models can, to some extent, alleviate the problem of self-selection when including factors from the error term that are correlated with X (Wooldridge 2009: 253f.). For instance, I also control for variables that are deemed to be important for explaining government evaluations or political trust such as economic evaluations and perceptions of corruption. Unfortunately, we cannot be sure that we have included all unobserved factors that are related to perceptions of gov-

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<sup>&</sup>lt;sup>9</sup> For an introduction on the topic compare Allison (1999:52ff.), Firebaugh (2008: 128f.) or Wooldridge (2009: 252ff.).

ernment performance or political trust, so we still need to be worried about obtaining biased estimates.

Third, we need to base our decisions about the direction of causation on the theoretical knowledge of the object we are studying. Although much research on SWD assumes that evaluations of the government or incumbent support affect regime evaluations, it is not implausible to argue that also the perceived functioning of a political system affects the evaluation of governments, so there might be a two-way reciprocal causality. In methodological terms, the findings from Table 17 might suffer from endogeneity bias, because the perception of government variable could be influenced by SWD and might therefore be correlated with the error term in the regression.

For other variables, however, there are theoretical grounds to argue that the effect of reverse causation should be minimal. For instance when studying the effect of political institutions on SWD in chapter 2, it is a reasonable assumption that not many people will move from one country to another country in anticipation of a different institutional framework. Even if this is the case, it will be partially discounted by the fact that all countries need to fulfill certain democratic standards in order to be included in the analysis and there have been no noteworthy institutional reforms *within* those countries for the period under scrutiny.

Similarly, it appears unlikely that there is reverse causation from SWD to the exogenous measures of economic performance when considering the aggregate models presented in chapters 2, 3 and 4. For one, people always want jobs and a smoothly running economy. On the other hand, we need to be aware of the fact that the dependent variable in all models is a measure of public opinion, not policy, and a contemporaneous effect of SWD on the running of the economy is implausible and even a lagged effect seems unlikely. To a lesser extent this should also be the case for "objective" measures of democratic quality and corruption at the aggregate level. On theoretical grounds we can also reject the issue of reverse causation for socio-demographic variables (i.e. age, gender, education) and arguably also for the economic situation of the respondent (household income, unemployment, personal economic situation). People will not choose to become unemployed because they are dissatisfied with the working of democracy. Instead, people are dissatisfied because they lose their jobs.

On a similar note there might also be empirical information about the time-ordering of the variables that can help us to discern the direction of cause and effect. Comparing for instance Figure 11 and Figure 12 in chapter 3 gives us the impression that the various declines in SWD in Spain have been initiated by economic recessions. In Figure 23 we can observe how an election is usually followed by a peak in SWD. However, there are cases where we cannot say what phenomena came first by comparing descriptive trends alone. Moreover, cause and effect are usually measured at the same point of time in public opinion surveys.

Yet, some surveys also include a number of questions about past behaviors, for example variables related to voting behavior in the last election. These are some of the key explanatory variables used in the multilevel-analysis of the CSES dataset in chapter 2. However, we cannot determine the direction of causality between political behavior and political attitudes with this individual level cross-sectional data alone. For example, a recent study by Quintelier and van Deth (2014) suggest that causality might run in both directions although the authors find the effect of participation on attitudes to be much stronger. Thus, people might be more satisfied with democracy as a result of their (recent) electoral participation (Anderson and Singer 2008; Anderson and Tverdova 2003; Singh 2014; Singh et. al. 2011). On the other hand it is not difficult to imagine that many people might have abstained because of a strong prior dissatisfaction. This potential issue, however, is alleviated by the fact that chapter 2 compares variables resulting from electoral behaviour (representation deficit, winning and losing) only between voters.

Although X and Y are usually measured together in most applications of survey research, we sometimes have the chance to establish a temporal ordering when constructing aggregated panel datasets. For instance, when merging aggregate public opinion data in chapter 2, I have ensured that SWD has been measured only after an election has taken place by comparing the exact timing of the surveys and the elections in a given year. This, together with modelling "years" as nested within "election cycles" in the TSCS panel analysis, assures that the key electoral outcome variables (electoral disproportionality and the effective number of parties) precede the assumed effects although prior levels of SWD might have facilitated the emergence of new parties.

Finally, I want to conclude this section by coming back to the individual-level panel analysis of the CIUPANEL data presented in Table 17, which is arguably at risk of suffering from endogeneity bias due to reverse causation. Since I analyze individual-level panel data collected at different points of time, it is tempting to use lagged independent variables to establish a temporal ordering in the analysis of the CIUPANEL data. This issue is at the center of a current methodological debate (Allison 2009, 2015; Vaisey and Miles 2017).

I have two main reservations against the inclusion of lagged independent variables in the 'within-between' random effects models I am using to analyze the data of the CIUPANEL and on many other occasions in this thesis. My first reservation is related to the 'between' part of the models that analyses persistent differences between respondents. For this part of the model, the introduction of lagged independent variables makes no sense as we are interested in a cross-sectional comparison between respondents.

However, the use of lagged IVs could make sense when we are interested in their impact on changing SWD over time, so when we turn to the 'within' part of our model. An intuitive idea for establishing causal ordering could be the inclusion of lagged independent variables in a lagged first-difference model (Allison 2009: 95):

$$y_{it} - y_{i, t-1} = \beta(x_{i, t-1} - x_{i, t-2}) + (\epsilon_{it} - \epsilon_{i, t-1})$$

This model makes the assumption that a change in X between two waves affects Y in the following waves. Estimating a lagged first difference model (LFD) requires a panel dataset with at least three waves of information. With the CIUPANEL this approach can be implemented as the dependent variable is also covered in a subsequent wave. However, the LFD model also makes the assumption that there is a causal lag of one wave. Unfortunately, we cannot determine what an appropriate time span is; instead the lag length is determined by the spacing of the waves ('data lag'). However, the real process might have a different lag length ('process lag'). For example, in the CIUPANEL the 'data lag' between wave 4 and wave 5 is about half a year. Arguably, it might take less time for changes in the perception of the government to influence SWD

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<sup>&</sup>lt;sup>10</sup> For example, in the CIUPANEL the 'data lag' between wave 4 and wave 5 is about half a year.

('process lag'). Yet, if the 'process lag' differs from the 'data lag', the estimates might be heavily biased (Vaisey and Miles 2017)<sup>11</sup> – which is my main reservation against the inclusion of lagged independent variables in the 'within' part of my models<sup>12</sup>.

However, this statistical artifact is specific to FE model with lagged predictors and does not arise in RE models (Allison 2015). Building on this observation, I also estimate RE models with lagged IV's based on data from the CIUPANEL of wave 4, 5 and 6 which are presented in Table 22. Although the results cannot be interpreted as providing a causal test, they show that the results for all variables of interest are robust against the inclusion of lagged IVs.

### 1.5. Content of the dissertation

against the use of lagged IV's in FE models.

This thesis is structured as follows: In the second chapter I am going to test the outcomes of electoral institutions on SWD and their interplay with voting behaviour. Here, I provide evidence that electoral proportionality increases SWD at the contextual-level while other pluralistic factors such as party or government system fractionalization produce the opposite effect. I illustrate this duality of counteracting effects of electoral systems by expanding the number of cases under study to different regions of the world in a comprehensive TSCS sample of 58 democracies between 1990 and 2012. In the second part of the paper, I am able to reconfirm these findings at the individual level by employing survey data from the Comparative Study of Electoral Systems (CSES). With regard to electoral proportionality, I am able to show that voters whose parties receive a lower seat share than their vote share are more dissatisfied, demonstrating and confirming once more that representational deficits have direct repercussions on SWD at the individual level. But at the same time, we can also observe that these individual ef-

<sup>&</sup>lt;sup>11</sup> Vaisey and Miles (2017) showed by simulation and formal proof that in instances where the 'process lag' is shorter than the 'data lag' there will be a bias towards the opposite sign of the true effect in LFD models. This worrisome finding was retested and reconfirmed recently by Allison (2015), now also cautioning

<sup>&</sup>lt;sup>12</sup> As noted earlier, the within part of the model provides estimates equivalent to those of a FE model.

fects of the representational deficits get amplified in highly fractionalized government contexts.

In chapter three I investigate the political and economic causes of satisfaction with democracy (SWD) in Spain from a longitudinal perspective. This is significant because the literature on SWD has exploded in recent years and there has been an increasing interest in the effects of the economy, especially after the onset of the Great Recession in 2008 in Europe. As this study will show, national economic performance plays a substantial role in shaping the evolution of SWD in Spain, yet to fully understand the dynamics of the Spanish case it is also necessary to take into account a number of important political factors, in particular a series of major political corruption scandals in the 1990s and at the beginning of the 2010s, which have largely contributed to worsening evaluations of Spanish democracy. This study contributes to the academic debate by focusing on the dynamic changes in the evolution of SWD both at the national and the individual levels. Unlike most existing literature, this study supports its argument by combining analyses of a microlevel panel dataset (the CIUPANEL) and of a pooled aggregatelevel panel dataset based on the Spanish samples in the Eurobarometer and the Latinobarómetro between 1986 and 2014.

Finally, chapter 4 tests the links between economic performance, democratic quality and satisfaction with democracy (SWD) at the national level. Analyzing a TSCS panel dataset of 61 democracies between 1980 and 2014, this study finds both types of performance to matter and their effects to be reinforcing. Countries with a good economic record and a high quality democracy tend to have higher levels of SWD in the long run. Longitudinally, increasing economic and democratic performance leads to increasing SWD within countries over time. Furthermore, this study provides evidence that the effect of economic performance on SWD has increased over time and that citizens today are more critical about the economic record of their country than before the beginning of the Financial Crisis in 2008. Finally, it shows that the effect of economic performance on SWD is conditional on the democratic quality of a country and vice versa.

# 2. The effects of government system fractionalization on satisfaction with democracy

This study analyses how different institutional settings influence individual and cross-national differences in satisfaction with democracy (SWD). The dominant theoretical paradigm is that pluralistic or consensual features of representative democracies should foster higher SWD among the citizenry. As Liphart (2012) argues, all the features that characterize consensual democracies which seek to maximize representation and the plurality of decision-making majorities should tend to produce more positive citizen evaluations of their functioning. However, more recent analyses find no empirical evidence of a positive effect of consensual democracies on SWD (Bernauer and Vatter 2011), prompting some to argue that the "difference between majoritarian and consensus institutions is not particularly important for popular perceptions of a regime" (Peffley and Rohrschneider 2014: 16). Moreover, the literature on SWD returns inconsistent results regarding the effects of electoral, party and governmental systems - i.e. of the arguably most important defining characteristics of the consensual-majoritarian dichotomy.

So, do institutions that promote consensualism have any positive impact on SWD? As this study will show, strong linkages exist but their relationships do not always work in the same expected positive direction. This article discusses and shows the consistency of these apparently contradictory results through a comprehensive cross-regional analysis, and also provides individual-level evidence for the logic behind aggregate-level results. Our empirical results strongly support the view that countries with greater electoral proportionality tend to have higher levels of SWD, while at the same time government fractionalization is associated with lower SWD. Our analysis further suggests that people are capable of valuing both good representation and also a concentrated government system where parties can be held accountable – a combination of electoral outcomes that has been described by some as an electoral "sweet spot" (Carey and Hix 2011).

In the first part of this paper, we test these essentially aggregate-level arguments by relying on a time-series cross-sectional (TSCS) panel dataset covering 58 democracies, 300 elections and 833 country years between 1990 and 2012 based on aggregate survey information. This is in stark contrast to the body of research

whose analysis usually hinges on many fewer cases, usually ranging from 15 to 30 countries, with a bias towards established Western democracies. This makes it not only hard to generalize the empirical findings but also difficult to disentangle the often highly collinear variables at the aggregate level (Arcenaux and Huber 2007). Our panel dataset also allows us to conduct a more complex longitudinal analysis of the causes of changes in SWD at the national level.

In the second part of the study, we replicate the analysis at the individual level by employing survey data from the Comparative Study of Electoral Systems (CSES). For this purpose, we merge information from the four existing rounds of the CSES, which provides us with information from 38 democracies, 96 elections, and 84,000 *voters*. Through analysis of this comprehensive dataset, we are able to reconfirm our initial aggregate-level findings. With regard to electoral proportionality, we are able to show that voters whose parties receive a lower seat share than their vote share are more dissatisfied, demonstrating and confirming once more that representational deficits have direct repercussions on SWD at the individual level (Blais et al. 2017). But at the same time, we can also observe that these individual effects of the representational deficits get amplified in highly fractionalized government contexts.

# 2.1. Arguments and hypotheses

In this study, we analyze how different institutional features are related to individual and cross-national differences in SWD. An influential discussion on this topic was framed by Lijphart (2012), who differentiated between consensual and majoritarian types of democracy. According to Lijphart, consensual democracies seek to maximize decision-making majorities and can be characterized in terms of inclusiveness, bargaining and compromise. Majoritarian democracies, on the other hand, concentrate political power and can be described as exclusive, competitive and adversarial. This divide is especially relevant to those features that belong to the "executive-parties dimension" of Lijphart's classification: electoral proportionality, party system fragmentation and a concentration of executive power. These variables are expected to be interconnected and are therefore considered to have similar effects on SWD.

In our study, we unbundle the effect of this set of "institutions" and argue that electoral proportionality and party/government fractionalization are distinct outcomes of the electoral rules (Lijphart 1994; Taagepera 2003) that have different effects on SWD. In important aspects, this argument parallels a puzzle posed to research on electoral turnout. While PR-systems and electoral proportionality are positively associated with turnout rates empirically, the presence of a higher number of parties appears to decrease participation in elections (Blais 2006; Blais and Aarts 2006; Blais and Dobrzynska 1998; Grofman and Selb 2011; Jackman 1987). The positive effects of PR systems are attributed to their ability to mobilize and to provide a more effective representation of small parties and of minority groups. Voting itself could also be more "satisfying" because fewer votes are wasted (Karp and Banducci 2008: 330). Yet, as Jackman (1987) has pointed out, multiparty systems also tend to produce coalition governments. These in turn endanger the decisiveness of elections since electoral outcomes no longer determine the final composition of governments.

We argue here that from a citizen's perspective both electoral proportionality and government system fragmentation can have independent and contradictory effects on SWD. Theoretically, a case can be made in favor of a positive effect on SWD for both majoritarian and consensual systems: "If we argue that a consensual system is better for support [...], we are using the representation argument [...]. If we stress the accountability argument we would be more likely to argue that majoritarian systems would be better since such systems allow us to know whom we can reward or punish for performance in office [...]" (Listhaug et al. 2009: 318). For many people, there is no contradiction in valuing both aspects at the same time: fair and pluralistic electoral representation but also concentrated party and government systems where single parties can be held accountable. Citizens may be especially happy with electoral "sweet spots", characterized by a low-magnitude PR electoral system that tends to produce highly representative governments but limits party and government fractionalization (Carey and Hix 2011). It is this duality of *counteracting* consequences of electoral systems that is likely to be responsible for a considerable degree of confusion in the literature on SWD.<sup>13</sup>

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<sup>&</sup>lt;sup>13</sup> As Lijphart (1994) shows, electoral proportionality and party/government system fractionalization are moderately correlated. Because both variables

## 2.1.1. Aggregate-level hypotheses

Findings with respect to electoral proportionality are far from uniform. There are a number of studies reporting that countries with greater proportionality tend to have higher levels of SWD (Anderson et al. 2005; Berggren et al. 2004; Farrell and McAllister 2006), but studies that analyze the effects of electoral proportionality over time report no relationship between the two variables (Ezrow and Xezonakis 2011; Martini and Quaranta 2014; Quaranta and Martini 2016a). This discussion leads us to our two first hypotheses:

H1a: Countries with a more disproportional electoral system tend to have lower levels of SWD.

H1b: Decreasing electoral proportionality leads to decreasing SWD within countries over time.

Somewhat paradoxically, other studies report that countries with majoritarian electoral systems (Aarts and Thomassen 2008; Berggren et al. 2004; Farrell and McAllister 2006; Singh 2014; Karp and Bowler 2001), and concentrated party and government systems (Anderson et al. 2005; Martini and Quaranta 2014; Karp and Bowler 2001; Quaranta and Martini 2016a; Weil 1989) tend to have higher levels of SWD. Here, the accountability argument together with clarity of responsibility can serve as plausible theoretical explanations for these findings (Manin et al. 1999). Accountability is only possible if it is clear in citizens' eyes which party is responsible for policies. Single-party government provides the most clarity, while coalition governments make it more difficult for voters to assign blame and responsibility or to vote incumbents out of office (Lundell 2011; Powell 2000). This leads us to our next pair of hypotheses:

H2a: Countries with a more fractionalized government composition tend to have lower levels of SWD.

potentially have opposite effects on SWD, we decided to account for both variables jointly in our models. Otherwise, as we can see in Table 11 and 12 in the Appendix, omitting one variable leads to an underestimation of the other variable.

H2b: Increasing fractionalization of the government composition erodes SWD within countries over time.

## 2.1.2. Individual and cross-level hypotheses

There is already some evidence at the individual level for the beneficial/negative effects of representation/under-representation on SWD. First, it has been consistently reported that having voted for parties that won an election substantially increases SWD (Anderson and Tverdova 2001; Anderson et al. 2005; Blais and Gélineau 2007; Curini et al. 2011; Singh et al. 2011). More recently, Blais et al. (2017) have demonstrated that SWD decreases if the seat share of the party that respondents prefer falls short of its vote share.

On the other hand, losers might be more dissatisfied when the policies implemented do not match their preferences. Following this logic, we can also assume that the positive effect on SWD of voting for the winner can be conditioned by the relative positions of each party in the cabinet. Thus, we further distinguish electoral winners between those who have voted for the party of the Prime Minister (PM) or president – therefore the party that leads the government – and those winners who have voted for the other government parties. Our expectation is that winners who have voted for the party of the PM/president derive much more satisfaction from their electoral victory than those whose party ends up as only a minor coalition partner:

H3: Electoral winners who voted for the party of the PM/president have more SWD than electoral winners who voted for a minor coalition partner and the latter have more SWD than electoral losers.

Additionally, we can utilize these individual findings to test our argument with the help of cross-level hypotheses, since the party and government systems can be expected to have important repercussions on the degree of representation of voters. This argument is inspired by a study by Anderson and Guillory (1997) that showed that the nature of democratic institutions – whether they are consensual or majoritarian in Lijphart's terms – should mediate the effects of winning and losing. These same authors argued that electoral winners in majoritarian democracies will be more satisfied since

their policies. By the same token, we expect that fractionalization of the government should condition the effects of winning and losing an election. Although this argument was devised with the consensual-majoritarian dichotomy in mind, we find this cross-level interaction more plausible when applied to the government system since this variable directly captures the extent of power-sharing.

Furthermore, we expect that the modifying effect of fractionalization will not be limited to conditioning the effect of winning and losing, but it should also apply more generally to the quality of representation: whether voters are adequately represented in the legislature. Our expectation is that the assumed negative effects of a representation deficit on SWD are amplified in strongly fragmented systems with a multitude of parties and complicated coalition dynamics. Thus, it should be more important in such systems to be adequately represented than in concentrated two-party systems, where the losing side is in any case doomed to opposition.

H4a: Electoral winners, in general, tend to be more dissatisfied with democracy in fragmented government situations.

H4b: The individual negative effects of representational deficits are amplified in more fractionalized government situations.

### 2.2. Data and measurement

This study only covers countries that fulfil a number of minimal democratic criteria. To approximate these standards, all the countries in our study need to be classified as "Electoral Democracies" and at least as "partly free" by Freedom House. In addition, they must be classified as democracies by Cheibub et. al (2010). We use two different sources of data in our analysis: a time-series cross-sectional panel (TSCS) dataset at the national level and an individual-level dataset based on the Comparative Study of Electoral Systems (CSES).

## 2.2.1. Aggregate TSCS panel dataset

We are able to retrieve data for 58 countries between 1990 and 2012 that match the above democratic criteria and can thus compile a widely-encompassing time-series cross-sectional (TSCS) panel dataset. This empirical sample exceeds those of previous studies in a number of respects. First, its regional coverage extends to democracies in Europe, North, South and Central America and South-East Asia, and thus overcomes the "Western" democracy bias that is inherent in most SWD studies. Second, it covers 300 election periods and information from 833 country-years, with an average of 14.4 observations per country, aggregating public opinion data from about a million respondents. We only include in our analysis those democracies where we can collect information on at least three consecutive elections. This dataset not only allows for the first longitudinal analysis on SWD outside Western Europe but also increases our confidence in the cross-sectional results because we are able to compare country means for a longer period of time and not only single snapshots. Third, the sample neatly balances new democracies against established ones: 395 country years come from established democracies while 438 country years come from third-wave democracies. Fourth, there is a clear temporal ordering in our dataset. We make sure that SWD is always measured after an election. Thus unlike most survey research, where cause and effect are usually measured simultaneously, in our dataset the electoral variables (the causes) precede SWD.

In order to construct the TSCS dataset, we rely on opinion data from 13 different sources, most of them international survey programs: Eurobarometer, Candidate Countries Eurobarometer, Central and Eastern Eurobarometer, the European Value Study, the New Democracies Barometer, the Comparative Study of Electoral Systems, the Americas Barometer by the Latin American Public Opinion Project, the Latinobarómetro and the Asian Barometer. Furthermore, we rely on a number of national election studies too: the Australian Election Study, the Canadian Election Study, the American National Election Studies and the New Zealand Election Study. <sup>14</sup> We only include representative surveys in our sample that use the same question wording and employ the same four-point

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 $<sup>^{14}</sup>$  More information on the used datasets can be found in Table 6 in the Appendix.

scale ranging from not at all satisfied with the way democracy works (1) to very satisfied (4). When aggregating individual survey data, we weight all the data according to the post-stratification, design or demographic weight as necessary. We choose to calculate the percentage satisfied with democracy. SWD at the aggregate level is normally distributed with a grand mean of 50.1 percent and a standard deviation of 19.6.

## 2.2.2. Explanatory context-level variables

The degree of electoral *disproportionality* is measured using the well-known Gallagher Index. <sup>15</sup> Higher values reflect a higher degree of disproportionality. As discussed, we expect higher levels of SWD in contexts with more proportional electoral outcomes (and therefore better representation and fewer wasted votes). All the information about the aggregate-level variables is summarized in Table 7 in the Appendix.

Government fractionalization measures the extent to which the executive power is homogeneous. <sup>16</sup> It reflects the level of party plurality in the composition of the cabinet. It ranges from 0 (every deputy from among the government parties belongs to the same party) to 1 (every deputy from among the government parties belongs to a different party). We expect that countries with single-party and small coalition governments will tend to have higher levels of SWD than countries with heterogeneous coalition governments.

#### 2.2.3. Context-level controls

Currently, the most prominent alternative explanation links SWD with the economic outputs of the political system. For crisis-ridden countries such as Portugal, Ireland, Italy, Spain or Greece, the literature mainly attributes the declining levels of SWD to the Great Recession (Armingeon and Guthmann 2014; Cordero and

<sup>&</sup>lt;sup>15</sup> The data come from Gallagher (2015). Missing values are replaced with data from Carey and Hix (2011) and from the Democracy Barometer (Merkel et al. 2016).

<sup>&</sup>lt;sup>16</sup> The data come from the Database of Political Institutions (Cruz et al. 2016).

Simón 2016; Quaranta and Martini 2016b; Sousa et. al 2014). But also, in general, there exists comparative evidence that economic performance is strongly related with SWD (Armingeon and Guthmann 2014; Halla et al. 2013; Quaranta and Martini 2016a). While economic growth might have a positive effect on satisfaction due to benefits from the improving economic situation, the erosion of disposable income might diminish people's SWD (Clarke et al. 1993, 1000f.). Closely related, the level of economic development has been shown to be positively associated with SWD as well (Anderson and Tverdova 2003; Guldbrandtsen and Skaaning 2010; Schäfer 2012), while income inequality and poverty appear to depress SWD (Anderson and Singer 2008; Schäfer 2012; Lühiste 2014). In our model, we control for these factors by adding *GDP per capita* and *GDP growth rate* and, finally, *income inequality*. 17

A second category of hypotheses links SWD with various aspects of the quality of governance. A number of comparative studies have shown that corruption, rule of law and effective public administration are strongly related with SWD at the national level (Anderson and Tverdova 2003; Ariely 2013; Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010; Peffley and Rohrschneider 2014). In our study, we employ a measure that taps into all three dimensions, the *Quality of Government Index*, provided by the International Country Risk Guide (ICRG). It is based on the rescaled average of three component variables "Corruption", "Law and Order" and "Bureaucracy Quality", where higher values express higher quality of government. Unlike any available alternative, the ICRG provides information up to 1985, so it covers the complete time-span of our dataset. Data come from the Quality of Governance Standard Dataset (Teorell et al. 2015).

We control for two potentially important institutional characteristics that might affect the analysis: type of government and structure of the state (federalism). *Type of government* is measured as a categorical variable distinguishing between parliamentary, semipresidential and presidential regimes. <sup>18</sup> Second, we control for the *structure of the state*, i.e. whether there exist independent sub-

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<sup>&</sup>lt;sup>17</sup> Data for GDP per capita and GDP growth rates are taken from the World Bank, accessed at <a href="http://data.worldbank.org/">http://data.worldbank.org/</a> and from the IMF, accessed at <a href="https://www.imf.org/external/data.htm">https://www.imf.org/external/data.htm</a>. Data for income inequality come from imputations by Solt (2016).

<sup>&</sup>lt;sup>18</sup> The data are taken from Cheibub et al. (2010).

national tiers of government with certain areas of autonomy which are formally guaranteed, commonly in a written constitution (1) or not (0).<sup>19</sup>

As Listhaug et al. (2009: 318) point out, our theoretical expectations about the direction of the effects can go both ways, depending whether we stress the importance of accountability or representation: "The arguments [...] in favor of federalism are related to the advantage that federal structures may have for maximizing representation in divided or fragmented societies. On the other hand it is plausible to argue that a federal structure will obscure accountability, often in the form of divided government—and that this might contribute to political alienation and distrust among citizens." Existing empirical evidence about the relationship between federalism, the type of government and SWD is mixed (Anderson et. al. 2005; Curini et al. 2011; Henderson 2008; Singh et al. 2011; Norris 2011)<sup>20</sup> underscoring the important contribution this study can make by retesting the linkages through comparison of a larger and more diverse sample of democracies.

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<sup>&</sup>lt;sup>19</sup> The data mainly come from the Democracy Barometer (Merkel et al. 2016), and also from Norris (2008).

<sup>&</sup>lt;sup>20</sup> Most previous studies find that neither federalism (Anderson et. al. 2005; Singh et al. 2011; Norris 2011) nor the type of government (Norris 2011; Henderson 2008) have a significant effect on SWD. Curini et al. (2011) on the other hand report that presidential systems enhance SWD, while Henderson (2008) finds a positive raltaionship with regard to federalism.

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the linkages based on a comparison of a larger and more diverse sample of democracies.

Party fractionalization/supply is measured using the effective number of electoral parties (ENEP).<sup>22</sup> We include this variable to distinguish the effect of plurality of party supply from government fractionalization. According to existing evidence and similar to electoral proportionality, we expect that countries with greater party fractionalization will tend to exhibit higher levels of SWD since multi-party systems provide more choices and might be better equipped to handle discontent among the electorate (Miller and Listhaug 1990). Additionally, rising ENEP should cause SWD to increase within a country over time. Another potentially relevant control variable is *ethnic fractionalization* (Alesina et al. 2003) since social diversity can be expected to impact on party fractionalization, probably in combination with the country's electoral system (Ordeshook and Shvetsova 1994; Neto and Cox 1997). On the other hand ethnic minority groups have been shown to express lower levels of political trust and democratic regime evaluations (Dowely and Silver 2002).

Finally, democratic elections might enhance people's feelings about their political institutions and the political process (Banducci and Karp 2003; Blais and Gélineau 2007; Blais et al. 2017; Esaiasson 2011). We, therefore, include in our model a variable temporal distance to elections, which is the difference between the year of observation and the election year for a given country.<sup>23</sup>

## 2.2.4. Comparative Study of Electoral Systems (CSES)

The second part of our research analyses individual-level data from 96 post-electoral surveys from the Comparative Study of Electoral Systems (CSES). We only include those surveys that cover parliamentary elections for the lower house – although they might have taken place in presidential or semi-presidential systems. For this dataset, we merge all four existing waves of the CSES. It covers

information from Gallagher (2015).

report that presidential systems enhance SWD, while Henderson (2008) finds a positive raltaionship with regard to federalism. <sup>22</sup> The data come from Bormann and Golder (2013). Missing data is replaced with

<sup>&</sup>lt;sup>23</sup> A value of 0 indicates that an election has taken place in a given year. The values of this variable increases on a yearly basis until a new election takes place.

38 countries between 1996 and 2013 that match the democratic criteria noted above. The sample includes information from all over the world, although most cases come from Europe. Outside Europe, it covers Australia, Brazil, Canada, Chile, Israel, Mexico, New Zealand, Peru, South Korea, Taiwan, Turkey, the US and Uruguay. At the individual level, the database includes cross-sectional information on 84,000 *voters*. We needed to exclude non-voters from analysis as one of our key explanatory variables, representation deficit, can be estimated for voters only.

## 2.2.5. Explanatory individual-level variables

Winning elections matters to voters when evaluating their democracy and its institutions. Previous studies usually rely on a categorical variable that distinguishes between electoral losers and electoral winners. Yet are all winners alike? Especially in the fragmented party and government systems, voters are often faced with the situation in which they have voted for a party that is part of a coalition but does not lead the government. For this reason, we further distinguish *electoral winners* between voters who have voted for the party of the prime minister or president and voters who have voted for another party in government.

We measure *representation deficit* at the individual level as the difference between the vote shares minus the seat shares of the parties respondents have voted for.<sup>24</sup> Thus, positive values reflect under-representation while negative values reflect over-representation of the respective party. For example, a value of 5 on the representation deficit indicator implies that the proportion of seats in the legislature is 5 percentage points lower than the proportion of votes for a given party. Relying on a similar measure, Blais et al. (2017) report that SWD decreases if the seat share of respondents' preferred parties falls short of their vote shares.

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<sup>&</sup>lt;sup>24</sup> The data for both variables come primarily from the CSES but sometimes it was also necessary to rely on other sources, such as the Parline database: <a href="http://www.ipu.org/parline-e/parlinesearch.asp">http://www.ipu.org/parline-e/parlinesearch.asp</a>. To replace missing values or to determine which party heads a government we use the ParlGov database: <a href="http://www.parlgov.org/static/static-2014/stable/data.html">http://www.parlgov.org/static/static-2014/stable/data.html</a>.

#### 2.2.6. Individual-level controls

At the individual level, we control for important sociological variables such as *age* (in years), *gender* (reference category: male) and *household income* (constructed as income quintiles for each country). To make the analysis of education consistent with those presented in later chapters, we have recoded the original *education* variable of the CSES data into three categories: primary or below, secondary, or tertiary (consult Table 8 for the coding scheme). We have chosen not to add *unemployment* (reference category: other) to the analysis as there is no information available on this question for surveys from Denmark in 2001 and the Netherlands in 2006. However, we added unemployment and the original CSES education variable to the analysis in Table 15 in the Appendix as another robustness test.

We also include *left-right self-placement* since there is documented evidence of a relationship with SWD (Anderson and Just 2013; Anderson and Singer 2008; Lühiste 2014; Schäfer 2012). Furthermore, we control for respondents' perceptions of *political efficacy* or accountability. For this, we rely on two survey items from which we create an additive index (Huang et al. 2008). Our expectation is that greater political efficacy is associated with greater SWD.

Moreover, we expect party identification (feel close to a political party=1, or not=0), as a measure of satisfaction with the party-system supply, to have a positive impact on SWD (Curini et. al. 2011; Huang et al. 2008; Peffley and Rohrschneider 2014; Sanders et al. 2014). Thus, we expect voters who identify themselves with a particular party to be both more likely to see differences between party alternatives than those who do not feel close to a party (Listhaug et. al 2009: 328) and to be more satisfied with the working of democracy (Dahlberg and Holmberg 2014: 532).

