

UC San Diego

UC San Diego Electronic Theses and Dissertations

Title

Voting At All Costs : : How Demographics Affect the Costs of Voting

Permalink

<https://escholarship.org/uc/item/6r58c89d>

Author

Nielson, Lindsay

Publication Date

2014

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA, SAN DIEGO

Voting At All Costs: How Demographics Affect the Costs of Voting

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy

in

Political Science

by

Lindsay Nielson

Committee in charge:

Professor Zoltan L. Hajnal, Chair
Professor Gary C. Jacobson, Co-Chair
Professor Isaac W. Martin
Professor Samuel L. Popkin
Professor Valerie A. Ramey

2014

The Dissertation of Lindsay Nielson is approved, and it is acceptable in
quality and form for publication on microfilm and electronically:

Co-Chair

Chair

University of California, San Diego

2014

DEDICATION

To my parents, Mike and Pam, for their support and
encouragement over the years.

TABLE OF CONTENTS

Signature Page	iii
Dedication	iv
Table of Contents	v
List of Figures	vii
List of Tables	ix
Acknowledgements	xi
Vita	xiii
Abstract of the Dissertation	xv
Chapter 1: The Puzzle	1
Chapter 2: The Theory	7
How Voting Costs Affect the Turnout Decision	10
How Voters' Characteristics Affect the Turnout Decision	16
The Interaction between Costs and Demographics	18
Other Factors that Influence Voter Turnout	24
Why Do Differences in Voter Turnout Matter?	25
Chapter 3: The Methods	27
Cooperative Congressional Election Study	28
Ohio and Pennsylvania Microtargeting Dataset	32
Measurement of Independent Variables	39
Data Analysis	42
Chapter 4: The National Results	45
Variations in Voting Costs	45
General Election CCES Models	48
Primary Election CCES Models	71
Conclusions	87
Chapter 5: The Microtargeting Results	90
Variations in Voting Costs	91
General Election Microtargeting Models	97
Conclusions	111
Chapter 6: Conclusions	114
Ways to Reform Voter Registration Costs	116

Ways to Reform Voter Identification Costs	121
Ways to Reform Polling Place Distance and Location Costs	125
Ways to Reform Ballot Complexity Costs	128
Does Having Representative Turnout Matter?	130
Appendix	133
References	164

LIST OF FIGURES

Figure 2-1: Traditional view of how voting costs affect voter turnout.....	19
Figure 2-2: Theoretical model linking demographics and costs to turnout	21
Figure 2-3: Theoretical model of interaction between demographics and voting costs.....	21
Figure 4-1: Variation in voter registration costs	46
Figure 4-2: Variation in voter identification costs	47
Figure 4-3: Interaction between respondent's age and voter registration deadline in general election	54
Figure 4-4: Interaction between respondent's income and voter registration deadline in general election	56
Figure 4-5: Interaction between respondent's sex and voter registration deadline in general election	57
Figure 4-6: Interaction between black vs. non-black respondents and voter registration deadline in general election	58
Figure 4-7: Interaction between respondent's age and voter identification requirements in general election	61
Figure 4-8: Interaction between respondent's income and voter identification requirements in general election	62
Figure 4-9: Interaction between respondent's employment and voter identification requirements in general election	63
Figure 4-10: Interaction between respondent's marital status and voter identification requirements in general election	64
Figure 4-11: Interaction between respondent's sex and voter identification requirements in general election	66
Figure 4-12: Interaction between Hispanic vs. non-Hispanic respondents and voter identification requirement in general election	67
Figure 4-13: Interaction between Asian vs. non-Asian respondents and voter identification requirement in general election	68
Figure 4-14: Interaction between respondent's education and voter registration deadline in primary election.....	76
Figure 4-15: Interaction between respondent's employment and voter registration deadline in primary election.....	77
Figure 4-16: Interaction between respondent's marital status and voter registration deadline in primary election.....	78

Figure 4-17: Interaction between respondent's income and voter identification requirements in primary election	79
Figure 4-19: Interaction between respondent's marital status and voter identification requirements in primary election	81
Figure 4-20: Interaction between respondent's sex and voter identification requirements in primary election	82
Figure 4-21: Interaction between black vs. non-black respondents and voter identification requirements in primary election	83
Figure 4-22: Interaction between Hispanic vs. non-Hispanic respondents and voter identification requirements in primary election	84
Figure 5-1: Variation in polling place distances	92
Figure 5-2: Variation in polling place distances by urbanicity	93
Figure 5-3: Variation in number of offices on ballot	96
Figure 5-4: Variations in number of ballot measures	96
Figure 5-5: Interaction between respondent's education and polling place distance in general election	104
Figure 5-6: Interaction between respondent's education and number of ballot measures in general election	105
Figure 5-7: Interaction between respondent's occupation type and number of ballot measures in the general election	107
Figure 5-8: Interaction between respondent's income and number of offices on ballot in general election	108
Figure A1: Variation in ratio of candidates to offices	133
Figure A2: Variation in percentage of nonpartisan offices	134
Figure A3: Variation in percentage of third-party candidates	134
Figure A4: Variation in percentage of non-federal offices	135

LIST OF TABLES

Table 4-1: Demographics of general election voters and non-voters, CCES	49
Table 4-2: General election CCES turnout model with no interactions	50
Table 4-3: Demographics of primary election voters and non-voters, CCES	72
Table 4-4: Primary election CCES turnout model with no interactions	73
Table 5-1: Regression of polling place distance on demographic and community factors	94
Table 5-2: Demographics of general election voters and non-voters, microtargeting data	98
Table 5-3: General election microtargeting turnout model with no interactions.....	100
Table A1: General election CCES turnout model, interaction between age and voter registration deadline	136
Table A2: General election CCES turnout model, interaction between income and voter registration deadline	137
Table A3: General election CCES turnout model, interaction between gender and voter registration deadline.....	138
Table A4: General election CCES turnout model, interaction between black and voter registration deadline	139
Table A5: General election CCES turnout model, interaction between age and voter identification requirements.....	140
Table A6: General election CCES turnout model, interaction between income and voter identification requirements.....	141
Table A7: General election CCES turnout model, interaction between employment type and voter identification requirements	142
Table A8: General election CCES turnout model, interaction between marital status and voter identification requirements.....	143
Table A9: General election CCES turnout model, interaction between sex and voter identification requirements	144
Table A10: General election CCES turnout model, interaction between Hispanic and voter identification requirements	145
Table A11: General election CCES turnout model, interaction between Asian and voter identification requirements	146
Table A12: Primary election CCES turnout model, interaction between education and voter registration deadline	147

Table A13: Primary election CCES turnout model, interaction between employment type and voter registration deadline	148
Table A14: Primary election CCES turnout model, interaction between marital status and voter registration deadline	149
Table A15: Primary election CCES turnout model, interaction between income and voter identification requirements.....	150
Table A16: Primary election CCES turnout model, interaction between employment type and voter identification requirements	151
Table A17: Primary election CCES turnout model, interaction between marital status and voter identification requirements	152
Table A18: Primary election CCES turnout model, interaction between sex and voter identification requirements	153
Table A19: Primary election CCES turnout model, interaction between black and voter identification requirements.....	154
Table A20: Primary election CCES turnout model, interaction between Hispanic and voter identification requirements	155
Table A21: General election microtargeting turnout model, interaction between education and polling place distance	156
Table A22: General election microtargeting turnout model, interaction between education and ballot measures	158
Table A23: General election microtargeting turnout model, interaction between occupation and ballot measures	160
Table A24: General election microtargeting turnout model, interaction between income and number of offices	162

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the help of many people. One of the most valuable lessons I learned in graduate school is that it is impossible to undertake a project of this magnitude alone.

Academically, I am indebted to the members of my committee for their guidance, comments, criticism, and support. Zoltan Hajnal, Gary Jacobson, and Samuel Popkin were involved with this project from the beginning and endured countless meetings where I threw out half-baked (or even quarter-baked) ideas, and they helped steer my project in the right direction. Valerie Ramey and Isaac Martin provided valuable insights from a non-political science perspective. This project also benefited from the guidance of those who participated in the American Politics Workshop and the Human Nature Group at the University of California, San Diego and the 2013 and 2014 annual meetings of the Midwest Political Science Association. Marva Coombs and Pamela Nielson provided proofreading and editing assistance.

There were many others who helped me secure data for this dissertation. Among them are the Center for the Study of Elections and Democracy at Brigham Young University, YouGov/Polimetrix, Gary C. Jacobson, the Campaign Media Analysis Group of Competitive Media Reporting, and many county election offices in Ohio and Pennsylvania. Apparently I so annoyed those poor county election officials that they started exchanging stories about this graduate student on the other side of the country who was calling and emailing them and asking them to dig up 13-year-old data. I thank them for their time, patience, and indulgence. This dissertation was also financially

supported by the National Science Foundation Doctoral Dissertation Research Improvement Grant under Grant No. 1263924.

I am also grateful to my undergraduate mentors, without whom I would not have made the fateful decision to attend graduate school. I thank Christopher F. Karpowitz, David B. Magleby, J. Quin Monson, and Kelly D. Patterson for providing advice, co-authorship opportunities, meals, and employment in my pre-graduate student days. They introduced me to the research process, and their guidance has shaped my academic worldview since then.

Personally, I am grateful for the support of my parents, Michael and Pamela Nielson. My colleagues, friends, and officemates, Hans J. G. Hassell, Rupal N. Mehta, Jaime E. Settle, Mona Vakilifathi, and Neil Visalvanich made this whole graduate school experience much more tolerable. Finally, I thank my friends Spencer Bagley, Sofia Campos, Cy Credille, Andrew Goulding, Matt Krause, Amelia Richardson, and Caitlin Stallings. Graduate school would have been a lonely experience indeed without them.

VITA

Degrees Awarded

- 2007 Bachelor of Arts, Brigham Young University
- 2010 Master of Arts, University of California, San Diego
- 2014 Doctor of Philosophy, University of California, San Diego

Fields of Study

Major Field: Political Science

Area of Specialization: American politics, voting and elections, comparative politics

Publications

“Political Norms and the Private Act of Voting.” 2011. With Christopher F. Karpowitz, J. Quin Monson, Kelly D. Patterson, and Steven A. Snell. *Public Opinion Quarterly* 75 (4): 659–685.

Academic Appointments and Teaching Experience

Postdoctoral Teaching Scholar, University of San Diego, 2014-2015.

Teaching Assistant/Discussion Section Leader, UCSD, 2010-2014

Instructor, Department of Political Science, UCSD, 2013

Instructional Assistant, Utah State University, 2012-2014

Research Scholar, Laboratory on International Law and Regulation, School of International Relations and Pacific Studies, UCSD, 2011

Graduate Student Research Assistant, UCSD, 2009

Research Associate, Center for the Study of Elections and Democracy, Brigham Young University, 2007-2008.

Grants

National Science Foundation Doctoral Dissertation Improvement Grant, “Voting At All Costs: How Demographics Affect the Costs of Voting,” \$6479, 2013-2015.

Edmund G. Brown Sr. Fellowship, University of California, San Diego, 2008-2009.

Mentored research grant from the Office of Research and Creative Activities at Brigham Young University, \$1500, 2006.

Professional Activity

Referee: *American Politics Research*, *Political Behavior*, *SAGE Open*

Member: American Political Science Association, Midwest Political Science Association, Human Nature Group (UCSD)

Department Service

UCSD Women in Political Science, Chair, 2010-2013. Responsible for planning quarterly events, overseeing mentoring program for first-year female graduate students, and advocating for women faculty and graduate students.

UCSD Political Science Graduate Council, New Student Orientation Coordinator (elected position), 2009-2010. Responsible for serving as liaison to newly admitted students and arranging the political science department orientation prior to the start of the new school year.

ABSTRACT OF THE DISSERTATION

Voting At All Costs: How Demographics Affect the Costs of Voting

by

Lindsay Nielson

Doctor of Philosophy in Political Science

University of California, San Diego, 2014

Professor Zoltan L. Hajnal, Chair
Professor Gary C. Jacobson, Co-Chair

Although voter turnout has received considerable attention in the political science literature, scholars do not yet have a complete understanding of how the costs of voting—which I define as the various burdens that make voting a difficult and time-consuming activity, such as requiring people to register to vote, show identification, or travel to their polling place—affect the likelihood that a person will turn out to vote. Most previous research posits that changes in voting costs affect all potential voters equally and that

turnout decreases uniformly across all demographic groups as voting costs increase.

However, I contend that that demographics and voting costs interact with each other to affect voter turnout: according to my theory, voter demographics affect political resources, which, in turn, affect the ability to surmount voting costs.

My dissertation uses two data sources to develop models of the demographics and voting costs that affect voter turnout. I interacted these two sets of variables in a series of regression models to gain a greater understanding of how voting costs might differentially affect people based on their individual characteristics. I use national data from the Cooperative Congressional Election Study to provide a large-scale test of my theory and data from the states of Ohio and Pennsylvania to model these interactions while controlling for community and campaign factors. Using these results, I identify two primary findings. First, people with traditionally higher levels of political resources (including people with higher education levels, higher incomes, those with white-collar occupations, and those who are male and white) are more likely to not turn out to vote when information costs (including voter registration deadlines and the length of the ballot in the election) are increased. Second, people with traditionally lower levels of political resources (including people with lower education levels, lower incomes, and minorities) are primarily disadvantaged by the transaction costs of voting, such as requiring voter identification.

My dissertation highlights the importance of opportunity costs to the act of voting and show that not all people react to voting costs in the same way. This has important implications for scholars' understanding of why people do or do not vote, how

representative the electorate is, and how the government addresses the policy priorities of its citizens.

CHAPTER 1: THE PUZZLE

Just one vote separated Missouri City alderman candidate Joe Selle from a clear victory.

His own.

Selle said he simply forgot to vote, and so did everyone else in Ward 3...

“I saw them down at the school” polling place, Selle said of Tuesday's election, “but it never occurred to me that’s what they were there for.”¹

The United States is frequently criticized for having very low levels of voter turnout. Its turnout levels lag far behind most other industrialized democracies. A report from the International Institute for Democracy and Electoral Assistance analyzed voter turnout rates among democracies since 1945 and found that when turnout in parliamentary elections is averaged from 1945 to 2001, the countries of Australia, Singapore, Uzbekistan, Liechtenstein, Belgium, Nauru, Bahamas, Indonesia, Burundi, Austria, Angola, Mongolia, New Zealand, and Cambodia had average turnout rates of more than 90 percent. The U.S., on the other hand, ranked 120th out of 169 countries and had an average turnout rate of only 66.5 percent (International IDEA 2002). While the average turnout rates among industrialized democracies has held steady at around 80 percent since the 1960s, turnout in the United States has been far below these other countries for the last fifty years. Low turnout is not just a problem in federal elections. The United States has many elections on the state and local levels, and they are plagued

¹ Graham, Bill. “Missouri City holds an election and nobody shows up. Now town tries to figure it out.” *The Kansas City Star*, April 5, 2007, p. A1.

with low turnout levels as well. In the April 2007 local election in Missouri I described above, no one—not even the candidates running in the race—turned out to vote at all.

Why does the United States have such low voter turnout? In a well-known comparative study of turnout, Powell (1986) found that much of the lowered voter turnout rates in the U.S. as compared to other democracies can be attributed to institutional factors. These institutional factors can take many forms, but the common thread among them is that they make it more difficult or inconvenient for people to vote. They can mean that it requires more cognitive effort to prepare to vote, more time and monetary costs to get to the polling place, and more time spent on the voting process. Powell also writes that these institutional costs mean socioeconomic factors have a stronger link to voter participation in the U.S. than in other countries.

Powell's study emphasizes the importance of institutional and demographic factors in determining voter turnout on the aggregate level. Other studies have examined turnout on an individual level and have confirmed these findings. Studies looking into institutional factors and voting costs such as voter registration, voter identification requirements, distance to the polling place, and informational costs have found that a lower cost burden on a voter is associated with a higher likelihood of turnout for that voter. Likewise, other research has found that certain demographic factors (including age, education, income, and being Caucasian) make a person more likely to vote, while being a minority means a person is less likely to vote. The prevailing theory is that certain demographic characteristics endow a person with increased political knowledge and efficacy that make the person more likely to vote.

