EARLY VOTING AND TURNOUT IN OHIO

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MASTER OF ARTS in POLITICAL SCIENCE

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Abstract

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Elections are critical to the functioning of democracy, and many states have enacted various reforms designed to increase voter turnout. The reforms are referred to as ‘convenience voting’ methods and are designed to lower the perceived costs of voting. In 2006, Ohio adopted reforms that allowed no-excuse absentee voting and a period where voters could register and vote the same day. However, research still is unclear if these reforms have any effect on turnout. By comparing turnout in Ohio in presidential elections both before and after the reform to the same elections in Pennsylvania, a state that has not enacted similar reform, the effect of convenience voting can be seen. Looking at turnout in each county within the states reveals that the reform enacted in Ohio has had no positive impact on turnout.
Acknowledgements

This work would not have been possible without the help of several people. First I would like to thank my committee chair, Dr. Steven Hall, without his help the statistics would not have gone as well as they did. He was also of great assistance in revising and streamlining the paper. I would also like to thank the other members of my committee, Dr. Joseph Losco and Dr. Raymond Scheele, for their aid in providing leads for research. Lastly I would like to thank my wife, Amanda Voris, for not holding the hours I spent on this against me.
Introduction

A drop in voter turnout for elections is a problem that many states have had to deal with over the past several decades. During midterm and off-year elections less than half of registered voting actually vote in elections. To combat this many states have adopted various forms of convenience voting to help encourage citizens to vote. Each of these measures has proven popular, with a growing percentage of voters taking advantage of them. In 2004, over 20 percent of voters voted via absentee or early methods.\(^1\) However, this does not address whether these methods actually succeed in increasing turnout during elections.

For decades scholars have thought that the decision to vote is based on a cost-benefit analysis by the voter. They weigh the time it would take to register to vote, pay attention to candidates, and go to the polls against the other activities they have to do. So, it is thought, reducing the cost and offering more opportunities to vote through absentee or early ballots will lower those costs enough to get hesitant citizens to the polls. Many studies have tried to test this and found conflicting results.

In 2006 Ohio instituted voting reform to allow for no-excuse absentee and early voting. During the 2008 presidential election a brief period of time also allowed citizens to register and vote the same day. According to what many scholars think this should increase turnout in Ohio. To see if this is the case, I will compare Ohio to Pennsylvania, a state that did not have any form of ‘convenience’ voting during the 2004 and 2008 presidential elections. By looking at these two elections in these two states we will be able to see if the adoption of convenience voting in Ohio has increased turnout overall.

Literature Review

Many researchers point to the American electoral system as the chief reason why people do not vote. Richard Timpone (1998) stated that democracy’s face two options when designing an electoral system. Either the system can be designed to maximize registration of citizens or it can be designed to minimize corruption. In America the individual states have most often decided to reduce the possibility of corruption, which has led to the widespread use of the two-step registration and then vote process. In other countries the ability to register at the polls is often available.

In 1957, Anthony Downs introduced the model of voter participation that many continue to use in various forms to this day. He observed that citizens vote for “whatever party he believes [will] provide him with the highest utility income from government action.” Stated simply, citizens vote when the benefits of voting exceed their perceived costs. Most Americans place a high value on voting, yet the ‘costs’ are often high. Katosh and Traugott (1982) stated that adding convenience factors can significantly change the equation to get citizens to vote. Numerous studies have reinforced this idea that the ‘costs’ involved with going to the polls remain one of the largest deterrents to increasing turnout. The Downsean model of the rational voter is the driving force behind most changes to more convenient forms of voting.

The institutional feature most associated with limiting turnout has been the two-step voting process in America. Rosenstone and Wolfinger (1978) observed that not only must citizens decided well before the election that they wish to vote, but they must make

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the effort to go and register. Many times this is more difficult than voting; it often involves a “longer journey, at a less convenient hour, to complete a, more complicated procedure-and at a time when interest in the campaign is far from its peak.” These often have an increased burden for those with less education or have moved recently. The effect was easy to see, with the U.S. being the second industrial democracy with less than 90 percent of eligible citizens registered to vote. For many years the thinking remained that registration requirements were the largest obstacle to voting.

Timpone (1998) noted that even in states where Election Day registration was allowed, it still required a second trip on the part of the voter. Many states have also eased the restriction regarding the use of absentee ballots, but these processes also require voters to make a decision ahead of time and go through an additional process to ensure they receive a ballot. With the passing of the National Voter Registration Act (NVRA) in 1993 it became much easier to register to vote, leading Berinsky (2005) to state that most barriers to registration have been removed. Yet turnout was not increasing.

