

# Happiness and Voting: Evidence from Four Decades of Elections in Europe

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**Abstract:** *There is a growing interest among policy makers in the use of subjective well-being (or “happiness”) data to measure societal progress, as well as to inform and evaluate public policy. Yet despite a sharp rise in the supply of well-being-based policymaking, it remains unclear whether there is any electoral demand for it. In this article, I study a long-run panel of general elections in Europe and find that well-being is a strong predictor of election results. National measures of subjective well-being are able to explain more of the variance in governing party vote share than standard macroeconomic indicators typically used in the economic voting literature. Consistent results are found at the individual level when considering subjective well-being and voting intentions, both in cross-sectional and panel analyses.*

**Verification Materials:** The data and materials required to verify the computational reproducibility of the results, procedures, and analyses in this article are available on the *American Journal of Political Science* Dataverse within the Harvard Dataverse Network, at: <http://doi.org/10.7910/DVN/QWLGGN>.

Are governments held accountable for their performance? This question is central to one of the largest and longest-running literatures in political economy. A substantial body of empirical work links governments’ reelection chances to the state of the economy, and has shown that voters tend to reward incumbents during periods of prosperity and punish them during downturns (e.g., Duch and Stevenson 2008; Fair 1978; Fiorina 1981; Key 1966; Kramer 1971; Lewis-Beck and Stegmaier 2000). One of the main reasons the research on retrospective voting is so extensive is that it plays a central role in the way democracies are thought to function. By holding governments accountable at the ballot box, voters are able to selectively retain high-quality incumbents (Besley 2006; Fearon 1999), as well as to incentivize politicians to work hard to ensure positive outcomes (Barro 1973; Ferejohn 1986). But which outcomes do incumbents have incentives to maximize?

The past few years have seen a growing interest in measures of national performance that go “beyond GDP” (Fleurbaey 2009). Various national statistical offices around the world have begun to systematically collect subjective well-being (SWB) data on a large scale in

order to more broadly assess societal progress, inform public policymaking decisions, and evaluate policy outcomes (Krueger and Stone 2014; O’Donnell et al. 2014).<sup>1</sup> However, whereas the voluminous evidence of economic voting suggests incumbents have strong incentives to ensure a healthy economy in order to be reelected, it remains unclear whether there is any electoral impetus for governments to measure—and focus policy on—voters’ broader well-being in this way, conditional on the state of the economy.

To assess whether it may make any electoral sense for politicians to use SWB as a policy goal, this article provides evidence of the extent to which national levels of happiness are able to account for the electoral fate of sitting governments at general elections, as well as whether individual-level happiness is able to explain voting intentions. Taken together, the results provide evidence of a strong empirical link between subjective well-being and incumbent voting: Good times keep governments in office; misery throws them out.

Since 1973, the Eurobarometer has regularly asked citizens of European Union (EU) member states, “On the whole, are you i) very satisfied, ii) fairly satisfied, iii) not

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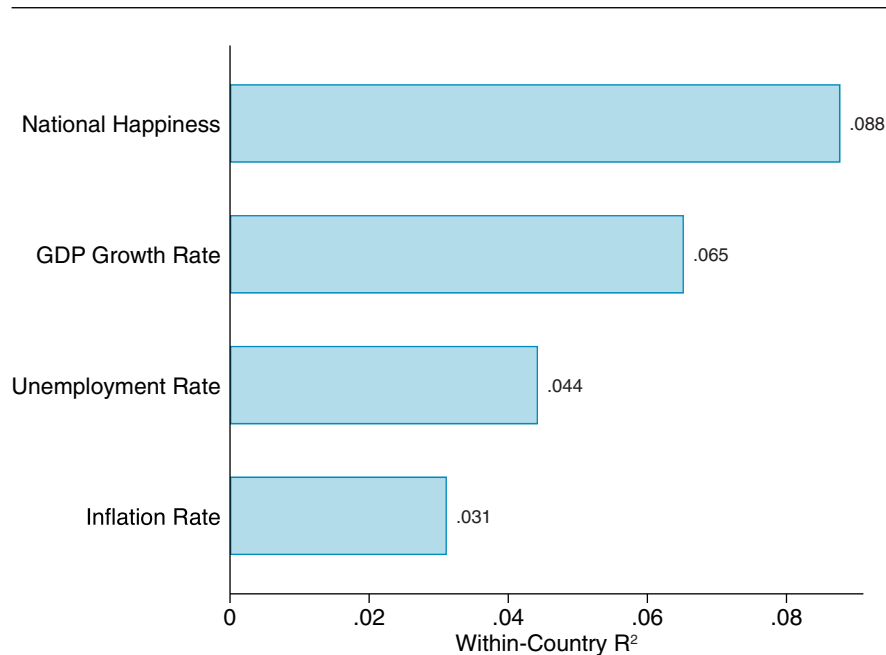
<sup>1</sup>The Organization for Economic Cooperation and Development (OECD) reports that policy makers in over 20 countries around the world are now embracing SWB measures in some way (Durand 2018). Reports and guidelines on the measurement and use of SWB in policymaking have been published, among others, by the OECD (2013) and U.S. National Research Council (Stone and Mackie 2013).

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**FIGURE 1 What Best Explains the Variance in Incumbent Government Vote Share?**



*Note:* Each bar represents the within-country  $R^2$  value from a separate bivariate within-country regression of cabinet vote share on each of the four indicators. The sample is 139 elections in 15 European countries, 1973–2014. National happiness is the country-mean of the life satisfaction question at the closest Eurobarometer survey prior to the election. Macroeconomic variables are drawn from the OECD and refer to the country-year of each election.