There have been countless studies of voter turnout in the United States in the past sixty years, but most previous studies are missing a crucial link between voters' personal characteristics and the institutional factors that make them either more or less likely to vote. Scholars do not yet have a full understanding of how demographics and voting costs combine to affect the probability that a person will turn out to vote. It is clear that demographics affect how likely a person is to turn out to vote and that changing the costs of voting also changes turnout levels, but as yet there have been no studies that detail how these two factors interact. I contend that there are reasons to expect that demographics and voting costs interact to affect voter turnout: voter demographics affect political resources, which in turn affect a person's ability to surmount voting costs. I contend that some types of voters are largely unaffected by small changes in costs, while others are greatly affected by the same small shift in costs. I hypothesize that a person's demographic characteristics determine how greatly they are impacted by a change in voting costs and furthermore that not all voting costs affect people in the same way.

This dissertation seeks to construct and test a new theory of voter turnout that relies on interactions between voter demographics and voting costs as a driving force behind changes in voter turnout. My turnout models account for the demographic, cost, community, and campaign factors that might influence voter turnout, thus representing a more comprehensive way of modeling voter turnout than most other studies. I answer two primary questions with these models: Which voting costs are causing the largest drop in voter turnout? And which demographic groups are disproportionately burdened by voting costs?

Understanding voting costs and how they affect turnout is especially important in today's political climate, as many states are considering legislation which would alter the costs of voting. More than twenty states currently require voters to show a form of identification before they are allowed to vote. In 2013 alone, eight states passed laws that place other restrictions on the ability to vote (including reducing early voting periods and repealing the ability to register to vote on the day of the election). In addition, nearly every state in the U.S. considered legislation that would alter the costs of voting in some way (Brennan Center for Justice 2013). Still other states require proof of citizenship, such as a birth certificate, before a person may register to vote. Voting costs drew a great deal of attention in the 2012 presidential election as Pennsylvania—an important swing state—attempted to implement legislation that would have required its citizens to show a photo identification before they would be allowed to vote. Opponents protested that the law was akin to a poll tax, as it required people to spend extra time and money in order to vote and that the burden of the law would fall disproportionately on the elderly, disabled, and low-income residents who would find it particularly difficult to obtain a state-issued identification. In October 2012—one month before the election—a state judge blocked the photo identification law because authorities had not given potential voters sufficient opportunities to acquire identification so they would be allowed to vote.²

Those who are opposed to laws which increase the costs of voting say that increased costs will disadvantage certain types of people—particularly those who are poorer, older, or less educated—and keep them from voting. As my research confirms,

² Bronner, Ethan. "Voter ID Rules Fail Court Tests Across Country." *The New York Times*, October 2, 2012, p. A1.

these claims have merit because there are certain demographic subsets that are especially sensitive to increases in voting costs. Furthermore, some research has shown that voters have different policy concerns than non-voters (Verba et al. 1993), and if certain demographic groups are less likely to vote because they are more inconvenienced by voting costs, then politicians may be less likely to pay attention to their policy priorities. Because the political system tends to serve the interests of those who participate, it is important to gain a more complete understanding of the factors that influence voter turnout and how they interact with each other.

My dissertation represents the first systematic attempt to quantify how demographics interact with voting costs to affect voter turnout using a widely representative dataset. It also represents one of the most comprehensive examinations of voter turnout to date. While other studies of turnout have been limited in the types of variables they can incorporate, the rich set of individual, cost, community, and campaign characteristics present in my data will represent a wider variety of the factors that citizens take into account when deciding whether to vote. I use both national- and state-level data to test my theory.

In Chapter 2, I outline my theory. I discuss the two divergent strands of literature on the effects of voter demographics and voting costs and how my theory reconciles them. In Chapter 3, I describe my two data sources and outline my empirical models. In Chapter 4, I discuss the results of the models from the national dataset. I use this dataset to explore the interactions between voters' demographics and the voting costs of voter registration and voter identification. In Chapter 5, I discuss the results of the models from the Ohio and Pennsylvania dataset. This dataset allows me to include controls for voters'

community characteristics and campaign environment and to test the voting costs of polling place distance and ballot complexity.

I discovered two primary findings in these chapters. First, people with traditionally higher levels of political resources (including higher education levels, higher incomes, white-collar occupations, and being male and white) are more likely to not turn out to vote when information costs (including voter registration deadlines and the length of the ballot in the election) are increased. Second, people with traditionally lower levels of political resources (including lower education levels, lower incomes, and minorities) are primarily disadvantaged by the transaction costs of voting, such as requiring voter identification. Lastly, in Chapter 6, I discuss what these results mean for the study of voter turnout and for election officials who want to maximize voter turnout. I suggest ways to reform the costs of voting to both maximize turnout and ensure that those who vote are representative of the population at large.

CHAPTER 2: THE THEORY

The most popular theories in the political science literature treat voting in political elections as either a rational or irrational act. That is, people are assumed to be rational actors who weigh the costs and benefits of a potential action and act in a way that provides them with the greatest net benefit. By applying this theory to voting, scholars have attempted to quantify the different considerations that voters must weigh when deciding whether to vote. The formula that has been developed through this effort has framed much of the literature on voter turnout to date.

Downs (1957) and Riker and Ordeshook (1968) pioneered the field of voting studies by proposing that voters weigh the costs and benefits of their actions when deciding whether to vote. This calculus can be represented by the equation

$$\text{Vote if } P \times B - C + D > 0$$

P represents the probability that one will cast the decisive vote in an election, B represents the difference in benefits one receives if his preferred candidate wins versus the benefits received if the other candidate wins, C represents the costs associated with the act of voting, and D represents citizen duty. If the result of this equation is greater than zero, then the benefits of voting outweigh the costs of voting and the person should choose to vote. If the result is less than zero, then the costs of voting outweigh the benefits and the person should choose not to vote.

Each of the four terms in the model has its own effect on the decision to vote. The P term requires voters to judge how close they believe the election will be and

emphasizes the role of citizens' perceptions of electoral closeness. As the expected vote share of an individual's preferred candidate approaches fifty percent, their estimate of P increases, they are more likely to see their vote as a critical contribution to the election, and thus they are more likely to vote (Riker and Ordeshook 1968). However, people tend to overestimate P and to mistakenly believe that their vote is crucial, making them more likely to turn out to vote than they rationally should (Quattrone and Tversky 1988).

Voters can receive a wide variety of benefits if their preferred candidate wins an election: favorable tax rates; subsidies for housing, food, and health care; police, fire fighters, and military protection; infrastructure projects like schools, hospitals, parks, and roads; and so forth. The B term in the voter calculus encompasses these potential benefits. However, it can be difficult for voters to calculate these benefits because they are diffuse, numerous, and not necessarily directly connected to the election of a particular candidate. In addition, deciding which candidate or political party would provide a potential voter with the greatest benefit requires the voter to make prospective assumptions about how the parties would act once they are in office and what constraints the parties would act under (Uslaner 1989, Holbrook and Garand 1996). In general, a voter's evaluation of a party depends on the information he has regarding the party's policies and the relationship between those policies and the voter's preferences (Downs 1957).

The main cost, C , associated with voting is the time that voters spend registering; researching and weighing ballot options and candidates; going to the polls; and marking the ballot. Since time is a scarce resource, "voting is inherently costly" (Downs 1957, 265). As P tends to discount B such that this part of the equation is vanishingly small in most real-world cases. This means that nearly any cost to voting, no matter how small,

will cancel out the potential benefits of the act and cause the potential voter to rationally abstain from voting. Thus, the early literature took the view that even people who have strong party preferences can be dissuaded from voting if costs are any more than negligible.

Downs' original equation did not include the D term, though he acknowledged that citizens generally place a high value on the idea of democracy and that many people will vote even when their short-run costs exceed their short-run benefits because social responsibility can produce a long-run return. Later work by Riker and Ordeshook (1968) quantified this sentiment with the D term that represents the benefits which result from the act of voting itself, including satisfaction gained from complying with social norms in favor of voting, affirming a partisan preference, affirming one's efficacy in the political system, or affirming one's support for democracy. Riker and Ordeshook argue that this term is large enough to offset a sizeable C value. Hence, a sense of democratic duty may influence a person to vote even if they would not vote otherwise.

The economic calculus of voting is a very useful way to explain political participation and why people vote. However, this approach is not without its drawbacks. To name one, it is apparent that many people will undertake an activity that is illogical or irrational in the short run—voting—in order to achieve a long-run gain—an advantageous political system. This is partially why later versions of the economic model included the D term. While it is difficult to place a mathematical value on each of the terms of this economic model and calculate the precise tipping point at which it becomes irrational for a person to vote, this model is useful for identifying the factors that people

take into consideration when deciding whether to vote and clarifying the competing pressures that potential voters are under (Barry 1978).

This voting calculus views voters as rational actors who are aware of the costs and benefits of their actions and who carefully consider these factors when deciding whether to vote. Furthermore, an increase or decrease in any of the terms in the equation can result in a change in the decision to vote. Decisions to turn out to vote are often made at the margins (Aldrich 1993), and small changes in one of the terms in the model can alter the decision to turn out to vote. This model also highlights the importance of costs in determining voter turnout, a concept that is central to the theory I develop. According to Barry (1978), evidence shows that “variations in the cost [of voting] can make more difference to turnout than variations in the (suitably discounted) benefits expected.”

How Voting Costs Affect the Turnout Decision

My study makes a unique contribution to the discipline of political science by applying a framework from microeconomics to the political world to help explain patterns in political behavior. Political science research on how voting costs can affect turnout has drawn heavily from the literature on costs developed in economics. Such costs can be broadly defined in two categories: transaction costs (defined as the costs incurred by participating in an economic exchange) and search and information costs (defined as the costs incurred by searching for a good on the market and determining where to find the good for the best price). This line of literature grew out of economic studies showing how firms choose to allocate their scarce resources to achieve an outcome with an optimal cost-to-benefit ratio. These costs have been found to be

“pervasive at all levels and types of activity (and inactivity) or transaction: costs of establishing, maintaining, adapting, regulating, monitoring, devising enforcement rules, and executing transactions” (Rao 2003).

Though the literature on transaction and search costs was originally developed to explain the behavior of businesses and firms, it is also applicable to human behavior. Individuals operate under many of the same conditions as corporations: they have limited resources, namely time and money, and many possible courses of action to take. Also like firms, individuals must devise strategies to use their scarce resources to create the greatest possible net gain (Dietrich 1994). Thus, applying the framework of transaction and search costs to individual behavior can reveal why an individual does or does not undertake an action. In terms of voter turnout, I define voting costs as structurally-determined factors that have the potential to influence whether individuals vote. These costs are largely determined by the laws that govern the voting process, by election officials who determine polling locations and operate the elections, and by campaigns themselves. I further define transaction costs within the voting context as the physical costs of going to a polling place to vote, and I define search and information costs as the cognitive costs of learning which candidates or ballot measures to vote for. Past studies on voting costs have confirmed that increasing these cost burdens makes people less likely to turn out to vote while lowering the cost burden increases the likelihood that people will vote. Furthermore, small changes in these voting costs, whether they be transaction costs or information costs, have been shown to have large effects on turnout (Niemi 1976, Aldrich 1993).

Transaction Costs and Voter Turnout

One of the first costs potential voters encounter is registering to vote. Every state except North Dakota requires its citizens to register before they are allowed to vote, and these registration deadlines range from weeks before the election to the day of the election itself. The further in advance of the election voters are required to register, the higher the cost burden on voters, as earlier registration dates require potential voters to be knowledgeable about deadlines that are, in some cases, well before the campaign period for the election has reached full swing. This can be particularly problematic for people who are not politically active or who do not pay attention to campaign news. Studies show that imposing voter registration can decrease turnout in an election by between five and ten percent points (Ansolabehere and Konisky 1994).

However, there are ways to reverse this turnout decline. Some states have changed their laws to allow for election day voter registration. This allows people to register to vote when they arrive at the polling place instead of having to take the extra step of registering days or weeks before the election. Academic studies have shown that allowing for election day registration can reverse some of the turnout decline caused by registration deadlines (Burden and Neiheisel 2010). Election day registration can especially increase turnout among groups that often have low levels of voter turnout, including racial minorities, non-native citizens, people who relocated six months or less before an election, and those between the ages of 18 and 25 (Alvarez, Ansolabehere, and Wilson 2002). In general, states that allow their citizens to register to vote on election day have turnout rates approximately ten percent higher than states without election day registration. The empirical research on voter registration supports the theory that as

voting costs increase and the act of voting becomes more burdensome, people will respond by turning out to vote in smaller numbers.

A new way of imposing voting costs is requiring voters to show identification. While many states have methods of verifying a voter's identity before counting his or her ballot—often by checking a voter's signature against the signature used on their registration card—in recent years, many states have implemented laws that require voters to show photo identification before being allowed to vote. As of 2014, 32 states had some form of voter identification law in force. Many of these laws were implemented to curb purported voter fraud. However, previous research has found that imposing a greater identification cost on voters leads to lower voter turnout (Vercellotti and Anderson 2006). Some consider identification requirements to be a poll tax in that obtaining a photo identification (such as a driver's license, passport, or identification card) is costly in both time and money. Evidence shows that many poor, minority, and elderly voters are unlikely to have photo identification (Overton 2007). Voter identification laws may introduce more inequalities into the voting process because research shows that racial minorities are asked to show identification at the polls more than white voters (Atkeson, Bryant, Hall, Saunders, and Alvarez 2010). This leads to concerns that voter identification requirements “would produce political outcomes that are less reflective of the electorate as a whole” (Overton 2007).

An additional well-known transaction cost of voting is the distance a person must travel to get to his or her polling place. Research shows that as voters are required to travel longer distances to their polling sites, they are less likely to vote (Haspel and Knotts 2005). However, alternative voting methods such as mail-in absentee voting, early

in-person voting, or all-mail elections can offset some of this turnout decline (Dyck and Gimpel 2005). Another increased cost can come from changing polling places. Especially in local and primary elections, many electoral jurisdictions consolidate polling places because they expect lower turnout and have limited funds and manpower to run a large number of polling places that will not see much use. This means that many voters must go to a different polling place than they are accustomed to. This can affect voter turnout in two ways: changing the distance a voter travels to the poll changes the transaction costs of voting, and requiring voters to learn a new polling place increases the information costs of voting. An increase of either or both of these costs can subsequently lower voter turnout (Brady and McNulty 2011).

Information Costs and Voter Turnout

Although the voting costs of registration, polling place distance, and polling place changes have received the lion's share of attention from researchers, other important costs can cause people to abstain from voting. In particular, search and information costs have received less attention in the literature. There are a variety of search and information costs associated with elections, and these cognitive costs can be burdensome enough that they make it impractical for a person to vote (Blais 2000). Search costs may be incurred both in gathering information, either by actively seeking it out or by coming across it incidentally (Aldrich 1993, Popkin 1994), and in processing information to reach a decision.

A single election ballot can list a variety of federal, state, and municipal offices and ballot measures. Most federal and state officers are elected on a partisan basis, and

voters can use candidates' party identifications to determine if the candidates' views are compatible with theirs (Dalton and Wattenberg 2000, Jacobson 2009). However, many municipal offices are elected on a non-partisan ballot, and that imposes higher cognitive costs on voters because the lack of party-based information cues. These non-partisan offices require potential voters to expend more effort to learn about the candidates and judge whether the candidates merits support. Having no incumbent running for an office can similarly increase search costs (Matsusaka 1995), as can having a number of candidates from a third or minor party on the ballot. Lengthy ballots can also contribute to non-voting by fatiguing and confusing voters (Bowler, Donovan, and Happ 1992). Increasing the length and complexity of ballots hampers the voters' abilities to translate their political preferences into vote choices (Selb 2008) and increases the informational costs associated with voting.