Another factor compounding with the winning effect on SWD is ideological proximity with the ideological content of the policies

<sup>&</sup>lt;sup>25</sup> The first question taps into the concept of internal efficacy ("Some people say that no matter who people vote for, it won't make any difference to what happens. Others say that who people vote for can make a difference to what happens"); while the second question covers the concept of external efficacy ("Some people

say it makes a difference who is in power. Others say that it doesn't make a difference who is in power").

adopted by the government. To test this possibility, we calculate a measure of respondent's left-right proximity to the parties in government. Here, we expect *ideological congruence* with the government to increase SWD (Curini et al. 2011; Dahlberg and Holmberg 2014; Kim 2009). Departing from Curini et al., we calculate congruence as:

$$ideological\ congruence_{ij} = (\mid x_{ij} - \overline{p}_j \mid) * (-1),$$

where  $x_{ij}$  is respondent i's left-right self-placement in country j and p is the left-right position of the cabinet. More in detail, p is calculated as the mean position of government parties weighted by the vote share each party has received. Information about the individual-level variables is summarized in Table 8 in the Appendix.

## 2.3. Method and model specification

## 2.3.1. TSCS aggregate panel model

For the TSCS aggregate panel dataset we estimate a three-level multilevel regression where country-years (k) are nested within election cycles (i), which in turn are nested within countries (j):

$$y_{kij} = \beta_0 + \beta_1 t_{kij} + \beta_2 x_{kij} + \beta_3 x_{ij} + \beta_4 x_i + \mu_i + \mu_{ij} + e_{tij},$$

where  $y_{kij}$  is the response variable of country j measured at election i, on occasion k.  $x_{kij}$  is a time-varying covariate such as GDP growth, while  $x_{ij}$  refers to a variable that varies between elections such as ENEP but does not vary within a given election cycle.  $x_j$  denotes time- and election-cycle invariant covariates such as the type of the executive or the degree of ethnic fractionalization. Finally,  $t_{kij}$  refers to a linear time trend variable that captures the measurement occasion.  $^{26}$ 

The above model is also referred to as a random effects (RE) model. It makes the exogeneity assumption that the errors  $\mu_j$  are

<sup>&</sup>lt;sup>26</sup> As Fairbrother (2014: 124f.) notes, the need for a time term arises from the possibility of simultaneous but unrelated time trends in time-varying variables x and y.

uncorrelated with the explanatory variables for all time periods. For this reason, it is sometimes argued that a fixed effects (FE) model should be preferred when dealing with time-series data since it allows for a correlation between the residuals and the explanatory variables. However, with a FE model it is impossible to test the effects of time-invariant variables. A similar problem arises in the context of rarely changing variables (Plümper and Troeger 2007). In consequence, a FE model makes use of only a small part of the variation in a time-varying variable since any higher-level variance is eliminated. Only the "within" effects can be estimated and nothing is known about cross-sectional "between" effects.

Building on the work of Mundlak (1978), Bell and Jones (2015) and Schmidt-Catran and Fairbrother (2016) solve this problem by simultaneously modeling the cross-sectional and longitudinal relationships by adding a group mean and a de-meaned term together in the model. Fairbrother (2014: 124) neatly summarizes the procedure thus: "Separate longitudinal and cross-sectional associations between  $x_{tj}$  and y can be identified by calculating the mean of  $x_{tj}$  across all relevant years for each country. The coefficient on the country mean j captures the effect on y of enduring cross-national differences in  $x_{tj}$ . To capture the effect on y of variation over time within each country, j can then be subtracted from  $x_{tj}$ . The resulting longitudinal component  $x_{tjM}$  (a country-year level variable) is group-mean centred, and is orthogonal to j, such that the two coefficients can be estimated separately." This leads to the following "within-between" random effects model:

$$y_{tij} = \beta_0 + \beta_1 t_{kij} + \beta_2 x_{kijM} + \beta_3 \overline{x}_j + \beta_4 x_{ijM} + \beta_5 \overline{x}_j + \beta_6 x_j + \mu_i + \mu_{ij} + e_{kij},$$

where the original time-varying variable  $x_{kij}$  and the election-varying variable  $x_{ij}$  are included twice in the model, decomposed into  $\bar{x}_j$  and  $x_{kijM}$  and  $x_{kijM}$  respectively. A benefit of this approach is that the "within" coefficients will return the same results as in an FE model. Therefore, we can exclude the possibility that some unobserved time-invariant variables at the higher level are biasing the "within" coefficients. Of equal importance is that this approach allows estimation of the cross-sectional association between a time-varying variable x on and y, while it enables us to include time-invariant variables simultaneously in the model.

#### 2.3.2. CSES individual-level model

The model with which we analyze the CSES survey data is similar to the previous one. We again estimate a three-level model, but this time individuals (k) are at the lowest level. The respondents are nested within elections/surveys (i), which in turn are nested within countries (j). At the aggregate level, there also exists some longitudinal variation (less than 3 percent of the total variance) since some countries are repeatedly observed over time. Nevertheless, there are also many countries that are only covered once or twice, and so we choose to disregard this limited longitudinal information and focus on a cross-sectional comparison. For this reason, we only include the group mean component  $\bar{x}_j$  of variables  $x_{ij}$  that vary between elections/surveys, such as ENEP or GDP per capita. This leads us to the following "between" random effects model<sup>27</sup>:

$$y_{tij} = \beta_0 + \beta_1 x_{kij} + \beta_2 \overline{x}_j + \beta_3 x_j + \mu_i + \mu_{ij} + e_{kij},$$

where  $x_{kij}$  is an individual-level covariate such as gender,  $\bar{x}_j$  the cross-sectional term for a time-varying variable  $x_{ij}$  such as ENEP, and  $x_j$  is a time-invariant variable such as the type of executive. Second, we also estimate a number of models with cross-level interactions between individual-level covariates and contextual variables, which take the following form:

$$y_{tij} = \beta_0 + \beta_1 x_{kij} + \beta_2 \overline{x}_j + \beta_3 x_{kij} * \overline{x}_j + \beta_4 x_j + \mu_i + \mu_{ij} + e_{kij}.$$

#### 2.3.3. Estimation

In order to analyze the TSCS aggregate panel dataset, the first step is to estimate a null or empty model, which serves as a point of reference (model 1). The second model adds the Gallagher Index and government fractionalization, while model 3 replaces government fractionalization with a measure for party system fractionalization (ENEP), along with all the economic, cultural and institutional control variables. To facilitate interpretation, we standardize

<sup>&</sup>lt;sup>27</sup> Estimating ordered probit multilevel regressions instead do not substantively change the results of our analysis.

all continuous variables before estimating our models so they have a mean of zero and a standard deviation of one. We choose not to fit a model which includes the terms for ENEP and government fractionalization jointly since the latter is a direct outcome of the former and as such the two variables are highly correlated.<sup>28</sup>

We include both the cross-sectional and the longitudinal terms of the aggregate variables in the models whenever sensible. While government fractionalization and the social and economic covariates vary at the country-year level, the institutional and cultural control variables are time- and election-period-invariant. ENEP and the Gallagher index, on the other hand, vary only at the election level but not at the country-year level. For this reason, we estimate their cross-sectional terms by calculating the means of all the election periods in a given country  $(\bar{x}_j)$ , weighted by the number of observations for each election so as to not give one election more weight in the estimation. The temporal (within) terms are calculated by subtracting the country means  $(x_{ij} - \bar{x}_j)$ . Put simply, the differenced terms capture electoral fluctuations around each country's long-term average.

For the individual models, we rely on the CSES survey data. We again estimate a null model for comparison (model 4). Second, we add all the individual-level covariates (model 5). In model 6 we add all the contextual control variables, the Gallagher Index, and government fractionalization. We choose to only include the controls that we have found significant in the analysis of the TSCS aggregate panel dataset. Finally, model 7 adds the cross-level interactions between government fractionalization on the one hand and winning an election and representational deficits on the other.

#### 2.4. Results

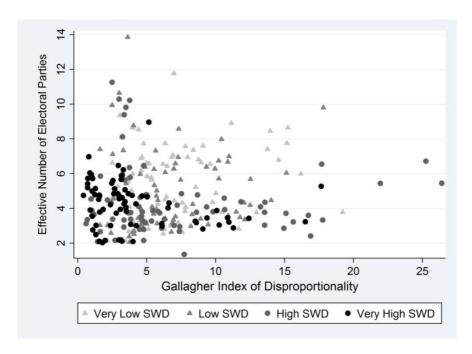
We begin our discussion by presenting a scatter plot of the effective number of electoral parties and the Gallagher Index for the 300 elections in our TSCS aggregate dataset (Figure 6). Its first purpose is to show that, contrary to common wisdom, a low number of political parties *and* high electoral proportionality is indeed a somewhat frequent outcome. Second, it illustrates the fact that citi-

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<sup>&</sup>lt;sup>28</sup> ENEP and government fractionalization are cross-sectionally correlated with coefficient R=0.68 (N=58 democracies, country-means).

zens appear to be most satisfied after elections that produce low party fragmentation but also low disproportionality. Third, the empirical distribution shows that the "sweet spot" hypothesis is not an interactive argument; the negative effect of party system fragmentation on SWD appears not to be conditional on high electoral disproportionality (compare also Table 11 and Table 12 in the Appendix). This is illustrated by the considerable number of cases with high levels of SWD lying close to either of the axes. It appears that reasonably high levels of SWD can still be obtained as long as an electoral system successfully limits either party system fragmentation or electoral disproportionality.

Figure 6: ENEP and Gallagher Index by SWD-quartiles (N=300 elections)



Furthermore, our argument predicts that electoral systems that successfully limit either party/ government fractionalization or minimize electoral disproportionality should tend to have higher levels of SWD *in the long run*. In fact, countries as diverse as Sweden, Iceland, Ireland, New Zealand, the US, Uruguay or Luxembourg score well on both dimensions and are also in the top quartile of countries with the most satisfied citizens, when we compare country

averages for the whole time period under consideration. Other countries in the top quartile, such as Denmark, Norway, Switzerland, Netherland or Finland do a remarkable job in limiting electoral disproportionality but combined with a more fractionalized party/government system. Finally, countries with very large electoral disproportionality (UK, Australia, and Canada) but a highly concentrated party and government system can also be found among the countries with the highest satisfaction. On the contrary, countries with a fractionalized party/government system and high levels of disproportionality such as Bulgaria, Croatia, Hungary, Slovakia, Lithuania, Peru or countries with extreme levels of party system fractionalization such as Brazil, Guatemala, Israel, Italy or Columbia are among the countries with the lowest SWD.

### 2.4.1. Analysis of the TSCS dataset

Table 4 shows the results of the multilevel analysis of the TSCS aggregate panel dataset of SWD. The table is divided into four sections. At the top, the "within" coefficients are presented. This is followed by a section with the cross-sectional predictors. Below this is a section with the random effects of the models (variance components). As can be seen from model 1, the null model, about 69 percent of the variance can be attributed to the country level, 14 percent to time variation (the election level) and 16 percent to the country-year level (occasions). These figures not only tell us that there is a sizeable amount of variation at every level but also that the largest part of the variation in SWD lies between countries and not within countries over time.

Model 2 includes all the economic, cultural and institutional control variables together with government fractionalization and the Gallagher Index of disproportionality. As hypothesized in H1a, we find that countries with a more disproportional electoral system tend to have lower SWD.<sup>29</sup> The strength of the cross-sectional effect is considerable, comparable to that of GDP growth. Interestingly, we find no longitudinal effect (hypothesis H1b). We believe the most plausible explanation for this is that there is very little time-varying

<sup>&</sup>lt;sup>29</sup> We also tested for curvilinear relationships between electoral disproportionality and SWD but found only inconsistent effects (compare Table 11 and Table 12 in the Appendix).

information in the Gallagher Index for the great majority of countries in our sample, meaning that the same electoral rules tend to produce similar levels of proportionality within a country over time (see the time trends in the Appendix). Nevertheless, the absence of a longitudinal finding does not undermine the cross-sectional results. In the case of the Gallagher Index, one can reasonably expect to find much larger effects when comparing between countries (different electoral systems).

With respect to the fragmentation of the government system, we find that countries with greater fractionalization tend to have lower levels of SWD cross-sectionally (hypothesis H2a).<sup>31</sup> This negative effect is substantial: an increase of one standard deviation in government fractionalization results in a decrease of 3 percent in SWD.<sup>32</sup> However, although the longitudinal coefficient points in the same direction, it fails to reach significance (hypothesis H2b). As for the Gallagher Index, we believe that there might not be sufficient longitudinal information in the measure to find an effect.

There is a surprising finding regarding fragmentation of the party system. Although both the cross-sectional and the longitudinal terms of ENEP are strong and highly significant predictors, they point in the same *negative* direction. First, we find that countries with greater legislative party fractionalization tend to have *lower* levels of SWD. Second, increasing party fractionalization leads to decreases in SWD within countries over time. Both effects are substantive, although the cross-sectional predictor appears to be stronger. An increase of one standard deviation in ENEP results in a decrease of 4.06 percent in SWD.

The longitudinal effect of ENEP on SWD can also be clearly observed when looking at the time-line plots of these two variables by country (Figure 7). As we can see, many of the time trends of these two variables appear to run parallel and are almost perfectly

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<sup>&</sup>lt;sup>30</sup> It also illustrates a major problem in the use of conventional RE models to analyze this type of panel data, because these models rely on the assumption that the longitudinal and cross-sectional effects are equal. If they are not, the RE coefficients are likely to be biased (Bell and Jones 2015: 137).

<sup>&</sup>lt;sup>31</sup> We also tested for curvilinear relationships between party system fractionalization and SWD but found no significant effects (compare Table 11 and Table 12 in the Appendix).

<sup>&</sup>lt;sup>32</sup> As a robustness test we replicated all models, excluding presidential and semipresidential systems, but found the effects of government fractionalization to remain highly significant (compare Table 13 and 14 in the Appendix).

correlated (Israel, Belgium, and Venezuela). At this point, we should also point out that the regression coefficient in our model is likely to be dampened by the fact that in about half of the countries there was little or almost no variation in the number of political parties, such as in Australia, Canada, Cyprus, Iceland, the UK and the USA, to mention just a few, despite which we are still able to detect a substantive relationship with SWD. This is a robust but controversial finding and it shows that increasing the plurality of the party supply does, in fact, have negative effects on SWD.

We also find evidence that democratic elections temporarily cause SWD to increase. This finding is consistent with democratic theory, which posits a link between electoral participation and the legitimacy of the political system (Przeworski 1991). In principle, democratic elections might enhance people's feelings about their political institutions and the political process (Esaiasson 2010). A similar relationship has already been shown in studies comparing individual-level pre- and post-electoral survey data (Banducci and Karp 2003; Blais and Gélineau 2007; Blais et al. 2017).

Furthermore, our analysis reinforces recent findings, connecting greater levels of quality of governance with higher levels of SWD (Anderson and Tverdova 2003; Ariely 2013; Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010; Peffley and Rohrschneider 2014). Finally, we find a substantial longitudinal and cross-sectional effect of economic growth on SWD, confirming once more the importance of economic explanations (Armingeon and Guthmann 2014; Clarke et al. 1993; Halla et al. 2013; Quaranta and Martini 2016a). Consistently, we find the level of economic development to be one of the most important predictors to explain lasting differences in SWD between countries. Regarding the institutional control variables, we neither find an effect for federalism, nor for the type of government, which is consistent with most of the literature (Anderson et. al. 2005; Curini et al. 2011; Henderson 2008; Listhaug et al. 2009; Norris 2011; Singh et al. 2011). Finally, we do not find a negative direct effect resulting from the degree of ethnic fractionalization, which is in line with an earlier study by Guldbrandtsen and Skaaning (2010).

Table 4: Multilevel analysis of TSCS dataset

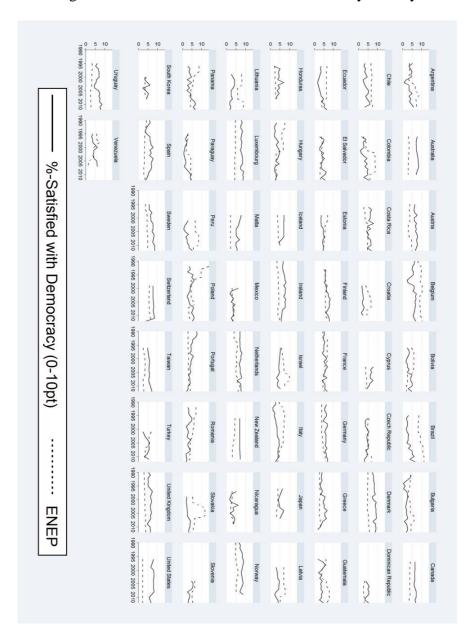
	Mod	el 1	Mod	el 2	Mod	el 3
	β	(se)	β	(se)	β	(se)
Longitudinal						
Gallagher Index			0.34	(0.46)	0.57	(0.46)
Government Fractionalization			-0.26	(0.43)		
ENEP					-0.96*	(0.45)
Years since last election			-1.65***	(0.29)	-1.65***	(0.29)
GDP growth rate			1.95***	(0.32)	1.99***	(0.32)
Gini Index			-2.23***	(0.39)	-2.23***	(0.39)
Quality of Government Index			0.48	(0.44)	0.54	(0.44)
Linear Time Trend			2.48***	(0.52)	2.45***	(0.51)
Cross-Sectional						
Gallagher Index			-3.77**	(1.25)	-2.70**	(1.05)
Government Fractionalization			-3.00*	(1.30)		
ENEP					-4.06***	(1.06)
GDP per capita			7.79***	(2.34)	6.60**	(2.19)
GDP growth rate			3.82**	(1.38)	4.21**	(1.28)
Gini Index			-0.5	(2.67)	0.16	(2.39)
Quality of Government Index			8.19**	(2.70)	9.08***	(2.51)
Semi-Presidential			-3.00	(2.91)	-3.09	(2.70)
Presidential			2.70	(4.33)	2.15	(4.04)
Federal			2.18	(3.26)	3.15	(3.05)
Ethnic fractionalization			-1.62	(1.37)	-1.14	(1.27)
Constant	49.92***	(2.20)	48.93***	(2.02)	48.84***	(1.88)
Variance components						
Country intercept	263.58***	(52.00)	48.64***	(11.42)	40.69***	(9.86)
Election intercept	54.56***	(7.57)	34.59***	(5.70)	33.33***	(5.57)
Residuals	61.60***	(3.78)	58.26***	(3.59)	58.39***	(3.59)
Log Likelihood	-3,158.00		-3,061.89		-3,055.79	
AIC	6,324.00		6,165.78		6,153.58	
ICC Country years	0.16		0.41		0.44	
ICC Election	0.14		0.24		0.25	
ICC Country	0.69		0.34		0.31	
Number of country years	833		833		833	
Number of elections	300		300		300	
Number of countries	58		58		58	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

It is also noteworthy that models 2 and 3 can explain a huge amount of the variation in the dependent variable, especially at the country level but to a lesser extent also at the election level. While 68 percent of the variation in the empty model 1 is due to differences between countries, the ICC for the country level decreases to

a mere 0.34 in model 2 – indicating a huge effect of the independent variables included in the model.

Figure 7: Time evolution of ENEP and SWD by country



## 2.4.2. Individual-level analysis with the CSES data

Table 5 shows the results of the analysis of the CSES postelectoral survey data. As model 4 shows, about 82 percent of the variance belongs to the individual level, 14 percent to the country level and only 4 percent to the time-varying election level. This is a very sizeable degree of clustering and underlines the necessity of a method that models these variances distinctively. We again make use of the multi-level toolkit and specify our models as shown in equations 4 and 5.

To summarize, we have estimated a series of multilevel models where respondents are clustered within surveys/elections, which are clustered within countries. Furthermore, we have decided to discard any longitudinal information at the aggregate level by including only the cross-sectional terms in our analysis. As we can see from model 5, which includes the individual-level variables, all the variables are highly significant, which is hardly a surprise given the large sample size of 84,000 *voters*. For this reason, in the interpretation, we will focus more on the strength of each coefficient.

As discussed above, we have two measures of electoral support to test our arguments at the individual level. The first one captures the difference between the vote- and the seat-share of the parties respondents have voted for, labelled as representation deficit. For this variable, we find once more (Blais et al. 2017) that voters whose parties are under-represented in the legislature tend to have lower SWD, although the substantive effect is only moderate in comparison. Second, we have further distinguished between electoral winners who have voted for the party of the PM or president and those who have only voted for a minor coalition party. Once more, we find that being an electoral winner is a very strong predictor and its substantive effect is comparable with that of political efficacy (winning an election is a categorical variable and therefore not standardized). However, what is more important for our argument is that we find that voters who have cast their ballot for the party that leads the government have twice as much satisfaction as voters who have only voted for a minor coalition partner (hypotheses H3). Finally, party identification, again a categorical variable, also has a sizeable effect on individual SWD. Similarly, ideological

congruence with the government parties substantially increases respondents' SWD, although its effect is a little weaker<sup>33</sup>.

In models 6 and 7, we have added only the most relevant aggregate variables to our analysis. Furthermore, we also include the type of executive to control for effects resulting from whether a postelectoral survey has been conducted in a presidential, semipresidential or parliamentary system. However, we find the type of executive does not have a significant effect on SWD. The results reproduce all our previous findings for the TSCS data set. The relative strength of the coefficients on the Gallagher Index and government fractionalization are very similar. These effects are substantial and are highly significant, and when taken together these political variables are even more important than the level of economic development (even though GDP per capita is the most important single predictor). Model 7 adds a cross-level interaction between government fractionalization and the preceding significant individuallevel variables that tap individual political representation. As previously discussed (hypotheses H4a and H4b), differences in the level of fractionalization might diminish the positive effect on SWD of voting for the winner or exaggerate the negative effect of representational deficits. This is what can be seen from model 7.

In order to better grasp the interactive effects, it is more informative to look at the marginal effects plots in Figure 8 (Brambor et al. 2006). These fully confirm the negative conditional effects of government fractionalization. However, they also show that fractionalization does not affect all winners equally. It only reduces satisfaction for those who have voted for the party that leads the government. For electoral winners who have voted for a minor coalition partner, there appears to be no effect. This is an interesting situation but fully compatible with the usually-employed power-sharing explanation of the linkage. In fact, the whole argument only makes sense for voters who have voted for the party that leads the government, since larger party and government fractionalization inevitably means coalition government and the sharing of power. On the other hand, if there is a minor coalition partner for whom

.

<sup>&</sup>lt;sup>33</sup> As an additional robustness test we also add unemployment to the analysis and further distinguish the education variable into six categories (compare Table 15 in the Appendix). While we find the results of Table 5 to be confirmed, we can also observe a strong negative effect of unemployment on SWD when we compare between respondents.

people could have voted, this already implies some degree of government fractionalization.

Table 5: Multilevel analysis of the CSES dataset

	Mod	el 4	Mode	el 5	Mode	el 6	Mod	el 7
	β	(se)	β	(se)	β	(se)	β	(se)
Individual Level	2500		1000		VX.		120	
Age			-0.01*	(0.00)	-0.01*	(0.00)	-0.01*	(0.00)
Female (ref.: male)			-0.03***	(0.00)	-0.03***	(0.00)	-0.03***	(0.00)
Education (ref.: tertiary education)								
Primary education or below			-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	(0.01)
Secundary education			-0.02**	(0.01)	-0.02**	(0.01)	-0.02**	(0.01)
Household income			0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)
Political efficacy			0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)
Left-right ideology			0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)
Left-right congruence			0.03***	(0.00)	0.03***	(0.00)	0.03***	(0.00)
Party ID (ref.: no party ID)			0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)
Electoral Winner (ref.: electoral loser)								
Winner: minor coalition party			0.07***	(0.01)	0.07***	(0.01)	0.08***	(0.01)
Winner: party PM/president			0.16***	(0.01)	0.16***	(0.01)	0.15***	(0.01)
Representation Deficit			-0.02***	(0.00)	-0.02***	(0.00)	-0.04***	(0.00
Country Level (Cross-Sectional)			1000000	()		()	CONTRACT.	,
Government Fractionalization (Gov. Frac.)					-0.11**	(0.03)	-0.09**	(0.03
Gallagher Index					-0.11**	(0.04)	-0.11**	(0.04
GDP per capita					0.16**	(0.05)	0.16***	(0.05
GDP growth rate					0.09***	(0.03)	0.09***	(0.03)
Quality of Government Index					0.13**	(0.04)	0.13**	(0.04)
Type of government (ref.: parliamentary)					80.00	()	0.000	
Semi-Presidential					-0.07	(0.07)	-0.08	(0.07)
Presidential					0.09	(0.09)	0.09	(0.09)
Cross-Level Interactions						()		()
Winner: minor coalition party * Gov. Frac.							-0.02	(0.01)
Winner: party PM/president * Gov. Frac.							-0.04***	(0.01)
Representation Deficit * Gov. Frac.							-0.04***	(0.00)
Constant	2.63***	(0.05)	2.56***	(0.05)	2.65***	(0.04)	2.66***	(0.04)
Variance components		()		()		()		()
Country intercept	0.09***	(0.02)	0.09***	(0.02)	0.02***	(0.01)	0.02***	(0.01)
Election intercept	0.03***	(0.01)	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00
Residuals	0.50***	(0.00)	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)
Log Likelihood	-90,491.78	(0.00)	-88,652,47	(0.00)	-88,629,94	(0.00)	-88,584,97	(0.00)
AIC	180,991.6		177,336.9		177,305.9		177,221.9	
ICC respondent level	0.82		0.81		0.92		0.92	
ICC election level	0.04		0.04		0.05		0.05	
ICC country level	0.14		0.15		0.03		0.03	
Number of respondents	83,968		83,968		83,968		83,968	
Number of elections	96		96		96		96	
Number of countries	38		38		38		38	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for all continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

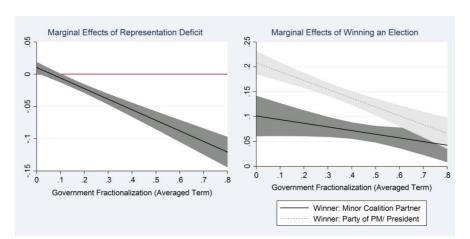


Figure 8: Marginal effects plots of cross-level interactions

#### 2.5. Discussion

This comparative cross-regional study has provided evidence that countries with higher electoral proportionality tend to have citizens that are more satisfied with the way democracy works. On the other hand, we have also found strong evidence that countries with a highly fractionalized government system tend to exhibit lower levels of SWD than those with concentrated party and government systems. Our longitudinal analysis has given additional support to the notion that increasing party fractionalization causes SWD to decline over time. These findings might seem paradoxical, especially if one takes Lijphart's dichotomy between majoritarian and consensual democracies as a starting point since we would expect that all these measures should point in the same direction.

We did not finish our analysis by demonstrating aggregate-level relationships but also went on to ask if electoral proportionality and government fractionalization also affect respondents at the individual level. In an analogy to the Gallagher Index at the aggregate level, we have been able to demonstrate that voters whose parties have received fewer seats than their respective vote share are less satisfied with the way democracy works in their country. Second, we have been able to show that the satisfaction voters receive is more than twice as high when they have voted for the government party that leads a coalition as compared to electoral winners who have

only voted for a minor coalition partner. Finally, we have found that the positive effect of winning an election on SWD is much diminished in highly fractionalized government systems, while the negative effects of representational deficits are amplified.

It, therefore, seems that people want to be represented adequately and have their votes counted equally and not wasted. However, citizens seem to dislike government fragmentation. This paradox seems to make sense since people might value both at the same time: good representation but also concentrated party and government systems where parties can be held accountable. It is this duality of counteracting consequences of consensual democracies that is likely to have produced the mixed results in the literature since the effects partially cancel each other out when they are not included jointly in a model or when they are combined into a single index. For the same reason, we should not be able to detect any substantial relationships between the type of the electoral system or the average district magnitude with SWD, since PR-systems and higher district magnitude are related not only to higher levels of electoral proportionality but also to a more fractionalized party/ government system (compare Table 9 and Table 10 in the Appendix).

Nevertheless, what is the mechanism behind the effect of government fragmentation? Is it just due to the resulting lack of accountability – as we have mainly argued – or just the perceived greater instability and inefficiency of such governments? After all, research on government instability has repeatedly shown that the risk of breakup of government increases with the number of parties in government (Dodd 1976; Taylor and Herman 1971; Somer-Topcu and Williams 2008) and it has profound negative effects on economic outputs such as growth rates (Aisen and Veiga 2013; Alesina et al. 1996; Gurgul and Lach 2013; Jong-A-Pin 2009). These alternative explanations might deserve more detailed attention.

This study also poses some problems and opens new questions. For instance, we found no longitudinal linkages between SWD and the Gallagher Index or our measure of government fractionalization. A partial explanation for this could be that these two variables carry too little time-varying information. Future research should focus squarely on the countries where there are actually sizeable changes – this might be due to electoral reform or a changing party system – and analyze them over a longer period of time.

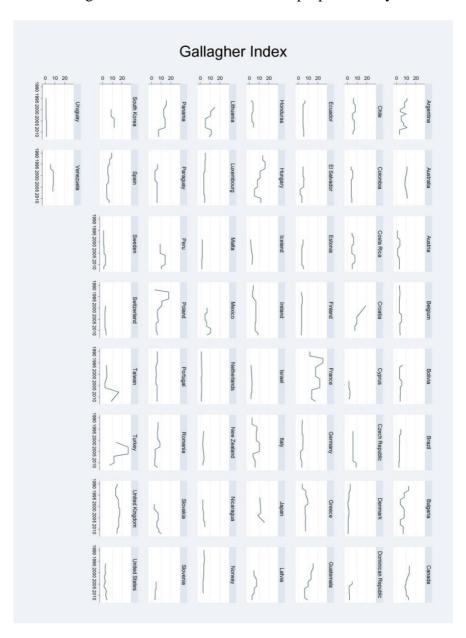
Another surprising finding has to do with the relationship between party supply and SWD. Miller and Listhaug (1990) argue that

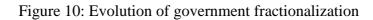
multi-party systems should increase system support in the long term since they provide more choices, handle discontent among the electorate better and increase the possibility of the emergence of new parties that can channel new demands. However, regarding SWD, we have been surprised to observe the opposite effect, not only cross-sectionally but also longitudinally. Countries with higher levels of party fractionalization display lower levels of SWD, and additionally increasing party fractionalization also leads to decreasing SWD over time. But why is this the case? How can fragmentation of the party supply decrease SWD? Does too much offer hurt citizen's perceptions of the party system? Where is the threshold? All these questions deserve further attention in the future; so far what our analysis has shown is that the effects of party system fragmentation are very similar to those of government fractionalization.

# 2.6. Appendix

# 2.6.1. Figures and tables

Figure 9: Evolution of electoral disproportionality





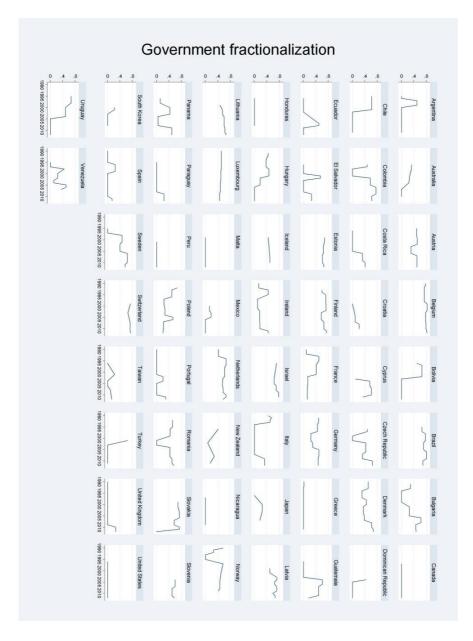


Table 6: SWD-sources of the TSCS panel dataset

Source	Data access and documentation
American National Election Studies	http://www.electionstudies.org/
Americas Barometer (LAPOP)	http://datasets.americasbarometer.org/database/
Asian Barometer	http://asianbarometer.org/data
Australian Election Study	http://aes.anu.edu.au/
Canadian Election Study	http://ces-eec.arts.ubc.ca/
Candidate Countries Eurobarometer (CCEB)	http://ec.europa.eu/public_opinion/archives/cceb2_en.htm
Central and Eastern Eurobarometer (CEEB)	http://ec.europa.eu/public_opinion/archives/cce b_en.htm
Comparative Study of Electoral Systems (CSES)	http://www.cses.org/datacenter/download.htm
Eurobarometer (EB)	http://www.gesis.org/eurobarometer-data- service/data-access/
European Value Study (EVS)	http://www.europeanvaluesstudy.eu/
Latinobarómetro	http://www.latinobarometro.org/latContents.jsp
New Democracies Barometer	http://www.cspp.strath.ac.uk/catalog4_0.html
New Zealand Election Study	http://www.nzes.org

*Notes*: Last accessed on the 8<sup>th</sup> of December 2016.

