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Satisfaction with Democracy in Latin America: Do the Characteristics of the Political System Matter?

Selim Jürgen Ergun, M. Fernanda Rivas y Máximo Rossi

Satisfaction with democracy in Latin America: do the characteristics of the political system matter?

Selim Jürgen Ergun[1], M. Fernanda Rivas[2], Máximo Rossi[3]

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ABSTRACT

This paper analyzes the impact that the rules and characteristics of the political system have on satisfaction with democracy in Latin America. Using individual level survey data provided by Latinobarometer and controlling for both personal characteristics and macroeconomic variables, we find that the rules and characteristics of the political system do matter: Satisfaction with democracy is higher in countries that use a proportional electoral rule for choosing the legislature, where voting is not enforced, and in countries with a federal system. The age of democracy has a negative impact on satisfaction with democracy while the electoral rule used to choose the president does not matter. On the economic side, we find that personal assessments of the economy impact more on satisfaction with democracy than actual macroeconomic data.

Keywords: satisfaction with democracy, Latin America, electoral system

RESUMEN

Este trabajo analiza el impacto que las normas y características del sistema político tienen sobre la satisfacción con la democracia en América Latina. Utilizando datos de la encuesta del Latinobarómetro y controlando por las características personales y variables macroeconómicas, encontramos que las reglas y las características del sistema político importan: la satisfacción con la democracia es mayor en los países que utilizan una regla electoral proporcional para la elección de la legislatura, donde el voto no es obligatorio y en países con un sistema federal. La antigüedad del régimen democrático tiene un impacto negativo sobre la satisfacción con la democracia, mientras que la regla electoral utilizada para elegir al presidente no tiene efectos significativos. En el aspecto económico, encontramos que las evaluaciones personales de la economía tienen mayor impacto sobre la satisfacción con la democracia que los datos macroeconómicos reales.

Palabras clave: satisfacción con la democracia, Latinoamérica, sistema electoral

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[1] Middle East Technical University – Northern Cyprus Campus, email: sergun@metu.edu.tr.
[2] Middle East Technical University – Northern Cyprus Campus, email: rivas@metu.edu.tr.
[3] Department of Economics, University de la Republica, Uruguay, email: maximo.rossi@cienciassociales.edu.uy

1. Introduction

The second half of the 20th century in Latin American history was marked by long periods of military and civil dictatorships on one hand and low economic standards on the other. In the current century, however, democracy has become the norm and the economic conditions have been improving at different pace around the region. Yet, since democracies in the region are not well rooted, the possibility of a change in the regime is still a fear of many people. So, what would be the optimum conditions that would guarantee the current democratic regimes to become well rooted?

One necessary condition, without doubt, would be that citizens are satisfied with the way the democracy works in their countries. This paper aims to analyze the determinants of satisfaction with democracy in Latin America. Specifically, we focus on the role of a set of political and electoral variables such as the age of democracy in the country, whether voting is enforced, the electoral system used to choose the parliament, the system used to elect the president, and whether the country has a federal system of government. As a measure of the level of satisfaction with democracy we use a survey question from the Latinobarometer 2010.

The use of survey questions measuring the level of satisfaction with democracy around the globe has been very popular in the last decades. But what do such questions actually measure?[4] We concur with Linde and Ekman (2003) who argue that satisfaction with democracy "is an indicator of support for the *performance* of the democratic regime" (p. 399) or, in other words, it measures people's evaluations of the political regime (Klingemann, 1999). It is not, however, an indicator of support of the principles of democracy (Linde and Ekman, 2003) which is actually measured in survey questions regarding support for democracy or the political regime.

Previous studies point out the role of the current macroeconomic conditions as well as socio-demographic factors on satisfaction with democracy. Thus, we control for a large set of macroeconomic and personal variables as well as personal political and opinion variables. Of equal or even more importance as shown in the literature is whether a

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[4] For a critique of the use of "satisfaction with democracy" survey questions see Canache et al. (2001).

citizen's ideology is represented in the government. Thus, we also control for whether the survey respondent supports a party that is represented in the government.

We find that people are more satisfied with democracy if members of the parliament are elected by a proportional electoral rule, and the power is shared with regional political units, i.e. under federalism. On the other side, while the way the president is elected has no significant effect on satisfaction with democracy, the level of satisfaction is lower in older democracies, i.e. the age of democracy has a significant negative effect on satisfaction with democracy. Compulsory voting has also a negative impact on satisfaction with democracy.

This paper makes two contributions to the literature. On the one side, to our best knowledge we are the first ones to consider an extensive set of institutional and electoral variables for Latin American countries to study their impact on satisfaction with democracy, and on the other side, we are also the first ones to investigate how federalism and the electoral system used to choose the president affect the level of satisfaction with democracy.

The paper is organized as follows. The next section reviews the literature and presents our hypotheses. Section 3 presents the data and describes the methodology we use. Section 4 presents our results and the last section discusses our findings and concludes.

2. Literature Review and Hypotheses

While on the one extreme Costa Rica has been under democratic rule for more than six decades, democracy has been the norm in many Latin American countries only for less than three decades. So, how would the age of democracy impact on the level of satisfaction with democracy in Latin America?

Studying the determinants of satisfaction with democracy in Europe, Armingeon and Guthmann (2014) and Reher (2015) found that the age of democracy has a positive effect on satisfaction with democracy. Anderson and Tverdova (2003) and Stockemer and Sundström (2013), on the other hand, did not find any significant effect of the age of democracy on satisfaction with democracy.

Fernandez and Kuenzi (2010) argue that the lower satisfaction with democracy in Latin America compared to the one in Africa could be due to the fact that in Latin America

people had more time to become disillusioned with democracy. The transition from authoritarian regimes to democracy might most likely lead to high levels of satisfaction with democracy, due to increasing liberties, more participatory decision making mechanisms and several other factors. The fact that most Latin American democracies are far from ideal, reflected for instance in the Freedom Index, might have led to a disillusionment over time in terms of how people perceive their democracies. Thus, we would expect satisfaction with democracy to decrease over time.

Hypothesis 1: *Satisfaction with democracy decreases with the age of the democracy.*

In Latin America, voting in both presidential and parliamentary elections is compulsory in some countries whereas it is not in others. Berggren et al. (2004) argue that citizens may resent being forced to vote and the cost of voting may outweigh the potential benefits. Using the Eurobarometer survey, they find that satisfaction with democracy is lower in countries were voting is compulsory.

The fact that voting is compulsory, however, should not play a major role, unless the law is enforced. Therefore, we would expect satisfaction with democracy to be lower in countries where voting is enforced.