Convenience voting is designed to lower the costs of voting for every citizen, and it is thought that by doing this the number of people who vote in elections can be increased. Convenience voting can be simply defined as any form of voting other than the traditional precinct-place voting. This often involves fewer restrictions to absentee voting, to the point that many states no longer require a reason to vote absentee, and increasingly the use of early voting. It is hoped that the widespread use of these

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measures will lead to an increase in turnout.\textsuperscript{7} The thinking often goes that voting appears to be a low-benefit activity and that the best way to increase turnout is by lowering the costs. One encouraging sign is that when early voting is introduced up to 20 percent of the electorate takes advantage of it.\textsuperscript{8}

The growing use of convenience voting has led many to study if there is any effect on turnout. Many studies have shown a slight increase in turnout. Gronke et al. (2008) observed that most studies have found an increase between two and four percent. Perhaps the most interesting study, Luechinger et al. (2007) looked at Switzerland from 1970-2005 as different jurisdictions adopted no-excuse absentee voting. In what was called a “natural experiment” they found that the switch to no-excuse absentee was associated with a 4.1 percent increase in turnout during that period. Traugott (2004) also summarized the research by saying that most studies show a small yet statically significant result.

Other studies have shown conflicting results. Karp and Banducci (2000) claimed that only a complete switch to vote by mail increased turnout, while other studies have shown that many convenience voting methods have no effect.\textsuperscript{9} Other scholars have found that convenience voting leads only to an increase of those who vote absentee, but not an increase in voter turnout over all.\textsuperscript{10} To the limited extent that turnout is increased, this in not by getting new voters to turnout but by getting people who do vote to do so

\textsuperscript{8} Gronke et al. 2008. 440.
more often. Other scholars have shown that turnout may be briefly increased by more convenient forms of voting, but that the effect levels off over time.\footnote{Gronke et al. 2008.}

This is often explained by looking at the differences between those who take advantage of convenience voting methods and those who do not. Generally, it can be said that voters who vote early are those who were likely to vote anyway.\footnote{Giammo and Brox. 2010.} Early voters tend to be both more interested in politics as well as more partisan than the average voter.\footnote{Karp, Jeffrey A., and Susan A. Banducci. 2000. “Going Postal: How All-Mail Elections Influence Turnout.” \textit{Political Behavior} 22 (3):223-239.} These voters would be likely to turn out regardless of the methods used, and thus switching to convenience voting has little real effect on overall turnout. Studies of what affects turnout have been widespread and have often shown conflicting results. Turnout has shown to be affected factors as varying as socioeconomic status to residential stability to rain.\footnote{Knack, Steve. 1994. “Does Rain Help the Republicans? Theory and Evidence on Turnout and the Vote.” \textit{Public Choice} 79 (1/2): 187-209.}

Socioeconomic status has always been an important determinant of turnout.\footnote{Leighley, Jan E. 1995. “Attitudes, Opportunities and Incentives: A Field Essay on Political Participation.” \textit{Political Research Quarterly} 48 (1):181-209.} Looking at country level data in Minnesota Calvert and Gilchrist (1993) found that Election Day registration was positively correlated with socioeconomic status. It has even be theorized that the efforts of many states to reduce the physical costs with voting have led to an increased “socio-economic bias” in the electorate.\footnote{Berinsky, Adam J. 2005. “The Perverse Consequences of Electoral Reform in the United States.” \textit{American Politics Research} 33: 471-491.} Residential stability
has shown as much as a 12 percent increase in turnout rate. Additionally, many voters do not take the trouble to keep the election officials updated soon after they move, and even for those accustomed to voting regularly there is a lag in voting after moving.

Education and age have also proven consistently correlated with higher levels of turnout. In 1997, Benjamin Highton observed that 49 percent of citizens without a high school education voted while 90 percent of those with an advanced degree turned out. Many have blamed the registration process with causing this disparity, noting that those with lower education are more affected by registration requirements. Powell (1986) showed that each age increment increased in probability of voting, and numerous other studies have mirrored this effect.

Turnout is also affected by what other races are on the ballot. Jackson (2000) found that turnout is higher in “high stakes” elections; such as when there are large differences between the candidates, when the race appears to be highly competitive, or when the president is up for election as well. Turnout can also be affected by the surrounding environment; specifically when the district one is dominated by one party, turnout for the other party decreases.