Table 7: Summary of aggregate-level variables

Type of Variable	Indicator	Measurement	Longitudinal Variation	Cross-Sectional Variation	Sources
Cultural and social	Ethnic fractionalization	Numerical	No	Yes	Alesina et. al. (2003)
indicators	Income inequality (GINI Index)	Numerical	Yes	Yes	Solt (2016)
Economic indicators	GDP per capita (current US\$)	Numerical	Corresponds to GDP growth rate	Yes	Worldbank (2016), for Taiwan: IMF (2016)
	GDP growth rate	Numerical	Yes	Yes	Worldbank (2016), for Taiwan: IMF (2016)
Quality of governance	Quality of Government Index (International Country Risk Guide)	Numerical	Little	Yes	Quality of Governance Standard Dataset (Teorell et. al. 2015)
Structure of the state	Federalism	Yes, No	No	Yes	Democracy Barometer (2016), Norris (2009)
	Type of executive	Parliamentary, Semi-Presidential, Presidential	No	Yes	Bohrmann and Golder (2013)
Electoral variables	Temporal distance to last election	Years	Yes	Not meaningful	Own calculations
	Gallagher Index of electoral disproportionality	Numerical	Little	Yes	Gallagher (2015), Carey and Hix (2011), Democracy Barometer (2016)
	Effective number of electoral parties (ENEP)	Numerical	Yes	Yes	Bohrmann and Golder (2013), Gallagher (2015), Democracy Barometer (2016)
	Government fractionalization	Numerical	Yes	Yes	Database of Political Institutions (2016)

Table 8: Summary of individual-level variables

Indicator	Measurement	Sources
Age	Numerical	CSES
Gender	Female, Male (Ref.)	CSES
Education	Primary or below, Secondary, Tertiary (Ref.)	CSES
	Primary or below: none, incomplete primary, primary, incomplete secondary. Secondary: secondary completed, Post-secondary trade/ vocational school. Tertiary: university undergraduate degree incomplete, university degree completed, more than basic university degree.	
Household Income	Numerical	CSES
Unemployed	Unemployed, other (Ref.)	CSES
Political Efficacy	Numerical	CSES
Left-Right Ideology	Numerical: Low =Left, High=Right	CSES
Left-Right Congruence	Numerical	Own calculations: CSES, Parlgov
Party ID	Close to party, not close to a party (Ref.)	CSES
Electoral Winner	Electoral winner PM/ President, electoral winner minor coalition party, electoral loser (Ref.)	Own calculations: CSES, Parlgov, Parline
Representational Deficit	Numerical	Own calculations: CSES, Parlgov, Parline

Table 9: Electoral system and average district magnitude (TSCS dataset)

	Mod	lel 8	Mod	el 9
	β	(se)	β	(se)
Longitudinal				
Years since last election	-1.64***	(0.29)	-1.64***	(0.29)
GDP growth rate	1.94***	(0.32)	1.96***	(0.32)
Gini Index	-2.20***	(0.39)	-2.24***	(0.39)
Quality of Government Index	0.47	(0.44)	0.51	(0.44)
Linear Time Trend	2.48***	(0.52)	2.47***	(0.52)
Cross-Sectional				
Mixed electoral system	-4.61	(4.69)		
PR electoral system	-2.28	(4.49)		
Average district magnitude			-1.73	(1.18)
GDP per capita	7.78**	(2.50)	7.87**	(2.48)
GDP growth rate	2.68	(1.42)	3.13*	(1.44)
Gini Index	0.39	(2.76)	0.19	(2.70)
Quality of Government Index	8.49**	(2.93)	8.90**	(2.86)
Semi-Presidential	-4.59	(3.10)	-4.67	(3.07)
Presidential	5.53	(4.50)	5.08	(4.44)
Federal	0.52	(3.64)	0.32	(3.43)
Ethnic fractionalization	-2.29	(1.41)	-2.26	(1.40)
Constant	51.23***	(4.62)	48.84***	(2.13)
Variance components				
Country intercept	57.36***	(13.21)	56.40***	(12.98)
Election intercept	34.74***	(5.71)	34.76***	(5.71)
Residuals	58.31***	(3.59)	58.33***	(3.59)
Log Likelihood	-3,066.32		-3,066.09	
AIC	6,170.64		6,168.18	
ICC Country years	0.39		0.39	
ICC Election	0.23		0.23	
ICC Country	0.38		0.38	
Number of country years	833		833	
Number of elections	300		300	
Number of countries	58		58	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

Table 10: Electoral system and average district magnitude (CSES dataset)

	Mode	1 10	Mode	111
	β	(se)	β	(se)
Individual Level				
Age	-0.01*	(0.00)	-0.01*	(0.00)
Female	-0.03***	(0.00)	-0.03***	(0.00)
Primary education	-0.05***	(0.01)	-0.05***	(0.01)
Secundary education	-0.02**	(0.01)	-0.02**	(0.01)
Household income	0.04***	(0.00)	0.04***	(0.00)
Political efficacy	0.07***	(0.00)	0.07***	(0.00)
Left-right ideology	0.05***	(0.00)	0.05***	(0.00)
Left-right congruence	0.03***	(0.00)	0.03***	(0.00)
Party ID	0.07***	(0.01)	0.07***	(0.01)
Winner: minor coalition party	0.07***	(0.01)	0.07***	(0.01)
Winner: party PM/president	0.16***	(0.01)	0.16***	(0.01)
Representation Deficit	-0.02***	(0.00)	-0.02***	(0.00)
Country Level (Cross-Sectional)				
Mixed electoral system	-0.24	(0.13)		
PR electoral system	-0.07	(0.10)		
Average district magnitude			-0.04	(0.04)
Quality of Government Index	0.16**	(0.05)	0.14**	(0.05)
Semi-Presidential	-0.08	(0.08)	-0.07	(0.08)
Presidential	0.18	(0.09)	0.14	(0.10)
GPD per capita	0.08	(0.06)	0.14*	(0.05)
GPD growth rate	0.03	(0.04)	0.07*	(0.03)
Constant	2.73***	(0.09)	2.64***	(0.05)
Variance components				
Country intercept	0.03***	(0.01)	0.03***	(0.01)
Election intercept	0.02***	(0.00)	0.02***	(0.00)
Residuals	0.48***	(0.00)	0.48***	(0.00)
Log Likelihood	-88633.74		-88634.92	
AIC	177313.5		177313.8	
ICC respondent level	0.91		0.90	
ICC election level	0.05		0.05	
ICC country level	0.05		0.05	
Number of respondents	83.968		83.968	
Number of elections	96		96	
Number of countries	38		38	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for all continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

Table 11: Party/government system fractionalization and electoral disproportionality (TSCS dataset)

	β	(se)	β	(se)	β	(se)								
Longitudinal														
Gallagher Index	0.35	(0.46)	0.33	(0.46)					0.57	(0.46)			0.35	(0.46)
Government Fractionalization				2							-0.27	(0.43)	-0.26	(0.43)
ENED					n 83	(0 44)	0 84	(0.44)	*90 0-	(0.45)	-0.27	(0.43)	-0.20	(0.45)
DINDE	本本本ドフ 1	1000	ことなる音楽	(000)	1 6/4**	(0.4)	-0.04	(0.4)	-0.70	(0.4.0)	<b>CA</b> ***	(000)	* たちかか	1000
rears since last election	-1.04	(0.29)	-1.04	(67.0)	-1.04	(0.29)	-1.04	(0.29)	-1.03	(0.29)	-1.04	(0.29)	-1.00	(0.29)
GDP growth rate	1.96***	(0.32)	1.96***	(0.32)	1.97***	(0.32)	1.97***	(0.32)	1.99***	(0.32)	1.94***	(0.32)	1.95***	(0.32)
Gini Index	-2.25***	(0.39)	-2.25***	(0.39)	-2.21***	(0.39)	-2.21***	(0.39)	-2.23***	(0.39)	-2.21***	(0.39)	-2.23***	(0.39)
Quality of Government Index	0.48	(0.44)	0.46	(0.44)	0.57	(0.44)	0.57	(0.44)	0.54	(0.44)	0.51	(0.44)	0.48	(0.44)
Linear Time Trend	2.47***	(0.52)	2.41***	(0.52)	2.42***	(0.51)	2.42***	(0.51)	2.45***	(0.51)	2.47***	(0.52)	2.48***	(0.52)
Cross-Sectional														
Gallagher Index	-2.54*	(1.17)	-12.46**	(4.04)					-2.85	(3.26)			-4.33*	(1.81)
Gallagher Index Squared			10.37*	(4.05)										
ENEP				22	-3.95***	(1.12)	-11.52*	(5.55)	-4.13*	(1.76)				
ENEP Squared							8.01	(5.75)						
Gallagher Index * ENEP									0.17	(3.67)				
Government Fractionalization											-1.29	(1.26)	-3.80	(2.30)
Gallagher Index * Gov .Frac.													0.97	(2.30)
GDP per capita	7.67**	(2.43)	6.66**	(2.34)	7.06**	(2.30)	7.44**	(2.28)	6.59**	(2.19)	8.22**	(2.50)	7.87***	(2.34)
GDP growth rate	3.07*	(1.39)	3.43**	(1.33)	3.77**	(1.34)	3.64**	(1.32)	4.20**	(1.30)	2.91*	(1.44)	3.76**	(1.38)
Gini Index	1.45	(2.64)	1.14	(2.50)	-0.49	(2.49)	-0.81	(2.46)	0.16	(2.39)	-0.15	(2.86)	-0.39	(2.68)
Quality of Government Index	8.62**	(2.81)	8.55**	(2.66)	9.24***	(2.64)	9.39***	(2.60)	9.09***	(2.52)	8.64**	(2.89)	8.39**	(2.74)
Semi-Presidential	-3.66	(3.02)	-3.59	(2.86)	-3.90	(2.83)	4.13	(2.79)	-3.11	(2.71)	-4.25	(3.10)	-3.29	(2.99)
Presidential	3.04	(4.49)	2.68	(4.27)	4.62	(4.11)	5.33	(4.08)	2.14	(4.04)	5.68	(4.49)	2.79	(4.33)
Federal	1.74	(3.39)	3.56	(3.29)	2.00	(3.18)	0.00	(3.43)	3.19	(3.13)	0.66	(3.45)	2.07	(3.27)
Ethnic fractionalization	-2.46	(1.37)	-2.11	(1.31)	-1.02	(1.34)	-0.77	(1.33)	-1.14	(1.27)	-1.91	(1.47)	-1.55	(1.38)
Constant	49.15***	(2.10)	48.99***	(1.99)	48.31***	(1.96)	48.45***	(1.93)	48.84***	(1.88)	48.45***	(2.15)	48.99***	(2.02)
Variance components		200				00				0.00				
Country intercept	53.84***	(12.45)	46.93***	(11.20)	46.36***	(11.02)	44.42***	(10.66)	40.70***	(9.86)	57.66***	(13.24)	48.60***	(11.40)
Election intercept	34.40***	(5.69)	34.44***	(5.69)	34.10***	(5.63)	34.17***	(5.63)	33.33***	(5.57)	35.00***	(5.74)		(5.70)
Residuals	58.40***	(3.60)	58.40***	(3.60)	58.26***	(3.58)	58.24***	(3.58)	58.39***	(3.59)	58.21***	(3.58)	58.26***	(3.59)
Log Likelihood	-3,064.60		-3,061.51		-3,059.71		-3,058.75		-3,055.79		-3,066.43		-3,061.80	
AIC	6,167.19		6,163.01		6,157.42		6,157.51		6,155.58		6,170.87		6,167.60	
ICC Country years	0.40		0.42		0.42		0.43		0.44		0.39		0.41	
ICC Election	0.23		0.25		0.25		0.25		0.25		0.23		0.24	
ICC Country	0.37		0.34		0.33		0.32		0.31		0.38		0.34	
Number of country years	833		833		833		833		833		833		833	
Number of elections	300		300		300		300		300		300		300	
Number of countries	60		58		58		58		58		58		58	

Table 12: Party/government system fractionalization and electoral disproportionality (CSES dataset)

	β	(se)	β	(se)	β	(se)	β	(se)	β	(sc)	β	(sc)	β	(se)	В	(se)
Individual Level																
Age	*10.0	(0.00)	*10.0	(0.00)	-0.01*	(0.00)	-0.01*	(0.00)	*10.0	(0.00)	*10.0	(0.00)	-0.01*	(0.00)	*10.0	(0.00)
emale	-0.03***	(0.00)	-0.03***	(0.00)	-0.03***	(0.00)	-0.03***	(0.00)	-0.03***	(0.00)	-0.03***	(0.00)	-0.03***	_	-0.03***	(0.00)
Primary education	-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	-	-0.05***	(0.01)
Secundary education	-0.02**	(0.01)	-0.02**	(0.01)	-0.02**	(0.01)	-0.02**	(0.01)	-0.02**	(0.01)	-0.02**	(0.01)	-0.02**	_	-0.02**	(0.01)
Household income	0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)
Political efficacy	0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00)
Left-right ideology	0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00)
Left-right congruence	0.03***	(0.00)	0.03***	(0.00)	0.03***	(0.00)	0.03***	(0.00)	0.03***	(0.00)	0.03***	_	0.03***	(0.00)	0.03***	(0.00)
Party ID	0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)	0.07***	_	0.07***	(0.01)	0.07***	(0.01)
Winner: minor coalition party	0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01)	0.07***	_	0.07***	(0.01)	0.07***	(0.01)
Winner: party PM/president	0.16***	(0.01)	0.16***	(0.01)	0.16***	(0.01)	0.16***	(0.01)	0.16***	(0.01)	0.16***	(0.01)	0.16***	(0.01)	0.16***	(0.01)
Representation Deficit	-0.02***	(0.00)	-0.02***	(0.00)	-0.02***	(0.00)	-0.02***	(0.00)	-0.02***	(0.00)	-0.02***	(0.00)	-0.02***	(0.00)	-0.02***	(0.00)
Country Level (Cross-Sectional)																
Gallagher Index	-0.05	(0.03)	-0.27*	(0.13)					-0.07*	(0.03)	-0.04	(0.10)			-0.10*	(0.04)
Gallagher Index Squared			0.22	(0.12)												
ENEP					-0.05	(0.03)	-0.26	(0.14)	-0.07*	(0.03)	-0.06	(0.04)				
ENEP Squared							0.20	(0.14)								
Gallagher Index * ENEP											-0.02	(0.10)				
Government Fractionalization													-0.06	(0.03)	-0.10	(0.06)
Gallagher Index * Gov .Frac.															-0.01	(0.05)
GDP per capita	0.12*	(0.05)	0.11*	(0.05)	0.15**	(0.05)	0.16**	(0.05)	0.13*	(0.05)	0.13*	(0.05)	0.16**	(0.06)	0.16**	(0.05)
GDP growth rate	0.07*	(0.03)	0.07*	(0.03)	0.08**	(0.03)	0.08**	(0.03)	0.09**	(0.03)	0.09**	(0.03)	0.08**	(0.03)	0.09***	(0.03)
Quality of Government Index	0.14**	(0.05)	0.12*	(0.05)	0.13**	(0.05)	0.13**	(0.05)	0.13**	(0.05)	0.13**	(0.05)	0.13**	(0.05)	0.12**	(0.05)
Semi-Presidential	-0.07	(0.08)	-0.05	(80.0)	-0.08	(0.08)	-0.08	(0.07)	-0.09	(0.07)	-0.09	(0.07)	-0.07	(0.08)	-0.07	(0.07)
residential	0.16	(0.09)	0.14	(0.09)	0.16	(0.09)	0.11	(0.10)	0.16	(0.09)	0.16	(0.09)	0.12	(0.09)	0.08	(0.09)
Constant	2.64***	(0.05)	2.63***	(0.05)	2.64***	(0.05)	2.65***	(0.05)	2.65***	(0.04)	2.65***	(0.04)	2.64***	(0.05)	2.65***	(0.04)
Variance components														9		
Country intercept	0.03***	(0.01)	0.03***	(0.01)	0.03***	(0.01)	0.02***	(0.01)	0.02***	(0.01)	0.02***	(0.01)	0.03***	(0.01)	0.02***	(0.01)
Election intercept	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00)	0.02***	(0.00)
Residuals	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)	0.48***	(0.00)
Log Likelihood	-88,634.65		-88,633.15		-88,633.88		-88,632.82		-88,631.86		-88,631.83		-88,634.04		-88,629.89	
AIC	177,313.3		177,312.3		177,311.8		177,311.6		177,309.7		177,311.7		177,312.1		177,307.8	
ICC respondent level	0.90		0.91		0.91		0.91		0.91		0.91		0.91		0.92	
ICC election level	0.05		0.05		0.05		0.05		0.05		0.05		0.05		0.05	
ICC country level	0.05		0.05		0.05		0.04		0.04		0.04		0.05		0.04	
Number of respondents	83,968		83,968		83,968		83,968		83,968		83,968		83,968		83,968	
Number of elections	96		96		96		96		96		96		96		96	
Number of countries	38		38		38		38		38		38		38		38	

Table 13: Government system fractionalization (TSCS dataset, parliamentary systems only)

	Mode	el 27
	β	(se)
Longitudinal		
Gallagher Index	0.88	(0.73)
Government Fractionalization	-0.21	(0.73)
Years since last election	-1.52***	(0.36)
GDP growth rate	2.24***	(0.41)
Gini Index	-1.81*	(0.70)
Quality of Government Index	-0.61	(0.60)
Linear Time Trend	2.55***	(0.70)
Cross-Sectional		
Gallagher Index	-3.05+	(1.63)
Government Fractionalization	-5.00**	(1.70)
GDP per capita	1.99	(2.64)
GDP growth rate	7.91***	(2.15)
Gini Index	-7.14+	(3.95)
Quality of Government Index	17.01***	(3.40)
Federal	0.85	(3.81)
Ethnic fractionalization	-1.13	(1.58)
Constant	44.84***	(2.12)
Variance components		
Country intercept	23.61***	(9.89)
Election intercept	36.11***	(7.43)
Residuals	32.41***	(3.13)
Log Likelihood	-1,184.41	
AIC	2,406.81	
ICC Country years	0.35	
ICC Election	0.39	
ICC Country	0.26	
Number of country years	344	
Number of elections	125	
Number of countries	23	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

Table 14: Government system fractionalization (CSES dataset, parliamentary systems only)

	Mode	1 28	Mode	1 29
	β	(se)	β	(se)
Individual Level				
Age	0.00	(0.00)	-0.00	(0.00)
Female	-0.02***	(0.01)	-0.02***	(0.01)
Primary education	-0.06***	(0.01)	-0.06***	(0.01)
Secundary education	-0.02*	(0.01)	-0.02*	(0.01)
Household income	0.04***	(0.00)	0.04***	(0.00)
Political efficacy	0.07***	(0.00)	0.07***	(0.00)
Left-right ideology	0.04***	(0.00)	0.04***	(0.00)
Left-right congruence	0.03***	(0.00)	0.03***	(0.00)
Party ID	0.06***	(0.01)	0.06***	(0.01)
Winner: minor coalition party	0.04***	(0.01)	0.03*	(0.01)
Winner: party PM/president	0.14***	(0.01)	0.14***	(0.01)
Representation Deficit	-0.02***	(0.00)	-0.04***	(0.01)
Country Level (Cross-Sectional)				
Government Fractionalization (Gov. Frac.)	-0.13**	(0.05)	-0.12**	(0.05)
Gallagher Index	-0.07+	(0.04)	-0.08+	(0.04)
GDP per capita	0.23***	(0.06)	0.23***	(0.06)
GDP growth rate	0.12***	(0.03)	0.12***	(0.03)
Quality of Government Index	0.19***	(0.05)	0.20***	(0.05)
Cross-Level Interactions				
Winner: minor coalition party * Gov. Frac.			0.03	(0.02)
Winner: party PM/president * Gov. Frac.			-0.04***	(0.01)
Representation Deficit * Gov. Frac.			-0.03***	(0.00)
Constant	2.68***	(0.04)	2.68***	(0.04)
Variance components				
Country intercept	0.01***	(0.01)	0.01***	(0.01)
Election intercept	0.02***	(0.00)	0.02***	(0.00)
Residuals	0.45***	(0.00)	0.45***	(0.00)
Log Likelihood	-50,478.34		-50,449.25	
AIC	100,998.7		100,946.5	
ICC respondent level	0.93		0.93	
ICC election level	0.04		0.04	
ICC country level	0.03		0.03	
Number of respondents	49,455		49,455	
Number of elections	50		50	
Number of countries	18		18	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for all continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.01, \*\* p<0.01, \* p<0.05, + p<0.10. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

Table 15: Multilevel analysis of the CSES dataset (additional individual-level controls)

	Mode	1 30	Mode	131	Mode	132	Mode	1 33
	- β	(se)	β	(se)	β	(se)	β	(se)
Individual Level								
Age			-0.01**	(0.00)	-0.01**	(0.00)	-0.01**	(0.00)
Female (ref.: male)			-0.03***	(0.01)	-0.03***	(0.01)	-0.03***	(0.00)
Education (ref.: university degree								
completed or above)								
Primary completed or below			-0.04***	(0.01)	-0.04***	(0.01)	-0.04***	(0.01)
Incomplete secondary			-0.05***	(0.01)	-0.05***	(0.01)	-0.05***	(0.01)
Secondary completed			-0.02*	(0.01)	-0.02*	(0.01)	-0.02*	(0.01)
Post-secondary trade/ vocational school			-0.03**	(0.01)	-0.03**	(0.01)	-0.03**	(0.01
University undergraduate degree			-0.02	(0.01)	-0.02	(0.01)	-0.02*	(0.01
Household income			0.04***	(0.00)	0.04***	(0.00)	0.04***	(0.00)
Unemployed (ref.: other)			-0.10***	(0.01)	-0.10***	(0.01)	-0.10***	(0.01
Political efficacy			0.07***	(0.00)	0.07***	(0.00)	0.07***	(0.00
Left-right ideology			0.05***	(0.00)	0.05***	(0.00)	0.05***	(0.00
Left-right congruence			0.03***	(0.00)	0.03***	(0.00)	0.03***	(0.00
Party ID (ref.: no party ID)			0.08***	(0.01)	0.08***	(0.01)	0.08***	(0.01
Electoral Winner (ref.: electoral loser)						,		
Winner: minor coalition party			0.07***	(0.01)	0.07***	(0.01)	0.07***	(0.01
Winner: party PM/president			0.16***	(0.01)	0.15***	(0.01)	0.15***	(0.01
Representation Deficit			-0.02***	(0.00)	-0.02***	(0.00)	-0.04***	(0.00
Country Level (Cross-Sectional)			0.02	(0.00)	0.02	(0.00)	0.01	(0.00
Government Fractionalization (Gov. Frac.)					-0.11***	(0.03)	-0.09**	(0.03
Gallagher Index					-0.10**	(0.03)	-0.10**	(0.03
GDP per capita					0.17***	(0.05)	0.17***	(0.05
GDP growth rate					0.10***	(0.03)	0.10***	(0.03
Quality of Government Index					0.12**	(0.03)	0.12**	(0.04
Type of government (ref.: parliamentary)					-0.10**	(0.04)	-0.10**	(0.03)
Semi-Presidential					-0.08	(0.03)	-0.08	(0.07)
Presidential					0.08	(0.07)	0.08	(0.08)
Cross-Level Interactions					0.08	(0.08)	0.00	(0.00
Winner: minor coalition party * Gov. Frac.							-0.01	(0.01
The field and the management and the field has a sufficient or a place of the second for the country of the field of the second for the seco							-0.05***	The Control of
Winner: party PM/president * Gov. Frac.							-0.03***	(0.01)
Representation Deficit * Gov. Frac.  Constant	2.63***	(0.05)	2.56***	(0.05)	2.65***	(0.04)	2.66***	(0.00)
	2.63***	(0.05)	2.56***	(0.05)	2.65***	(0.04)	2.66***	(0.04
Variance components	0.08***	(0.02)	0.00***	(0.02)	0.02***	(0.01)	0.02***	(0.01)
Country intercept		(0.02)	0.09***	(0.02)	0.02***	(0.01)	0.02***	(0.01)
Election intercept	0.03***	(0.01)	0.02***	(0.00)	0.03***	(0.00)	0.03***	(0.00
Residuals	0.51***	(0.00)	0.49***	(0.00)	0.49***	(0.00)	0.49***	(0.00)
Log Likelihood	-85,936.57		-84,182.52		-84,159.45		-84,111.08	
AIC	171,881.1		168,405		168,372.9		168,282.2	
ICC respondent level	0.82		0.81		0.92		0.92	
ICC election level	0.04		0.04		0.05		0.05	
ICC country level	0.18		0.15		0.03		0.03	
Number of respondents	79,275		79,275		79,275		79,275	
Number of elections	94		94		94		94	
Number of countries	38		38		38		38	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for all continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

#### 2.6.2. Robustness checks

A number of additional robustness checks were performed after the estimation of each model. Given the extensive scope of the robustness checks and the usage of two entirely different datasets, we will not present our results here in detail. However, every step can be replicated by using the commented Stata Do-file accompanying this study. First, we identified and controlled for the effect of influential outlying cases at the country and election levels as suggested by Van der Meer et al. (2010), mainly by analyzing the random effects at both levels but also by scrutinizing partial residual plots. Second, when observing the residuals at the lowest level we found them to be almost normally distributed. Deleting the few potentially problematic cases did not change the results. Third, following a suggestion by King and Roberts (2015), to understand differences in robust standard errors and normal standard errors as indications of model misspecification, we estimated all the models twice and compared their standard errors. We found only minor differences and no coefficient loses or gains of much statistical significance.

Fourth, we estimated the random part of all the models by treating "country-years" as nested within "election cycles", which are cross-classified within "years" and "countries". However, the variance that can be attributed to the "year" level is so marginal that it did not change the estimates to a notable degree. Fifth, analyzing the correlation matrix of each model and the VIF scores, we found the degree of collinearity in the longitudinal part to be only a minor issue. Regarding the cross-sectional part, we found GDP per capita, the Quality of Government Index and the Gini Index to be moderately collinear but not the institutional variables. As a consequence, we increased the possibility of type II errors for the Gini Index and accepted  $\beta_i = 0$ , although in reality there is a relationship (Arceneaux and Huber 2007; Goldberger 1991).

Finally, we also added random slopes for the longitudinal estimators for ENEP and "years since election" to further probe the robustness of the fixed effect of these "within" estimators (Barr et. al 2013; Bates et al. 2015). We found that the fixed effect stays significant regardless of the inclusion of the random term.

# The political and economic causes of satisfaction with democracy in Spain – a twofold panel study

This study analyses the reasons for the increasing public dissatisfaction with the working of democracy in Spain from a longitudinal perspective. In 2005, almost three quarters of the Spanish population were satisfied with the working of democracy, but only ten years later the percentage of citizens satisfied had fallen to an alltime low of less than 20 per cent. How can we explain this tremendous decline in the evaluation of democracy? For Spain, like for other countries such as Portugal, Ireland, Italy or Greece, where people suffered significantly from the consequences of the economic and fiscal crisis, the literature mainly attributes the declining levels of satisfaction with democracy (SWD) to the Great Recession (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016a; Morlino and Piana 2014; Sousa et. al 2014).

As this study will show, national economic performance plays a substantial role in shaping the evolution of SWD in Spain, yet to fully understand the dynamics of the Spanish case it is also necessary to take into account a number of important political factors. The present study departs from the well-developed arguments about the effects of the inputs and outputs of a political system on SWD and puts them to a *longitudinal test* in Spain. The study shows that in the Spanish case both lines of explanation are of equal importance: not only the performance of the economy but also the responsiveness and trustworthiness of the political actors and representative institutions play roles explaining changes in SWD. Most notable among these are the direct and indirect effects of the various major corruption scandals that have plagued Spanish politics and also the growing public distrust in the institutions of Spanish democracy.

The Spanish case is a particularly useful context in which to test the effect of these variables from a longitudinal perspective. Spanish SWD has suffered significant ups and downs over the last three decades while at the same time important aspects of the political system and the institutional framework have remained constant. Spain's political and economic performance on the other hand has varied to a considerable degree. Since the 1980s Spain has stumbled

into two major recessions with strong political and social repercussions, yet it also experienced a decade of growth from the mid-90s to the 2010s. In addition, it went through a series of political corruption scandals involving all the major parties in the 1990s and again at the beginning of the 2010s. Nevertheless, until very recently the structure of the national-party and government system has remained fairly stable (Orriols and Cordero 2016; Hopkin 2005), making it an ideal case to study the effects of economic and political performance on SWD.

This study contributes to the academic debate by focusing on the dynamic changes in the evolution of SWD in Spain both at the national and the individual levels. To do this, we analyse two different panel datasets. In the first part of the study, we analyse a pooled aggregate panel dataset which we have constructed by merging repeated cross-sectional surveys from the Eurobarometer and the Latinobarómetro between 1986 and 2014, combining information from more than 70,000 respondents. Analysing this multilevel dataset allows us to conduct a complex longitudinal analysis of the contextual factors affecting the evolution of SWD in Spain. We then complete our longitudinal analysis with a micro-level panel analysis based on a new Spanish electoral panel: the CIUPANEL (Torcal et al. 2016).

# 3.1. Argument and hypotheses

A number of longitudinal studies have presented comparative evidence that economic growth, price inflation and especially unemployment are exogenous causes of SWD over time (Armingeon and Guthmann 2014; Halla et al. 2013; Quaranta and Martini 2016b). While economic growth might have a positive effect on SWD because more citizens can benefit from the improving economic situation and prosperity, unemployment and the erosion of disposable incomes through rising prices might diminish people's satisfaction with their lives and their evaluations of the incumbent political authorities, thereby decreasing SWD (Clarke et al. 1993: 1000f.). Taken together, this leads us to our first three context-level hypotheses about the impact of economic performance on the evolution of SWD in Spain:

H1a: Economic growth is positively related to SWD over time.

H1b: Increasing unemployment is negatively related to SWD over time.

H1c: Increasing price instability is negatively related to SWD over time

When we move our focus of analysis from the contextual level to the individual level, we can identify a second line of literature that links *perceptions* of the political and economic outputs with SWD. This shift in perspective offers a number of benefits as it allows the effects of egotropic and sociotropic evaluations to be disentangled and also allows assessments of economic and policy performance to be distinguished. Waldron-Moore (1999: 38) neatly summarize our expectations regarding egotropic evaluations: "It is generally accepted that economic evaluations affect political perceptions. Advocates of rational behaviour argue that individuals evaluate their past, current and future circumstances and calculate what serves their best interests [...] Such calculations influence preferences [...] Individuals may prefer and support democracy because it satisfies their best interests." A number of cross-sectional studies provide evidence that the personal economic wellbeing of a respondent is correlated with SWD (Anderson and Guillory 1997; Waldron-Moore 1999). In this article we intend to test whether a similar linkage can also be observed *longitudinally*:

H2a: Worsening personal economic situations lead to declining SWD over time.