A final information cost in elections has to do with how well-publicized the election is. For instance, elections with high campaign spending tend to have higher turnout rates, in part because the increased campaign spending translates to higher visibility for the election (Jacobson and Kernell 1981; Ansolabehere and Iyengar 1996; Freedman, Franz, and Goldstein 2004). That means that there is more information available about the election and it is less costly for potential voters to gather information. Previous literature supports the theory that increased search and information costs place additional burdens on voters that may affect their turnout. Furthermore, experimental research has shown that people with more information about an election have a higher propensity to vote (Lassen 2005).

The research on voting costs that I have outlined supports the theory that an increase in the cost of voting will lead to a decrease in voter turnout and that small changes in costs can have large effects on turnout (Niemi 1976). However, voting costs are not the only factors that affect voter turnout; other factors, such as the voters' demographic characteristic, must be considered in any study of voting patterns.

How Voters' Characteristics Affect the Turnout Decision

In addition to voting costs, the demographic characteristics of potential voters can affect the likelihood that they will vote. In particular, age, education, and income all positively correlate with voter turnout. Older, more educated, and wealthier people consistently vote at higher rates than younger, less educated, and less wealthy people (Leighley and Nagler 2013). Scholars theorize that these sociodemographic factors correlate with political knowledge and efficacy, and these attributes in turn lower the costs of voting because these people have the cognitive wherewithal to overcome the costs associated with voting (Verba and Nie 1972; Wolfinger and Rosenstone 1980). Another important individual-level characteristic is voting history. Voting is "habit-forming" (Gerber, Green, and Shachar 2003), and prior voting history predicts voting in subsequent elections (Nownes 1992; Stein and Garcia-Monet 1997; Gronke, Bishin, Stevens, and Galanes-Rosenbaum 2005; Stein, Leighley, and Owens 2005).

In contrast, some demographic characteristics can make people less likely to vote. Race and ethnicity, in particular, have been shown to affect voter turnout. Until the mid-1960s, many blacks were, in effect, barred from political participation, especially in the South, and even today many minorities vote at lower rates than whites. Some of the

differences in participation among racial groups can be attributed to group consciousness—blacks who have high group consciousness and identify strongly with their black communities have much higher participation rates (Verba and Nie 1972). Research has shown that other prominent minority groups like Asians and Latinos do not yet have the same level of group consciousness (Lien 2001, Masuoka 2006, Sanchez and Masuoka 2008). Data from recent national elections demonstrates that turnout among minority groups has declined slightly over the last twenty years. Turnout among blacks and Hispanics has risen in presidential election years and declined very slightly in midterm elections while turnout among Asians in both presidential and midterm elections has dropped markedly during the same time period. Blacks currently turn out to vote at approximately the same rate as whites, but Hispanic and Asian turnout rates are 10-15 points lower for both midterm and presidential elections (Pew Hispanic Center 2009 and 2011).

Other demographics may also affect persons' likelihood of turning out to vote. Men show a slightly positive turnout gap over women that increases with age, and by the time they reach eighty years old, men are approximately 4.5 percent more likely to vote than women (Wolfinger and Rosenstone 1980). Studies have found mixed results on whether women or men tend to be more engaged in other forms of political participation such as contributing money or trying to influence others' votes. Rosenstone and Hansen (1993) found that men engage in other forms of participation more than women while Coffé and Bolzendahl (2010) found opposite results. Additionally, peoples' occupations also affect whether they vote. While occupation correlates to a moderate degree with education and income, one previous study found that even when those two factors are

controlled for, citizens' occupation types still statistically and significantly predict turnout. In particular, manual laborers such as factory workers, carpenters, and mechanics are far less likely to turn out than professionals such as administrators, teachers, and office workers (Laird 2012). These turnout differences are likely due to factors such as number of hours worked and varying degrees of flexibility in determining work schedules.

Family characteristics like marriage and children also affect political participation, specifically turnout. Being married or in a long-term partnership and/or having children signifies that people have undergone "life-space" changes that mark a shift from previous lifestyles, including "changes in daily life, employment and occupational endeavors, and place of residence...and the demands and rewards of joint responsibilities and opportunities" (Stoker and Jennings 1995). While Kingston and Finkel (1987) find that those who are married tend to participate in politics more than those who are single, Stoker and Jennings acknowledge that some of the lifestyle changes that accompany marriage could diminish turnout. Scholars have not yet established a clear causal link between family dynamics and voter turnout, nor have the findings on whether family characteristics increase or decrease voter turnout been consistent.

The Interaction between Costs and Demographics

Underlying all of this research is a critical, but unexamined, assumption that costs affect all people equally and that a given increase in costs will affect all potential voters to the same degree. The political science literature thus far has regarded voting costs as having a linear effect on voter turnout for all voters, as shown in Figure 2-1. However, I

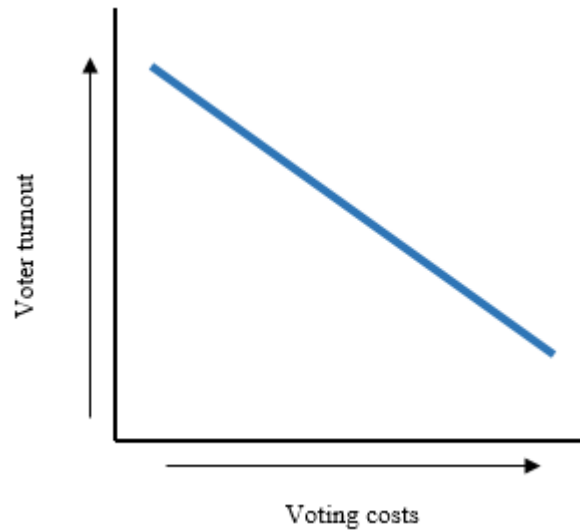


Figure 2-1: Traditional view of how voting costs affect voter turnout

break from previous scholars and argue that the costs of voting differentially affect voters. I suspect that the structural factors and costs that affect the turnout decision have different effects on voters based on the individual characteristics that the voters possess. I theorize that a person's response to changes in voting costs is mediated by their demographic characteristics and that not all people are equally equipped to overcome increases in the costs of voting.

Some literature has hinted that changes to the C term are unlikely to affect the population in the same way. Downs (1957), for example, proposed that voting costs can act to disenfranchise low-income citizens relative to wealthier citizens, but no one to my knowledge has explicitly theorized about this interaction or directly tested it in a

representative study.³ By and large, scholars have not pursued this line of research in great detail. I aim to correct this oversight.

Like previous scholars, notably Verba et al. (1993), I propose that demographics largely determine the levels of political resources a person possesses. However, I take this finding a step further and propose that these resources in turn affect whether the person is able to overcome those costs. Figures 2-2 and 2-3 summarize how I propose that demographics and costs interact to affect turnout. In this model, certain people have high levels of political resources and higher baseline turnout rates than other voters. Because these people have abundant political resources, they are easily able to shoulder the increased burden that comes with increased voting costs and their level of turnout decreases only slightly as these costs increase. This group of people is represented by the blue line in Figure 2-3. On the other hand, other people have lower levels of political resources and a lower baseline turnout rate. Because these people have few political resources, they are largely unable to vote as the costs of voting become more burdensome. This group of people is represented by the green line in Figure 2-3. There is a third group of people, represented by the red line in Figure 2-3, who have middling levels of political resources. These people are most affected by changes in voting costs because they are the most sensitive to marginal changes in costs. As shown in Figure 2-3, these people have the greatest decrease in their turnout as voting costs increase because

³ In a study of political participation in Buffalo, New York, Huckfeldt (1986) found that a person's neighborhood socioeconomic status interacted with the individual's socioeconomic status to produce higher turnout such that a higher neighborhood SES increased participation among individuals with higher SES, but decreased participation among individuals with low SES. Gimpel, Dyck, and Shaw (2004) later studied voters in seven states in the 2000 presidential election and found that "neighborhoods influence voting by interacting with partisan affiliation to dampen turnout among voters we might otherwise expect to participate."

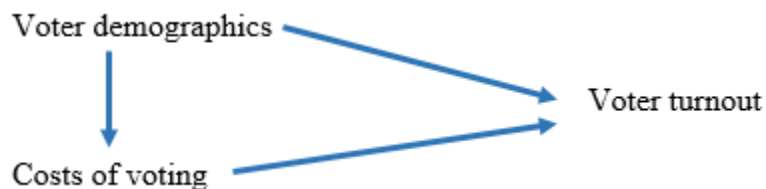


Figure 2-2: Theoretical model linking demographics and costs to turnout

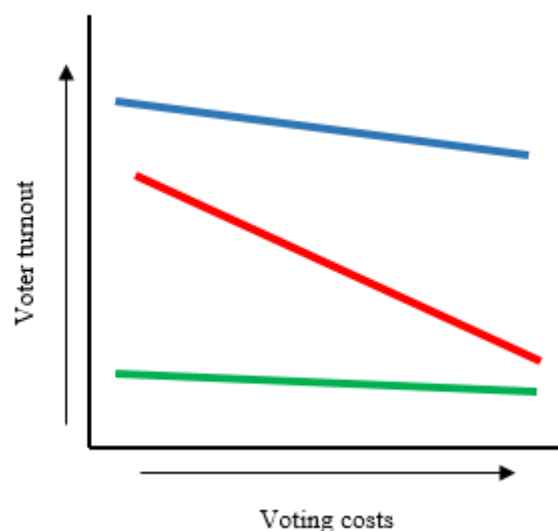


Figure 2-3: Theoretical model of interaction between demographics and voting costs

they are most likely to judge that voting is not worth the time and effort if the act of voting is made more burdensome.

Other scholars have suggested that a similar schematic exists in other types of political participation by identifying an activist, apathetic, and ordinary class of participants. Activists tend to participate in politics no matter what, apathetics rarely participate no matter what, and ordinary participants can be persuaded one way or another depending on the circumstances (Fiorina 1999; Lohmann 1993; Oliver et al. 1995; Levin 2011). In my theory, people with high levels of political resources are like

activists who are inclined to vote no matter what, people with low levels of resources are like the apathetics who rarely participate no matter what, and people with middle levels of resources are like the ordinary participants who can be persuaded to vote or not vote depending on the circumstances.

In addition, not all voting costs affect people in the same way. Participating in politics primarily requires two resources: time and money. People must spend time to register to vote, become informed about the candidates and ballot measures in the election, travel to their polling place, and stand in line to vote on election day. People must also spend money to acquire a photo identification if their state requires them to present one and to travel to their polling place (either by buying gas for their car or spending money on public transportation).

I theorize that people respond differently to voting costs that require an expenditure of time than they respond to voting costs that require an expenditure of money. For instance, a person with a high income is likely to have access to reliable transportation and income to pay for the extra gas costs of going to the poll, so if the distance to his or her polling place is increased, that voter is likely to be able to absorb the cost and still vote. However, a low-income person does not have extra money to spend on transportation, so an increase in distance to the polling place increases the likelihood that he or she will be unable to vote. However, the same high-income voter who is able to overcome a transaction cost such as distance may not react in the same way to other voting costs. If the informational burden of an election increases, then a high-income person might judge that the additional time spent learning about the candidates and ballot measures is not worth the additional benefits of casting an informed

vote. Thus, a high-income person may react differently to paying a small out-of-pocket expense (a dollar on gas to drive to a poll) than to losing several hours of time (costing him or her hundreds of dollars in wages).

I hypothesize that voting costs which require a person to spend more time, such as information costs or registration costs, are most likely to decrease turnout among voters with high levels of political resources (including older people; those with high incomes, higher education levels, or full-time or white collar jobs; men; married or partnered people; and Caucasians). This is because these people tend to place a high premium on their time, so as the time required to vote increases, these high-resource people may decide that the opportunity costs of voting are too high to make it practical to cast their vote. I also theorize that voting costs which require a person to spend more money, such as requiring voter identification or increasing the distance to the polling place, are most likely to decrease turnout among voters with low levels of political resources (including younger people; those with low incomes, low education levels, or part-time or blue collar jobs; women, single or divorced people; and racial minorities). Because these people value their monetary resources more than their time, increasing the amount of money they must spend in order to vote is likely to make it impractical for them to cast a ballot.

My primary aim in this dissertation is to determine how voting costs and demographics come together to affect voter turnout. My dissertation contributes to the political science literature by examining how demographics and voting costs interact to affect voter turnout and by identifying the demographic groups whose turnout is most affected by changes in voting costs. I also identify which costs potential voters find most burdensome. In addition to the well-studied voting costs of distance to the polling place

and registration costs, I also analyze the search and information costs involved in voting and voter identification. My project makes three important contributions to the political science literature:

- I create a model of turnout that accounts for a full set of factors that influence individual turnout.
- I identify which specific voting costs are causing the greatest decreases in turnout.
- I identify which demographic groups are disadvantaged by increases in voting costs.

Other Factors that Influence Voter Turnout

In addition to costs and demographics, previous research has shown that other factors can determine whether a person turns out to vote. Recently the discipline has begun to focus on community influences. Because many people vote in a community context (Karpowitz et al. 2011), community surveillance can be a powerful predictor of voting behavior and voter turnout (Green and Gerber 2010). Many people face society-based pressures to vote, and community norms supporting turnout can have a very strong positive effect on an individual's turnout (Gerber, Green, and Larimer 2008; Green and Gerber 2010; Michelson and Nickerson 2011). A community's ethnic or economic composition can strengthen or dilute a norm of political participation (see, for example, Huckfeldt 1986; Barreto, Segura, and Woods 2004; Cho, Gimpel, and Dyck 2006; Campbell 2006; Barreto 2007). Thus, some of my models account for the demographic characteristics of the respondent's community. According to previous literature, communities with older residents, wealthier and highly educated residents, and fewer

racial minorities should have high turnout levels and social norms that encourage political participation.

Political campaigns can also affect whether a person turns out to vote in an election because they engage in a variety of activities designed to persuade people to turn out to vote. Research has found that people who are exposed to campaign advertising are more informed about and interested in the election and are more likely to vote (Freedman, Franz, and Goldstein 2004), and this effect is magnified for those who are specifically targeted by these ads (Clinton and Lapinski 2004). Thus, a complete model of turnout must account for campaign spending in an election as a proxy for how much campaigns influenced individual turnout. Some of my models account for this by controlling for campaign advertising spending in the respondent's area in the election.

Why Do Differences in Voter Turnout Matter?

Based on the literature that I have outlined above, it is apparent that voting costs have the potential to affect voters in different ways, as not all people react to changes in voting costs in the same way. What the literature has not yet established is the magnitude of these differences and whether these differences are enough to keep certain people from turning out to vote. Some groups of people may be systematically disadvantaged by voting costs to the degree that they are under-represented in the electorate; this can in turn affect the representativeness of the electorate and have consequences for representation in government and enacted legislation as well. Some evidence suggests that voters have different policy concerns than non-voters (Verba et al. 1993), and elected representatives are more likely to respond to the concerns of their electoral constituencies

than their general constituencies. Non-participation could also negatively affect non-voters' attitudes towards democracy and democratic representation, as they could feel shut out of the process altogether. Because the political system tends to serve the interests of those who participate, it is important to gain a full understanding of the mechanisms and nuances of voter turnout in order to understand why people do not vote and also to understand the influence that their non-participation has on government and democratic representation.

CHAPTER 3: THE METHODS

The theory that I outlined in Chapter 2 leads me to study a specific set of demographic and cost variables. For demographics, I study the ages, income levels, education levels, racial identity, gender, and employment type of potential voters. These variables are present in most political science surveys, and according to past research, each of these demographic variables affects the amount of political resources a person has. Therefore, I expect that these variables will interact with voting costs in the way I outline in Chapter 2. In addition to the demographic independent variables, my study also incorporates a variety of the costs that people face as they decide whether or not to vote in an election. I have included both transaction and information costs in my models.

