Increasing Voter Turnout:
Is Democracy Day the Answer?

by

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ABSTRACT

It has often been argued that voter turnout in the United States is too low, particularly compared with turnout in other industrialized democracies, and that a healthy democracy should have higher turnout. One proposal that has been considered by Congress to increase voter turnout is the creation of "Democracy Day," making Election Day a national holiday. In this study I evaluate the likely effectiveness of an election holiday in increasing turnout by studying how state regulations making Election Day a holiday for state employees affects voter turnout among state employees in those states. I exploit these "natural experiments" in a difference-in-difference context, using various groups of non-state employees as controls. My analysis relies on data from Voting Supplements to the Current Population Survey in November 2004 and 2006. The results are clear. There is no evidence from the "natural experiment" of states providing an election holiday for state employees that such holidays significantly increase voter turnout. I conclude that having an election holiday, by itself, is not an effective strategy to increase voter turnout.

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1 Introduction

It has often been argued that voter turnout in the United States is too low, particularly compared with turnout in other industrialized democracies, and that a healthy democracy should have higher turnout. The most extreme policy to "encourage" voting would be to make voting compulsory, with fines levied for failure to vote.[1] Given that turnout varies with socio-economic and demographic factors such as education and age (with more educated and older workers being more likely to vote (Timpone, 1998)), the idea is that compulsory voting would lead to voters being more representative of the polity as a whole and would increase the perceived legitimacy of election outcomes (Hill, 2006).

Some have argued that an important cause of low turnoput in the United States is a cumbersome registration process.[2] The National Voter Registration Act (NVRA) of 1993 (the so-called "Motor-Voter" law) was passed in order to address this. However, while Motor-Voter does appear to have increased the voter registration rate its effect on turnout is not clear.[3]

Another proposal to increase voter turnout is to declare Election Day a national holiday ("Democracy Day").[4] Presumably, the argument is that granting workers the day off would give them the time to vote when they otherwise might not. The economic cost of such a holiday is substantial, particularly understanding that the act of voting is 1) generally not very time consuming (at least compared with the length of a work day) and 2) that the polls are generally open from early morning until late evening. In this study, I present an

[1] Jackman and Miller (1995), comparing voter turnout across countries, find that turnout rates in the 1980s were about 7 percentage points higher in countries with compulsory voting laws (Australia, Belgium, Greece, and Italy in their study).

[2] Powell (1986) compares turnout in nine countries, and he concludes that it is likely that lower voter turnout in the United States is likely due at least in part to the difficulty of the registration process.

[3] Highton and Wolfinger (1998) find increases in turnout ranging from 4.7 to 8.7 percentage points as a result of Motor voter provisions. In contrast, Martinez and Hill (1999) find little improvement in voter turnout.

[4] Resolution (H.R)63, the Democracy Day Act of 2005 was proposed by Representative John Conyers. This bill would make the Tuesday after the first Monday in even years (Election Day) a legal public holiday. While the bill has not passed Congress, it had 110 co-sponsors as of January 2007. A companion resolution was introduced in the Senate in May 2005. See http://en.wikipedia.org/wiki/Democracy_Day_(United_States), accessed on August 15, 2008.

empirical analysis of the narrow question of whether granting election day as a holiday, in fact, increases voter turnout.

There is little earlier work of which I am aware that addresses this question. Wattenberg (1998) argues for moving election day from a Tuesday to a weekend ". . . thereby giving people more time to vote." (p. 46). Barring this, he suggests the alternative of declaring election day a national holiday, perhaps by moving election day to the second Tuesday in November and combining it with with Veterans' Day. However, he presents no evidence on the efficacy of such changes.

The study of which I am aware that is closest to the analysis I present here is that of Wolfinger, Highton, and Mullin (WFM) (2002). WFM use data from the November 2000 voting supplement to the Current Population Survey (CPS) to investigate, among other policies, whether 1) policies requiring private employers to allow workers to leave their place of work in order to vote (24 states) increase voter turnout among private sector workers and 2) policies that permit state employees to leave work in order to vote (31 states) increase voter turnout among state employees. WFM find no effect of these policies on voter turnout. Since these policies are ambiguous with regard to whether or not workers are paid for time away from work while voting, the null finding may reflect an unwillingness by marginal voters to avail themselves of the time off to vote if income is foregone.

Freeman (2004) notes that Puerto Rico, which has turnout substantially higher than the rest of the United States, declares Election Day to be a legal holiday. Freeman also notes that Puerto Rico has also instituionalized substantial election-day political activity designed to mobilize voters. This confounding factor makes it difficult to conclude anything about the effect of an election day holiday on voter turnout from the experience of Puerto Rico.

My analysis, which is similar in spirit to WFM, exploits the fact that 13 states grant state employees election day (some in even years only) as a paid holiday. The test I present is intuitive and is based on the "natural experiment" of some states having this policy of granting state employees an election day holiday. Using data from voting supplements to the Current Population Survey in November 2004 and 2006, I compare voter turnout among state employees in the "holiday" states to voter turnout among state employees in non-holiday states. In order to allow for unmeasured differences across states in voter turnout common to

all voters, I use non-state employees (both private sector and other public sector) as control groups in a difference-in-difference framework. The results are clear-cut. Granting workers the day off does not increase voter turnout.