However, Waldron-Moore (1999) also argue that the concept of self-interest can be extended beyond the personal to the national interest – from ego-centric to socio-tropic evaluations. Similarly, Mattes and Bratton (2007: 197f.) suggest that strict instrumental-rational calculations in which persons are motivated primarily by (economic) short-term self-interest may be limited and rather naive. Instead, they argue that citizens might judge democratic performance not only in terms of material criteria but also according to the delivery of political goods. Again, there exists considerable *cross-sectional evidence* in favour of a linkage between sociotropic evaluations and SWD. Research has shown that perceptions of the

national economy are correlated with SWD at the individual level (Armingeon and Guthmann 2014; Bratton and Mattes 2001; Huang et al. 2008; Waldron-Moore 1999). Moreover, there is also evidence of a link with evaluations of policy outputs in areas such as health care, social protection and education (Bratton and Mattes 2007; Huang et al. 2008; Lühiste 2014; Stockemer and Sundström 2013).

H2b: Worsening individual evaluations of the national economy lead to decreasing SWD over time.

H2c: Worsening individual evaluations of policy outputs lead to decreasing SWD over time.

Notwithstanding the prominence of economic/policy output explanations in the current academic debate, there exists a second category of output-hypotheses that link SWD with the fairness and impartiality of the decision-making process. Although the existing evidence only comes from cross-sectional studies, a number of these have shown that corruption, the existence of the rule of law and an effective public administration are correlated with SWD at the contextual level (Anderson and Tverdova 2003; Ariely 2013; Dahlberg and Holmberg 2014; Norris 2011; Peffley and Rohrschneider 2014; Stockemer and Sundström 2013). Similarly, at the individual level there is evidence that negative perceptions of corruption are associated with lower SWD (Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Huang et al. 2008; Linde 2012; Peffley and Rohrschneider 2014). This seems to be a likely explanation for Spain since the country has experienced a series of major political corruption scandals over the last decades.

H3a: The increasing salience of political corruption leads to decreasing levels of SWD.

H3b: Worsening individual perceptions of political corruption decrease SWD over time.

We also expect that corruption scandals might result in a deterioration of political attitudes related to the *input side* of the political system, such as trust in political actors and other institutions of representation, indirectly contributing to declining SWD. According to Miller and Listhaug (1990: 358), political trust should reflect evalu-

ations of whether or not the political authorities and institutions are performing in accordance with the normative expectations held by the public: of them being fair, equitable, honest, efficient and responsive. Indeed, corruption has been described as the "antithesis" of political trust (Van der Meer and Dekker 2011: 98). Moreover, there is already significant empirical evidence linking corruption with erosion of trust in the government and parliament (Torcal and Bargsted 2015; Van der Meer and Dekker 2011; Torcal 2014). In turn, trust in representative institutions has been shown to be positively associated with SWD at the individual level (Ariely 2013; Bratton and Mattes 2001; Zmerli and Newton 2008). Similarly, respondents' evaluations of government performance are closely correlated with SWD (Bratton and Mattes 2001; Huang et al. 2008; Sanders et al. 2014; Stockemer and Sundström 2013).

H4a: Trust in representative democratic institutions is positively related to SWD over time.

H4b: Positive evaluations of government performance are positively related to SWD over time.

# 3.2. The evolution of satisfaction with democracy in Spain

In Figure 11 we display the evolution of SWD over the last thirty years (1985 to 2015) in Spain. Together with this trend, we also show the evolution of evaluations of the economic and political situations. As we can see from this figure, SWD has suffered important variations over time and they seem to be very closely related to the evolution of assessments of the political and economic situations (Montero et al. 1997).

Additionally, we can identify four periods in the evolution of SWD. In the first, between 1985 and 1992, the percentage of citizens satisfied with democracy remained fairly stable, oscillating around 60 per cent. The second period, which started in 1992 and lasted until 1996, shows a dramatic decline in SWD. At the peak of

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<sup>&</sup>lt;sup>34</sup> Testing this erosive relationship is not the focus of our current analysis. However, as we will show in the next section, the occurrence of political corruption is closely associated with a decline in trust in the Spanish parliament.

this downswing at the end of 1993 SWD was only about 30 per cent. However, this was followed by a quick recovery until 1996, when SWD reached its pre-crisis level. In the third period, from 1996 to mid-2008, despite some important fluctuations SWD reached levels close to 80 per cent, similar to countries such as Canada, Denmark, Switzerland and Luxembourg. During the last period, which initiated with the beginning of the financial crisis in 2008, SWD suffered a tremendous decline, falling to a very low 20 per cent, similar to countries such as Greece, Portugal, Italy and Ireland which also experienced a very significant decline.

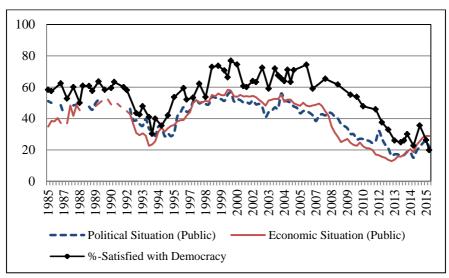


Figure 11: Public evaluations and SWD in Spain

*Notes*: Measured on a quarterly basis. The values for SWD are interpolated (line); dots show the observed values. *Sources*: Eurobarometer, Latinobarómetro, Centro de Investigaciones Sociológicas (CIS), CIUPANEL.

As we can see from Figure 12, at the first glance we can attribute these dynamics to the wellbeing of the Spanish economy. In particular, the degree of unemployment mirrors the development of SWD in Spain. Economic growth is also closely related to SWD but to a lesser extent than the previous measures. Inflation on the other hand is not related to SWD longitudinally, even when we focus on the period before the introduction of the euro in 1998.

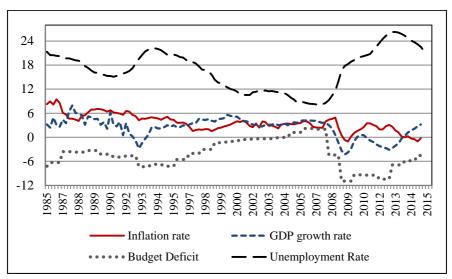


Figure 12: Economic performance in Spain

*Notes*: Measured on a quarterly or yearly basis. *Sources*: OECD Stat (2016), IMF WEO Database (2016).

Nevertheless, there exists a second plausible explanation for the dramatic decline in SWD. As it happens, the two economic recessions coincided with periods of great political distress caused by a series of major corruption scandals in the mid-1990s and the beginning of the 2010s. As we can see from Figure 13, the salience of political corruption to the public over time seems to go hand in hand with the evolution of SWD. Thus, the first period of discontent in the early 90s was also marked by increasingly critical opinions about the government's performance after a number of political scandals over party funding and corruption involving members of the PSOE administration (Montero et al. 1997). Similarly, the newly-elected prime minister, Mariano Rajoy, had not only to face the debt crisis in 2012 but was also confronted with a series of corruption scandals and their salience on the political agenda (Orriols and Cordero 2016). At the same time, we can observe a similar decline in confidence in the Spanish parliament, which is also highly correlated with the salience of corruption (R=0.76). However, although there have been signs of modest economic recovery and a modest decrease in the unemployment rate since the end of 2013, unlike in the 1990s there is no evidence that the economic growth is translating into higher levels of SWD, implying the importance of political factors as an alternative explanation.

100
80
60
40
20
0
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Figure 13: Political trust and perceptions of corruption in Spain

*Notes*: Measured on a quarterly or yearly basis. Values for SWD are interpolated (line); dots show the observed values. *Sources*: Eurobarometer, Latinobarómetro, European Social Survey, Centro de Investigaciones Sociológicas (CIS), CIUPANEL.

# 3.3. Research design

As our dependent variable, we use answers to the classical question on how satisfied people are with the working of their democracy. SWD is measured on a 4-point scale by relying on the following question: "On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy works in your country?" Public opinion research usually analyse two sources of cross-sectional variation: between individuals (type 1) and between countries (type 2). However, there are two more sources of variation we can exploit if we have longitudinal data (see Table 16): for individuals over time (type 3) and within countries over time (type 4).

In a single-country case study like the one we propose here, we can analyse variation of types 1, 3, and 4. Our research design rests on a combination of two distinct panel studies at the individual level

and at the aggregate level. At the *respondent level*, we use an individual-level panel dataset based on the CIUPANEL to explain variation of types 1 and 3. This allows us to study the effects of changing *political and economic perceptions* on SWD for individuals and between them. At the *contextual level*, we analyse a pooled dataset based on repeated cross-sectional surveys performed in Spain by the Eurobarometer and the Latinobarómetro between 1986 and 2014, which enables us to study variation type 4. Analysis of this variation allows us to assess which changes in the *objective economic and political performance* caused the dramatic decline in SWD at the national level. Although panel data is typically defined as data based on repeated observations of the same units over time, when we move our focus to the society as a whole, it is possible to think of our data as a panel (Fairbrother 2014: 122).

Table 16: Research design

#### Time

		Cross-Sectional	Longitudinal
Level of Analysis	Individual Level	<ul><li>(A) CIUPANEL,</li><li>(B) Eurobarometer/</li><li>Latinobarómetro*</li><li>Type 1</li></ul>	(A) CIUPANEL  Type 3
Level	Country Level	Not applicable in a single country case study  Type 2	(B) Eurobarometer/ Latinobarómetro <i>Type 4</i>

Notes: \* Only includes control variables at the individual level.

## 3.4. Explaining aggregate trends in SWD

To test the contextual effects of economic and political performances on the evolution of SWD over time in Spain, we have con-

structed a dataset based on 92 representative surveys by the Eurobarometer and Latinobarómetro (see Table 19 and Table 20 in the Appendix). This includes individual-level information from more than 70,000 respondents covering a time span between 1986 and 2014. By relying on temporal information from three decades, we are able to provide findings that cover a very long period of Spanish democracy, including two recessions and two periods of economic boom. Given the abundance of survey data even for the same years, we have decided to not only use country-years as the contextual level but also country-months. Thus, our unit of analysis is the survey respondent (level 1) who is nested in months (level 2), which are nested in years (level 3). Since we are able to measure most context-level explanatory variables on a monthly basis, the maximum potential lag between cause and effect therefore decreases to less than one month.

#### 3.4.1. Explanatory context-level variables

For the measurement of our explanatory variables we have chosen to use *objective indicators* wherever this is possible. In this way we guarantee the exogenous character of the independent variables. The most frequently used longitudinal variables to describe the performance of an economy are unemployment, economic growth and inflation. Longitudinal evidence is strongest for unemployment, which has been shown to decrease SWD substantially. In our study, we use the *unemployment rate* measured as a percentage of the total Spanish labour force. Our second economic performance indicator is GDP growth. We expect economic growth to increase SWD over time, while periods of recession should diminish satisfaction. The inflation rate is measured using the Consumer Price Index. Our assumption is that higher price instability should lead to decreasing SWD. The unemployment and inflation rates are measured on a monthly basis, while GDP growth is captured yearly and the data come from OECD.Stat (2016).

To tap into political performance, we use a measure that captures the salience of political *corruption* to the public. To track corruption, we use the percentage of respondents who answer that

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<sup>&</sup>lt;sup>35</sup> Data accessed at: <a href="http://www.latinobarometro.org/lat.jsp">http://www.gesis.org/eurobarometer-data-service/search-data-access/data-access</a>

"corruption and fraud" are among the "three principal problems that currently exist in Spain." The data come from the monthly barometers of the *Centro de Investigaciones Sociológicas* in Spain (CIS). This indicator has several advantages. Unlike other subjective indictors based on expert surveys, such as the Perception of Corruption index compiled by Transparency International and the one by the World Bank, which only start in the mid-90s, the CIS corruption data actually stretches back into the 1980s. Furthermore, Transparency International and the World Bank's aggregate measures of corruption remain unexpectedly stable for Spain between 1995 and 2015 despite the serious political corruption scandals in the mid-90s and the beginning of the 2010s.

#### 3.4.2. Context-level controls

Political institutions such as the electoral system, the parliamentary type of executive, the role of the Supreme Court or the asymmetrical bicameralism remain constant for the period under consideration. Furthermore, the disproportionality of the Spanish PRsystem has led to a two party system with an alternation of power between the socialist PP and the conservative PSOE, where, until very recently, only regional parties could successfully compete with both parties and only in few electoral districts (Torcal and Lago 2008). This has severely limited party system fractionalization in the legislature, leading to highly concentrated single party governments (compare Figure 16 in the Appendix). However, despite the continuity of the institutional context, since 2011 there has been a significant change in the supply of electoral parties which might have altered citizens SWD (Miller and Listhaug 1990).<sup>37</sup> In our study, party supply is measured using the effective number of electoral parties (ENEP).<sup>38</sup>

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 $\underline{\text{http://www.cis.es/cis/opencms/ES/NoticiasNovedades/InfoCIS/2014/PlataformaO}} \\ nLineBancodeDatos.html$ 

<sup>&</sup>lt;sup>36</sup> Data accessed at:

<sup>&</sup>lt;sup>37</sup> The Spanish political landscape is undergoing much transformation during the time that this article is being prepared. The entrance of two strong national political parties on the left (Podemos) and on the centre-right (Ciudadanos) in the European election in May 2014 put an end to the old party system where two dominant parties, the PP and PSOE, competed for power (Cordero and Christmann 2017; Orriols and Cordero 2016).

<sup>&</sup>lt;sup>38</sup> Data comes from Gallagher (2015).

Furthermore, we control for whether a survey was conducted during or shortly after a parliamentary election, since democratic elections can be expected to enhance people's feelings about their political institutions and the political process (Banducci and Karp 2003; Blais et al. 2017; Esaiasson 2011). We do so by including a dummy variable which captures *proximity to elections* by taking value 1 if a survey was conducted during the six months after a national parliamentary election.

The third aggregate control variable we have added is an index that measures the extent to which the Spanish government has a balanced budget. *Budget deficit* is measured as general government net lending/ borrowing, calculated as revenue minus total expenditure. Budget deficit data are only available on a yearly basis and come from the IMF WEO Database (2016).<sup>39</sup> Our expectation is that a budget deficit is negatively related to SWD as it limits the ability of governments to be responsive to citizen's needs (Armingeon and Baccaro 2012; Schäfer and Streeck 2013; Morlino and Piana 2014).

#### 3.4.3. Individual-level controls

At the individual level, we control for socio-demographic variables such as age, gender (reference category=female) and education (Norris 2011). Age is measured in years, while education is measured categorically as the age at completion of studies (reference category="over 19", other categories="less than 15", "15 to 19" and "still studying"). Furthermore, we add the employment status (reference category="employed, student, retired or other", other category ="unemployed") and the *civil status* of the respondents (reference category ="single, separated, widowed or divorced", other category ="cohabitating or married"). Although we would have liked to include other basic control variables such as income, partisanship or left-right position, the inclusion of any other individuallevel variable would create large temporal gaps in the dataset. Furthermore, many variables of interest, such as evaluations of the economy, are only included in relatively recent waves of the Eurobarometer. However, we believe that these limitations are out-

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<sup>&</sup>lt;sup>39</sup> Data accessed at: https://www.imf.org/external/pubs/ft/weo/2016/01/weodata/index.aspx

weighed by the fact that we are able to estimate our model on the basis of hierarchical data covering three decades of Spanish democracy.

#### 3.4.4. Method and model

Since SWD is an ordinal variable, we estimate an ordered multi-level probit regression where survey respondents (i) are nested within months (j), which are nested within years (k):

$$probit\{Pr(y_{ijk} > s \mid x_{ijk}, \zeta_{jk}, \zeta_k)\}$$

$$= \beta_1 x_{ijk} + \beta_2 x_{jk} + \beta_3 x_k + \zeta_{jk} + \zeta_k + \varepsilon_{ijk} - k_s,$$

where  $Pr(y_{ijk} > s \mid x_{ijk}, \zeta_{jk}, \zeta_k)$  is the probability that survey respondents express a level of SWD higher than the threshold s,  $x_{ijk}$  is an individual-level covariate, e.g. employment situation, while  $x_{jk}$  and  $x_k$  refer to time-varying covariates at the monthly or yearly level such as the unemployment rate or budget deficit.  $^{40}\zeta_{jk}$  is the intercept of the cumulative probit model varying over quarter months, while  $\zeta_k$  denotes the intercept for the year level.  $\varepsilon_{ijk}$  denotes the unique error term for each i, which is assumed to follow a standard normal distribution.  $\kappa_s$  are the thresholds of the ordered probit.

In ordered probit models, a latent response is estimated as a linear function of explanatory variables and a number of thresholds. Assuming survey respondents i are nested in months j, nested in years k, observed ordinal responses  $y_{ijk}$  are generated from a latent continuous response  $y_{ijk}^*$  with a threshold model (Rabe-Hesketh and Skrondal 2012: 594), where Kappa ( $\kappa$ ) denotes the cut-off points (or thresholds). Since there are four categories, SWD is related to the latent response by:

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<sup>&</sup>lt;sup>40</sup> We follow the recommendation of Schmidt-Catran and Fairbrother (2016) to include random effects at all potentially relevant levels and specify a three-level model since data for budget deficit and GDP growth was only available at a yearly basis. As can be seen in Table 22 in the Appendix, the differences between a two- and a three-level model are visible in the standard errors but do not affect the substantive interpretation.

$$y_{ijk} = \begin{cases} \textit{Not at all satisfied if} & -\infty \leq y^*_{ijk} < \kappa_1 \\ \textit{Not very satisfied if} & \kappa_1 \leq y^*_{ijk} < \kappa_2 \\ \textit{Fairly satisfied if} & \kappa_2 \leq y^*_{ijk} < \kappa_3 \\ \textit{Very satisfied if} & \kappa_3 \leq y^*_{ijk} < \infty \end{cases}$$

## 3.4.5. Specification

We first decompose the variances in SWD by estimating an empty model. This "null" model provides the information to compute the Intraclass Correlation Coefficients (ICC) which reflects the share of variation in SWD that can be attributed to the individual and the aggregate levels. Model 1 includes the individual-level control variables previously discussed, the context-level control variables and the objective economic performance variables. Model 2 adds our political performance variable, the salience of political corruption. While Model 1 covers the whole period between 1986 and 2014, the inclusion of our corruption measure leads to time gaps in the data. Overall, the inclusion of the corruption measure leads to a loss of about one third of our sample (compare Figure 13). For this reason, we have decided to estimate a second model and compare the robustness of the estimates.

#### 3.4.6. Results

The results of our longitudinal contextual-level analysis are summarized in Table 17. To facilitate interpretation of the output of the estimation we report standardized coefficients and changes in predicted probabilities. The underlying scale of a probit model also has a standard deviation of one so all coefficients can be easily interpreted. In addition, we report the predicted probabilities of changing from not satisfied (not at all satisfied, not satisfied) to satisfied (very satisfied, fairly satisfied) over the range of the explana-

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<sup>&</sup>lt;sup>41</sup> Continuous variables can be interpreted as the standard deviation increase in SWD associated with a one standard deviation increase in the explanatory variable, holding all other variables constant. For categorical explanatory variables, the coefficients reflect the standard deviation increase in SWD when the variable switches from zero to one.

tory variables (maximum observed value – minimum observed value) in Figure 14, holding all the other variables at their means.

Table 17: Ordered probit multilevel model of SWD in Spain over time

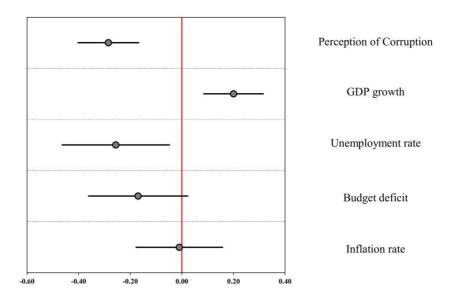
	Nu	ıll	Mod	el 1	Nu	ıll	Mod	el 2
	β	(se)	β	(se)	β	(se)	β	(se)
Respondent-Level Coefficients								
Age			0.04***	(0.01)			0.04***	(0.01)
Male (ref.: female)			-0.01	(0.01)			-0.01	(0.01)
Education (ref.: more than 19)								
up to 15			-0.02*	(0.01)			-0.07***	(0.01)
16-19			-0.03**	(0.01)			-0.04**	(0.01)
Still studying			0.06***	(0.02)			0.05*	(0.02)
Married/ cohabitating			0.04***	(0.01)			0.05***	(0.01)
Unemployed			-0.15***	(0.01)			-0.15***	(0.02)
Longitudional Coefficients								
Proximity to election			0.15*	(0.07)			0.09	(0.09)
ENEP			-0.04	(0.04)			-0.04	(0.04)
Budget deficit			-0.28***	(0.07)			-0.13+	(0.08)
Inflation rate			0.04	(0.04)			-0.00	(0.04)
GDP growth			0.16***	(0.04)			0.14***	(0.04)
Unemployment rate			-0.41***	(0.06)			-0.21*	(0.09)
Perception of corruption							-0.16***	(0.04)
Thresholds								
Cut-off point 1	-1.24***	(0.06)	-1.25***	(0.03)	-1.23***	(0.08)	-1.28***	(0.03)
Cut-off point 2	-0.13*	(0.06)	-0.13***	(0.03)	-0.10	(0.08)	-0.15***	(0.03)
Cut-off point 3	1.38***	(0.06)	1.38***	(0.03)	1.46***	(0.08)	1.42***	(0.03)
Variance components								
Month-level residual variance	0.03***	(0.01)	0.02***	(0.01)	0.03**	(0.01)	0.02***	(0.00)
Year-level residual variance	0.10***	(0.03)	0.00	(0.00)	0.12**	(0.04)	0.00	(0.00)
Log Likelihood	-81,769.43		-81,575.53		-59,913.02		-59,764.05	
AIC	163,548.9		163,187.1		119,836		119,564.1	
ICC month-level	0.03		0.00		0.03		0.00	
ICC year-level	0.09		0.02		0.11		0.02	
Number of respondents	70,741		70,741		52,684		52,684	
Number of months	58		58		41		41	
Number of years	29		29		22		22	

Notes: Ordered probit multilevel regression; standardized  $\beta$  (except gender, education, employment status, civil status, proximity to election); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

The two null-models in Table 17 show the results of the decomposition of the variance in SWD (ICC). As we can see, between 86 and 88 per cent of the variation in the data can be attributed to the respondent level. Conversely, about 12 to 14 percent of the variance belongs to the year and month levels, which is a sizeable degree of clustering. This underlines the necessity of modelling both types of variance in a multilevel analysis because a pooled regression model would probably underestimate the standard errors of the context-level coefficients (Arceneaux and Nickerson 2009).

Figure 14: Predicted change in probabilities (Model 2)

Longitudinal Coefficients (Aggregate Level)



Let us turn now to the results of the longitudinal context-level analysis. The economic performance indicators (economic growth, unemployment rate) in Model 1 are significant and point in the expected directions (confirming hypotheses 1a and 1b). However, there are important differences in the magnitude of the effects. The factor with the strongest impact on SWD is unemployment: an increase of one standard deviation in the unemployment rate causes SWD to decrease by more than two-fifths of a standard deviation. A similar increase in GDP growth also has a substantial effect, leading to an increase of about one-fifth of a standard deviation in SWD. However, we find no effect for inflation (leading to the rejection of H1c). Finally, it is also noteworthy that the effect of the employment status of a respondent is largely consistent with the results of

<sup>&</sup>lt;sup>42</sup> The relative importance of some contextual economic factors might be conditional on the national economic context and, more importantly, on the individual salience of each of these issues (Singer 2011). In the case of Spain and more generally for Europe, inflation has remained significantly low since the implementation of the EMU, explaining the lower importance for predicting SWD. Outside the European context, however, inflation has emerged as an important factor explaining within and between cross-national variations in political trust (Torcal and Bargsted 2015).

our contextual-level analysis: Respondents who are unemployed tend to be substantially less satisfied.

In Model 2, we add the measure capturing the salience of political corruption issues among the Spanish population. The resulting coefficient seems to confirm a strong and significant relationship with SWD, even when controlling for the other political and economic performance indicators (confirming hypothesis 3a). In fact, its negative effect on SWD is about as strong as that of unemployment. As we can see, the two periods marked by political corruption scandals have decreased the probability of being satisfied with the way democracy works by more than 25 per cent (see Figure 14). Finally, it is worth mentioning that our models are capable of explaining most of the longitudinal variation in SWD, as can be seen from the substantial reduction in the ICC, especially at the year level.

## 3.5. Individual-level panel analysis

The main purpose of this section is to provide a comprehensive test of the effects of political and economic *perceptions* on SWD from a longitudinal perspective using individual-level panel data for Spain: the CIUPANEL (Torcal et al. 2016). The panel consists of an online sample of the Spanish population followed over six different waves between 2014 and 2016. Quotas were applied for gender, age, education, size of city/village of residence and autonomous regions. For the present study, we make use of waves 4 and 5 of this panel, which were administrated in May-June and December 2015 respectively.<sup>43</sup>

## 3.5.1. Explanatory individual-level variables

To test the effects of the economic outputs of the political system, we rely on a question that asks about respondents' sociotropic *evaluations of the economy*: "What do you think about the state of the economy in Spain? Would you say it is very good, good, neither

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<sup>&</sup>lt;sup>43</sup> Several key variables of our study such as perceptions of corruption or questions related to the policy performance have only been collected in the fourth and fifth wave.

good nor bad, bad, or very bad?" Our expectation is that positive economic evaluations lead to more favourable evaluations of democracy, a relationship that has already been well documented in a number of studies (Anderson and Guillory 1997; Armingeon and Guthmann 2014; Bratton and Mattes 2001; Waldron-Moore 1999).

Furthermore, previous studies report a relationship between the personal economic well-being of a respondent and his/her SWD (Anderson and Guillory 1997; Waldron-Moore 1999). In our study, we measure the *personal economic situation* by creating an index based on factor scores for answers to the following questions: (A) "Today, to what extent are you worried about paying the bills for your home?", (B) "Today, to what extent are you worried about needing to reduce your standard of living?", (C) "Today, to what extent are you worried about having a job?", (D) "Today, to what extent are you worried about paying back bank loans or mortgages?" The correlations between these items vary between R=0.42 and R=0.64 and reliability is reasonably high, with a Cronbach's alpha of 0.80.

To test the effects of the political outputs of the political system, we construct an index by relying on a set of variables designed to capture *policy performance* in Spain. For this, we rely on four different items that ask about respondent's evaluations of the employment situation, the education system, the healthcare system and immigration policy. The correlations between these items are well above R=0.5 and reliability is high with a Cronbach's alpha of 0.82. The index is created by calculating factor scores for a single unrotated factor solution. Our expectation is that more favourable evaluations of the policy output should be related to higher SWD (Mattes and Bratton 2007).

The second political output measure we use is an index of *perceptions of corruption*. There is already considerable evidence that factors related to the fairness and impartiality of the political decision-making process are connected to SWD. Thus, perceptions about corruption among politicians, the police and judges have been shown to have a negative relationship to SWD, while positive perceptions related to fairness and impartiality have been linked to increasing SWD (Mattes and Bratton 2007; Huang et al. 2008; Linde 2012; Peffley and Rohrschneider 2014; Sanders et al. 2014; Stockemer and Sundström 2013). Our perception-of-corruption index is based on factor scores from six questions asking about the extent to which corruption is widespread in (A) the Spanish parlia-

ment, (B) the political parties, (C) the judicial system, (D) the police and (E) civil servants. The scale reliability is high with a Cronbach's alpha of 0.81.

We tap into evaluations of political system inputs by relying on two important factors, *political trust* and *evaluation of government performance*. We measure political trust using two indicators: (A) trust in the Spanish parliament; and (B) in political parties. The reliability is high with a Cronbach's alpha of 0.76. Our expectation is that political trust should have a positive relationship to SWD (Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Zmerli and Newton 2008). Finally, *evaluation of the government performance* is measured with the following question: "Overall, how do you evaluate the working of the PP government?" The existence of a positive linkage between government performance and SWD is already well documented (Bratton and Mattes 2001; Huang et al. 2008; Sanders et al. 2014; Stockemer and Sundström 2013) but existing research has not tested the linkage longitudinally.

#### 3.5.2. Individual-level controls

At the individual level, we control for socio-demographic variables such as age, gender (reference category=female) and education level. Age is measured in years, while education contains six education categories. These are variables which change little (almost time-invariant), so we have only included the group mean component  $\bar{x}_i$  in the model.

We have also added a set of important individual attitudinal variables. The first of these is the respondent's *left-right self-placement* since there is documented evidence of a relationship of this with SWD (Anderson and Just 2013; Anderson and Singer 2008). On the basis of previous findings, we expect that respondents who place themselves on the right are more satisfied. We also control for respondents' *political interest*. Citizens who understand politics and think that their participation has an impact on policymaking should have a more optimistic view of the working of democracy and therefore be more satisfied (Anderson and Guillory 1997; Anderson and Singer 2008; Anderson and Tverdova 2003). Moreover, we expect *party identification* (feel close to a political party=1, or not=0) as an indicator of satisfaction with the party-system supply to have a positive impact on SWD too (Huang et al.

2008; Peffley and Rohrschneider 2014; Sanders et al. 2014). Finally, we include a variable that captures the extent of respondent's *identification with the Spanish nation state*. Although identification with the political community is high in Spain (Norris 2011), citizens in some regions of Spain also exhibit strong regional identities, which might affect their evaluation of Spanish democracy.

#### 3.5.3. Method and model

Again, we estimate an ordered multi-level probit regression model to study the effects of political and economic perceptions on SWD. However, this time we treat respondent measurement occasions (i) as nested within respondents (j). Building on the work of Bell and Jones (2015) and Schmidt-Catran and Fairbrother (2016), we simultaneously model the cross-sectional and longitudinal relationships by adding a group mean and a de-meaned term together in the model, leading to the following within-between ordered multi-level probit regression:

$$probit\{Pr(y_{ij} > s \mid x_{ij}, \zeta_j)\}$$

$$= \beta_1 x_{ijM} + \beta_2 \bar{x}_j + \beta_3 x_j + \zeta_j + \varepsilon_{ij} - k_s$$

where  $Pr(y_{ij} > s \mid x_{ij}, \zeta_j)$  is the probability that respondent measurement occasions i nested within respondents j express a level of SWD higher than the threshold s.  $x_j$  refers to time-invariant covariates at the respondent level such as gender. The original timevarying variable  $x_{ij}$  is included twice in the model, decomposed into  $\bar{x}_i$  and  $x_{ijM}$ , enabling us to distinguish separate longitudinal and cross-sectional associations between  $x_{ij}$  and SWD. The coefficient on the respondent mean  $\bar{x}_j$  captures the effect on satisfaction of enduring cross-sectional differences in  $x_{ij}$ , allowing us to analyse differences between respondents. To capture the effects of change over time within each respondent, we subtract  $\bar{x}_j$  from  $x_{ij}$ .

A benefit of this approach is that the *within* coefficients will return the same results as a fixed effects (FE) model, which has traditionally been recommended for the analysis of this type of panel dataset. We can therefore exclude the possibility that some time-invariant unobserved variable at a higher level is biasing the *within* coefficients. Of equal importance, this approach allows estimation

of the cross-sectional association between a time-varying variable x and y and enables us to include time-invariant variables simultaneously in one model.<sup>44</sup>

## 3.5.4. Specification

We first decompose the cross-sectional and longitudinal variations in SWD at the individual level (null model). Then, we estimate a model that only includes the *within* variables used for the analysis (Model 3). As pointed out in the previous section, this model is equivalent to a FE model. Finally, Model 4 adds the *between* predictors to the model, which enables us to make cross-sectional comparisons between respondents. It should be noted that our main interest lies in the longitudinal predictors of the model. However, finding similar cross-sectional *and* longitudinal relationships should increase confidence in the robustness of our results.

#### 3.5.5. Results

Table 18 shows the results of the estimation of the models. The table can be divided into three sections: The *within* (longitudinal) coefficients are presented at the top, followed by a section with all the *between* (cross-sectional) predictors. At the bottom we report the variance components alongside some measures of the goodness of fit. Again, to facilitate interpretation all the continuous variables are standardized before the estimation. In addition, we report the changes in the predicted probabilities for the main variables of interest in Figure 15. As can be seen from the null model, about 73 per cent of the variance can be attributed to the respondent level, while 27 per cent belongs to changes in SWD within respondents over time.

