Economic Performance, Quality of Democracy and Satisfaction with Democracy

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This study tests the links between economic performance, democratic quality and satisfaction with democracy (SWD) at the national level. Analysing a time-series cross-sectional (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.

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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 for shaping democratic regime evaluations (Armingeon and Guthmann 2014; Bratton and Mattes 2001; Clarke et. al. 1993; Huang et. al. 2008; Quaranta and Martini 2016a; Sanders et al. 2014; Lühiste 2013; Kronberg and Clarke 1994; Waldron and Moore 1999). For countries that had formally been under the European Stability Mechanism (ESM) or under IMF Conditionality such as Greece, Ireland, Italy, Portugal or Spain, the literature mainly attributes the decreasing levels of SWD to the Great Recession, initiated by the financial crisis in 2008 (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016b; Morlino and Piana 2014; Sousa et. al 2014).

On the input side, 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 toward the democratic regime (Norris 2011). 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 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; McAllister 2005; Hofferbert and Klingemann 1999; Huang et. al. 2008; Kronberg and Clarke 1994). Paradoxically, 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).

For a number of reasons, these comparative studies are not well-equipped to provide clarity about the effects of economic and democratic performance on SWD. First, they mainly conduct cross-country comparisons and no study has addressed the more relevant question whether changes in democratic quality also affect the evolution of SWD over time. Second, existing evidence is usually based on a comparison of relatively few countries which likely leads to an imprecise estimation of the aggregate-level parameters (Bryan and Jenkins 2015). It also makes it more difficult to disentangle the often highly collinear variables at the country level (Arcenaux and Huber 2007). Third, the analysed samples suffer from a regional and welfare 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 odd cases with low democratic quality for comparison. This situation is further aggravated by the usage of 'democratization' measures and their inherent inability to track differences in the quality of already established democracies.

This study tries to overcome these limitations by 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; by contrasting the FHI against a more fine graded measure tapping into the 'quality of democracy', the Democracy Barometer (Merkel et al. 2014); and by increasing the temporal and geographical scope of the empirical analysis, covering also many developing economies. Unlike previ-

ous research on the topic, this study conducts a cross-country comparison and a longitudinal panel analysis. This allows testing what factors are capable to explain 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. For this, I analyse a time-series cross-sectional (TSCS) panel dataset that includes information from 61 democracies, covering 1000 country-years between 1980 and 2014. Its regional extension covers East and West Europe, North, South, and Central America, Oceania, South-East Asia and Sub-Saharan Africa, neatly balancing established democracies against new democracies.

This study provides evidence for a strong cross-sectional linkage between democratic quality, economic performance and SWD: countries with a high democratic quality and a good economic record tend to have higher levels of SWD in the long run. Furthermore, it shows that the effect of economic performance on SWD has increased over the decades, while the effect of democratic performance has not changed. Estimating a number of societal growth curves, I am able to show that the increasing importance of economic factors can be attributed to various global economic crises, especially to the Great Recession, implying that citizens today are more critical about the economic record of their countries than before the onset of the financial crisis in 2008.

It further builds on the observation that economic growth and development might intensify demands for democracy, leading to a more critical citizenry. The results of my analysis support the view 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 its citizens will be content with the working of democracy *in the long run*. Finally, it addresses the question whether democratic and economic performance causes SWD to change within countries over time. This study presents longitudinal evidence showing that especially changes in the economic performance of a country are capable to explain even major fluctuations in SWD.

1. Argument and Hypotheses

1.1. *Economic Performance*

Is there an effect of the economy on public evaluations of regime performance? Reviewing the existing evidence, it is likely to be the case. 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 and 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, are 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; Kumlin 2010; Norris 2011; Schäfer 2012; Stockemer and Sundström 2011). As Waldron and Moore (1999: 38) summarize the argument: "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."

At the *contextual-level*, a number of longitudinal studies have presented coherent 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 could 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 the evaluations of the incumbent political authorities, thereby decreasing SWD (Clarke et. al. 1993: 1000f.). Another explanation invokes the inability of governments to be political responsive to their citizens when confronted with rising interest rates, budget deficit and mounting public debt (Armingeon and Guthmann 2014; Quaranta and Martini 2016a). Here, the expectation is that extensive budget deficits

lead to decreasing levels of SWD as it limits the ability of governments to be responsive to their citizens to the degree that they also need to be responsive to their international creditors (Armingeon and Baccaro 2012; Schäfer and Streeck 2013; Morlino and Piana 2014). This discussion leads to the first longitudinal contextual-level hypotheses:

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

For countries such as Greece, Ireland, Italy, Portugal or Spain, where people suffered significantly from the consequences of the Great Recession, the literature mainly attributes the dramatic decline of SWD to the to the worsening economic situation (Armingeon and Guthmann 2014; Cordero and Simón 2016; Quaranta and Martini 2016b; Morlino and Piana 2014; Sousa et. al 2014). These studies also indicate an increasing importance of economic factors in the evaluation of democracy during the recent economic crisis as the unpopular austerity measures, taken as a response to the sovereign debt crisis, further nurtured discontent.

H2: The effect of economic performance on SWD has increased over time.

Rather surprising, 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). Kumlin (2010) even finds a positive effect of unemployment. 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).

