

A Behavioral Measure of the Enthusiasm Gap in American Elections*

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Abstract

What are the effects of a mobilized party base on elections? I present a new behavioral measure of the enthusiasm gap in a set of American elections to identify how the turnout rate of the party faithful varies across different contexts. I find that the advantaged party can see its registrants turn out by four percentage points more than the disadvantaged party in some elections, and that this effect can be even larger in competitive House districts. I estimate the net benefit to party vote share of the mobilized base, which is around one percentage point statewide, and up to one and one half points in competitive House contests. These results suggest that the partisan characteristics of an election have consequences not just for vote choice, but for the composition of the electorate.

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How large are the effects of a mobilized party base on the composition of the electorate and on party vote shares in American elections? The enthusiasm gap, where one political party's supporters in the electorate are more mobilized than those of other parties' supporters, is often proposed as an important determinant of election results. Pollsters at Gallup believe *enthusiasm* to be crucial,¹ and journalists also attribute election results to the behavior of parties' core supporters.² Political strategists, too, turned towards mobilizing the base in the 2000s as an electoral strategy, thinking it a more promising route to electoral success than trying to persuade swing voters.³

Though not phrased as *enthusiasm*, political science theory and evidence suggest that in each election, an interaction between election context (candidates, state of the times, and issues) and Americans' longstanding attachments to the parties should be related to their decision whether or not to vote (Downs 1957, Campbell, Converse, Miller, and Stokes 1960, Campbell 1960, Converse 1966, DeNardo 1980). More recent research shows that campaign spending and field offices correlate with voter turnout (e.g., Caldeira and Patterson 1982, Holbrook and McClurg 2005, Masket 2009), that get-out-the-vote activities have a causal effect on turnout (Gerber and Green 2000, Green and Gerber 2008), and that parties and campaigns exert effort to mobilize their core supporters to come to the polls (which evidence suggests is successful, e.g., Holbrook and McClurg 2005, McGhee and Sides 2011). Further, Americans' views about the appropriate size of government seem to cycle over time (Erikson, MacKuen, and Stimson 2002), suggesting that at some elections more conservative members of the citizenry would be motivated to influence election outcomes, while at other elections, more liberal members of the citizenry would be motivated

¹ "Gallup has found that voting enthusiasm generally relates to the eventual election outcome in midterm and presidential election years. In election years in which one party has a clear advantage on enthusiasm, that party tends to fare better in the midterm elections or win the presidential election." Frank Newport, "Republicans Less Enthusiastic About Voting in 2012," December 8, 2011, Gallup.com, retrieved at <http://www.gallup.com/poll/151403/republicans-less-enthusiastic-voting-2012.aspx>.

² As the *New York Times* editorial concluded following the 2010 midterm elections, when the Republicans picked up 63 House seats and six Senate seats, the Republicans "had succeeded in turning out their base, and . . . the Democrats had failed to rally their own (Editorial, "Election 2010," *New York Times*, November 3, 2010, A26)."

³ The Bush-Cheney 2004 reelection campaign made a widely-publicized decision to focus more of its resources on turning out the conservative base than persuading swing voters. Strategists Matthew Dowd and Karl Rove determined that seven percent or fewer of presidential voters were truly persuadable, and so 2004 could be won through a more effective mobilization strategy ("Karl Rove – The Architect," *PBS Frontline*, April 2005, <http://www.pbs.org/wgbh/pages/frontline/shows/architect/rove/2004.html>).

to effect change.

Despite the potential importance of differential mobilization between partisan bases in the electorate suggested by both practitioners and scholars, we lack good measures of the size and effect of a mobilized party base. The Gallup measure of the enthusiasm gap is based on answers to survey questions not directly related to actual turnout or vote share.⁴ Political science measures tend to estimate the effects of specific party activities (Caldeira and Patterson 1982, Holbrook and McClurg 2005, Masket 2009, McGhee and Sides 2011), or the effect of changes in overall turnout separate from partisanship (e.g., DeNardo 1980, Erikson 1995, Nagel and McNulty 1996, Citrin, Schickler, and Sides 2003, Martinez and Gill 2005). These studies do not, however, estimate the magnitude of the change in composition of the electorate due to a mobilized base. Nor is the net effect of that mobilized base on election outcomes identified. I present here an effort to do both.

In this essay, I offer a new behavioral measure of changes in partisan turnout from statewide voter files to connect partisanship and participation. I adopt the term *enthusiasm gap* to characterize this measure. Put simply, I measure the difference in turnout in a single election between Democrats and Republicans who would normally turn out to vote at the same rate. This behavioral measure of the enthusiasm gap offers three distinct advantages. First, the behavioral measure is more closely related than other measures to the theoretical idea that in some elections, one party is advantaged by the motivation of its core supporters in the electorate. Second, the millions of observations in the statewide voter file characterizing the entire electorate allow me to estimate how the enthusiasm gap varies across U.S. House districts and the varying level of salience of these contests. This allows me to measure the extent to which differential gaps in partisan turnout occur concurrently across districts, due to national tides for example, or if they vary with the effort and context of the contest in each House district. Third, I estimate the effect of the changes in partisan turnout on vote shares, providing a measure of how a “good year” for one party influences vote share through the turnout choices of the party base.

Using the records of registered voters from state voter files and respondents to election surveys

⁴ Gallup asks survey respondents about their enthusiasm to vote in an upcoming election, and compares the responses of Democrats and Republicans to infer the likely partisan composition of the electorate.

in Florida in election years 2004, 2006, 2008, and 2010, I find that the turnout of partisan registrants who would normally vote at similar rates can vary with partisanship by up to four percentage points across the electorate, and more so in competitive House races. I find that this differential turnout can influence statewide vote share by close to one percent, and vote share in competitive House contests by up to one and one half percent. I believe the estimates on vote share to be conservative. I find that differential turnout benefitted Democrats in 2006 and 2008, and Republicans in 2004 and 2010. I also find variation in the size of the enthusiasm gap by the competitiveness of the House contest, providing evidence that partisan turnout is to a measurable degree a function of the local campaign environment and not solely national tides.

I proceed by first presenting an example and definition of the enthusiasm gap, formally defining its measurement, presenting data sources and estimation, presenting estimates for statewide enthusiasm gaps in four elections and estimates by House district competitiveness in two midterms, and concluding with estimates of the net benefit to partisan vote share of the enthusiasm gap in each election.

Factors of differential partisan participation

As an initial example of the enthusiasm gap in practice, consider the rates of turnout by party of registration presented in Table 1. I take all of the registered voters in the state of Florida who voted both in the 2002 midterm election and the 2004 presidential election and tabulate their turnout in the 2006 midterm, the 2008 presidential, and the 2010 midterm.⁵ Looking only at voters who turned out in 2002 and 2004 is a simple way to hold constant the long-term components of turnout (which I estimate more carefully below).⁶ In both 2006 and 2008, Republican registrants who had voted in both 2002 and 2004 were about one percentage point more likely to turn out than Democratic registrants who had voted in both 2002 and 2004. But in 2010, Republican registrants who had voted in both 2002 and 2004 were almost six points more likely to turn out than Democrats

⁵ I present details and data sources in the empirical section below.