2 Data and Simple Statistics on Voter Turnout

The data, from the November CPS in 2004 and 2006, includes observations on 170,711 individuals who were U.S. citizens at least 18 years of age and who reported whether or not they voted.[5]

These data show the expected patterns in voter turnout. These are:

- Voter turnout is substantially higher in 2004 (a presidential election year) at 71.6 percent than in 2006 (an off year) at 54.3 percent. This reflects the perceived importance of presidential elections.

- More educated individuals are more likely to vote. For example, the 2006 turnout rate among high school graduates was 46.6 percent compared with a turnout rate of 71.9 percent among college graduates. The relationship between voter turnout and education is summarized in figure 1.[6]

- Older individuals are more likely to vote through their late sixties, after which the turnout rate falls (probably due to increased cost of voting among the oldest citizens). For example, the 2006 turnout rate rises rapidly from less than 20 percent for teenagers to 37 percent for 30 year olds to 71 percent for 70 year olds before falling to about 56 percent for 85 year olds. The relationship between the turnout rate and age is summarized in figure 2.

- Voter turnout increases substantially with housing tenure.[7] The 2006 turnout rate rises

[5] Missing data on reported vote is a substantial issue in these data, with fully 10 percent of individuals not reporting.

[6] The statistics presented in this and succeeding figures are weighted by the CPS final sample weights.

[7] Squire, Wolfinger, and Glass (1987) argue that low turnout among recent movers is the result of a costly registration process, and they present some evidence consistent with this view. The analysis of Highton (2000) yields a similar conclusion.