I believe we gain from asking the question why longitudinal studies report a strong relationship between economic performance and SWD, while cross-country comparisons indicate rather no 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), especially when conducting comparisons between countries at the aggregate level (Arcenaux and Huber 2007). Simply put, collineartity is a problem of lack of variation: We are missing odd cases for comparison and deal with insufficient data (Goldberger 1991). Tellingly, existing evidence comes usually from a limited number of cases, ranging from 15 to 30 countries, with a bias on economically developed democracies. Despite the mixed empirical record, 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, including more low- and middle income economies.

H3: Countries with higher levels of economic performance tend to have higher levels of SWD.

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 citizen value a good and fair democratic process (Hibbing and Theiss-Morse 2001) and it also suggests itself to ask if the quality of democratic regimes has an effect on public evaluations of the working of democracy. Yet, despite some more recent efforts addressing this question, it is still open to debate.

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; McAllister 2005; Hofferbert and Klingemann 1999;

Huang et. al. 2008; Kronberg and Clarke 1994). 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. […] 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 for democratic 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 […]."

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 responsiveness 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 more deep rooted perceptions about 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.

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 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, because 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; Bertelsmann Transformation Index 2016; Diamond and Morlino 2005; Economist Intelligence Unit 2016; Merkel et al. 2014; Munck 2016; Ringen 2007;

Economist Intelligence Unit 2016; Freedom House 2016), but much less is known about the effects of other aspects of the democratic process.

Despite the recent proliferation of fine-graded democracy indices to choose from, until now, the literature on SWD has only considered the Freedom House Index, with mixed results. Yet, as I discuss later in the measurement section, 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 rather limited number of cases, focusing mainly on established, Western democracies. For this reason, it is not particular 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). Noteworthy exceptions are the studies of Norris (2011) and Ariely (2013), analysing broad samples of more than 40 countries, which are also the only ones reporting evidence in favour of a relationship between democratic quality and SWD.

It is also problematic that all empirical evidence at the contextual-level comes only from cross-country comparisons. We have no knowledge about the causally more interesting question if changes in the democratic status of a country can also lead to changing levels of SWD over time. Again, I expect that we might be able to detect substantial cross-sectional and longitudinal relationships, once we also consider data from new democracies and rely on more fine-graded measures, tapping 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 then countries with a poor democratic record.

1.3. *A Conditional Argument*

I believe it is not far-fetched to ask if economic performance affects regime evaluations in the same fashion in every democratic context. There is a vast corpus of empirical studies showing a substantial relationship between the level of democracy and the economic well-being of a country. Lipset (1959) was among the first to argue that prosperity stimulates democracy.[1] Greater prosperity would contribute to consolidate democracy, Lipset argued, by expanding literacy and schooling, by strengthening the middle classes, increasing media access, mitigating the effects of poverty, promoting democratic values and legitimacy and facilitating civil society organizations.

Following the work of Lipset, a considerable body of research has presented evidence for the notion that economic growth and development facilitate democratic transition, foster democratic stability and strengthen the quality of democratic regimes (Barro 1996; Burkhart and Lewis-Beck 1994; 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 would be 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". Thus, if economic development results in more demands for political freedom and democracy *in the long run*, contributing to the development of a critical citizenry with higher expectations of their democratic regimes (Norris 1999), we can expect the assumed positive relationship between economic performance on SWD to be strengthened or weakened based on the provision of exactly those democratic goods. Simply put, citizens living in affluent countries might expect more of their democracies.

Other studies provide evidence for a reversal effect of democracy on economic growth (Gerring et. al. 2005; Halperin et. al. 2010; Narayan et. al. 2011; Norris 2012; Krieckhaus 2004). Here, a general argument is that democracy allows sanctioning incompetent politicians by competitive, periodic elections, so representatives are obligated to account for

[1] "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)

their past performance and have strong incentives to manage the economy effectively and to provide policies that appeal to the majority of citizens. 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 result are likely to deepen disillusionment with the political process […] than 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 might be a necessary but not a sufficient condition for a satisfied citizenry. If democracies fail to be responsive in providing jobs and welfare over a long period of time, citizens can reasonably be expected to be discontent with the working of their regime. 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.*

2. Data and Measurement

2.1. *Dependent Variable*

As the dependent variable I use 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[2], a concept that has been made famous half a century ago by Easton (1965). 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 "constitutional reality" of a country (Fuchs et. al. 1995: 328).

2.2. *Case Selection*

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). Also, 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). For these two reasons I only select countries into the sample that fulfill a number of *minimal democratic criteria*.[3] 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).

2.3. *TSCS Panel Dataset*

I could retrieve data from 61 countries between 1980 and 2014 that match the above noted democratic criteria and thus was able to compile an encompassing time-series cross-sectional (TSCS) panel dataset. This empirical sample exceeds those of previous studies in

[2] Easton distinguished between two types of political support: whether it is 'diffuse' or 'specific'. Diffuse support "refers to evaluations of what an object is or represents to the general meaning – not what it does." (Easton 1975: 444) Specific political support refers to the satisfaction that members of a given system feel they obtain from the perceived outputs and performance of the political authorities.

[3] 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 elections". 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, so citizens should be able to cast their ballot free of pressures and have their vote counted accurately (Munck 2009: 55).