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<sup>&</sup>lt;sup>44</sup> As a robustness test we also estimated a RE model with lagged predictors and found the results for all variables of interest to be very similar (compare Table 23 in the Appendix). Following the recommendation of Vaisey and Miles (2017) we did not estimate a lagged first-difference model (LFD) as we expect the spacing between the waves of the CIUPANEL ('data lag') to be much longer than the real process ('process lag'). For this case, Vaisey and Miles (2017) showed by simulation and formal proof that the inclusion of lagged predictors leads to a bias towards the opposite sign of the true effect.

Table 18: Within-between ordered probit multilevel model of SWD (CIUPANEL)

	Nu	ıll	Mod	el 3	Mod	el 4
	β	(se)	β	(se)	β	(se)
Longitudinal Coefficients						
Personal economic situation index			-0.04+	(0.02)	-0.04+	(0.02)
Political interest			0.02	(0.02)	0.02	(0.02)
Identification with Spain			0.02	(0.02)	0.02	(0.02)
Left-right ideology			-0.03	(0.02)	-0.03	(0.02)
Partisanship			0.04+	(0.02)	0.03	(0.02)
Government performance evaluation			0.08***	(0.02)	0.08***	(0.02)
Policy performance index			0.05*	(0.02)	0.05*	(0.02)
Economic situation in Spain			0.06**	(0.02)	0.06**	(0.02)
Trust in representative institutions index			0.18***	(0.02)	0.19***	(0.02)
Perception of corruption index			-0.07**	(0.02)	-0.06**	(0.02)
Respondent-Level Coefficients						
Age					-0.10**	(0.03)
Male (ref.: female)					-0.24***	(0.06)
Education level					-0.07*	(0.03)
Personal economic situation index					-0.06+	(0.03)
Political interest					0.02	(0.03)
Identification with Spain					0.28***	(0.04)
Left-right ideology					-0.11**	(0.04)
Partisanship					0.09**	(0.03)
Government performance evaluation					0.20***	(0.05)
Policy performance index					0.10*	(0.04)
Economic situation in Spain					0.31***	(0.04)
Trust in representative institutions index					0.85***	(0.06)
Perception of corruption index					-0.18***	(0.04)
Thresholds						
Cut point 1	-1.22***	(0.05)	-1.36***	(0.06)	-1.52***	(0.06)
Cut point 2	1.39***	(0.06)	1.55***	(0.06)	1.40***	(0.06)
Cut point 3	4.14***	(0.13)	4.59***	(0.15)	4.44***	(0.15)
Variance Components						
Respondent-level residual variance	2.71***	(0.21)	3.48***	(0.27)	1.15***	(0.12)
Log Likelihood	-4,417.17		-4,310.88		-3,418.81	
AIC	8,842.35		8,649.77		6,891.62	
ICC respondent-level	0.73		0.78		0.53	
Number of observations	4,417		4,417		4,417	
Number of respondents	2,702		2,702		2,702	

Notes: Ordered probit multilevel regression; standardized  $\beta$  (except gender); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.01, \*\* p<0.01, \*\* p<0.05, + p<0.1. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

Model 3 shows the results of the longitudinal analysis. As hypothesized, we find that individuals' SWD responds to changing perceptions regarding the inputs and outputs of the Spanish political system. In fact, these are the only significant predictors that can explain changes in SWD over time at the individual level. Regarding perceptions of the economic output, we find that more positive

evaluations of the economic situation increase individuals' SWD (confirming hypothesis 2a). On the other hand, we find little evidence for a longitudinal effect of the personal economic situation of respondents. Although the coefficient points in the expected direction, its substantial effect is weak and only significant at the p<.10 level (not confirming hypothesis 2b). Thus, while sociotropic evaluations matter strongly for individuals' SWD, people do not appear to blame democracy *per se* for their personal situations. Thus, Anderson and Guillory (1997, 73ff.) have probably been right when observing that sociotropic assessments of the national economic situation are more powerful explanations for SWD than those of personal economic conditions.

Regarding the political outputs of Spanish democracy, we observe that more favourable evaluations of policy performance are positively related to SWD (confirming hypothesis 2c). Probably more interesting in the light of the previous discussion on the temporal evolution of SWD in Spain is the finding that worsening perceptions of corruption also lead to an erosion of SWD within respondents (confirming hypothesis 3b). Finally, changes in attitudes related to the inputs of the political system (trust in representative institutions, evaluation of the government) have a strong effect on changes in SWD too (confirming hypotheses 4a and 4b). There are, however, important differences in the magnitudes of the effects. 45

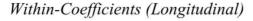
When we look at the predicted probabilities for the *within* coefficients in Figure 15, we see that the size of the effect is about the same for government performance evaluations, policy performance evaluations, perceptions of the national economy and the corruption perception index, making it about 10 per cent more likely that respondents change from not satisfied to satisfied. Confidence in the representative institutions stands out as a very strong predictor. Cit-

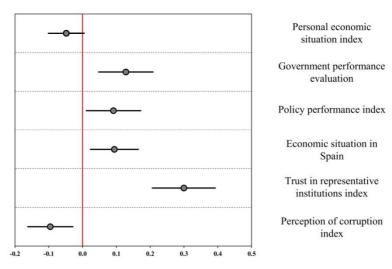
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<sup>&</sup>lt;sup>45</sup> We also tested whether government and policy performance evaluations, perceptions of the national economy, political trust and perceptions of corruption might reflect affective support for the incumbent government party, the PP. Indeed we found incumbent support to be strongly correlated with government performance evaluations and moderately correlated with trust in representative institutions, policy performance and perceptions of the economy. Therefore, we have included support for the incumbent party as another control variable in Table 24 in the Appendix. Since we find the results of our models to be stable, it supports the interpretation that SWD is not only affected by the evaluations of the incumbent party but also reflects more deep rooted perceptions of the political process.

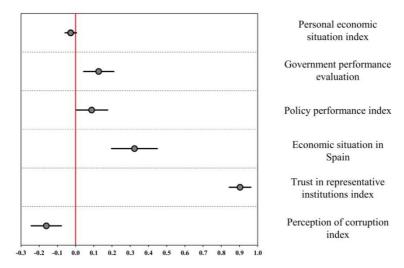
izens who lose trust in their representative institutions are about 30% more likely to become dissatisfied.

Figure 15: Predicted change in probabilities (Model 4)





#### Between-Coefficients (Cross-Sectional)



Model 4 adds the cross-sectional predictors. As should be the case, the longitudinal coefficients remain basically unchanged, but what about the persistent differences in SWD between respondents?

Again, we find most of our expectations confirmed: respondents who have more favourable evaluations of the Spanish economy also tend to have higher levels of SWD, while we find no substantive relationship between the egotropic economic situation of respondents and SWD. Favourable perceptions of policy performance and government performance, on the other hand, are associated with higher SWD. Finally, a high salience of corruption and a high degree of distrust in the representative institutions are associated with low levels of SWD.

Finally, let us briefly turn to the control variables included in our model. Although we find no longitudinal effects for ideology, diffuse attachment to the regime or partisanship, we observe substantial cross-sectional relationships. More in detail, we find that respondents placing themselves on the right of the ideological spectrum tend to be more satisfied (Anderson and Just 2013; Anderson and Singer 2008), partisanship is associated with higher levels of SWD (Huang et al. 2008; Peffley and Rohrschneider 2014; Sanders et al. 2014) and diffuse attachment to the Spanish nation state is also positively related to SWD.

#### 3.6. Discussion

The aim of this article has been to contribute to the debate on the attitudinal consequences of political and economic performance with respect to its potential to influence citizens' satisfaction with the working of their democratic system. In recent years, the literature on SWD has exploded and there has been an increasing interest in the effects of the economy, especially after the onset of the Great Recession in 2008 in Europe. For countries such as Portugal, Ireland, Italy, Spain, and Greece, the literature mainly attributes the declining levels of SWD to economic factors (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016a; Morlino and Piana 2014; Sousa et. al 2014).

By drawing on an extensive aggregate-level panel dataset based on Spanish surveys part of the Eurobarometer and the Latinobarómetro between 1986 and 2014, we can reconfirm this economic argument for this country, especially when it comes to the relationship with unemployment, although the relationships with economic growth is also strong. However, we have also shown that economic

performance is not the sole explanation for the trends observed in SWD. Political performance, in particular a series of major political corruption scandals in the 1990s and at the beginning of the 2010s, have largely contributed to worsening evaluations of Spanish democracy. In 2015, only one in five citizens voiced favourable views about the working of democracy – an all-time low, despite a modest economic recovery since 2013.

Unlike most public opinion research, we have combined this macro-level panel analysis with a follow-up individual-level panel analysis, based on data from the recently released CIUPANEL study. This has provided us with a unique opportunity to study how the recent economic and political crisis played out at the individual level and how it changed individual respondent attitudes. While our focus at the national level was a test of objective exogenous measures of political and economic performance, this shift in perspective to the individual level allowed us to unpack the perceptional consequences of the crisis for SWD in Spain.

When analysing the individual-level panel data, we found that the dynamics at the micro level are consistent with the dynamics at the context level to a high degree: changes in individuals' perceptions of political and economic outputs (economic evaluations, policy performance, perceptions of corruption) are able to explain a sizeable share of the variation in SWD. We also found that attitudes related to the inputs of the political system matter greatly. When people lose their trust in the institutions and actors of political representation, they display lower levels of SWD. Closely related to this, we find worsening perceptions of political corruption also decrease SWD.

Therefore, contrary to the dominant economic-instrumental explanations of the increasing dissatisfaction with democracy in Spain, we argue here that there are important political factors behind this negative trend as well. Although economic performance is a major exogenous factor in the evolution of SWD in Spain, when we move our focus to the individual level worsening perceptions of the political performance appear to be a more powerful explanation of why people change their opinion about the working of democracy. These results clearly show the importance of the political process in influencing citizens' attitudes toward the democratic regime (Norris 2011). Thus, while the economic recession might have initiated the decline in SWD, increasing distrust and poor political performance (together with the corruption scandals) contributed signif-

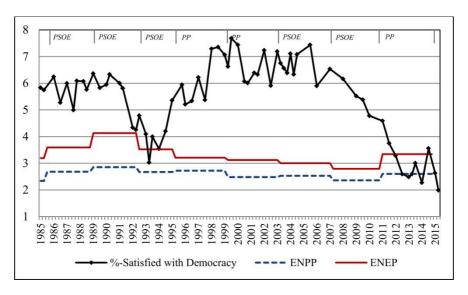
icantly to the deterioration and its resilience. The economic crisis has opened a period of "stress testing" for Spanish democracy, and, as the evolution of SWD has shown, this test has been a failure in the eyes of most Spanish citizens.

Finally, the question that remains to be answered is how far the results of the present case study can be generalized to other countries. We believe the story we have told here about a combination of political and economic factors shaping the evolution of evaluations of a democratic regime can also be applied to countries with a similar history of economic crisis and persistent political corruption, such as Italy or Greece. Furthermore, this comprehensive study on SDW in Spain might contribute to the general debate by providing longitudinal evidence.

## 3.7. Appendix

## **3.7.1.** Figures

Figure 16: Electoral outcomes and SWD in Spain



*Notes*: Measured on a quarterly basis. Values for SWD are interpolated (line); dots show the observed values. *Sources*: Own elaboration, Eurobarometer, Latinobarómetro, CIS, CIUPANEL, Gallagher (2015).

#### 3.7.2. Context-level variables

**Budget deficit:** General government net lending/ borrowing, calculated as revenue minus total expenditure and expressed as percentage of GDP. This indicator is used to approximate the government budget deficit and its consequences for the economy's fiscal stance. Measured on a yearly basis. Source: IMF WEO Database (2016).

**Economic situation (public):** Weighted average values of the responses to the following question: "Referring now to the general economic situation in Spain, would you rate it as (100) very good, (75) good, (50) fair, (25) bad or (0) very bad?" Data come from the monthly opinion barometer of the CIS (2016).

**Economic Performance Index (EPI):** Own estimation. Measured on a monthly basis. The EPI combines information on unemployment, government deficit, inflation and GDP growth into a single composite index. Thereby, it attempts to capture the economy's monetary status, its production stance, the fiscal stance and the aggregate performance of the economy respectively. The index is constructed as follows:

Weighted EPI  $= 100\% - W_{Inf} \times (|Inf(\%) - I^*|) - W_{Unem}$   $\times (Unem(\%) - U^*) - W_{Def} \times \left(\frac{Def}{GDP(\%)} - \frac{Def}{GDP^*}\right)$   $+ W_{GDP} \times (\Delta GDP(\%) - \Delta GDP^*).$ 

where I\* is the desired inflation rate (0%), U\* is the desired unemployment rate (4.75%),  $(Def/GDP^*)$  is the desired government deficit as a share of GDP (0%) and  $\Delta GDP^*$  is the desired change in GDP (4.75%). The weights (W) are generated by estimating the inverse standard deviation for each economic variable multiplied by the average standard deviation of all variables. For a detailed description of the construction of the index compare Khramov and Lee (2013: 6f.).

**Effective Number of Electoral Parties:** Party supply is measured using the effective number of electoral parties (ENEP). According to Laakso and Taagepera (1979: 4) it is calculated as  $1/\sum x^2_i$ , where  $x_i$  is the percentage of votes won by the i-th party. Measured on a monthly basis. Own elaboration, based on data from Gallagher (2015).

**Effective Number of Parliamentary Parties:** Party system fractionalization is measured using the effective number of parliamentary parties (ENPP). According to Laakso and Taagepera (1979: 4) it is calculated as  $1/\sum x_i^2$ , where  $x_i$  is the percentage of seats won by the i-th party. Measured on a monthly basis. Own elaboration, based on data from Gallagher (2015).

**GDP growth rate:** Gross domestic product, total, percentage change. GDP measures the value of goods and services produced by

a state minus its imports. Measured on a yearly basis. Annual change rate. Source: OECD Stat (2016).

**Inflation rate:** Total, growth rate compared to the same period of the previous year. The inflation rate is measured using the consumer price index and reflects the annual percentage change in the costs of an average consumer basket. Measured on a monthly basis. Source: OECD Stat (2016).

**Perception of corruption (public):** Percentage of respondents who have answered that "corruption and fraud" are among the "three principal problems that currently exist in Spain." Data comes from the monthly opinion barometer of the CIS (2016). Although data coverage is very good since the beginning of the 2000s (i.e. 11 out of 12 months are usually covered), this is not true for the 1980s and 1990s. Although there might still be 5 or 6 six surveys in a given year, they might not necessarily coincide with the surveys of the Eurobarometer/Latinobarómetro. For this reason, we have chosen to partially impute missing data (9 out of 41 months). We either replace missing values with observed values from another survey if it has been conducted within three months before or after the missing value or if a missing month falls between two surveys within a three-month period we interpolate the value. Following this procedure, we replace missing values for the following time points: October 1986, April 1988, October 1993, June 1994, December 1997, April 1998, December 1998, October 2001 and August 2003. Including the imputed values does not substantially affect the results of our models.

**Political situation (public):** Weighted average values of the responses to the following question: "Referring now to the political situation in Spain, would you rate it as (100) very good, (75) good, (50) fair, (25) bad or (0) very bad?" The data come from the monthly opinion barometer of the CIS (2016).

**Proximity to national legislative election:** Measures whether a survey has been conducted during or shortly after a national legislative election. Takes on the value 1 for within six months after an election has taken place (including the month in which the election falls). Measured on a monthly basis. Own estimation.

**Unemployment rate:** Total, percentage of the labour force. Unemployment refers to people aged 15 and over who were without work during the reference week but available for work and actively seeking work during the previous four weeks including the reference week. Measured on a monthly basis. Source: OECD Stat (2016).

# 3.7.3. Eurobarometer/ Latinobarómetro: question wording and variable coding

**Age**: in years.

**Education level**: (1) finished at age 15 or below, (2) finished at age 16–19, (3) finished at age 20 or older, and (4) still studying. Reference category = (3) finished at age 20 or older.

**Male**: gender of respondent, reference category = female.

**Marital status:** (1) married, re-married or cohabitating, reference category = (0) single, separated, widowed or divorced.

**Satisfaction with democracy in Spain:** "On the whole, are you (3) very satisfied, (2) fairly satisfied, (1) not very satisfied, or (0) not at all satisfied with the way democracy works in your country?".

**Unemployed**: (1) Unemployed, reference category = (0) employed, student, retired or other.

# 3.7.4. Eurobarometer/ Latinobarómetro: surveys included in sample

Table	19:	Euro	baron	neter	survey	ys (S	Spain	onl	y)

Eurobarometer number	Year	Quarter
EB 250	1986	4
EB 270	1987	2
EB 280	1987	4
EB 290	1988	2
EB 300	1988	4

EB 310	1989	1
EB 311	1989	2
EB 320	1989	4
EB 321	1989	4
EB 330	1990	2
EB 340	1990	4
EB 341	1990	4
EB 350	1991	1
EB 351	1991	2
EB 360	1991	4
EB 370	1992	1
EB 371	1992	2
EB 380	1992	4
EB 381	1992	4
EB 390	1993	1
EB 391	1993	2
EB 400	1993	4
EB 410	1994	1
EB 411	1994	2
EB 420	1994	4
EB 430	1995	2
EB 432	1995	2
EB 440	1995	4
EB 441	1995	4
EB 451	1996	2
EB 460	1996	4
EB 461	1996	4
EB 470	1997	1
EB 471	1997	2
EB 472	1997	2
EB 480	1997	4
EB 490	1998	2
EB 500	1998	4
EB 501	1998	4
EB 510	1999	2
EB 511	1999	2
EB 520	1999	4
EB 521	1999	4
EB 521 EB 530	2000	2
EB 540	2000	4
EB 540 EB 541	2000	4
	2000	1
EB 542		
EB 550	2001	1
EB 551	2001	2
EB 552	2001	2
EB 560	2001	3
EB 561	2001	3

EB 562	2001	3
EB 563	2002	1
EB 570	2002	1
EB 571	2002	2
EB 572	2002	2
EB 581	2002	4
EB 591	2003	2
EB 601	2003	4
EB 610	2004	1
EB 620	2004	4
EB 622	2004	4
EB 634	2005	2
EB 652	2006	2
EB 681	2007	4
EB 724	2009	4
EB 734	2010	2
EB 763	2011	4
EB 773	2012	2
EB 781	2012	4
EB 793	2013	2
EB 795	2013	2
EB 801	2013	4
EB 812	2014	1
EB 814	2014	2
EB 823	2014	4
EB 833	2015	2

Table 20: Latinobarómetro surveys (Spain only)

Latinobarómetro number	Year	Quarter
Latinobarómetro 1996	1996	3
Latinobarómetro 1997	1997	4
Latinobarómetro 1998	1998	4
Latinobarómetro 2001	2001	2
Latinobarómetro 2002	2002	2
Latinobarómetro 2003	2003	2
Latinobarómetro 2004	2004	3
Latinobarómetro 2006	2006	4
Latinobarómetro 2007	2007	4
Latinobarómetro 2008	2008	4
Latinobarómetro 2009	2009	4
Latinobarómetro 2010	2010	4

# 3.7.5. Eurobarometer/ Latinobarómetro: descriptive statistics

Table 21: Descriptive statistics

	Mean	SD	Min	Max	N
Age	43.95	18.12	15	99	70741
Education: up to 15	0.43	0.49	0	1	70741
Education: 16-19	0.26	0.44	0	1	70741
Education: more than 19	0.21	0.41	0	1	70741
Still studying	0.10	0.30	0	1	70741
Male	0.49	0.50	0	1	70741
Married/ cohabitating	0.60	0.49	0	1	70741
Satisfaction with democracy	1.54	0.83	0	3	70741
Unemployed	0.11	0.31	0	1	70741
Budget deficit	-4.06	3.59	-10.96	2.20	29 years
Economic Performance Index (EPI)	79.91	8.71	62.03	94.68	58 months
ENEP	3.33	0.38	2.79	4.13	58 months
GDP growth	2.41	2.49	-3.58	5.71	29 years
Unemployment rate	16.93	5.34	8.3	26.3	58 months
Perception of corruption	10.49	15.95	0	63.8	41 months
Proximity to general election	0.12	0.33	0	1	58 months
Inflation rate	3.44	2.09	-0.37	9.32	58 months

## 3.7.6. Aggregate-level panel analysis: robustness tests

Table 22: Ordered probit multilevel model of SWD in Spain over time

	TAUL											
	β	(se)										
Respondent-Level Coefficients												
Age			0.04***	(0.01)	0.04***	(0.01)			0.04***	(0.01)	0.04***	(0.01)
Male (ref.: female)			-0.01	(0.01)	-0.01	(0.01)			-0.01	(0.01)	-0.01	(0.01)
Education (ref.: more than 19)												
up to 15			-0.02*	(0.01)	-0.02*	(0.01)			-0.07***	(0.01)	-0.07***	(0.01)
16-19			-0.03**	(0.01)	-0.03**	(0.01)			-0.04**	(0.01)	-0.04**	(0.01)
Still studying			0.06***	(0.02)	0.06***	(0.02)			0.05*	(0.02)	0.05*	(0.02)
Married/ cohabitating			0.04***	(0.01)	0.04***	(0.01)			0.05***	(0.01)	0.05***	(0.01)
Unemployed			-0.15***	(0.01)	-0.15***	(0.01)			-0.15***	(0.02)	-0.15***	(0.02)
Longitudional Coefficients												
Proximity to election			0.16*	(0.07)	0.33**	(0.11)			0.09	(0.09)	0.13	(0.09)
ENEP			-0.04	(0.03)	0.05	(0.04)			-0.04	(0.04)	-0.02	(0.03)
Budget deficit			-0.28***	(0.06)					-0.13+	(0.08)		
Inflation rate			0.03	(0.04)					-0.00	(0.04)		
GDP growth			0.16***	(0.04)					0.14***	(0.04)		
Unemployment rate			-0.41***	(0.05)					-0.21*	(0.09)		
Economic Performance Index (EPI)	_				0.27***	(0.04)					0.15***	(0.03)
Perception of corruption									-0.16***	(0.04)	-0.25***	(0.03)
Thresholds												
Cut-off point 1	-1.22***	(0.05)	-1.24***	(0.03)	-1.20***	(0.04)	-1.21***	(0.06)	-1.28***	(0.03)	-1.27***	(0.03)
Cut-off point 2	-0.11*	(0.05)	-0.12***	(0.03)	-0.08*	(0.04)	-0.08	(0.06)	-0.15***	(0.03)	-0.14***	(0.03)
Cut-off point 3	1.40***	(0.05)	1.39***	(0.03)	1.43***	(0.04)	1.48***	(0.06)	1.42***	(0.03)	1.43***	(0.03)
Variance components												
Month-level residual variance	0.14***	(0.03)	0.02***	(0.00)	0.07***	(0.01)	0.17***	(0.04)	0.02***	(0.00)	0.02***	(0.01)
Log Likelihood	-81,787.47		-81,576.16		-81,605.16		-59,924.93		-59,764.05		-59,769.57	
AIC	163,582.9		163,186.3		163,238.3		119,857.9		119,564.1		119,569.1	
ICC month-level	0.12		0.02		0.06		0.14		0.02		0.02	
Number of respondents	70,741		70,741		70,741		52,684		52,684		52,684	
Number of months	58		58		58		41		41		41	

## 3.7.7. CIUPANEL: question wording and variable coding

**Age:** in years.

**Economic situation in Spain:** "What do you think about the state of the economy in Spain? Would you say it is (5) very good, (4) good, (3) neither good nor bad, (2) bad, or (1) very bad?".

**Education level**: (1) Lower than primary; (2) Primary education (until 12 years of age); (3) First Lower secondary (until 12 years of age); (4) Second Lower secondary; (5) Upper secondary; (6) Tertiary education.

**Government performance evaluation:** "Overall, how do you evaluate the working of the PP government?" (5) Very good; (4) good; (3) fair; (2) bad; (1) very bad.

**Identification with Spain**: "To what extent do you identify with Spain? To answer this question please use the following scale from 0 to 10, where 0 means 'no identification' and 10 means 'strong identification'."

**Left-right ideology**: "In politics people sometimes talk of left and right. Where would you place yourself on a scale from 0 to 10 where 0 means the left and 10 means the right?"

**Male**: gender of respondent, reference category = female.

**Party ID**: "Is there any particular political party you might feel closer to than all the other parties?" Yes (1); no (0).

**Perception of corruption index:** The index created is based on the factor scores of the following questions: (A) "In your opinion, how many officials of the state administration in our country have been involved or related corruption?" (1) Almost nobody; (2) a few of them; (3) many of them; (4) almost all of them. (B) "To what extent do you believe corruption is widespread in the parliament in Spain?" (C) "To what extent do you believe corruption is widespread in the political parties in Spain?" (D) "To what extent do you believe corruption is widespread in the judicial system in Spain?"

(E) "To what extent do you believe corruption is widespread in the police in Spain?" (0) Not widespread; (10) very widespread.

**Personal economic situation index:** The index created is based on factor scores of the following questions: (A) "Today, to what extent are you worried about paying the bills for your home?" (B) "Today, to what extent are you worried about needing to reduce your standard of living?" (C) "Today, to what extent are you worried about having a job?" (D) "Today, to what extent are you worried about paying back bank loans or mortgages?" (4) Very worried; (3) somewhat worried; (2) not very worried; (1) not at all worried.

**Policy performance index:** The index created is based on the factor scores of the following questions: (A) "In your opinion, how do you evaluate the situation in Spain with respect to unemployment?" (B) "In your opinion, how do you evaluate the situation in Spain with respect to education?" (C) "In your opinion, how do you evaluate the situation in Spain with respect to the healthcare system?" (D) "In your opinion, how do you evaluate the situation in Spain with respect to immigration?" (0) Very bad; (10) Very good.

**Political interest**: "How much are you interested in politics?" (4) Very much; (3) much; (2) a little bit; or (1) not at all.

**Probability to vote for PP**: "There are many political parties in Spain that would like to have your vote. What is the probability that you will ever vote for the PP (Partidon Popular)?" (0) Not likely; (10) very likely.

**Satisfaction with democracy in Spain:** "On the whole, are you (4) very satisfied, (3) fairly satisfied, (2) not very satisfied, or (1) not at all satisfied with the way democracy works in your country?"

Trust in representative institutions index: The index created is based on the factor scores of the following questions: (A) "On a scale from 0 to 10 how much do you trust the Spanish parliament?" (B) "On a scale from 0 to 10 how much do you trust the government in Spain?" (0) Absolutely do not trust; (10) Fully trust.

3.7.8. CIUPANEL: descriptive statistics

	Mean	SD	Min	Max	N
Age (wave 4)	46.34	15.67	18	90	2313
Age (wave 5)	47.43	15.35	18	90	2104
Economic situation in Spain (wave 4)	2.14	0.84	1	5	2313
Economic situation in Spain (wave 5)	2.25	0.83	1	5	2104
Education level (wave 4)	4.81	1.11	1	6	2313
Education level (wave 5)	4.59	1.13	1	6	2104
Government performance evaluation (wave 4)	1.92	1.08	1	5	2313
Government performance evaluation (wave 5)	2.11	1.14	1	5	2104
Identification with Spain (wave 4)	6.57	3.09	0	10	2313
Identification with Spain (wave 5)	7.11	2.98	0	10	2104
Left-right ideology (wave 4)	3.88	2.42	0	10	2313
Left-right ideology (wave 5)	4.07	2.49	0	10	2104
Male (wave 4)	0.50	0.50	0	1	2313
Male (wave 5)	0.53	0.50	0	1	2104
Partisanship (wave 4)	0.66	0.47	0	1	2313
Partisanship (wave 5)	0.67	0.47	0	1	2104
Perception of corruption index (wave 4)	0.00	0.93	-3.10	1.59	2313
Perception of corruption index (wave 5)	-0.17	0.89	-3.10	1.59	2104
Personal economic situation index (wave 4)	0.04	0.92	-1.76	1.50	2313
Personal economic situation index (wave 5)	-0.11	0.95	-1.76	1.50	2104
Policy performance index (wave 4)	-0.07	0.91	-1.41	3.60	2313
Policy performance index (wave 5)	0.13	0.94	-1.41	3.60	2104
Political interest (wave 4)	2.72	0.79	1	4	2313
Political interest (wave 5)	2.79	0.78	1	4	2104
Political trust index (wave 4)	-0.16	0.90	-0.95	4.16	2313
Political trust index (wave 5)	0.22	0.97	-0.95	4.16	2104
Satisfaction with democracy (wave 4)	1.92	0.74	1	4	2313
Satisfaction with democracy (wave 5)	2.06	0.73	1	4	2104

## 3.7.9. Individual-level analysis: robustness tests

Table 23: Ordered probit multilevel model of SWD with lagged predictors (CIUPANEL)

	Nu	111	Mod	el 9
	β	(se)	β	(se)
Age			0.01	(0.03)
Male (ref.: female)			-0.11*	(0.05)
Education level			0.02	(0.03)
Personal economic situation index (lagged)			-0.02	(0.03)
Political interest (lagged)			0.00	(0.03)
Identification with Spain (lagged)			0.23***	(0.03)
Left-right ideology (lagged)			0.04	(0.03)
Partisanship (lagged)			0.03	(0.03)
Government performance evaluation			0.27***	(0.04)
Policy performance index (lagged)			0.10**	(0.03)
Economic situation in Spain (lagged)			0.20***	(0.03)
Trust in representative institutions index			0.30***	(0.04)
Perception of corruption index (lagged)			-0.09**	(0.03)
Thresholds				
Cut point 1	-1.08***	(0.05)	-0.98***	(0.05)
Cut point 2	1.42***	(0.06)	1.11***	(0.05)
Cut point 3	4.32***	(0.15)	3.48***	(0.12)
Variance Components				
Respondent-level residual variance	2.81***	(0.22)	0.55***	(0.08)
Log Likelihood	-3,758.38		-3,328.72	
AIC	7,524.77		6,691.44	
ICC respondent-level	0.74		0.35	
Number of observations	3,777		3,777	
Number of respondents	2,141		2,141	

Notes: Ordered probit multilevel regression with lagged predictors; based on CIUPANEL wave 4, 5 and 6; standardized  $\beta$  (except gender); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

Table 24: Within-between ordered probit multilevel model of SWD with incumbent support (CIUPANEL)

	Null		Model 10		Model 11	
	β	(se)	β	(se)	β	(se)
Longitudinal Coefficients						
Personal economic situation index			-0.04+	(0.02)	-0.04+	(0.02)
Political interest			0.02	(0.02)	0.02	(0.02)
Identification with Spain			0.02	(0.02)	0.02	(0.02)
Left-right ideology			-0.03	(0.02)	-0.03	(0.02)
Partisanship			0.03	(0.02)	0.03	(0.02)
Government performance evaluation			0.08***	(0.02)	0.07**	(0.02)
Policy performance index			0.05*	(0.02)	0.05*	(0.02)
Economic situation in Spain			0.06**	(0.02)	0.06**	(0.02)
Trust in representative institutions index			0.19***	(0.02)	0.19***	(0.02)
Perception of corruption index			-0.08***	(0.02)	-0.07**	(0.02)
Probability to vote for PP			0.02	(0.03)	0.02	(0.03)
Respondent-Level Coefficients						
Age					-0.09**	(0.03)
Male (ref.: female)					-0.23***	(0.06)
Education level					-0.08*	(0.03)
Personal economic situation index					-0.04	(0.03)
Political interest					0.00	(0.03)
Identification with Spain					0.27***	(0.04)
Left-right ideology					-0.06	(0.04)
Partisanship					0.09**	(0.03)
Government performance evaluation					0.27***	(0.06)
Policy performance index					0.11*	(0.04)
Economic situation in Spain					0.30***	(0.05)
Trust in representative institutions index					0.90***	(0.06)
Perception of corruption index					-0.17***	(0.04)
Probability to vote for PP					-0.05**	(0.02)
Thresholds						
Cut point 1	-1.22***	(0.05)	-1.36***	(0.06)	-1.60***	(0.07)
Cut point 2	1.40***	(0.06)	1.56***	(0.07)	1.32***	(0.07)
Cut point 3	4.13***	(0.13)	4.57***	(0.16)	4.33***	(0.15)
Variance Components		(/		/		( )
Respondent-level residual variance	2.72***	(0.21)	3.48***	(0.28)	1.14***	(0.12)
Log Likelihood	-4,251.45	()	-4,147,47	()	-3,280.43	()
AIC	8,510.90		8,324.94		6,618.87	
ICC respondent-level	0.73		0.78		0.53	
Number of observations	4,246		4,246		4,246	
Number of respondents	2,613		2,613		2,613	

Notes: Ordered probit multilevel regression; standardized  $\beta$  (except gender); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.01, \*\* p<0.01, \*\* p<0.05, + p<0.1. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

# 4. Economic performance, quality of democracy and satisfaction with democracy

Under what conditions are people content with democracy? Research on satisfaction with democracy (SWD) increasingly advocates explanations that stress the importance of economic and policy outputs in shaping democratic regime evaluations (Clarke et al. 1993; Quaranta and Martini 2016a; Kronberg and Clarke 1994; Waldron-Moore 1999). For example, recent studies into the decreasing levels of SWD in countries which had formally been under the European Stability Mechanism (ESM) or under IMF Conditionality such as Greece, Ireland, Italy, Portugal or Spain have mainly attributed this change to the effects of the Great recession, initiated in 2008 (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016b; Sousa et. al 2014).