Much like competitiveness, the activity of the campaigns has been shown to increase turnout. Jackman (1987) observed that during close elections there is more

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20 Rosenstone and Wilfonger (1978).
23 Kostadinova and Power. 2007.
incentive for the campaigns to mobilize supporters, and this in turn increases turnout. This result has been shown again and again in subsequent elections.\textsuperscript{25}

More recent studies have focused on the effects of patience and turnout. For years scholars have stated that the benefits of voting are often not immediately seen, so those who understand and grasp this would see the benefits as higher than those who did not. Downs (1957) stated that some voters may even vote for a “hopeless” party now in the hopes that it would grow into a viable party in the future.\textsuperscript{26} Fowler and Kam (2006) found that patience is correlated with political interest and church attendance, two factors that are correlated with a higher likelihood of voting.

Many of these factors are not within control of the government. To increase turnout there is little way that a state can give its citizens more patience or guarantee a competitive election. Mobilization is dependent on campaign funding, and mobilization strategy will likely not benefit the state as a whole. Likewise, state officials cannot control the weather on Election Day or the demographic characteristics of their states. The one factor that is under the control of state officials is the registration process. Many times they attempt to remove what barriers might exist, while keeping enough restrictions to prevent fraud, in order to lower the perceived ‘costs’ of voting. This is seen in no-excuse absentee voting or periods of early voting, which enable anyone to acquire a ballot in advance of the election. Voters can then more easily fit voting into their schedule and choose when to vote. Same day registration allows voters to make only one trip and complete all the official tasks required for voting.

\textsuperscript{25} Rosenstone and Hanson (1993) and Kaniovski and Mueller (2006)
\textsuperscript{26} Downs. 1957. 49.
Research on the effects of convenience voting is still in a relatively early stage. Gronke et al. (2008) observes that most research focuses on the effect on turnout, while ignoring the larger effects on campaigns. Candidates must now campaign knowing that a growing number of votes are cast before Election Day. How this is changing their strategy has yet to be extensively examined. Also, the effect on how states run elections is often not looked at. The most cited criticism of convenience voting is that it makes election fraud easier to conduct and harder to catch, but this has not been examined by researchers.

Early Voting in Ohio

Ohio has a relatively short history with early voting methods. Prior to 2006, an excuse was required when asking for an absentee ballot. In 2005 a push began to allow absentee ballots to be requested without an excuse, which would also allow for early-in-person voting at the county election board. It was hoped that this would lead to an increase in turnout by lessening the lines on Election Day.

The push for electoral reform began as an issue on the 2005 ballot. Issue Two would allow “any person qualified to vote in an election during the thirty-five days prior to the election to receive and to cast a ballot by mail or in person at the county board of elections.”27 Supporters argued that this would limit factors that kept many from voting by allowing them to choose when to vote before Election Day. Arguments for Issue 2 often specifically cited the desire to “make voting more convenient.”28 Those against the

28 Ibid. Argument for the amendment was written by “Reform Ohio Now, Inc.,” the organization leading support for a number of proposed amendments during the 2005 election.
bill noted that there was no provision for identification checks when citizens showed up to vote and no uniform standards of when election boards had to be open to allow citizens to vote early. Their chief fear was that this issue would lead to “a significant increase in cases of fraudulent voting in Ohio, as experienced by other states.”

Generally, Issue 2 had broad support across the state, but many Republicans feared that the lack of an identity check might be abused by counties that had a history of electoral fraud. In response, the Republican-controlled legislature quickly passed House Bill 234 which enabled “no-fault absentee voting.” This bill was very similar to Issue 2 with only the addition of identification requirements and other checks on the Republican concerns of Issue 2. Opponents quickly countered that this was an attack on Issue 2, but the supporters stated that this was the best way to both increase the convenience of voting and prevent “lasting damage to the [state] constitution… [and] to the sanctity of our vote.” Republican Governor Bob Taft promptly signed the bill and it became effective for the 2006 election.

In 2006, Democrats were elected to most statewide offices in Ohio. Democrat Jennifer Brunner was elected Ohio Secretary of State, the office in charge of running elections in the state. Controversy started as the 2008 Presidential Election approached. The center of the controversy centered on a five day window at the beginning of the early voting period in Ohio. Ohio election law requires voters to register at least 30 days prior to the election, but the early voting law allowed voters to get a ballot 35 days before the election. The law also did not address the possibility of citizens registering to vote and voting during the 5 day overlap period.