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, 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 dataset does not only allow for a complex longitudinal analysis but it will also increase our confidence in the cross-sectional 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.[4]

In many instances I collected multiple surveys for the same country-year. For example, three surveys covered Mexico in 2006. 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

[4] More information on the used datasets can be found in Table A in the Appendix.

with democracy, thereby obtaining a scale that can be interpreted in a meaningful way. The aggregate data is normally distributed and numerical in character.[5]

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:

$$\textit{Economic Performance Index} = 100\% - WInf * |Inf(\%) - I^*| - WUnem * (Unem(\%) - U^*) - WDef * (Def/GDP(\%) - Def/GDP^*) + WGDP * (\Delta GDP(\%) - \Delta GDP^*)$$

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.[6]

[5] Compare Figure A in the Appendix.

[6] More information on the used variables and sources can be found in Table B in the Appendix. There have been 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.

2.5. *Measuring Democratic Quality*

Democracy can have many meanings, thus it comes of little surprise that the concept of quality of democracy is also contested (see Munck 2016 for a current overview). Here, I follow the tradition to conceive democracy as a continuous variable, scored numerically from low to high values. Despite the recent proliferation of various promising democracy indices to chose from[7], so far, only the *Freedom House Index* has been related to SWD, with mixed success (Anderson and Tverdova 2003; Ariely 2013; Guldbrandtsen and Skaaning 2010; Listhaug et. al. 2009; Singh 2014). Although the FHI sets out to measure freedom, the index is often used to measure democracy (Coppedge et al. 2011: 249).

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). 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 might not be a good choice to study the effects of the democratic process on SWD. 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). More importantly, however, the FHI is a rather crude measure, which can reliably distinguish between democracy and dictatorships but has difficulties to track differences in the democratic quality of already established democracies.[8]

[7] For example: the Bertelsmann Transformation Index (2016), Economist Intelligence Unit (2016), the Unified Democracy Score (Pemstein et. al. 2010) or Varieties of Democracy (2016).

[8] Empirically, the distribution of cases is bimodal with a high concentration of cases in the upper and lower ratings of the scale (Cheibub et al. 2010: 77). The index is bounded and there is no way to distinguish the quality of democracy between states that have a perfect positive score (Coppedge et al. 2011: 249).

Therefore, 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 also 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.

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- and post-electoral survey data (Banducci and Karp 2003; Blais et. al. 2015). 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.[9]

[9] The data come from the Database of Political Institutions (Cruz et. al. 2016).

The degree of electoral disproportionality is measured using the well-known *Gallagher Index*[10]. 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 tend to have higher levels of SWD (Anderson et. al. 2005; Berggren et al. 2004; Christmann and Torcal 2016; Farrell and McAllister 2006). Thus, I expect higher levels of SWD in contexts with more proportional electoral outcomes (and therefore better representation and fewer wasted votes).

Party system fractionalization is measured using the *effective number of parliamentary parties*.[11] 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 since electoral outcomes no longer determine the final composition of governments (Christmann and Torcal 2016). Additionally, rising party system fractionalization should cause SWD to increase within a country over time (Martini and Quaranta 2014; Quaranta and Martini 2016b). 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).

Furthermore, I control for two important institutional characteristics: type of government and structure of the state (federalism).[12] *Type of government* is measured as a categorical variable distinguishing between parliamentary, semi-presidential and presidential regimes.[13] 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 national fiscal policy (1) or not (0).[14]

[10] The data come from Gallagher (2015). Missing values are replaced with data from the Democracy Barometer (2016).

[11] Identical results are obtained when using the effective number of electoral parties.

[12] 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.

[13] The data are taken from Bormann and Golder (2013).

[14] The data are taken from the Political Constraints Index Dataset (2013).

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 2013) 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).

3. Explaining Aggregate Trends in SWD

I start with an examination of national trends in SWD. In Figure 1 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, for example Austria, Denmark, Switzerland or the Netherlands. On the other end, there are a number of defective democracies where SWD has never or barely raised 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 1990th 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 could recuperate their losses after a few years, for example Argentina or Poland.

--- Figure 1 ---

Now to what extent can economic and democratic performance account for the substantial cross-sectional and longitudinal variation we can observe in Figure 1? The scatterplots in Figure 2 offer a first indication for a strong relationship between those 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.

--- Figure 2 ---

The first scatter-plot on the top left of Figure 2 shows the cross-sectional association between economic performance and SWD. Indeed, the slope of the linear regression line suggest 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 2. 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 stronger 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 well-equipped 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 country-years).

4. Method

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 (2015), I simultaneously model the cross-sectional and longitudinal relationships by adding a group mean and a

de-meaned term together in the model.[15] This leads to the following within-between random effects (REWB) model:

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

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.[16]

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 and economic performance leads to faster or slower change in SWD with the passing of time. Especially, since the starting of the Great Recession in 2008 we can suspect that the influence of economic performance on SWD might have increased in recent years. Answering this question is technically simple, requiring only an interaction of time with a country mean variable $\bar{x}_j$, leading to the following model specification:

[15] Fairbrother (2014: 124) neatly summarizes the procedure: "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 $\bar{x}_j$ 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, $\bar{x}_j$ can then be subtracted from x_{tj}. The resulting longitudinal component x_{tjM} (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."