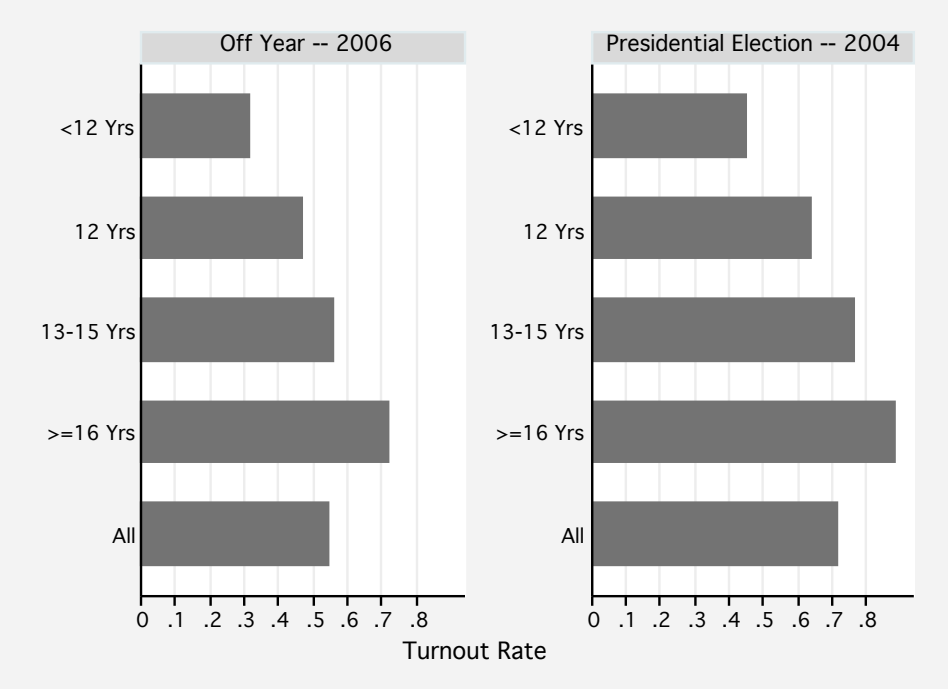

Figure 1: Turnout Rate, by Type of Election Year and Education Level

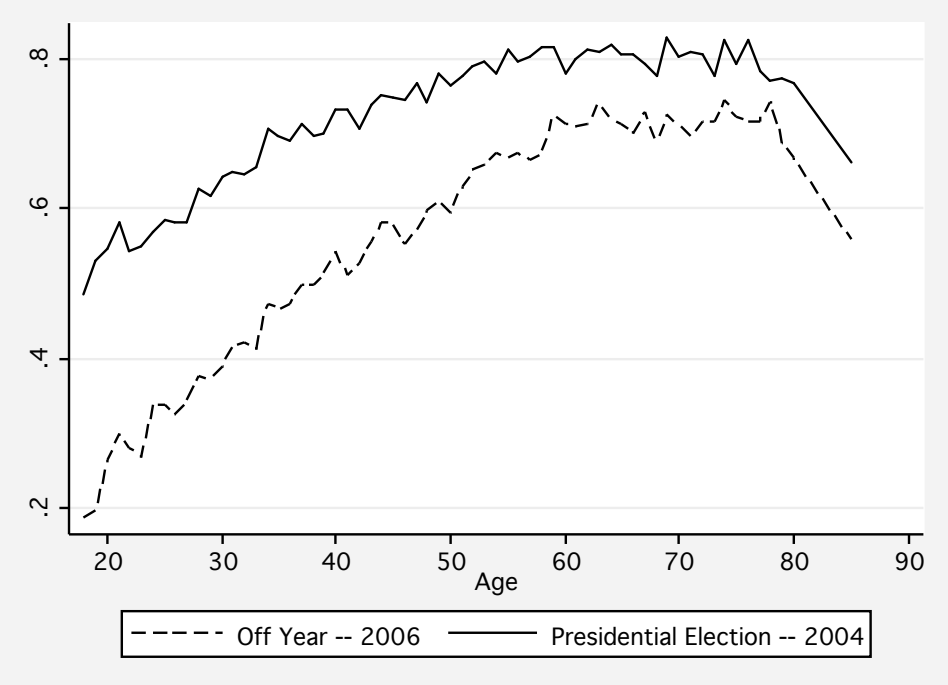

Figure 2: Turnout Rate, by Type of Election Year Type and Age

from about 24 percent for individuals with housing tenure less than 1 month to almost 65 percent for individuals with housing tenure of at least five years. The relationship between the turnout rate and housing tenure is summarized in figure 3.

- Voter turnout is substantially higher among those employed in the public sector (71 percent in 2006) than in either the private sector (52 percent in 2006) or among the non-employed (53 percent in 2006). This may reflect the particular salience of government to public sector employees.

- There is not much variation by specific public sector, with 2006 turnout rates of 67 percent for federal government employees, 72 percent for state government employees, and 71 percent for local government employees. The relationship between the turnout rate and sector of employment is summarized in figure 4.

2.1 Election Holiday Status and Voter Turnout

There are thirteen states with an election day holiday for state employees: Delaware, Hawaii, Illinois, Kentucky, Louisiana, Maryland, Michigan, Montana, New Jersey, New York, Rhode Island, West Virginia, and Wisconsin.[8]

An important issue in this analysis is whether the policy of granting state employees an election day holiday is plausibly exogenous to voter turnout generally in the state. For example, if a state instituted such a policy in response to concern about low election turnout among state employees and this policy was effective in encouraging turnout, then we would not measure an effect of the policy despite its being effective. There would be no difference between turnout among state employees in holiday and non-holiday states. However, absent the holiday policy, turnout would, counter-factually, have been lower in the holiday states.

[8] My source for this information comes from links found on http://www.nj.com/news/index.ssf/2008/06/lawmaker_looking_to_take_a_hol.html (accessed August 12, 2008). Several states have an election day holiday only in even years. This is of no consequence for my analysis because the CPS voting supplements are only in even years. Kentucky has an election day holiday only in years with presidential elections. For the purposes of my analysis, I consider Kentucky to be an election holiday state, but I drop Kentucky observations from my analysis of the 2006 off year election.