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29 Ibid. 7. Argument written by the Secretary of State’s Office because no organization actively opposed amendment.
Under Republican control in 2006, Secretary of State Kenneth Blackwell advised county election boards not to allow same day voting and registration. The reasoning was that one had to be registered for 30 days before one could receive a ballot, so registering and voting the same day was not allowable. On August 13, 2008 Brunner issued an advisory ruling changing that practice. She stated that during the period of early voting there were several days when “a person may appear at the board of elections office and simultaneously submit for that election applications to register to vote or to update an existing registration and to request an absentee ballot.”

Brunner also observed that this was the first time same day voting and registration would be allowed.

Brunner stated that the vote would not actually be cast until it was placed on Election Day, and thus the 30 day registration period was preserved. The early vote would be treated as a provisional ballot so that the identity of a voter could be challenged and ensure that no fraud was taking place. While this practice was controversial, matters were further complicated when Brunner issued an advisory opinion that stated that local election officials did not have to allow partisan election observers during the period of early voting.

Republicans feared that this would lead to fraud, especially in heavily Democratic counties that may now be able to intimidate Republican voters. Opponents brought suit against Brunner to end the practice citing the ‘overlap’ period as a violation of the 30 day residency requirement. However, the suit went nowhere. The Court of Appeals held that

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the central issue was the interpretation of state election law, which fell under the office of Secretary of State in Ohio. The Appeals Court then noted that it would be “difficult to think of a greater intrusion on state sovereignty than when a federal court instructs state officials on how to conform their conduct to state law.”34 With that decision the practice stood, and in the period of a few years Ohio went from requiring excuses to receive an absentee ballot to no-excuse absentee and early voting.

Case Selection

The state of Ohio was chosen as the focus of this study for a number of reasons. Primarily this has to do with the switch to open voting laws in a short period of time. During the 2004 presidential election, Ohio law required an excuse for any person requesting an early ballot. By 2008, this changed into no-excuse absentee voting with a period where voters can register and vote the same day. By using Ohio we can test one population group under different election laws to see the effect changing these laws have. Another benefit of using Ohio is that the state is often considered a microcosm for the nation; the state’s urban-rural, industrial-agricultural and demographics are very close to the national averages. This means that trends spotted in Ohio may hold applicability to the nation at large. A third reason is that Ohio is a consistent battleground state that either party can win, which will help moderate the effects of competitive elections.

The issue now becomes how to pick the state that will serve as a control. This state must be a state that had not switched to forms of convenience voting before the 2008 presidential election. Also, early voting was not randomly placed in Ohio as

34 Ohio Republican Party; Larry Wolpert v. Secretary of State Jennifer Brunner, No. 08-00913 (United States Court of Appeals for the Sixth Circuit, 2008).
opposed to other states so this must be controlled for when selecting a state. If possible, it would also be beneficial to select a battleground state to control for the effect of campaign mobilization drives and to ensure that the races examined have a similar degree of competitiveness.

The best method to achieve this is through Propensity Score Matching (PSM). PSM is a statistical way to model the probability of a state instituting convenience voting methods. The reasons why a state institutes forms of convenience voting is not an area that has received much study. A wide variety of states have enacted various forms of convenience voting, and similar varieties have not. Predominantly, all the states that have resisted the adoption of convenience voting are in New England and the South. Both traditionally liberal and conservative states have adopted forms of convenience voting (California and Oregon to Oklahoma and Texas), and similarly liberal and conservative states have resisted (New York and Massachusetts to South Carolina and Virginia). Even in Ohio both parties were in favor of more convenient forms of voting, just differing on the way the system was enacted.

Variables will selected based on what factors traditionally limit voter participation, under the assumption that states with large populations that do not vote would be more likely to institute voting reforms to bring these people into the voting population. After the model has been estimated, ‘predicted’ values can be estimated for each state. The ‘nearest neighbor’ to Ohio will then be selected for comparison. The model will be estimated using turnout information from 2004 and 2008, with the selection being based on which state was just as ‘likely’ to institute convenience voting in 2008 but did not.
Turnout information was taken from the U.S. Election Project at George Mason University. This data is available for all states in even year elections dating back to 1980. Only the presidential elections of 2004 and 2008 will be used, as this will be the years examined during the study. The study offers a number of turnout measures, but suggests the use of turnout as the percent that voted for the highest office (president) out of the voting eligible population. This is what was used for the PSM.

