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

### *Satisfacción con democracia en América Latina: ¿las características del sistema político importan?*

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#### Abstract

Citizens' attitudes are crucial in preventing or encouraging democratic weakening, specifically satisfaction with the functioning of the democratic system. We analyse the nexus between the rules and characteristics of the political system and satisfaction with democracy in Latin America. Using data from the 2015 Latinobarometer survey, we have estimated ordered multilevel logit models. We find that satisfaction is greater in countries that use a proportional electoral rule to elect the legislature. The rule used to elect the president is partially related to satisfaction with democracy, while the age of democracy is negatively related to satisfaction. Moreover, the degree of voting obligato-

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ness in elections and the degree of federalism are not related to satisfaction with democracy. Our results suggest that a more representative legislature and a stronger fight against corruption could improve people's level of satisfaction with democracy.

*Keywords by author:* electoral rules, federalism, compulsory voting, corruption, Latin America.

*JEL Classification:* D70, D72, H11, P16.

## Resumen

Las actitudes de los ciudadanos son cruciales para prevenir o impulsar el retroceso democrático, específicamente la satisfacción con el funcionamiento del sistema democrático. Analizamos el nexo entre las reglas y las características del sistema político con la satisfacción con la democracia en América Latina. Usando datos de encuestas proporcionados por Latinobarometer, se han estimado modelos multilevel logit ordenados. Encontramos que la satisfacción es mayor en los países que utilizan una regla electoral proporcional para elegir la legislatura. La regla utilizada para elegir al presidente está parcialmente relacionada con la satisfacción con la democracia, mientras que la edad de la democracia tiene una relación negativa con la satisfacción. Por otro lado, el grado de obligatoriedad del voto en las elecciones y el grado de federalismo no están relacionados con la satisfacción con la democracia. Nuestros resultados sugieren que una legislatura más representativa y una lucha más fuerte contra la corrupción podrían mejorar el nivel de satisfacción con la democracia.

*Palabras clave del autor:* reglas electorales, federalismo, voto obligatorio, corrupción, América Latina.

*Clasificación JEL:* D70, D72, H11, P16.

## Introduction

The second half of the 20th century in Latin American history was marked by long periods of military and civil dictatorships. The last three decades, on the other hand, have been the most democratic ones in the history of the continent (Levitsky, 2018). However, although democracy is almost the norm,

several analysts posit that democracy is still a "troubled system of governance" in the region (International IDEA, 2017a, p 40).

Citizens' attitudes are crucial in preventing or driving democratic backsliding. Positive attitudes to democracy can bolster collective resistance to state misuse and help to avoid democratic backsliding, while negative attitudes can induce democratic backsliding and even the fall of democracy in a country (International IDEA, 2017b). This is why studying the factors that affect attitudes towards democracy is important.

This paper aims to analyse how country-level and individual-level characteristics are related to citizens' 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, how enforced voting is, the electoral system used to choose the parliament, the system used to elect the president, and how federal the system of government is. As a measure of the level of satisfaction with democracy, we use a survey question from the Latinobarometer 2015.

Using survey questions to measure the level of satisfaction with democracy around the globe has been very popular in recent decades. But what do such questions actually measure?<sup>4</sup> 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). In other words, it measures people's evaluations of the political regime (Klingemann, 1999). It is not, however, an indicator of the level of support for the principles of democracy (Linde & 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 socio-demographic variables. Of equal or even more importance, as shown in the literature, is whether a 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.

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4 For a critique of the use of "satisfaction with democracy" survey questions see Canache, Mondak, and Seligson (2001).

We find that people are more satisfied with democracy when members of the parliament are elected by a proportional electoral rule, while the rule used to elect the president is only partially associated with satisfaction with democracy. Furthermore, the level of satisfaction is lower in older democracies: i.e. the age of democracy is negatively related to satisfaction with democracy. Whether voting is compulsory and how strictly it is enforced, however, is not related to satisfaction with democracy. The same happens with the degree of federalism.

Since we interpret satisfaction with democracy as an indicator of support for the performance of the democratic regime, and because changes in electoral rules and institutions could be the result of citizens' dissatisfaction with the political regime, an endogeneity problem is a possibility. We discuss this issue in Section II.

This paper makes two contributions to the literature. To the best of our knowledge, we are the first to consider an extensive set of institutional and electoral variables for Latin American countries in order to study their relationship with satisfaction with democracy. We are also the first to investigate the nexus between the degree of federalism, the electoral system used to choose the president, and the level of satisfaction with democracy.

The paper is organized as follows: The next section reviews the literature and presents our hypotheses. Section II presents the data and describes the methodology we use. Section III details our results, and the last section discusses our findings and contains the concluding remarks.

## I. Literature review and hypotheses

In this section, we present the relevant literature regarding our variables of interests, i.e. variables related to a country's political system, and some control variables at the country level. We also formulate seven hypotheses about the relationship between the characteristics of the political system and satisfaction with democracy.

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 does *how old the democratic system is* relate to the level of satisfaction with democracy in Latin America?