A second, less prominent explanation connects attitudes related to the functioning of the political system with SWD, underscoring the importance of the political process in shaping people's attitudes toward the democratic regime (Norris 2011). Evidence for this relationship varies depending on whether the data is collected at the individual or national level. Research conducted at the individuallevel finds that respondents tend to be more satisfied with democracy when they feel represented, perceive their representatives as accountable and responsive, and believe that their individual freedoms and political rights are protected (Aarts and Thomassen 2008; Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Huang et al. 2008; Kronberg and Clarke 1994). On the other hand, research at the national level, analysing objective measures of the democratic process, such as the Freedom House Index (FHI), return only insignificant or inconsistent results (Anderson and Tverdova 2003; Ariely 2013; Guldbrandtsen and Skaaning 2010; Listhaug et al. 2009; Norris 2011; Singh 2014).

Notwithstanding the important advances in the literature, there are several concerns regarding the capacity of the existing comparative studies to provide clarity about the relationship between economic performance, democratic quality and SWD. For one, most studies draw their inferences only from cross-country comparisons. This may make it difficult to separate the effect of key variables from other, country-related factors. Secondly, existing cross-sectional evidence is usually based on a comparison of relatively

few countries. This likely leads to an imprecise estimation of the aggregate-level parameters (Bryan and Jenkins 2016) and makes it more difficult to disentangle the often highly collinear variables at the country level (Arcenaux and Huber 2007), especially when testing multiple macro-economic indicators (Quaranta and Martini 2016b: 8). Finally, the examined samples suffer from a regional selection bias, since most cases belong to economically developed, Western democracies. This empirical focus makes it difficult to analyze the performance of democracies, because there are few deviating cases for comparison. This situation is further aggravated by the usage of "democratization" measures and their inability to track differences in the quality of already established democracies.

This study seeks to overcome these limitations in three ways. Firstly, it uses improved measures of key variables. This includes using the Economic Performance Index (Khramov and Lee 2013) that combines information on unemployment, government budget deficit, GDP growth and inflation into a single composite index. Additionally, the quality of democracy is measured not only with the standard FHI, but is tested against a more fine grain measure tapping into the "quality of democracy", the Democracy Barometer (Merkel et al. 2014). Secondly, the study increases the temporal and geographical scope of the empirical analysis, by also covering many developing economies. Thirdly, it combines a cross-country comparison with a longitudinal panel analysis. This allows testing what factors are capable of explaining persistent differences "between" countries. It also allows examining if the same explanations can be used to account for changing levels of SWD "within" countries over time.

The analysis is conducted on a time-series cross-sectional (TSCS) panel dataset that includes information from 61 democracies, covering 1000 country-years between 1980 and 2014. The results provide evidence for a strong cross-sectional linkage between democratic quality, economic performance and SWD. In line with the argument that economic development might intensify demands for democracy (Lipset 1959) and lead to a more critical citizenry (Norris 1999), the findings support the claim that the effects of democratic quality on SWD are conditional on the well-being of the economy and vice versa. Only when a country has both a reasonable level of democratic quality and a good economic record will its citizens be content with the working of democracy in the long term. Furthermore, it presents longitudinal evidence showing that changes

in the democratic and especially in the economic performance of a country are capable of explaining major trends in SWD. Finally, it shows that the effect of economic performance on SWD is strongest during times of prolonged economic crisis and that people today are more critical about the economic performance of their country than before the Financial Crisis in 2008.

## 4.1. Argument and hypotheses

## 4.1.1. Economic performance

Is there an effect of the economy on public evaluations of regime performance? Research conducted at the *individual-level* has repeatedly shown that people's perceptions of the past, present and current state of the economy shape their evaluations about the functioning of their democratic system (Armingeon and Guthmann 2014; Bratton and Mattes 2001; Huang et al. 2008; Waldron-Moore 1999). Pointing in the same direction, the economic well-being of a respondent appears to be a good predictor for his or her SWD as well: wealthier, employed individuals who evaluate their financial situation favourably tend to be more satisfied than poorer, unemployed respondents (Anderson and Singer 2008; Anderson and Tverdova 2003; Huang et al. 2007; Kronberg and Clarke 1994; Norris 2011; Schäfer 2012; Stockemer and Sundström 2011).

At the *contextual-level*, a number of longitudinal studies have presented evidence that economic growth, price inflation and especially unemployment are exogenous causes of SWD change over time (Armingeon and Guthmann 2014; Halla et al. 2013; Quaranta and Martini 2016a). While economic growth can have a positive effect on SWD because more citizens benefit from the improving economic situation and prosperity; unemployment and the erosion of disposable incomes through rising prices might diminish people's satisfaction with their lives and their evaluations of the incumbent political authorities, thereby decreasing SWD (Clarke et al. 1993: 1000f.). Another explanation lies in the (in)ability of governments to be political responsive to their citizens. When confronted with rising interest rates, budget deficit and mounting public debt, governments are less able to be responsive to the demands of citizens as

they also need to be responsive to their international creditors (Armingeon and Baccaro 2012; Armingeon and Guthmann 2014; Quaranta and Martini 2016a; Schäfer and Streeck 2013). SWD decreases as governments fail to respond to the interests of the citizens. Taken together, the previous discussion leads to the first longitudinal contextual-level hypotheses:

# H1: Decreasing economic performance leads to decreasing levels of SWD over time.

Yet, as Singer (2011) has recently pointed out, economic issues gain more salience during times of crisis. Analyzing cross-national survey data from the Comparative Study of Electoral Systems, the author shows that the economy dominates other issue concerns under conditions of economic recession, volatility and economic underdevelopment. Recently, for countries such as Greece, Ireland, Italy, Portugal or Spain, where people suffered significantly from the consequences of the Great Recession, the literature on SWD mainly attributes the dramatic decline of satisfaction to the to the worsening economic situation and the effect of the unpopular austerity measures (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016b; Sousa et. al 2014). In line with this argument, it is expected that economic factors will have become increasingly important in the evaluation of democracy since the recent economic crisis began in 2008 (Bargsted and Torcal 2016).

# H2: The effect of economic performance on SWD has increased since 2008.

Somewhat paradoxically in light of the previous evidence, the economic record of a country appears to be not well suited to explain persistent differences *between* countries. For one, cross-country comparisons report no relationship between unemployment rates and SWD (Anderson and Singer 2008; Dahlberg and Holmberg 2014; Schäfer 2012). Other studies, considering average consumer prices, could not detect a relationship between inflation rates and SWD (Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010). There is more evidence for the notion that people are content with democracy in countries characterized by high levels of economic growth (Anderson and Tverdova 2003; Curini et al.

2011; Guldbrandtsen and Skaaning 2010; Schäfer 2012; Singh 2014) and high standards of living (Anderson and Tverdova 2003; Norris 2011; Singh 2014), but even so this finding is not unanimous (Anderson and Singer 2008; Stockemer and Sundström 2011).

But why do longitudinal studies report a strong relationship between economic performance and SWD, while cross-country comparisons indicate little or mixed effects? Part of the problem could be that many studies usually include two or three economic covariates in their analyses. This increases the risk of collinearity among the macro-economic indicators which are likely to influence each other (Quaranta and Martini 2016b: 8). Simply put, collinearity is a problem of lack of variation: We are missing deviating cases for comparison and deal with insufficient data (Goldberger 1991). Tellingly, existing evidence usually comes from a limited number of cases, ranging from 15 to 30 countries, with a bias on economically developed democracies. I expect that we should be able to detect a substantial cross-sectional relationship as well, once we improve our measurement and extend the empirical sample to include more low and middle income economies. This leads me to my next hypothesis:

H3: Countries with higher levels of economic performance tend to have higher levels of SWD in the long run.

## 4.1.2. Democratic quality

While the economy has been frequently invoked as an explanation for SWD, factors related to the democratic process have not attracted the attention they deserve. Theoretically, it is a compelling argument that citizens value a good and fair democratic process (Hibbing and Theiss-Morse 2001). As Huang et al. (2007: 51) argue: "not only do citizens compare the economic performance of different political systems, they also compare the production of political goods." Norris (2011: ch.10, p.3) makes a similar point: citizens would focus upon the intrinsic quality of democratic governance when evaluating regime performance but would also take into account several aspects of the decision making process. In this line of reasoning, judgements of regime performance would be based on "evaluations of the quality of underlying democratic procedures, exemplified by the perceived fairness of elections, the responsive-

ness and accountability of elected representatives, and the honesty and probity of public officials" (Norris 2011: ch.10, p.1). These judgements would go beyond discontent with particular decisions or outcomes but would tap into more deep rooted perceptions of how democracy works. Citizens would expect their regime to meet certain democratic standards. If democratic processes fail to match these expectations, there would be little reason for SWD.

In the last decade, most evidence in favour of a democratic explanation has been gathered by *individual-level* analyses showing that respondents tend to be more satisfied with democracy when they feel represented by parties and politicians, perceive their representatives as accountable and responsive, and believe that their individual freedoms and political rights are protected (Aarts and Thomassen 2008; Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Huang et al. 2008; Kronberg and Clarke 1994).

While we can be rather confident that individuals' perceptions of the democratic process are indeed related to the way respondents evaluate their regime, little effort has been devoted to study the linkage between objective measures of democratic quality and SWD at the *contextual-level*. Most contextual-level evidence comes from studies that are primarily concerned with features belonging to the governance of a country, showing substantial associations between the rule of law, corruption, effective public administration and SWD (Anderson and Tverdova 2003; Ariely 2013; Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010; Norris 2011; Peffley and Rohrschneider 2014; Stockemer and Sundström 2011). Without doubt, government effectiveness is an important defining attribute of a high quality democracy. Elected governments need to have the capabilities and resources at their disposal to be responsive to the policy preferences of the public (Berg-Schlosser 2004; Diamond and Morlino 2005; Merkel et al. 2014; Munck 2016; Ringen 2007; Freedom House 2016), yet little is known about the effects of other aspects of the democratic process.

Despite the recent proliferation of fine-grain democracy indices to choose from, until now, the research on SWD has only considered the Freedom House Index (FHI), with mixed results. Yet, as I discuss later, the FHI is not an ideal choice to test the linkage, mainly because of its inability to track changes in the democratic quality among already established democracies. This shortcoming is further aggravated by the problem that most empirical evidence comes from a small number of cases, mainly focusing on established,

Western democracies. For this reason, it is not particularly surprising that most comparative studies report only insignificant and inconsistent relationships between the FHI and SWD (Anderson and Tverdova 2003; Guldbrandtsen and Skaaning 2010; Listhaug et al. 2009; Singh 2014).

It is also problematic that all empirical evidence at the contextual-level comes only from cross-country comparisons. An improved test of the causal effects of the variable would be to study if changes in the democratic status of a country can also lead to changes in the level of SWD over time. Again, I expect that we might be able to detect substantial cross-sectional and longitudinal relationships, once we consider data from new democracies and rely on more fine-grain measures for the concept which tap more neatly into the *quality* of democracy. Taken together, the previous discussion leads to two related context-level hypotheses about the impact of democratic performance on SWD:

H4: Improvements in the democratic quality of a country leads to increasing levels of SWD over time.

H5: Countries with a high quality democracy tend to have higher levels of SWD than countries with a poor democratic history.

# 4.1.3. The interplay between economic performance and democratic quality

Does economic performance influence citizens' evaluations of regime performance in the same fashion in every democratic context? There is already a vast corpus of empirical studies claiming that democracy and economic well-being are mutually related. Lipset (1959) was among the first to argue that prosperity stimulates democracy. Greater prosperity, Lipset argued, would contribute to consolidating democracy by expanding literacy and schooling, by strengthening the middle classes, increasing media access, mitigat-

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<sup>&</sup>lt;sup>46</sup> "From Aristotle down to the present, men have argued that only in a wealthy society in which relatively few citizens lived in real poverty could a situation exist in which the mass of the population could intelligently participate in politics and could develop the self-restraint necessary to avoid succumbing to the appeals of irresponsible demagogues." (Lipset 1959: 75)

ing the effects of poverty, promoting democratic values and legitimacy and facilitating civil society organizations. A considerable body of research has presented evidence that, in line with these claims, economic growth and development indeed facilitates democratic transition, fosters stability and strengthens the quality of democratic regimes (Barro 1996; Bollen 1979; Dahl 1989; Diamond 1992; Przeworski and Limongi 1997; Narayan et al. 2011).

According to Burkhart and Lewis-Beck (1994: 903) a "common idea" of these studies is that "increasing economic benefits for the masses intensify demands for the political benefits of democracy. Economic development can spread authority and democratic aspirations among a variety of people, thus fostering democracy". If this is the case and economic development leads to increased demands for political freedom and democracy, while contributing to the development of a critical citizenry with higher expectations (Norris 1999), it is possible that the evaluation of the quality of the democratic process is affected by economic performance. Simply put, citizens of strongly performing economies may expect more of their democracies.

Other studies provide evidence for the effect of democracy on economic growth (Gerring et al. 2005; Halperin et al. 2010; Narayan et al. 2011; Norris 2012; Krieckhaus 2004). Here, the general argument is that democracy allows for sanctioning incompetent politicians by competitive, periodic elections, so representatives are obliged to account for their past performance and have strong incentives to manage the economy effectively and to provide policies that appeal to the majority of citizens. From this perspective, democracy can be seen as a method to ensure responsiveness in the economic domain.

Norris (2012: ch.6, p.14) further points out that liberal democracy and governance capacity are simultaneously required: "If government leaders are thrown out of office for failing to improve the economy, but opposition parties are similarly unable [...] then the results are likely to deepen disillusionment with the political process [...] disenchantment may spread so that the public comes to lack confidence in the regime, and ultimately, faith in democratic ideals and principles. On the other hand, if state officials are competent and effective as managing economic growth [...] but government leaders are not responsive and accountable to citizens, then there is no mechanism which makes sure that wealth trickles down to benefit [...] the general public."

This discussion points to the possibility that democratic quality and economic performance might be necessary but not sufficient conditions for a satisfied citizenry. In the face of prolonged economic malaise, citizens will likely be dissatisfied, no matter the state of their democracy. On the other hand, even with a strong economy, if democracies fail to be responsive in the provision of an effective administration, a functioning legal system, in the creation of jobs and the reallocation of welfare, citizens can reasonably be expected to be discontented with the working of their political system. Taken together, these arguments give leverage to two conditional hypotheses about the long-term effect of democratic and economic performance on SWD:

H6a: The long-term effect of economic performance on SWD is conditional on the democratic quality of a country. The effect is strongest in countries with high democratic quality and weakest in countries with low democratic quality.

H6b: The long-term effect of democratic quality on SWD is conditional on the economic record of country. The effect is strongest in countries with a good economic record and weakest in countries with poor economic record.

#### 4.2. Data and measurement

## 4.2.1. Dependent variable

The dependent variable, satisfaction with democracy, is captured using a question on how satisfied people are with the working of their democracy. SWD is measured on a 4-point scale by relying on the following questions: "On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy works in your country?" SWD is one of the most frequently used measures of political support, a concept that has been made famous half a century ago by Easton (1965). Within this framework, SWD is commonly assumed to be an expression of regime performance (Norris 1999), so it represents an evaluation of the performance of democracy in terms of what the regime delivers

and what it refrains from doing (Klingemann 1999), or a measure of the actual process of democratic governance and attitudes towards the "constitutional reality" of a country (Fuchs et al. 1995: 328).

#### 4.2.2. Case selection

It appears to be sensible to differentiate democracies from non-democracies before asking about the quality of democracy. Also, the question on SWD needs to be meaningful in its context; otherwise it cannot be used for cross-country comparison. For these two reasons I only select countries into the sample that fulfill a number of minimal democratic criteria. Approximating these standards, all countries in the study needed to be classified as an "Electoral Democracy" and at least as "partly free" by Freedom House but also be classified as a democracy by Cheibub et. al (2010).

#### 4.2.3. TSCS panel dataset

I was able to retrieve data from 61 countries that match the above noted democratic criteria. Data covers the years between 1980 and 2014 and is compiled in an encompassing time-series cross-sectional (TSCS) panel dataset. It includes information of 1000 country-years, with an average of 16.4 observations per country, for which I have aggregated public opinion data from about one and a half million respondents. I included only those democracies in the sample where I could collect information from at least two points in time. This empirical sample exceeds those of previous studies in a number of aspects: First, its regional coverage extends to democracies in East and West Europe, North, South, and Central America, Oceania, South-East Asia and Sub-Saharan Africa. Second this dataset does not only allow for a complex longitudinal analysis but it will also increase our confidence in the crosssectional results since we are able to compare country averages over a long period of time. Third, the sample neatly balances new democracies against established ones: 514 country-years come from established democracies, while 486 country-years come from Third Wave Democracies.

In order to construct the TSCS dataset I have relied on opinion data of various international survey programs: the Eurobarometer,

Candidate Countries Eurobarometer, the Afrobarometer, the Asian Barometer, Central and Eastern Eurobarometer, the European Value Study, the New Democracies Barometer, the Comparative Study of Electoral Systems (CSES), the Comparative National Elections Project (CNEP), the AmericasBarometer by the Latin American Public Opinion Project (LAPOP) and the Latinobarómetro. Furthermore, I relied on a number of national studies: the Australian Election Study, the Canadian Election Study, the American National Election Studies, the New Zealand Election Study and the Israeli Democracy Index.<sup>47</sup>

In many instances I collected multiple surveys for the same country-year. Where there was more than one survey covering the same country-year; I calculated mean values of those surveys, thereby minimizing biases that might have occurred in the data generation process of a particular survey. When aggregating individual survey data, all data have been weighted according to their respective sample, design or demographic weights — whenever necessary. I have only included representative surveys in the sample that use the same question wording and employ the same 4pt scale. When aggregating this survey data I calculated the percentage satisfied with democracy, thereby obtaining a scale that can be interpreted in a meaningful way. The aggregate data is normally distributed and numerical in character (see Figure 21 in the Appendix).

## 4.2.4. Measuring economic performance

To capture the status of an economy, I have calculated the *Economic Performance Index (EPI)* as proposed by Khramov and Lee (2013). The EPI combines information on unemployment, government deficit, inflation and GDP growth into a single composite index. Thereby, it attempts to capture the economy's monetary status, its production stance, the fiscal stance and the aggregate performance of the economy respectively. The index has the benefit of summarizing information about the performance of the economy while avoiding problems associated with collinearity among the macro-economic variables (Quaranta and Martini 2016b: 8). The index is constructed as follows:

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<sup>&</sup>lt;sup>47</sup> More information on the datasets used can be found in Table 27 in the Appendix.

Economic Performance Index (EPI)
$$= 100\% - W_{Inf} \times (|Inf(\%) - I^*|) - W_{Unem}$$

$$\times (Unem(\%) - U^*) - W_{Def} \times \left(\frac{Def}{GDP(\%)} - \frac{Def}{GDP^*}\right)$$

$$+ W_{GDP} \times (\Delta GDP(\%) - \Delta GDP^*),$$

where I\* is the desired inflation rate (0%), U\* is the desired unemployment rate (4.75%), (Def/GDP\*) is the desired government deficit as a share of GDP (0%) and ΔGDP\* is the desired change in GDP (4.75%). The weights (W) are generated by estimating the inverse standard deviation for each economic variable multiplied by the average standard deviation of all variables. For a detailed description of the construction of the index compare Khramov and Lee (2013: 6f.). Data for the macro-economic variables have been taken from the IMF World Economic Outlook (2016), the World Bank (2016) and the Annual Macro-Economic Database (2016) provided by the European Commission.

## 4.2.5. Measuring democratic quality

Democracy can have many meanings. Therefore, the concept of "quality of democracy" is also heavily contested (see Munck 2016 for a current overview). Here, I follow the tradition of conceiving democracy as a continuous variable, scored numerically from low to high values. To calculate democratic quality I first use data from Freedom House Index. Although the FHI sets out to measure freedom, the index is often used to measure democracy (Coppedge et al. 2011: 249). In fact, to date this has been the preferred choice for studies into SWD (Anderson and Tverdova 2003; Ariely 2013; Guldbrandtsen and Skaaning 2010; Listhaug et al. 2009; Singh 2014).

Freedom House (2016) provides data on two dimensions, "political rights" and "civil liberties", which I used to calculate an average democracy index (Anderson and Tverdova 2003; Ariely 2013).

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<sup>&</sup>lt;sup>48</sup> More information on the variables and sources used can be found in Table 28 in the Appendix. There were a number of severe outliers for the inflation rate. Since a transformation of the variable was not possible due to the construction of the index, I deleted severe outliers with an inflation rate >31.

Political rights include information on electoral processes, political pluralism, and the functioning of government. Countries with high scores enjoy a vast array of political rights and there are free and fair elections. Elected candidates actually rule, parties are competitive, there is an opposition with some political power and minorities enjoy some self-government or can participate in the political process. Civil liberties include freedom of expression, freedom of assembly and association but also freedoms in regard to religion and education. There is a rule of law, the judiciary is independent, the economy operates freely and there is equality of opportunities.

Although frequently used in social science research, the FHI is not without criticism. For one, Freedom House has attracted considerable methodological criticism for its conceptualization, measurement and data aggregation process (Coppedge et al. 2011; Hadenius and Teorell 2005; Munck and Verkuilen 2002; Norris 2008)<sup>49</sup>. The FHI also lacks consistency over time by dropping and adding questions to their expert survey (Hadenius and Teorell 2005: 15ff.). A similar problem arises from their shifting from one source of evidence to another. While Freedom House relied on historical sources like the New York Times in the 1970s and 80s it has shifted to expert surveys in later decades (Coppedge et al. 2011: 250).

More importantly, however, the FHI is a rather crude measure. While it can reliably distinguish between democracy and dictatorships it has difficulties to track differences in the democratic quality of already established democracies, a property it shares with another prominent *democratization* measure, Polity IV (Marshall et al. 2017). This lack of variation combined with the aforementioned

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<sup>&</sup>lt;sup>49</sup> Conceptually, the FHI conflates the concept of democracy with attributes which might be better seen as distinct to democracy (Munck 2002: 9): socioeconomic rights, freedom from war, right to own property, non-interference with business, equality of opportunity, transparency or corruption. Furthermore, the data collection lacks transparency as the coding procedures are not publicly available and only aggregate scores for the various subcomponents are relased (Norris 2007: 7). Furthermore, Munck and Verkuilen (2002: 15) criticize that Freedom House gives no theoretical justification of their simple additive aggregation rule (which gives equal weight to each component) and that it seems unjustified to give items like decentralization of power the same weight as the actual power exercised by elected representatives.

<sup>&</sup>lt;sup>50</sup> Empirically, the distribution of cases of the FHI and Polity IV are bimodal with a high concentration of cases in the upper and lower ratings of the scale (Cheibub et al. 2010: 77). The two indices are bounded and there is no way to distinguish the quality of democracy between states that have a perfect positive score

concerns about measurement error, makes the FHI a very conservative indicator to test the relationship between democratic quality and SWD, likely to underestimate the true effect.

Thus, to test if results are sensitive to the choice of measurement, I decided to contrast the FHI against the *Democracy Barometer* (Merkel et al. 2014). Methodologically, the two indices differ strongly in their data generation process. While the FHI relies on expert evaluations, which might be subject to perception biases, the Democracy Barometer (DB) seeks to avoid the use of expert data altogether and instead relies on objective national statistics and aggregated public opinion data. Unlike most other democracy indices, the DB is conceptually well-grounded in normative democratic theory (Munck 2016), embracing a liberal as well as participatory model of democracy (Bühlmann et al. 2012).

Conceptually, the DB rests on the premise that a democratic system seeks to find a good balance between the values of "freedom" and "equality" and that this would require "control". Freedom is defined as negative freedom and the protection of the individual against illegitimate intrusion of the state or of other persons. This principle entails individual liberties and a public sphere and civil society that operate under a secure rule of law. The principle of control means that "citizens hold their representatives accountable and responsive" (Bühlmann et al. 2012: 522). Control rests on electoral competition, mutual constraints of the governmental branches and governmental capability/ effectiveness. The principle of equality consists of transparency of political processes, political participation and a substantive as well as a descriptive representation of the citizenry.

#### 4.2.6. Control variables

I control for a number of variables related to the electoral process that might affect the analysis. First, voting in democratic elections might enhance people's feelings about their political institutions and the political process (Esaiasson 2010). A similar relationship has also been shown in studies comparing individual-level pre-

(Coppedge et al. 2011: 249). For example, although Polity IV is measured on a scale from -10 to 10, more than 90% of the cases in the analysed TSCS dataset score 8 or higher.

and post-electoral survey data (Banducci and Karp 2003; Blais et al. 2017). In this study, I control for a categorical variable election year, which takes on the value 1 when there has been a parliamentary or presidential election in a given year.<sup>51</sup>

The degree of electoral disproportionality is measured using the well-known Gallagher Index<sup>52</sup>. Higher values reflect a higher degree of disproportionality. To account for the effect of outlying cases I have log-transformed the variable prior to analysis. There are a number of studies reporting that countries with greater proportionality and therefore better representation and fewer wasted votes tend to have higher levels of SWD (Anderson et al. 2005; Berggren et al. 2004; Farrell and McAllister 2006).

Party system fractionalization is measured using the effective number of parliamentary parties.<sup>53</sup> According to existing evidence, we expect that countries with greater party fractionalization will tend to exhibit lower levels of SWD since multi-party systems tend to produce coalition governments which endanger the decisiveness of elections (compare chapter 2). Another potentially relevant control variable is ethnic fractionalization (Alesina et al. 2003) since social diversity can be expected to impact on party fractionalization, probably in combination with the country's electoral system (Ordeshook and Shvetsova 1994; Neto and Cox 1997). On the other hand ethnic minority groups have been shown to express lower levels of political trust and democratic regime evaluations (Dowely and Silver 2002).

Furthermore, I control for two important institutional characteristics: type of government and structure of the state (federalism).<sup>54</sup> Type of government is measured as a categorical variable distinguishing between parliamentary, semi-presidential and presidential regimes.<sup>55</sup> Second, I control for the *structure of the state*, i.e. whether there exist independent sub-national tiers of government (states, provinces, regions) which impose substantive constraints on

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<sup>&</sup>lt;sup>51</sup> The data come from the Database of Political Institutions (Cruz et al. 2016).

<sup>&</sup>lt;sup>52</sup> The data come from Gallagher (2015). Missing values are replaced with data from the Democracy Barometer (2016).

<sup>53</sup> Identical results are obtained when using the effective number of electoral

parties. <sup>54</sup> I also considered using a measure of bicameralism (Political Constraints Index Dataset 2013) but found no relationship with SWD and a rather strong association with federalism. Therefore I do not include it in the models.

<sup>&</sup>lt;sup>55</sup> The data are taken from Bormann and Golder (2013).

national fiscal policy (1) or not (0). <sup>56</sup> Existing empirical evidence about the relationship between federalism, the type of government and SWD is mixed (Anderson et. al. 2005; Curini et al. 2011; Henderson 2008; Singh et al. 2011; Norris 2011) <sup>57</sup> underscoring the important contribution this study can make by retesting the linkages through comparison of a larger and more diverse sample of democracies.

Finally, I control for the extent of economic equality, since there is documented evidence that high income inequality (Schäfer 2012; Singer 2008) and high poverty rates (Lühiste 2014) are associated with lower SWD. I control for income inequality by using the well-known *GINI-Index*, where higher values indicate high inequality and low values a more even distribution of incomes. The data are taken from Solt (2016).

## 4.3. Explaining aggregate trends in SWD

I start with an examination of national trends in SWD. In Figure 17 we can see that there is a group of economically developed democracies, especially those with relatively high levels of SWD, where there is little change over time. Examples include Austria, Denmark, Switzerland or the Netherlands. Additionally, there are a number of defective democracies where SWD has never or only barely risen above the 50 percent threshold, so the majority of citizens have never been content with their political system, e.g. Bulgaria, Slovakia, Paraguay or Peru. Then, there are countries that have experienced a rapid decline in SWD since the beginning of the economic crisis in 2008 such as Greece, Spain, Portugal, Iceland or Ireland. There is also a group of countries such as Brazil or Ecuador where citizens have been dissatisfied in the 1990s but changed their attitudes over the last decade for the better. Other countries have experienced a severe crisis in the public assessment of democracy but recovered after a few years, for instance Argentina or Poland.

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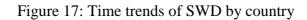
<sup>&</sup>lt;sup>56</sup> The data are taken from the Political Constraints Index Dataset (2013).

<sup>&</sup>lt;sup>57</sup> Most previous studies find that neither federalism (Anderson et. al. 2005; Singh et al. 2011; Norris 2011) nor the type of government (Norris 2011; Henderson 2008) have a significant effect on SWD. Curini et al. (2011) on the other hand report that presidential systems enhance SWD, while Henderson (2008) finds a positive raltaionship with regard to federalism.

Now, to what extent can economic and democratic performance account for the substantial cross-sectional and longitudinal variation we can observe in Figure 17? The scatterplots in Figure 18 offer a first indication of a strong impact of these variables. To explore the persistent cross-sectional relationships between countries, I plot country means of SWD against country means of the EPI, FHI and DB. To capture the longitudinal relationships, I compare de-meaned SWD against de-meaned democratic and economic performance, following the logic of a fixed effects (FE) model.

The first scatter-plot on the top left of Figure 18 shows the cross-sectional association between economic performance and SWD. Indeed, the slope of the linear regression line suggests a strong positive association between SWD and the EPI (R=0.4, 61 countries). Similarly, we can observe an equally visible and strong longitudinal relationship when we compare the scatter-plot on the top right of Figure 18. Changes in the economic performance within a country appear to be equally strongly related with the evolution of SWD over time (R=0.42, 1000 country-years).

Furthermore, also the various democratic performance indices appear to be associated with SWD in the way we would expect. Cross-sectionally, countries with higher democratic quality tend to have higher levels of SWD. The strength of the association varies between an R= 0.59 (61 countries) for the FHI and an R=0.70 (57 countries) for the DB. We can also observe an important limitation of the FHI, where cases are truncated at the higher end of the scale. This ceiling effect implies that the FHI cannot differentiate between high quality democracies and might explain why the DB appears to be more strongly related to SWD. Similarly, when we consider the de-meaned scores of the FHI, we can also see that cases cluster excessively around the mean, implying that the FHI might not be wellequipped to track changes in democratic performance over time. Despite this shortcoming we are still able to detect a highly significant positive longitudinal relationship with SWD (R= 0.14, 1000 country-years), comparable to that of the DB (R=0.18, 887 countryyears).