The U.S. Election Project also contained a link to the National Conference of State Legislatures which detailed the states that have a form of convenience voting. This will be the dependent variable for the PSM model. States will be coded as ‘convenient’ (1) if they have a form of no-excuse absentee, vote by mail, same day registration or early in-person voting. States that require an excuse for absentee voting will be coded as ‘inconvenient’ (0) for the model.

Independent variables were selected based on factors that are associated with individuals who do not vote. The theory is that states with a high number of citizens who are less likely to vote will be more likely to use convenience voting. All of this information came from the U.S. Census Bureau for the relevant year.

Minorities are less likely to vote and so states with high percentages of minorities may turn to convenience voting methods to get these citizens involved. A variable was created by taking the percentage of the state’s population that is not white. Information was not readily available for 2004 and 2008, likely due to the fact that the U.S. Census does research only every five or ten years through the Census and Community Surveys. This information was taken from the U.S. Census Bureau American FactFinder which

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allows access to a large number of data from numerous sources and years. Data was taken from the 2010 Census for 2008 and from 2005 American Community Survey for 2004.\textsuperscript{36}

Income is another variable that is often associated with increased turnout, so it is likely that states with a lower median income will try to get the lower income citizens to vote through an easier voting process. The median income for each state was available for both 2008\textsuperscript{37} and 2004.\textsuperscript{38}

Another variable that is often associated with higher turnout rates is age. To measure this the median age was taken for each state. As with race, this variable was not readily accessible for each state in both years so the information from the 2010 Census and 2005 American Community Survey were used.

<table>
<thead>
<tr>
<th>State</th>
<th>Election Year</th>
<th>Turnout Percentage</th>
<th>Probit Model Prediction</th>
<th>Difference from Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>2008</td>
<td>66.44</td>
<td>.4303</td>
<td>+.0350</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>2008</td>
<td>61.27</td>
<td>.4364</td>
<td>+.0289</td>
</tr>
<tr>
<td>Ohio</td>
<td>2008</td>
<td>65.07</td>
<td>.4653</td>
<td>-----</td>
</tr>
<tr>
<td>Delaware</td>
<td>2008</td>
<td>60.60</td>
<td>.4932</td>
<td>-.0279</td>
</tr>
<tr>
<td>Kentucky</td>
<td>2008</td>
<td>55.73</td>
<td>.5248</td>
<td>-.0594</td>
</tr>
</tbody>
</table>

The results indicated that a number of states have a similar ‘probability’ of beginning convenience voting but did not. It is important to recognize that many states were eliminate because they did enact forms of convenience voting between the 2004 and 2008 elections.

The results indicate that there are several states that could serve as a match for the purposes of this study; Delaware, Pennsylvania, Michigan and Kentucky. Selecting the nearest neighbor limits the choices down to either Delaware or Pennsylvania. By choosing Pennsylvania we will have the added benefit of selecting another battleground state which will help to control for competitiveness and candidate spending. This information has been shown to affect turnout, yet data is unavailable at the county level. Table 2 details these factors for the states near Ohio according to PSM. Pennsylvania is the only state near Ohio according to average margin of victory and candidate spending. Delaware, the statistical nearest neighbor, is consistently won by Democratic candidate, and sees little spending to contest this.

Table 2: Comparison of Winning Margin and Spending 2004 - 2008

<table>
<thead>
<tr>
<th>State</th>
<th>Margin of Victory (percent)</th>
<th>Candidate Spending (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004</td>
<td>2008</td>
</tr>
<tr>
<td>Michigan</td>
<td>3.42</td>
<td>16.44</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>2.50</td>
<td>10.32</td>
</tr>
<tr>
<td>Ohio</td>
<td>2.10</td>
<td>4.58</td>
</tr>
<tr>
<td>Delaware</td>
<td>7.60</td>
<td>24.98</td>
</tr>
<tr>
<td>Kentucky</td>
<td>19.86</td>
<td>16.22</td>
</tr>
</tbody>
</table>

Methodology

For this model the turnout during the 2004 and 2008 presidential elections will be examined to see if the adoption of convenience voting in Ohio led to an increase in turnout. Each state will be examined at the county level to see the effect of Ohio’s law

on turnout. Many studies examine turnout in states as a whole, but this may hide the true effect of convenience voting reforms. If turn increases only in certain counties it is possible that mobilization by campaigns is more responsible than the adoption of convenience voting. Looking at the county level data will help to reveal this. One handicap this presents is that much of the demographic information we wish to see is not available. This forced the used of the 2000 and 2010 Census information as the only source that had full data for every county in both states. This also gives a number of valuable data that can be used to isolate the effects of the adoption of convenience voting.