[16] 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.

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

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 take the following form:

$$y_{ti} = \beta_0 + \beta_1 time_{ij} + \beta_2 x_{ijM} + \beta_3 \bar{x}_j + \beta_4 z_{ijM} + \beta_5 \bar{z}_j + \beta_6 \bar{x}_j * \bar{z}_j + \beta_7 x_j + \mu_j + e_{ij}$$

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 allows 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.

5. Analysis

Table 1 and Table 2 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.[17]

[17] 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

The two null-models in Table 1 and Table 2 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).

--- Table 1 and Table 2 ---

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 three 4 per cent points. Taken together, economic factors clearly have the explanatory power to explain even major crisis in the public evaluation of the political system as for example 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 coefficient 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, despite which 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 ex-

explanatory variables, the coefficients reflect the percentage increase in SWD when the variable switches from zero to one.

plained variances, which are remarkably high for a FE model with an R^2=0.25 and R^2=0.27.[18]

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 run. Thus, an increase in one standard deviation of the DB is associated with an increase of 10.6 per cent points in SWD which is a very strong effect. In total, the cross-sectional predictors do also a very good job in accounting for the variation between countries with an R^2 ranging between 0.6 (Model 2) and 0.72 (Model 7), which is not uncommon for a cross-sectional 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.

--- Figure 3 and Figure 4 ---

In Model 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 3 (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 demo-

[18] Since I do not include random slopes in the model, 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.).

cratic quality (confirming hypothesis 6a and 6b). However, we slightly need to adapt our previous expectations. While I initially assumed that both economic and democratic performance have always a positive effect on SWD – which is stronger or, weaker conditional on the other 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 its citizens will be satisfied with the working of democracy in the long run. 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^2 for the country level.

Model 4 and 9 adds 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 4. On the left, I show the marginal effects of economic performance conditional on the values of a linear time trend, showing an increasing effect over the years. 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 4, the effect of economic performance on SWD was greatest after the Black Monday in 1987, in the mid-90th and especially after the onset of the Great Recession in 2008.[19] 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. 2015). 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 1980th (Keeley

[19] The same picture emerges when estimating the interaction with a categorical variable for the period between 2008 and 2014.

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; Christmann and Torcal 2016; 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 (Christmann and Torcal 2016; Martini and Quaranta 2014; Martini and Quaranta 2016b).

6. Conclusions

The aim of this article has been to contribute to the debate on the attitudinal consequences of democratic quality 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. This study reaffirms this economic argument by showing that the same linkage exists both cross-sectionally and longitudinally, which should increase our confidence in the presented evidence.

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, democratic performance 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[20], 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

[20] 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.

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 interrelated in the long-term. 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 finding is consistent with a large corpus of research, showing that economic development and democracy mutually reinforce each other, finally leading to 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 almost all indicators for democratic quality also entail aspects of good governance in their concept and measurement. Furthermore, it might be a valuable contribution to test at the individual level if the relevance of economic evaluations changes during periods of severe economic crisis, as this study predicts.

Connecting to the half century old discussion about political support (Easton 1965), the results of this study suggest that SWD can best be characterized as specific support: it reflects the satisfaction that citizen feel they obtain from the outputs and performance of their political regime. It appears to be a volatile attitude, shaped by the experiences of the citizens. It can readily change once economic or democratic situations better or worse in the short run but is also driven by those factors in the long run. 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.

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Figure 1: Time Trends of SWD by Country