⁶ Table 1 represents registrants who were eligible to vote in 2002, implicitly excluding new registrants. I make this choice here for clarity of the example. In the full analysis, I include in my calculation of the enthusiasm gap and its effects registrants new to the election of interest.

Table 1: Enthusiasm Gap in Turnout by Party of Registration in Three Elections in Florida

Election	Democrat turnout	Republican turnout
2006	76.2 (N=1,687,702)	77.0 (N=1,734,441)
2008	90.1 (N=1,622,176)	91.1 (N=1,668,173)
2010	72.8 (N=1,551,685)	78.7 (N=1,638,142)

Note: Cell entries are the percentage of registered voters in Florida who voted in both 2002 and 2004 who voted in the election of that row. Party of registration is measured at the time of the election in that row (registrants of other parties and non-partisans are excluded from the tabulations).

who had voted in both 2002 and 2004. This increase in *relative* turnout is the enthusiasm gap.

A variety of factors could generate these relative differences in turnout. I classify these factors into two broad categories: global causes, which operate on the entire electorate, and local causes, which are specific to local contests. The existing literature suggests a variety of global and local factors that could operate as short-term forces on turnout and that might vary by partisanship. Global causes include national context. The national context of the election might motivate partisans of one group more than the other because members of one party are especially excited to participate in a change in party control of government due to unpopular policies or events (i.e. retrospective voting, e.g., Kramer 1971), or if the incumbent president is especially popular, or if the mood of the public is inclined to increase or decrease the size of government (e.g. Erikson, MacKuen, and Stimson 2002).

Global effects on the enthusiasm gap operate on the population without reference to local conditions and competitiveness. Other factors, however, might vary across local contexts and contests. For example, competitive House districts or swing states might see a larger enthusiasm gap because campaigns exert mobilization effort, or because voters in those districts perceive higher stakes, or both. In a good year for one party, that party might be more effective because it has more money, more volunteers, better candidates (Jacobson and Kernell 1983), or better strategic planning for the election, or because citizens that are targeted by the party efforts are more responsive to its appeals than usual. Because mobilization activities can be targeted at states and districts with close elections, campaign activity that generates an enthusiasm gap should not operate globally but instead

be limited to places the campaigns care about.⁷

The competing theoretical expectations set up an empirical test. If the gap is driven by statewide or national context, then change in the competitiveness of House districts should not influence the size of the gap. If, on the other hand, local context and mobilization activity is driving the size of the gap, change in competitiveness should increase the size of the gap. I implement this test, comparing competitive to non-competitive House districts, below.

The basic model

My definition of the enthusiasm gap is similar to the *short-term forces* that Converse and others contrast to the long-term component of the vote choice (Campbell et al. 1960, Converse 1966). Under their definition, the vote choice is a function of long-term components such as partisan attachments, and short-term forces specific to a single election. Similarly, I define the turnout choice as a function of both long-term components and short-term forces. The enthusiasm gap is the subset of short-term influences on turnout that vary by an individual's partisanship. Part of the short-term stimulus applies to all partisans, for example the salience of the election. I focus specifically on the short-term factors that differentially affect members of different parties. Empirically, I compare the turnout in a single election of partisans from two parties who would normally turn out to vote at the same rate. It may be that Republicans are more likely on average to turn out than Democrats (the long-term component), but the enthusiasm gap in a single election is the *relative* difference in turnout between Democrats and Republicans compared to the usual difference.⁸

My model of the enthusiasm gap begins with an assumption that each individual has a latent propensity to vote in each election – a normal turnout, in the Converse (1966) phrasing. This latent

⁷ Note that the definition of the enthusiasm gap does not require effects on turnout to be positive. It may be that one group is less motivated than usual because of an unpopular incumbent president, by weak prospects for the party in legislative elections, or by an especially weak crop of candidates. Mobilization efforts might also be less effective than usual if the party efforts are under-resourced, have fewer volunteers with less enthusiasm, or if the targets of the appeals are less responsive. Finally, demobilization efforts could be more effective than usual through the targeting of messages that make individuals from one party more disgusted with politics than individuals from the other.

⁸ This is similar to Converse's (1966) normal vote, where the short-term forces push partisan defection rates away from the normal defection rates, and the "normal vote would be located where comparable classes of identifiers from the two partisan camps show equal defection rates (25)."

propensity to vote arises from the non-partisan and partisan characteristics of the individual and the type of election. For example, a 55-year old, white male in a presidential election might have a propensity to vote of 76 percent, suggesting that more than three out of four individuals with those characteristics are likely to vote in an average presidential election. The enthusiasm gap is defined as the difference in actual turnout between members of two partisan groups relative to the propensity to vote of those two partisan groups.

For example, it may be that Republican, 55-year old, white males in presidential elections have a propensity to vote of 78 percent, but that Democratic, 55-year old, white males in presidential elections have a propensity to vote of 71 percent. This seven point difference in the propensity to vote is not the enthusiasm gap. Rather, imagine that the Republican, 55-year old, white males turned out at 80 percent in the 2008 presidential election, and the Democratic, 55-year old, white males turned out at 76 percent in the 2008 presidential election. The enthusiasm gap for 2008 would be three percent favoring the Democrats: the Republicans turned out at two points higher than their propensity to vote, while the Democrats turned out at five points higher than their propensity to vote. The difference in these differences is the estimate of the enthusiasm gap $([80 - 78] - [76 - 71] = -3)$.

To illuminate, I plot hypothetical turnout curves in Figure 1. On the x-axis, I plot the latent propensity to vote, and on the y-axis I plot the actual rate of turnout for citizens of that propensity in that election. Lines connect the actual turnout for simulated Republicans and Democrats across latent propensity to vote. While latent propensity to vote is a strong predictor of actual turnout, with explanatory power much greater than partisanship, I have plotted elections with four different hypothetical enthusiasm gaps. In the first election, in the top left frame, registered Democrats are on average 2.5 percentage points more likely to vote than registered Republicans of the same propensity to vote. The observed turnout for Democrats represented by the dashed line is almost always higher than the observed turnout for Republicans. In the second election, however, Republicans benefit from a larger enthusiasm gap, averaging 5 percentage points. In the third election, in the bottom left frame, there is no enthusiasm gap and the two lines are close to each other at all