Turnout information was available from the Secretary of State’s office in each state. For Ohio, this information was reported as total ballots cast as a percent of registered voters. This was fully available for both the 2004 and 2008 presidential races. Pennsylvania was a bit more difficult. Turnout was not formally given for the county level, only for the state as a whole. However, the Pennsylvania Secretary of State’s office did have a record for each county that gave the total vote in each county. The Secretary of State also had records of the number of registered voters in each county for past years. This allowed for the calculation of turnout as a percent of registered voters exactly as reported in Ohio.

Additionally it should be noted that we are looking for an increase in total turnout during the election, and not just at absentee or early voting. Other studies have shown that an increase in early or absentee voting does not entail an increase in overall turnout. In Ohio average turnout for each county in 2004 was 72.8 percent, this dropped slightly in 2008 to 71.3 percent. In Pennsylvania turnout increased from 2004 to 2008 by over 9 percentage points (57.9 percent in 2004 to 67.4 in 2008). Turnout was higher in Ohio for
both elections, and the county level approach will help reveal the effect of the early voting laws. Looking at the states on the whole, turnout increased in both states in 2008 (from 66.8 percent to 66.9 percent in Ohio and 62.6 percent to 63.6 percent in Pennsylvania).

Independent variables were recorded for each county in both Ohio and Pennsylvania from the 2000 and 2010 Census. Demographic information does not vary greatly over short periods of time. In Ohio and Pennsylvania the average difference was never greater than 4 percent in a category. Dummy variables will be created to isolate counties that are predominantly urban and have major colleges or universities. The presence of convenience voting will also be recorded as a dummy variable and be the focus of the examination.

Variable ‘race’ was created to measure the minority population in each county. This variable was calculated by taking the percent of each county’s population that was classified as ‘white’ by the U.S. Census Bureau and subtracting that from 100. The result was a percentage of the county’s population that was ‘non-white,’ or minority. The average minority population for Ohio in 2000 was 6.3 percent and in 2010 was 7.5 percent. In Pennsylvania the 2000 minority population was 6 percent and that grew to 8.5 percent in 2010. Only Philadelphia County, PA had a majority-minority population (with 59 percent minority in 2010), but this was the only county with a minority population greater than 30 percent. Ohio had three counties with minority populations greater than 30 percent (Cuyahoga County 36.4 percent; Franklin County 30.8 percent, and Hamilton County 31.2 percent (all 2010)).
The variable age was created to measure the percent of the population over age 65. In 2000 Ohio averaged a 65 and over population of 13.4 percent, and that grew to 14.8 percent in 2010. In Pennsylvania the percentage dropped over the ten year period, from 19.9 percent in 2000 to 16.8 percent in 2010.

Education was measured by taking the percent of the population with a bachelor’s degree or higher. In 2000 14.9 percent of Ohio’s population had a college or advanced degree that number increased to 17.4 percent in 2010. Ohio had several counties with more than one-third of the population with an college degree in 2010 (Delaware County, 49.5 percent; Franklin County, 35 percent; Geauga County, 34 percent; Greene County, 34.5 percent; and Warren County, 35.9 percent). Pennsylvania also saw an increase in the percent of the population with a college degree, from 17 percent in 2000 to 20 percent in 2010. Pennsylvania similarly had a number of counties with more than one-third of the population with a college degree (Allegheny County, 34.1 percent; Bucks County, 34.5 percent; Centre County, 40 percent; Chester County, 47.8 percent; Delaware County, 34.7 percent; and Montgomery County, 44.2 percent).

Per capita income was used to measure the effect of income in each county. This is the most often used measure of wealth on many levels of analysis. The measure was in 2010 dollars, with the 2000 data transformed into 2010 dollars. Ohio saw a decrease in per capita income from 2000 to 2010, from $23,727 to $22,624. Pennsylvania saw an increase in their per capita income from 2000 to 2010, from $22,913 to $23,645.

The U.S. Census also contained a measure of how long residents had been living in their current residence. With research showing that those who have recently moved being less likely to vote, this measure was included. The percent of people living in their
current resident for more than one year was included. In both states residential stability was high, with over 80 percent having lived in their current residence from more than one year. In Ohio and Pennsylvania residential stability also increased slightly from 2000 to 2010; Ohio 84 percent to 86.4 percent and Pennsylvania 86.5 percent to 87.8 percent.