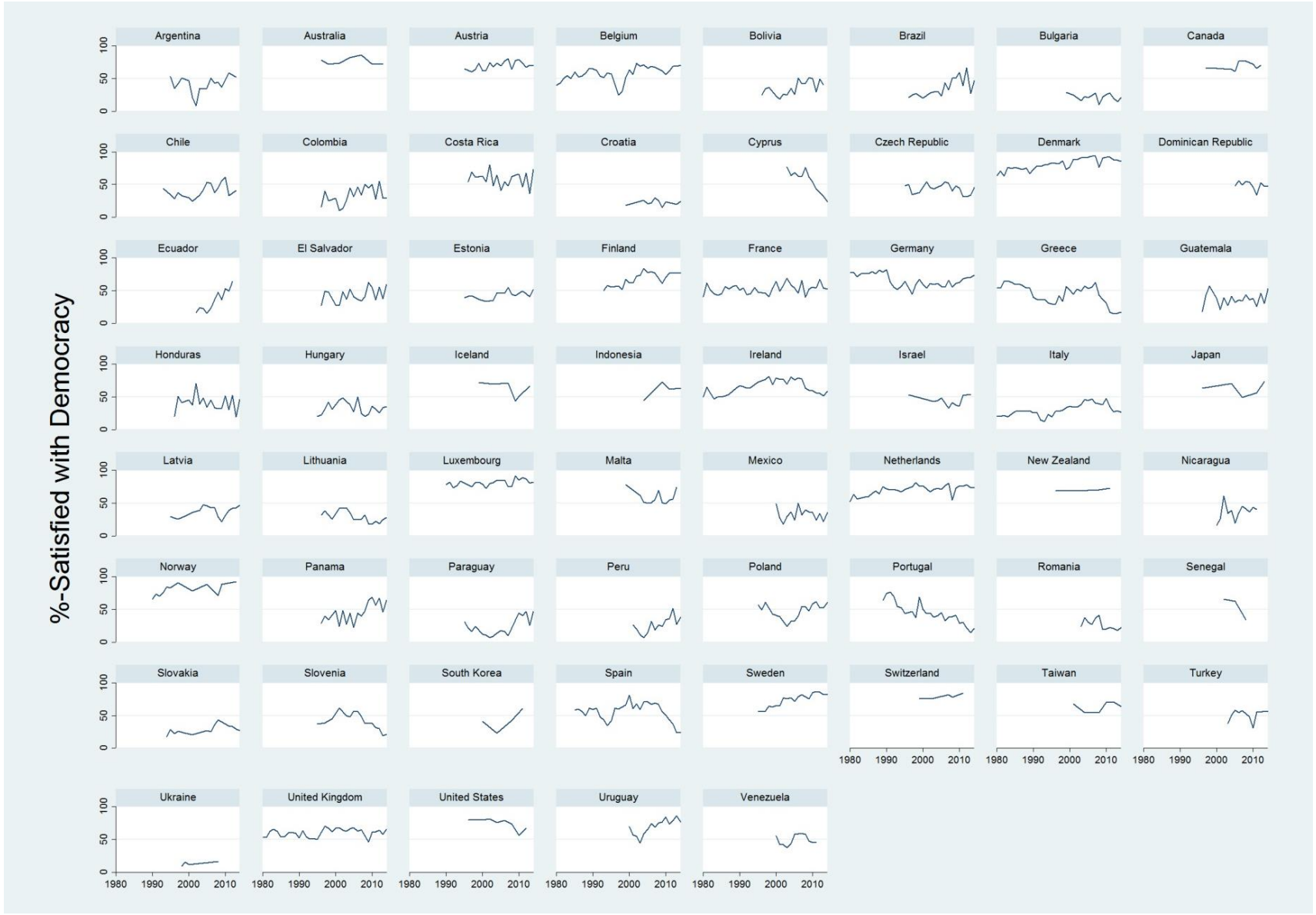
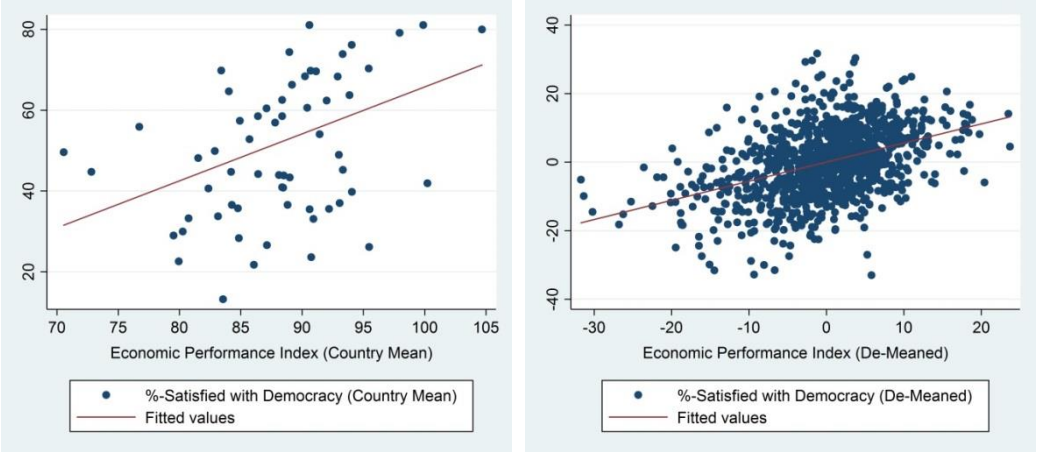
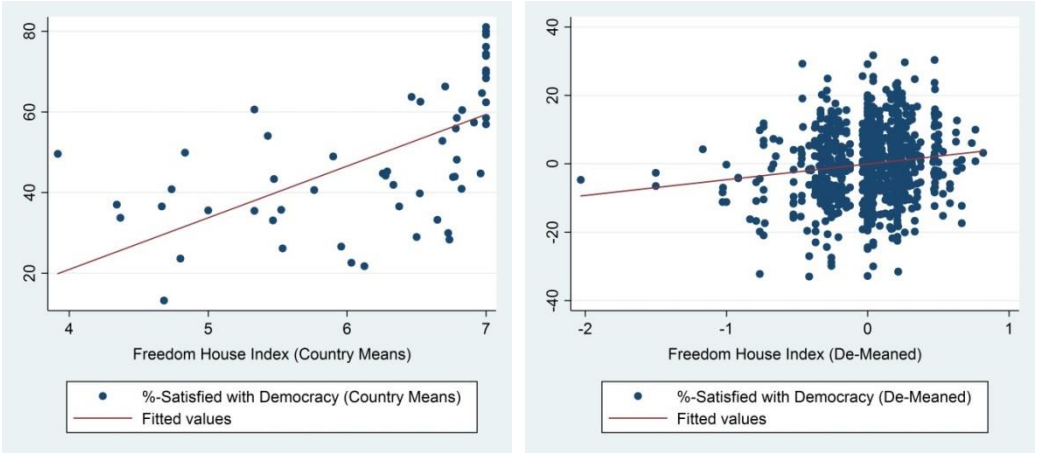