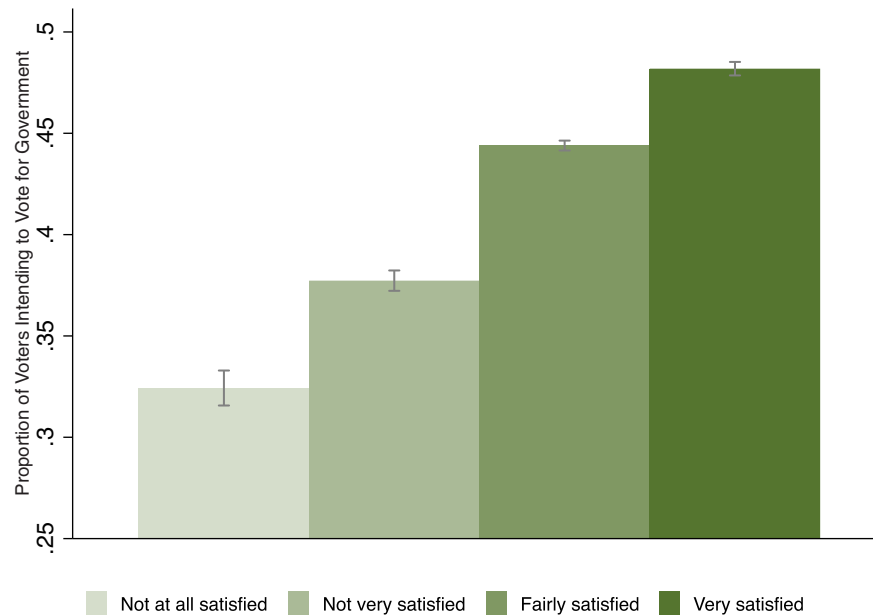
very satisfied, or iv) not at all satisfied with the life you lead?” Figure 1 shows the amount of variance in government party vote share over the past four decades that can be explained by national levels of SWB in the months prior to general elections and by each of the standard macroeconomic indicators. In a bivariate regression, life satisfaction accounts for around 9% of the variance in the incumbent vote within countries, whereas economic growth—the more standard measure used in the retrospective voting literature—explains around 6.5%. In the second section of this article, I enter SWB into a fuller vote share equation that is otherwise standard to the economic voting literature. Here, the key question is whether SWB measures are able to add to our understanding of incumbent voting, controlling for the state of the economy (and, in turn, whether there is any electoral dividend for governments focusing on improving SWB beyond ensuring a healthy economy). Entered together into a voting equation, one standard deviation changes in national SWB and the economic growth rate are predictive of 6.1 and 2.9 percentage point swings in incumbent party vote share, respectively.

In the third section of the article, I turn to the micro-foundations of this aggregate relationship. Up until the early 2000s, the Eurobarometer also asked respondents, “If there were a general election tomorrow, which party would you vote for?” Using data from over 400,000 individuals in 447 national surveys, I find that happier survey respondents are more likely to also report an intention to vote for a governing party. Figure 2 plots the correlation between life satisfaction and incumbent voting in the data. Whereas just over 30% of the people who are “not at all satisfied” with their lives would vote for the government, this figure rises to nearly 50% among those who are “very satisfied.”

Two basic concerns arise with this initial association: (1) government-supporting voters may well be happier simply because their chosen party is in power,<sup>2</sup> and (2)

<sup>2</sup>Di Tella and MacCulloch (2005) show, using the Eurobarometer data, that individuals are happier when parties they are ideologically close to are in power. This leaves open the possibility that any observed relationship between SWB and government support could be driven by previous election results causing happiness rather than happiness causing future voting intentions.

**FIGURE 2 Life Satisfaction and the Intention to Vote for a Governing Party**



*Note:* Each bar represents the proportion of likely voters in each category of life satisfaction who respond that they would vote for a government party. The 95% confidence intervals are shown. *Source:* Eurobarometer, 1973–2000.

the observed happiness–voting link may be driven by unobserved individual heterogeneity. In order to help mitigate the initial issue of reverse causality, I show that the individual-level result holds when controlling for a lagged dependent variable (whether the respondent voted for the current government during the last election) and for the respondent's ideological closeness to the government.<sup>3</sup> To more fully deal with the issue of (time-invariant) omitted variables, I turn in the fourth section of the article to long-run panel surveys in two of the countries—Great Britain and Germany—that enable me to estimate individual fixed effects equations, which assess the extent to which a person becomes more (less) likely to support a governing party as she becomes more (less) happy over time. Although the data used in this article are ultimately observational in nature, the empirical associations shown here nevertheless build upon—and are consistent with—causal evidence presented by Liberini, Redoano, and Proto (2017), who leverage exogenous variation in subjective well-being induced by widowhood in order to show a significant effect of life satisfaction on

individuals' support for governing parties over time in Great Britain.

The findings contribute to a number of strands of literature in political science, economics, and psychology. First, the research adds to the huge body of work on retrospective voting (Healy and Malhotra 2013). This literature has focused almost entirely on the state of the economy, and the terms *retrospective voting* and *economic voting* have in many ways become almost synonymous (for reviews of the economic voting literature, see Hibbs 2006; Lewis-Beck and Stegmaier 2000). In this article, I seek to expand the evidence base for retrospective voting beyond the economy, and in doing so I contribute to a small literature that has begun to investigate the links between voting and noneconomic outcomes such as war casualties and responses to natural disasters (Bechtel and Hainmueller 2011; Berry and Howell 2007; Healy and Malhotra 2009; Karol and Miguel 2007).

Second, the results contribute to an emerging literature using subjective well-being data to answer questions in political economy (e.g., Alvarez-Díaz, González, and Radcliff 2010; Di Tella and MacCulloch 2005; Flavin and Keane 2012; Flavin, Pácek, and Radcliff 2011; Pácek and Radcliff 2011; Radcliff 2001; Stutzer and Frey 2006). The article builds in particular on the findings of Liberini, Redoano, and Proto (2017), who show that individuals'

<sup>3</sup>In the aggregate analysis, I also residualize national SWB from the partisanship of survey respondents (as well as from other demographic determinants of happiness).

self-reported well-being is associated with their probability of declaring support over time for a governing party between 1996 and 2008 in the United Kingdom.<sup>4</sup> The principal contribution of this article is to show that these prior findings, using self-reported voting intentions and political support, translate into real-stakes electoral outcomes and are consistent across a range of countries and time periods. Indeed, the data suggest at the national level—across 15 countries over four decades—that happiness measures are strongly predictive of the electoral fate of governing parties in general elections.