All of Ohio’s 88 counties were coded as ‘convenient’ for 2008 and ‘non-convenient’ for 2004. All of Pennsylvania’s 67 counties were coded as ‘non-convenient for both years. Another variable was created to classify counties as either urban or rural. This was done by taking the population density of each county and coding all counties with a population density of 284 or more are urban. Pennsylvania classifies 19 of its counties as urban and the same method yields 19 urban counties in Ohio.

Two models will be run using an OLS model. The first model will compare Ohio in 2004 to Ohio in 2008. This will reveal if there is a significant difference in the turnout during those elections. Second, a model will compare Ohio to Pennsylvania in 2008. This model should reveal the effect early voting has on turnout in the individual counties.

Testing Early Voting In Ohio

The first test compared the presidential election in Ohio in 2004 to the election in 2008. This test should reveal if an increase in turnout was the result of the adoption of convenience voting. The model was run with other variables that are expected to play a role in increasing likelihood to vote. The results are reported in Table 3.

Income appears to have a small yet significant effect, the effect becomes more apparent when placed in context. A one standard deviation increase in per capita income (which would be approximately $3000) would result in a three percentage point increase

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42 This is the same method that was used by the Center for Rural Pennsylvania. They list the counties in Pennsylvania they classify as urban, and the same method was applied to Ohio using 2000 Census data. Pennsylvania methodology available at: http://www.rural.palegislature.us/rural_urban.html.
in turnout. In Ohio this slight increase could result in over a hundred thousand new votes. An increase in the minority population is associated with a decrease in turnout, which is not surprising. However, though this effect is slightly significant, it is small. A one standard deviation increase, which would be a rather large 6 percent increase in the minority population, would only result in an estimated .59 percentage point drop in turnout. Housing stability also has a slightly significant effect. These effects are in line with what previous research would indicate.

Table 3: Convenience Voting in Ohio, 2004 - 2008

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>44.06*** (7.488)</td>
<td>39.79*** (8.088)</td>
</tr>
<tr>
<td>% Minority</td>
<td>-.09* (.052)</td>
<td>-.09* (.052)</td>
</tr>
<tr>
<td>% 65 and over</td>
<td>.20 (.168)</td>
<td>.25 (.171)</td>
</tr>
<tr>
<td>Income</td>
<td>.0008*** (.0001)</td>
<td>.001*** (.0002)</td>
</tr>
<tr>
<td>% Same house as year</td>
<td>.12 (.0999)</td>
<td>.19* (.111)</td>
</tr>
<tr>
<td>before</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Bachelor’s of higher</td>
<td>-.21** (.074)</td>
<td>-.12 (.099)</td>
</tr>
<tr>
<td>Early</td>
<td></td>
<td>-1.1 (.799)</td>
</tr>
<tr>
<td>N</td>
<td>176</td>
<td>176</td>
</tr>
<tr>
<td>R-Squared</td>
<td>.2739</td>
<td>.2820</td>
</tr>
</tbody>
</table>

* p<.1 **p<.05 *** p<.001

Surprisingly, age does not appear to have a significant effect on turnout. However, the effect is estimated to be quite large relative to the other variables under consideration and is consistently positive in both models. Additionally the effect increase when convenient voting is in the model which could suggest that the elderly take more advantage of the convenient voting methods. This would also be consistent with what earlier research would suggest.
Additionally, education is estimated to have a negative effect on voting, and this effect is statistically significant. This effect does disappear in the second model which may suggest an issue with the data. It is interesting to note that this is opposite of what we would expect according to previous research.

More relevant for this examination, is that the presence of early voting has neither a positive nor a significant effect. According to the model, the adoption of convenience voting actually had a negative effect on turnout in 2008. This suggests that the increase in turnout may be due to other factors, such as mobilization efforts by the campaigns. This is different than what we would have expected, however, it leaves unexamined that perhaps turnout would have been lower in 2008 without convenience voting. To test this we will run a model that compares Ohio to Pennsylvania in 2008 and 2004.