There are two approaches that scholars have used to studying voter turnout. Some, like Wolfinger and Rosenstone (1980) and their successors Leighley and Nagler (2013), have used individual-level data, primarily from surveys and censuses, to study what drives people to vote. This method has the advantage of being thorough, as it can account for individual-level variations, though it can be difficult to compile all the necessary variables into one dataset. While surveys and censuses commonly collect demographic data, they do not always include other important controlling variables or even ask respondents about their voting behavior. The second approach, used by Cox and Munger (1989) and Caldeira and Patterson (1982),⁴ is to aggregate data at the precinct, county, or state level. While this type of data can be easier for scholars to compile, it is not always

⁴ See Geys 2006 for a review of this literature.

the best way to model turnout, especially since we cannot always determine individual behavior based on aggregate data. I am fortunate to be able to use the former approach in my study. Thanks to advances in data compiling and cooperative survey projects, I have been able to access data that allows me to model voter turnout at the individual level. I do this through two primary data sources. The first is the Cooperative Congressional Election Study, and the second is a microtargeting dataset from Ohio and Pennsylvania. Both data sources include the demographic and vote cost variables necessary to build my comprehensive turnout models that more accurately represent the environment in which people are voting (or not voting).

Cooperative Congressional Election Study

My first source of data is the Cooperative Congressional Election Study (CCES) for the years 2008 and 2010.⁵ The CCES is a nationwide stratified sample of respondents that “seeks to study how Americans view Congress and hold their representatives accountable during elections, how they voted and their electoral experiences, and how their behavior and experiences vary with political geography and social context. This study [constructs] a very large sample capable of capturing variation across a wide variety of legislative constituencies” (Ansolabehere 2011, Ansolabehere 2012). This study is conducted in each congressional election year. It represents a collaborative effort,

⁵ Most CCES studies are publicly available. The data and documentation for 2008 and 2010 may be downloaded at <http://projects.iq.harvard.edu/cces>. The CCES researchers periodically release updated versions of the datasets, and I used the most up-to-date versions as of the time of analysis in my research. For the 2008 CCES, this was the sixth version. For the 2010 CCES, this was the third version. I have not included the 2006 CCES in my analysis because I did not have data on one of my voting costs, voter identification requirements, available for that year. I have not included the 2012 CCES in my analysis because that year included a very large oversample of voters.

as upwards of thirty universities contribute and between 30,000 and 50,000 respondents are interviewed in each cycle. All respondents in each cycle participate in what is called the Common Content survey, which asks a consistent set of questions across multiple cycles, and each university that contributes to the study designs its own survey to administer to a subset of 1,000 respondents. I have used the Common Content in my analysis because it represents a very large and nationally-representative sample of potential voters and because the Common Content includes demographic questions and voter turnout. The questions on the Common Content are consistent across multiple surveys.

The CCES is coordinated by a team of researchers at Harvard University led by Stephen Ansolabehere, and the sample is recruited and the survey administered by YouGov/Polimetrix of Palo Alto, CA. All surveys are administered over the Internet. Each study includes two waves of data collection. One round of data is collected before the November general election, and the second round is collected after the election. All the variables I use in this study come from the post-election waves conducted in each cycle.

YouGov/Polimetrix uses a sampling frame of U.S. adult citizens. The respondents are selected from non-random pools of respondents recruited by YouGov/Polimetrix but are matched to a sampling frame constructed from the American Community Survey (ACS). For the 2010 CCES a sampling frame was constructed from the 2008 ACS, and for the 2008 CCES a sampling frame was constructed from the 2006 ACS. These sampling frames are constructed by stratified sampling from the full ACS sample with selection within strata by weighted sampling with replacements, using the person weights

on the public use file from the ACS. The data used to construct the sampling frame included age, race, gender, education, marital status, number of children under 18, family income, employment status, citizenship, state, and metropolitan area. This sampling frame is then matched with data on voter registration and turnout from the Current Population Survey (CPS). The target sample for each study is selected by stratification by age, race, gender, education and by simple random sampling within strata (Ansolabehere 2011, Ansolabehere 2012). Comparisons of the CCES with actual election results shows that the sampling bias for these surveys is very small.

After the cases are matched for each study, they are weighted to the sampling frame using propensity scores to account for variations between the ACS sample frame and the respondents who actually took the CCES surveys. The propensity score includes age, years of education, gender, and turnout, and the final weights were post-stratified by gender, race, education, and age. This creates a nationally-representative sample of U.S. adults. All of the CCES analysis I report in this dissertation included these weights.

The CCES is an ideal data source for my study for several reasons. First, its large sample size is simply unmatched by any other privately conducted but publicly available social science survey. By pooling two years of CCES data I was able to study the voting behavior of 80,000 respondents. This large study population includes several demographic minorities that are under-represented in many smaller social science surveys, including racial minorities like Native Americans, people with low levels of education, and people with high income levels. The Common Content variables I use also did not change over the course of the study, providing a reliable measure of demographic characteristics and voter turnout over two election cycles. CCES respondents are also

geographically diverse and reside throughout the country, allowing me to test the relationship between voters' demographics and voting costs in a valid way. The CCES is also unique in providing a validated measure of voter turnout. While the Common Content survey asks voters to self-report whether they voted—a measure that is subject to error for many reasons—CCES researchers later validated turnout using data from state voter files compiled by YouGov for those states that allow voting history to be reported.⁶ These voter files were matched against the CCES survey sample to provide a validated vote measure. This measure is superior for cases within states that release the data and for cases where a match to the survey data with the voter file is possible. While, as Achen and Blais (2010) point out, all measures of voter turnout are subject to some amount of measurement or validation error, the validated turnout measure provided by the CCES is the best available source for my purposes.

Although the CCES provides demographic data and a validated measure of voter turnout, it does not include measures of the costs that potential voters face as they go to the polls. Given that CCES respondents live across all fifty states and, in all likelihood, most of the more than 3,000 counties in the United States, it was impractical to collect data on voting costs that vary at the county or individual level for this dataset. Instead, I chose to study two voting costs that vary at the state level: the voter registration deadline and whether the person must show identification before being allowed to vote. According to the theory I outlined in Chapter 2, I consider both of these to be transaction costs of voting.

⁶ Virginia does not permit out-of-state entities to examine its vote history data, so it is generally not included in studies of validated voter turnout.

The information on state registration deadlines in each election was taken from the websites of the state election officials in each state. I defined the registration deadline as the last day a state resident was able to register to vote, whether in person or by mail (as some states have different deadlines). I measured this cost in terms of the number of days before the election a person had to register to vote. States that allowed people to register to vote on the day of the election were assigned a value of zero, and states that required their citizens to register no later than thirty days before the election were assigned a value of thirty.

The information on identification requirements was gathered from various reports published by scholars affiliated with the Brennan Center for Justice, including Weiser and Norden 2011. State laws governing identification requirements fall into three categories: requiring no identification beyond what the Help America Vote Act of 2002 (HAVA) requires,⁷ requesting identification but not barring people who do not show it from voting, and requiring all voters to show identification, whether photo or non-photo, before being allowed to vote. The coding of my variable reflects these three categories.

Ohio and Pennsylvania Microtargeting Dataset

In addition to using the CCES as a source of national data to model turnout, I also use a microtargeting data file to provide a closer look at why people vote. While such

⁷ HAVA is a federal law that requires any voter who registered by mail and who has not previously voted in a federal election to show current and valid photo identification or a copy of a current utility bill, bank statement, government check, paycheck, or other government document that shows the name and address of the voter. Voters who submitted any of these forms of identification during registration are exempt, as are voters entitled to vote by absentee ballot under the Uniformed and Overseas Citizens Absentee Voting Act. HAVA also requires newly-registered voters to provide their driver's license number or the last four digits of their Social Security number to validate their eligibility to vote.

microtargeting datasets have been used commercially for years, it is only in the last few years that they have been used for political purposes. These datasets are assembled by combining data gathered online, such as the websites a user visits or the products they purchase online, and combining it with offline data including the charities a person donates to, the credit cards they use, the cars they drive, and where they live. Political consultants purchase this data from data-mining or marketing companies and combine it with publicly available voting records which include party registration and how often the person has voted in past elections (though not which candidates they vote for). The result is a dataset rich in information on a person's characteristics. These microtargeting datasets typically contain information on a person's demographic profile, the ages and characteristics of the people living in their house, their economic profile, what their interests and hobbies are, and how they spend their money. Political campaigns have begun to use microtargeting data to fine-tune their messages to potential voters based on their specific characteristics. For instance, when Republican candidate Chris Christie was running for governor of New Jersey in 2009, his campaign ran an online ad in which Christie discussed his mother's struggle with breast cancer. Through using microtargeting data, his campaign was able to target this ad to female Republican voters who were searching for information on breast cancer.⁸ Barack Obama's presidential campaigns have also used microtargeting data to campaign to and mobilize supporters, and these data are widely credited for contributing to his election and re-election (Issenberg 2012).

⁸ Vega, Tanzina. "Online Data Helping Campaigns Customize Ads." *New York Times*, February 20, 2012, pg. A1.

Academic scholars have also found that microtargeting data are invaluable for research purposes. In particular, microtargeting data have several advantages over other types of political science survey data, such as the American National Election Study (ANES), for my study. First, microtargeting data offer a validated vote, which measures voting behavior more accurately than other surveys do. Most political science surveys rely on respondents to recall whether they voted in past elections, and these measures tend to be over-reported and subject to error. An examination of the ANES data in presidential election years between 1972 and 1996 shows that approximately 70-75 percent of survey respondents reported voting, while aggregate turnout data from the same elections showed that only 50-55 percent of age-eligible voters voted—a difference of about twenty percent in each election (Bernstein, Chadha, and Montjoy 2001). At least some of this discrepancy comes from survey participants over-reporting their tendency to vote, rather than ANES consistently over-sampling voters. In 1978 the ANES undertook a project that used state voting records to validate whether or not survey participants had actually voted in the 1978 general midterm election. Fifty-five percent of respondents self-reported that they had voted, while the validation study showed that in fact only 43 percent had voted—a difference of 12 percent (Katosh and Traugott 1981).

While some surveys validate their participants' votes, this process is expensive and time-consuming and not often undertaken. Participants in these surveys could be over-reporting their voting behavior for several reasons: non-voters could be embarrassed to admit that they did not vote, they could fear the stigma of not conforming to the social norm of voting (Bernstein, Chadha, and Montjoy 2001), or they could have forgotten whether or not they voted by the time they participate in a post-election survey. Even

more importantly for my study, certain demographic categories have shown a tendency to over-report, most notably minorities and those who are more educated, partisan, and religious (Katosh and Traugott 1981; Anderson and Silver 1986; Bernstein, Chadha, and Montjoy 2001; Cassel 2003; Ansolabehere and Hersh 2012). In general, those who feel more pressure to vote are more likely to over-report their voting behavior. Because voters who over-report voting are systematically different from true voters, a study relying on self-reported voting will likely be subject to error. Because demographics are an essential part of my study, I prefer to rely on the more accurate measure of voting provided by microtargeting data. The microtargeting dataset that I will use has a verified voter history in the primary and general elections in 2000, 2002, 2004, and 2006 for each of the 2,000 respondents in my data.

A second advantage of microtargeting data is the rich collection of voter characteristics it has. Besides the general voter demographics (education, race, income, age, occasionally marital status) that most political science surveys contain, microtargeting data contains a wealth of information on other voter characteristics, including the voter's occupation, marital status, and voting history; household characteristics including the size of the household and the ages, occupations, and party affiliations of household members; and community-level characteristics, including urbanicity, gender balance, racial balance, use of public transportation, and average household income. Microtargeting datasets also have fewer instances of missing data, as they do not rely on subjects to self-report their demographic characteristics. This rich demographic information provides two advantages for my study: the wealth of demographic information allows me to estimate voter characteristics more precisely than

other studies, and the information in the microtargeting data also allows me to estimate several voting costs more accurately and to control for more factors that may influence the decision to vote.

A final advantage of microtargeting data is that the respondents in my dataset are geographically concentrated, which allows me to more easily supplement the dataset with additional information on election- and campaign-level factors. While the ANES has a similar sample size as my microtargeting dataset, the respondents are scattered across the nation, and adding information on voting costs such as polling place distance and ballot complexity is an arduous task, making it very difficult to study variations in electoral or community characteristics. Because my microtargeting respondents are located in two states I am more easily able to collect information from state and local election officials, which allows me to measure voting costs and create a more complete model of the dynamics that influence voting behavior.

The particular microtargeting dataset I use come from Ohio and Pennsylvania. This dataset incorporates 2,000 registered voters, 1,000 from Ohio and 1,000 from Pennsylvania. The vote history information in this dataset spans the primary and general elections in 2000, 2002, 2004, and 2006. The microtargeting dataset I use was acquired by Brigham Young University as part of its 2006 Campaign Communications Study. The dataset was assembled by the Acxiom Corporation and was purchased by YouGov/Polimetrix.⁹

⁹ BYU and YouGov/Polimetrix have generously given me permission to use the data, and a protocol to manage the data and guard against the release of sensitive or potentially identifying information was approved by the UCSD Human Research Protections Program as Project #120564S on March 26, 2012.

In addition to the vote history, demographic, and community information contained in the microtargeting dataset, I have added additional data on the voting costs these respondents faced and the level of campaign activity in the elections in my study. The voting cost information measures both the transaction and information costs of voting. The transaction cost variable measured the distance the respondent had to travel to his or her assigned polling place in each election. This variable was created by collecting data from county election officials regarding the address of the polling place respondents were assigned to vote in. I then used the Network Analyst tool in ArcMap, a geographic information systems software package, to measure the distance from the respondent's home address to his or her assigned polling place in each election.¹⁰ Because population densities change over time, election officials often change polling place locations between elections and consolidate voting locations in primary and local elections to minimize costs; therefore, the distances that respondents traveled to their polling places changed frequently over the six years of my study.

In addition to polling place distance, I also measured how much information a respondent had to gather to cast an informed vote in the election. Most of the prior literature has focused on transaction costs, but the theory I outlined in Chapter 2 demonstrates that information costs have a role in determining voter turnout as well. I hypothesize that longer ballots and more complicated ballots, including those with more third-party and nonpartisan candidates and more ballot measures, require potential voters

¹⁰ Some respondents used P.O. boxes as their address on their voter registration; these respondents were excluded from my analysis. In addition, because some counties in Ohio and Pennsylvania do not keep past records on polling place assignments or refused to share that information with me, I was not able to measure polling place distances for all respondents. The polling place distance measures the distance traveled on streets, not distance as the crow flies.

to gather more information, since they cannot rely on party cues to help them make their voting decisions, and thereby the increase the costs of voting and decrease the likelihood that a person will turn out to vote. These variables were coded from the election returns from each county and incorporated federal, state, and county offices and ballot measures.¹¹ There are six information costs I include in my analysis:

- The total number of elected offices on the ballot, not including ballot measures.
- The ratio of candidates to offices, calculated by counting the total number of candidates for all offices on the ballot and dividing it by the total number of offices on the ballot.
- The proportion of offices that were non-federal. Federal offices included President, Senator, and Representative in Congress; whereas non-federal offices were state-level offices (e.g. Governor, Lieutenant Governor, Secretary of State, Attorney General, state-level judges) and county-level (county commissioner, judge of the court of common pleas, coroner, engineer, etc.). This was calculated by counting the number of non-federal offices and dividing it by the total number of offices on the ballot.
- The total number of state- and county-wide ballot measures.¹²
- The proportion of candidates on the ballot who were third-party candidates.¹³
- The proportion of total offices that were non-partisan. Candidates who run for offices including state school board or certain judicial positions have no party affiliation listed on the ballot.¹⁴

¹¹ Because of the difficulty of matching individuals to the city-wide offices they voted on, including mayors, local school boards, and city supervisors, I could not include information on city-level offices.

¹² Because of the difficulty in matching voters to the exact precinct, I could not include lower-level ballot measures.

¹³ This includes parties such as Green, Libertarian, and Constitution and candidates who had no party affiliation listed.

¹⁴ Candidates for partisan office who had no party affiliation listed are not included in this count.

