Democracy, Participation, and Life Satisfaction

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Abstract

Objectives: We examine whether democracy, the degree of political participation and access to the executive, and differing systems of democracy influence individual levels of subjective wellbeing. *Methods*: We use individual data on life satisfaction and characteristics related to satisfaction for approximately 46 countries. We estimate ordered probit models with country and time-specific fixed effects, and cluster-adjusted robust standard errors. *Results*: Democracy and human rights are positively correlated with individual levels of well being. The opportunity to participate in the political process and whether the democracy is parliamentary or presidential are related to individual well-being. *Conclusions*: The type of democratic institutions influences the subjective well being of political minorities, decreasing their well-being in parliamentary systems.

1 Introduction

Philosophers have analyzed the nature of human happiness for millennia, and many, like Adam Smith, have discussed its relationship to the governing structures and economic institutions of society. More recently, psychologists and social scientists have begun to measure both individual and collective levels of happiness and to try to understand how institutions, predispositions, and behaviors affect an individual's well-being. Much of this research relies on the individual's own assessment of her happiness, hence the use of the phrase subjective wellbeing (SWB).¹

Researchers have connected SWB to a myriad of factors: genetic dispositions and personality traits (Lykken, 1999), the quality of one's affective ties, one's relative social and economic standing, religiosity, a sense of personal control, physical health, employment status, race, education, and age (Peterson, 1999; DiTella and MacCulloch, 2006; Kahnemann and Krueger, 2006; Frey and Stutzer, 2002; Diener and Lucas, 2000). SWB is also influenced by social conditions and institutional structures: individualism, GDP, human rights, political stability, economic freedom, levels of trust, social capital, equality, and a stable democracy (Diener, Diener, Diener, 1995; Diener and Suh, 1999; Veenhoven, 2000; Inglehart and Klingeman, 2000; Diener and Oishi, 2000; Helliwell and Putnam, 2006).

While the pursuit of happiness has often been considered central to the democratic project, the question of whether democracy actually contributes to human well-being is a more contentious issue. Market democracies generally have higher levels of happiness than other

¹ Like many who write in this area, we have chosen life satisfaction as our dependent variable rather than measures of happiness. Happiness is generally used to refer to a temporary emotion or mood while questions about life satisfaction ask for a more reflective assessment of well-being (Diener and Suh, 1999; Helliwell, 2003; Helliwell and Putnam, 2006).

countries, though there are contradictory findings on whether democratic practices and institutions themselves are much of a factor in determining individual happiness levels. Inglehart and Klingeman conclude that "the interpretation that democracy determines well-being does not stand up: other factors ... seem to play much more powerful roles" (Inglehart and Klingeman, 1999). On the other hand, in a 2005 study Dorn et al. find a sizable and significant effect of democracy on SWB for those countries whose democratic structures were in place before 1988, and a positive but insignificant effect for those countries that democratized between 1988 and 1998 (Dorn, Fischer, Kirchgassner, Sousa-Poza, 2005).

In this paper we investigate the relationship between democracy and individual levels of subjective well-being, addressing questions that are either currently contested or have not yet been discussed in the literature. First, we find empirical evidence that democracy does exert a demonstrable impact on life satisfaction, independent of economic well-being, cultural predispositions, and individual characteristics. We also provide some evidence for the position that political and civil rights are associated with SWB. Second, we consider how the institutional structures that allow political participation and access to the executive influence individual levels of life satisfaction. We find evidence that individuals in countries with greater access to institutional structures that allow political expression have higher levels of life satisfaction. Finally, we distinguish between presidential and parliamentary systems, and between proportional representation and majoritarian electoral systems. Consistent with our findings regarding the importance of participation, we find that the effect of a particular system depends on whether or not an individual holds minority views.

1.1 Aspects of Democracy

If there is a correlation between happiness and democracy, the question is whether particular aspects of democracy are better predictors of SWB than others. Political participation has been thought to contribute to well-being in different ways. First, participation may contribute to well-being if in democratic states policies are more in line with voter preferences than in non-democratic states. Second, the act of participation itself may contribute to SWB, independent of policy outcomes, by fostering social connectedness and inculcating a sense of purpose, both of which have to been connected with higher levels of SWB (Verba, Schlozman, and Brady, 1995; Putnam, 2000; Peterson, 1999; Frey and Stutzer, 2000; Seligman et al, 2006). Political participation may also increase an individual's sense of personal efficacy and control (Verba, Schlozman, and Brady, 1995). While it has been found that happiness is correlated with a sense of control over our lives and circumstances (Peterson, 1999, Seligman, 1975), Lane (2000) contends that the sense of control is mostly relevant in our private lives and that it does not extend to the level of national politics.