Hypothesis 2: *Enforced voting affects negatively satisfaction with democracy.*

The composition of the parliament in a country clearly depends not only on for whom or for which party voters cast their votes but also on how those votes are transformed into seats, that is, the electoral rule. Thus, one could expect that the electoral rule used to choose parliamentary members might affect the level of satisfaction with democracy. Berggen et al. (2004) argue that smaller districts establish a closer tie between voters and their representatives, and, thus, they conjecture that satisfaction with democracy would be lower in large-district proportional representation systems than in single-member district systems. Their analysis confirms that argument. Several other studies, on the other hand, such as Listhaug et al. (2009), Rich (2015), and Guldbrandtsen and Skaaning (2010) do not find any significant effect of the electoral rule used to choose the legislature on satisfaction with democracy. Lijphart, in his *Patterns of Democracy* (1999), however, concludes that

citizens in countries with proportional representation systems have higher levels of satisfaction with democracy. Singh (2014) confirms that conclusion.

Aarts and Thomassen (2008) find that satisfaction with democracy depends positively on the perception of representativeness.[5] One might argue that the more proportional an electoral system is, the more representative is the parliament in terms of different political views, ethnicities, minorities, etc. A more extensive representation might lead to a higher level of satisfaction with democracy.

Hypothesis 3: Satisfaction with democracy is higher when a proportional electoral rule is used for parliamentary elections.

All the Latin American countries we consider in our analysis are presidential democracies. There is, however, variation in how presidents are elected. Some countries, such as Uruguay or Chile, use a two round majority system, others such as Argentina or Costa Rica use a qualified plurality rule, whereas others such as Panama or Paraguay use a simple plurality rule. Theoretically, in a country using the plurality rule for presidential election where, say five candidates compete, the president might be elected with as little as twenty percent of the votes. On the other hand, if the rule used is a two round majority system, the elected president will have received the absolute majority of the votes, at least in the second round. In other words, it is more likely that the elected president has been supported by an absolute majority, or at least, it is much less likely that she is a "bad choice" for a vast majority. Thus, we would expect an electoral rule for choosing the president that prevents the election of a candidate with little support to lead to higher satisfaction with democracy.

Hypothesis 4: Satisfaction with democracy is higher when a two-round majority system or a qualified plurality rule is used to choose the president rather than a simple plurality rule.

In Latin America there are a few countries such as Argentina and Brazil that have a federal system of government whereas the majority are unitary states. Norris (1999) studies the effect of institutional characteristics on trust in institutions and she argues that federal states are more flexible and therefore would be able to integrate more diverse interests and

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[5] Interestingly, they find that satisfaction with democracy is negatively related to proportional representation.

thus create more trust in its institutions.[6] If a federal state is more able to integrate diverse interests, we would expect in such countries to observe higher levels of satisfaction with democracy than in unitary states.

Hypothesis 5: Satisfaction with democracy is higher in countries with a federal system.

As stated before, we interpret satisfaction with democracy as a measure of how people evaluate the performance of the regime. The performance of a democratic regime would greatly depend on the performance of the governing party or parties. The evaluation of such a performance, in most of the cases, would be of a greatly subjective nature. Therefore, in their seminal work Anderson and Guillory (1997) argued that people's satisfaction with democracy would be influenced by whether they are among the winners or losers of the latest elections, that is, whether they voted for the party (or a party) in the government in the last election. This is precisely what they find. Following their work, several others, including Anderson and Tverdova (2003), Banducci and Karp (2003), Anderson et al. (2005), Anderson and Singer (2008), Listhaug et al. (2009), Curini et al. (2012), Schäfer (2012), Lühiste (2014), Singh (2014), Rich (2015), Leiter and Clark (2015), obtained the same result. Therefore, we would expect to observe the same phenomena in Latin American countries. However, since we do not have information in our database about the party the respondent has voted for in the last election, we use as proxy a variable created by the Latinobarometer organization: if the party the respondent would vote for is ruling the country. Accordingly, we expect that respondents who would vote for a party that is ruling the country at the moment the survey was conducted, would show higher satisfaction with the way democracy works.

Hypothesis 6: People show higher satisfaction with democracy if the party they would vote for participates in the government.

It has been established in the literature that when people evaluate the performance of democracy in their countries, that is, when they answer the question about how satisfied they are with the way democracy works, they do not isolate the democracy's performance from how they believe the economy is performing. A long list of papers, including, Karp

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[6] She finds however, the exactly opposite result.

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and Bowler (2001), Berggren et al. (2004), Park and Shin (2006), Listhaug et al. (2009), Fernandez and Kuenzi (2010), Guldbrandtsen and Skaaning (2010), Stockemer and Sundström (2013), Armingeon and Guthmann (2014), Lühiste (2014), and covering almost every region of the world, have established a positive relationship between satisfaction with democracy and a more positive personal evaluation of the national economic performance.

A good national economic performance does not necessarily impact on everybody the same way, that is, some people might not be benefitting at all although they might believe that the economy is doing well. The contrary might also be the case. That is, although one might believe that the economy is not doing well as a whole, that person might still be believing that she is doing well economically. Therefore, a positive personal economic evaluation, as confirmed by Berggren et al. (2004) and Guldbrandtsen and Skaaning (2010) could also increase satisfaction with democracy. As a result, we expect a positive relationship between a more positive personal and/or national evaluation of the economy and satisfaction with democracy.

Hypothesis 7: The more positive the view of the citizens is about the way the economy is operating and the more positive their view is about their personal economic situation the more satisfied with democracy they are.

Of course, people's subjective evaluations about how well the economy is doing does not need always to be verified by measurable macroeconomic variables. So, one could also analyze the impact of several macroeconomic variables such as the unemployment rate, the inflation rate, the short-term growth rate and the long-term growth rate on satisfaction with democracy. This has been done by several authors. For instance, regarding the effect of the unemployment rate on satisfaction with democracy, while Wagner et al. (2009), Friedrichsen and Zahn (2014), and Leiter and Clark (2015) found that a higher unemployment rate implies lower satisfaction with democracy, Anderson and Singer (2008) and Armingeon and Guthmann (2014) did not find any significant relationship between those two variables. While Wagner et al. (2009) found a significant negative relationship between the inflation rate and satisfaction with democracy, Friedrichsen and Zahn (2014) did not verify that finding. Considering the effect of growth, while Friedrichsen and Zahn (2014) and Anderson and Tverdova (2003) found a positive

relationship between the annual GDP growth rate and satisfaction with democracy, Stockemer and Sundström (2013) and Anderson and Singer (2008) did not find any significant relationship. Looking on the impact of a longer period growth rate, namely the five-year average GDP growth rate, Guldbrandtsen and Skaaning (2010) found a positive effect of it on satisfaction with democracy.

Considering all the above mentioned findings, we also control in our analysis for the effect of the inflation rate, the unemployment rate, the annual GDP growth rate and the ten-year average GDP growth rate.

We hypothesized that both the view of the citizens about the way the economy is operating and their view about their personal economic situation would affect satisfaction with democracy. From a similar reasoning, then, we should also distinguish between the overall unemployment rate and whether a person in particular is unemployed, and the overall income level and the income of that person or her household in particular. Friedrichsen and Zahn (2014), Schäfer (2012) and Anderson and Singer (2008) find that being unemployed has a significant negative impact on satisfaction with democracy. Regarding income, while Anderson et al. (2005), Schäfer (2012) and Leiter and Clark (2015) find a positive relationship between household or personal income and satisfaction with democracy, Wu and Chu (2007) find an inverse u-shaped relationship. Taking into account the above argument and empirical findings, we also control for whether a respondent is unemployed or not and the respondent's income level.