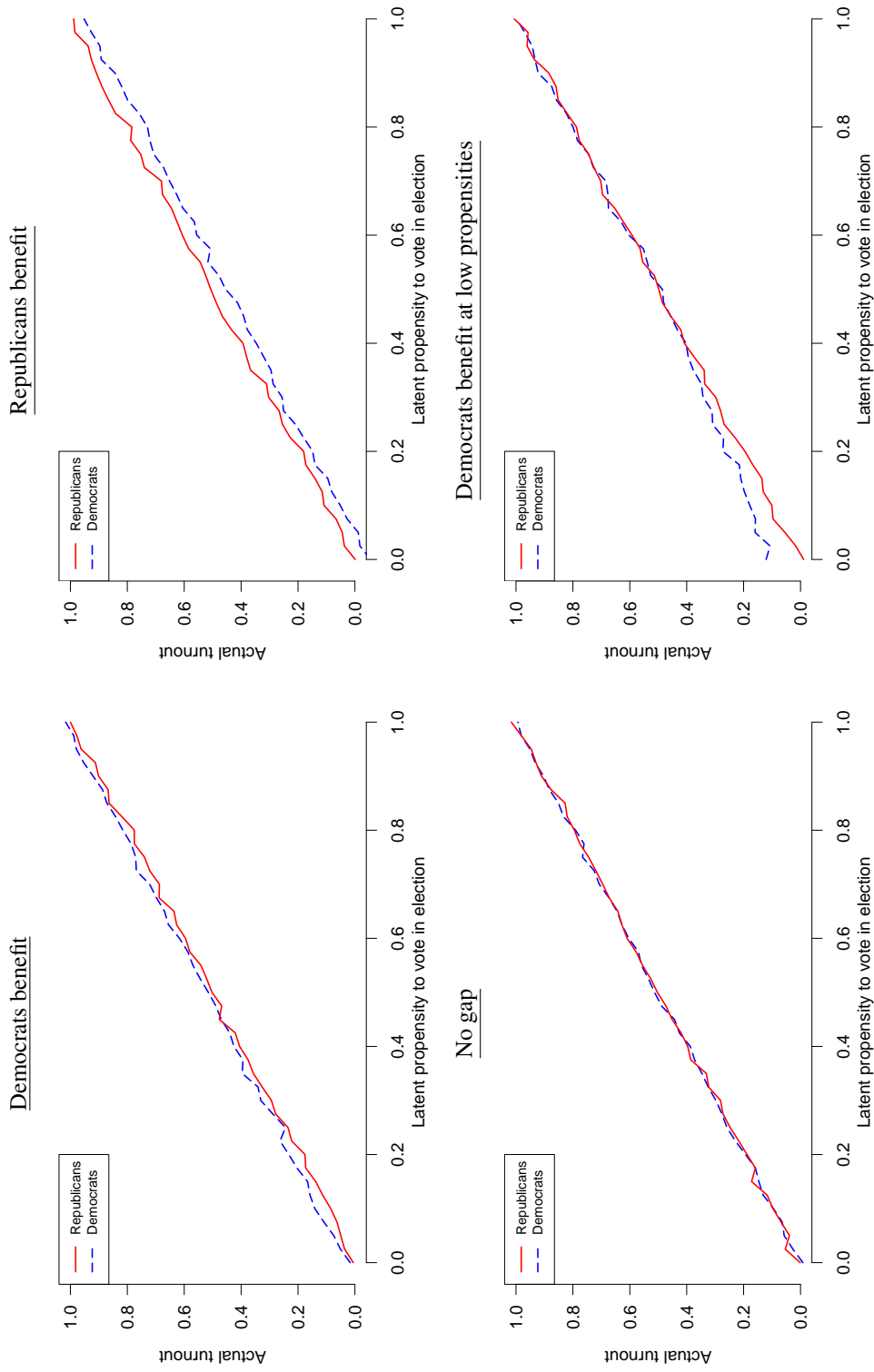
points. Finally, the enthusiasm gap need not apply evenly across the electorate, as I have simulated in the election in the bottom right frame, where Democrats benefit from an enthusiasm gap at low propensities to vote, but neither party benefits at higher propensities. Other patterns are, of course, possible. The enthusiasm gap for the entire electorate is the average difference in turnout between Democrats and Republicans given their propensities to vote, weighted by the number of registrants at each propensity.

Effect of the Enthusiasm Gap on Election Outcomes

In the previous section, I presented my behavioral model of the enthusiasm gap. How would such gaps influence the actual outcome in each election? The basic accounting is that if more Democrats than usual turn out to vote, and if marginal-turnout Democratic voters (those who would not turn out in the absence of an enthusiasm gap but do turn out with a gap) are more likely to vote for Democratic candidates, then Democratic candidates should benefit from a Democratic enthusiasm gap. The same logic would apply to a Republican enthusiasm gap.

Of course, the second premise of the syllogism is of central importance. It is not necessarily the case that partisans who turn out at the margin are strong supporters of their party. At what rate would marginal-turnout Democrats or Republicans vote for Democrat or Republican candidates? On the one hand, by assumption these marginal-turnout partisans have voted in this election because of the enthusiasm gap, some set of factors that mobilizes their party more than the other at that propensity to vote. This would suggest such voters have been motivated to vote through the context of their partisan attachment, and that this motivation should propagate to their vote choice. On the other hand, by definition these citizens would not have to come to the polls in the absence of the enthusiasm gap. This could be because they were marginal partisans (Campbell 1960, DeNardo 1980) who are less likely to turn out than strong partisans (Campbell et al. 1960), or that they are less interested in politics or have lower education (Wolfinger and Rosenstone 1980, Rosenstone and Hansen 2003). But, marginal partisans and less-interested, lower-educated citizens are less strongly attached to parties with their vote choices as well, and, by some accounts, most persuadable and likely to swing their votes between the parties

Figure 1: Hypothetical relationships between propensity to vote and actual turnout under varying enthusiasm gaps



Note: The enthusiasm gap is the space between the dashed and solid lines at each propensity to vote. In the first frame, I have simulated turnout when the Democrats benefit from an average enthusiasm gap of 2.5 percentage points. In the second frame, the Republicans benefit from an average enthusiasm gap of 5.0 percentage points. In the third frame, neither party benefits from a gap, and in the fourth frame, the Democrats benefit from an enthusiasm gap at low propensities to vote, but no gap at higher propensities.

(Zaller 1992, Zaller 2004).

Thus, while a partisan enthusiasm gap may bring a set of partisans to the polls who would not otherwise have voted, it is not clear how much the benefitting party gains in vote share. Many of these marginal-turnout citizens may also be marginal-vote choice voters. We should not expect to see a one-to-one relationship between the enthusiasm gap in turnout and the benefitting party's vote share, but this discussion suggests that it may not be surprising if the party benefitting from the enthusiasm gap does barely better than splitting the new voters with its opponent.

A final concern with the effect of the enthusiasm gap on election outcomes is, relative to what? Relative to what level of turnout should one calculate the gain in vote share due to the enthusiasm gap for the benefitting party's candidates? For any single election it is impossible to say if the gap between turnout for Democrats and Republicans is due to the short-term forces that generate the enthusiasm gap of that election or due to long-term normal differences in turnout between partisans attached to the two parties (up to the bounds provided by the ceiling and floor of universal and zero turnout), i.e. to normal differences in their latent propensities to vote. This is where my definition of the gap as relative to a propensity to vote becomes especially valuable. I define the effect of the enthusiasm gap on vote share in a single election by comparing an estimated election outcome where the enthusiasm gap is zero at each point of propensity to vote. The difference in vote shares between the counterfactual election without enthusiasm gap and the observed election is the effect of the enthusiasm gap on the outcome. I describe the practical implementation of this definition below.

Measuring the Enthusiasm Gap

I turn now to a measure of the enthusiasm gap using observations from statewide voter files. Voter files are the official record of turnout managed by state election officials, which match registered citizens to their individual history of turnout. For each registrant, the file records their history of turnout going back some number of elections, along with demographic and other characteristics.