Figure 2: Scatterplots

Economic Performance Index and SWD



Freedom House Index and SWD



Democracy Barometer and SWD

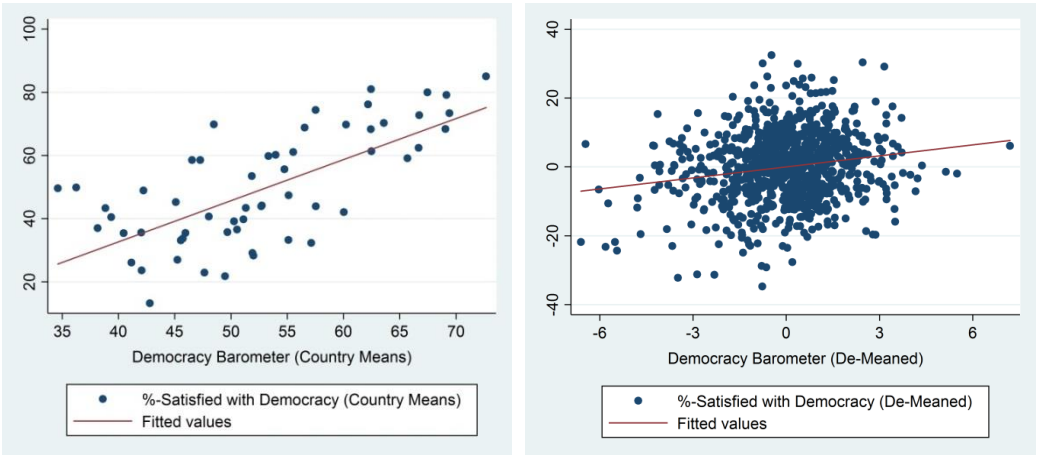


Table 1: REWB Model of Satisfaction with Democracy

	Null		Model 1		Model 2		Model 3		Model 4		Model 5	
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Longitudinal												
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)	-52.36***	(14.71)
FHI * EPI							57.09***	(14.78)			58.91***	(15.05)
EPI * Linear time trend									2.30***	(0.28)	2.30***	(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	-		0.03		0.60		0.69		0.58		0.67	
R-squared country years	-		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	

Notes: Multilevel regression with ML-Integration; standardized β 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.

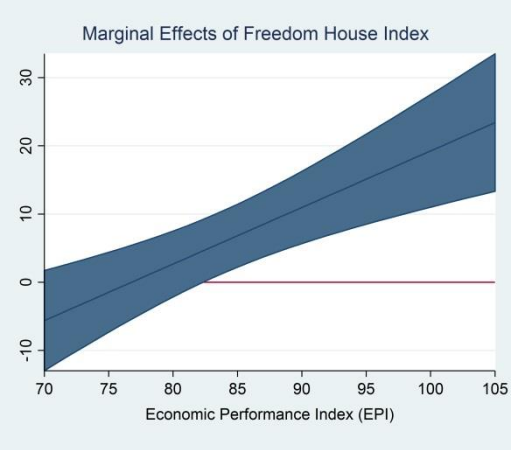
Table 2: REWB Model of Satisfaction with Democracy