Third, the analysis provides a novel test for predictions drawn from the theoretical literature on political agency (see Besley 2006 for a review).<sup>5</sup> Central to political agency models is the principal–agent relationship between the electorate and the incumbent government. Voters are unable to directly observe either the actions or competence of the politicians to whom they have delegated policymaking authority, and they are instead left to make judgments based on observable outcomes like their own welfare. In Ferejohn's seminal model, for example, voters "are only able to assess the effects of governmental performance on their own well-being," which is known to depend jointly upon policy makers' actions as well as essentially probabilistic exogenous factors (Ferejohn 1986, 11). In earlier formal models, elections are generally considered as a mechanism to mitigate the moral hazard problem: Voters reelect incumbents who deliver sufficient welfare to voters and throw out those who do not, in order to create incentives for politicians to exert costly effort to improve people's lives (e.g., Barro 1973). More recent theoretical work stresses the role of elections in dealing with adverse selection: Voters observe their welfare in order to learn about an incumbent's honesty, competence, or motivation and reelect only those they expect to perform better in the future than an unknown contender (e.g., Fearon 1999).<sup>6</sup> Common to all of these models is *retrospective voting*, the central prediction that voters' welfare is positively related to incumbents' reelection prospects.

<sup>4</sup>In a related paper, Esaiasson, Dahlberg, and Kokkonen (2017) show that subjective well-being is predictive of satisfaction with democracy, which may be seen as a measure of perceived government performance.

<sup>5</sup>In the supporting information (SI), I sketch a simple example of a political agency model in order to draw out the principal predictions to be tested, as well as their policy implications.

<sup>6</sup>Disentangling the sanction and selection mechanisms is difficult since they are often observationally similar—indeed, in many theoretical models, the two work in the same direction (e.g., Alt, Bueno de Mesquita, and Rose 2011; Banks and Sundaram 1998; Besley 2006)—and is not the focus of this article.

Fourth, the analysis adds to a long-standing discussion on the concepts of utility and welfare. Self-reported measures of "experienced utility" like SWB differ from the more standard economic concept of welfare based on "decision utility," derived from revealed preferences (Kahneman, Wakker, and Sarin 1997; Rabin 1998).<sup>7</sup> Whereas the economic voting literature tests retrospective voting predictions empirically using economic and financial indicators as proxies for voters' decision utility, SWB data offer an opportunity to test this prediction using an alternative measure of people's experienced utility.<sup>8</sup>

Fifth, the findings contribute to an ongoing debate on the ends of public policymaking. In line with recommendations made by the Stiglitz–Sen–Fitoussi Commission (2010), many governments are beginning to collect SWB data on a large scale with the intention of using it to gauge success and guide policymaking. While one element of this article is to test the retrospective voting prediction of political agency models, it is also worth noting that such models are game-theoretic in nature. The literature on political business cycles, in particular, reminds us that voters and governments act in equilibrium, with elected politicians making decisions in anticipation of voters' behavior (e.g., Rogoff 1990). By establishing a link between life satisfaction and electoral outcomes, the findings suggest it may well be in governments' own electoral interest to collect and use SWB data in policymaking.

Finally, the analysis relates to work in political psychology, which has long studied the effects of discrete emotions—such as fear, anger, and hope—in shaping the political process, both on the part of voters as well as politicians (e.g., Civettini and Redlawsk 2009; Parker and Isbell 2010). Equally, research in political science has more recently begun to study the role of such emotions in the political sphere (e.g., Marcus and MacKuen 1993; Valentino et al. 2011).<sup>9</sup> In this article, I add to this stream of research by studying a broader measure of overall subjective well-being, and in doing so build on a burgeoning literature in positive psychology, and more latterly in economics, that studies the determinants of happiness as well

<sup>7</sup>Despite the two "types" of utility being conceptually distinct, recent evidence presented by Benjamin et al. (2012) suggests that self-reports of life satisfaction are also good predictors of individuals' choices and actions and thus come close to the more standard notion of decision utility (see also Benjamin et al. 2014b; Frijters 2000).

<sup>8</sup>The term *experienced utility* is used broadly here since I focus on voters' life satisfaction, which is only one element of the broader concept of subjective well-being (Kahneman and Krueger 2006; Kahneman and Riis 2005). For simplicity, I use the broad term *happiness* to refer to life satisfaction throughout the article.

<sup>9</sup>See Marcus (2000) for a review.

as the use of SWB data in public policy (e.g., Adler and Seligman 2016; Diener et al. 2009; Dolan, Peasgood, and White 2008).

## Aggregate SWB and Election Results

In this section, I construct a panel of 15 European Union member countries between 1973 and 2014 and examine what best predicts the electoral fortunes of sitting governments. I follow the established literature in measuring national happiness using self-reports of life satisfaction drawn from large, nationally representative surveys. Equally, I follow the conventions of the retrospective voting literature and seek to estimate otherwise standard models of incumbent voting. This allows me to assess the extent to which the use of a broad measure of national success like happiness in such models is able to add to our understanding of electoral accountability, beyond more standard (financial) predictors of election results.

I estimate cross-country panel regressions of the following form:

$$V_{jt} = \beta_1 SWB_{jt} + \beta_2 ECON_{jt} + Z'_{jt} + \xi_j + \gamma_t + \varepsilon_{jt}, \quad (1)$$

where  $V_{jt}$  is the total percentage of votes won collectively by all of the parties in the governing coalition in country  $j$  prior to each national general election  $t$ .  $SWB_{jt}$  is the national mean of life satisfaction, derived from responses to the life satisfaction question outlined in the introduction. This 1–4 scale question is drawn from the Eurobarometer survey closest in time prior to each election, which is on average around 4 months beforehand.  $\xi_j$  and  $\gamma_t$  are country and year fixed effects, and  $\varepsilon_{jt}$  is an error term adjusted for clustering at the country level.