One serious problem that institutions and probably many of the societies as a whole have been suffering in Latin America is corruption. The impact of corruption on satisfaction with democracy has already been established. Wagner et al. (2009), using the World Bank Control of Corruption Indicator, and Stockemer and Sundström (2013) using the same indicator and also individual perceptions of corruption find that higher perception of corruption implies lower satisfaction with democracy. Using as a measure of corruption perception the Corruption Perception Index by Transparency International, Anderson and Tverdova (2003) obtain the same finding.

They take, however, one further interesting step and analyze whether the impact of corruption perception on satisfaction with the political system is different for those who voted for a party in the government than for those who did not. They find that corruption

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has a less negative effect on the evaluation of the system of voters for a party in the government. In our analysis, we also control for the effect of corruption perception and whether corruption affects those who support a winning party differently than those who would vote for another party.

3.Database and methodology

Our empirical research is conducted using data from 18 Latin American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, El Salvador, Uruguay, and Venezuela). The data source is the Latinobarometer Survey (2010) which provides information about individuals' opinions, attitudes, behaviors, values, and socio-demographic characteristics (including religious affiliation and practices).[7]

Our dependent variable is based on the following question: "In general, would you say that you are very satisfied, quite satisfied, not very satisfied or not at all satisfied with the working of the democracy in (country)?" The possible answers go from 1 (Not at all Satisfied) to 4 (Very Satisfied).[8] We call this variable *Satisfaction with Democracy* (SWD).

We have run multilevel ordered logit models with four sets of independent variables: country level political variables, other country level variables, personal economic, political, and opinion variables, and personal control variables. Tables A1 and A2 in the appendix show a summary description of the variables used in our analysis. Table A1 shows the variables we take from the Latinobarometer (including the dependent variable) and Table A2 shows the rest of the variables.

Our main independent variables are the ones reflecting the political system in our set of countries. They include a variable reflecting the age of the democracy (*Age democracy*), a dummy variable showing if voting is enforced (*Voting enforced*), a dummy variable that takes value 1 if the election of the parliament follows proportional representation

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[7] See http://www.latinobarometro.org.
[8] We have inverted the original answers that were going from 1 (Very satisfied) to 4 (Not at all satisfied), to make it easier to interpret the results. So, a larger value of the variable implies more satisfaction with the working of the democracy.

(*Elections-Proportional representation*), a dummy variable that takes value 1 if the election of the president is a plurality or first-past-the-post election (*Elections for president - FPTP*), i.e. the election is won by the candidate that receives more votes than any others (the alternative is a two-round system or a qualified plurality), and a dummy variable that shows whether the country has a federal system (*Federal system*).

The second set of variables consists of country level variables: Gini index[9], inflation rate, unemployment rate, openness to trade index, size of the shadow economy[10], GDP growth in the last year and in the last 10 years, corruption level, freedom index, and human development index. The data for these variables, like the variables in the first group, come from different sources, which are indicated in Table A2 in the appendix.

The variables in the third and fourth group are from the same source as our dependent variable, i.e. the Latinobarometer. The third set of variables include personal economic, political, and opinion variables: two variables capturing how good the respondent thinks the country's and her personal economic situations are in comparison to 12 months before (*Economic country situation is better* and *Economic personal situation is better*), how the respondent positions herself in the income distribution from the poorest (1) to the richest (10) (*Economic self-position*), a variable that shows how fair she thinks the income distribution in her country is (*Income distribution: Fair?*), going from 1 (Very unfair) to 4 (Very fair)[11], how interested she is in politics (*Interest in politics*) from 1 (Not interested) to 4 (Very interested), and her political inclination (*Left-right*) from 0 (Left) to 10 (Right).[12] Lastly, we also include a variable that shows if the subject supports one of the parties in the government or not (*Winner*)[13], and an interaction between this variable and the corruption level.

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[9] Anderson and Singer (2008), Berry and Tello Rodriguez (2010), Wu and Chu (2007) explore the effect of income inequality measured by the Gini coefficient on SWD and find that a higher income inequality leads to lower SWD.

[10] Wagner et al. (2009) find that the smaller the weight of the shadow economy the higher SWD.

[11] We have inverted the original variable.

[12] The variables *Interest in politics,* and *Left-right* are included because they were previously found to affect SWD. Schäfer (2012) and Rich (2015) find a positive impact of interest in politics on SWD. Anderson and Tverdova (2003) and Anderson and Singer (2008) find that higher interest in politics implies higher satisfaction with the system. Anderson et al. (2005), Lühiste (2014), Park and Shin (2006), Reher (2015), and Schäfer (2012) find that leftist voters are less satisfied with democracy and a more rightist view increases SWD.

[13] We use a variable created by the Latinobarometer organization that is based on the question "If elections were held this Sunday, which party would you vote for?".

The last group of variables are the personal control variables: the gender of the respondent (*Male*, takes value 1 if the respondent is a man), the age (*Age*), the educational level –we include 4 dummy variables representing educational attainments from incomplete secondary or technical education to complete higher education–, two variables reflecting her religion (*Catholic* and *Other Christian religion*), two dummies about the religiosity of the respondent (*Religious person*, and *Very religious person*), two variables reflecting her marital status (*Married[14]* and *Single*), and finally a dummy variable that takes value 1 if the respondent is unemployed (*Unemployed*).[15]

4.Results

In this section, a statistical analysis of the data is presented, followed by an econometric analysis. In the first subsection the average satisfaction with democracy (SWD) for each country is shown, and it is related to some of the independent variables. In subsection 4.2 the results of a multilevel ordered logit model are presented.

4.1. Statistical analysis

The analysis in this section is guided by the hypotheses stated in section 2.

Figure 1 shows the average SWD for all the 18 countries in our sample. The minimum level of SWD is observed in Mexico (2.05) and the highest level in Uruguay (2.95); i.e. Mexicans are the less satisfied and Uruguayans are the most satisfied with the way the democracy works. An ANOVA tells us that the 18 means are not equal. Nonetheless, not all of them are different. Only the Uruguayan average is different from that of all the other

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[14] The variable *married* includes those respondents who are married or living with a partner.
[15] The gender of the respondent is included as a control variable because Leiter and Clark (2015) and Schäfer (2012) find that males are more satisfied with democracy. We control for the age because Anderson and Singer (2008), Friedrichsen and Zahn (2014), and Leiter and Clark (2015) find a negative relation between age and SWD. The dummy variables reflecting the education level of the respondents have been included because Schäfer (2012) and Leiter and Clark (2015) find that more educated subjects are more satisfied with democracy, while Berry and Tello Rodriguez (2010) find the opposite. The religion and religiosity of the respondents are control variables because Schäfer (2012) finds that those with stronger religious beliefs are more satisfied with democracy.