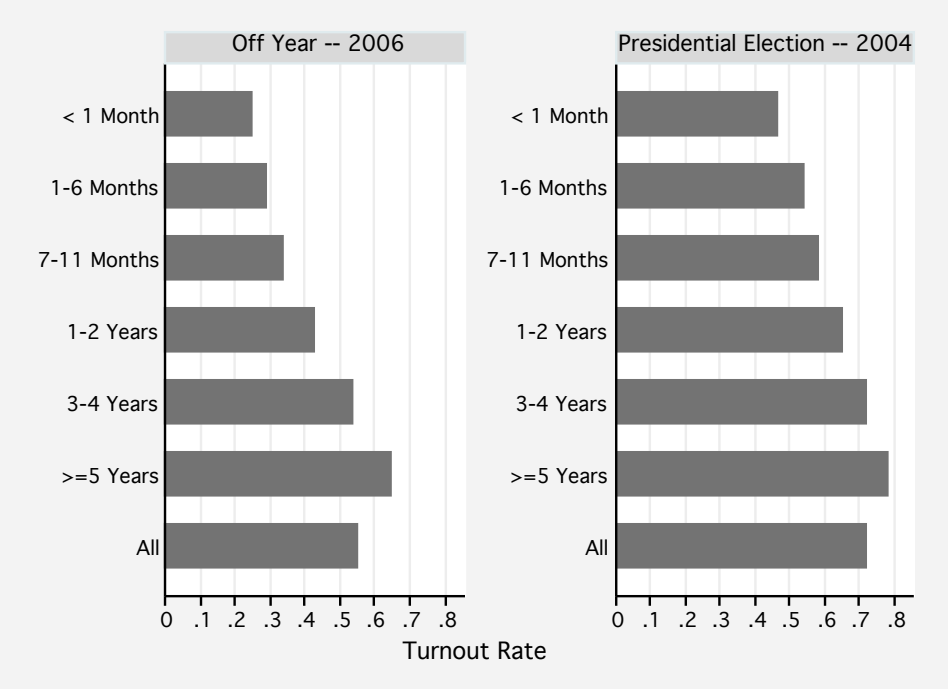

Figure 3: Turnout Rate, by Type of Election Year Type and Housing Tenure

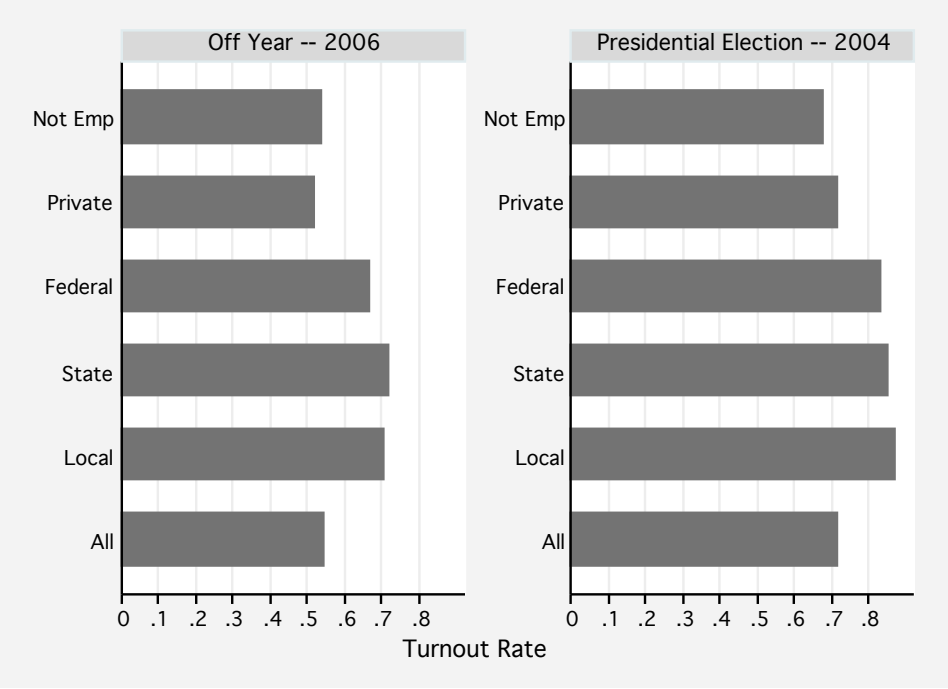

Figure 4: Turnout Rate, by Type of Election Year and Sector of Employment

I assume reasonably that, if there is low voter turnout among state employees in a particular state, then there is also low voter turnout among other individuals in that state. On this basis, I can use non-state employees in a given state as a control group to account for unmeasured differences across states in the propensity to vote.

Another potential problem with this approach is that non-state employees in a holiday state may be more likely to have an election holiday as well. This may be particularly likely for local government employees, through the collective bargaining process or otherwise. However, it is certainly not the case for federal employees, and it is not relevant for those who are not employed. It is also less likely to be the case for private sector workers. In order to address this issue, I disaggregate non-state employees by sector and compare voter turnout in holiday and non-holiday states by sector. This creates a set of control groups with which to compare state employees.

Table 1 contains means and simple difference and difference-in-difference analyses of the mean turnout rate by sector of employment and election holiday status of the state. I analyze 2004 and 2006 separately since it may be the case that an election holiday would have different effects in presidential and off year elections. The top panel of table 1 contains the analysis for 2004 while the bottom panel contains the analysis for 2006.

The first two columns of the table contains the mean turnout rates for holiday and non-holiday states by sector of employment. The third column contains the difference between holiday and non-holiday states in the turnout rate of each group. Average turnout is statistically significantly higher (at at least the 10 percent level) in election holiday states for all groups of workers but federal government employees and the not-employed in 2006.

If the election day holiday policy was not related to other factors affecting turnout in a state, then the policy should affect only voter turnout for state employees. It is clear that this is not the case. While there is a significant difference between voter turnout among state employees in states with and without the election day holiday, there is also a significant positive relationhship of voter turnout with the election day holiday for other classes of individuals. Of course, this cannot be the direct result of the election holiday policy because it applies only to state employees. It may be that states with such a policy for state employees are states where other individuals value higher voter turnout.

Table 1: Turnout Rate, Difference-In-Difference Analysis, 2004-2006.

2004 – Presidential Election

Sector	Election Holiday States	No Holiday States	Difference	Diff-in-Diff (see note)
Not Employed	0.6876	0.6769	0.0108	0.0230
	(0.0049)	(0.0030)	(0.0058)	(0.0218)
Private	0.7410	0.7031	0.0379	-0.0041
	(0.0040)	(0.0024)	(0.0047)	(0.0208)
Federal	0.8158	0.8392	-0.0234	0.0571
	(0.0221)	(0.0140)	(0.0264)	(0.0258)
State	0.8731	0.8393	0.0338	
	(0.0174)	(0.0102)	(0.0204)	
Local	0.8858	0.8627	0.0231	0.0107
	(0.0118)	(0.0077)	(0.0142)	(0.0189)
All but State	0.7319	0.7046	0.0273	0.0065
	(0.0031)	(0.0018)	(0.0036)	(0.0208)
All	0.7359	0.7087	0.0272	
	(0.0030)	(0.0018)	(0.0035)	