Frey and Stutzer (2000) examined this question by doing a statistical study of the Swiss cantons which have measurably different levels of participatory democracy. They found higher participation levels and higher opportunity for participation correlated with higher levels of individual happiness. However, Dorn, Fischer, Kirchgassner and Sousa-Poza, (2005) found that once the culture of the different Swiss cantons was controlled for using language as a proxy, the participation variable was no longer significant.

While we do not, given the limitations of our data set, address all the complexities of this issue, we explore the effects of structural and institutional aspects of the political system that determine how citizens can influence national policy. We use three concepts from the Polity IV

democracy rating: executive recruitment, constraints on the executive, and political competition. Executive recruitment refers to the extent of competitiveness and openness of executive recruitment that is institutionalized in the political process. The second aspect we consider is the existence of institutional constraints on the decision-making process. Finally, political competition refers to the regulation and competitiveness of political expression and activity. We find that after including country fixed-effects that absorb the effects of culture, the extent of political competition is associated with higher SWB, but we do not find similar evidence for executive recruitment and constraints, suggesting that institutions that allow political expression and activity are among the most important aspects of democracy in generating SWB.

1.2 Democratic Systems

Recent research has highlighted important differences between presidential and parliamentary systems which may affect individual levels of subjective well-being. First, in a parliamentary system, an executive can be more easily removed in response to voter discontent. In presidential systems, on the other hand, voters must generally wait until the end of fixed terms to remove a president, unless they are willing to risk a governmental crisis caused by impeachment. Second, since in parliamentary systems the executive is generally the head of the ruling party, there is less conflict between the legislative and executive branches, which in turn may allow for a more proactive legislative agenda (Linz, 1990; Mainwaring, 1993). Third, Persson, Roland, and Tabellini (2003) find that parliamentary systems tend to provide advantages for a broader majority of the citizenry, while presidential systems provide more goods to powerful minority groups. These differences suggest that parliamentary systems may

be more immediately responsive to electorates concerns, and thus, potentially associated with higher levels of SWB.

Electoral systems, too, can matter. Proportional electoral systems allow more diverse interests to be represented and require parties to compromise through the influence of coalition-formation. Thus, proportional systems may generate legislation that better represents the interests of a broad majority of citizens (Persson, Roland, and Tabellini, 2003). Majoritarian systems, on the other hand, tend to focus policy on small constituencies (Persson and Tabellini, 2005). However, proportional systems can also be marked by conflict and instability as coalitions break down, and the need to form a government can put undue influence in the hands of certain small minority parties (Persson and Tabellini, 2005), both which may create voter unhappiness. As a first test of whether these differences matter, we distinguish between parliamentary and presidential systems and proportional and winner-take-all systems. As far as we know, no one has yet addressed these differences in the context of subjective well-being. In addition, we also test the hypotheses that the effects of a parliamentary rule (rather than presidential) and a majoritarian electoral system (rather than a proportional system) differ for individuals who are in the minority of the political spectrum.

2 Methods and Data

2.1 Methods

Our methods are most closely related to those employed by DiTella, McCulloch and Oswald (2003). First, an important issue is the measurement of the concepts of interest, both democracy and life satisfaction. Typically, overall democracy is measured by indices created by researchers who attempt to measure and identify characteristics of democracies. Two of the

most widely used indices are available in the Polity IV data set and in the civil and political liberties data compiled by the Freedom House. A criticism of this kind of data set is that it is based on the subjective evaluations of the researchers and, although specific guidelines are followed to characterize the regime, these researchers may be predisposed to conclude that certain countries are more "free" or "democratic" than others. We attempt to mitigate this concern by using data compiled by two sources and showing that our overall conclusions are robust to the different ways of measuring democracy. Furthermore, as we explore the effects of the components of democracy, we are less concerned that our results are being driven by systematic biases in the evaluation of these aspects because researcher bias at the country level will be evident in the scores given to all aspects of democracy in that country. Finally, our last set of results uses more objective measures of the political system that are not subject to these biases.