countries, and also the averages of Costa Rica and Panama are different from all the other means (although they are not different from each other).[16]
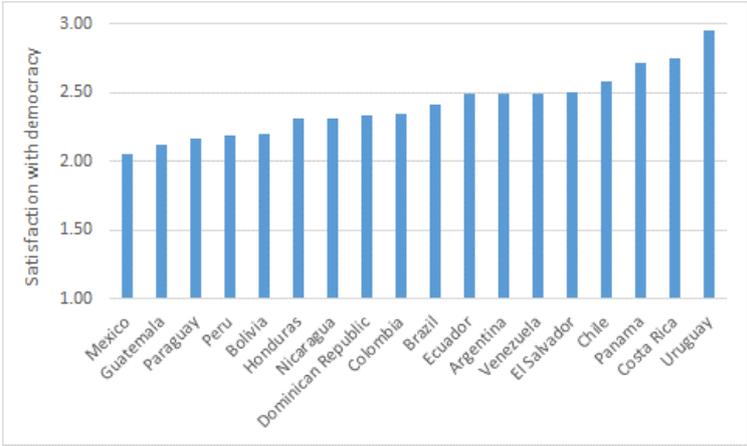

Figure 1: Average satisfaction with democracy per country

Our second hypothesis states that enforcing citizens to vote would have a negative effect on SWD. The countries in our sample that enforce voting are: Argentina, Brazil, Chile, Ecuador, Peru, and Uruguay. Their average SWD is 2.52 and the average SWD for the rest of the countries is 2.35, i.e. the average SWD is higher for the countries where voting is enforced. The p-value of the t-test is <1%. This evidence contradicts *Hypothesis 2*, but in conducting this analysis we are not controlling for any other variable; this will be done in the Econometric analysis section.

Regarding the parliamentary electoral rule, 13 countries have a proportional electoral system while Bolivia, Mexico, Panama, and Venezuela have a mixed system and Chile has a binomial system. The average SWD for the countries with proportional representation is 2.42, while the average for the other countries is 2.40. These values are not statistically different. This result does not support *Hypothesis 3,* but again, we are not controlling for any other variable here.

In relation to the system used to elect the president, there are three possibilities: FPTP (first-past-the-post) or simple plurality rule where the candidate that receives more votes wins the election, qualified plurality rules, or two-round systems. From the 18 Latin

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[16] Since the average SWD is found to be different among the 18 countries, we do not show statistical tests for variables that take different values for each country –like *Age democracy* and all the macroeconomic variables included in the category "Other country variables"– because it would imply repeating the same tests.

American countries considered in this research, Honduras, Mexico, Panama, Paraguay, and Venezuela have a FPTP system. The average SWD for this group of countries is 2.34, while the average SWD for the other countries is 2.44. The p-value of the t-test is <1%, i.e. the difference between these means is statistically significant. This finding supports *Hypothesis 4* that SWD would be higher when a two-round or a qualified majority rule is used to choose the president.

In our sample there are only 4 countries that have a federal system: Argentina, Brazil, Mexico, and Venezuela; 4 of the 6 most populated countries. Their mean SWD is 2.36 whilst the mean for the other countries is 2.43, and the difference is statistically significant (p-value<1%). This result contradicts *Hypothesis 5* that stated that SWD would be higher in countries with a federal system. Exactly the opposite is found here.

Figure 2 shows the difference in SWD between the respondents that support the ruling party (Winners) vs. the respondents that do not (Non-winners).
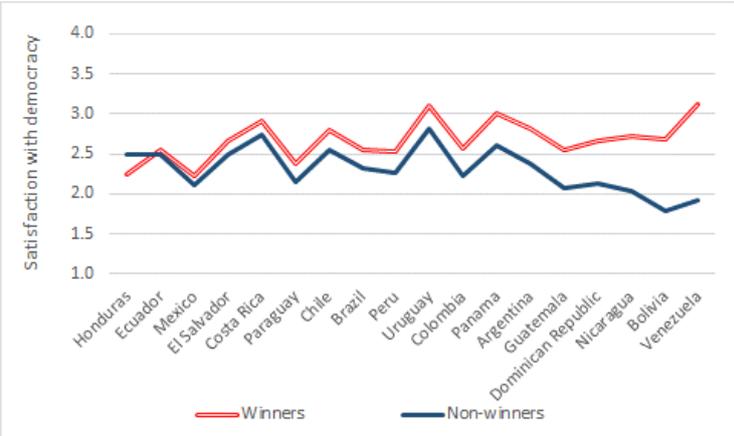

Figure 2: Average satisfaction with democracy per country for Winners and Non-winners

With only one exception (Honduras) the level of satisfaction with democracy of the respondents that would vote for a/the ruling party is higher than that of the respondents who would not vote for such a party. Nonetheless, the difference is not constant, for some countries the difference is very small but for others (like Venezuela) the difference is very large.[17] T-tests conducted for each country separately tell us that, except for Honduras (where the difference is significant but in the other direction), Ecuador, and Mexico, the differences are statistically significant. For Costa Rica the p-value is 6.3%, for El Salvador

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[17] In Venezuela, the average SWD for winners is 3.12 while it is 1.92 for non-winners.

it is 2.9%, and for Peru 2.8%; all the other p-values are lower than 1%. This finding gives support to *Hypothesis 6* (people supporting a/the winning party show higher levels of SWD).

Until now the analysis focused on the political variables, most of them at country level, and on the relation between SWD and whether the respondent would vote for a ruling party or not. Now, the relation between SWD and the personal economic, political, and opinion variables will be investigated.

First of all, we analyze the Latinobarometer survey question where respondents were asked to state how much better their personal economic situation is compared to 12 months before. They were also asked to make a similar comparison about their country's economic situation, which we also analyze. Both variables go from 1 (much worse) to 5 (much better). Figure 3 illustrates the relationship between the answer to these two questions and SWD.
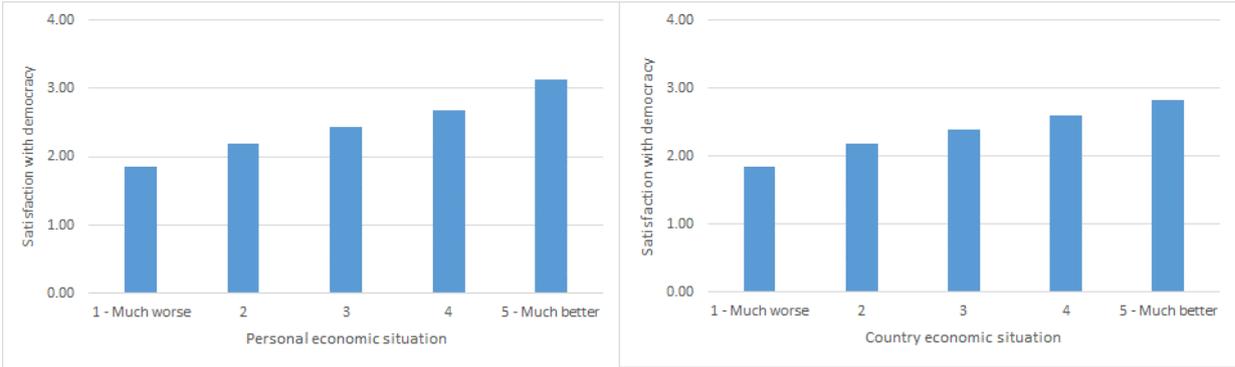
Figure 3: SWD by evaluation of economic situation

There seems to be a positive relation between how well the respondent thinks her personal and the national economic situations are and how satisfied she is with democracy. ANOVAs show that the average SWD for each category of the independent variables are different (p-values<1%).