2006 – Off Year Election

Sector	Election Holiday States	No Holiday States	Difference	Diff-in-Diff (see note)
Not Employed	0.5468	0.5326	0.0142	0.0285
	(0.0059)	(0.0034)	(0.0067)	(0.0245)
Private	0.5304	0.5130	0.0175	0.0253
	(0.0048)	(0.0027)	(0.0055)	(0.0242)
Federal	0.6991	0.6595	0.0396	0.0031
	(0.0270)	(0.0157)	(0.0311)	(0.0343)
State	0.7525	0.7098	0.0427	
	(0.0209)	(0.0110)	(0.0235)	
Local	0.7286	0.7000	0.0287	0.0141
	(0.0142)	(0.0084)	(0.0165)	(0.0260)
All But State	0.5518	0.5330	0.0188	0.0240
	(0.0036)	(0.0020)	(0.0041)	(0.0239)
All	0.5575	0.5388	0.0187	
	(0.0035)	(0.0020)	(0.0040)	

Note: Based on data from Voting Supplments to the November CPS in 2004 and 2006. Standard errors in parentheses. Weighted by CPS final sample weights. N=169,357. The difference-in-difference estimates are calculated as the difference between the difference in turnout rate for state employees and for the indicated group in holiday states and the same difference in non-holiday states. The difference-in-difference estimate for "All but State" pools the non-state worker group in calculating the difference in difference.

The last column of table 1 contains simple difference-in-difference estimates of the effect of the election holiday on the turnout rate of state workers for a variety of control groups of individuals. There is no significant effect of the election holiday on the turnout rate in either 2004 or 2006 of state workers relative to those not employed, private sector workers, or local government workers. Neither is there a significant effect of the election holiday on the turnout rate of state workers relative to all other workers. However, there is a significant effect of the election holiday on the turnout rate of state workers relative to federal government workers in 2004.

The results in table 1 do not provide consistent evidence that an election day holiday affects voter turnout. However, this analysis does not account for other factors that affect voter turnout, such as individual demographic characteristics or unmeasured state-specific factors. I turn now to a multivariate analysis that does account for these factors.

3 An Empirical Model of the Decision to Vote

I model the decision to vote as an individual comparison of costs and benefits. The cost of voting include time and effort, both in voting and, if voting, in deciding how to vote. The benefit of voting consists both of the marginal benefit due to the effect of the vote on the probability of getting the preferred election outcome as well as any non-pecuniary benefit from the act of voting itself.

A reduced form representation of the net benefit (benefit net of cost) of voting to individual i in state j is

$$Y_{ij} = X_{ij}\beta + \gamma_1 Priv_{ij} + \gamma_2 Fed_{ij} + \gamma_3 State_{ij} + \gamma_4 Loc_{ij} + \delta_j + \epsilon_{ij}, \tag{3.1}$$

where

- Y_{ij} is an unobserved latent variable representing the net benefit of voting,
- X_{ij} is a vector of individual characteristics that affect the net benefit of voting including measures of age, education, sex, marital status, race, source of citizenship (naturalized vs. native born), and housing tenure,

- β is vector of parameters,
- $Priv_{ij}$ is an indicator for employment in the private sector,
- Fed_{ij} is an indicator for employment by the federal government,
- $State_{ij}$ is an indicator for employment by a state government,
- Loc_{ij} is an indicator for employment by a local government,
- δ_j is a set of state fixed effets included to account for unmeasured state-specific factors that might affect the probability of voting for individuals in a given state, and
- ϵ_{ij} is a random component representing unmeasured factors that affect the net benefit of voting.

The omitted sector consists of individuals who are not employed.

Individual will vote if and only if their net benefit of voting is positive ($Y_{ij} > 0$). Assuming a standard normal distribution for ϵ_{ij}, this yields the usual probit model for the probability of voting.

For an election holiday for state employees to increase the vote probability, it must increase the net benefit of voting (presumably by reducing the cost of voting) for state employees. I denote the existence of an election holiday for state employees in state j by an indicator variable, H_j. I then augment the specication in equation 3.1 with the interaction of H_j and $State_{ij}$. The resulting expression is

$$Y_{ij} = X_{ij}\beta + \gamma_1 Priv_{ij} + \gamma_2 Fed_{ij} + \gamma_3 State_{ij} + \gamma_4 Loc_{ij} + \theta H_j State_{ij} + \delta_j + \epsilon_{ijt}. \qquad (3.2)$$

The state fixed effects (δ_j) capture any systematic difference between states with an election holiday for state employees and states without such a holiday in the probability of voting for all individuals (regardless of sector of employment). The parameter θ is the difference-in-difference effect of the election holiday on the probability of voting of state employees. This model allows for systmatic differences across states with and without the tax holiday as well as differences between state employees and non-state employees. As such, it goes far in

accounting for any endogeneity of the state election holiday that is correlated with general voting propensity in the state.