A second concept in our study that might be imperfectly measured is life satisfaction. Self-reported measures of life satisfaction have been used by many researchers and have been shown to be correlated with brain activity associated with pleasure, smiling frequency, sleep quality, self-reported health, as well as a variety of demographic characteristics that are associated with improved life circumstances. (See, DiTella and MacCulloch, 2006; Kahnemann and Krueger, 2006; and Frey and Stutzer, 2002 for a discussion of self-reported measures of life satisfaction.) In addition, as reported by Sandvik, Diener, and Seidlitz (1993), and Costa and McCrae (1988), friends and relatives of people who respond to surveys by indicating higher levels of happiness and satisfaction corroborate the self-reporting. We use a self-reported measure of life satisfaction from the World Values Survey. Because responses to life satisfaction questions are ordinal and not cardinal, it is best to estimate an ordered probit model

that does not assume that each increment in the response scale is identical (i.e., the difference between a response of 2 and a response of 3 does not necessarily need to indicate a change in satisfaction of the same magnitude as the difference between a response of 7 and a response of 8.) In other words, our estimation method treats the survey response as an indicator of the unobserved individual characteristic of true satisfaction.

Because we examine life satisfaction levels of individuals from many different countries, we need to control for omitted country characteristics that might be related to both the level of democracy and an individual's happiness. Fortunately, we have panel data and not only observe many different individuals in each of the 46 countries in our sample, we also have samples for more than one time period for each country.² Therefore, we are able to include some country characteristics that others have shown to be related to individual happiness (e.g., GDP per capita and unemployment rate). Importantly, the availability of panel data allows us to estimate a country-specific fixed effect that captures the effects of omitted time-invariant country characteristics. Pooling individuals in several different countries must be done with care, and in addition to estimating a country-specific effect, we also calculate cluster-adjusted robust standard errors that account for within-country correlation and heteroscedasticity.

Another methodological issue is whether to use aggregate country data or individual data. While both approaches provide important insight into the relationship between democracy and SWB, we have chosen the latter for the following reasons. First, as we mention above, our data set allows us to control for time-invariant country-specific effects, such as culture. By including country-specific effects, we are less likely to be attributing to democracy an effect that belongs to 2 Note that we have different individuals in our sample from each country in each time period, allowing us to identify a country-specific effect. Because we do not have multiple observations for any one individual, we are unable to estimate individual-specific effects.

some other country characteristic. Second, as those who use aggregate data often acknowledge, averaging happiness levels can obscure important differences in SWB among groups and individuals within countries. Third, precisely because there is so much heterogeneity within individuals in a nation, and to the extent that we are able to control for many relevant characteristics, our analysis at the individual level may make a stronger case for causality. Finally, using individual level data makes reverse causality less of an issue. At the aggregate level of analysis it is possible that a positive coefficient between democracy and average levels of well-being could be the result of reverse causality, that happier people are more likely to institute and support democratic institutions. However, when using individual level data it is more legitimate to think that the country characteristic caused the individual life satisfaction and not that one happier individual caused the country to become more democratic.

2.2 Variables and Data

We use three different types of measures of democracy. We obtain measures of overall democracy from the Polity IV data set and from Freedom House. Following Persson and Tabellini (2006), we use the overall democracy score from the Polity IV data to create a variable that is equal to 1 when this index is positive and 0 when the index is less than or equal to 0. (The original polity score is from -10 to 10.) This coding allows us to include both stable and transitioning democracies in our analysis. A second measure of overall democracy is the political liberties score from Freedom House and a third measure is the sum of the political and civil liberties score.³

³ See Gastil (1990) for a discussion of the methods used by the Freedom House ratings.