It seems that *Hypothesis 7* is confirmed: the more positive the view of the citizens is about the way the economy is operating and the more positive their view is about their personal economic situation the more satisfied with democracy they are.

The analysis below deals with variables that are included in the econometric regressions but mainly as control variables: how poor/rich the respondent thinks she is, how fair she thinks the income distribution is, how interested in politics the respondent is, and how leftist/rightist she is (in a 0 to 10 scale).

Figure 4 shows the relation between average SWD and the variables *Economic self-position* (how poor/rich the respondent thinks she is) and the relation between SWD and how fair she thinks income distribution in her country is.

Figure 4: SWD by economic self-position and by income distribution

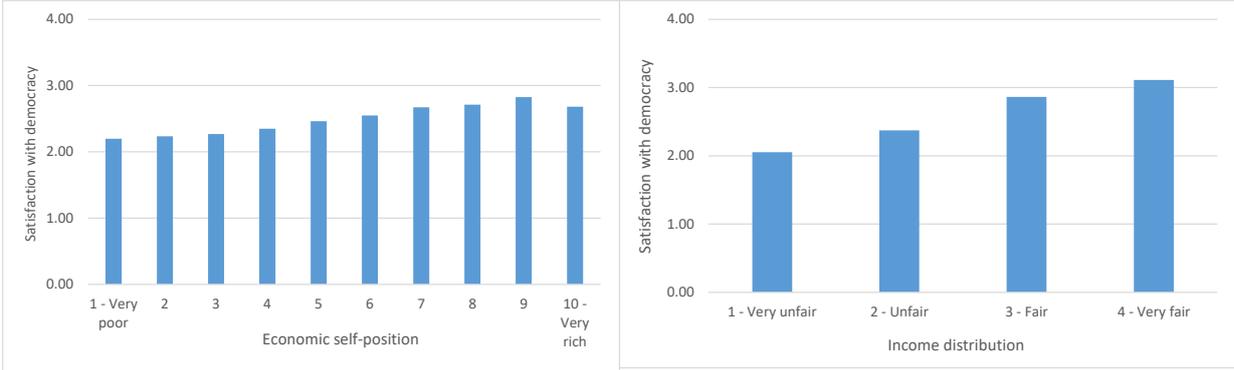Except for the last level of the variable *Economic self-position*, there seems to exist a positive relation between how rich the respondent thinks she is (in a 1 to 10 scale) and how satisfied she is with the way democracy works. An ANOVA shows that the average SWD of categories 1, 2, and 3 are equal to each other, and on the other extreme categories 7, 8, 9, and 10 are also similar to each other, but SWD increases the more rich the subject thinks she is.

Also, Figure 4 shows a clear positive relation between the assumed income distribution fairness and SWD: the fairer the respondent thinks the income distribution is, the more satisfied with the way democracy works she is.

The following figure deals with how interested in politics the respondent is and how leftist/rightist she is. There seems to be a positive relation between interest in politics and SWD, while it seems there is no obvious relation between how leftist or rightist a respondent is and her satisfaction with democracy. An ANOVA confirms that the level of SWD is different according to the level of interest in politics; more interested respondents

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are more satisfied with democracy. On the other hand, even though an ANOVA rejects that the level of SWD is equal for all the left/right levels, the relation is not clear at all.
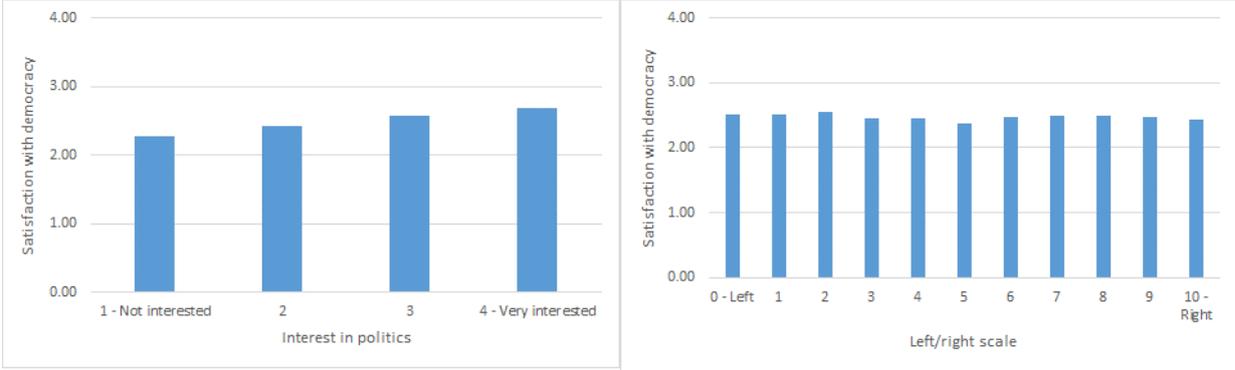

Figure 5: SWD by interest in politics and left/right

4.2. Econometric analysis

In this subsection the results of two multilevel ordered logit models are presented. Model II includes the same variables as Model I plus a dummy variable that shows if the party the respondent supports is ruling the country (*Winner*), and an interaction between this variable and the corruption level of the country. Both models are shown, despite the fact that the estimates are very similar, because including the variable *Winner* implies reducing the sample size to almost half of it. The models are presented in Table I and the marginal effects in Table II.

The variables are organized in 4 groups. The first two groups include variables at the country level: the political variables group and the other country variables group. The third group consists of personal variables: economic, political, and opinion variables group, and the forth group comprises the control variables.

Our main focus of attention is on the country's political variables, namely: the age of the democracy, whether voting is enforced, the electoral systems used to choose the parliament and the president, and whether the country has a federal system.

Regarding how old the democracy is, i.e. how many years passed after the return of the country to democracy, we find that it has a negative effect on satisfaction with democracy:

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the more years it has passed since the end of a non-democratic regime the less satisfied with democracy the respondents are. The estimate of the marginal effects shows a positive variation of 0.2 percentage points (pp) of the probability of answering Not at all Satisfied with Democracy (NSD) if *Age of democracy* increases 1 year, and on the other hand, a negative variation of 0.2 pp in the likelihood of Very Satisfied with the Democracy (VSD). This result supports *Hypothesis 1*. In Latin America most of the countries have lived under democracy for a quite long time now, and it seems that the initial enthusiasm has been washed away with time. Our result is in line with that of Fernandez and Kuenzi (2010).