The enthusiasm gap is the difference in turnout in a single election between Democrats and

Republicans who would normally turn out to vote at the same rates. Formally, let the propensity to vote for individual i in election j , \tilde{y}_{ij} , be a function of individual characteristics x_i through the function $f_j(x_i)$. So that the relationship between individual characteristics and propensity to vote need not be fixed in every election, I index f_j by election. The turnout observed for individual i in election j , t_{ij} , is the realization of an experiment with latent turnout \tilde{y}_{ij} plus an enthusiasm effect, ξ_{ij} , which may or may not have expected value zero, and a stochastic error ϵ_{ij} specific to individual i in election j identically and independently distributed across individuals and elections with expected value zero. Thus the turnout choice is a function of the long-term component, \tilde{y}_{ij} , and the short-term components ξ_{ij} and ϵ_{ij} . This yields the data-generating equations

$$\begin{aligned}\tilde{y}_{ij} &= f_j(x_i), \\ t_{ij} &= \tilde{y}_{ij} + \xi_{ij} + \epsilon_{ij}.\end{aligned}$$

The enthusiasm gap, γ_j , is the average difference in the size of ξ_{ij} between members of partisan groups. This difference can be measured from the observed data through a difference-in-difference in turnout relative to the propensity to vote. Let the variable G_i measure group membership. In the binary case with parties $G \in [0, 1]$, the enthusiasm gap is

$$\gamma_j = \sum_i \frac{[(t_{ij} - \tilde{y}_{ij}) \times \mathbf{1}(G_i = 1)]}{\mathbf{1}(G_i = 1)} - \sum_i \frac{[(t_{ij} - \tilde{y}_{ij}) \times \mathbf{1}(G_i = 0)]}{\mathbf{1}(G_i = 0)}, \quad (1)$$

where $\mathbf{1}(G_i = g)$ returns the value of one when G_i is g , that is individual i is a member of partisan group g , and zero otherwise. Note that averaging across individuals cancels out the stochastic error ϵ_{ij} , leaving remaining difference attributable to the average of the ξ_{ij} by party.

Because propensity to vote, \tilde{y}_{ij} , is a latent quantity not observed directly, I estimate propensity to vote using characteristics from voter files for each registrant in each election using a regression model of turnout. I model turnout as a function of registrant characteristics recorded in the voter file for the election prior to j of the same type. Because the voter file has millions of observations, the model can include many covariates to flexibly capture the relationship. After estimating the

model, I create a predicted value for the current election with the estimated coefficients from the model of turnout in the previous election. I use the characteristics from the current election so that the predicted value is my estimate of the propensity to vote for the current election, given the current characteristics. For example, to estimate the propensity to vote for the 2004 election, I regress individual turnout from the 2000 presidential election on registrant characteristics from the 2000 presidential election. To calculate the predicted value for 2004, I use registrant characteristics measured at the 2004 election, e.g. the same registrant is four years older and I use this age to construct their 2004 propensity to vote. In measuring the enthusiasm gap in this fashion, I classify how turnout differs in the current election given registrant characteristics from how that registrant would be predicted to have voted in the last election of the same type. Note that this choice means that the estimate of the enthusiasm gap, γ_j , for election j is relative to estimation of f_j for the preceding election of the same type. It is this differencing that identifies the enthusiasm gap specific to each individual election from any more general differences in turnout that occur in an average election.⁹

The registrant characteristics I use to model turnout and construct propensity to vote are age, age squared, gender, race, and indicators for party of registration as Democrat or Republican. These characteristics are commonly used in models of voter turnout (e.g., Rosenstone and Hansen 2003). I also include prior history of turnout, which is valuable for the estimation because prior turnout is a strong predictor of future turnout (Plutzer 2002). I include as covariates the turnout history for each registrant going back four years for general, primary, and presidential primary elections. A pattern of turnout history for the model of turnout in the 2004 general election, for example, would include turnout from two earlier elections in 2004 (presidential primary and general primary), plus turnout for each election in 2003, 2002, 2001, and 2000. This set of elections captures the registrant's history of turnout in the four years since the last election of the type to be predicted. For each unique pattern of prior history of turnout I include a separate fixed effect, a

⁹ Of course, measuring the gap relative to the previous election means that the measure is also relative to whatever gap existed in that previous election. One might alternatively average across a set of elections in the hopes of canceling out each individual election's enthusiasm gap, but my time series of elections is not particularly long to do much averaging.

flexible way to capture the relationship between prior history of turnout and current turnout.¹⁰

I present in the Appendix a formal description of my measure of the effect of the enthusiasm gap on party vote shares. To briefly summarize, the effect of the enthusiasm gap on the election outcome is the effect of the changed turnout compared to an election where the enthusiasm gap is zero, multiplied by the probability of a vote for the Democrat for each registrant whose turnout was induced by the gap. I turn now to presenting results.

Results from voter files

I estimate the enthusiasm gap for Florida general elections in 2004, 2006, 2008, and 2010 using statewide voter files, which I obtained directly from the Florida Secretary of State.¹¹ I use Florida because it is a large, diverse state that has been nationally competitive in the recent decade and provides access to high-quality voter files with extensive vote histories.¹² The 2004 election in Florida featured the presidential contest between incumbent George W. Bush and challenger John Kerry along with a U.S. Senate contest. The 2006 election included a U.S. Senate contest along with a gubernatorial race and other statewide executive offices. The 2008 election headlined with the presidential election between John McCain and Barack Obama, with no Senate contest, while the 2010 election included U.S. Senate, gubernatorial, and statewide executive contests as in 2006.¹³

In Figure 2, I plot the enthusiasm gap in each of the four Florida elections over the estimated propensities to vote in that election.¹⁴ The x-axis in each frame is my estimate of the propensity to vote from the model of turnout of the previous election of that type. For each propensity to vote, I calculate actual turnout in the voter file for registrants of that propensity, separately for those

¹⁰ I use the R package *biglm* to estimate models on the large numbers of observations (R Development Core Team 2012, Lumley 2011).

¹¹ I use voter files produced at different intervals so that bias from purging of records is limited, e.g. using a 2011 voter file to analyze turnout in the 2000 general election could be problematic because of changes in the electorate, or due to lost or purged turnout records. I use a voter file from March 2007 to analyze the 2004 and 2006 elections, a file from August 2009 for the 2008 election, and a file from January 2011 for the 2010 election.

¹² The procedure presented here could be replicated in other states, and is most effective with large sample sizes and quality vote history records, as in Florida.

¹³ For each of these elections, I construct propensity to vote from a least-squares regression model of turnout from the prior election of the same type (2000, 2002, 2004, and 2006, respectively). I present the coefficients from these models in Appendix Tables A1 through A4. Using alternative statistical models, such as logit or classification trees, yields similar results.

¹⁴ I round to tenths all aggregations to propensity to vote.

registered with the Democratic and Republican parties. I represent each group of partisans at a given propensity to vote with a circle with area proportional to the number of registrants of that party and propensity. For example, the rightmost points in the first frame for the 2004 election indicate that registrants from both parties with a propensity to vote of around 1.0 voted in the 2004 election at rates approaching but not quite achieving 1.0, and the large size of both Democrat and Republican circles indicates that many registrants have high propensities to vote in 2004. The lines connect the actual turnout across propensity to vote for each party.