The specification is equation 3.2 contrasts the voter turnout of state employees in election holiday states with the combined group of all other employees (and the non-employed) in those states. A less constrained specification allows the state employee election holiday difference to vary by class of worker. This specification is

$$\begin{aligned} Y_{ijt} &= X_{ijt}\beta + \gamma_1 Priv_{ijt} + \gamma_2 Fed_{ijt} + \gamma_3 State_{ijt} + \gamma_4 Loc_{ijt} + \theta_1 H_j NonEmp_{ijt} \\ &+ \theta_2 H_j Private_{ijt} + \theta_3 H_j Local_{ijt} + \theta_4 H_j Loc_{ijt} + \delta_j + \epsilon_{ijt}. \end{aligned} \tag{3.3}$$

In this case, the difference-in-difference estimate of the effect of the election holiday on the turnout rate of state workers relative to workers in group k is $-\hat{\theta}_k$ (the negative of the coefficient of $H_j Group_k$).

4 Results

Tables 2 and 3 contain estimates of the key parameters of probit models of the probability of voting for 2004 and 2006 respectively.[9] All models include measures of basic demographics, including age, age squared, sex, marital status, the interaction of sex and marital status, education, race. All models also account for differences in housing tenure and whether the individual is a naturalized citizen. The key variables, whose coefficient estimates are contained in tables 2 and 3, are sector of employment and the interaction of a holiday-state indicator with sector of employment.[10] The estimates in tables 2 and 3 show the clear result that the non-employed are least likely to vote and public sector employees are the most likely to vote.

The first column of tables 2 and 3 contain estimates of a model without state fixed effects using all non-state individuals as a single control group.

[9] The probit estimates are normalized to represent the marginal effect of each variable on the probability voting evaluated at the mean characteristics of the sample.

[10] The coefficient estimates not presented in tables 2 and 3 are presented in appendix tables. All accord with expectations, as summarized in figures 1-4.

Table 2: Normalized Probit Estimates of Vote Probability

2004 – Presidential Election

Variable	(1)	(2)	(3)	(4)
Private Sector	0.0428	0.0396	0.0407	0.0382
	(0.0046)	(0.0051)	(0.0046)	(0.0051)
Federal	0.1001	0.1100	0.1028	0.1094
	(0.0160)	(0.0190)	(0.0160)	(0.0189)
State	0.1158	0.1140	0.1185	0.1171
	(0.0139)	(0.0140)	(0.0139)	(0.0140)
Local	0.1462	0.1431	0.1458	0.1430
	(0.0099)	(0.0115)	(0.0099)	(0.0115)
Holiday State	0.0220	0.0423		
	(0.0042)	(0.0272)		
Holiday State * Not Emp		-0.0272		-0.0269
		(0.0281)		(0.0283)
Holiday State * Private		-0.0147		-0.0168
		(0.0278)		(0.0280)
Holiday State * Federal		-0.0616		-0.0495
		(0.0435)		(0.0437)
Holiday State * State	0.0203		0.0212	
	(0.0276)		(0.0278)	
Holiday State * Local		-0.0156		-0.0163
		(0.0341)		(0.0343)
State FEs	No	No	Yes	Yes
Log Likelihood	-43664.5	-43662.1	-43272.4	-43271.0

Note: Based on data from Voting Supplement to the November 2004 CPS. All models include controls for housing tenure, age, age squared, sex, marital status, the interaction of sex and marital status, education, race, and whether a naturalized citizen. Other coefficients are presented in the Appendix. Standard errors are in parentheses. The base group consists of native-born white unmarried males with 12 years of education in an off year, who are not employed, who have occupied their current residence for at least 5 years, and who live in a non-holiday state (where relevant). Weighted by CPS final sample weights. The normalized estimates are calculated as the product of the usual probit coefficients and the standard normal density function evaluated at the sample mean values of the variables. N=86,782

Table 3: Normalized Probit Estimates of Vote Probability

2006 – Off Year Election

Variable	(1)	(2)	(3)	(4)
Private Sector	0.0357	0.0392	0.0327	0.0367
	(0.0055)	(0.0061)	(0.0056)	(0.0061)
Federal	0.1069	0.0985	0.1051	0.0989
	(0.0170)	(0.0198)	(0.0171)	(0.0199)
State	0.1721	0.1741	0.1762	0.1783
	(0.0151)	(0.0152)	(0.0153)	(0.0154)
Local	0.1510	0.1523	0.1546	0.1530
	(0.0107)	(0.0120)	(0.0107)	(0.0121)
Holiday State	0.0055	0.0350		
	(0.0052)	(0.0300)		
Holiday State * Not Emp		-0.0214		-0.0277
		(0.0312)		(0.0311)
Holiday State * Private		-0.0360		-0.0442
		(0.0308)		(0.0307)
Holiday State * Federal		0.0115		-0.0032
		(0.0469)		(0.0474)
Holiday State * State	0.0295		0.0363	
	(0.0304)		(0.0303)	
Holiday State * Local		-0.0268		-0.0221
		(0.0375)		(0.0375)
State FEs	No	No	Yes	Yes
Log Likelihood	-47165.9	-47163.9	-46543.6	-46541.3

Note: Based on data from Voting Supplement to the November 2006 CPS. All models include controls for housing tenure, age, age squared, sex, marital status, the interaction of sex and marital status, education, race, and whether a naturalized citizen. Other coefficients are presented in the Appendix. Standard errors are in parentheses. The base group consists of native-born white unmarried males with 12 years of education in an off year, who are not employed, who have occupied their current residence for at least 5 years, and who live in a non-holiday state (where relevant). Weighted by CPS final sample weights. The normalized estimates are calculated as the product of the usual probit coefficients and the standard normal density function evaluated at the sample mean values of the variables. N=81,501