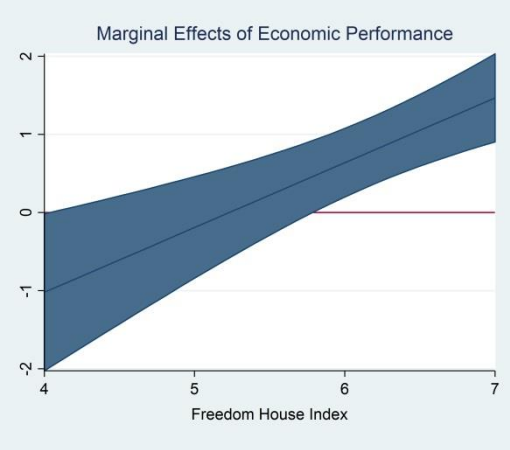
	Null		Model 6		Model 7		Model 8		Model 9		Model 10	
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Longitudinal												
Economic Performance Index (EPI)			3.84***	(0.31)	3.85***	(0.31)	3.87***	(0.31)	4.01***	(0.30)	4.03***	(0.30)
Democracy Barometer (DB)			1.19***	(0.31)	1.19***	(0.31)	1.18***	(0.31)	0.77*	(0.32)	0.76*	(0.32)
Gini Index			-1.94***	(0.31)	-1.92***	(0.31)	-1.92***	(0.31)	-2.24***	(0.33)	-2.24***	(0.33)
Effective Number of Parties			-0.84**	(0.30)	-0.84**	(0.30)	-0.84**	(0.30)	-0.88**	(0.30)	-0.88**	(0.30)
Gallagher Index			-0.20	(0.30)	-0.23	(0.30)	-0.24	(0.30)	-0.18	(0.30)	-0.19	(0.30)
Election year			1.44***	(0.31)	1.41***	(0.31)	1.38***	(0.31)	1.37***	(0.30)	1.35***	(0.30)
Linear time trend			1.07***	(0.30)	1.05***	(0.30)	1.05***	(0.30)	0.82**	(0.32)	0.82**	(0.32)
Cross-Sectional												
Economic Performance Index (EPI)					3.17*	(1.57)	-19.90***	(5.89)	3.34*	(1.60)	-20.58***	(5.93)
Democracy Barometer (DB)					10.63***	(2.60)	-51.65***	(15.55)	10.73***	(2.64)	-53.85***	(15.67)
DB * EPI							73.65***	(18.25)			76.34***	(18.40)
EPI * Linear time trend									1.13***	(0.32)	1.14***	(0.32)
DB * Linear time trend									0.63	(0.37)	0.65	(0.37)
Gini Index					-2.12	(3.10)	1.30	(2.87)	-1.95	(3.15)	1.56	(2.90)
Effective Number of Parties					-5.95***	(1.52)	-5.24***	(1.34)	-5.94***	(1.54)	-5.18***	(1.35)
Gallagher Index					-3.55*	(1.62)	-3.54*	(1.43)	-3.60*	(1.65)	-3.58*	(1.44)
Semi-Presidential					-0.96	(2.47)	-0.66	(2.34)	0.45	(2.48)	0.56	(2.34)
Presidential					6.97	(5.32)	2.01	(4.84)	7.20	(5.40)	2.03	(4.87)
Federal					4.17	(3.13)	5.82*	(2.92)	4.11	(3.15)	5.83*	(2.93)
Ethnic fractionalization					-0.40	(1.61)	-1.34	(1.44)	-0.38	(1.64)	-1.37	(1.45)
Constant	49.61***	(2.34)	49.58***	(2.30)	46.77***	(2.38)	47.88***	(2.12)	46.37***	(2.42)	47.58***	(2.14)
Variance components												
Country intercept	304.44***	(58.88)	296.02***	(56.77)	86.27***	(18.05)	65.17***	(13.84)	89.64***	(18.98)	66.48***	(14.29)
Residuals	106.60***	(5.23)	77.80***	(3.82)	77.95***	(3.84)	77.99***	(3.84)	75.61***	(3.73)	75.68***	(3.73)
Log Likelihood	-3435.55		-3303.83		-3270.92		-3263.74		-3259.25		-3251.71	
AIC	6877.09		6627.66		6579.84		6567.49		6560.49		6547.41	
R-squared country	-		0.03		0.72		0.79		0.71		0.78	
R-squared country years	-		0.27		0.27		0.27		0.29		0.29	
ICC country	0.74		0.79		0.53		0.46		0.54		0.47	
Number of country years	887		887		887		887		887		887	
Number of countries	57		57		57		57		57		57	

Notes: Multilevel regression with ML-Integration; standardized β 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.

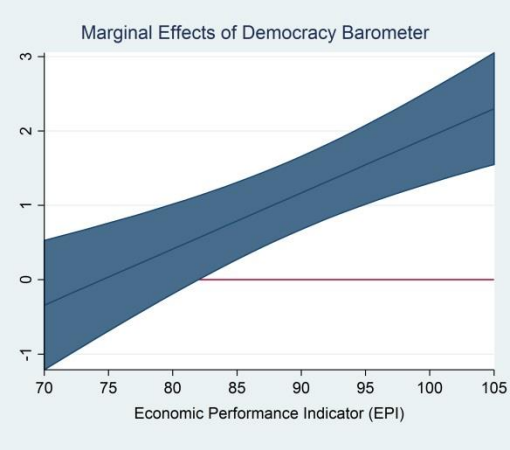
Figure 3: Marginal Effects Plots

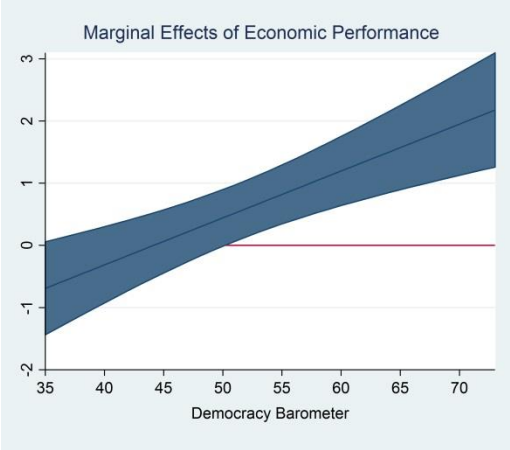
*Model 3, Table 1: Economic Performance Index * Freedom House Index*