Following the literature,  $Z_{jt}$  is a vector of time-varying controls, including (1) the number of parties in government, (2) the sitting government's collective seat share, (3) government ideological disparity, and (4) party fractionalization. In the main analysis these are held constant, but in a supplementary set of regressions reported in the SI (see Table S21), they are interacted with SWB to more directly test the "clarity of responsibility" thesis that politicians will be less likely to be held accountable for outcomes in instances where it is less clear who is responsible for outcomes (cf. Powell and Whitten 1993).

National SWB is itself influenced by macroeconomic conditions (Di Tella, MacCulloch, and Oswald 2001, 2003). The vector  $ECON_{jt}$  thus includes the election-year economic growth, unemployment, and inflation rates.

The parameter  $\beta_1$ , in this multivariate framework, provides an estimate of the association between incumbent vote share and the variation in subjective well-being that is not correlated with the three principal indicators of macroeconomic conditions. This is the key coefficient of interest, since one of the main contributions of this article is to investigate whether measures of SWB are able to explain electoral outcomes over and above what is already known from the literature on economic voting.

Column 1 of Table 1 shows a relationship that is both statistically and substantively significant between life satisfaction and cabinet vote share. To enable comparison, all of the explanatory variables are standardized into z-scores such that they have a mean of zero and a standard deviation of one across the sample of elections. The outcome is the percentage vote share of the incumbent government, lying between 0 and 100. Thus, a one standard deviation change in SWB is significantly associated with around a 7.9 percentage point swing in the vote share enjoyed by the governing coalition at the end of their term in office.

Columns 2–5 replicate the finding that the electoral fate of incumbents is associated with the state of the macroeconomy. A one standard deviation change in the election-year economic growth rate is associated with a 3.9 percentage point change in government vote share, and a one standard deviation change in the unemployment rate over time is predictive of a swing of around 2.7 percentage points. Perhaps surprisingly, the inflation rate enters positively into the equation in column 4. However, inflation is positively correlated with the economic growth rate, and neither the unemployment nor inflation rates are significantly associated with cabinet vote share once all of the macroeconomic indicators are entered together into the model in column 5. Both economic growth as well as life satisfaction emerge as predictors of vote share when they are entered together into the equation in column 6, with the magnitude of the well-being coefficient twice that of economic growth.

To what extent is this association driven by differential turnout? Although the foregoing analysis shows a strong association between SWB and government party vote share, the electoral fate of governing parties may be dependent jointly on turnout as well as people's vote choices. Indeed, an individual's decision of whether or not to vote to retain the governing party can be seen as one of two steps: (1) whether to vote and (2) whom to vote for. In columns 7 and 8, I estimate the association between SWB and electoral turnout. The data suggest that neither national happiness nor the main macroeconomic indicators are significantly related to aggregate turnout in the



**TABLE 1** Happiness and General Election Results in Europe

	DV: Government Vote Share						DV: Turnout	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
National Happiness	7.885*** (2.229)					6.127** (2.823)	−0.666 (1.582)	−0.729 (1.741)
GDP Growth Rate		3.915*** (1.304)			3.564** (1.377)	2.849** (1.246)		−0.556 (0.527)
Unemployment Rate			−2.649** (0.991)		−1.518 (1.333)	0.037 (1.236)		0.059 (1.122)
Inflation Rate				2.915* (1.365)	1.603 (1.671)	1.955 (1.483)		1.611 (1.240)
Further Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	139	139	139	139	139	139	139	139
R <sup>2</sup>	0.767	0.758	0.738	0.736	0.772	0.793	0.923	0.928

*Note:* Robust standard errors are in parentheses, adjusted for clustering at the country level. The sample is a panel of 15 European countries, 1973–2014. Independent variables are all z-scored (mean = 0, SD = 1). The outcome variable in Models 1–6 is collective cabinet vote share, lying between 0 and 100. The outcome variable in Models 7 and 8 is percent turnout, lying between 0 and 100. Life satisfaction is the national mean at the closest Eurobarometer survey prior to the election. Macroeconomic variables are country-year values drawn from the OECD. Country and year dummies are included in all models, together with the number of parties in government, government's prior seat share, party system fractionalization (ENEP), and cabinet ideological disparity. \*p < .1, \*\*p < .05, \*\*\*p < .01.

sample of elections. When estimating the determinants of turnout and government vote share simultaneously in a structural equation model (see SI Table S9), I find that the association between SWB and governing voting is driven by vote choice rather than turnout.

This general pattern of results is robust to a number of alternative econometric specifications and analytic choices. First, when replacing cabinet vote share with the vote share received by the main coalition party only, one standard deviation changes in aggregate life satisfaction and economic growth are associated with 5.2 and 2.8 percentage point swings in the incumbent vote, respectively (see SI Table S6). Second, the findings are robust to the inclusion of country-specific linear as well as quadratic time trends (see SI Table S8).

Third, the results are robust when using alternative measures and definitions of national happiness. In the main analysis, I consider the association within countries over time between the mean level of SWB—measured at the closest prior survey to each election—and government vote share. Rather than take the country-mean of the 4-point life satisfaction scale, I code the percentage answering in each of the four response categories (see SI Table S12). This does not alter the main result of the article. The percentage responding that they are “not at all” satisfied—the lowest category—is able to explain the most variance in vote share of the four models. This

suggests the strongest electoral dividends for politicians may be gained by ensuring their policies mitigate and alleviate misery.

Further, in SI Table S10, I also use the election-year mean (rather than the closest survey), as well as the variance of happiness, to predict electoral outcomes. The country-level standard deviation of SWB enters negatively into the equation, suggesting that happiness inequality may play a role in determining a government's electoral fate come the end of its term in office. However, the variance is largely dominated by the level once both are included together in the vote share equation. Finally, I investigate the extent to which recent changes in SWB—rather than the level—are predictive of cabinet vote share. Here, I code the annual growth rate of life satisfaction, which, akin to the GDP growth rate, is the percentage change from the year prior to the election to the election year. Recent SWB growth is strongly and positively related to government vote share, as one might expect. Splitting happiness growth into its positive and negative elements using a spline analysis, the data suggest that recent negative changes in SWB are a much stronger predictor of government vote share than positive ones.<sup>10</sup>

<sup>10</sup>One potential explanation for this is that whereas voters may attribute downturns in their well-being to government action, they may attribute upturns to their own efforts.