Measurement of Independent Variables

Using the CCES and microtargeting data I have described, I identified seven demographic characteristics upon which I modeled voter turnout. As described in Chapter 2, these characteristics serve as approximations of the level of political resources a person possesses, which, according to my theory, subsequently affect whether or not a person is able to successfully overcome increases in voting costs and turn out to vote. These demographic characteristics, and their operationalization are as follows:

- Age: the age of the respondent in each election.¹⁵
- Education: a dichotomous variable that measures whether the respondent has attended or completed a higher education degree. Respondents who have no high school education or are high school graduates are coded as zero, and respondents who have some college education, a college or graduate degree, or have completed vocational or technical training are coded as one. One of the most enduring findings from previous research is that additional education is strongly correlated with additional political literacy and therefore with higher levels of turnout. However, most studies have found that the highest increase in turnout is associated with going from a high school-level education to a college-level education; the increase in turnout is only marginal when going from a college-level education to a graduate education. Accordingly, I have coded my education variable to reflect this.
- Income: defined as the respondent's yearly household income. I coded this variable into three categories. The first is low-income respondents, those making less than \$25,000 per year, which is slightly more than 200% of the federal poverty line. The second category is medium-income respondents, or those who make between \$25,000 and \$75,000 per year. The third category is high-income respondents, or those who make more than \$75,000 per year.
- Racial minority: measures the respondent's race. For the CCES data, I created a series of dichotomous variables for most racial groups, including whites, blacks, Hispanics, Asians, and other. For the microtargeting data, this variable is dichotomous, coded as zero if the respondent identifies primarily as white/Caucasian and one if the respondent identifies as a member of any racial

¹⁵ Both the CCES and the microtargeting data contained information regarding the birth year of the respondent. I subtracted that birth year from the election year.

minority group. Unfortunately, the size of the microtargeting sample was too small to allow me to examine each racial group by itself.

- Gender: the gender of the respondent. Coded as zero for males and one for females.
- Marital status: measures the relationship status of respondents. I divided respondents into two categories to measure this. Respondents who were single, divorced, or widowed were coded as zero, and respondents who were married, in a domestic partnership or civil union, cohabitating, or otherwise in a long-term partnership were coded as one.
- Work status: measures what type of occupation the respondent has. For both the CCES and microtargeting data, this is coded into a three-category, ordinal variable. Unfortunately, because of the different way that these two data sources collected this information, these two variables are not equivalent. For the CCES data, this is coded as zero if the respondent is a student or is unemployed, one if the respondent is employed part-time, and two if the respondent is employed full-time. For the microtargeting data, this variable is coded as zero if the respondent is self-employed, one if the respondent has a blue-collar occupation (those with manual labor jobs, such as factory worker, carpenter, and mechanic), and two if the respondent has a white-collar occupation (those with professional jobs, such as administrators, teachers, and office workers).

In addition to the demographic characteristics present in both the CCES and the microtargeting datasets, the microtargeting data also included information on the characteristics of the community that respondents lived in and the campaign environment the respondents were voting in. The community variables closely mirror the individual demographic characteristics I included in the models:

- Age: the average age of residents in the respondent's community.
- Education: the average number of years of education among the members of the respondent's community.
- Income: the median household income in the respondent's community.
- Racial minorities: the percentage of the members of the respondent's community who are non-white.

- Community stability: the percentage of people in the respondent's community who had lived in the same house for the previous twenty years.
- Urbanicity: the percentage of people in the respondent's community who lived in an urban area.

The campaign variable in the microtargeting models is a logged measure of how much money was spent on campaign advertising in federal-level elections in the respondent's media market during the election year. These data were compiled by the Wisconsin Advertising Project, which is a joint effort between scholars at the University of Wisconsin, the Brennan Center for Justice, and the Campaign Media Analysis Group. This research project seeks to comprehensively document how candidates, parties, and outside groups communicate with voters in elections by analyzing all political advertisements aired on broadcast and cable television stations. The data include information on the content of the advertisements and how much they cost.¹⁶ I purchased the data from the Wisconsin Advertising Project with the support of a Doctoral Dissertation Improvement Grant from the National Science Foundation. I created the campaign spending variable by taking the sum of the campaign advertising spending in each media market for each election. I then logged that spending total and matched it to the respondent based on which media market their county of residence was located in.¹⁷ While this is admittedly an incomplete way of measuring campaign spending, as it does not account for non-broadcast advertising, campaign appearances, or other types of

¹⁶ The Wisconsin Advertising Project was sponsored by a grant from The Pew Charitable Trusts. The opinions expressed in this dissertation are my own and do not necessarily reflect the views of any of the scholars or funders involved in the Wisconsin Advertising Project.

¹⁷ Not all respondents in the microtargeting data have a campaign spending measure. This is because the Wisconsin Advertising Project only tracks the top 100 media markets in the country, and not all areas of Ohio and Pennsylvania are located in one of those media markets.

campaign spending, the Wisconsin Advertising Project provides complete and consistent data across multiple election cycles and for nearly all the respondents in my dataset.

Data Analysis

Using the demographic and cost variables I have outlined in this chapter, I built a series of logit regression models with an individual's turnout as the dependent variable. For the CCES dataset, these models included the seven demographic variables outlined above; controls for the party identification of the respondent; the two voting costs I analyze with the CCES data, registration deadline and voter ID requirements; and controls for the year of the election to account for election-level variation that the variables I include in my models were unable to measure. All these models were weighted to match the CCES respondents to the sampling frame. I ran separate models that interacted each demographic variable with each cost variable for a total of 18 regression models.

The specifications of the regression models for the microtargeting data were very similar in that they included the seven demographic variables, controls for the respondent's party identification, and the cost variables. These models, however, incorporated several more cost variables—the distance the respondents travel to their assigned polling place in the election,¹⁸ as well as the number of offices on the ballot, the ratio of candidates to offices in the election, the percentage of third-party candidates, the percentage of non-federal offices, and the number of ballot measures in the election, all

¹⁸ To account for possible data entry errors, I have excluded polling place distances of more than 25 miles from the models.

of which measure of the length and complexity of the ballot—as well as the community factors I described previously. The models also include election-year fixed effects. The data is structured such that each person has a separate entry for each election he or she participated in. Again, each demographic variable was interacted with each cost variable for a total of 42 regression models.

The logit regression models with interaction terms analyze how people from different demographic groups respond to increases in voting costs. The interaction terms in these models allow me to graph the turnout rates of the people in each demographic category so that I can trace how turnout rises and falls among, for example, low-income and high-income voters as each voting cost increases. I do this by creating graphs using Margins in Stata 13, which allows me to vary only the two variables involved in the interaction term while holding all other variables in the model constant.¹⁹ I also show the 95% confidence intervals for these estimated turnout rates. I report the findings of these regression models in Chapters 4 and 5.

The analysis I show makes three main contributions to the existing literature on voter turnout. First, I am able to test a variety of individual, community, and cost factors in the same models. It is rare to be able to include all three types of factors in the same model, and most previous studies also focus on only one cost at a time, whereas I am able to test multiple costs in the same model. This allows me to better replicate the environment in which people are voting. Second, I test informational costs that have previously been overlooked in the political science literature as it has focused primarily

¹⁹ The factors in the models that are not being varied are held constant at their mean or modal value. This is standard practice when analyzing the results of regressions with interaction terms (see Jaccard and Turrisi 2003).

on the effects of transaction costs. However, as I show in Chapter 2, there are theoretical reasons to expect that information costs, including how long and complex the ballot is, have an effect on whether people turn out to vote. Finally, I interact the cost variables with the demographic variables to test my theory that the effect of voting costs on turnout depends on a voter's demographic characteristics. This is a new way of conceptualizing turnout, and as my results will show, people react to increases in voting costs in different ways.

CHAPTER 4: THE NATIONAL RESULTS

To begin my analysis, I first turn to the CCES data described in Chapter 3. This data provides me a way to test my theory on a national scale and with a very large number of people. I modeled turnout for both general and primary elections. I first ran a logit regression model with an individual's turnout in the election as the dependent variable. These models include two categories of factors: the respondent's demographic characteristics and the voting costs measured in this dataset. I also controlled for the election year. I run these models two ways: I first run the regressions with no interaction terms to replicate the findings of other turnout models that use the traditional view of turnout. I then run a series of models where I interact each individual demographic variable with each voting cost variable to test my theory. To display the effects of the interaction terms in these models, I create graphs using the Margins command in Stata 13. These graphs allow me to hold constant the factors that are not being interacted in each model so that I can highlight the effects that the changing voting cost has on the demographic factor in question.

Variations in Voting Costs

Before I begin to discuss the turnout and interaction models that I test as part of my theory, I first wish to show the wide range of voting costs that potential voters face. Figure 4-1 displays a histogram of the registration deadline that voters encountered in the two years of the CCES that I study. As this figure shows, there is high variation in the

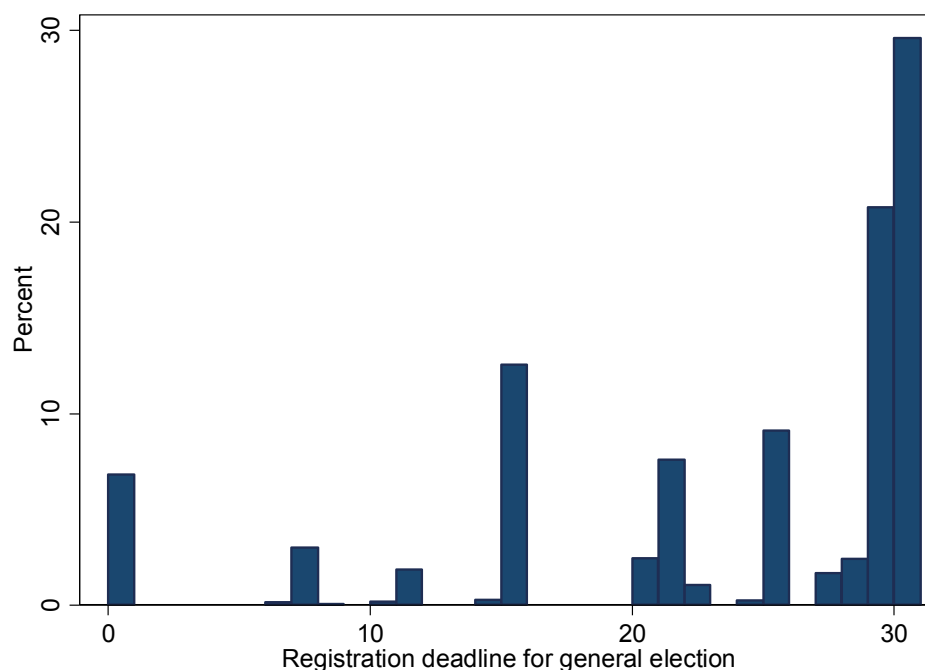


Figure 4-1: Variation in voter registration costs

registration deadline that a potential voter is subject to. Some states have a registration cost of zero, meaning that voters are allowed to register on the same day of the election. At this cost's maximum value, many more states require their voters to register thirty days before the day of the election. While this graph only shows registration deadlines in general elections, most states have the same registration cost in the primary and general election. Interestingly, several states changed their voter registration deadlines from 2008 and 2010 to make them later in the election cycle. For many respondents this lowered the registration burden in the 2010 election. On average in 2008, voters had to register 23.89 days before the election compared to 22.56 days in the 2010 election—a statistically significant ($p < 0.0000$) difference of more than a day.

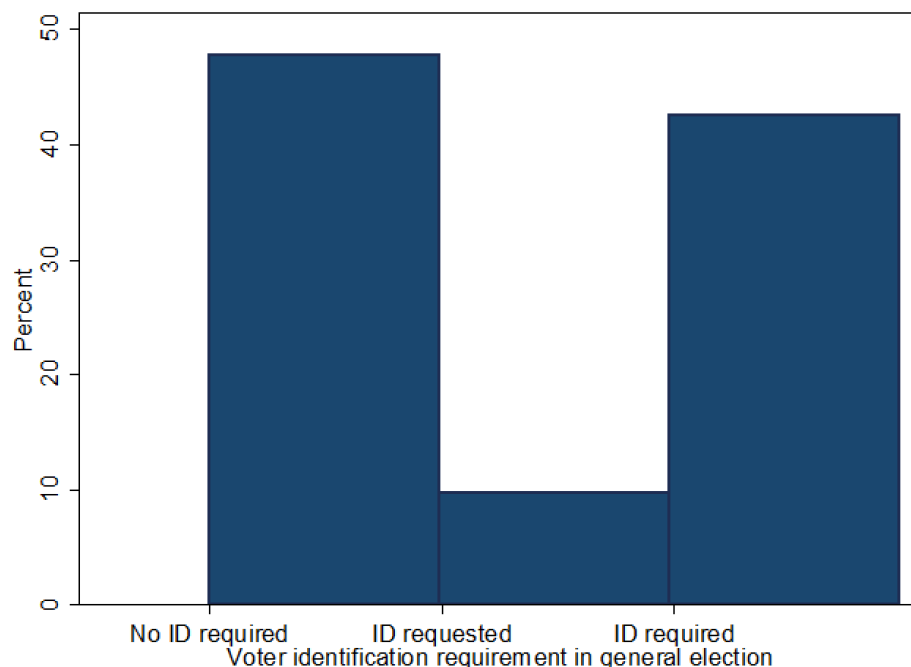


Figure 4-2: Variation in voter identification costs

The second cost I examine, voter identification requirements, also varied widely. A histogram of this cost in the general elections in 2008 and 2010 is shown in Figure 4-2. As this figure shows, identification costs vary quite significantly. A plurality of respondents—47.79 percent—were not required to show any identification when they voted in these elections. Less than ten percent were asked, though not required, to show photo identification. However, a large proportion of the respondents in these two years—42.47 percent—were required to show identification before they were allowed to vote. Like the registration cost, the identification cost changed for many people from the 2008 to the 2010 election. In 2008, 49.67 percent of people in my study had to show no identification, 5.05 percent were requested to show identification, and 45.27 percent were

required to show identification. In 2010, the percentage of people who were not asked to show identification decreased to 46.67 percent, the percentage of people who were requested to show identification increased to 12.52 percent, and the percentage of people who were required to show identification decreased to 40.81 percent. This change highlights that many states have been altering the voting costs their citizens face. As researchers have shown, voter identification costs have continued to change since 2010 (Brennan Center for Justice 2013).

General Election CCES Models

To begin my analysis, I first discuss the demographic differences between voters and non-voters in the elections I study. As Table 4-1 shows, there are marked differences between people who vote and people who do not vote, and these differences confirm what other scholars have found regarding demographics and turnout. Voters tend to be older (Verba and Nie 1972; Wolfinger and Rosenstone 1980), more educated (Verba and Nie 1972; Wolfinger and Rosenstone 1980), wealthier (Verba and Nie 1972; Wolfinger and Rosenstone 1980), and more Caucasian (Verba and Nie 1972, Lien 2001, Masuoka 2006, Sanchez and Masuoka 2008), and they are more likely to be male (Rosenstone and Hansen 1993) and in a stable romantic partnership (Kingston and Finkel 1987). The mean age for voters is 53.3 compared to 46.0 for non-voters. Voters are seven percentage points more likely to have a college education and ten percentage points more likely to have high incomes. They are 11 percentage points more likely to be white than non-voters, seven percentage points more likely to be male, and nine percentage points more

Table 4-1: Demographics of general election voters and non-voters, CCES

		General Voters	General Non-Voters
Age	18-34	12.36	26.99
	35-49	25.00	29.85
	50-64	38.91	30.60
	65-79	21.55	11.56
	80+	2.18	1.02
Education	HS or less	26.58	33.29
	Some college	73.42	66.71
Income	< \$20,000	7.70	13.52
	\$20K - \$80K	41.01	45.30
	> \$80,000	51.29	41.17
Employment	None	44.43	42.60
	Part time	9.81	10.13
	Full time	45.75	47.27
Race	White	81.91	70.49
	Black	7.46	12.77
	Hispanic	5.45	10.43
	Asian	0.74	1.57
	Other	4.45	4.73
Gender	Male	51.10	44.09
	Female	48.90	55.91
Marital Status	Single	30.31	39.27
	Partnered	69.69	60.73

likely to be married or partnered. The only demographic characteristic on which voters and non-voters do not differ significantly is their employment.