Table 4: Convenience Voting in Ohio and Pennsylvania 2008

<table>
<thead>
<tr>
<th></th>
<th>OLS</th>
<th>FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>33.33*** (7.701)</td>
<td>102.91*** (12.108)</td>
</tr>
<tr>
<td>Early Voting (Ohio in 2008)</td>
<td>-10.16*** (.989)</td>
<td>-11.02*** (.773)</td>
</tr>
<tr>
<td>Ohio</td>
<td>14.77*** (.802)</td>
<td>----</td>
</tr>
<tr>
<td>2008</td>
<td>8.92*** (.765)</td>
<td>10.58*** (.828)</td>
</tr>
<tr>
<td>% Minority</td>
<td>-.07* (.037)</td>
<td>-.40** (.159)</td>
</tr>
<tr>
<td>% 65 and over</td>
<td>-.04 (.024)</td>
<td>-.01 (.024)</td>
</tr>
<tr>
<td>Income</td>
<td>.0005*** (.0001)</td>
<td>.0001*** (.0002)</td>
</tr>
<tr>
<td>% Same house as year before</td>
<td>.16* (.093)</td>
<td>-.41** (.127)</td>
</tr>
<tr>
<td>% Bachelor’s of higher</td>
<td>.02 (.076)</td>
<td>.15 (.227)</td>
</tr>
<tr>
<td>N</td>
<td>310</td>
<td>310</td>
</tr>
<tr>
<td>R-Squared</td>
<td>.6875</td>
<td>.7242</td>
</tr>
</tbody>
</table>

*p<.1 ** p<.05 *** p<.001
Table 4 shows the results when turnout is compared among all counties in Ohio and Pennsylvania for both years. In this model 2008 and Ohio were used as dummy variables to account for higher turnouts overall in those two areas (as Ohio had higher turnout in both elections and 2008 saw higher turnout in both states). The effect of early voting can be seen by looking at the interaction variable that isolated Ohio in 2008, when early voting was present. The model was run using both the standard OLS regression and a fixed effects model that looks at the difference between each county in 2004 and 2008 in the sample.

The results include a mix of the expected and unexpected. Education and race appear to have effects that are consistent with previous research. In both models race has a significant and negative effect on turnout, and in both models education has a insignificant yet positive effect. In both instances a standard deviation increase is a rather large 7 percent increase in that share of the population and is associated with less than half a percentage point decrease in turnout, except for percent minority in 2008 which is associated with an almost 3 percentage point drop in turnout. Age has little effect in either year, but this is not significant and so little can be said about it. Income also has a slight affect on turnout, with a $4,300 only increasing turnout a few percentage points.

Perhaps the most surprising result of all is that convenience voting has a significant negative impact in both models. In each model the expected result of a county having early voting is a 10+ percentage point drop in turnout. This is only countered by the large effect associated with both the Ohio and 2008 dummy variables. One would expect that turnout in Ohio would have increased more in 2008 than it did (turnout for the state was up only .1 percent overall). The higher overall turnout in Ohio in 2008 thus
appears to have little to do with the adoption of convenience voting methods, which is contrary to what one might have expected given the overall increase in turnout that year.

Conclusion

The literature on convenience voting shows mixed results. Many people are beginning to take advantage of convenience voting when it is offered in their state, yet these people tend to be very similar to those who would vote normally. Additionally, results are mixed as to whether or not turnout is actually increased at all. In Ohio this appears to be the case.

When tested, the adoption of early voting appears to have no effect on turnout in Ohio. From 2004 to 2008 there was a slight increase in turnout, but the increase does not appear to be from the adoption of convenience voting measures. The only statistical effect of convenience voting appears to be that many of the groups that we would expect to vote in any case vote more often. The groups that we would expect to not vote showed no decline or improvement. The presence of convenience voting had no statistically significant effect on turnout in Ohio. When compared to a state that did not have any form of convenience voting, convenience voting appears to have a negative effect that although it is significant, does not add much to the quality of the model.

This result may be due to the relatively small sample size. Election results by county are difficult to come by, as not all states record the same information for every election. Looking at more elections at the county level may help give a better picture of the effect of convenience voting. Time is also needed as only two major elections (2008 and 2010) have taken place when same day registration and no-excuse absentee voting
were allowed in Ohio. As more low profile elections take place this will give an opportunity to judge the effect in the absence of major national races.

Research is also needed to see how campaigns are responding to the widespread use of convenience voting. Gronke et al. 2008 observes that convenience voting may affect the cost of campaigning, but is it unclear whether it raises or lowers it. They also observe that not much research has yet been done to see if one party is given a greater advantage where convenience voting is used. Each of these questions can help us to understand the wider effects of convenience voting methods, even if they do not appear to increase turnout in elections.
Bibliography


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