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A second type of measure allows us to examine the components of democratic systems that underlie the overall scores. Specifically, the Polity IV overall democracy rating is based on three overall concepts: constraints on executive power, competitiveness of executive recruitment, and the institutions and access to those institutions that allow participation in the political process. Participation is based on an index that assesses the extent to which the expression of political preferences is institutionalized and the extent to which alternative preferences can be expressed. In our estimations, we use this index to create a variable, Participation, that is equal to 1 (0 otherwise) when the index takes on the maximum value. Our executive recruitment variable is equal to 1 when an index assessing the competitiveness and openness of the mechanisms for selecting a political leader takes on its maximum value. Finally, our measure of constraints on executive power takes on a value of 1 when an index measuring limits on the chief executive's authority achieves its maximum value. By coding in this manner we may exclude some transitioning democracies, so we interpret these results as applying primarily to mature democracies. Finally, we control by the type of democracy using a dummy variable that indicates that the system is based on parliamentary rule and a second variable indicating if the electoral system is majoritarian. Both of these measures are from the data set compiled by Persson (1999).⁴

Individual level data on life satisfaction and individual characteristics come from the World Values Survey (WVS). The WVS surveys individuals in many countries, asking them a battery of questions regarding their attitudes towards a variety of social and political issues. One of the questions is "All things considered, how satisfied are you with your life as a whole these days?" Respondents answer on a scale of one to ten and this is the response that we use as our

⁴ These data are available from Persson's web site at <u>http://www.iies.su.se/~perssont/</u>.

main variable of interest. The WVS has been conducted four times (1981-84, 1990-93, 1995-97, 1999-2002), and each time the sample of countries has been expanded. We include individuals from all countries that are included in the WVS at least two of the four times for which we have data. We take from the WVS individual characteristics that may be related to SWB and include these as control variables in our estimation. All of our estimations include controls for age, age squared, relative place in the income distribution of each country, dummy variables for age at which education was completed, dummy variables for employment status (unemployed, self-employed, retired, work at home, student), dummy variables for marital status (married, divorced, separated, widowed), dummy variables for number of children, and a dummy variable if a respondent considers herself to be a "religious person." We also included a variable that indicates where an individual places herself in the right-left political spectrum. The variable, RIGHT, is an index from 1 to 10, with individuals responding with a 1 placing themselves in the extreme left of the political spectrum and individuals responding with a 10 placing themselves in the extreme right.

Although the impact of income on life satisfaction is somewhat controversial (Easterlin, 2003; Lane, 2000; Frey and Stutzer, 2002; Diener and Oishi, 2000; Gilbert 2006), we do include real per capita GDP as a control variable. Unemployment rates may also be related to individual satisfaction and we include these as a separate country-level control as well. By including per capita GDP and unemployment rates we also control for the fact that democracies are more likely to implement economic and social policies that promote economic growth (Persson and Tabellini, 2006). Both per capita GDP and unemployment rates are obtained from the World Bank's World Development Indicators. Although there are arguably many other country characteristics that might be related to individual life satisfaction, our use of the fixed effects

estimation should control for many potential omitted time-invariant country-level variables.⁵ In total, we have data from individuals in 46 countries. Descriptive statistics and more detailed data definitions for each variable we use in our analysis are provided in the appendix.

2.3 Results

Using the data on individual and country characteristics and democracy described above, we first show that higher overall ratings of democracy are associated with higher levels of life satisfaction for the individuals in those countries. Table 1 provides the coefficients from an ordered probit model in which life satisfaction is the dependent variable. The first column of Table 1 shows the results for the control variables and columns two through four show the results when different measures of democracy are added. Before discussing the results for the democracy variables, we first discuss the results for the control variables. These control variables are included in all our estimations, however, the qualitative results are similar each time and we only report and discuss them here.⁶

In general, we find that being female, married, and employed is associated with reporting higher levels of life satisfaction. There is a U-shaped relationship between age and SWB with a turning point around 50 years of age. We do not find significant effects for age at which education is completed. One might have expected to find that those who did not continue their education earlier would be less satisfied with life; however, we find no evidence for this

⁵ Although we report detailed results for the fixed effects estimation that controls for country characteristics that do not change over time, an alternative specification estimating a random effects model yields qualitatively similar results.

⁶ A full set of results for any specification discussed by not reported in detail is available from the authors upon request.

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hypothesis. One possible explanation is that because our specification includes many other socio-demographic characteristics that are likely highly correlated with education (i.e., income and employment status) we are unable to uncover an independent effect of education. Helliwell (2001) also finds that education is not strongly associated with SWB. We also find that individuals who think of themselves as being religious report higher levels of life satisfaction, and, interestingly, individuals who report having political views more to the right of the political spectrum are also more satisfied with life. This latter finding is in keeping with findings of the General Social Survey since 1972 that Republicans and conservatives are happier than Democrats and liberals.