I next include all of these demographic factors in a regression model with voting costs so I can analyze which factors are most important in determining whether a person votes. The findings of the general election CCES model are reported in Table 4-2.

Table 4-2: General election CCES turnout model with no interactions

	Voted in general election
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.100 (0.010)***
Race: Black	-0.249 (0.029)***
Race: Hispanic	-0.503 (0.035)***
Race: Asian	-0.943 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.073 (0.019)***
Democrat	0.422 (0.023)***
Republican	0.582 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	-0.057 (0.011)***
2008	0.688 (0.019)***
Constant	-2.751 (0.050)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

This table also confirms the findings of previous studies regarding how demographics affect turnout. According to this table, respondents who were older, who had a post-high school education, who had a higher income, or who had part-time or full-time

employment were more likely to vote in the four elections I studied. Based on coefficient sizes alone, education seems to have the largest positive effect on turnout. As expected, partisans—those who affiliated with either the Democratic or Republican Party—were more likely to vote in general elections as compared to independents or respondents who were members of third or minor political parties.

On the other hand, being a member of a racial minority meant a respondent was less likely to vote compared to a white respondent. This held true for blacks, Hispanics, and Asians. Running this model with dichotomous variables for respondents who were Native American, Middle Eastern, of mixed race, or members of another race produced inconsistent results. Native American and Middle Eastern respondents were less likely to vote, and mixed race respondents were more likely to vote, but none of these coefficients was statistically significant. This is because the number of people in each of those racial categories was very small—there were only 986 Native Americans, 177 Middle Easterners, and 1,837 mixed race respondents. The coefficient for respondents of other races was positive and statistically significant, but the categorization of this variable is somewhat suspect. It likely includes respondents who are of one of the more populated racial categories but who, for their own reasons, did not want to divulge their race. Because of the statistical insignificance and inconsistencies in these four racial variables, I have chosen instead to focus on blacks, Hispanics, and Asians in the remainder of my analysis.

The two remaining demographic variables in this model, which measure the marital status and sex of the respondent, have interesting results. I find that females are less likely to vote than males, although the size of this coefficient is smaller than the

coefficient for other characteristics. I also find that respondents who are married or in another type of long-term romantic partnership are more likely to vote. There are several possible reasons for these findings. Women typically assume a larger burden of childcare and domestic responsibilities in their households, even if they themselves are employed, and this leaves less leisure time and less time for participating in politics (Aguilar and Hurst 2007). Not only is it harder to show up at the polls on election day if one has no extra time, but it is also harder to follow politics and gather the political information that makes one more likely to vote. The positive turnout effect for married or partnered respondents is at least partially explained by a correlation between being married and owning a home, which previous scholars (including Squire, Wolfinger, and Glass 1987; Timpone 1998; DiPasquale and Glaeser 1999; and Highton and Wolfinger 2001a) have noted is positively correlated with turnout because home ownership denotes that one has a good deal of social and economic ties to his or her community.²⁰

More to the point, Table 4-2 shows that both of the costs I study in this dataset—registration deadlines and voter identification requirements—are statistically significant and negative. As the registration deadline a person encounters gets earlier and as the person's state imposes a more burdensome identification requirement, a person becomes less likely to vote. The size of the coefficients for these variables is small, but they are statistically significant in both cases. This indicates that the size of these costs is having

²⁰ There is a significant interaction between these variables; when I run the model in Table 4-2 with a dichotomous variable measuring whether the respondents own their home, I find that the coefficient for married respondents is insignificant while the coefficient for owning a home is strongly positive and strongly significant. When I interact marital status and home ownership in this model, I find that the coefficient for home ownership is positive, the coefficient for marriage is negative, and the interaction term is positive.

some effect on turnout, even if it is quantitatively small when other factors that affect turnout are taken into account.

A traditional study of turnout would take these results as evidence that costs are fairly unimportant and would conclude that demographics are the most important factors in determining turnout, as the demographic characteristics have much larger coefficient sizes. Although it appears at first glance that costs have only a tiny impact on turnout in these regression models, I show in the remainder of my analysis that this is not the case. When I interact demographic factors with costs, I find that voting costs do in fact play a role in determining whether a person turns out to vote, and furthermore that these costs affect certain demographics more than others.

Interactions between Voter Registration Cost and Demographics

The first interaction I explore is between age and voter registration deadlines. This regression model included all the same covariates as the model in Table 4-2 in addition to an interaction term between the age and voter registration variables.²¹ The coefficients in this model follow the same patterns of significance as the coefficients in Table 4-2; the coefficients I would expect to be significant, based on my reading of previous research, are statistically significant in the expected directions. In addition, the interaction term is statistically significant, though the coefficient size is negligible. The interaction between age and voter registration deadline is depicted graphically in Figure 4-3.²² This graph, and the other interaction graphs I show in this chapter and the next two

²¹ I have placed all interaction regression models discussed in this chapter in the appendix.

²² All other terms in the models that are not being interacted are held constant at their mean or modal values. This meant that the mean/modal respondent was a married white female who was 50.25 years old,

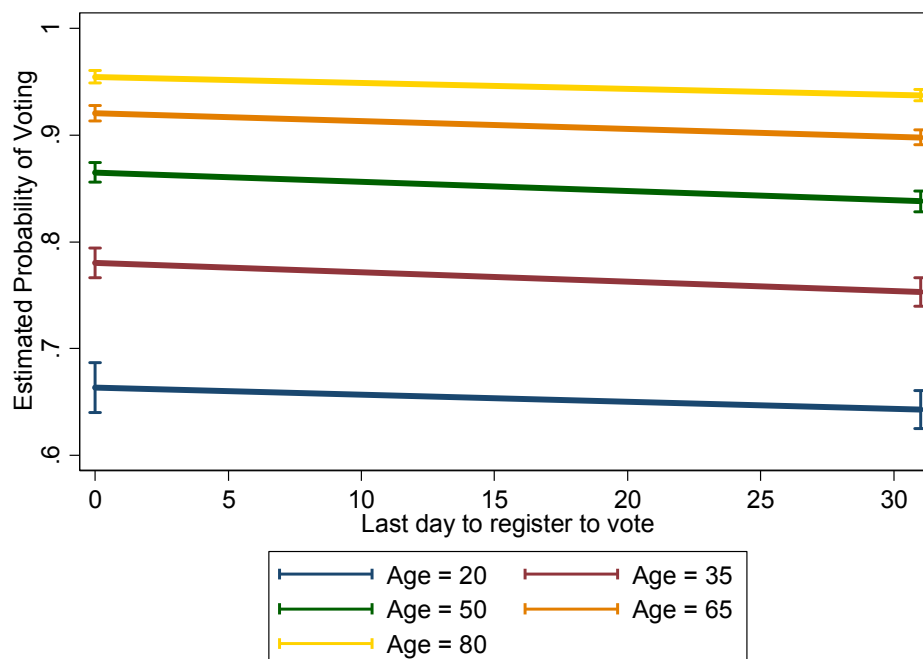


Figure 4-3: Interaction between respondent's age and voter registration deadline in general election

chapters, were created using the Margins command in Stata 13. The x -axis of these graphs displays the voting cost as it increases in magnitude, and the y -axis displays the estimated probability that a respondent will vote based on the regression model described in the corresponding table. The lines on the graph represent different demographic groups. Thus, these graphs show how the estimated turnout rates among members of different demographic groups change as voting costs increase.

Figure 4-3 shows that while the interaction between age and voter registration deadline is statistically significant in the regression model, its actual effect is very small.

had an income above \$80,000, had a post-high school education, was employed full-time, was a political partisan, was not required to show photo identification to vote, and had to register to vote 23.11 days before the election took place.

This graph shows the differences in estimated turnout between respondents who are 20, 35, 50, 65, and 80 years old. If my theory that demographic groups react differently to changes in costs is true, then I would expect to see the slopes of the lines on these graphs differ. However, Figure 4-3 shows that while different age groups have different baseline turnout levels—not surprisingly, the youngest respondents were the least likely to turn out, at an estimated 65%-68% turnout rate, and estimated turnout levels increased as the respondent's age increased, to the point where eighty-year-old respondents had an estimated turnout rate of 93%-95%—all age groups had similar changes in turnout levels as the voter registration cost increased. For each group, turnout declined by between one and three percentage points as the voter registration cost increased from its lowest possible value to its highest possible value. Given that the slopes of the lines in Figure 4-3 are essentially parallel, the interaction between age and voter registration deadline is statistically significant but does not have any real-world effect.

However, other interaction models showed statistically significant interactions that also had a strong real-world effect on turnout. One such model was the interaction between a respondent's income and the registration deadline, which is depicted in Figure 4-4. This figure lends support both to the traditional turnout literature and to my theory. Most scholars find that voter turnout generally increases as a person's income increases, and in fact this graph shows that high-income respondents (those making more than \$80,000 yearly) have estimated turnout rates five percent higher than middle-income respondents (those making between \$20,000 and \$80,000 yearly) and 11% higher than low-income respondents (those making below \$20,000 yearly). However, while the

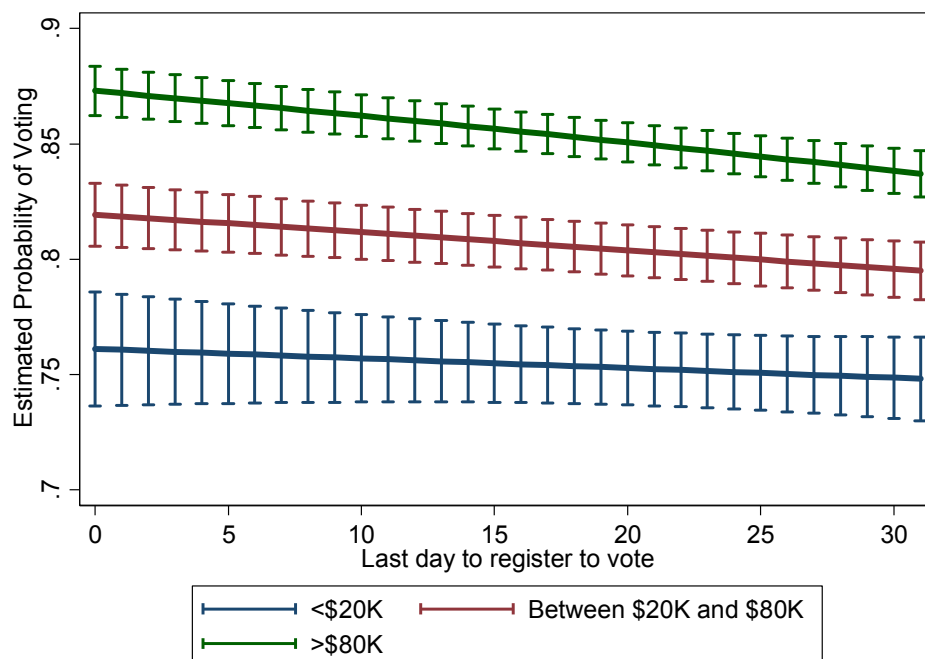


Figure 4-4: Interaction between respondent's income and voter registration deadline in general election

turnout rates of low-income respondents stay relatively static at 76% as the registration cost increases from zero to thirty, indicating that this group of people is relatively impervious to changes in registration costs, the turnout rates of middle-income respondents dropped by about three percentage points, and the turnout of high income respondents dropped by about six percentage points. A portion of these higher-income respondents find that the act of voting becomes too difficult and costly for them as registration costs increase. This lends credence to my theory that interactions are driving some of the change in turnout that scholars observe and indicates that opportunity costs are very important in determining turnout levels for certain people.

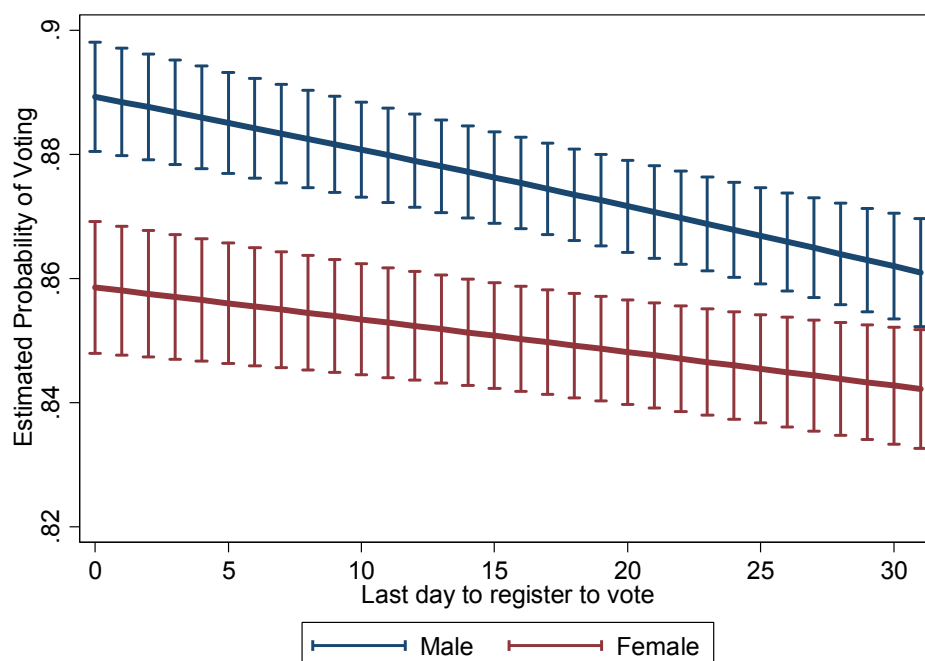


Figure 4-5: Interaction between respondent's sex and voter registration deadline in general election

Another statistically significant interaction is shown in Figure 4-5, which shows the interaction between a respondent's gender and the voter registration deadline. As shown in the turnout model in Table 4-2, females are less likely to vote than are males. However, my analysis also shows that men had a slightly steeper drop-off in their estimated turnout rates than women as voter registration costs increased. Turnout among women decreased by two percent, from 86% to 84%, as voter registration costs increased from zero to thirty days, while turnout among men dropped by three percent, from 89% to 86%.

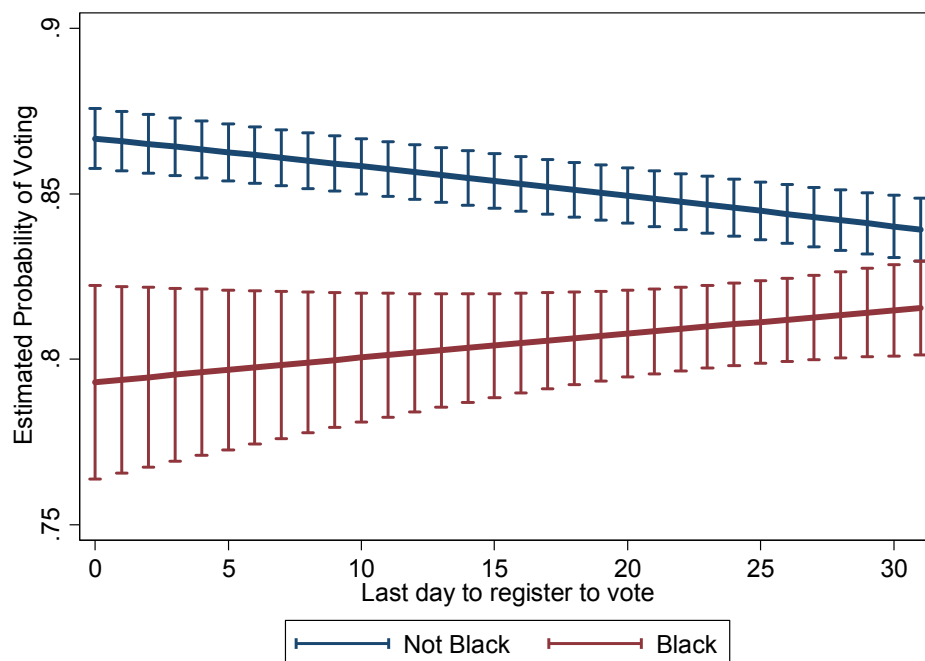


Figure 4-6: Interaction between black vs. non-black respondents and voter registration deadline in general election

In addition, racial minorities tend to have different turnout dynamics than whites. This is shown in Figure 4-6, which displays a graph that compares predicted turnout rates between black and non-black²³ respondents. This graph also largely confirms findings from other scholars and shows that non-black respondents were more likely to vote than black respondents, though their estimated turnout rates start to converge as the voter registration cost reaches its maximum value. However, while the predicted voting probability of non-black respondents decreased slightly from 87% to 84%, the estimated turnout rate of black respondents actually *increased* from 79% to 82%. This contradicts

²³ Because the logit regression models I based these graphs on included a series of binary variables to measure a respondent's race, the category of non-black respondents includes whites, Hispanics, Asians, Native Americans, Middle Easterners, mixed-race respondents, and those who marked "other."

the previous wisdom on voter turnout, which holds that an increase in costs should correspond to a decrease in turnout as potential voters find it too difficult to vote as costs make it more impractical.