The second hypothesis refers to whether voting is enforced in the country. It stated that enforcing citizens to vote would have a negative effect on SWD. Although with the statistical analysis we found a positive effect on SWD, when we control for other variables –as it is done in the regression analysis– a negative effect is found: the fact that voting is enforced has a negative effect on SWD, giving support to *Hypothesis 2*. Enforcing citizens to vote reduces VSD by 7.3 pp, while the probability of answering NSD increases by 10.8 pp. This finding corroborates that of Berggren et al. (2004).

The third political variable considered is the rule used to elect the parliament. In the statistical analysis we did not find any effect, but Table 1 shows that having a proportional representation system has a positive and significant effect on SWD, supporting *Hypothesis 3*: SWD is higher in countries which use a proportional electoral rule for parliamentary elections. The explanation most likely lies in the fact that a more proportional system represents a larger myriad of political views, ethnicities, minorities, etc. Having a proportional representation increments by 4.8 pp the likelihood of responding VSD and decreases that of answering NSD by 7.2 pp.

Regarding the system used to elect the president, in section 4.1 a positive effect of FPTP was found, but when adding control variables this effect disappears, the dummy variable *FPTP* does not have a significant effect on SWD. No evidence to sustain *Hypothesis 4* is found.

The last political variable analyzed is whether the country has a federal system. With the statistical analysis a negative effect of a federal system was found, but Model II shows that when controlling for other variables, the fact of having a federal system has a positive and significant effect on the satisfaction with the way democracy works, upholding *Hypothesis*

5. The marginal effects show that having a federal system increases by 4.3 pp the odds of answering VSD and decreases NSD in 3.8 pp. Nonetheless, the effect of the variable *Federal system* is not significant in Model I.

These five variables are our main focus of interest. What have we found? We found that the more time has elapsed since the last non-democratic regime the less satisfied with democracy the citizens are, enforcing citizens to cast a vote has a negative effect on SWD, a proportional representation in the parliament goes with higher SWD, the presidential electoral system does not affect SWD, and having a federal system impacts positively the satisfaction with the way democracy works, although its effect is significant only in Model II.

The analysis continues with the block of variables named "Personal economic, political, and opinion variables". First of all, we analyze how the personal and country's economic situation affects the SWD of the respondents. The related variables are: *Economic country situation is better*, *Economic personal situation is better,* and *Economic self-position*.

The positive and significant effect of the aforementioned variables gives support to *Hypothesis 7*: the more positive the view of the citizens is about the way the economy is operating and the more positive their view is about their personal economic situation, the more satisfied with democracy they are. In the first case the probability of a subject answering VSD increases by 3.8 pp and that of answering NSD decreases by 4.9 pp. In the second case the numbers are: 1.8 pp and 2.3 pp respectively. These results are in accordance with those of Berggren et al. (2004) and Guldbrandtsen and Skaaning (2010).

In the same line, we find that the fairer the respondent thinks the income distribution is, the more satisfied with democracy she is (VSD increases by 6.5 pp and NSD decreases by 8.4 pp).

In relation to the personal political variables, Table 1 shows that being interested in politics goes with a higher SWD –in line with Schäfer (2012) and Rich (2015), while SWD is not affected by being more leftist or rightist per se, not verifying the previous finding that leftist voters are less satisfied with democracy.

In Model II the variable *Winner* is included; it takes value 1 if the respondent would vote for a party that participates in the current government. Its positive and significant effect corroborates the finding in Section 4.1, that when the party the respondent supports is ruling (alone or with other parties) her satisfaction with democracy is higher. This result supports *Hypothesis 6*: people show higher satisfaction with democracy if the party they would vote for participates in the government. Being a winner increases the probability of VSD by 4.7 pp and decreases that of NSD by 5.7 pp.

INSERT TABLE I

Following Anderson and Tverdova (2003), we also include as an independent variable in model II an interaction between the variable *Winner* and the level of corruption in the country (*Corruption level* is one of the variables included in the group "Other country variables"). Its positive and significant effect means that even though people show lower levels of SWD when the corruption levels are higher (as shown by the negative and significant effect of the variable *Corruption level*), this negative effect is partially mitigated if the responded supports a party that is ruling the country.

The rest of the variables are mainly control variables, some at the country level and others at the personal level. They are included because they have been found to affect SWD in previous research papers.

Related to the macroeconomic control variables, most of them do not have a significant effect on SWD. We find that *Corruption level*, and *Gini index* (only in Model II) have a negative impact on SWD. Surprisingly, Model II implies a negative effect of the variable *Freedom index* on SWD. Conversely, *Openness to trade* and *Growth last 10 years* have a positive effect on SWD (though *Growth last 10 years* has an impact only in Model II).

The same happens to the personal control variables: most of them do not have a significant effect on SWD. Simply the age (in Model II only), the education level, and *Very religious person* have an impact. In line with Berry and Tello Rodriguez (2010), we find that having an education level higher than complete primary education has a negative effect on

satisfaction with democracy. Being a very religious person, on the other hand, has a positive effect. In Model II, we find that *Age* has a positive impact on SWD, contradicting Anderson and Singer (2008), Friedrichsen and Zahn (2014), and Leiter and Clark (2015) who found a negative relation between age and SWD.

INSERT TABLE II

5. Discussion and concluding remarks

Our objective in this paper was to analyze the potential impact of rules and characteristics of the political system on satisfaction with democracy in Latin America. We found that almost all characteristics of the political system that we hypothesized to be potentially influential on satisfaction with democracy, such as the electoral rule used to choose the legislature, or whether the country uses a federal system of government, turned out to be so. One important exception, however, is the electoral rule used to choose the president.

We conjectured that people's satisfaction with democracy would be higher in countries where the electoral rule used to choose the president is either a two-round majority rule or a qualified plurality rule, than in countries where simple plurality rule is used because in the latter case the president might haven bee elected with a rather low vote share. So, the fact that we did not find any significant impact of the electoral rule used to choose the president, could potentially be explained if in countries using plurality rule, the winners of the presidential election actually received a large vote share. In case of the five countries using plurality rule, looking at the results of the last two presidential elections preceding the Latinobarometer survey we use, we see that although in six out of ten elections the winner obtained more than 45% of the votes, in Mexico in 2006 the president was elected with only 35.9% of the votes and in Paraguay in 2003 with only 37.1% on the votes. On the other hand, looking at the presidential elections in the four countries using a qualified plurality rule, we see that in two cases (Nicaragua 2006 and Costa Rica 2006) the winner obtained rather low vote shares. (38% and 40.9% respectively) So, these observations

might explain at least partially why we did not find any significant impact of the electoral rule used to choose the president on satisfaction with democracy.

As had been established previously in the literature, the way the economy works has an impact on how much people are satisfied with the way democracy works. Taking into account the possibility that people's perception on how the economy works and actual macroeconomic variables do not need to indicate the same thing we controlled for both sets of variables and found, like Armingeon and Guthmann (2014), that personal evaluations of the economy are better indicators of satisfaction with democracy than actual macroeconomic data. The fact that satisfaction with democracy is affected by people's evaluation of how the economy is doing, is evidence in favor of the argument of Linde and Ekman (2003) that satisfaction with democracy "is an indicator of support for the *performance* of the democratic regime" (p. 399).