As Keefer (2007) posits, young democracies suffer from the "inability of political competitors to make broadly credible preelectoral promises to voters" (p. 804), resulting in higher levels of corruption and political violence and more social fragmentation. As a democracy gets older, politicians experience more democratic competition that eventually improves their political credibility.

There are several studies analysing the determinants of satisfaction with democracy in Europe, which also focus on the role that age of democracy plays. These studies include both Western European countries and also more recently democratized Eastern European countries. Armingeon and Guthmann (2014) expect to observe stronger support for democracy in older democracies and confirm this empirically analysing 26 EU countries. Reher (2015) also finds that how old the democracy is has a positive effect on satisfaction with democracy. She also points out that there is a strong correlation between the age of democracy and the quality of democracy in the 28 EU countries she analyses. Moreover, she notes that for the case of the relatively recently democratized countries in Europe, the transition was not only a change in the political system but in also the economic system.

On the other hand, Anderson and Tverdova (2003), using survey data for Australia, Canada, Japan, New Zealand, the U.S., five EU, and six (then) non-EU European countries, and Stockemer and Sundström (2013) who analyse 23 EU countries, Israel, Ukraine, and Russia, do not find that the age of the democracy has any significant effect on satisfaction with the democracy. The difference between these authors' country samples and those of Armingeon and Guthmann (2014) and Reher (2015) may explain the differences in their findings.

Fernandez and Kuenzi (2010) argue that the lower level of satisfaction with democracy in Latin America compared to that in Africa could be due to the fact that in Latin America people have had more time to become disillusioned with democracy. The transition from authoritarian regimes to democracy might initially lead to high levels of satisfaction with democracy due to increasing freedoms, more participatory decision-making mechanisms, and several other factors. As pointed out by Wagner, Schneider and Halla, (2009), people living in more democratic countries are more satisfied with democracy. The fact that most Latin American democracies are still far from ideal in terms of the quality of democracy, reflected for instance in the Freedom Index, might have led to disillusionment over time in terms of how people perceive their democracies. Thus, we would expect satisfaction with democracy to decrease over time.

*Hypothesis 1: In Latin America, satisfaction with democracy decreases with how old the democracy is.*

In Latin America, voting in both presidential and parliamentary elections is compulsory in some countries but not in others. Berggren, Fugate, Preuhs and Still, (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 where voting is compulsory.

The fact that voting is compulsory, however, should not play a major role, unless the law is enforced. How strictly voting is enforced, however, varies across the continent. Singh (2018) posits that compulsory and enforced voting may have two effects on satisfaction with democracy. On the one side, participation will be higher if voting is enforced and a higher participation rate would improve how citizens perceive the legitimacy of the democratic process and would enhance attitudes toward democracy. On the other hand, forcing people to participate in the democratic process may strengthen the negative feelings towards democracy, especially for those who have more anti-democratic attitudes.

In the light of the arguments by Berggren et al. (2004) and Singh (2018), and combined with the fact that satisfaction with democracy has been declining in Latin America (Levitsky, 2018), we would expect satisfaction with democracy to be lower the higher the level of voting enforcement.

*Hypothesis 2: The stricter voting enforced is, the lower the 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: the electoral rule. Thus, one could expect that the electoral rule used to choose parliamentary members might affect the level of satisfaction with democracy. Berggren 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 the argument. Several other studies, conversely, such as Guldbrandsen and Skaaning (2010), Listhaug, Aardal and Ellis, (2009), and Rich (2015) do not find any significant effect of the electoral rule used to choose the legislature on satisfaction with democracy. Lijphart (2012), however, concludes that citizens in countries with proportional representation systems have higher levels of satisfaction with their democracy. Singh (2014) confirms the conclusion.

Aarts and Thomassen (2008) find that satisfaction with democracy depends positively on the perception of representativeness.<sup>5</sup> One might argue that the more proportional an electoral system is, the more representative the parliament is in terms of different political views, ethnicities, minorities, etc. This, in turn, implies that consensual systems are more inclusive in their power-sharing (Listhaug et al., 2009). Thus, we expect that more extensive representation goes together with 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 and Chile, use a two-round majority system (also called absolute majority rule), others such as Argentina and Costa Rica use a qualified plurality rule, whereas others such as Panama and Paraguay use a plurality or first-past-the-post (FPTP) rule. Theoretically, in a country using the plurality rule for presidential elections 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 an absolute 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 s/he 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 who has little support to be associated with a higher level of satisfaction with democracy.

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



*Hypothesis 4: Satisfaction with democracy is higher when an absolute majority system or a qualified plurality rule is used to choose the president rather than a plurality (FPTP) rule.*

In Latin America, there are a few countries such as Argentina and Brazil that have a federal system of government; 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 thus create more trust in its institutions.<sup>6</sup> If a higher degree of federalism implies more integration of diverse interests, we would, in these countries, expect to observe higher levels of satisfaction with democracy than in unitary states.