Fourth, I show that the results are robust to adjusting the national life satisfaction measure for individual-level determinants of SWB (see SI Table S5). This residualized measure of SWB—adjusted for individual demographics like gender, age, education, and marital status—can be thought of as what Di Tella, McCulloch, and Oswald (1999) label a country's level of "pure" subjective well-being, on which government policy ought to be focused. Adjusting in this way for demographics does very little to alter the results, however. In order to begin to deal with the issue of reverse causality noted above, I also residualize life satisfaction from individual partisanship, using a subset of surveys that asked about respondents' ideology. Similar to Di Tella and MacCulloch (2005), I find that partisan individuals have higher life satisfaction when their chosen party is in office (see SI Table S7). However, partialing out the variance in individuals' life satisfaction that is attributable to their (un)favored party being in office at the time of the survey does not change the main findings of the article.

## Individual Life Satisfaction and Incumbent Voting

In order to study the microfoundations of the robust empirical link between the electorate's aggregate subjective well-being and the vote share received by government parties at general elections, I turn in this section to the individual level. Until 2002, the Eurobarometer included the following voting intention question in some, though not all, survey rounds: "If there were a general election tomorrow, which party would you vote for?" In all, over 400,000 individuals in 447 usable national surveys between 1973 and 2000 were asked the life satisfaction question in the same survey as the voting intention question.

As noted above, the decision whether to support incumbent parties at the ballot box includes both the initial decision of whether to vote as well as the subsequent choice of whom to vote for. Unfortunately, the Eurobarometer does not include an explicit question on whether or not the respondent intends to vote. In the main analysis of vote choice, I restrict the sample to include "likely voters" only.<sup>11</sup> This group of respondents makes up around 71% of the sample and includes those

who answer the voting intention question positively with a particular political party.<sup>12</sup>

In the first instance, I find that happiness is positively related to being a "likely voter" in the sample. Column 2 of Table 2 suggests that individuals who are "very satisfied" with life (as opposed to "not at all") are around 5.6% more likely to be a probable voter. This is consistent with the findings of Flavin and Keane (2012), who show in a sample of U.S. voters that life satisfaction is positively related to turnout intentions.

Restricting the sample to those who are likely to vote, column 3 of Table 2 represents the basic correlation between SWB and incumbent voting (shown in Figure 2) in regression form, using a linear probability model (LPM).<sup>13</sup> The coefficient on "very satisfied" with life as a whole (compared to "not at all satisfied") suggests that such individuals are 16 percentage points more likely to support a governing party were an election held tomorrow. The addition of a series of fixed effects and other control variables in Model 4 does little to alter this main finding. These controls include a standard set of demographics (gender, age, age<sup>2</sup>, marital status, and education) as well as country and survey fixed effects, and the same set of national political controls included in the national-level analysis in the previous section.<sup>14</sup>

In columns 5 and 6, I add into the equation a lagged dependent variable (LDV), using a subset of 295 surveys in which respondents were also asked which party they voted for during the most recent general election. Controlling in this way for prior government support helps to mitigate the concern that any effect of life satisfaction on incumbent voting may be driven by government-supporting individuals having higher well-being simply because the party they support is in power (cf. Di Tella and MacCulloch 2005). In line with this general concern, the addition of an LDV reduces the magnitude of the happiness–voting association. Nevertheless, the association remains both statistically and substantively significant. An alternative strategy uses a question asking respondents to place themselves on a 1–10 left–right ideology scale. I match these responses to expert judgments

<sup>12</sup>In all, 44.2% of these voters report intending to vote for a governing party, which is comparable to the mean vote share of 44.3% received by incumbent parties in these countries during the same 1973–2000 period. Mean turnout during the period is 80%, which is marginally higher than the group of "likely" voters included in the analysis.

<sup>13</sup>Marginal effects estimated from logit and probit models (see SI Table S17) are very similar to those reported in the main analysis using LPMs.

<sup>14</sup>As above, I hold these clarity of responsibility variables constant in the main models and interact them with subjective well-being in further analysis (see SI Table S22).

<sup>11</sup>Results using the whole sample rather than likely voters only, do not alter the pattern of results (see SI Table S14).

**TABLE 2 Individual Happiness and the Intention to Vote for a Governing Party**

	DV: Likely to Vote		DV: Intends to Vote for Government Party					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Life Satisfaction</b>								
Not very satisfied	0.020** (0.009)	0.016** (0.007)	0.053*** (0.008)	0.058*** (0.015)	0.059*** (0.014)	0.039*** (0.013)		0.033** (0.012)
Fairly satisfied	0.073*** (0.017)	0.039*** (0.009)	0.120*** (0.015)	0.128*** (0.016)	0.134*** (0.019)	0.088*** (0.016)		0.064*** (0.014)
Very satisfied	0.120*** (0.027)	0.056*** (0.009)	0.158*** (0.030)	0.168*** (0.019)	0.194*** (0.027)	0.131*** (0.022)		0.110*** (0.021)
<b>Lagged DV</b>								
Last vote was for governing party						0.724*** (0.015)	0.719*** (0.017)	0.720*** (0.017)
<b>Finances Past Year</b>								
A lot worse							−0.146*** (0.024)	−0.126*** (0.020)
A little worse							−0.074*** (0.012)	−0.066*** (0.011)
A little better							0.045*** (0.007)	0.042*** (0.007)
A lot better							0.059*** (0.019)	0.048** (0.017)
<b>Controls</b>								
Country Dummies	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Survey Dummies	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Demographics	No	Yes	No	Yes	Yes	Yes	Yes	Yes
National Politics	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Observations	411,989	411,989	291,523	291,523	188,945	188,945	67,040	67,040
R <sup>2</sup>	0.006	0.056	0.006	0.053	0.058	0.396	0.337	0.340
Countries	15	15	15	15	15	15	12	12

*Note:* Robust standard errors are in parentheses, adjusted for clustering at the country level. The dependent variable is equal to 1 if the respondent is likely to vote in Models 1 and 2, and 0 otherwise. The dependent variable is equal to 1 if the respondent intends to vote for a government party in Models 3–8, and 0 otherwise. LPMs are reported; see the supporting information for nonlinear models. Sample in Models 3 – 8 includes “likely voters” only. National political controls are number of parties in government, government’s seat share, party system fractionalization (ENEP), and cabinet ideological disparity. Demographic controls are gender, age, age<sup>2</sup>, marital status, and education level. Omitted category for Life Satisfaction is “Not at all”. Omitted category for Finances Past Year is “Same”. \*p < .1, \*\*p < .05, \*\*\*p < .01. *Source:* Eurobarometer, 1973–2000.

of the ideological position of the government and introduce the absolute distance between the voter’s and government’s ideology into the equation. Although voters who are ideologically further from the government are much less likely to vote for incumbents, this does not alter the main finding of a robust link between SWB and incumbent support (see SI Table S15).