Specification 1 in tables 2 and 3 contains estimates of the most direct model that addresses the effect of the election holiday for state employees on the likelihood of voting. This specification, which uses all individuals other than state employees as a single control group, includes additional indicator variables for 1) the presence of an election holiday for state employees in the state of residence and 2) the interaction of the election holiday indicator with the indicator for employment by state government. To the extent that an election holiday is effective in encouraging state employees to vote, I expect this interaction variable to be positive. Interestingly, the existence of an election holiday for state employees in a state implies that the average overall probability of voting is 2.2 percentage points higher in 2004 for all individuals in those states. This implies that state employees receive an election holiday in states with relatively high turnout generally. However, while the point estimate of the difference-in-difference effect of the election holiday (the coefficient of Holiday State * State Employee) is positive in both 2004 and 2006, it is not significantly different from zero in either year. Neither is the average effect across the two years significantly different from zero (average = 0.0249, s.e. = 0.0290, p-value = 0.195).

I explore these relationships further in specification 2, which allows estimation of separate difference-in-difference estimates, for each of four control groups defined by sector of employment (or non-employment), of the effect of an election holiday on the probability of voting. In no case in either year is the difference-in-difference estimate of the effect of the election holiday on the probability of voting statistically significant.

In order to account for unmeasured state-specific factors that affect voter turnout for all individuals, specifications 3 and 4 repeats the first two specifications in tables 2 and 3 including state fixed effects. The results are very similar to those derived without state fixed effects, and, once again, there is no significant effect of the election holiday on the turnout rate of state employees.

While the estimated effect of the election day holiday for state employees is not statistically significant, the point estimates using the combined control group (columns 1 and 3 of tables 2 and 3) are positive and relatively large (at least 2 percentage points). However, they are estimated imprecisely, which may reflect variation across states in the election holiday effect. In order to investigate this, I re-estimated the model in column 3 of tables 2 and

3 (the specification with the combined control group and state fixed effects) allowing for separate effects of the election day holiday in each holiday state. This is a generalization of equation 3.2 such that

$$Y_{ij} = X_{ij}\beta + \gamma_1 Priv_{ij} + \gamma_2 Fed_{ij} + \gamma_3 State_{ij} + \gamma_4 Loc_{ij} + \theta_j H_j State_{ij} + \delta_j + \epsilon_{ijt}. \quad (4.1)$$

The generalization is that the key parameter θ is estimated separately for each election holiday state (θ_j).

The estimates of θ_j from this model are contained in table 4. While there is a substantial range in $\hat{\theta}_j$ across states (from a low of -0.13 in New Jersey to a high of 0.18 in Delaware), none are significantly different from zero. Additionally, the hypothesis that all $\theta_J = 0$ cannot be rejected in either year (p-value = 0.51 in 2004 and 0.88 in 2006). Neither can the weaker hypothesis that all θ_j are equal be rejected (p-value = 0.56 in 2004 and 0.93 in 2006). I conclude from this that the imprecision in the estimated effect of the election holiday on voter turnout is not due simply to heterogeneity across states with the election holiday for state workers.

5 Concluding Remarks

There is no evidence from the "natural experiment" of states providing an election holiday for state employees that such holidays significantly increase voter turnout. While there is some evidence that voter turnout is higher overall in states with an election holiday for state employees, there is no particular effect on turnout among state employees. I conclude that having an election holiday, by itself, is not an effective strategy to increase voter turnout.

Table 4: Normalized Probit Estimates of Election Holiday Effect on Vote Probability

Estimated coefficient on dummy variables for state employees in each election holiday state

Variable	(1) 2004	(2) 2006
Rhode Island	-0.0218	0.0380
	(0.0873)	(0.0962)
New York	-0.0118	0.0314
	(0.0580)	(0.0619)
New Jersey	-0.1342	-0.0030
	(0.0962)	(0.0846)
Illinois	0.0591	0.0151
	(0.0702)	(0.0728)
Michigan	0.0137	0.1107
	(0.0725)	(0.1252)
Wisconsin	0.1360	0.1090
	(0.1081)	(0.0865)
Delaware	0.1805	0.1181
	(0.1099)	(0.0693)
Marylan	-0.0206	0.0929
	(0.0785)	(0.0890)
West Virginia	0.0265	0.0007
	(0.0665)	(0.0736)
Kentucky	0.0802	
	(0.0829)	
Louisiana	0.0504	-0.0251
	(0.1058)	(0.1123)
Montana	0.2206	-0.0228
	(0.1143)	(0.1091)
Hawaii	0.0414	-0.0196
	(0.0608)	(0.0582)
Log Likelihood	-43267.7	-46541.9
Sample Size	85768	81501

Note: Based on data from Voting Supplement to the November and 204 and 2006 CPS. All models include controls for housing tenure, age, age squared, sex, marital status, the interaction of sex and marital status, education, race, whether a naturalized citizen, sector of employment, and state fixed effects. Standard errors are in parentheses. Weighted by CPS final sample weights. The normalized estimates are calculated as the product of the usual probit coefficients and the standard normal density function evaluated at the sample mean values of the variables. Observations in Kentucky are omitted in the 2006 off year election.