*Hypothesis 5: The higher the degree of federalism in a country, the higher the satisfaction with democracy.*

As stated before, we interpret satisfaction with democracy as a measure of how people evaluate the performance of the regime. A democratic regime's performance greatly depends on the performance of the governing party or parties. The evaluation of such a performance, in most 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 government in the last election. They found this to be true. Following their work, several other authors, including Anderson, Blais, Bowler, Donovan and Listhaug (2005), Anderson and Singer (2008), Anderson and Tverdova (2003), Banducci and Karp (2003), Curini, Jou and Memoli, (2012), Farrer and Zingher (2018), Leiter and Clark (2015), Listhaug et al. (2009), Lühiste (2014), Schäfer (2012), Singh (2014), and Rich (2015) all 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 a proxy a variable created by the Latinobarometer organization: if the party the respondent would vote for is

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6 She finds, however, exactly the opposite result. While Farrer and Zingher (2018) also find that federalism has a negative effect on satisfaction with democracy in Asia, they do not find any significant relationship in Europe, Africa, and Latin America. In another model specification, however, they find a significant positive relationship in all the four continents.

ruling the country. Anderson et al. (2005) discuss the advantages and disadvantages of using any of those two types of survey questions. Using data from a Eurobarometer survey, they conclude that there is little difference between classifying survey respondents as winners or losers on the basis of the past vote or future vote. Therefore, we expect that respondents who would vote for a party that is ruling the country at the moment the survey was conducted, would be more satisfied with the way democracy works.

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

One serious problem that institutions and probably many of the societies as a whole have been suffering in Latin America is corruption. Corruption has serious negative impacts on societies for several reasons. On the one hand, corruption negatively impacts the economy (Rose-Ackerman, 1999; Lambsdorff, 1999), and on the other, it erodes the perception of fairness and equality that citizens believe institutions must adhere to (Chang & Chu, 2006). This erosion, then, may lead to distrust in institutions and hence a lower satisfaction with the system. Empirically, the impact corruption has 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 as well as individual perceptions of corruption find that a higher corruption perception implies lower satisfaction with democracy. By using the Corruption Perception Index undertaken by Transparency International as a measure of corruption perception, Anderson and Tverdova (2003) obtained the same finding.

As they are more likely to benefit from corruption, Anderson and Tverdova (2003) argue that citizens who are closer to the current government have a more benign view of corruption. In their empirical analysis, they find that corruption has a less negative effect on the evaluation of the system of voters for a party in the government. Thus, we expect to observe the same behaviour.

*Hypothesis 7: While satisfaction with democracy is lower in countries with a higher corruption perception level, the negative effect of corruption on satisfaction with democracy is lower for voters of the parties in government.*

Besides the nexus between the political system and satisfaction with democracy, several authors have also studied the role that macroeconomic variables play on people's level of satisfaction. For instance, regarding the effect of the unemployment rate on satisfaction with democracy, while Friedrichsen and Zahn (2014), Leiter and Clark (2015), and Wagner et al. (2009) 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. In terms of the effect of growth, while Anderson and Tverdova (2003) and Friedrichsen and Zahn (2014) found a positive relationship between the annual GDP growth rate and satisfaction with democracy, Anderson and Singer (2008) and Stockemer and Sundström (2013) found no significant relationship.

Considering all the above-mentioned findings, we include the inflation rate, the unemployment rate, and the annual GDP growth rate in our analysis as control variables.

While some studies found the unemployment rate had a negative effect of on satisfaction with democracy, the effect should be stronger if it personally affects the individual. In fact, Anderson and Singer (2008), Friedrichsen and Zahn (2014), and Schäfer (2012) found that being unemployed has a significant negative impact on satisfaction with democracy. For that reason, we also include whether or not a respondent is unemployed as one of our socio-demographic variables.

## II. 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, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela). The data source is the Latinobarometer Survey (2015), which provides information about individuals' opinions, attitudes, behaviours, values, and socio-demographic characteristics (including religious affiliation and practices). The countries' sample sizes is either

one-thousand (Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama), 1200 (Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela), or 1250 (Brazil). We use the weights provided by the Latinobarometer, which change from country to country. Details for the methodology used are presented in a methodology report written by Latinobarometer.

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 range from 1 (Not at all Satisfied) to 4 (Very Satisfied). We have inverted the original answers to make it easier to interpret the results. Thus, a larger value of the variable implies more satisfaction with the workings of democracy. We call this variable Satisfaction with Democracy (SWD).

We have run multilevel ordered logit models with three sets of independent variables: country-level political variables, other country-level variables, and personal socio-demographic 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 how old the democracy is (*Age democracy*), a variable showing the level of enforcement of voting (*Voting enforced*),<sup>7</sup> a dummy variable that takes value 1 if the election of the parliament follows proportional representation (*Elections-Proportional representation*), a dummy variable that takes value 1 if the election of the president follows an absolute majority rule (*Elections for president – AMR*), a dummy variable that takes value 1 if the election of the president follows a qualified plurality rule (*Elections for president – QPL*) –meaning that the reference category is plurality (FPTP) rule, where the candidate who receives more votes wins the elections–, and a variable that shows the political system's degree of federalism (*Degree of federalism*).<sup>8</sup>

7 See the appendix for a more detailed description of this variable.

8 See the appendix for a more detailed description of this variable.

The second set of variables consists of country-level variables: Gini index, inflation rate, unemployment rate, openness to trade index, size of the shadow economy, GDP growth, corruption level, freedom index, and human development index.