Given that the decisions of whether to vote and whom to vote for are inherently related, in SI Table S13 I estimate bivariate probit models that jointly estimate (1) whether

or not the respondent is a likely voter and (2) whether or not she will vote for the government. Doing so does not alter the main findings. Although SWB is a significant predictor in both stages, the data suggest that the bulk of the association runs through vote choice rather than turnout decisions.

SWB is itself influenced by personal economic circumstances. Throughout the article, the key question is not only whether happiness is associated with incumbent voting, but also the extent to which this holds over and



above what is already well known about economic voting. In just over 100 national surveys,<sup>15</sup> respondents were asked the following “pocketbook” question: “Compared to 12 months ago, do you think the financial situation of your household, now is . . . ?” The response categories are *a lot worse*, *a little worse*, *about the same*, *a little better*, and *a lot better*. In the final two columns of Table 2, I enter these as a set of dummy variables into the equation, leaving aside the “same” response as the omitted category. Economic voting is evident in the data: In Model 7, those responding that their household’s financial situation has deteriorated strongly in the past year are 14.6 percentage points less likely to intend to vote for a governing party, whereas those who feel their financial situation has improved significantly are 6 percentage points more likely to do so.

Entering both life satisfaction and household finances into the same regression in column 8, I find that—as in the aggregate analysis—both financial well-being as well as broader happiness enter independently and significantly into the equation. Compared with the national-level analysis, the dominance of SWB over the economic variables is less clear, with the two here similarly significant (substantively and statistically) in predicting voting intentions at the individual level.

## SWB and Vote Choice in Individual Panel Data

The cross-sectional evidence of a strong link between SWB and the intention to vote for incumbent parties remains open to the critique that the estimated SWB coefficient may be largely driven by unobserved individual heterogeneity. Consequently, I turn now to long-run individual panel data from two of the countries used in the Eurobarometer analysis, Germany and Great Britain. This allows me to partial out time-invariant characteristics like permanent personality traits and attitudes, family background, and social class with individual fixed effects and ask the more stringent question of whether a person becomes more likely to support a governing party as she becomes happier over time.<sup>16</sup>

The German Socio-Economic Panel (SOEP) has followed a large representative sample of German house-

holds on an annual basis since 1984, and the British Household Panel Survey (BHPS) has similarly followed households in Great Britain since 1991.<sup>17</sup> Throughout both panels, respondents have been asked whether they support a particular political party and, if so, which one. In the BHPS, this is followed up with a hypothetical vote intention question similar to that in the Eurobarometer if the respondent says she does not support any particular party. Using this information, I create an indicator variable equal to 1 if the individual is a supporter of a governing party during the month of the interview.

Life satisfaction is asked slightly differently in the two surveys. In Germany, individuals are asked, “How satisfied are you with your life, all things considered?” with responses measured on an 11-point scale, on which 0 corresponds to *completely dissatisfied* and 10 to *completely satisfied*. In Britain, since 1996 respondents have been asked how satisfied they are with their life overall on a 7-point scale, on which 1 means *completely dissatisfied* and 7 *completely satisfied*.

Results from fixed effects linear probability models predicting individuals’ incumbent support over time are shown in Tables 3 and 4. Like Liberini, Redoano, and Proto (2017), I find SWB is associated with incumbent support within people over time. The data suggest that, in both Germany and Great Britain, those who are “completely satisfied” with life overall—compared to being “completely dissatisfied”—seem to reward incumbents by increasing their likelihood of supporting a governing party by around 4 percentage points.

Results from fixed effects logit models as well as random effects probit models are consistent with the main results reported using LPMs (see SI Table S19). In addition, estimates based on balanced samples in each country also suggest the results are not driven by particular types of people coming and going from the sample at different points in time (see SI Figure S1).

Do these findings add anything to our understanding of electoral behavior, beyond what is already well known from the extensive literature on economic voting? In each country (and as in the above analysis), both subjective

<sup>15</sup>Austria, Finland, and Sweden joined after this question ceased to be asked.

<sup>16</sup>I also include a selection of time-varying observables such as household income, financial situation, age, and marital status. Nevertheless, it is worth noting that other “third” variables that vary over time may drive any observed relationship.

<sup>17</sup>I follow both panels through until 2014, including in the sample all individuals who are observed at least twice. Although the BHPS ceased to exist after 2008, I follow the sample through into the UK Household Longitudinal Survey (UKHLS) from 2010 to 2014. See the data appendix for more details. Liberini, Redoano, and Proto (2017) also study the question of subjective well-being and political support in the BHPS, between 1996 and 2008. I am able to confirm their main finding, as well as extend it using a further five waves of data. This is significant since the Labour Party was in power in all but one of the years of their sample, whereas by extending the analysis to 2014, all three main parties in the UK are in government at different times.