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

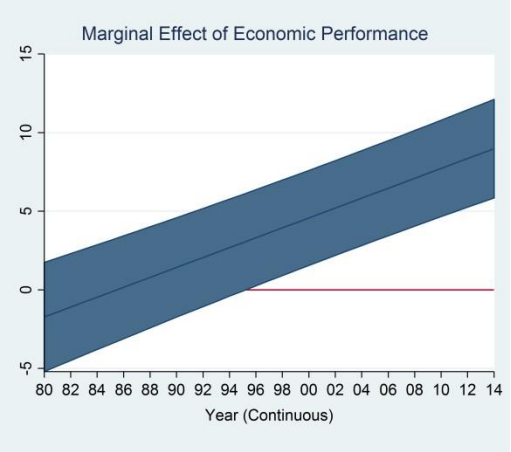


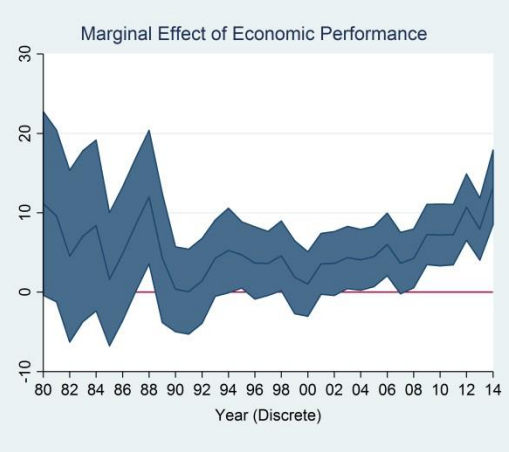


Notes: To allow for a more meaningful interpretation, the marginal effects have been calculated based on unstandardized coefficients. Based on the 'between' predictors of the model.

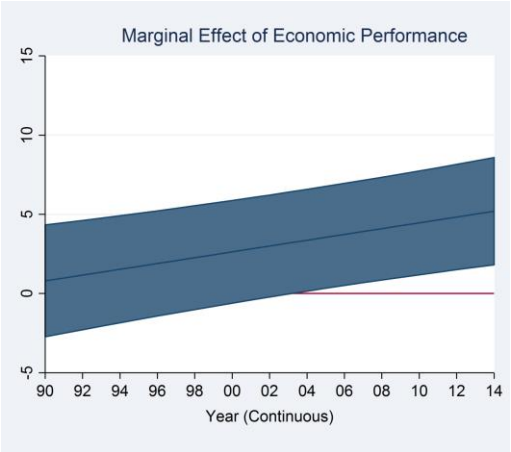
Figure 4: Societal Growth Curves

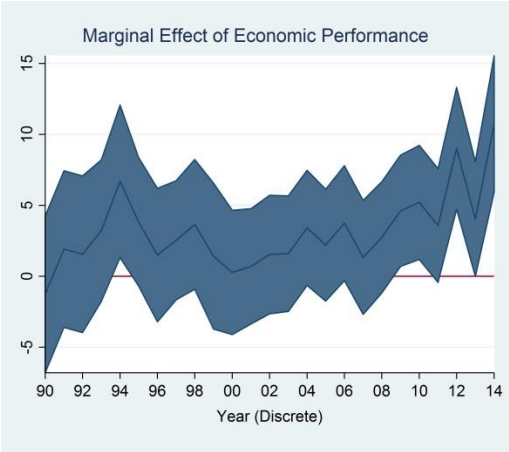
*Model 4, Table 1: Economic Performance Index * Time*





*Model 9, Table 2: 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 categorical one.

8. Appendix

8.1. *Figures and Tables*

Table A: 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.americasbarometer.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_opinion/archives/cceb2_en.htm
Central and Eastern Eurobarometer (CEEB)	30 August 2016	http://ec.europa.eu/public_opinion/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/eurobarometer-data-service/data-access/
European Value Study (EVS)	10 July 2015	http://www.europeanvaluesstudy.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/catalog4_0.html
New Zealand Election Study	10 July 2015	http://www.nzes.org

Figure A: Distribution of SWD

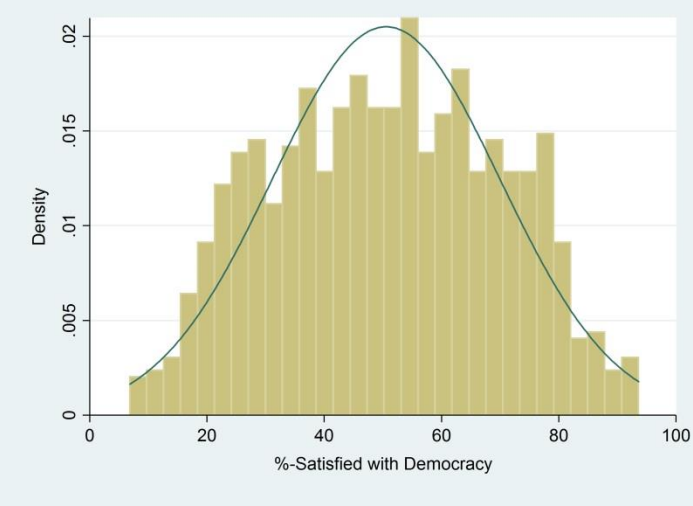


Table B: Summary of Variables

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 Indicators	Freedom House Index (FHI)	Numerical	Yes	Yes	Freedom House (2016)
	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 C: 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 D: 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

8.2. *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 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 none of the models. Fourth, following the suggestion of King and Roberts (2014) 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 its significance when using robust standard errors.

Fifth, Arceneaux and Huber (2007) identify the issue of collineartity as one of the major challenges any study at the country level will likely be facing. Analysing the correlation matrix of each model but also VIF scores, I found the degree of collineartity 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.[21] I found that the fixed effect stays highly significant for the 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.

[21] 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 be not significant when allowing a random slope for that variable (Barr et. al 2013, Bates et. al. 2015).

8.3. *Additional References*

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