The Gini coefficient is included because Anderson and Singer (2008), Berry and Tello Rodriguez (2010), and Wu and Chu (2007) explore the effect of income inequality measured by the Gini coefficient on SWD and find that higher income inequality leads to lower SWD. Regarding the size of the shadow economy, Wagner et al. (2009) find that the smaller the weight of the shadow economy the higher SWD.

The data for these country-level variables, including the variables in the first group, come from different sources, which are indicated in Table A2 in the appendix.

The variables in the third group are from the same source as our dependent variable, i.e. the Latinobarometer. This group includes: the sex of the respondent (*Male*, takes value 1 if the respondent is a man), the age (*Age*), the level of education –we include four dummy variables representing educational attainments from incomplete secondary or technical education to complete higher education–, two variables reflecting the respondent's religion (*Catholic* and *Other Christian religion*), two dummies about the level of religiosity (*Religious person* and *Very religious person*), two variables reflecting marital status (*Married*<sup>9</sup> and *Single*), and a dummy variable that takes value 1 if the respondent is unemployed (*Unemployed*).

The sex of the respondent is included as a control variable because Leiter and Clark (2015) and Schäfer (2012) found that males are more satisfied with democracy. We control for age because Anderson and Singer (2008), Friedrichsen and Zahn (2014), and Leiter and Clark (2015) found a negative relationship between age and SWD. The dummy variables reflecting the education level of the respondents have been included because Leiter and Clark (2015) and Schäfer (2012) found that more educated subjects are more satisfied with democracy, while Berry and Tello Rodriguez (2010) found the opposite. The religion and religiosity of the respondents are control variables because

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9 The variable *Married* includes those respondents who are married or living with a partner.

Schäfer (2012) found that those with stronger religious beliefs are more satisfied with democracy.

In the second model, we also include a variable that shows if the subject supports one of the parties in the government or not (*Winner*),<sup>10</sup> and an interaction variable between *Winner* and the level of corruption in the country.

We study how the characteristics of the political system are related to the level of SWD. There is, however, the possibility of an endogeneity problem between the variables reflecting the electoral system, the degree of enforcement of voting, the degree of federalism, and our dependent variable (SWD). That is, the electoral rules or the rules concerning voting might have been changed as a reaction to low levels of satisfaction with the previous system.

Analysing why countries that have compulsory voting rules adopted such rules, Singh (2018) observes that they have been adopted for a variety of reasons. In most Latin American countries, compulsory voting was adopted at the same time as universal (or universal male) suffrage. He argues that this suggests such rules were not adopted as a reaction to a specific need, but instead as part of wider changes towards more democratic governments. On the other hand, Singh (2018) argues that compulsory voting in Latin America is also tied to authoritarian forms of government: i.e. such rules were implemented by or kept by authoritarian regimes. Furthermore, Helmke and Meguid (2010) observe that implementing compulsory voting is the result of strategic considerations of those in power as such rules would benefit them. Singh (2018) concludes that all the examples across the globe cast doubt on the argument that countries with dissatisfied electorates implement compulsory voting rules.

Regarding electoral rules, the literature analysing changes in electoral rules empirically and theoretically argues that the rules would be changed when such changes would help to keep those in power in government or to reduce their electoral losses (see for instance Benoit, 2004; Boix, 1999; Colomer, 2005; Ergun, 2010; Matakos & Xefteris, 2015, and Remmer, 2008, for Latin America).

Selee (2004), observing that many Latin American countries went through a decentralization process during the 1980s and 1990s, states that the

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10 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?"

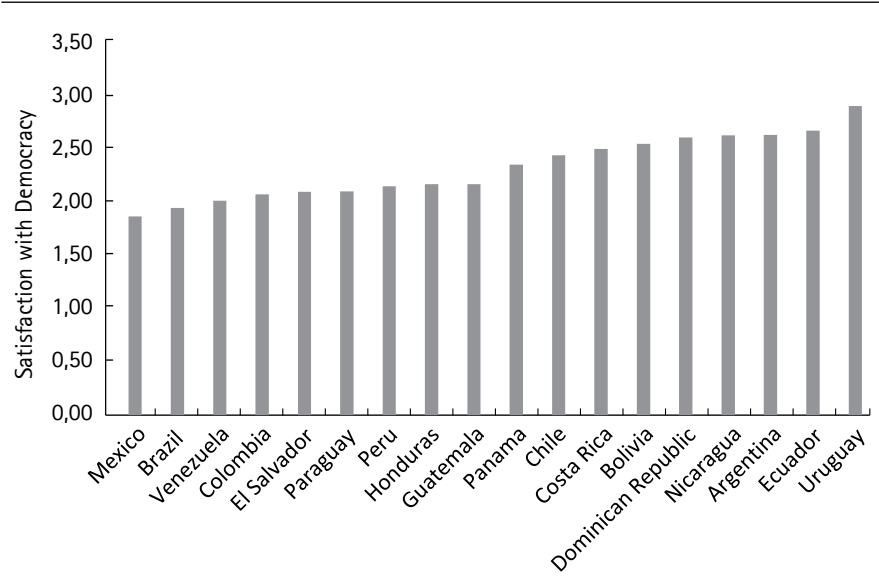
reason why those countries transitioned was to make sure that the central state would not have such power as was the case during the authoritarian regimes.