**TABLE 3 Within-Person Analysis: Germany**

	DV: Is a Government Supporter		
	(1)	(2)	(3)
<b>Life Satisfaction</b>			
1	0.002 (0.011)		0.002 (0.011)
2	0.012 (0.010)		0.012 (0.010)
3	0.013 (0.009)		0.013 (0.009)
4	0.011 (0.009)		0.011 (0.009)
5	0.012 (0.009)		0.012 (0.009)
6	0.015* (0.009)		0.014 (0.009)
7	0.023*** (0.009)		0.022** (0.009)
8	0.026*** (0.009)		0.024*** (0.009)
9	0.029*** (0.009)		0.028*** (0.009)
Completely satisfied	0.037*** (0.009)		0.035*** (0.009)
<b>Financial Worries</b>			
Very concerned		−0.003** (0.002)	−0.002 (0.002)
Not at all concerned		0.008*** (0.002)	0.007*** (0.002)
Household income (ln)	−0.000 (0.001)	−0.000 (0.001)	−0.000 (0.001)
Observations	475,888	475,888	475,888
R <sup>2</sup>	0.028	0.028	0.028
Individuals	55,001	55,001	55,001

*Note:* Robust standard errors are in parentheses, adjusted for clustering at the individual level. Individual fixed effects are included in all models. Dependent variable in all models is equal to 1 if the respondent supports a governing party, 0 otherwise. Fixed effects LPMs are reported; see the supporting information for nonlinear specifications. Controls included in all models: region dummies, year dummies, age, age<sup>2</sup>, and marital status. Reference category for Life Satisfaction is “0”. Reference category for Financial Worries is “Somewhat concerned”. \*p < .1, \*\*p < .05, \*\*\*p < .01. *Source:* SOEP 1984–2014.

well-being and household finances enter into the equation in a largely independent manner. Whereas the Eurobarometer does not consistently include a well-defined household income variable, here in the panel analyses I am able to include both objective household income as well as subjective impressions of finances. The nonsignificant coefficient on (log) household income suggests that as people become richer and poorer over time, they do not change their propensity to support

the government. Nevertheless, as their impressions of their financial situation change, they do in fact vary their support for incumbent politicians.<sup>18</sup>

In the BHPS, two further subjective economic variables are available. A question on how the respondent

<sup>18</sup>Household income remains an insignificant predictor of incumbent support, even when subjective financial impressions are omitted from the equation.

TABLE 4 Within-Person Analysis: Great Britain

	DV: Is a Government Supporter		
	(1)	(2)	(3)
<b>Life Satisfaction</b>			
2	0.020*		0.019
	(0.012)		(0.012)
3	0.008		0.008
	(0.011)		(0.011)
4	0.019*		0.018*
	(0.010)		(0.010)
5	0.022**		0.018*
	(0.010)		(0.011)
6	0.032***		0.028**
	(0.011)		(0.011)
7	0.040***		0.035***
	(0.011)		(0.011)
<b>Finances Today</b>			
Finding it very difficult		−0.018**	−0.015*
		(0.008)	(0.008)
Finding it quite difficult		−0.009*	−0.008
		(0.006)	(0.006)
Doing alright		0.015***	0.014***
		(0.003)	(0.003)
Living comfortably		0.022***	0.020***
		(0.004)	(0.004)
Household income (ln)	0.001	−0.001	−0.001
	(0.003)	(0.003)	(0.003)
Observations	162,068	162,068	162,068
R <sup>2</sup>	0.017	0.017	0.017
Individuals	19,271	19,271	19,271

*Note:* Robust standard errors are in parentheses, adjusted for clustering at the individual level. Individual fixed effects are included in all models. The dependent variable in all models is equal to 1 if the respondent supports a governing party, 0 otherwise. Fixed effects LPMs are reported; see the supporting information for nonlinear specifications. Controls included in all models: region dummies, year dummies, age, age<sup>2</sup>, and marital status. Reference category for Life Satisfaction is “1”. Reference category for Finances Today is “Just getting by”.

\*p < .1, \*\*p < .05, \*\*\*p < .01. *Source:* BHPS/UKHLS 1996–2014.

sees her finances in the near future is included in all of the studied waves, and a question on how her household’s finances have changed over the past year is included up until the BHPS respondents were merged into the UKHLS after 2008. Results are consistent using these measures (see SI Table S20).

## Discussion

Various countries around the world have recently begun to go “beyond GDP” by measuring subjective well-being on a large scale and using the data (1) as a general measure of societal success and progress, (2) to guide and inform

policy decisions, and (3) to evaluate the outcomes of government programs (Durand 2018; O’Donnell et al. 2014). These practices are likely to continue to grow, in part because SWB is able to pick up the benefits of a great deal of government activity that traditional economic outcomes may struggle to (Krueger and Stone 2014).<sup>19</sup> Yet despite the recent sharp rise in the supply

<sup>19</sup>Evaluations of two recent prominent programs in the United States, for example—the Moving to Opportunities experiment and the Oregon Medicaid expansion—showed positive outcomes in self-reported psychological well-being, which may have been elided by focusing solely on more traditional measures of program evaluation (Finkelstein et al. 2012; Ludwig et al. 2013).

of SWB-based public policymaking, an open empirical question is whether there is any electoral demand for it. The findings presented in this article suggest there may be significant electoral incentives for politicians seeking reelection to consider SWB when deciding upon policy priorities.

Global, cognitive evaluations of life are currently the most widely used measure of SWB by researchers in the economic literature as well as by policy makers, but life satisfaction is only one component of SWB. Large-scale data on the emotional states of citizens are becoming more prevalent and are beginning to provide policy makers with a fuller picture of national SWB (Kahneman et al. 2004; Krueger and Stone 2014). Further research should investigate the extent to which measures of positive and negative affect, as well as eudaemonic measures of purpose, are able to add to our understanding of voting behavior.