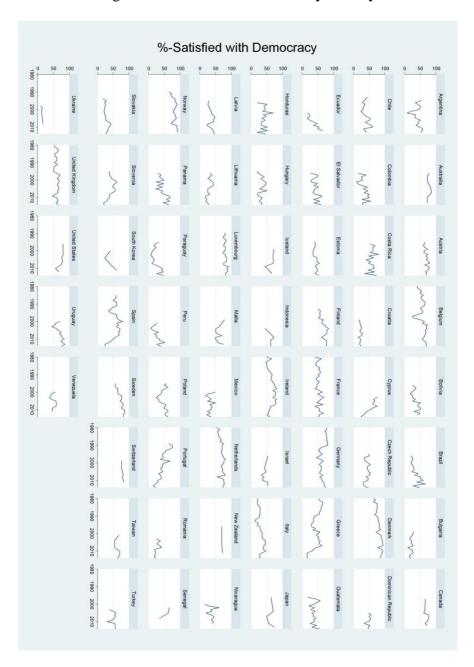
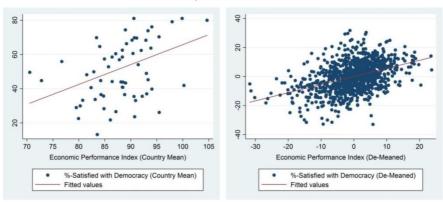
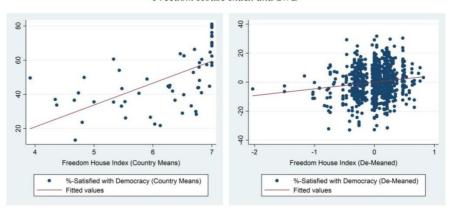


Figure 18: Scatterplots

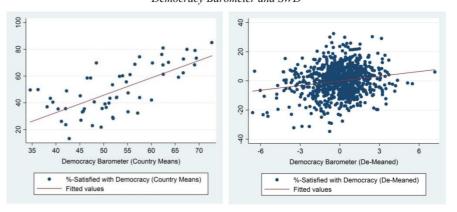
#### Economic Performance Index and SWD



#### Freedom House Index and SWD



#### Democracy Barometer and SWD



#### 4.4. Method and model

For the TSCS aggregate panel dataset I estimate a two level multilevel regression where country-years (*i*) are nested within countries (*j*). Building on the work of Mundlak (1978), Bell and Jones (2015) and Schmidt-Catran and Fairbrother (2016), I simultaneously model the cross-sectional and longitudinal relationships by adding a group mean and a de-meaned term together in the model. This leads to the following within-between random effects (REWB) model:

$$y_{ij} = \beta_0 + \beta_1 tim e_{ij} + \beta_2 x_{ijM} + \beta_3 \bar{x}_j + \beta_4 x_j + \mu_j + e_{ij},$$

where  $y_{ij}$  is the response variable of country j measured at occasion i. The original time-varying variable  $x_{ij}$  is included twice in the model, decomposed into  $\bar{x}_j$  and  $x_{ijM}$  respectively.  $x_j$  refer to time-invariant covariates at the country level such as having a federal structure of the state. Finally,  $time_{ij}$  refers to a linear time trend variable that captures the measurement occasion. <sup>59</sup>

A benefit of this approach is that the *within* coefficients will return the same results as a fixed effects (FE) model, which has traditionally been recommended for the analysis of this type of panel dataset. We can therefore exclude the possibility that some time-invariant unobserved variable at a higher level is biasing the *within* coefficients. Of equal importance, this approach allows estimation of the cross-sectional association *between* a time-varying variable x and y and enables us to include time-invariant variables simultaneously in one model.

Furthermore, I estimate a number of "societal growth curves" (Fairbrother 2014: 125ff.), which allows me to test if democratic

<sup>&</sup>lt;sup>58</sup> Fairbrother (2014: 124) describes the procedure as follows: "Separate longitudinal and cross-sectional associations between  $x_{ij}$  and y can be identified by calculating the mean of  $x_{ij}$  across all relevant years for each country. The coefficient on the country mean  $\bar{x}_j$  captures the effect on y of enduring cross-national differences in  $x_{ij}$ . To capture the effect on y of variation over time within each country,  $\bar{x}_j$  can then be subtracted from  $x_{ij}$ . The resulting longitudinal component  $x_{ijM}$  (a country-year level variable) is group-mean centered, and is orthogonal to  $\bar{x}_j$ , such that the two coefficients can be estimated separately."

<sup>&</sup>lt;sup>59</sup> As Fairbrother (2014: 124f.) notes, the need for a time term arises from the possibility of simultaneous but unrelated time trends in time-varying variables x and y.

and economic performance leads to faster or slower change in SWD with the passing of time. Our expectation is that since the Great Recession, begun in 2008, the influence of economic performance on SWD has increased. Testing this expectation is technically simple, requiring only an interaction of time with a country mean variable  $\bar{x}_i$ , leading to the following model specification:

$$y_{ij} = \beta_0 + \beta_1 tim e_{ij} + \beta_2 x_{ijM} + \beta_3 \bar{x}_j + \beta_4 tim e_{ij} \times \bar{x}_j + \beta_5 x_j + \mu_j + e_{ij}.$$

Finally, I estimate a model that adds a country-level interaction between the long term economic performance  $\bar{x}_j$  and democratic quality  $\bar{z}_j$ , which takes the following form:

$$y_{ij} = \beta_0 + \beta_1 tim e_{ij} + \beta_2 x_{ijM} + \beta_3 \bar{x}_j + \beta_4 z_{ijM} + \beta_5 \bar{z}_j + \beta_6 \bar{x}_j \times \bar{z}_j + \beta_7 x_i + \mu_i + e_{ij}.$$

## 4.4.1. Specification

I first decompose the variances in SWD by estimating an empty model. This "null" model provides the information to compute the Intraclass Correlation Coefficients (ICC) which reflects the share of variation in SWD that can be attributed to the cross-sectional and occasion level. Since the sample size of the models vary due to differences in the coverage of the FHI and DB, I estimated two null models. Then, I estimate a model that only includes the within variables used for the analysis (Model 1 and 6). Model 2 and 7 add the between predictors, which allow for making cross-sectional comparisons between countries. Model 3 and 8 add the cross-sectional interactions between democratic quality and economic performance. Model 4 and 9 add the societal growth curves, allowing to test if the effect of economic and democratic performance on SWD has changed over the decades. Finally, as a robustness test, model 5 and 10 add the societal growth curves together with the interaction terms for democratic and economic performance.

## 4.5. Analysis

Table 25 and Table 26 show the results of the multilevel analysis of the TSCS aggregate panel dataset of SWD. The tables are divided into four sections. At the top, the "within" coefficients are presented. This is followed by a section with the cross-sectional predictors. Below this is a section with the random effects of the models (variance components). To facilitate interpretation of the output of the estimation we report standardized coefficients for continuous variables.<sup>60</sup>

The two null-models in Table 25 and Table 26 show the results of the decomposition of the variance in SWD (ICC). As we can see, between 72 and 74 per cent of the variation in the data can be attributed to the country level, which is a sizeable degree of clustering. Conversely, about 26 to 28 percent of the variance belongs to the country-year level. This underlines the necessity of modelling both types of variance in a multilevel analysis because a pooled regression model would very likely underestimate the standard errors of the context-level coefficients (Arceneaux and Nickerson 2009).

Let us first examine the longitudinal models (Model 1 and 6) which are equivalent to a FE model. The results for the longitudinal predictors confirm all respective hypotheses. The Economic Performance Index points in the expected direction, is highly significant and is by far the most important longitudinal predictor in both models (confirming hypothesis 1). An increase of one standard deviation in the EPI – recall that all continuous variables have been standardized – causes SWD to increase by about four per cent points. Taken together, economic factors clearly have the explanatory power to explain even major crises in the public evaluation of the political system, as for example happened in Spain or in Greece.

The longitudinal effect of democratic quality is much weaker, albeit highly significant in both models (confirming hypothesis 4). There are also differences in the magnitude of the effects. While the effect of the FHI is miniscule in comparison (Model 1), the coeffi-

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<sup>&</sup>lt;sup>60</sup> Continuous variables can be interpreted as the percentage increase in SWD associated with a one standard deviation increase in the explanatory variable, holding all other variables constant. For categorical explanatory variables, the coefficients reflect the percentage increase in SWD when the variable switches from zero to one.

cient of the DB is much stronger but still much weaker than the economic effect (Model 6). At this point, I should also point out that the regression coefficients, especially the FHI, are likely to be dampened by the fact that in many countries there was little or almost no variation. That said we are still able to detect a substantive relationship with SWD. Overall, the longitudinal predictors do a very good job in explaining the evolution of SWD within countries. This can be observed in the reduction of the AIC values and also in the explained variances, which are remarkably high for a FE model with an R<sup>2</sup>=0.25 and R<sup>2</sup>=0.27.<sup>61</sup>

Model 2 and Model 7 add the cross-sectional predictors. As should be the case, the longitudinal coefficients remain basically unchanged, but what about the historical differences in SWD between countries? Turning to the cross-sectional part of the model, we can observe a picture that is highly consistent with the longitudinal part of the model. Both economic performance and democratic quality are very strongly related to SWD cross-sectionally (confirming hypothesis 3 and 5). Again, there are important differences in the magnitude of the effect. While the EPI and the FHI have roughly the same effect on SWD in Model 2, the more fine-tuned DB clearly outperforms the EPI in Model 7, stressing the importance that the quality of democratic institutions has on citizen's evaluations of the political system in the long term. Thus, an increase in one standard deviation of the DB is associated with an increase of 10.6 per cent points in SWD, a considerable effect. In total, the cross-sectional predictors also do a very good job in accounting for the variation between countries with an R<sup>2</sup> ranging between 0.6 (Model 2) and 0.72 (Model 7), which is not uncommon for a crosssectional analysis at the national level. This can also be seen in the substantial reduction of the AIC values and the substantial decrease of the ICC. Apparently, the use of the DB compared to the FHI, results in a much better model fit, demonstrating once more the problematic nature of the measure when applied to a sample with many established democracies.

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<sup>&</sup>lt;sup>61</sup> Since I do not include random slopes in the models, the estimation of a measure for the explained variance is straightforward, based on a comparison of the residual variance of the actual model and the null model (Hox 2010:70f.).

Table 25: REWB model of satisfaction with democracy (FHI)

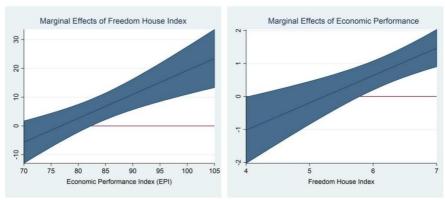
	β	(se)	β	(se)								
Longitudinal			8		3				8			
Economic Performance Index (EPI)			4.16***	(0.30)	4.17***	(0.30)	4.18***	(0.30)	4.30***	(0.29)	4.31***	(0.29)
Freedom House Index (FHI)			0.77*	(0.30)	0.81**	(0.30)	0.80**	(0.30)	0.91**	(0.29)	0.90**	(0.29)
Gini Index			-1.86***	(0.29)	-1.84***	(0.29)	-1.84***	(0.29)	-1.85***	(0.31)	-1.84***	(0.31)
Effective Number of Parties			-0.82**	(0.30)	-0.81**	(0.30)	-0.82**	(0.30)	-0.88**	(0.29)	-0.89**	(0.29)
Gallagher Index			-0.19	(0.29)	-0.22	(0.29)	-0.22	(0.29)	0.06	(0.28)	0.06	(0.28)
Election year			1.29***	(0.29)	1.27***	(0.30)	1.26***	(0.30)	1.27***	(0.28)	1.26***	(0.28)
Linear time trend			0.76*	(0.30)	0.69*	(0.31)	0.69*	(0.31)	1.02**	(0.33)	1.02**	(0.32)
Cross-Sectional												
Economic Performance Index (EPI)					4.63**	(1.52)	14.01***	(2.78)	4.76**	(1.55)	14.43***	(2.83)
Freedom House Index (FHI)					4.70*	(2.08)	-50.75***	(14.44)	4.89*	(2.12)	*	(14.71)
FHI * EPI							57.09***	(14.78)				(15.05)
EPI * Linear time trend									2.30***	(0.28)		(0.28)
FHI * Linear time trend									-0.15	(0.42)	-0.15	(0.42)
Gini Index					-5.65	(2.89)	-1.56	(2.80)	-5.63	(2.95)	-1.43	(2.85)
Effective Number of Parties					-4.29**	(1.59)	-3.78**	(1.43)	-4.19**	(1.63)	-3.67*	(1.45)
Gallagher Index					-5.04**	(1.70)	-4.51**	(1.53)	-5.04**	(1.74)	-4.48**	(1.56)
Semi-Presidential					-1.10	(2.60)	-0.62	(2.48)	0.63	(2.57)	0.90	(2.46)
Presidential					4.22	(5.32)	0.75	(4.85)	4.91	(5.42)	1.27	(4.92)
Federal					4.59	(2.82)	5.09	(2.69)	3.65	(2.79)	4.22	(2.67)
Ethnic fractionalization					1.37	(1.71)	0.93	(1.53)	1.47	(1.74)	1.01	(1.56)
Constant	49.82***	(2.19)	49.81***	(2.15)	47.90***	(2.47)	48.50***	(2.23)	47.37***	(2.51)	48.05***	(2.26)
Variance components												
Country intercept	282.92***	(53.01)	274.49***	(51.05)	112.40***	(22.67)	88.12***	(18.15)	118.38***	(24.10)	92.19***	(19.13)
Residuals	108.79***	(5.02)	81.92***	(3.78)	82.17***	(3.80)	82.20***	(3.81)	76.38***	(3.54)	76.43***	(3.54)
Log Likelihood	-3873.83		-3739.49		-3714.81		-3708.12		-3681.89		-3675.03	
AIC	7753.66		7498.98		7467.62		7456.25		7405.78		7394.07	
R-squared country	1		0.03		0.60		0.69		0.58		0.67	
R-squared country years	κ		0.25		0.25		0.24		0.30		0.30	
ICC country	0.72		0.77		0.58		0.52		0.61		0.55	
Number of country years	1000		1000		1000		1000		1000		1000	
Number of countries	61		61		61		61		61		61	

Table 26: REWB model of satisfaction with democracy (DB)

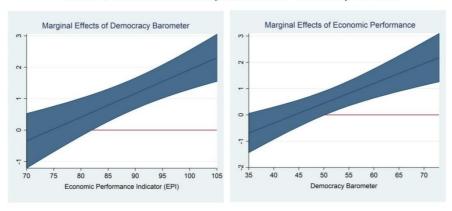
(se)	σ	(se)	β	(se)	β	(se)	β	(se)	β	(se)
	3.84***	(0.31)	3.85***	(0.31)	3.87***	(0.31)	4.01***	(0.30)	4.03***	(0.30)
	1.19***	(0.31)	1.19***	(0.31)	1.18***	(0.31)	0.77*	(0.32)	0.76*	(0.32)
	-1.94***	(0.31)	-1.92***	(0.31)	-1.92***	(0.31)	-2.24***	(0.33)	-2.24***	(0.33)
	-0.84**	(0.30)	-0.84**	(0.30)	-0.84**	(0.30)	-0.88**	(0.30)	-0.88**	(0.30)
	-0.20	(0.30)	-0.23	(0.30)	-0.24	(0.30)	-0.18	(0.30)	-0.19	(0.30)
	1.44***	(0.31)	1.41***	(0.31)	1.38***	(0.31)	1.37***	(0.30)	1.35***	(0.30)
	1.07***	(0.30)	1.05***	(0.30)	1.05***	(0.30)	0.82**	(0.32)	0.82**	(0.32)
			3.17*	(1.57)	-19.90***	(5.89)	3.34*	(1.60)	-20.58***	(5.93)
			10.63***	(2.60)		(15.55)	10.73***	(2.64)	-53.85***	(15.67)
						(18.25)			76.34***	(18.40)
							1.13***	(0.32)		(0.32)
							0.63	(0.37)	0.65	(0.37)
			-2.12	(3.10)	1.30	(2.87)	-1.95	(3.15)	1.56	(2.90)
			-5.95***	(1.52)	-5.24***	(1.34)	-5.94***	(1.54)	-5.18***	(1.35)
			-3.55*	(1.62)	-3.54*	(1.43)	-3.60*	(1.65)	-3.58*	(1.44)
			-0.96	(2.47)	-0.66	(2.34)	0.45	(2.48)	0.56	(2.34)
			6.97	(5.32)	2.01	(4.84)	7.20	(5.40)	2.03	(4.87)
			4.17	(3.13)	5.82*	(2.92)	4.11	(3.15)	5.83*	(2.93)
			-0.40	(1.61)	-1.34	(1.44)	-0.38	(1.64)	-1.37	(1.45)
*** (2.34)	49.58***	(2.30)	46.77***	(2.38)	47.88***	(2.12)	46.37***	(2.42)	47.58***	(2.14)
*** (58.88)	296.02***	(56.77)	86.27***	(18.05)	65.17***	(13.84)	89.64***	(18.98)	66.48***	(14.29)
)*** (5.23)	77.80***	(3.82)	77.95***	(3.84)	77.99***	(3.84)	75.61***	(3.73)	75.68***	(3.73)
.55	-3303.83		-3270.92		-3263.74		-3259.25		-3251.71	
09	6627.66		6579.84		6567.49		6560.49		6547.41	
	0.03		0.72		0.79		0.71		0.78	
	0.27		0.27		0.27		0.29		0.29	
+4	0.79		0.53		0.46		0.54		0.47	
7	887		887		887		887		887	
	57		57		57		57		57	
	49.61*** (2.34) 49.61*** (5.88) 304.44*** (58.88) 106.60*** (5.23) -3435.55 6877.09 - 0.74 887 887	(2.34) (58.88) (5.23)	3.84*** 1.19*** -1.94*** -0.20 1.44*** 1.07*** 1.07***  (2.34) 49.58*** (58.88) 296.02*** (58.88) 296.02*** (58.88) 296.02*** (5.23) 77.80*** -3303.83 6627.66 0.03 0.27 0.79 887 57	3.84*** (0.31) 1.19*** (0.31) 1.19*** (0.31) -0.84** (0.30) -0.20 (0.30) 1.44** (0.31) 1.07*** (0.30) 1.14*** (0.31) 1.07*** (0.30)  (2.34) 49.58*** (2.30) (5.8.8) 296.02*** (56.77) (5.8.8) 77.80*** (3.82) -3303.83 6627.66 0.03 0.27 0.79 887	3.84*** (0.31) 3.85*** 1.19*** (0.31) 1.19*** -1.94*** (0.31) -1.92*** -0.84** (0.30) -0.84** -0.20 (0.30) -0.23 1.44*** (0.30) 1.05*** 1.07*** (0.30) 1.05***  1.07*** (0.30) 1.05*** -2.12 -5.95*** -5.95*** -0.96 6.97 4.17 -0.40 (2.34) 49.58*** (2.30) 46.77*** (5.88) 296.02*** (3.82) 77.95*** -3303.83 -3270.92 6627.66 0.03 0.79 0.27 0.79 0.53 887 887 57 57	3.84*** (0.31) 3.85*** (0.31) 3.87*** 1.19*** (0.31) 1.19*** (0.31) 1.18*** -1.94*** (0.31) -1.92*** (0.31) -1.92*** -0.84** (0.30) -0.84** (0.30) -0.84** -0.20 (0.30) -0.23 (0.30) -0.24 1.14*** (0.31) 1.15*** (0.31) 1.38*** 1.07*** (0.30) 1.05*** (0.30) 1.05*** 10.63*** (2.60) -51.65*** -2.12 (3.10) 1.39*** -5.95*** (1.52) -5.14*** -5.95*** (1.52) -5.14*** -5.95*** (1.52) -5.24*** -3.55* (1.62) -3.54* -3.67 (3.31) 5.82* -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.40 (1.61) -1.34 -0.58** (3.82) 77.95*** (1.805) 65.17*** -3303.83 -3270.92 -3263.74 -3303.83 -3270.92 -3263.74 -36627.66 6579.84 6567.49 -0.027 -0.27 -0.79 -0.53 -0.46 -887 -887 -57 -57 -57 -57 -57 -57 -57 -57 -57 -57	3.84*** (0.31) 3.85*** (0.31) 3.87*** 1.19*** (0.31) 1.19*** (0.31) 1.18*** -1.94*** (0.31) -1.92*** (0.31) 1.29*** -0.84** (0.30) -0.84** (0.30) -0.84** -0.20 (0.30) -0.23 (0.30) -0.24 1.44*** (0.31) 1.41*** (0.31) 1.38*** 1.07*** (0.30) 1.05*** (0.30) 1.05*** 10.63*** (2.60) -51.65*** -2.12 (3.10) 1.39** -5.95*** (1.52) -5.165*** -5.95*** (1.52) -5.24*** -3.55* (1.62) -5.94*** -3.55* (1.62) -5.94*** -3.55* (1.62) -3.54* -0.66 (6.97 (5.32) 2.01) 4.17 (3.13) 5.82* -0.40 (1.61) -1.34	3.84*** (0.31) 3.85*** (0.31) 3.87*** (0.31) 1.19*** (0.31) 1.19*** (0.31) 1.18*** (0.31) 1.19*** (0.31) 1.18*** (0.31) 1.19*** (0.31) 1.18*** (0.31) 1.92*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.55) 73.65*** (1.52) 73.65*** (1.52) 73.65*** (1.52) 73.65*** (1.52) 73.65*** (1.52) 73.65*** (1.34) 73.65*** (1.35) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.36) 73.65*** (1.	3.84*** (0.31) 3.85*** (0.31) 3.87*** (0.31) 4.01*** 1.19*** (0.31) 1.19*** (0.31) 1.18*** (0.31) 0.77* 1.94*** (0.31) 1.99*** (0.31) 1.18*** (0.31) 0.77* 1.94*** (0.31) 1.92*** (0.31) 1.92*** (0.31) 0.24*** 1.04*** (0.30) 0.23 (0.30) 0.24* (0.30) 0.88** 1.07*** (0.31) 1.14*** (0.31) 1.38*** (0.31) 1.37*** 1.05*** (0.30) 1.05*** (0.30) 1.05*** (0.30) 0.82** 1.05*** (0.30) 1.05*** (0.30) 1.05*** (0.30) 0.82** 1.05*** (0.30) 1.05*** (1.55) 10.73*** 1.063*** (2.60) -51.65*** (18.25) 1.39*** 1.063*** (1.57) -19.90*** (18.25) 1.13*** 1.95*** (1.52) -5.24*** (18.25) 1.13*** 1.95*** (1.52) -5.24*** (1.34) -5.94*** 1.95*** (1.52) -5.24*** (1.34) -5.94*** 1.95*** (2.30) 46.77*** (1.52) -5.24** (1.34) -3.60* 1.96** (2.47) -0.66 (2.47) -0.66 (4.44) 7.20 1.96** (2.47) -0.66 (2.47) -0.64 (4.44) -0.38 1.96*** (2.30) 46.77*** (18.05) 65.17*** (13.84) 89.64*** 1.95*** (3.81) 77.95*** (18.05) 65.17*** (13.84) 89.64*** 1.95*** (3.83) 0.72 0.79 0.71 0.03 0.72 0.73 0.79 0.03 0.72 0.79 0.71 0.72 0.73 0.74 0.75 0.75 0.77 0.75 0.77 0.77 0.77 0.77 0.77 0.77 0.77	1,000,   P   1,000   P   1,0

Figure 19: Marginal effects plots

Model 3, Table 1: Economic Performance Index \* Freedom House Index



Model 8, Table 2: Economic Performance Index \* Democracy Barometer



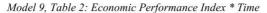
*Notes*: To allow for a more meaningful interpretation, the marginal effects have been calculated based on unstandardized coefficients. Based on the 'between' predictors of the model.

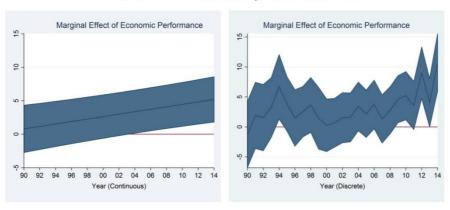
In Models 3 and 8 I add the interaction terms for democratic quality and economic performance at the country level. In order to grasp the interaction effect completely, it is more informative to look at the marginal effects plots in Figure 19 (Brambor et al. 2006). As we can see, not only is the effect of democratic quality on SWD conditional on the long term economic performance, but also the effect of economic performance is modified by democratic quality (confirming hypothesis 6a and 6b). However, we need to adapt slightly our previous expectations. While I initially assumed that both economic and democratic performance always have a positive effect on SWD – which is stronger or, weaker conditional on the

other's performance – the results of the analysis indicate that only when a country has *both* a reasonable level of democratic quality and a good economic record will its citizens be satisfied with the working of democracy in the long term. Overall, the inclusion of the interaction term greatly increases the model fit as can be seen in the substantial decrease of the ICC or the increase in the R<sup>2</sup> for the country level.

Figure 20: Societal growth curves

Model 4, Table 1: Economic Performance Index \* Time





*Notes*: Based on the 'between' predictors of the EPI and a time trend variable. The interaction with the linear time trend variable has been shown in the models but not the interaction with the categorical one.

Models 4 and 9 add the societal growth curves, allowing to test if the effect of economic and democratic performance on SWD has changed with the passing of time. As we can observe very clearly in both models, this is in fact the case, but only for economic performance (confirming hypothesis 2). To illustrate the changing impact of economic performance on SWD, I have plotted various growth curves in Figure 20. The figures on the left show the marginal effects of economic performance conditional on the values of a linear time trend variable, indicating an increasing effect of economic performance with the passing of time. Yet, it might also be informative to allow the growth curve to vary over the years. For this reason I also estimated the growth curves using a discrete time variable (not shown in the tables). As we can see the right side of Figure 20, the effect of economic performance on SWD was greatest after the Black Monday in 1987, in the mid-1990s and especially after the onset of the Great Recession in 2008.<sup>62</sup> Finally, the economic growth curve but also the cross-sectional interaction between democratic and economic performance stay highly significant when included jointly in Model 5 and 10.

Four other findings bear mentioning as well. First, I find strong evidence that democratic elections temporarily cause SWD to increase, consistent with evidence based on comparisons of pre- and post-electoral survey data (Banducci and Karp 2003; Blais et al. 2017). Second, I find that increasing income inequality leads to decreasing SWD over time. This effect is substantial and income inequality turns out to be the second strongest longitudinal predictor in my models. This is a worrisome finding since income inequality and poverty rates have constantly risen in most OECD countries since the 1980<sup>th</sup> (Keeley 2015). Third, I find that countries with a high level of electoral disproportionality tend to have lower levels of SWD, compatible with previous research which report a substantial cross-sectional relationship (Anderson et al. 2005; Berggren et al. 2004; Farrell and McAllister 2006). Finally, I find strong evidence that countries with a more fractionalized party system tend to have lower levels of SWD cross-sectionally. Similarly, increasing party fractionalization appears to be associated with decreasing SWD within countries over time (Martini and Quaranta 2014; Martini and Quaranta 2016b).

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<sup>&</sup>lt;sup>62</sup> The same picture emerges when estimating the interaction with a categorical variable for the period between 2008 and 2014.

#### 4.6. Discussion

The aim of this article has been to contribute to the debate on the attitudinal consequences of democratic quality and economic performance and their potential to influence citizens' satisfaction with the working of their democratic system. In recent years, the literature on SWD has exploded and there has been an increasing interest in the effects of the economy's performance, especially after the onset of the Great Recession in 2008 in Europe. This study reaffirms this economic argument by showing that the same linkage exists both cross-sectionally and longitudinally, a finding which should increase our confidence in the link between the two.

This study also shows that it is not all about the economy. While economic performance is the best explanation for short-term fluctuations in SWD, the democratic record turned out to be a stronger predictor to explain persistent differences between countries. Consistently, I find that changes in the democratic quality of a country lead to changing SWD over time, yet the effect is relatively small in comparison. I have also shown that this finding is not sensitive to the choice of measurement<sup>63</sup>, although my analysis indicates that we should avoid the use of "democratization" measures such as the Freedom House Index or we might risk underestimating the true effect, especially when applied to a sample composed of many established democracies.

I did not finish my analysis here but went on to ask if the effect of democratic and economic performance on SWD might have changed over the decades. Estimating a series of societal growth curves, I found evidence that the effect of economic performance on SWD has increased in recent years. Today, citizens appear to be much more critical about the economic record of their countries than before the onset of the Financial Crisis in 2008. Encouragingly, this does not mean that citizens deem the democratic performance of their countries to be of less importance. Finally, I demonstrated that the effects of economic performance and democratic quality on SWD are mutually reinforcing. In the long-run, citizens are only content with their regime when it can be characterized as a high quality democracy and it can show a good economic record. This

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<sup>&</sup>lt;sup>63</sup> I obtained identical results when using the Government Effectiveness Index and the Voice and Accountability Index provided by the World Bank (Kaufmann et al. 2010). Results are available upon request.

finding is consistent with a large corpus of research, showing that economic prosperity and democracy mutually reinforce each other, contributing to the development of a more critical citizenry (Norris 1999).

This study also poses some problems and opens new questions. Democracy is an abstract concept and any attempt of measurement faces plenty of difficult decisions on definitions, operationalizations and index building (Munck and Verkuilen 2002; Munck 2016). In the end, we often cannot know precisely what those indices reflect. It would be an interesting contribution to disaggregate the various attributes of democratic quality and test what exactly drives the relationship with SWD. Is it the quality of representation, participation or the degree of accountability of the system? On the other hand, various aspects of governance have been shown to be related to SWD as well. Disentangling their effects from those of other aspects of democracy is an interesting topic for further research. This, however, will not be an easy undertaking since existing measures for democratic quality usually also entail aspects of good governance in their concept and measurement and both concepts are extremely highly correlated empirically.