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Appendix to Table 2
Additional Parameter Estimates
Normalized Probit Estimates of Vote Probability
2004 – Presidential Election
(See note to table 2 for details.)

Variable	(1)	(2)	(3)	(4)
Constant	-0.1139	-0.1120		
	(0.0143)	(0.0144)		
Age	0.0032	0.0032	0.0033	0.0033
	(0.0006)	(0.0006)	(0.0006)	(0.0006)
Age-squared	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ED<12	-0.1578	-0.1577	-0.1533	-0.1532
	(0.0057)	(0.0057)	(0.0057)	(0.0057)
ED 13-15	0.1468	0.1468	0.1460	0.1459
	(0.0046)	(0.0046)	(0.0046)	(0.0046)
ED $\geq$ 16	0.2674	0.2673	0.2671	0.2670
	(0.0052)	(0.0052)	(0.0052)	(0.0052)
Female	0.0428	0.0428	0.0436	0.0436
	(0.0055)	(0.0055)	(0.0055)	(0.0055)
Married	0.0849	0.0849	0.0879	0.0879
	(0.0058)	(0.0058)	(0.0057)	(0.0057)
Married*Female	-0.0150	-0.0150	-0.0159	-0.0159
	(0.0075)	(0.0075)	(0.0075)	(0.0075)
Nonwhite	0.0167	0.0167	0.0271	0.0271
	(0.0053)	(0.0053)	(0.0055)	(0.0055)
Naturalized Citizen	-0.1316	-0.1317	-0.1329	-0.1330
	(0.0080)	(0.0080)	(0.0082)	(0.0082)
Housing Tenure (< 1 month)	-0.2112	-0.2113	-0.2116	-0.2117
	(0.0151)	(0.0151)	(0.0150)	(0.0150)
Housing Tenure (1-6 months)	-0.1620	-0.1619	-0.1630	-0.1629
	(0.0067)	(0.0067)	(0.0067)	(0.0067)
Housing Tenure (7-11 months)	-0.1405	-0.1405	-0.1409	-0.1408
	(0.0088)	(0.0088)	(0.0088)	(0.0088)
Housing Tenure (1-2 years)	-0.0938	-0.0938	-0.0961	-0.0961
	(0.0054)	(0.0054)	(0.0055)	(0.0055)
Housing Tenure (3-4 years)	-0.0459	-0.0459	-0.0469	-0.0469
	(0.0056)	(0.0056)	(0.0055)	(0.0055)

Appendix to Table 3
Additional Parameter Estimates
Normalized Probit Estimates of Vote Probability
2006 – Off Year Election
(See note to table 3 for details.)

Variable	(1)	(2)	(3)	(4)
Constant	-0.5369	-0.5390		
	(0.0180)	(0.0181)		
Age	0.0127	0.0127	0.0130	0.0130
	(0.0008)	(0.0008)	(0.0008)	(0.0008)
Age-squared	-0.0000	-0.0000	-0.0000	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ED<12	-0.1717	-0.1717	-0.1689	-0.1689
	(0.0076)	(0.0076)	(0.0077)	(0.0077)
ED 13-15	0.1435	0.1436	0.1409	0.1410
	(0.0054)	(0.0054)	(0.0055)	(0.0055)
ED $\geq$ 16	0.2787	0.2789	0.2787	0.2788
	(0.0058)	(0.0058)	(0.0058)	(0.0058)
Female	0.0058	0.0059	0.0076	0.0076
	(0.0068)	(0.0068)	(0.0069)	(0.0069)
Married	0.0834	0.0835	0.0883	0.0883
	(0.0067)	(0.0067)	(0.0068)	(0.0068)
Married*Female	0.0084	0.0083	0.0067	0.0068
	(0.0089)	(0.0089)	(0.0089)	(0.0089)
Nonwhite	0.0156	0.0155	0.0265	0.0264
	(0.0063)	(0.0063)	(0.0066)	(0.0066)
Naturalized Citizen	-0.1785	-0.1783	-0.1778	-0.1776
	(0.0094)	(0.0094)	(0.0097)	(0.0097)
Housing Tenure (< 1 month)	-0.2902	-0.2901	-0.2862	-0.2862
	(0.0208)	(0.0208)	(0.0209)	(0.0209)
Housing Tenure (1-6 months)	-0.2539	-0.2540	-0.2562	-0.2563
	(0.0085)	(0.0085)	(0.0086)	(0.0086)
Housing Tenure (7-11 months)	-0.2113	-0.2114	-0.2117	-0.2118
	(0.0113)	(0.0113)	(0.0114)	(0.0114)
Housing Tenure (1-2 years)	-0.1473	-0.1473	-0.1478	-0.1478
	(0.0065)	(0.0065)	(0.0065)	(0.0065)
Housing Tenure (3-4 years)	-0.0767	-0.0767	-0.0772	-0.0773
	(0.0064)	(0.0064)	(0.0065)	(0.0065)