To summarize my findings from the interactions between the voter registration costs and demographics in general elections, I find support for the theory I outlined in Chapter 2, particularly when I examine the demographics of income, gender, and race. For each of these variables I find evidence confirming traditional analyses of voting behavior—the groups with higher levels of political resources (wealthier people, men, and whites) tend to turn out more than groups with lower levels of political resources (poorer people, women, and racial minorities). However, I also found support for my hypothesis that time-intensive voting costs depress turnout among high-resource potential voters, and money-intensive voting costs depress turnout among low-resource potential voters. In the set of findings I discuss here, the wealthiest group had a larger decrease in turnout than the middle-income or low-income group, and men had a steeper decline in turnout than women. There are a few explanations for this. The first possible explanation is that because the resource-poor groups of potential voters had low turnout to begin with, there were fewer people for which costs would make a difference in their turnout decision. Another possible explanation lies in the opportunity costs of voting. It seems that as this cost increases, men and wealthier respondents are less likely to be able to overcome this cost and be able to vote in an election. They could have greater time constraints, such as working longer hours or not being able to leave work during regular voting hours, that make voting more impractical for them as costs increase.

Another interesting finding from this section is that an increase in costs is not always associated with a decrease in voter turnout. This is the case for black voters, as shown in Figure 4-6. It could be that because blacks have traditionally higher levels of group consciousness than other racial minority groups (Verba and Nie 1972), they are being mobilized to vote specifically to counteract the turnout-depressing increases in costs. As the voter registration deadline moves earlier, perhaps independent groups are making the effort to encourage and remind blacks to register specifically because they have lower levels of turnout to begin with.

It is also interesting to consider why registration affects people based on their income, gender, and race specifically. In some sense, voter registration is an information cost to voting: it requires voters to have foreknowledge of the election and to be thinking about whether they want to participate in it prior to the election occurring. A potential voter must be politically aware and savvy to overcome this cost. Perhaps this is further evidence of the importance of opportunity costs in turnout. Because people with higher incomes and men have more constraints on their time, they may be less aware of this cost and less able to overcome it and turn out to vote.

Interactions between Voter Identification Cost and Demographics

I next move to the interactions between voter identification requirements and demographics. As described in Chapter 3, the voter ID variable is measured in an ordinal scale. States that do not have any sort of photo identification requirement are coded as zero, states that request (but do not require) their voters to show identification are coded as one, and states that require voters to show photo identification before they are allowed

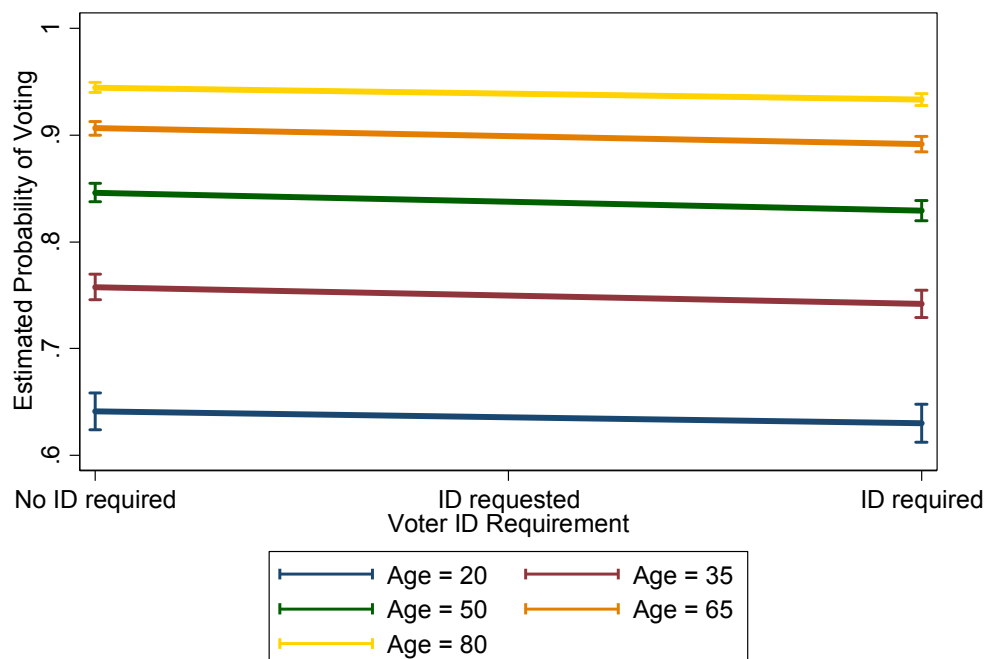


Figure 4-7: Interaction between respondent's age and voter identification requirements in general election

to vote are coded as two. The first statistically significant interaction for this voting cost is shown in Figure 4-7, which displays the interaction between the respondent's age and voter ID laws. As with the interaction between age and registration costs, this interaction is statistically significant and confirms previous findings—older people are most likely to vote, and younger people are less likely to vote—but this interaction shows little effect, as the slopes of the lines representing different demographic groups are essentially parallel. Each line shows a very slight drop in turnout as the voting cost increases, but a voter's age does not affect how they respond to this increasing cost.

However, there are other demographic groups which did show statistically significant interactions with the voter identification cost. One of these is the respondent's

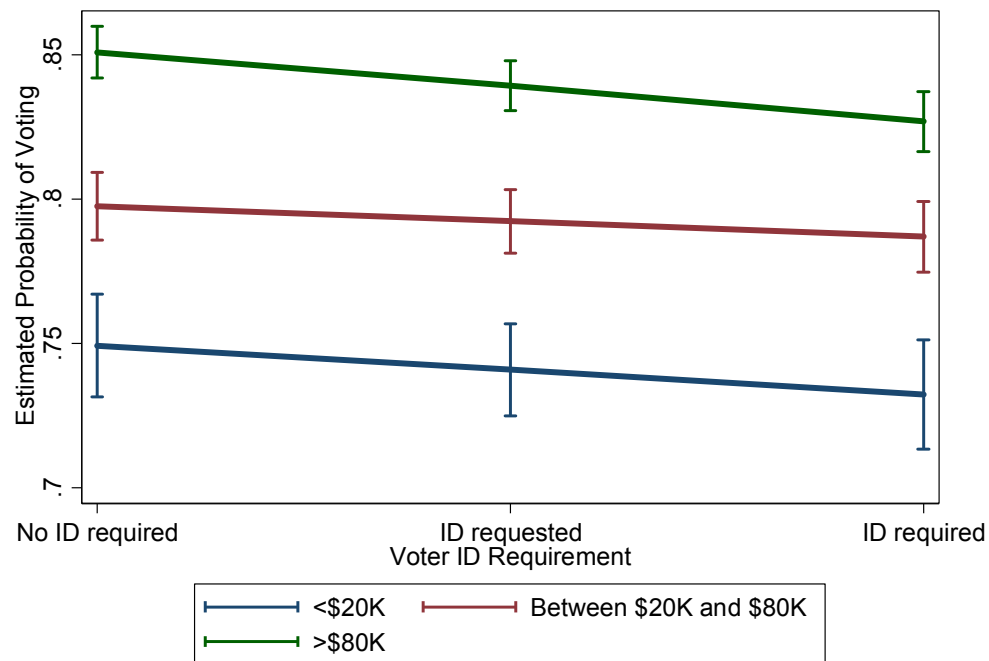


Figure 4-8: Interaction between respondent's income and voter identification requirements in general election

income. As shown in Figure 4-8, my results support the traditional finding that a person's estimated likelihood of voting increases as his or her income increases, but also lend support to my theory. All respondents, regardless of income level, saw a decline in their estimated likelihood of voting as the voter identification requirement became more stringent, but respondents in the highest income category (making more than \$80,000 per year) and the lowest income category (making less than \$20,000 per year) saw slightly steeper declines in their turnout than respondents with mid-level incomes.

In addition, the interaction between respondents' employment level and their voter identification requirement was statistically significant. Figure 4-9 shows this interaction. In this dataset, employment was coded as an ordinal variable that measured

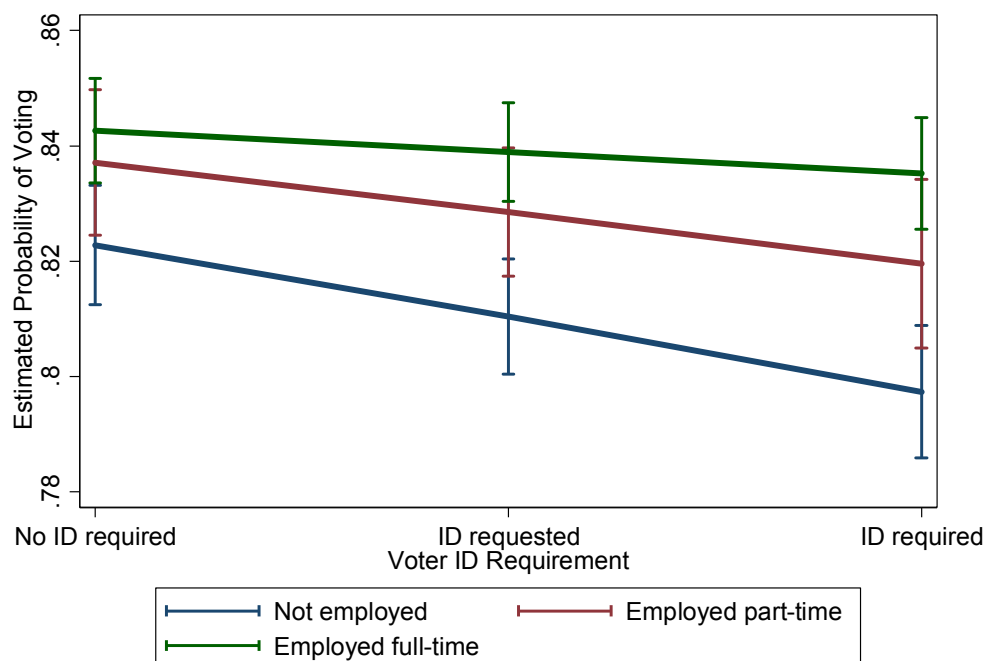


Figure 4-9: Interaction between respondent's employment and voter identification requirements in general election

whether the respondent was not employed (including being a full-time student, being retired, or not looking for work), employed part-time, or employed full-time. This variable allows me to measure how much time respondents spend on their employment, and in theory the respondents who spend more time at work should have less time to spend on politics and voting in elections. Figure 4-9 shows that in fact it is the respondents who work full-time who are most likely to vote, with an estimated turnout rate of about 84%. This estimated turnout rate stays relatively constant as the identification requirement becomes more burdensome. Respondents who were employed part-time had slightly lower turnout rates, and their turnout also declined a bit as the voting cost increased, from 84% in states that did not require photo identification to 82%

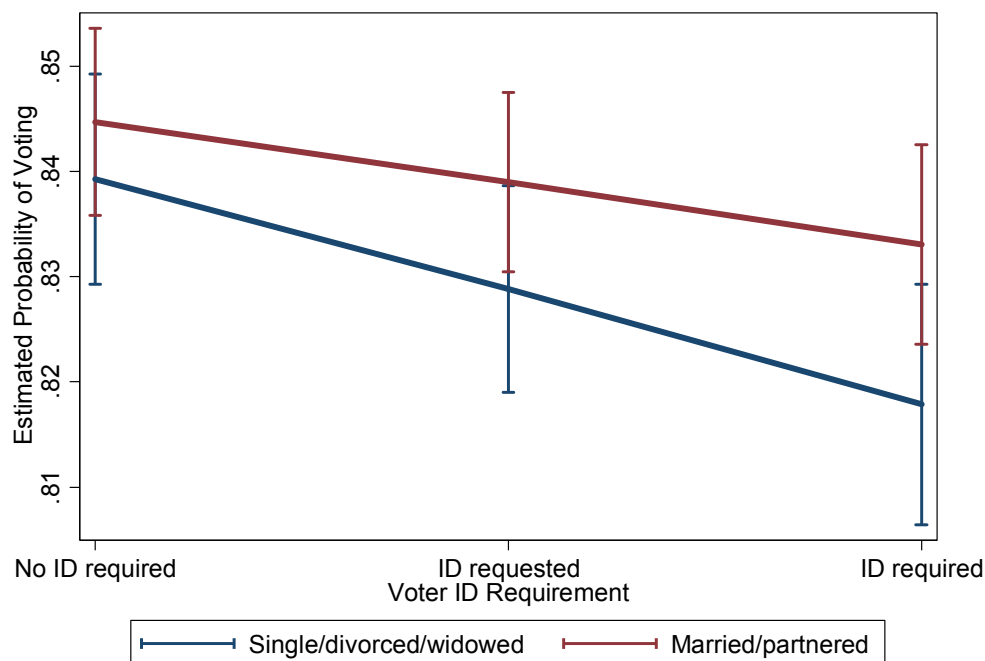


Figure 4-10: Interaction between respondent's marital status and voter identification requirements in general election

for states that did require identification. Surprisingly, respondents who were not employed had the steepest decline in their turnout. When the identification requirement was minimal, unemployed respondents had an estimated turnout level of 82%, which declined to just under 80% when this voting cost was at its most burdensome. Unfortunately, the 95% confidence intervals around these lines overlap, which means that some of these differences may be statistically indistinguishable from each other.

As with the interaction between employment status and voter identification requirements, the interaction between a respondent's marital status and voter ID was also statistically significant in the regression model, but the confidence intervals for the estimated turnout levels overlapped in the interaction graph (shown in Figure 4-10). This

figure has two lines: one estimating turnout for respondents who are single, divorced, or not in a romantic partnership, and one for respondents who are married or in a long-term partnership. My findings show that people who are married/partnered have higher turnout rates than unmarried/unpartnered respondents and that this gap widens slightly as the voter identification cost becomes more burdensome. When respondents' states do not require them to show identification in order to vote, married and unmarried respondents have essentially the same predicted rate of turnout, 85%. The turnout gap between these two groups widens to one percent if their state requests that they show ID, and it widens further to one and a half percent as their state requires them to show ID (though these differences are not statistically significant in my model). In addition, both groups show declining turnout rates as this cost increases. It is possible that the correlation between being married/partnered and owning a home, which I discussed earlier in this chapter, explains why unmarried respondents have slightly steeper declines in their turnout as this cost of voting increases. Married and partnered people, because they are more established in their communities, may be more likely to have photo identification because they have used this identification to sign mortgage papers on a home. However, I must caution again that these results are not statistically significant.