Country characteristics are also important, with many of the country dummy variables (not reported) entering the specification significantly. Furthermore, individuals who live in countries with higher unemployment rates report lower levels of life satisfaction. After controlling for all the individual characteristics and the country fixed effect, we do not find a significant relationship between per capita GDP and individual satisfaction.

We find a positive and statistically significant effect of democracy and freedom on life satisfaction. The democracy variable entered in Column 2 is the Polity IV summary measure of overall democracy while the civil and political liberties variables in Columns 3 and 4 are the summary measure of freedom from the Freedom House.⁷ Because these variables still enter significantly even after controlling for many individual characteristics as well as country-level characteristics through the use of the country dummies, per capita GDP, and unemployment rates, these findings are strong evidence in favor of the hypothesis that democracy does cause greater life satisfaction. The fact that the results hold for different measures of democracy give us further confidence in this statement.

⁷ Democracy equals 1 when the overall democracy index in the Polity IV data set (POLITY) is greater than 0.

Why are individuals living in more democratic countries more satisfied with life? We examine whether life satisfaction is influenced by living in countries with greater participation of individuals in the political process, with more open and competitive elections, and with greater constraints on the power of the executive. Results for ordered probit models with the same controls as those reported earlier, but with these measures of the different aspects of democracy appear in Table 2. The results in Column 1 of Table 2 show a specification in which all three democracy concepts (participation, executive recruitment, and executive constraints) are entered simultaneously. As can be seen in this first column, only participation enters significantly into the equation, with the expected positive effect on life satisfaction. In columns two through six, we demonstrate that these results are robust by showing that using different combinations of these variables does not affect the main conclusion.⁸ Thus, the evidence in Table 2 suggests that the reason why individuals in more democratic countries are more satisfied with life is in part because of their ability to participate in the political process.

Although the Polity IV data evaluate general features of institutions and access to those institutions that enable participation, it does not allow us to distinguish between different types of democracy. In our final analysis, we take up this issue, examining whether individuals who live in countries with majoritarian electoral systems are more satisfied than those with proportional representation systems, and if individuals who live in a country with a parliamentary system are more satisfied than those in presidential systems. Both the nature of the electoral system and the system of representation could affect an individual's perception of

⁸ Wald tests reveal that indeed the coefficient on participation is different from the coefficient on the competitiveness of executive recruitment and on the constraints on executive power at the 5% significance level. In addition, a test of the joint significance of competitiveness of executive recruitment and constraints on executive power shows that the null hypothesis that both coefficients are zero cannot be rejected.

their ability to participate in the political process and, therefore, may be related to life satisfaction. We note that an individual's satisfaction under these different systems may depend on whether that individual holds a minority political view if parliamentary and majoritarian systems tend to focus policies on small constituencies (Persson and Tabellini, 2005). Therefore, in determining the effect of these structural features of the political system, we control for whether or not an individual is in the minority. Specifically, we take the absolute value of the individual's place in the political spectrum minus the median value for that individual's country. People who are to the right or left of the median placement for their country will have high values for this variable, which we term "Minority View". The larger this value is, the more different an individual's views are from the typical view for their country. We include this new variable in our estimation of life satisfaction and interact it with the democracy structure variables to see if the structure variables affect individuals in the minority differently than others.

Before presenting the results, we do need to deal with one additional estimation issue. When we focus the analysis on the democratic system, these features have not changed for any of the countries in our sample. Thus, we can no longer estimate a model with country dummies because these dummy variables would be perfectly correlated with the democracy structure variable. However, we are still able to control for omitted country characteristics via a countryspecific random effect. We estimate a linear model rather than an ordered probit model because, due to the complexity of our specification, a random-effect ordered probit model does not converge to a maximum for the log likelihood. In our earlier estimations, we found little difference in our qualitative conclusions under this different estimation procedure so we are confident that the estimation procedure is not driving our conclusions. We should note that in this estimation, we examine a smaller number of countries that are all democracies so there will

be less variability to use to find significant effects. In addition, the nature of the exercise is to look for more subtle effects of structural features of the democracy so we expect it to be more difficult to find effects.