The enthusiasm gap for the entire election, γ_j , which I indicate in the title to each frame, is the average difference in turnout between Democrats and Republicans at each propensity to vote, weighted by the number of registrants at each propensity. The estimate of γ_j for 2004 (-1.9) means that, on average, a Democratic registrant was about two percentage points less likely to turn out in 2004 than a Republican of the same propensity to vote, given the distribution of propensities across the electorate.¹⁵

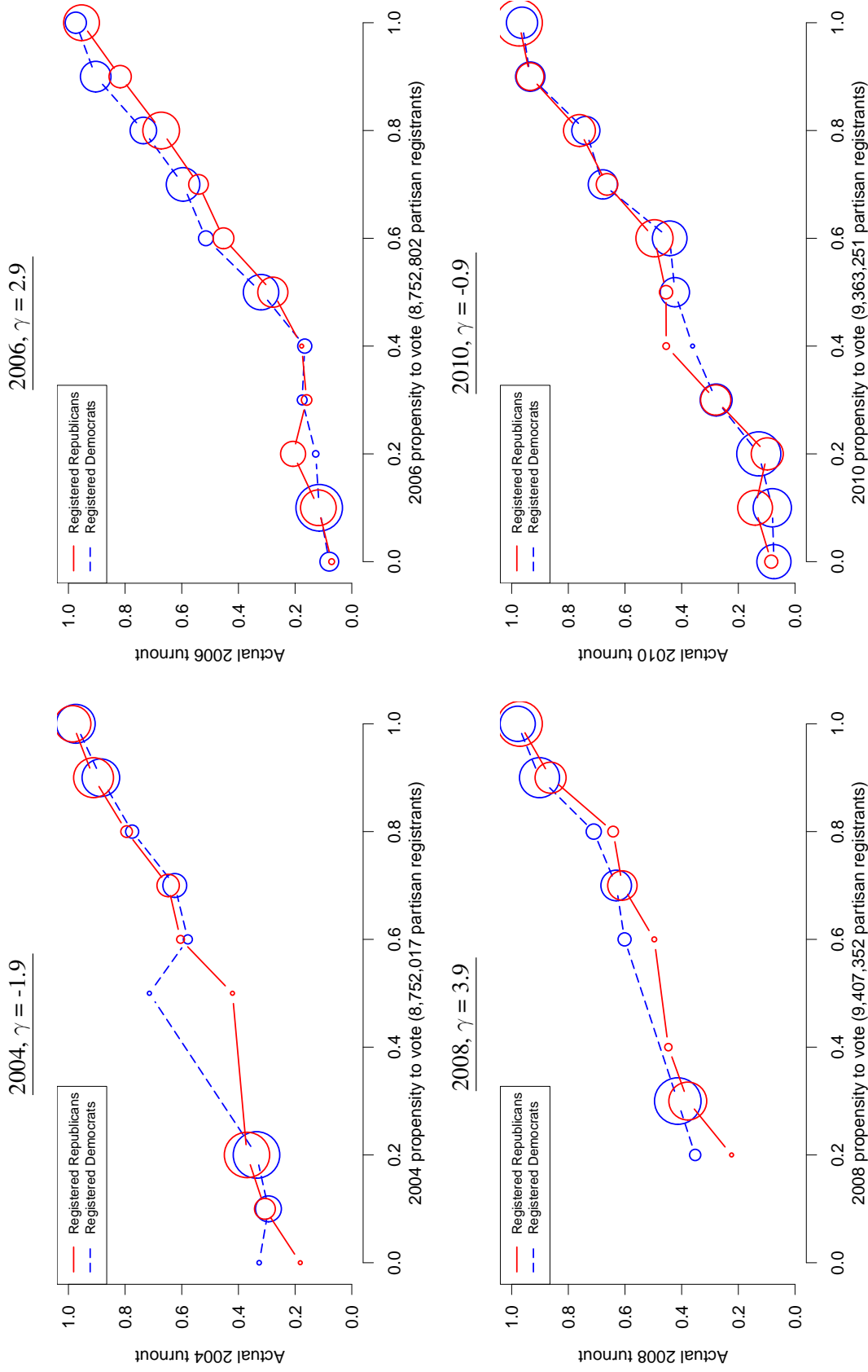
The estimates of the enthusiasm gap across elections suggest that short-term partisan factors can have measurable effects, and that these effects vary by election. Republicans were 1.9 points more likely to turn out in 2004 and 0.9 points more likely to turn out in 2010, while Democrats were 2.9 points more likely to turn out in 2006 and 3.9 points more likely to turn out in 2008. Given the closeness of the presidential election in 2008 in Florida, with Obama beating McCain in 2008 by 2.8 percent of votes cast, the difference in turnout by party of registration could have been decisive for the victor.¹⁶ On the other hand, Democratic vote share in House elections in Florida moved from 42 percent of the two party vote in 2006 to 38 percent in 2010, a much larger swing than the 0.9 point advantage to the Republicans from the enthusiasm gap in 2010 relative to 2006. In addition to the election-level estimate of the enthusiasm gap, the frames of Figure 2 indicate from what segments of the voting electorate the enthusiasm gap is more and less relevant.¹⁷ The

¹⁵ Note that I have not assumed that Democrats and Republicans do not have different underlying propensities to vote. Instead, the enthusiasm gap is the difference in turnout between Democrats and Republicans with the same propensity to vote. My estimate of the propensity accounts for prior differences in turnout between Democrats and Republicans.

¹⁶ Bush beat Kerry by 5.0 percent of votes cast in Florida in 2004.

¹⁷ Inference about the importance of the gap at each point on the x-axis should be tempered by the number of

Figure 2: Enthusiasm Gap by Propensity to Vote, Florida 2004-2010



Note: Each frame plots observed turnout on propensity to vote based on a model from the most recent election of the same type (midterm or presidential). Cases are aggregated to the propensity to vote and party of registration. Circle size is proportional to the number of partisans with that propensity to vote. The average space between Democrat and Republican circles, weighted by the number of registrants with that predicted propensity to vote, is the enthusiasm gap γ , with positive values indicating Democratic benefit from enthusiasm, and negative values indicating Republican benefit from enthusiasm. Propensities to vote with fewer than 10 registrants are suppressed from lines. Non-partisan and other party registrants are not plotted.

Republican advantage in 2004, for example, was gained from registrants across almost the entire range of propensity to vote. In 2006, Democrats benefitted from an enthusiasm gap from registrants with moderate to high propensities to vote, with Republicans picking up an advantage at a few of the low propensities.

The Obama victory in 2008 might be attributable to an enthusiasm gap at almost all propensities to vote but for the most participatory registrants (to the right in the plot). Potentially of note is the larger size of the gap moving left in the frame, suggesting the Democrats did especially well at activating low-participating segments of the Florida electorate, perhaps due to Obama's candidacy or to effective outreach efforts. In 2010, in contrast, Republicans gain a small advantage from a slim enthusiasm gap at almost every point across the electorate, with essentially an even match at high propensities and slight advantage at middle propensities, and no consistent pattern at the lower propensities.