We also found a negative relationship between the age of democracy and satisfaction with democracy, that is, citizens in countries with a longer uninterrupted period of democratic rule are less satisfied with the way democracy works. A fading satisfaction with democracy over time might have worrisome implications such as an erosion in support for democracy, as pointed out by Sarsfield and Echegaray (2006), who show that satisfaction with democracy affects support for democracy. That is, the higher is dissatisfaction with democracy, the more likely this will erode support for democracy.

So what do our findings suggest about what could be done to increase satisfaction with democracy and stop the decrease of support for democracy in the region? On the political side, a more representative legislature, as indicated by the finding regarding the electoral rule used to choose the legislature, and more distribution of power as suggested by the finding regarding the federal system, are two potential factors that could increase satisfaction with democracy. On the economic side, our results suggest that a stronger fight against corruption and policies aimed at reducing income inequality in the region might impact positively on satisfaction with democracy.

As in other regions around the globe, we found that people who would vote for a winning party are more satisfied with democracy. What is interesting is the huge variation of the winner-loser gap across the region. Analyzing this variation to find potential explanation might be an interesting future research question.

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Table 1: Multilevel regressions

		Dependent variable: SWD			
		Model I		Model II	
		Ordered logit		Ordered logit	
		Coef.	Rob. Std. Err.	Coef.	Rob. Std. Err.
Political variables	Age democracy	-0.020**	0.009	-0.015**	0.007
	Voting enforced	-0.878***	0.291	-0.909***	0.196
	Elections-Proportional representation	0.595***	0.095	0.641***	0.065
	Elections for president - FPTP	-0.136	0.384	-0.002	0.293
	Federal system	0.146	0.177	0.400***	0.147
Other country variables	Gini index	-0.032	0.024	-0.060***	0.023
	Inflation rate	0.047	0.030	0.015	0.026
	Unemployment rate	0.022	0.040	-0.002	0.030
	Openness to trade	0.008***	0.003	0.008***	0.002
	Size shadow economy	-0.017	0.012	-0.015	0.010
	Growth previous year	0.096	0.069	0.080	0.056
	Growth last 10 years	0.126	0.120	0.223*	0.119
	Corruption level	-0.295***	0.070	-0.491***	0.092
	Freedom index	-0.032	0.114	-0.200**	0.099
	Human development index	0.010	0.018	0.010	0.014
Personal economic, political, and opinion variables	Economic country situation is better	0.436***	0.036	0.395***	0.050
	Economic personal situation is better	0.203***	0.039	0.160***	0.046
	Economic self-position	0.070***	0.019	0.069***	0.022
	Income distribution: Fair?	0.747***	0.078	0.722***	0.068
	Interest in politics	0.185***	0.021	0.198***	0.027
	Left - right	0.016	0.027	0.010	0.020
	Winner			1.070***	0.356
	Winner * Corruption level			0.161**	0.072
Personal control variables	Male	0.025	0.039	0.028	0.053
	Age	0.001	0.001	0.003*	0.002
	Educ : Incomplete secondary, technical	-0.132*	0.071	-0.160**	0.075
	Educ: complete secondary, technical	-0.100	0.068	-0.073	0.075
	Educ: incomplete high	-0.177**	0.085	-0.161	0.109
	Educ: complete high	-0.209***	0.056	-0.226***	0.081
	Catholic	-0.036	0.215	0.088	0.246
	Other Christian religion	0.041	0.222	0.116	0.252
	Religious person	0.046	0.044	0.107	0.069
	Very religious person	0.125*	0.070	0.259***	0.087
	Married	0.013	0.057	0.010	0.068
	Single	-0.045	0.082	0.042	0.105
	Unemployed	-0.086	0.101	0.022	0.103
	var(_cons)	0.026	0.013	0.005	0.010
	Number of observations	11,989		6,667	

* significant at 10%, ** significant at 5%, *** significant at 1%

Table 2: Marginal effects

		Model I				Model II			
		SWD = 1	SWD = 2	SWD = 3	SWD = 4	SWD = 1	SWD = 2	SWD = 3	SWD = 4
Political variables	Age democracy	0.002**	0.002***	-0.002**	-0.002**	0.001**	0.001**	-0.001**	-0.001**
	Voting enforced	0.108***	0.057***	-0.092***	-0.073***	0.104***	0.066***	-0.084***	-0.086***
	Elections-Proportional representation	-0.072***	-0.044***	0.068***	0.048***	-0.071***	-0.053***	0.064***	0.061***
	Elections for president - FPTP	0.016	0.012	-0.016	-0.012	0.000	0.000	0.000	0.000
	Federal system	-0.016	-0.013	0.016	0.013	-0.038***	-0.040***	0.035***	0.043***
Other country variables	Gini index	0.004	0.003	-0.004	-0.003	0.006***	0.006***	-0.006***	-0.006***
	Inflation rate	-0.005	-0.004	0.005	0.004	-0.002	-0.001	0.001	0.002
	Unemployment rate	-0.003	-0.002	0.003	0.002	0.000	0.000	-0.000	-0.000
	Openness to trade	-0.001***	-0.001***	0.001***	0.001***	-0.001***	-0.001***	0.001***	0.001***
	Size shadow economy	0.002	0.002	-0.002	-0.002	0.002	0.001	-0.001	-0.002
	Growth previous year	-0.011	-0.008	0.011	0.008	-0.008	-0.008	0.008	0.008
	Growth last 10 years	-0.014	-0.011	0.014	0.011	-0.023*	-0.022*	0.022**	0.023*
	Corruption level	0.033***	0.026***	-0.033***	-0.026***	0.043***	0.036***	-0.041***	-0.039***
	Freedom index	0.004	0.003	-0.004	-0.003	0.020**	0.019**	-0.019**	-0.020**
	Human development index	-0.001	-0.001	0.001	0.001	-0.001	-0.001	0.001	0.001
Personal economic, political, and opinion variables	Economic country situation is better	-0.049***	-0.038***	0.049***	0.038***	-0.040***	-0.038***	0.038***	0.040***
	Economic personal situation is better	-0.023***	-0.018***	0.023***	0.018***	-0.016***	-0.015***	0.015***	0.016***
	Economic self-position	-0.008***	-0.006***	0.008***	0.006***	-0.007***	-0.007***	0.007***	0.007***
	Income distribution: Fair?	-0.084***	-0.066***	0.085***	0.065***	-0.073***	-0.070***	0.070***	0.073***
	Interest in politics	-0.021***	-0.016***	0.021***	0.016***	-0.020***	-0.019***	0.019***	0.020***
	Left - right	-0.002	-0.001	0.002	0.001	-0.001	-0.001	0.001	0.001
	Winner					-0.057***	-0.050***	0.059***	0.047***
Personal control variables	Male	-0.003	-0.002	0.003	0.002	-0.003	-0.003	0.003	0.003
	Age	0.000	0.000	0.000	0.000	-0.000*	-0.000*	0.000*	0.000*
	Educ : Incomplete secondary, technical	0.015*	0.011**	-0.015*	-0.011*	0.017**	0.015**	-0.016**	-0.016**
	Educ: complete secondary, technical	0.011	0.009	-0.011	-0.009	0.008	0.007	-0.007	-0.007
	Educ: incomplete high	0.021**	0.015**	-0.021**	-0.015**	0.017	0.015	-0.016	-0.016
	Educ: complete high	0.025***	0.017***	-0.024***	-0.017***	0.024***	0.021***	-0.023***	-0.022***
	Catholic	0.004	0.003	-0.004	-0.003	-0.009	-0.008	0.009	0.009
	Other Christian religion	-0.005	-0.004	0.005	0.004	-0.012	-0.011	0.011	0.012
	Religious person	-0.005	-0.004	0.005	0.004	-0.011	-0.010	0.010	0.011
	Very religious person	-0.014*	-0.011*	0.014*	0.011*	-0.025***	-0.026***	0.023***	0.028***
	Married	-0.001	-0.001	0.001	0.001	-0.001	-0.001	0.001	0.001
	Single	0.005	0.004	-0.005	-0.004	-0.004	-0.004	0.004	0.004
	Unemployed	0.010	0.007	-0.010	-0.007	-0.002	-0.002	0.002	0.002