The results of this exercise appear in Table 3 (all control variables used in the previous estimations are included here as well). The first column of Table 3 show an estimation in which a variable for the majoritarian electoral system is included and the second column interacts the majoritarian system with the newly created variable, "minority view." As can be seen in these first two columns, we find no effect on satisfaction of a majoritarian electoral system when compared with proportional representation systems. Even though we control for the absolute place in the political spectrum of each individual, we find some evidence that people who report holding a minority political view are more satisfied with life. This finding could be influenced by reverse causality—individuals who are more satisfied with life may be more willing to report minority political views.

Although we find no evidence of an effect of the majoritarian electoral rule, we do find evidence that a parliamentary system affects the life satisfaction of some individuals. In particular, column 4 provides evidence that individuals with a minority view are less satisfied with life if the system is parliamentary. We find that those in the minority feel worse off under the parliamentary system is consistent with a participation hypothesis, if these individuals feel that minority views are not well represented under this system. This finding is also consistent with other evidence that presidential systems provide more goods to powerful minority groups, while parliamentary systems provide advantages to a broader majority (Persson, Roland, and Tabellini, 2003). It may be that the potential sting of having a minority political position in a

democracy may be mitigated for powerful minorities in presidential systems in a way it is not in parliamentary systems.

We find further evidence for this position when we estimate the determinants of a variable assessing individual sense of control over life circumstances, a variable that has been found to be positively correlated to higher levels of well-being (Peterson, 1999).⁹ The results in Table 4 (columns 2 and 4) suggest that people who report holding minority views also report feeling more in control in general. As before, this positive coefficient may be influenced by some reverse causality-people who feel more in control may feel more comfortable reporting minority views. In a result that is less subject to the reverse causality problem, we find a negative coefficient on the interaction term of parliamentary systems and minority views in column 4 of Table 4. This suggests that in presidential systems, individuals with minority views have a greater sense of control than do those in parliamentary systems, a result which may partially be explained by the greater responsiveness of presidential systems to powerful minorities. Given that parliamentary systems are thought to be more efficient at passing legislation than are presidential systems (Linz, 1990) and since that legislation is likely to be more centrist, it is also possible that political minorities might be less satisfied in parliamentary systems because a greater volume of legislation may be passed, and this legislation may well not be in line with minority preferences.

⁹ This variable comes from the World Values Survey. The question reads: "Some people feel they have completely free choice and control over their lives while other people feel what they do has no real effect on what happens to them. Please use this scale where 1 means "none at all" and 10 means "a great deal" to indicate how much freedom of choice and control you feel you have over the way your life turns on." The median of this variable is 7 and the range goes from 1 to 10.



3 Conclusion

Our research provides evidence that democracy and human rights are strongly and positively correlated with individual levels of well being. We find further support that the opportunity to participate in the political process may be a channel for explaining why democratic institutions contribute to higher levels of well-being. Finally, we provide evidence that the type of democratic institutions influences the subjective well being of political minorities, decreasing their well-being in parliamentary systems and possibly increasing them in majoritarian systems.

Our distinctions between parliamentary and presidential systems and between proportional representation and majoritarian systems, while an improvement over using a simple measure of democracy, are still relatively rough. Further research should focus on employing a more nuanced understanding of institutional differences between democracies. The same is true for studies of democratic participation. As Frey and Stutzer's (2000) study of direct democracy in Switzerland suggests, different types of political participation may well impact levels of SWB.

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Table 1:	Life Satisfaction	, Democracy	and	Political	Freedom
		,			