In light of the above arguments, we consider the potential endogeneity problem not to be a very likely problem although we acknowledge that we cannot completely rule out this possibility. Hence, in what follows, we refrain from establishing strong causal relationships regarding these variables.

III. Results

This section presents a brief descriptive analysis of the data followed by an econometric analysis. Figure 1 shows the average SWD for all the 18 countries in our sample. The average level of SWD in the 18 countries considered is 2.31. The minimum level is observed in Mexico (1.86) and the highest level in Uruguay (2.89); i.e. Mexicans are the less satisfied and Uruguayans are the most satisfied with the way their democracy works.

Figure 1. Average satisfaction with democracy per country



Source: Latinobarometer (2015) based on the 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 answers range from 1 (Not at all Satisfied) to 4 (Very Satisfied).

The following presents the results of two multilevel ordered logit models. The variables in Model I are organized into three 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 socio-demographic variables. Since this last group of variables is not crucial in our analysis but it comprises control variables, the results are not included in the tables, but we briefly comment on the variable reflecting the respondents' job status. 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 country's level of corruption. Both models are shown because including the variable *Winner* implies reducing the sample size by half. For that reason, in what follows, we interpret the results of Model I except when we discuss the effect of supporting a party that forms part of the government. The estimates are presented in Table 1 and the marginal effects in Table 2.

We mainly focus our attention on the country-level political variables, namely: how old the democracy is, how strictly enforced voting is, the electoral systems used to choose the parliament and the president, and how federal the country is.

Regarding how old the democracy is, i.e. how many years have passed since the country returned to democracy, we find that it has a negative relationship with satisfaction with democracy: the more years that have 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 by one year. Conversely, there is a negative variation of 0.1 *pp* in the likelihood of a "Very Satisfied with the Democracy" (VSD) result. This supports *Hypothesis 1*. In Latin America, most of the countries have been democratic 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 Fernandez and Kuenzi's (2010).

The second hypothesis refers to the level of voting enforcement in the country: the stricter that voting is enforced, the lower the SWD would be. Table 1 shows that there is no correlation with SWD, i.e. we cannot find support for *Hypothesis 2*.



The third political variable considered is the rule used to elect the parliament. Table 1 shows that having a proportional representation system has a positive significant relationship with SWD, which supports *Hypothesis 3*: SWD is higher in countries which use a proportional electoral rule for parliamentary elections. The most likely explanation lies in the fact that a more proportional system represents a larger range of political views, ethnicities, minorities, etc. A proportional representation system increases the likelihood of responding VSD by 10.1 *pp* and decreases answering NSD by 25.6 *pp*.

Regarding the system used to elect the president, the dummy variable *Elections for president – AMR* does not have a significant relationship with SWD, while the variable *Elections for president – QPL* does: There is a positive relationship between having a Qualified Plurality Rule to elect the president and SWD in a country. Having QPL increments the likelihood of responding VSD by 6.5 *pp* and decreases answering NSD by 8.9 *pp*. *Hypothesis 4* is partially supported.

The last political variable analysed is how federal the political system is. We find no correlation with SWD, which implies that no evidence to sustain *Hypothesis 5* is found.

These six variables are our main focus of interest. What have we found? We found that the more time elapsed since the last non-democratic regime, the less satisfied the citizens are with democracy; the use of a proportional representation rule to elect the parliament correlates with a higher SWD; having a QPL to elect the president is positively related to SWD; and when there is an AMR to elect the president, the level of voting enforcement and the degree of federalism in a country are not related to SWD.

After running the ordered logit multilevel model, we ran a Wald test in order to test whether the coefficients of the variables related to the political system are simultaneously equal to zero. Based on the p-value (0.0000), we are able to reject the null hypothesis, which indicates that the coefficients of the variables related to the political system are not simultaneously equal to zero. This means that including these variables leads to a statistically significant improvement in the fit of the model.