Enthusiasm gap by competitiveness of contests

To this point, I have shown that an enthusiasm gap in turnout varies in size and direction across a set of elections in Florida. I now turn to an estimation of whether this effect is due more to global short-term forces on turnout, which operate on the entire population, or more to forces that are specific to the local contests at play.

My time-series of elections allows me to consider changes in the relationship between competitiveness of U.S. House contests and size of the enthusiasm gap. Because the enthusiasm gap as I estimate it here is relative to the last election of the same type, I look at changes in competitiveness by House district to see if the short-term stimulus of local House competitiveness is driving the size of the gap. I make the comparison by *change* in competitiveness because I construct each individual's propensity to vote from a model of turnout in the previous election. Imagine that competitive contests have larger enthusiasm gaps, and all contests competitive in the previous election remain competitive in the current election. Under these circumstances, I might estimate an enthu-

registrants at that propensity, indicated by the size of the circles. The statewide estimate noted in the subtitle is appropriately weighted by the number of registrants.

siasm gap of zero for competitive districts in the current election even though competitive contests do in fact have a larger gap. This is because the enthusiasm gap already existed in the previous election and my model of propensity to vote from the previous election contains that differential turnout. In contrast, measuring change in competitiveness differences out the constants of the short-term stimulus and isolates the effect of the short-term effect of the current election relative to the previous.¹⁸

I estimate separate enthusiasm gaps in Florida by change in competitiveness in U.S. House districts in 2006 (change from 2002) and 2010 (change from 2006). I define competitive districts as those districts noted prior to the election as competitive, and classify districts by their change in competitiveness from the previous midterm election.¹⁹ This leads to three classifications: districts that moved from uncompetitive to competitive, districts that moved from competitive to uncompetitive, and districts that did not change their competitiveness between the two elections. I thus estimate the enthusiasm gap procedure used in the previous section three times each in 2006 and 2010 for a total of six estimations.²⁰

In Figure 3, I present enthusiasm gaps by change in competitiveness and year for Florida House districts. The results suggest the importance of local campaign context as a short-term stimulus on turnout with partisan consequences for the enthusiasm gap. Districts that moved into or out of competitiveness have larger enthusiasm gaps than the districts that did not change their competitiveness, both for the 2006 election relative to 2002 competitiveness and for the 2010 election relative to 2006 competitiveness. The Democrats benefited from enthusiasm gaps in 2006 of 4.1 and 3.1 points in districts that moved into or out of competitiveness, although they also benefited in no change districts on the order of 1.8 points, giving some support to the importance of a global

¹⁸ My measure of competitiveness for each contest in each year is binary. Likely all districts, even those who do not change classification across elections, have some change in competitiveness. A more effective design might try to capture the continuous size of the enthusiasm gap relative to a continuous change in competitiveness.

¹⁹ I measure competitiveness as the union of the classifications of the Cook Political Report and CNN Election web sites in 2006 and 2010. For 2002, I use the union of Congressional Quarterly classifications and CNN. I list the districts that changed competitiveness in the note to Figure 3.

²⁰ I estimate the propensity to vote model separately for registrants in each classification of districts, with observed turnout again aggregated to the intersection of party of registration and propensity to vote. I present propensity to vote model results for the district subsets by competitiveness in Appendix Tables A5 to A10.

influence on the Democratic enthusiasm gap in 2006. The 2010 results provide little support for global influences, however, with districts not changing competitiveness providing Republicans a -0.1 point enthusiasm gap, compared to the larger gaps of -4.0 and -4.7 points in the districts that change their competitiveness.

The evidence in Figure 3 suggests that the enthusiasm gap is due to the competitive nature of local contests and not solely to statewide forces favoring one of the two parties operating across all districts. More broadly, I have measured the size and effect of the enthusiasm gap in recent Florida elections. In some elections, registered Democrats are more likely to vote than registered Republicans of the same underlying propensity to vote, while in others Republicans are more likely. Overall, these gaps correlate with the partisan victor in each election and are suggestive evidence that the composition of the electorate influences which party wins. But turnout by registration is not the full story, as registering with a political party does not mean one votes for candidates from that party with probability of one. In the next section, I merge vote rates to the turnout rates to more accurately assess the effect of the enthusiasm gap on vote shares received.

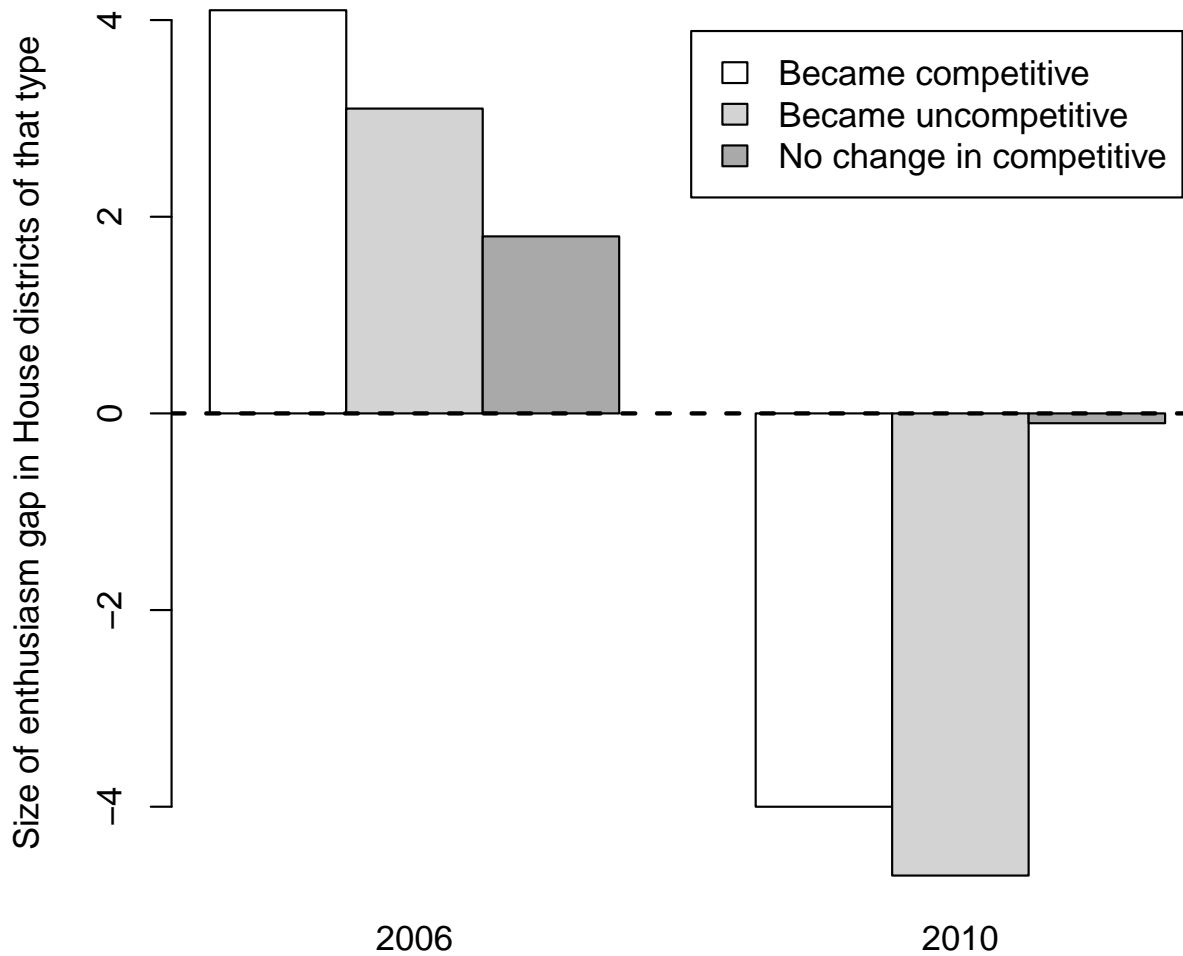
Effect of the Enthusiasm Gap on Election Outcomes