A further dimension of SWB is temporal: Although the main analysis of this article studies voters' current levels of life satisfaction, it may be that future expectations of life satisfaction are just as—or even more—important in driving vote choice. In a subset of waves of the German SOEP, respondents were asked about their *anticipated* life satisfaction in 5 years' time, using the same 0–10 response scale as with current life satisfaction. In Table A1, I find that people's future life satisfaction dominates current life satisfaction when it comes to predicting support for governing parties within people over time. Anticipating being completely satisfied (as compared to completely dissatisfied) is associated with around a 6.5% higher probability of declaring support for a governing party.<sup>20</sup>

Open to further research is the broader question of what array of determinants of SWB, and potentially which domains of SWB, drive the link between national happiness and election results—and ultimately what incumbents might do to improve their chances of reelection. Although SWB has been shown to be determined by a host of policy-relevant yet noneconomic variables, including physical and mental health, environmental quality, social cohesion, crime and corruption, quality of government services, and education (see, e.g., Clark et al. 2018; Diener et al. 1999; Dolan, Peasgood, and White 2008), the analysis of Liberini, Redoano, and Proto (2017) suggests voters may also reward/punish incumbent politi-

cians for boosts and dips in their happiness that are caused by factors outside of government control. Further research may continue to investigate (1) the extent to which voters are able (or willing) to filter which elements of their well-being provide useful information about the quality and effort of incumbents, and (2) the theoretical implications of this for our understanding of democratic accountability.<sup>21</sup>

Although SWB is a stronger predictor of incumbent vote share in general elections than economic growth, unemployment, or inflation, macroeconomic variables are nevertheless significant predictors of government electoral success conditional on national happiness. Equally, at the individual level, SWB and personal finances are independently predictive of voting intentions. This suggests politicians face multiple incentives to improve people's economic as well as broader noneconomic well-being. Future theoretical work may look to model these dynamics within a multitask political agency framework.<sup>22</sup>

The data used here are observational, and it is worth reiterating that it is not possible to interpret the empirical associations presented in this article causally. Rather, the analysis is focused on determining what best predicts the electoral fate of governing parties. Despite this important caveat, however, a causal interpretation of the findings is suggested by Liberini, Redoano, and Proto (2017), who leverage exogenous variation in SWB to demonstrate a causal mechanism between happiness and self-reported incumbent voting intentions. The analysis presented here suggests that this effect is also evident at the national level, across 15 countries over four decades, in real-world elections.

<sup>21</sup>Determining what should and should not be relevant to voters is not typically straightforward, however. Government is expected to play a role—at least as a safety net—in a great many areas of people's lives and generally seeks to create conditions that are conducive to people leading happier lives rather than directly seeking to influence their well-being. One possibility is that voters, knowing their well-being is at least partly dependent on government action, use their general overall SWB as a heuristic for incumbent competence and/or effort.

<sup>22</sup>In a simple political agency model, such as that sketched in the SI, voters observe their utility  $U$  in order to update their beliefs about the incumbent. If we assume SWB is a good proxy for  $U$ , then insofar as a buoyant economy improves people's life satisfaction, it provides voters with information about the politician's type. However, the data suggest that voters learn about incumbents through their life satisfaction *and* the state of the economy to some extent independently. This leaves open the possibility that SWB and material prosperity may be two arguments within the utility function, rather than SWB serving as a proxy for that function (see also Becker and Rayo 2008; Benjamin et al. 2014a; Glaeser, Gottlieb, and Ziv 2016).

<sup>20</sup>In some, though not all, waves of the Eurobarometer, a question regularly asked respondents whether they think life next year will be better, the same, or worse. Using this question in SI Table S16, I also find that optimism is positively related to government voting intentions. This relationship is largely independent of current life satisfaction.

## Conclusion

In a classic study of retrospective voting, Fiorina (1981, 6) noted that despite voters' general lack of in-depth knowledge about political and economic issues, "they typically have one comparatively hard bit of data: they know what life has been like during the incumbent's administration." By focusing on self-reported measures of life satisfaction, the results of this article suggest voters do indeed seem to use this piece of data at the ballot box in order to hold governments accountable for their performance.

It has long been thought that governments struggle to stay in power if the people are not happy. Although this was once considered impossible to test empirically, developments over the past few decades in the measurement of subjective well-being now make the study of happiness and electoral accountability a much more feasible proposition. The data from four decades of general elections in Europe suggest that the electoral fate of incumbent governments goes hand in hand with the happiness of the people.

## Appendix

**TABLE A1 Future Life Satisfaction (German SOEP)**

	DV: Is a Government Supporter		
	(1)	(2)	(3)
<b>Life Satisfaction in 5 Years</b>			
1	0.025 (0.013)*		0.027 (0.014)*
2	0.019 (0.012)		0.022 (0.012)*
3	0.029 (0.011)**		0.034 (0.012)***
4	0.029 (0.011)***		0.036 (0.012)***
5	0.041 (0.011)***		0.048 (0.012)***
6	0.052 (0.011)***		0.059 (0.012)***
7	0.057 (0.011)***		0.063 (0.012)***
8	0.058 (0.011)***		0.063 (0.012)***
9	0.068 (0.011)***		0.071 (0.013)***
Completely satisfied	0.065 (0.012)***		0.065 (0.013)***
<b>Life Satisfaction Today</b>			
1		0.003 (0.015)	−0.006 (0.015)
2		0.006 (0.013)	−0.005 (0.013)
3		0.011 (0.012)	−0.006 (0.013)
4		0.009 (0.012)	−0.011 (0.013)
5		0.011 (0.012)	−0.013 (0.012)
6		0.014 (0.012)	−0.016 (0.013)
7		0.022 (0.012)*	−0.012 (0.013)
8		0.026 (0.012)**	−0.010 (0.013)
9		0.032 (0.012)***	−0.007 (0.013)
Completely satisfied		0.036 (0.012)***	−0.001 (0.014)
Observations	274,767	274,767	274,767
R <sup>2</sup>	0.018	0.018	0.018
Individuals	36,559	36,559	36,559

*Note:* Standard errors are in parentheses, clustered on individuals. The dependent variable in all models is equal to 1 if the respondent is a government supporter, 0 otherwise. Individual fixed effects are included in all models. Demographic controls in all models: age, age<sup>2</sup>, marital status, region, and wave dummies.

\*p < .1, \*\*p < .05, \*\*\*p < .01.



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## Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**Appendix S1:** Additional Data Description

**Appendix S2:** Conceptual Framework

**Appendix S3:** Extra Tables for National-Level Analysis

**Appendix S4:** Extra Tables for Individual-Level Eurobarometer Analysis

**Appendix S5:** Extra Tables for Individual-Level Panel Analysis

**Appendix S6:** Clarity of Responsibility