Table 1. Multilevel regressions

		Dependent variable: Satisfaction with democracy			
		Model I		Model II	
		Ordered logit		Ordered logit	
		Coef.	Rob.Std.Err.	Coef.	Rob.Std.Err.
Political variables	Age democracy	-0.010*	0.006	0.002	0.007
	Voting enforced	-0.028	0.093	0.021	0.133
	Elections-Proportional representation	1.430***	0.412	1.351**	0.588
	Elections for president - AMR	-0.408	0.463	0.082	0.653
	Elections for president - QPL	0.649**	0.288	0.814**	0.369
	Degree of federalism	0.102	0.076	0.034	0.112
Other country variables	Gini index	-0.051*	0.031	-0.020	0.041
	Inflation rate	0.045***	0.011	0.048***	0.014
	Unemployment rate	-0.038	0.057	-0.068	0.073
	Openness to trade	0.006	0.005	0.013**	0.006
	Size shadow economy	0.036**	0.016	0.027	0.021
	Growth rate	0.309***	0.034	0.227***	0.050
	Corruption level	-0.047***	0.014	-0.040**	0.019
	Freedom index	-0.300**	0.142	-0.223	0.164
	Human development index	0.043***	0.015	0.064***	0.019
Winner				1.514**	0.767
Winner * Corruption level				0.013	0.016
Thresholds	cut1	5.261*	2.758	8.545**	3.634
	cut2	7.182***	2.751	10.448***	3.622
	cut3	9.064***	2.762	12.456***	3.615
Random effects	var(_cons)	0.023	0.010	0.035	0.018
Number of observations		19,121		8,941	

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

Control variables included: sex, age, education, religion, religiosity, marital status, job status.

AMR: Absolute majority rule, QPL: Qualified plurality rule.

In Model II, the variable *Winner* is included; it takes value 1 if the respondent would vote for a party that is in the current government. Its positive and significant effect implies that when the party the respondent supports is ruling (alone or with other parties) s/he is more satisfied with democracy. This result supports *Hypothesis 6*: people show higher satisfaction with democracy if the party they would vote for is part of the government. Being a winner increases the probability of VSD by 9.8 *pp* and decreases NSD by 13.1 *pp*.

Table 2. Marginal effects of the ordered logit models

	Model I				Model II			
	SWD = 1	SWD = 2	SWD = 3	SWD = 4	SWD = 1	SWD = 2	SWD = 3	SWD = 4
Age democracy	0.002*	0.001*	-0.001*	-0.001*	0.000	0.000	0.000	0.000
Voting enforced	0.004	0.002	-0.004	-0.003	-0.003	-0.002	0.002	0.002
Political variables								
Elections-Proportional representation	-0.256***	-0.017	0.171***	0.101***	-0.167**	-0.120**	0.135**	0.152**
Elections for president - AMR	0.062	0.027	-0.053	-0.036	-0.010	-0.007	0.008	0.009
Elections for president - QPL	-0.089**	-0.059**	0.083**	0.065*	-0.101**	-0.072**	0.082**	0.092**
Degree of federalism	-0.015	-0.007	0.013	0.009	-0.004	-0.003	0.003	0.004
Other country variables								
Gini index	0.008*	0.004	-0.007	-0.005*	0.003	0.002	-0.002	-0.002
Inflation rate	-0.007***	-0.003***	0.006***	0.004***	-0.006***	-0.004***	0.005***	0.005***
Unemployment rate	0.006	0.003	-0.005	-0.003	0.008	0.006	-0.007	-0.008
Openness to trade	-0.001	0.000	0.001	0.001	-0.002**	-0.001**	0.001**	0.001
Size shadow economy	-0.005**	-0.002**	0.005**	0.003**	-0.003	-0.002	0.003	0.003
Growth rate	-0.047***	-0.021***	0.040***	0.028***	-0.028***	-0.020***	0.023***	0.026***
Corruption level	0.007***	0.003***	-0.006***	-0.004***	0.004***	0.003	-0.003*	-0.003
Freedom index	0.045**	0.021**	-0.039**	-0.027**	0.028	0.020	-0.022	-0.025
Human development index	-0.006***	-0.003***	0.006***	0.004***	-0.008***	-0.006***	0.006***	0.007***
Winner					-0.131***	-0.088***	0.121***	0.098***

\*\* significant at 10%, \* significant at 5%, \*\*\* significant at 1%  
Control variables included: sex, age, education, religion, religiosity, marital status, job status.  
SWD: Satisfaction with democracy, AMR: Absolute majority rule, QPL: Qualified plurality rule.

Following Anderson and Tverdova (2003), we also include 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") as an independent variable in model II. We find support for the first part of *Hypothesis 7*: corruption is negatively related to SWD; however, the interaction variable has a statistically insignificant effect, meaning that there is no support for the second part of *Hypothesis 7*.

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 be related to SWD in previous research papers.

Regarding the country-level control variables, only some have a significant effect on SWD. We find that the *Gini index* and the *Corruption level* are negatively related to SWD. Conversely, *Growth rate*, *Inflation rate*, and *Human development index* are positively related to SWD. Surprisingly, *Size shadow economy* has a positive effect while *Freedom index* has a negative effect. As a smaller shadow economy might be reflecting higher-quality institutions (Wagner et al., 2009), one would expect to observe a negative relationship between SWD and the size of the shadow economy. This is precisely what Wagner et al. (2009) found in the case of European countries. Maciel and de Souza (2018), on the other hand, do not find any significant relationship between these two variables for 27 EU countries. The reason why we find a negative relationship requires further analysis, which is beyond the scope of this paper. Regarding the *Freedom Index*, even though it would be expected to find a positive relationship with SWD, as some authors found (for instance, Ariely, 2013), many other researchers found insignificant results (Anderson & Tverdova, 2003, Listhaug et al. 2009, Guldbrandtsen & Skaaning, 2010). The negative relationship is rather unexpected, which shows that this issue warrants more investigation. Since the Freedom Index is a multi-dimensional variable, it would be interesting to study the relationship between each of its components and SWD.