In this section, I estimate the effect of the enthusiasm gap on the candidate vote shares received in each election (consistent with Appendix Equation A1). For each registrant in each election in each voter file, I impute their probability of vote for the Democratic candidate.²¹ For survey observation of vote choices in Florida, I use the Cooperative Congressional Election Studies 2006, 2008, and 2010.²² In the 2006 and 2010 elections, I model United States House vote, and include intercept

²¹ The dependent variable is coded one for a Democratic vote, and zero for Republican and other-party votes – it is not a two-party only model because the vote probabilities here should reflect the full set of choices that voters considered.

²² The Cooperative Congressional Election Studies are fielded by YouGov Polimetrix using internet interviews. There was no CCES in 2004. CCES samples are constructed by first drawing a target population sample. This sample is based on the Census American Community Surveys and Current Population Survey Voting and Registration Supplements. The target sample is representative of the general population on a broad range of characteristics including a variety of geographic (state, region, metropolitan statistical area) and demographic (age, race, income, education, gender) measures. A stratified sample of individuals from YouGov Polimetrix's opt-in panel is invited to participate in each study. Those who completed the survey were then matched to the target sample based on the variables listed in parentheses above. For more detailed information on this type of survey and sampling technique see Vavreck and Rivers (2008). All analysis presented in this paper uses the sampling weights provided with each Study.

Figure 3: Enthusiasm Gap by Change in Competitiveness of U.S. House Contest, Florida 2006 and 2010



Note: Dependent variable is the enthusiasm gap, where positive values indicate Democratic benefit from enthusiasm, and negative values indicate Republican benefit from enthusiasm. Competitiveness defined by the union of Cook Political Report and CNN in 2006 and 2010, and by the union of Congressional Quarterly and CNN in 2002. In 2006, the districts that became competitive are 8, 9, 13, 16, and the districts that became uncompetitive are 5, 24. In 2010, the districts that became competitive are 2, 12, 24, 25, and the districts that became uncompetitive are 9, 13, 16. Line plots by propensity to vote for each district subset are presented in Appendix Figure A1.

shifts for each House district in the state, and in the 2008 election, I model presidential vote. I present the model results from the CCES respondents in Appendix Table A11, limiting analysis to respondents residing in Florida and with the same set of covariates used to construct propensity to vote from the voter files: age, age squared, gender, Democratic registration, Republican registration, and race.

Using the same cases from the Florida voter files that produced estimates of the enthusiasm gap in the previous section, I impute the probability that each registrant voted for the Democratic House candidate (2006 or 2010), or for Democrat Barack Obama for president (2008). To estimate the effect of the enthusiasm gap, for each election I calculate expected Democratic vote share under two scenarios of enthusiasm and present these estimates in Table 2. In the first scenario, presented in column two, all registrants turn out as their records indicate in the voter file, and vote for the Democratic candidate at rates imputed based on their characteristics. In the second scenario, presented in column three, all non-Democratic registrants turn out as their records indicate in the voter file, while Democratic registrants turn out with probability equal to the rate of turnout for registered Republicans with the same estimated propensity to vote. By setting Democratic turnout equal to Republican turnout of that same propensity to vote, I simulate an election where the enthusiasm gap γ_i for each Democratic registrant is set to zero relative to Republicans of the same propensity.

For each scenario of enthusiasm gap and turnout, I calculate Democratic vote share by aggregating estimated Democratic vote rate across observed or counterfactual turnout for each registrant. I present expected Democratic vote share under observed turnout in column two, expected Democratic vote share under counterfactual turnout without enthusiasm gap in column three, and the difference in these two shares in column four. The difference in the two shares is the expected benefit for the Democratic candidate(s) from the enthusiasm gap in that election. I also present the vote shares separately for competitive and uncompetitive Florida House districts in 2006 and 2010 in the final four rows.

The effects of the enthusiasm gap on outcomes are less than the magnitude of the effect on

Table 2: Effect of Enthusiasm Gap on Democratic Vote Share in Florida Elections

Election	Vote (observed turnout)	Vote (no gap)	Democrat gain
2006	50.7	49.7	+1.0
2008	50.0	49.2	+0.8
2010	36.8	37.3	-0.5
2006 became competitive	44.9	43.7	+1.2
2006 became uncompetitive	39.9	38.8	+1.1
2006 no change in competitive	53.7	53.3	+0.4
2010 became competitive	44.5	46.1	-1.6
2010 became uncompetitive	33.0	34.3	-1.3
2010 no change in competitive	35.6	35.8	-0.2

Note: This table presents the estimated effect of the enthusiasm gap on partisan vote shares in each election. The cells in columns two and three present expected Democratic vote share when the enthusiasm gap is as observed in the election (column two) and under a counterfactual election without enthusiasm gap (column three). Democratic vote share is the predicted Democratic vote given registrant characteristics, as estimated using the same characteristics from Florida CCES election survey respondents in 2006, 2008, and 2010. Column four presents the differences in the two vote shares, which is the estimated vote gain for the Democrat(s) due to the size and direction of the enthusiasm gap in that election.

turnout. The expected Democratic House vote share in 2006 falls from 50.7 percent when the enthusiasm gap benefits Democratic turnout to 49.7 percent when I simulate an election where the enthusiasm gap is zero. This means that Democratic House candidates across the state gained about 1.0 points in vote share due to the enthusiasm gap. In 2008, I estimate that Obama gained about 0.8 points in vote share in Florida due to the enthusiasm gap in 2008. Finally, Democratic candidates for Florida House seats in 2010 lost about 0.5 points in vote share due to an enthusiasm gap that increased Republican turnout relative to an election without such a gap.

I estimate that the effect of the enthusiasm gap on candidate vote shares is larger in districts with a change in competitiveness. In 2006, I estimate that Democratic candidates gained on average 1.2 points in vote share in House districts that became competitive in Florida, 1.1 points in districts that became uncompetitive, and 0.4 points in districts that did not change. Likewise, in the Republican year of 2010, Democratic candidates lost on average about 1.6 points in vote share in House districts that became competitive, 1.3 points in districts that became uncompetitive, and only 0.2 points in districts that did not change.