	(1)	(2)	(3)	(4)
Male	-0.0426***(0.0126)	-0.0424***(0.0126)	-0.0481***(0.0135)	-0.0482***(0.0134)
Age	-0.0300***(0.0026)	-0.0299***(0.0026)	-0.0274***(0.0029)	-0.0274***(0.0029)
Age*Age	0.0003***(0.0000)	0.0003***(0.0000)	0.0003***(0.0000)	0.0003***(0.0000)
2 nd income group	0.2357***(0.0386)	0.2368***(0.0383)	0.2458***(0.0466)	0.2452***(0.0466)
3 rd income group	0.4164***(0.0653)	0.4164***(0.0653)	0.4356***(0.0785)	0.4345***(0.0783)
4 th income group	0.5931***(0.0647)	0.5929***(0.0647)	0.6091***(0.0713)	0.6072***(0.0713)
5 th income group	0.7055***(0.0761)	0.7056***(0.0761)	0.6572***(0.1005)	0.6544***(0.1001)
15 or younger when	-0.0120(0.0187)	-0.0128(0.0188)	-0.0158(0.0200)	-0.0155(0.0201)
completed education				
15 to 19 when	-0.0006(0.0211)	-0.0017(0.0213)	-0.0255(0.0209)	-0.0251(0.0212)
completed education				
Unemployed	-0.2604***(0.0239)	-0.2604***(0.0240)	-0.2703***(0.0272)	-0.2703***(0.0272)
Self employed	-0.0185(0.0214)	-0.0183(0.0213)	-0.0347*(0.0206)	-0.0348*(0.0207)
Retired	0.0036(0.0284)	0.0035(0.0284)	0.0059(0.0291)	0.0061(0.0291)
At home	0.0162(0.0372)	0.0163(0.0372)	0.0086(0.0384)	0.0086(0.0383)
Student	0.0258(0.0212)	0.0258(0.0212)	0.0178(0.0228)	0.0181(0.0227)
Married	0.1984***(0.0170)	0.1986***(0.0170)	0.2033***(0.0182)	0.2029***(0.0182)
Divorced	-0.0443*(0.0231)	-0.0439*(0.0230)	-0.0523**(0.0233)	-0.0523**(0.0233)
Separated	-0.1707***(0.0366)	-0.1702***(0.0367)	-0.1864***(0.0370)	-0.1867***(0.0370)
Widowed	-0.0606**(0.0273)	-0.0603**(0.0274)	-0.0771**(0.0302)	-0.0771**(0.0302)
1 child	-0.0359**(0.0149)	-0.0356**(0.0148)	-0.0291*(0.0158)	-0.0289*(0.0158)
2 children	-0.0234(0.0172)	-0.0231(0.0171)	-0.0167(0.0181)	-0.0164(0.0181)
3 or more children	-0.0154(0.0196)	-0.0148(0.0194)	-0.0108(0.0212)	-0.0104(0.0213)
Religious	0.1180***(0.0119)	0.1184***(0.0121)	0.1289***(0.0134)	0.1290***(0.0132)
Right	0.0374***(0.0036)	0.0373***(0.0036)	0.0327***(0.0037)	0.0327***(0.0037)
Per capita GDP	0.0000(0.0000)	0.0000(0.0000)	-0.0000(0.0000)	-0.0000(0.0000)
Unemployment rate	-0.0069***(0.0020)	-0.0067***(0.0020)	-0.0083***(0.0018)	-0.0079***(0.0019)
Democracy		0.1589***(0.0605)		
Civil and Political			0.0230*(0.0135)	
Liberties				
Political Liberties				0.0378*(0.0220)
Number of Countries	46	46	34	34
Observations	84042	84042	71871	71871
			.1 T	

Estimation method: Ordered Probit. Cluster-adjusted standard errors in parentheses. Interaction with income

groupings and per capita GDP and dummy variables for each time period and country are included in each

estimation. * significant at 10%; ** significant at 5%; *** significant at 1%

	(1)	(2)	(3)	(4)	(5)	(6)
Participation	0.2898***	0.2894***	0.2925***	0.2924***		
	(0.0478)	(0.0461)	(0.0492)	(0.0459)		
Competitiveness	-0.0165	-0.0150			-0.0457	
of Executive						
Recruitment						
	(0.0803)	(0.0745)			(0.0819)	
Constraints on	0.0072		0.0011			-0.0244
Executive						
Power						
	(0.0495)		(0.0393)			(0.0431)
Number of	46	46	46	46	46	46
Countries						
Observations	84042	84042	84042	84042	84042	84356

Table 2: Life Satisfaction and Components of Democracy

Estimation method: Ordered Probit. Cluster-adjusted standard errors in parentheses. Dummy variables

for each time period and each country are included in each estimation. Includes all control variables used in estimations in Table 1. * significant at 10%; ** significant at 5%; *** significant at 1%

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	(1)	(2)	(3)	(4)
Majoritarian	0.0561	0.0387		
Electoral System				
	(0.1726)	(0.1919)		
	(0.1726)	(0.1818)		
Majoritarian		0.0152		
Electoral System				
*Minority View				
		(0.0287)		
Minority View		0.0346**		0.0725***
		(0.0140)		(0.0117)
Parliamentary			0.0929	0.1677
System				
			(0.1275)	(0.1235)
Parliamentary				-0.0476**
System*Minority				
View				
				(0.0187)
Observations	56319	56319	57441	57441
Number of	26	26	27	27
Countries				