Regarding the personal control variables: most do not have a significant effect on SWD. Being a male and being Catholic have a positive effect on SWD. On the other hand, being unemployed has a negative effect.

We also run two Logit models with the same set of variables where the dependent variable (Satisfied with democracy) takes value 1 if SWD is equal to 3

(Quite satisfied) or 4 (Very satisfied) and value 0 otherwise. The results are almost the same with only some slight changes in the statistical significance of just two control variables. The estimates can be found in the appendix (Table A3).

#### IV. Discussion and concluding remarks

Our objective in this paper was to analyse the nexus between the rules and characteristics of the political system with satisfaction with democracy in Latin America. We found that some of the 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 how old the democracy is, are indeed related to satisfaction with democracy. One important exception, however, is the degree of federalism.

We conjectured that people's satisfaction with democracy would be higher in countries which have a more federal system because a more federal system would allow better integration of diverse interests. The fact that we did not find a significant relationship between the degree of federalism and satisfaction with democracy could potentially be explained by two arguments. As pointed out by Norris (1999), it is possible that federalism is a poor measure of decentralization. Additionally, accountability of the ruling elites would be higher in more unitary states (Norris, 1999), which could potentially offset the positive link between federalism and satisfaction with democracy.

Regarding the electoral rule used to choose the president, as expected, we found that satisfaction with democracy is higher in countries that use a qualified plurality rule rather than a plurality (first-past-the-post) rule. Surprisingly, we did not find any statistically significant difference in the level of satisfaction with democracy in countries which use an absolute majority rule and with those using a plurality rule. This is an interesting issue which cannot be explained by our current research. More research on the topic could shed light on why this is observed.

We 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. This was pointed out by Sarsfield and Echegaray (2006), who show that satisfaction with democracy affects support for democracy. In other words, the higher the dissatisfaction with democracy, the more likely support for democracy will be eroded.

Finally, what do our findings suggest about what could be done to increase satisfaction with democracy and stop the decline 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 is a potential factor that could increase satisfaction with democracy. On the economic side, our results suggest that a stronger fight against corruption might improve the level of satisfaction with democracy. Moreover, observing structural discontent across Latin America, Levitsky (2018) argues that high degrees of social inequality may be a driving force. His observation combined with our findings suggests that policies aimed at reducing income inequality in the region could boost citizens' satisfaction with the political regime.

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Appendix

Table A1. Variables from the Latinobarometer

	Variable name	Explanation / Question	Min	Max	Mean	Std.Dev.
Independent variable	SWD	Satisfaction with democracy (we have inverted the original variable)	1 (Not at all satisfied)	4 (Very satisfied)	2.311	0.909
	Winner	Participation in the government of the political party the subject votes	0 (No)	1 (Yes)	0.55	0.497
Personal control variables	Male	Gender	0 (Female)	1 (Male)	0.491	0.500
	Age		16	98	40.24	16.416
	Educ : Incomplete secondary, technical		0 (No)	1 (Yes)	0.138	0.345
	Educ: complete secondary, technical	Education (omitted categories: illiterate, incomplete primary education, and complete primary education)	0 (No)	1 (Yes)	0.277	0.447
	Educ: incomplete high		0 (No)	1 (Yes)	0.093	0.290
	Educ: complete high		0 (No)	1 (Yes)	0.099	0.299
	Catholic	Religion (omitted categories: non-Christian religions and non-believers)	0 (No)	1 (Yes)	0.641	0.480
	Other Christian religion		0 (No)	1 (Yes)	0.217	0.412
	Very religious person	How would you describe yourself? Very devout, devout, not very devout, or not devout at all?	0 (No)	1 (Yes)	0.112	0.316
	Religious person		0 (No)	1 (Yes)	0.341	0.474
Unemployed	Married	Marital status (omitted categories: separated, divorced, and widow)	0 (No)	1 (Yes)	0.554	0.497
	Single		0 (No)	1 (Yes)	0.331	0.470
	Labour situation		0 (No)	1 (Yes)	0.066	0.247

Note: Based on the 19,121 observations used in Model I except variable Winner that is based on the 8,941 observations used in Model II.