Why are the estimated effects on vote share relatively modest? It is first important to note that these effects are limited to the subset of the population registered with one of the major parties. Part of the overall change in party vote across election is due to changes in turnout and vote choice for other registrants. These effects, however, are the product of the increase (decrease) in turnout across the population of Democratic registrants and the probability that those registrants who voted because of the enthusiasm gap, given their characteristics, would vote for the Democratic candidate. Because I impute vote choice based on variables from the voter file, one concern is that my limited number of explanatory variables and specification error may attenuate predicted vote rate toward 50 percent, thus understating the true effect of the change in turnout on the vote share. Given this concern, one might conclude that a 1.5 point effect in the House contests that become competitive is not insignificant, and could be the difference in close elections. The results suggest that partisan influences on turnout can have consequences on which party's candidates win close elections.

Discussion

I have estimated that the differential mobilization of party bases across American elections can be of modest but measurable size. In some elections, otherwise similar Democrats are more likely to turn out than Republicans by a few percentage points, while in others, the Republicans are more likely to participate. My interpretation is that a few percentage points is not surprisingly large, but could potentially be the difference in close elections, especially in close districts across the nation.

I find that local campaign context is centrally related to the size of the enthusiasm gap and to the effect of changes in turnout on party vote shares. This suggests that much of the enthusiasm gap may be the salience, excitement, or campaign activity surrounding competitive contests. It also suggests that those interested in increasing participation might find increasing competitive elections a route to do so.

More broadly, I have presented evidence that confirms that individual partisanship *is* related to the turnout choice in a way that varies across elections. I believe this to be one of the first

empirical efforts to provide such evidence. Converse describes the assumption that most scholars have followed on the matter:

“[I]n some instances strong partisan forces affect the turnout of different classes of identifiers, increasing the turnout of the advantaged party . . . However, these instances are rarer than is commonly assumed, and it is a convenience to treat patterns of turnout . . . independently of partisan variation (Converse 1966, p. 19).”

It may be useful to begin to relax this assumption in our analysis of turnout, partisanship, and vote choice.

The magnitude of my estimates rest on a few important measurement issues. Because I am using the voter files, I possess only party of registration, not party identification as measured through survey questions. The survey question and party of registration measure different things, and which more accurately characterizes the party base is relevant for interpreting the magnitude of these effects. While I believe party of registration a reasonable approximation to characterizing the base – this is the group eligible to vote in closed party primaries, for example – others may want to scale up or down my estimates of the enthusiasm gap in consideration of the different measures. Further, I have defined the enthusiasm gap for major party registrants only. To the extent other registrants are also influenced, either in turnout or vote choice, by an enthusiasm gap, I am understating the total effects on vote share.

While the amount of data brought to bear here may seem large, the project is within reach for most with a modern computer. Many states will sell the voter file to academic researchers for less than one hundred dollars. Constructing my estimates of the enthusiasm gap requires ordinary least squares and predicted values. Running linear models on millions of observations can be accomplished with many statistical programs, and I provide code for my results with this model using the freely available R program. My approach can be replicated in different settings and could even be applied with survey data such as the Current Population Survey Voting Supplement or other larger-sized surveys.

Though I identify important variation in the size and direction of the enthusiasm gap across

elections, the modest effects on vote share also suggest that much of the action in who wins elections likely rests with less partisan voters who turn out in some elections and not others, who who change their support between parties across elections. Future research could focus on developing more accurate measures of the correlation between the choice to vote, partisanship, and the electoral context.

References

- Caldeira, Gregory A., and Samuel C. Patterson. 1982. "Contextual Influences on Participation in U.S. State Legislative Elections." *Legislative Studies Quarterly* 7(3): 359–381.
- Campbell, Angus. 1960. "Surge and Decline: A Study of Electoral Change." *Public Opinion Quarterly* 24(3): 397–418.
- Campbell, Angus, Philip E. Converse, Warren E. Miller, and Donald E. Stokes. 1960. *The American Voter*. New York: Wiley.
- Citrin, Jack, Eric Schickler, and John Sides. 2003. "What if Everyone Voted? Simulating the Impact of Increased Turnout in Senate Elections." *American Journal of Political Science* 47(1): 75–90.
- Converse, Philip E. 1966. "The Concept of a Normal Vote." In *Elections and the Political Order*, ed. Angus Campbell, Philip Converse, Warren Miller, and Donald Stokes. New York: John Wiley and Sons.
- DeNardo, James. 1980. "Turnout and the Vote: The Joke's on the Democrats." *American Political Science Review* 74(2): 406–420.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: HarperCollins.
- Erikson, Robert S. 1995. "State Turnout and Presidential Voting: A Closer Look." *American Politics Research* 23(4): 387–396.
- Erikson, Robert S., Michael B. MacKuen, and James A. Stimson. 2002. *The Macro Polity*. New York: Cambridge University Press.
- Gerber, Alan S., and Donald C. Green. 2000. "The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment." *American Political Science Review* 94(3): 653–663.
- Green, Donald P., and Alan S. Gerber. 2008. *Get Out the Vote: How to Increase Voter Turnout*. Second ed. Washington: Brookings Institution Press.
- Holbrook, Thomas M., and Scott D. McClurg. 2005. "The Mobilization of Core Supporters: Campaigns, Turnout, and Electoral Composition in United States Presidential Elections." *American Journal of Political Science* 49(4): 689–703.
- Jacobson, Gary C., and Samuel Kernell. 1983. *Strategy and Choice in Congressional Elections*. New Haven: Yale University Press.
- Kramer, Gerald H. 1971. "Short-Term Fluctuations in U.S. Voting Behavior, 1896-1964." *American Political Science Review* 65(1): 131–143.
- Lumley, Thomas. 2011. *biglm: bounded memory linear and generalized linear models*. R package version 0.8.

- Martinez, Michael D., and Jeff Gill. 2005. "The Effects of Turnout on Partisan Outcomes in U.S. Presidential Elections 1960-2000." *Journal of Politics* 67(4): 1248–1274.
- Masket, Seth E. 2009. "Did Obama's Ground Game Matter?: The Influence of Local Field Offices During the 2008 Presidential Election." *Public Opinion Quarterly* 73(5): 1023–1039.
- McGhee, Eric, and John Sides. 2011. "Do Campaigns Drive Partisan Turnout?" *Political Behavior* 33: 313–333.
- Nagel, Jack H., and John E. McNulty. 1996. "Partisan Effects of Voter Turnout in Senatorial and Gubernatorial Elections." *American Political Science Review* 90(4): 780–793.
- Plutzer, Eric. 2002. "Becoming a Habitual Voter: Inertia, Resources, and Growth in Young Adulthood." *American Political Science Review* 96(1): 41–56.
- R Development Core Team. 2012. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing.
- Rosenstone, Steven J., and John Mark Hansen. 2003. *Mobilization, Participation, and Democracy in America*. New York: Pearson Longman.
- Vavreck, Lynn, and Douglas Rivers. 2008. "The 2006 Cooperative Congressional Election Study." *Journal of Elections, Public Opinion and Parties* 18: 355–366.
- Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. *Who Votes?* New Haven: Yale University Press.
- Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.
- Zaller, John. 2004. "Floating Voters in U.S. Presidential Elections, 1948-2000." In *Studies in Public Opinion: Attitudes, Nonattitudes, Measurement Error, and Change*, ed. William E. Saris, and Paul M. Sniderman. Princeton, NJ: Princeton University Press.