* significant at 10%, ** significant at 5%, *** significant at 1%

Appendix

Table A1: Variables from the Latinobarometer

	Variable name	Explanation / Question		Min	Max	Mean	Std.Dev.
Dependent variable	SWD	Satisfaction with democracy	In general, would you say that you are very satisfied, quite satisfied, not very satisfied or not at all satisfied with the working of the democracy in (country)?	1 (Not at all satisfied)	4 (Very satisfied)	2.42	0.88
Personal economic, political, and opinion variables	Economic country situation is better	Do you consider the country's present economic situation to be better, a little better, the same, a little worse or much worse than 12 months ago?		1 (Much worse)	5 (Much better)	2.91	1.01
	Economic personal situation is better	Do you consider your economic situation and that of your family to be much better, a little better, about the same, a little worse or much worse than 12 months ago?		1 (Much worse)	5 (Much better)	3.14	0.88
	Economic self-position	Imagine a staircase with 10 steps, in which on the first step are located the poorest and on the 10th step, the richest. Where would you put yourself on this staircase?		1	10	4.42	1.89
	Income distribution: Fair?	How fair you think that income distribution is in (country)?		1 (Very unfair)	4 (Very fair)	2.01	0.75
	Interest in politics	How interested are you in politics?		1 (Not at all interested)	4 (Very interested)	2.02	0.94
	Left - right	In politics, people normally speak of "left" and "right". On a scale where 0 is left and 10 is right, where would you place yourself?		0 (Left)	10 (Right)	5.40	2.57
	Winner	Participation in the government of the political party the respondent would vote for		0 (No)	1 (Yes)	0.55	0.50
Personal control variables	Male	Gender		0 (Female)	1 (Male)	0.50	0.50
	Age			16	96	40.05	16.21
	Educ : Incomplete secondary, technical	Education (omitted categories: illiterate, incomplete primary education, and complete primary education)		0 (No)	1 (Yes)	0.13	0.34
	Educ: complete secondary, technical			0 (No)	1 (Yes)	0.24	0.43
	Educ: incomplete high			0 (No)	1 (Yes)	0.09	0.29
	Educ: complete high			0 (No)	1 (Yes)	0.10	0.30
	Catholic	Religion (omitted categories: non Christian religions and non believers)		0 (No)	1 (Yes)	0.80	0.40
	Other Christian religion			0 (No)	1 (Yes)	0.18	0.39
	Religious person	How would you describe yourself? Very devout, devout, not very devout, or not devout at all?		0 (No)	1 (Yes)	0.36	0.48
	Very religious person			0 (No)	1 (Yes)	0.13	0.33
	Married	Marital status (omitted categories: separated, divorced, and widow)		0 (No)	1 (Yes)	0.59	0.49
	Single			0 (No)	1 (Yes)	0.31	0.46
	Unemployed	Labor situation		0 (No)	1 (Yes)	0.06	0.23

Note: Based on the 11,989 observations used in regression Model I

Table A2: Country level variables (N=18)

	Variable name		Source	Min	Max	Mean	Std.Dev.
Political variables	Age democracy	Years passed after the return of the country to democracy (until 2010)	Cheibub, J.A., J. Gandhi, and J. R. Vreeland (2010)	8	61	28.11	14.83
	Voting enforced		International Institute for Democracy and Electoral Assistance (IDEA)	0 (No)	1 (Yes)	0.33	0.49
	Elections-Proportional representation	Parliament election	Political Database of the Americas	0 (Mixed system+outlier-Chile)	1 (Proportional representation)	0.72	0.46
	Elections for president - FPTP	Presidencial election is a first-past-the-post (FPTP) election	Political Database of the Americas	0 (Two round system + qualified plurality)	1 (FPTP)	0.28	0.46
	Federal system	Watts' federalism index	www.pippanorris.com	0 (No)	1 (Yes)	0.22	0.43
Other country variables	Gini index	2009 (Except: Guatemala 2011, Mexico 2010, Nicaragua 2005)	Inter-American Development Bank (IADB)	41.80	55.90	50.12	3.96
	Inflation rate	2009	International Monetary Bank (IMF)	0.54	27.09	5.20	5.83
	Unemployment rate	2009	World Bank (modeled ILO estimate)	3.10	14.90	7.17	2.98
	Openness to trade	Exports plus Imports divided by GDP; total trade as a percentage of GDP (2009)	Penn World Table Version 7.1, Center for International Comparisons of Production, Income and Prices at University of Pennsylvania	22.30	145.36	65.83	30.26
	Size shadow economy	2007 (Except: Panama and Paraguay 2006)	Buehn & Schneider (2012)	18.50	63.50	38.67	12.63
	Growth previous year	GDP per capita ppp growth 2008-2009	Calculated using GDP per capita PPP from World Bank	-7.42	2.08	-1.64	2.74
	Growth last 10 years	GDP per capita ppp growth 1999-2009	Calculated using GDP per capita PPP from World Bank	0.26	3.92	2.13	1.02
	Corruption level	Public sector corruption perception index, 2009	Transparency International (We have multiplied the original variable by -1)	-6.7 (Less corruption)	-1.9 (More corruption)	-3.51	1.40
	Freedom index	2009, Free (-1.0 to -2.5), Partly Free (-3.0 to -5.0), or Not Free (-5.5 to -7.0)	Freedom house (We have multiplied the original variable by -1)	-4.00	-1.00	-2.47	0.93
	Human development index	2009 - from 0 to 100 (100 is the best outcome possible)	United Nations Development Program (UNDP)	56.90	79.80	70.09	6.71