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 2015	Cheibub, J.A., J. Gandhi, and J. R. Vreeland (2010)	15	67	35.33	12.33
	Voting enforced	1 (Purely voluntary voting) to 4 (Enforced by sanctions)	Singh (2018)	1	4	2.54	1.08
	Elections-Proportional representation	Parliament election	Political Database of the Americas and ACE (The electoral knowledge network)	0 (Mixed system)	1 (Proportional representation)	0.78	0.43
	Elections for president - AMR	Presidential election: Absolute majority rule		0	1	0.44	0.51
	Elections for president - QPL	Presidential election: Qualified plurality rule		0	1	0.22	0.43
	Elections for president - FPTP	Presidential election: First-past-the-post rule		0	1	0.33	0.49
	Degree of federalism	Gerring-Thacker Index. 1 (More unitary state) to 5 (More federal state)	www.pippanorris.com	1	5	2.56	1.62
Other country variables	Gini index	2014 (Except: Chile 2013)	Inter-American Development Bank (IADB)	39.80	55.00	48.76	4.49
	Inflation rate	2014	International Monetary Bank (IMF), except Argentina (World Bank)	1.10	57.30	9.36	14.75
	Unemployment rate	2014	World Bank	2.00	9.10	5.47	1.96
	Openness to trade	Trade (% of GDP) (2014)	World Bank	24.70	119.10	65.08	26.93
	Size shadow economy	2014 (Except Panama, for which we use the average for the period 2007-2014)	Medina and Schneider (2018), except Panama (Schneider and Buehn, 2018)	12.72	56.78	33.13	11.04
	Growth rate	GDP per capita growth (annual %) (2014)	World Bank	-5.21	6.35	1.71	2.68
	Corruption level	Corruption perception index (2014)	Transparency International	-73 (Less corruption)	-19 (More corruption)	-38.61	14.54
	Freedom index	2014. Free (-1.0 to -2.5), Partly Free (-3.0 to -5.0), or Not Free (-5.5 to -7.0).	Freedom House	-5.00	-1.00	-2.67	1.07
Human development index	2014. HDI goes from 0 to 100 (100 is the best outcome possible)	United Nations Development Program (UNDP)	60.30	83.30	73.27	6.46	

Table A3. Logit regressions

		Dependent variable: Satisfied with Democracy					
		Model I		Model II		Model I	Model II
		Logit		Logit		Logit	
		Coef.	Rob.Std.Err.	Coef.	Rob.Std.Err.	Marginal effects	
Political variables	Age democracy	-0.012*	0.007	0.000	0.007	-0.003*	0.000
	Voting enforced	-0.037	0.082	0.004	0.106	-0.008	0.001
	Elections-Proportional representation	1.381***	0.393	1.586***	0.505	0.264***	0.303***
	Elections for president - AMR	-0.423	0.425	0.077	0.540	-0.092	0.016
	Elections for president - QPL	0.698***	0.284	0.9983***	0.332	0.159***	0.207
	Degree of federalism	0.123	0.089	0.080	0.108	0.027	0.017
Other country variables	Gini index	-0.072**	0.031	-0.038	0.035	-0.016**	-0.008
	Inflation rate	0.045***	0.013	0.054***	0.014	0.010***	0.011***
	Unemployment rate	-0.003	0.062	-0.079	0.068	-0.001	-0.016
	Openness to trade	0.008	0.005	0.018***	0.006	0.002	0.004***
	Size shadow economy	0.034***	0.016	0.027	0.019	0.008**	0.006
	Growth rate	0.305***	0.034	0.259***	0.042	0.067***	0.054
	Corruption level	-0.054***	0.014	-0.051***	0.018	-0.012***	-0.010***
	Freedom index	-0.399**	0.176	-0.409***	0.166	-0.087**	-0.085***
	Human development index	0.030*	0.018	0.069***	0.020	0.007*	0.014***
Winner				1.373*	0.730		0.219***
Winner * Corruption level				0.009	0.016		
Constant		-5.968**	2.894	-11.484***	3.601		
Random effects	var(_cons)	0.009	0.013	0.026	0.013		
Number of observations		19,121		8,941		19,121	8,941

\* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%  
Control variables included: sex, age, education, religion, religiosity, marital status, job status.  
AMR: Absolute majority rule, QPL: Qualified plurality rule

## Variable description

### *Voting enforced*

To distinguish between the various degrees of enforcement present in the region, we use the four-category classification by Singh (2018). He categorizes countries into the following four groups:

- 1: countries where voting is voluntary
- 2: countries where voting is legally compulsory but where no sanctions for abstention are applied
- 3: countries where legal sanctions are present but usually not employed
- 4: countries where legal sanctions are present and enforced in practice

### *Degree of federalism*

As a measure of how federal a political system is, we use the unitarism (or federalism) index created by Gerring and Thacker (2004). The index goes from 1 to 5, and a higher value implies a higher degree of power-sharing among governing bodies at different levels. It is created as an additive variable by combining two dimensions. One dimension measures the degree of power-sharing between the national authority and regional governments in the following manner:

- 1: non-federal
- 2: semi-federal
- 3: federal

The other dimension focuses on bicameralism, which itself varies in two dimensions: the relative power of the two houses and the composition of the two houses. Gerring and Thacker (2004) divide the different possible cases into three categories:

- 0: unicameral case (no or weak upper house)
- 1: weak bicameralism
- 2: strong bicameralism