Table 3: Life Satisfaction and Forms of Democracy

Random effects estimation. Cluster-adjusted robust standard errors in parentheses. Dummy variables for each time period, a constant, and a country-specific random effect are included in each estimation. Includes all control variables used in the estimations in Table 1. * significant at 10%; ** significant at 5%; *** significant at 1%

	(1)	(2)	(3)	(4)
Majoritarian	0.3791	0.4354**		
Electoral System				
	(0.2324)	(0.2158)		
Majoritarian		-0.0329		
Electoral				
System*Minority				
View				
		(0.0334)		
Minority View		0.0626**		0.0858***
		(0.0264)		(0.0207)
Parliamentary			-0.3285	-0.2343
System				
			(0.2163)	(0.2240)
Parliamentary				-0.0600**
System*Minority				
View				
				(0.0289)
Observations	55746	55746	56864	56864
Number of	26	26	27	27
Countries				

Table 4: Control and Forms of Democracy

Random effects estimation. Cluster-adjusted robust standard errors in parentheses. Dummy variables for each time period, a constant, and a country-specific random effect are included in each estimation. Includes all control variables used in the estimations in Table 1. * significant at 10%; ** significant at 5%; *** significant at 1%

Appendix: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Definition
Male	84042	.5076033	.4999452	=1 if male
Age	84042	42.84679	16.09435	Age in years
2 nd income quintile	84042	.2676638	.442744	=1 if in 2 nd income quintile
3 rd income quintile	84042	.2480545	.4318862	=1 if in 3 rd income quintile
4 th income quintile	84042	.1764356	.3811926	=1 if in 4 th income quintile
5 th income quintile	84042	.1170129	.3214376	=1 if in 5 th income quintile
15 or younger when	84042	.3745627	.4840127	=1 if 15 or younger when finished education
complete education				j i gi
15 to 19 when complete	84042	.4123177	.4922547	=1 if between 15 and 19 when finished
education				education
Unemployed	84042	.083958	.2773265	= 1 if unemployed
Self employed	84042	.0817567	.2739954	=1 if selfemployed
Retired	84042	.157338	.3641213	=1 if retired
Home	84042	.1324576	.3389896	=1 if work at home
Student	84042	.050677	.2193387	=1 if student
Married	84042	.6753409	.4682501	=1 if married
Divorced	84042	.0448228	.206916	=1 if divorced
Separated	84042	.017527	.1312249	=1 if separated
Widowed	84042	.0641822	.2450787	=1 if widowed
1 child	84042	.1717118	.377132	=1 if have 1 child
2 children	84042	.3074653	.4614466	=1 if have 2 children
3 or more children	84042	.2825135	.4502244	=1 if have 3 or more children
Religious	84042	.6524952	.4761806	= 1 if a religious person
Right	84042	5.551915	2.166096	Placement of views on political scale $(10 =$
8				far right. $1 = \text{far left}$
GDP	84042	14586.44	12372.41	Per capita GDP in 1995 dollars
Unemployment	84042	9.156693	5.920808	Unemployment rate
Democracy	84042	.9740725	.15892	=1 if Polity IV summary democracy variable
				> 0 (POLITY > 0)
Political Liberties	69319	5.746924	1.890299	Freedom House political liberties. $1 = \text{least}$
				liberal, 7= most liberal
Civil and Political	69319	11.29895	3.596457	Freedom House political + civil liberties 2=
Liberties				least liberal, 14=most liberal
Participation	84042	.5648128	.4957845	=1 if Polity IV participation variable is
*				maximum (POLCOMP=10)
Competitiveness of	84042	.8778349	.3274784	=1 if Polity IV executive recruitment
Executive Recruitment				variable is maximum (EXREC=8)
Constraints on Executive	84042	.768461	.4218184	=1 if Polity IV executive constraints variable
Power				is maximum (EXCONST=7)
Majoritarian Electoral	53767	.4209376	.4001567	1/seats per district (MAJ from Persson and
System				Tabellini (1998))
Parliamentary system	54889	.6947294	.4605262	=1 if parliamentary system
Minority View	84042	1.596833	1.480663	Distance of views from center: Absolute
-				value of (Right – Median Value of Right for
				Country)