# 4.7. Appendix

## 4.7.1. Figures and tables

Figure 21: Distribution of SWD

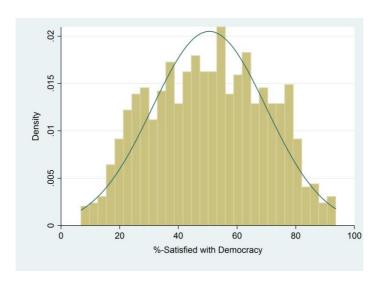


Table 27: SWD-sources of the TSCS panel dataset

Source	Last accessed	Data access and documentation
Afrobarometer	11 August 2016	http://www.afrobarometer.org/
American National Election Studies	10 July 2015	http://www.electionstudies.org/
Americas Barometer (LAPOP)	11 August 2016	http://datasets.americasbaromet er.org/database/
Asian Barometer	11 August 2016	http://asianbarometer.org/data
Australian Election Study	10 July 2015	http://aes.anu.edu.au/
Canadian Election Study	10 July 2015	http://ces-eec.arts.ubc.ca/
Candidate Countries Eurobarometer (CCEB)	10 July 2015	http://ec.europa.eu/public_opini on/archives/cceb2_en.htm
Central and Eastern Euro- barometer (CEEB)	30 August 2016	http://ec.europa.eu/public_opini on/archives/cceb_en.htm
Comparative National Elections Project (CNEP)	30 August 2016	https://u.osu.edu/cnep/
Comparative Study of Electoral Systems (CSES)	11 August 2016	http://www.cses.org/datacenter/ download.htm
Eurobarometer (EB)	11 August 2016	http://www.gesis.org/eurobarom eter-data-service/data-access/
European Value Study (EVS)	10 July 2015	http://www.europeanvaluesstud y.eu/
Israeli Democracy Index	10 July 2015	http://en.idi.org.il/tools-and- data/the-guttman-center-for- public-opinion-and-policy- research/the-israeli-democracy- index/
Latinobarómetro	11 August 2016	http://www.latinobarometro.org /latContents.jsp
New Democracies Barometer	10 July 2015	http://www.cspp.strath.ac.uk/cat alog4_0.html
New Zealand Election Study	10 July 2015	http://www.nzes.org

Table 28: Summary of variables

Type of Variable	Indicator	Measurement	Longitudinal Variation	Cross-Sectional Variation	Sources
Cultural/Social	Ethnic Fractionalization	Numerical	No	Yes	Alesina et. al. (2003)
	Income Inequality (GINI)	Numerical	Yes	Yes	Solt (2016)
Democratic Performance	Freedom House Index (FHI)	Numerical	Yes	Yes	Freedom House (2016)
Indicators	Democracy Barometer (DB)	Numerical	Yes	Yes	Democracy Barometer (2016)
Economic Performance Indicators	GDP growth rate	Numerical	Yes	Yes	Worldbank (2016), IMF (2016)
	Unemployment rate	Numerical	Yes	Yes	IMF (2016), Worldbank (2016)
	Inflation rate	Numerical	Yes	Yes	Worldbank (2016), IMF (2016)
	General government net lending/borrowing (deficit/surplus)	Numerical	Yes	Yes	IMF (2016), Worldbank (2016), AMECO (2016)
	Economic Performance Index	Numerical	Yes	Yes	Own calculations
Electoral Variables	Election year (legislative or presidential)	Yes, No	Yes	Not meaningful	Database of Political Institutions (2016)
	Gallagher Index of electoral disproportionality	Numerical, Logged	Little	Yes	Gallagher (2015), Democracy Barometer (2016)
	Effective Number of Parliamentary Parties (ENPP)	Numerical	Yes	Yes	Bohrmann and Golder (2013), Gallagher (2015)
Structure of the State	Federalism	Yes, No	No	Yes	Henisz (2012)
	Type of Executive	Parliamentary, Semi-Presidential, Presidential	No	Yes	Bohrmann and Golder (2013)

Table 29: Descriptive statistics (Freedom House sample)

	Mean	SD	Min	Max	N
Satisfaction with Democracy	50.57	19.45	6.81	93.64	1000
Ethnic Fractionalization	0.29	0.20	0.00	0.74	1000
Income Inequality (GINI)	34.50	9.14	18.32	56.48	1000
Freedom House Index (FHI)	6.36	0.85	3	7	1000
GDP growth rate	2.94	3.38	-14.81	18.29	1000
Unemployment rate	8.39	4.08	1.01	27.48	1000
Inflation rate	5.02	5.07	-4.48	31.09	1000
Government deficit (high) /surplus (low)	2.79	3.77	-18.46	15.91	1000
Economic Performance Index (EPI)	87.10	9.66	39.45	112.47	1000
Election year (legislative or presidential)	0.34	0.47	0	1	1000
Gallagher Index	6.19	4.54	0.42	26.4	1000
Effective Number of Parliamentary Parties	3.88	1.65	1.07	13.22	1000
Federalism	0.18	0.38	0	1	1000
Type of Executive: Presidential	0.31	0.46	0	1	1000
Type of Executive: Semi- Presidential	0.23	0.42	0	1	1000
Type of Executive: Parliamentary	0.45	0.50	0	1	1000

Table 30: Descriptive statistics (Democracy Barometer sample)

	Mean	SD	Min	Max	N
Satisfaction with Democracy	49.85	19.83	6.81	93.64	887
Ethnic Fractionalization	0.29	0.20	0.01	0.74	887
Income Inequality (GINI)	35.22	9.31	20.13	56.48	887
Democracy Barometer (DB)	53.21	9.33	29.78	74.52	887
GDP growth rate	2.99	3.49	-14.81	18.29	887
Unemployment rate	8.35	4.10	1.01	27.48	887
Inflation rate	4.77	4.92	-4.48	31.09	887
Government deficit (high) /surplus (low)	2.48	3.60	-18.46	15.15	887
Economic Performance Index (EPI)	87.73	9.39	39.92	113.01	887
Election year (legislative or presidential)	0.33	0.47	0	1	887
Gallagher Index	6.13	4.43	0.42	26.4	887
Effective Number of Parliamentary Parties	3.91	1.64	1.07	13.22	887
Federalism	0.17	0.37	0	1	887
Type of Executive: Presidential	0.34	0.48	0	1	887
Type of Executive: Semi- Presidential	0.23	0.42	0	1	887
Type of Executive: Parliamentary	0.43	0.49	0	1	887

#### 4.7.2. Robustness checks

A number of robustness checks have been performed: First, I re-estimated the models by using the indices "Voice and Accountability" and "Government Effectiveness" provided by the World Bank (Kaufmann et al. 2010). The results I have obtained are identical to those presented in the analysis. Second, I controlled the effect of influential outlying cases at the country level as suggested by Van der Meer et al. (2010). When I found that countries were above critical thresholds of Cook's D, they were included as dummy variables in the models. Third, analysing the residuals of the models, I found them to be almost normally distributed. Dropping the few potentially problematic cases does not change the results in any of the models. Fourth, following the suggestion of King and Roberts (2015) to understand differences in robust and normal standard errors as an indication for model misspecification, I re-estimated the models and compared their standard errors. I found only minor differences, so the coefficients for democratic and economic performance do not lose their significance when using robust standard errors.

Fifth, Arceneaux and Huber (2007) identify the issue of collinearity as one of the major challenges any study at the country level will likely face. Analysing the correlation matrix of each model but also VIF scores, I found the degree of collinearity in the longitudinal part to be of no issue. In regard to the cross-sectional part, I find the Gini-Index, Presidentialism and the indices for democratic performance to be moderately collinear. As a consequence we increase the possibility of type II errors and accept  $\beta_i = 0$ , although in reality there is a relationship (Arceneaux and Huber 2007; Goldberger 1991).

Finally, I also added random slopes for the longitudinal estimators of economic performance and democratic quality to further probe the robustness of the fixed effect of these "within" estimators. <sup>64</sup> I found that the fixed effect stays highly significant for the

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<sup>&</sup>lt;sup>64</sup> A current methodological debate calls attention to the problem that a multilevel model might return a significant fixed effect for a "within" predictor even if the effect of the variable differs substantially between subjects (or countries). Yet, the uncertainty about the effect of the variable might be so substantial that the fixed effect could turn out to not be significant when allowing a random slope for that variable (Barr et. al 2013, Bates et al. 2015).

EPI and the DB but not for the FHI, indicating again that the FHI might not be well-equipped to track changes in democratic performance over time, especially in established democracies where the index lacks substantial variation.

## 5. Conclusions

The central aim of this dissertation was to identify and examine sources of satisfaction with democracy (SWD) around the world. By expanding the scope of research on SWD into East and West Europe, North, South, and Central America, Oceania, South-East Asia and Sub-Saharan Africa, I was able to address some novel questions and to test some of the paradigm's core theories in developing economies and new democratic contexts. By drawing on time-series cross-sectional (TSCS) data from a wider set of global democracies, I explored the relationship between economic performance, democratic quality and SWD, factors that have received only limited attention in previous research. By analyzing individual level data from the Comparative Studies of Electoral System (CSES), I examined the intermediary outcomes of electoral systems, i.e. the composition of the party/government system and the degree of electoral proportionality, and their interplay with voting behavior at the individual level. Finally, by investigating individual-level panel data in Spain, I was able to go in depth and confirm into the individual-level causes of changing SWD within respondents over time. At the contextual-level the thesis addressed the following research questions:

- I. Do changes in the national economic performance lead to changes in SWD within countries over time?
- II. What is the effect of prolonged economic crisis on the evolution of SWD?
- III. Do changes in the quality of democracy lead to changes in SWD within countries over time?
- IV. Can we observe an increasing relevance of democratic performance over time?
- V. Is there an effect of the electoral system?
- VI. What is the effect of electoral proportionality?
- VII. What is the effect of party/ government system fractionalization?

#### At the individual-level it asked:

VIII. Do changes in the economic well-being of a respondent lead to changes in SWD over time?

- IX. Do changes in the perceptions of the national economy lead to changes in SWD within respondents?
- X. Do changes in the perceptions of the democratic process lead to changes in SWD within respondents?
- XI. Is there an effect of winning and losing an election on SWD? Does it make a difference whether you voted for the party that leads a government?
- *XII.* Is there an effect of representational deficits on SWD?
- XIII. Is the effect of winning and losing conditional on the composition of governments?

# 5.1. Main findings

Some authors see satisfaction with democracy at the aggregate level as a suitable way for gauging the degree of responsiveness of a political system (Jones and Micozzi 2011; Lijphart 2012; Morlino 2009; Morlino and Piana 2014; Powell 2004), where the concept of responsiveness is defined as the formation and implementation of policies that citizens want (Powell 2004: 91) or as the "capacity to satisfy the governed by executing its policies in a way that corresponds to their demand" (Morlino 2009: 41). Responsiveness is important to the functioning of democracy as Dahl (1971:1) acknowledges when say that it is "a key characteristic of a democracy is the continuing responsiveness of the government to the preferences of its citizens". In fact, it is the quality of being responsive from which Dahl deduces his conditions of being a polyarchy and which thus serves as "one of the justifications of democracy itself" (Powell 2005: 63).

In a study of the quality of democracy in the Asian-Pacific region, Morlino et al. (2011) aggregate public opinion data of SWD by calculating the percentage of survey respondents who are very or fairly satisfied with the way democracy works. These aggregated figures are argued to reflect whether there is a "broadly legitimated regime that satisfies citizens" (Morlino 2010: 213), judging whether there is a high quality of democracy in terms of the provided results by the political system. Indeed, Morlino (2010: 215) strongly supports the idea that "perhaps the most effective method for measuring the dimension of responsiveness is to examine the legitimacy of the government or the citizens' perception of responsiveness, rather

than the reality." He argues that by observing specific legitimacy (SWD) we could indirectly measure the latent empirical concept of responsiveness which he argues to be a cause of satisfaction.

But is it justified to use aggregate figures of SWD as a measure of democratic responsiveness? Is satisfaction with democracy a good proxy for the general level of responsiveness of a political system? The main caveat is that it rests on the assumption that when a political system is responsive to the demands of the citizenry, there should also be high levels of satisfaction. Such an approach is problematic unless we find clear empirical evidence that the sources of SWD belong to a group of factors that are endogenous to the political system and thus are linked to the working and the outputs of a democratic regime. Second, since we are dealing with aggregatelevel data we need to test this assumption at the contextual-level. Furthermore, we need to demonstrate that the factors driving SWD pertain to a group of rational explanations. In this sense, SWD should "reflect an informed assessment about the cumulative record of successive governments, whether judged by normative expectations [...] or by the achievement of certain desired policy outputs and outcomes (Norris 2011, ch. 10, p. 3).

The findings of this thesis suggest that aggregated values of SWD might be used as a proxy for democratic responsiveness with some qualifications. On average, citizens tend to be more satisfied in countries characterized by low unemployment, a high standard of living, a growing economy and low levels of inflation. On the other hand, I found that countries with a high quality of democratic processes and governance tend to have higher levels of SWD as well. Yet, I have also found that intermediary outcomes of electoral representation most notably electoral ty/government system fractionalization are powerful explanations to explain cross-national differences in SWD, casting some doubt about such a usage. Against this backdrop, it is preferable to use SWD as a measure for responsiveness in cross-time comparisons only, especially where economic performance turned out to be a very strong predictor.

Let us now turn to a more detailed discussion of the main findings provided by the dissertation (see Figure 22). Most important, the results of the three studies give leverage to a more novel finding regarding democratic performance. This thesis has demonstrated how "objective" measures of the quality of the democratic process, such as the Freedom House Index and the Democracy Barometer,

among others, are capable of explaining both cross-national differences and longitudinal trends in SWD within countries (III). Unlike previous research which has mainly reported mixed and inconsistent cross-sectional relationships (Anderson and Tverdova 2003; Ariely 2013; Guldbrandtsen and Skaaning 2010; Listhaug et al. 2009; Norris 2011; Singh 2014), I have been able to show both a cross-national and longitudinal linkage by drastically expanding the temporal and geographical scope of analysis and also including many new democracies. However, I did not find any evidence that democratic quality has gained more importance during the last three decades (IV).

Figure 22: Main findings of the thesis

#### Chapter 2: Proportionality and party/ government fractionalization

#### Chapter 3: Political and economic performance in Spain

#### Chapter 4: Economic performance and democratic quality

- Electoral proportionality increases SWD (crossnational)
- Voters are less satisfied when not represented fairly in elections
- Party system fractionalization decreases SWD (crossnational, longitudinal)
- Government system fractionalization decreases SWD (cross-national)
- Voters who voted for the party of the PM/ president are more satisfied than voters who voted for a minor coalition partner
- Electoral losers are least satisfied
- Electoral winners are less satisfied in highly fractionalized government contexts

- Economic performance is capable of explaining the evolution of SWD in Spain
- Worsening economic evaluations lead to decreasing SWD in respondents
- Worsening evaluations of the policy performance lead to decreasing SWD
- Worsening government evaluations leads to decreasing SWD
- Higher salience of corruption in the public has contributed to the decline of SWD in Spain
- Worsening perceptions of corruption lead to decreasing SWD in respondents
- Decreasing trust in the representative institutions leads to decreasing SWD

- Economic performance is an important predictor for SWD (cross-national, longitudinal)
- Democratic quality is equally relevant (cross-national, longitudinal)
- The importance of economic performance has increases over time (especially salient during times of prolonged crisis)
- The effects of economic performance and democratic quality on SWD are mutually reinforcing

As we can see in Figure 22, another new and interesting finding of chapter 4 is that the effects of economic and democratic performance on SWD are interrelated. In line with the argument that economic development might intensify demands for democracy (Lipset

1959; Burkhart and Lewis-Beck 1994) and lead to a more critical citizenry (Norris 1999), the empirical analysis has shown that the effect of the economy is conditional on the democratic quality of a country and vice versa. Only when a country has both a reasonable level of democratic quality and a good economic record will its citizens be content with the working of democracy *in the long-term*. Thus even with a strong economy, if democracies fail to be democratically responsive, citizens can reasonably be expected to be dissatisfied with the working of their political system.

Closely related, chapter 2 has shown that the quality of governance is a good predictor of explaining cross-country variation in SWD (Anderson and Tverdova 2003; Ariely 2013; Dahlberg and Holmberg 2014; Guldbrandtsen and Skaaning 2010; Norris 2011; Peffley and Rohrschneider 2014; Stockemer and Sundström 2011), while chapter 3 has shown that the various corruption scandals that have plagued Spanish politics (Montero et al. 1997; Orriols and Cordero 2016) contributed substantively to the recent decline of SWD. At the individual-level, perceptions of political corruption and trust in representative institutions were found to be significantly related to SWD not only cross-sectionally (Ariely 2013; Bratton and Mattes 2001; Mattes and Bratton 2007; Huang et al. 2008; Linde 2012; Peffley and Rohrschneider 2014) but also within the same respondents over time (X). The latter finding contributes new longitudinal evidence to the debate.

The analysis conducted in chapter 2 also reveals that there is still a substantial amount of variation left unexplained by democratic and economic performance both at the national and the individual-level. The most important finding regarding the institutional explanation – according to which citizens develop SWD as a consequence of the organizing principles of political institutions – is that measures of electoral system by themselves are not substantially related with SWD (V). This is in line with previous studies which have relied solely on variables for the electoral system or the majoritarian-consensual dichotomy and which also reported no significant relationships (Bernauer and Vatter 2011, Henderson 2008, Norris 2011, Peffley and Rohrschneider 2014).

Yet, I have argued that from a citizen's perspective both electoral proportionality and government system fragmentation can have independent and contradictory effects on SWD. From a citizen's perspective, there is no contradiction in simultaneously holding positive evaluations of not only fair and pluralistic electoral

representation but also concentrated party and government systems where single parties can be held accountable. People may be especially happy with electoral "sweet spots", characterized by a lowmagnitude PR electoral system that tends to produce highly representative governments but limits party and government fractionalization (Carey and Hix 2011). Indeed, I found that countries with high electoral proportionality tend to show higher levels of SWD cross-nationally (VI) while other pluralistic factors such as party and government system fractionalization produce the opposite effect (VII). By clarifying these relationships theoretically, this dissertation has contributed to assuaging the apparently paradoxical findings of previous research which has reported that countries with greater electoral proportionality tend to have higher levels of SWD (Anderson et al. 2005; Berggren et al. 2004; Farrell and McAllister 2006), while having a concentrated party and government system has also been found to be positively associated with SWD as well (Anderson et al. 2005; Martini and Quaranta 2014; Karp and Bowler 2001; Quaranta and Martini 2016a; Weil 1989).

With regard to electoral proportionality, I was also able to show that voters whose parties receive a lower seat share than their vote share are more dissatisfied at the individual level (XII), confirming once more that representational deficits have direct repercussions on SWD at the individual level (Blais et al. 2017). Furthermore, Chapter 2 reveals that being an electoral winner is a strong predictor for individual's SWD (Anderson and Tverdova 2001; Anderson et al. 2005; Blais and Gélineau 2007; Curini et al. 2011; Singh et al. 2011) and that, when compared with electoral losers (XI), voters who have cast their ballot for the party that leads the government have twice as much satisfaction as voters who have only voted for a minor coalition partner. This is a new finding. Finally, it provides evidence that the effect of winning an election is diminished in highly fractionalized party and government system contexts (XIII), qualifying an earlier finding of Anderson and Guillory (1997) who showed a similar linkage based on a measure capturing the consensual-majoritarian dichotomy.

As we can see in Figure 22, the empirical findings also show that improving economic performance leads to increasing SWD within countries over time (I). Additionally, economic factors are most relevant during prolonged times of economic crisis and that people today appear to be more critical about the working of their democratic regimes (II). This contextual-level effect of the econo-

my has been very clearly confirmed in all three studies, regardless of the empirical measures used to track economic performance (GDP pc, GDP growth, unemployment rate, Economic Performance Index). The positive relationship between economic performance and SWD is in line with the results of previous studies (Armingeon and Guthmann 2014; Clarke et al. 1993; Halla et al. 2013; Quaranta and Martini 2016a). Indeed, the consistency of economic effects, regardless of time frame and methodological approach, suggests that the linkage is robust.

Furthermore, the individual-level panel analysis of SWD in Spain (chapter 3) confirms that evaluations of the national economy are also a major explanation for changes in SWD within respondent over time (IX) and also when we compare respondents (Anderson and Guillory 1997; Armingeon and Guthmann 2014; Bratton and Mattes 2001; Waldron-Moore 1999). However, I found only weak evidence for a longitudinal effect of the personal economic situation of respondents (VIII). Thus, while sociotropic evaluations matter strongly for individuals' SWD, people do not appear to blame democracy per se for their personal situations. On the other hand, the individual-level analysis with data from the CSES (chapter 2) provided some cross-sectional evidence that respondents who are unemployed tend to have lower levels of SWD, confirming our previous expectations. Relatedly, the analysis of the CIUPANEL (chapter 3) also showed a longitudinal linkage between policy and government evaluations, further stressing the importance of rationalinstrumental evaluations on citizen's SWD (Bratton and Mattes 2001; Huang et al. 2008; Sanders et al. 2014; Stockemer and Sundström 2013).

Overall, the empirical findings of this thesis reinforce the argument that SWD reflect evaluations of regime performance rather than general support for regime principles/ form of government (Dalton 1999; Norris 1999; Klingemann 1999). I have found SWD to be consistently related with democratic and economic performance and also with electoral outcomes at the contextual-level. At the individual-level I have shown that SWD is closely linked with respondent's evaluation of the economic and policy performance and also with perceptions of corruption, trust in representative institutions and evaluations of the working of the government. Furthermore, this thesis has demonstrated that individual's SWD is also closely related with his/her (electoral) representation.

In the context of the half century old discussion about political support (Easton 1965, 1975), the results of this study suggest that SWD can best be characterized as specific support. Thus, it reflects the satisfaction that citizens feel regarding the outputs and performance of their political regime. It appears to be a rather volatile attitude, shaped by the experiences of the citizens. It can readily change once economic or democratic situations improve or worsen in the short term but is also driven by these factors in the long term. Therefore, it makes sense to argue that SWD reflects a "rational calculus" about the needs and demands of the citizenry, staying close to the words that Easton (1975: 437) has used to describe specific support.

Yet, the rationality of citizens is not driven by economic-instrumental evaluations alone. This thesis reinforces the argument, made for example by Huang et al. (2007: 51), that citizens do not only compare the economic performance of different political systems. Instead, I have presented consistent and coherent evidence that the evaluations of the quality of democratic processes and electoral outcomes are of great importance. In terms of the differentiation of "instrumental" and "intrinsic" support made by Bratton and Mattes (2001)<sup>65</sup>, the aforementioned findings provide strong evidence that SWD is a combination of both types of support. Here, the *normative* connotation is that intrinsic support is somewhat favourable over instrumental support since citizens' appear to hold their system accountable by democratic standards and not for economic reasons alone.

# 5.2. Concluding remarks and avenues for future research

The thesis casts light on promising avenues for future research, poses some problems and raises new questions. First, it would be an interesting contribution to disaggregate the various attributes of democratic quality and test what exactly drives the relationship with

<sup>&</sup>lt;sup>65</sup> According to (Bratton and Mattes 2001:448) intrinsic support is based on an "appreciation of the political freedoms and equal rights that democracy embodies", while instrumental support describes a "calculation in which regime change is a means to other ends, most commonly the alleviation of poverty and the improvement of living standards."

SWD. Is it the quality of representation, participation or the degree of accountability of the system? Furthermore, quality of democracy is a contested concept. Although most conceptualizations include variations on Dahl's (1971) dimensions of inclusiveness and contestation, there is no common agreement (see Munck 2016), and components such as freedom, civil rights, representation and accountability are often included as well. In the end, we often cannot know what theses indices measure and what drives their relationship with SWD. For this reason, I have also tested the sensitivity of the results by employing different prominent measures for democratic quality such as the Freedom House Index, Voice and Accountability by the World Bank and the Democracy Barometer. Although I found the empirical results to be robust regardless of the employed measure, I clearly recommend avoiding the use of "democratization" indices such as Polity IV or the Freedom House since those measures cannot differentiate well between already established democracies (Cheibub et al. 2010; Coppedge et al. 2011).

Second, most conceptualizations and empirical attempts to measure democratic quality also include various elements of the quality of governance. Without doubt, government effectiveness is an important defining attribute of a high quality democracy. Elected governments need to have the capabilities and resources at their disposal to be responsive to the policy preferences of the public. In this thesis I also provided evidence that the quality of governance matters to a great deal when explaining SWD, especially corruption. Disentangling their effects from those of other aspects of democratic quality would be an interesting and also challenging topic for future research. This, however, will not be an easy undertaking since existing measures for democratic quality are extremely highly correlated with measures for quality of governance empirically, impeding cross-national comparisons in particular, due to issues of collinearity.

Third, democratic theory also posits a link between electoral participation and the legitimacy of the political system: Regular and fair elections are supposed to create legitimacy for the political system - even when confronted with electoral defeat (Dahl 1989, Przeworski 1991). So in principle, democratic elections might en-

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<sup>&</sup>lt;sup>66</sup> Berg-Schlosser (2004); Bertelsmann Transformation Index (2014); Diamond and Morlino (2005); Merkel et al. (2014); Ringen (2007); Economist Intelligence Unit (2014); Freedom House (2014); Varieties of Democracy (2014).

hance people's feelings about their political institutions and the political process (Esaiasson 2010). This link has been shown in studies comparing individual level pre- and post-electoral survey data, especially in the context of Canadian national and regional elections (Blais and Gélineau 2007, Blais et al. 2017, Nadeau et al. 2000) but also for New Zealand (Banducci and Karp 2003).

To my knowledge no comparative analysis exists that, through using time trend data, evaluates the longitudinal consequences of having an election. Although not the focus of this dissertation, it is a noteworthy finding that I found proximity to elections to increase SWD substantially throughout all my empirical analysis. Indeed, when we compare time trends of SWD against temporal distance to elections, it gets abundantly clear that otherwise seemingly random fluctuations in SWD can indeed be attributed to the timing of elections (compare Figure 23). Future research should focus more squarely on that topic, especially the duration of the effect. It should also ask about the conditions elections need to fulfill in order to increase SWD.

Fourth, I found no longitudinal effects of government fractionalization and electoral disproportionality. This might relate to a more general problem of research on the attitudinal consequences of political institutions where the explanatory variables are rather stable over time (Norris 2011: Ch. 10, p. 19). So, a partial explanation for the absence of the relationship could be that both variables carry too little time-varying information. Future research on the topic should therefore focus more squarely on cases where we can observe a substantial change in the composition of the party system or focus on cases where we can monitor SWD before and after constitutional reforms, for example for changes in the electoral systems in Italy, Japan or New Zealand.

Figure 23: Satisfaction with democracy and distance to parliamentary elections



*Notes*: Flat lines for electoral proximity indicate that information for SWD have been only collected during or shortly after an election has taken place.

Another surprising finding has to do with the relationship between party supply and SWD. Miller and Listhaug (1990) argue that multi-party systems should increase system support in the long term since they provide more choices, handle discontent among the electorate better and increase the possibility of the emergence of new parties that can channel new demands. However, regarding SWD, we have been surprised to observe the opposite effect, not only cross-sectionally but also longitudinally. Countries with higher levels of party fractionalization display lower levels of SWD, and additionally increasing party fractionalization also leads to decreasing SWD over time (Martini and Quaranta 2014; Martini and Quaranta 2016b). But why is this the case? How can fragmentation of the party supply decrease SWD? These questions clearly deserve more attention in the future. Yet, what I have been able to show is that measures for party system fractionalization correspond in their effects on SWD very closely to those of government system fractionalization, a direct outcome of the former, indicating a more general problem of electoral accountability, since coalition governments make it more difficult for voters to assign blame and responsibility or to vote incumbents out of office (Lundell 2011; Powell 2000).

Yet, is lack of accountability the only possible explanation for this negative linkage? After all, research on government instability has repeatedly shown that the risk of breakup of government increases with the number of parties in government (Dodd 1976; Taylor and Herman 1971; Somer-Topcu and Williams 2008). Indeed, an old study of nine Western democracies conducted by Harmel and Robertson (1986) has already presented evidence that countries with higher governmental instability tend to have lower SWD, supporting the authors' premise that "government change may lead to lessened performance and general feelings of anxiety associated with perceived 'chaos at the top,' and that both may result in lessened support for the regime" (Harmel and Robertson 1986: 1029). Although the authors present plausible arguments and report a substantive relationship, government instability appears not to be considered a relevant factor in the contemporary discussion in the literature.

That government instability might indeed have a negative effect on SWD can be seen in Figure 23 where I plot long-term countrymeans of SWD against a measure of cabinet duration provided by the Database of Political Institutions (Cruz et. al. 2016)<sup>67</sup>. Here, we can observe a significant negative relationship between average government instability and long-term SWD when we compare countries. Unsurprisingly, countries with relatively high levels of government instability such as Italy, Hungary or Israel tend to have lower levels of SWD, while relatively stable countries such as Canada, Luxembourg or Germany tend to have higher levels of SWD. Thus, a promising avenue for further research could be to test if there still remains a direct effect of government fractionalization when tested jointly with government instability and how much of the effect of government fractionalization is moderated through government instability.

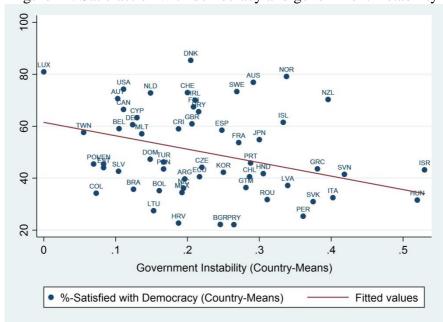


Figure 24: Satisfaction with democracy and government instability

*Notes*: Country means, N=58 electoral democracies.

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<sup>&</sup>lt;sup>67</sup> Governmental instability is measured as a percent count of veto players who drop from the government in a given year. It is estimated by dividing the number of exits between year t and year t+1 by the total number of veto players in year t. According to Beck et. al. (2001: 18) veto players are defined "as the president and the largest party in the legislature for a presidential system and as the prime minister and the parties in the government coalition for a parliamen-tary system."

Table 31: Government Instability and SWD

	Model 1		Model 2		Model 3	
	β	(se)	β	(se)	β	(se)
Longitudinal						
Gallagher Index			0.34	(0.46)	0.56	(0.46)
Government Fractionalization			-0.26	(0.43)		
ENEP					-0.94*	(0.45)
Government Instability			0.16	(0.37)	0.16	(0.37)
Years since last election			-1.56***	(0.36)	-1.56***	(0.36)
GDP growth rate			1.95***	(0.32)	1.99***	(0.32)
Gini Index			-2.25***	(0.39)	-2.24***	(0.39)
Quality of Government Index			0.47	(0.44)	0.53	(0.44)
Linear Time Trend			2.47***	(0.52)	2.44***	(0.51)
Cross-Sectional						
Gallagher Index			-3.16**	(1.13)	-2.34*	(0.96)
Government Fractionalization			-2.43*	(1.18)		
ENEP					-3.31***	(0.99)
Government Instability			-4.02***	(1.05)	-3.52***	(1.01)
GDP per capita			6.96***	(2.10)	6.08**	(2.00)
GDP growth rate			2.98*	(1.25)	3.38**	(1.19)
Gini Index			0.66	(2.42)	1.05	(2.20)
Quality of Government Index			8.69***	(2.42)	9.34***	(2.29)
Semi-Presidential			-5.39*	(2.68)	-5.18*	(2.52)
Presidential			0.44	(3.94)	0.30	(3.74)
Federal			-0.30	(2.97)	0.79	(2.85)
Ethnic fractionalization			-2.58*	(1.25)	-2.09	(1.19)
Constant	49.92***	(2.20)	50.95***	(1.89)	50.62***	(1.79)
Variance components						
Country intercept	263.58***	(52.00)	36.41***	(9.13)	31.57***	(8.17)
Election intercept	54.56***	(7.57)	34.51***	(5.69)	33.36***	(5.57)
Residuals	61.60***	(3.78)	58.27***	(3.59)	58.37***	(3.59)
Log Likelihood	-3158.00		-3055.272		-3050.21	
AIC	6324.00		6156.55		6146.42	
ICC Country years	0.16		0.41		0.47	
ICC Election	0.14		0.24		0.27	
ICC Country	0.69		0.34		0.26	
Number of country years	833		833		833	
Number of elections	300		300		300	
Number of countries	58		58		58	

Notes: Multilevel regression with ML-Integration; standardized  $\beta$  for continious variables; standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

A promising avenue for further research can be to test whether there still remains a direct effect of government fractionalization when tested jointly with government instability and how much of the effect of government fractionalization is mediated through government instability. Table 31 offers an initial test for this mediation effect. Based on the multilevel analysis of the TSCS dataset presented in Table 4 in chapter 2, a measure of government instability is added to the respective models. Indeed when considering the results of Model 1 and Model 2, we can see that the cross-sectional effects of government fractionalization and the effective number of parties slightly decrease when tested together with government instability. Yet, both coefficients remain substantial and significant, providing some further support to the lack of accountability argument. Equally important is the finding that countries characterized by high levels of government instability tend to have substantially lower levels of SWD. This interesting relationship deserves more attention in the future as governmental instability appears to be an important explanatory variable in its own right in cross-country comparisons. On the other hand, I find no longitudinal effect, possibly implying that we might need to think carefully about both the measurement of government instability and its functional relationship with SWD over time, as a certain degree of change in governments is also an expected consequence of periodic elections.

Finally, the question that remains to be answered is how far the results of the individual level panel analysis of Spain can be generalized to other countries. I believe that the combination of political and economic factors shaping the evolution of satisfaction with democracy can be applied at the least to countries with a similar history of economic crisis and political corruption, for example Italy or Greece. My best guess is that we can also obtain very similar results when we apply this model to many Eastern European and Latin-American countries, facing very similar problems of prolonged economic crisis, corruption and deficits in the administrative capacities. In how far the individual-level results can be applied to economically developed, established democracies is open to debate. Yet, what I have shown is that political and economic factors do a remarkable job in explaining aggregate levels of SWD crossnationally and over time.

This is also the message to policy makers, journalists and pollsters: When observing a peak or decline of SWD it is probably advisable not to be too quick to attribute the change to a certain event or single factor. As this study has demonstrated, there are a number of democratic and economic performances that can cause changes in SWD, thus we should be careful that we pick the right explanation. The relative plenitude of relevant factors can also be understood as an opportunity: if we are not able to change things for the better economically, we can still enhance citizens SWD by improving the quality of democratic processes, fighting corruption or improving administrative effectiveness.

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