Much like the interaction between age and voter identification requirements, the interaction between a respondent's gender and his or her state's voter identification requirement is statistically significant but does not have any real-world effect. This interaction is shown in Figure 4-11. As with the interaction between gender and voter registration deadline, men are shown to have slightly higher turnout rates than women. However, it appears that the slopes of the lines for men and women are parallel; no

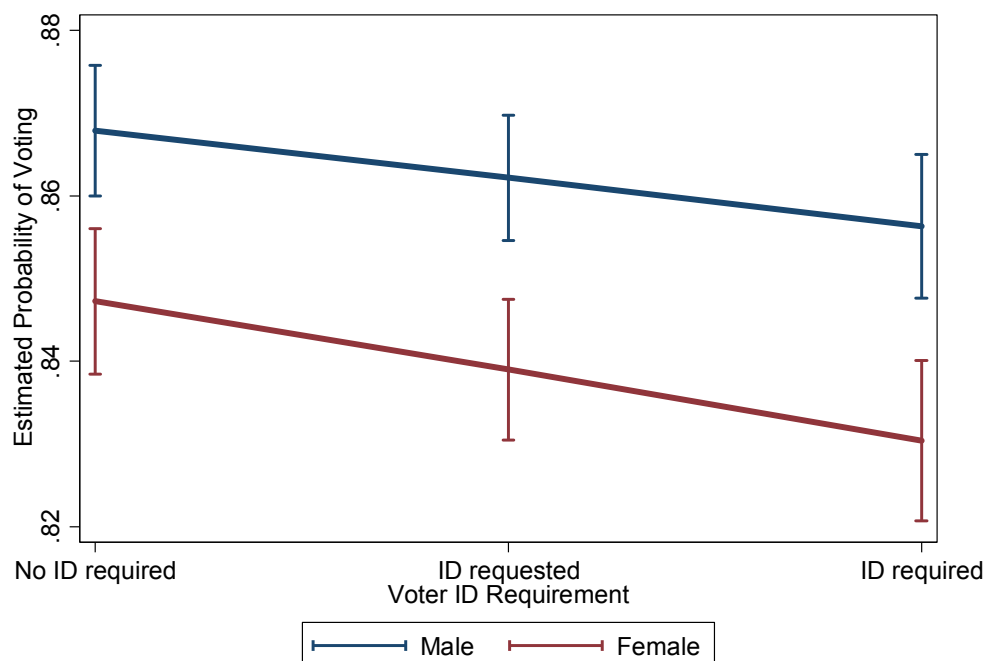


Figure 4-11: Interaction between respondent's sex and voter identification requirements in general election

matter what the state's ID requirement is, men are about two percent more likely to vote than women. However, both men and women display a decline in their turnout as this cost of voting increases, which indicates that this particular cost is burdensome enough to keep some people from turning out to vote.

Lastly, a respondent's racial identity also demonstrates interaction patterns with the voter identification cost. Figure 4-12 displays the interaction between Hispanic respondents and identification requirements, and Figure 4-13 displays the interaction between Asian respondents and identification requirements. These graphs show a pattern that is very similar to that of Figure 4-4, which graphs the interaction between black respondents and voter registration deadline. In both Figure 4-12 and Figure 4-13, non-

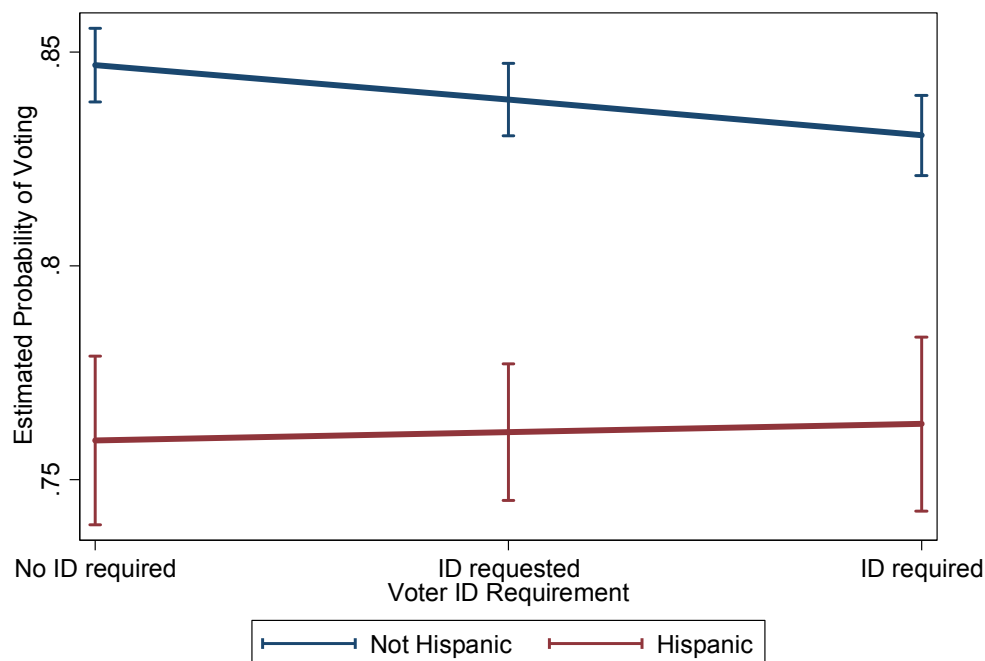


Figure 4-12: Interaction between Hispanic vs. non-Hispanic respondents and voter identification requirement in general election

minority respondents are shown to have higher turnout rates. In Figure 4-12, non-Hispanic respondents voted at rates nearly ten percent higher than Hispanic respondents, and in Figure 4-13 the turnout gap between Asian and non-Asian respondents was nearly twenty percent at times. However, I found no statistically significant interaction between black respondents and voter identification requirements. This is surprising, given that many of the criticisms of identification laws claim that they disadvantage racial minorities and blacks in particular. I may not see statistically significant effects in this case because perhaps mobilization is counteracting the effects of the identification laws for black voters. Research has shown that blacks have higher levels of group consciousness than other minority groups (Lien 2001, Masuoka 2006, Sanchez and

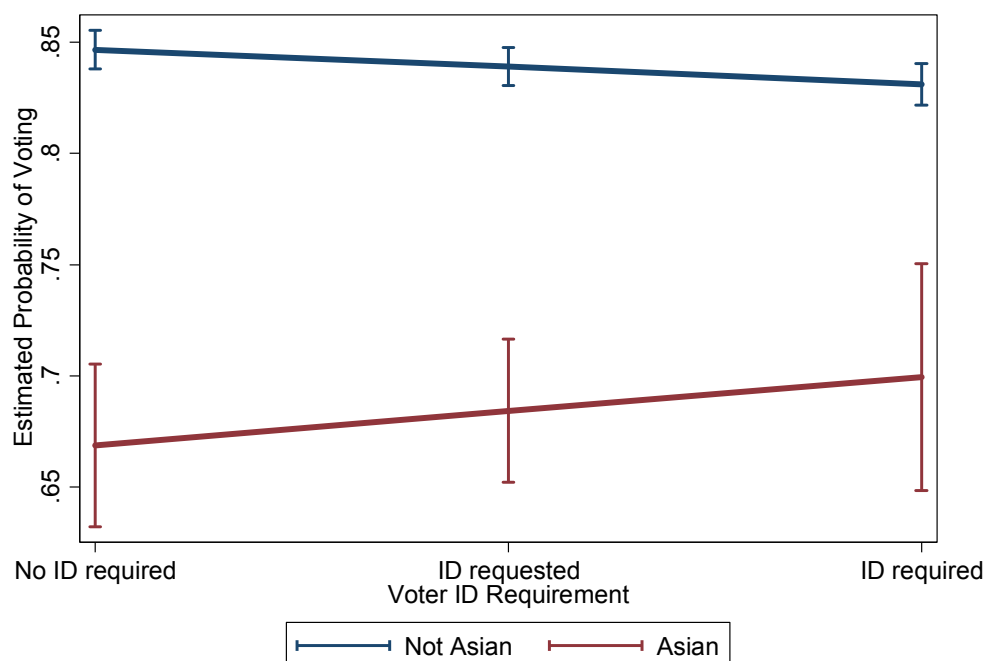


Figure 4-13: Interaction between Asian vs. non-Asian respondents and voter identification requirement in general election

Masuoka 2008), and this group consciousness could be causing interest groups to focus on helping black voters acquire identification to negate the effects of these laws.

As with the relationship between racial minorities and registration costs shown in Figure 4-6, Figures 4-12 and 4-13 show that turnout among non-minority respondents declined slightly as the voting cost increased. In both cases, non-minorities turned out at an estimated rate of 85% when their state did not require them to show identification to vote, and they turned out at 83% when their state did require them to show identification. Also like Figure 4-6, both Hispanics and Asians contradicted this pattern of decreased turnout. In Figure 4-12, turnout among Hispanics remained fairly static even as the identification cost became more burdensome, and in Figure 4-13, turnout among Asians

rose by nearly four percentage points. As in Figure 4-6, this contradicts the previous wisdom on voter turnout, which holds that an increase in voting costs should correspond to a decrease in turnout as potential voters find it too difficult to vote as costs make it more impractical.

My findings about the interactions between voter identification and demographics in primary elections also provide evidence in favor of my central theory that interactions drive some of the changes in voter turnout. In particular, income, gender, and race showed patterns of interaction, and the demographics of employment type and marital status also showed some interaction effects but were not statistically significant. As with the findings in the previous section, my analysis confirms previous studies which find that resource-rich people (those with higher incomes and more secure employment or who are male, married, and/or white) are most likely to vote. In contrast to my findings in the previous section, some of the groups with the fewest political resources had the largest decreases in turnout as the voter identification cost increased. In particular, low-income people, people who were not employed or worked only part-time, those who were not married or partnered, and women had steeper turnout declines than their more resource-rich counterparts. The findings I have described here largely confirm the narrative of opponents of voter identification laws. In particular, resource-poor potential voters are less likely to have identification and less likely to be able to afford the costs in time and money to acquire one, and so they tend to vote less.

However, the respondent's race did not follow this pattern that I have described. Instead, I found that non-minorities were significantly more likely to vote than Hispanics or Asians and their turnout declined as this voting cost increased but that turnout among

Asians and Hispanics actually increased as requirements to show voter identification became more strict. I did not observe a statistically significant relationship for blacks. As with my findings about the interaction between minorities and voter registration costs, I suspect that there is some sort of mobilization effect at work here. Most scholars and pundits who study the issue of voter identification point out that racial minorities are generally less likely to have photo identification and so are at the greatest risk of not turning out to vote as these requirements are put into place. It could be that outside groups are working to counteract this effect by increasing their mobilization efforts among racial minorities as states make their identification requirements in elections more strict.

Summarizing the General Election Results

The results for the general election turnout models I have discussed indicate that some demographic groups are indeed less able to overcome changes in voter turnout and that not all costs are created equal. The costs of registration and voter identification appear to affect different types of voters: registration costs are more burdensome for resource-rich potential voters, and identification costs are more burdensome for resource-poor potential voters. An exception to this occurs for racial minorities: while non-minorities consistently vote more and experience declines in their turnout as costs (both registration and identification) increase, racial minorities actually experience increases in their turnout as these costs increase. I suspect that much of this increase is due to mobilization effects designed to counteract the turnout-depressing effects of voter identification costs.

However, I have reason to suspect that voter turnout patterns may not be the same in primary elections as they are in general elections. General elections are well-publicized in the media and campaigns have more resources than for primary elections. In addition, political parties tend to do less mobilizing work in primary elections than they do in general elections. Many previous scholars have found that the people who vote in primary elections are not demographically similar to the people who vote in general elections (Ranney 1972, Leighley and Nagler 2013). Thus, my next section will detail how the interactions between costs and demographics differ in primary elections.

Primary Election CCES Models

Before discussing the regression models and interactions for primary elections, I first wish to detail the differences in demographics between voters and non-voters. These differences are shown in Table 4-3. As was the case in the general elections, primary election voters show similar demographic differences that confirm the findings of other scholars about demographic differences between voters and non-voters. The mean age of voters in primary elections was 55.9 compared to 47.0 for non-voters (both these averages are slightly higher than the averages for general election voters). In addition, primary voters were seven percentage points more likely to have at least some college education than were non-voters. They were also ten percentage points more likely to have high incomes and 11 percentage points more likely to be Caucasian than were non-voters. They were 11 percentage points more likely to be male as compared to non-voters and nearly ten percentage points more likely to be married or partnered. As with general election voters, the only demographic variable they did not differ on significantly was

Table 4-3: Demographics of primary election voters and non-voters, CCES

		Primary Voters	Primary Non-Voters
Age	18-34	8.74	25.33
	35-49	21.52	28.11
	50-64	40.80	33.57
	65-79	26.15	12.05
	80+	2.79	0.94
Education	HS or less	23.26	30.35
	Some college	76.74	69.65
Income	< \$20,000	7.15	12.91
	\$20K - \$80K	39.51	44.35
	> \$80,000	53.34	42.73
Employment	None	47.11	43.58
	Part time	9.87	10.77
	Full time	43.02	45.65
Race	White	84.10	72.67
	Black	6.14	12.03
	Hispanic	4.23	8.77
	Asian	0.68	1.69
	Other	4.85	4.84
Gender	Male	53.36	44.53
	Female	46.64	55.47
Marital Status	Single	28.99	38.58
	Partnered	71.01	61.42

their employment type. As was the case with my findings on the demographics of general election voters, these differences match what previous scholars have found about the relationship between demographics and voter turnout (see, for instance, Verba and Nie 1972, Wolfinger and Rosenstone 1980, Kingston and Finkel 1987, Rosenstone and Hansen 1993, Lien 2001, Masuoka 2006, Sanchez and Masuoka 2008).

Table 4-4: Primary election CCES turnout model with no interactions

	Voted in primary election
Age	0.041 (0.001)***
Post-high school education	0.490 (0.019)***
Income (low, medium, high)	0.276 (0.015)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.243 (0.031)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.616 (0.078)***
Female	-0.202 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.586 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.002 (0.001)*
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.525 (0.019)***
Constant	-4.017 (0.056)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Next, I examine the effects that these demographic variables have in a regression model with voting costs included. The findings of this primary election CCES model are reported in Table 4-4. As with the general election model reported in Table 4-2, the

findings of this model confirm the research that other scholars have done on turnout dynamics. Older people were more likely to vote, more educated people were more likely to vote, wealthier people were more likely to vote, more stably-employed people were more likely to vote, and racial minorities were less likely to vote. In addition, women were less likely to vote than men, and the coefficient for the respondents' marital status was statistically insignificant. The registration deadline in the respondents' state was statistically significant and resulted in a slight decline in turnout, and the voter identification requirements were statistically significant but, surprisingly, had a positive coefficient, meaning that as identification requirements became stricter, people were actually more likely to vote.

Comparing the coefficients to the general election model in Table 4-2 shows interesting differences in turnout between primary and general elections. While all of the coefficients, except for marital status and voter identification requirements, showed the same patterns of significance and the coefficients are all in the same direction, the coefficient sizes differ widely in some cases. For instance, employment type appears to have a much smaller impact on primary election turnout than general election turnout: the employment coefficient for primary elections is about one-third the size of the coefficient for general elections. In addition, the coefficient for Asian respondents in primary elections is about two-thirds the size of the coefficient for general elections, indicating that fewer Asians vote in primary elections than in general elections. However, the coefficients for the respondents' party affiliation are larger in the primary election model than in the general election model. This indicates that party affiliation may play a stronger role in determining primary turnout than in determining general turnout. This is

likely because most primary elections are conducted on a partisan basis and very few independent, third-party, or non-partisan candidates run in these primary elections. In addition, the coefficient for the respondents' registration deadline in the primary election is one-third the size of the coefficient for the general election, indicating that this factor is not as integral when potential voters are deciding whether to vote in primary elections.

Just as this model shows few differences from the general election turnout model I reported earlier in this chapter, I also find similar patterns of interactions between demographics and voting costs when I examine primary elections in particular. As I will show, there are some differences in which demographics interact with costs and in the size of these interaction terms. This indicates that potential voters use a different set of standards to calculate whether it is rational to vote in primary elections as compared to general elections.

Interactions between Voter Registration Cost and Demographics

While there were several statistically significant interactions between demographics and voter registration deadlines in primary elections, they had very little actual effect. The first of these interactions, between a respondent's education level and the registration deadline, is shown in Figure 4-14. Just as with the interaction between these variables in the general election, respondents with a post-high school education were about 18 percentage points more likely to vote than respondents with a high school education. In addition, while turnout among high school-educated respondents stayed relatively static at 54% no matter the size of the registration cost, turnout among more educated respondents declined slightly—from 67% to 65%—as the registration cost rose

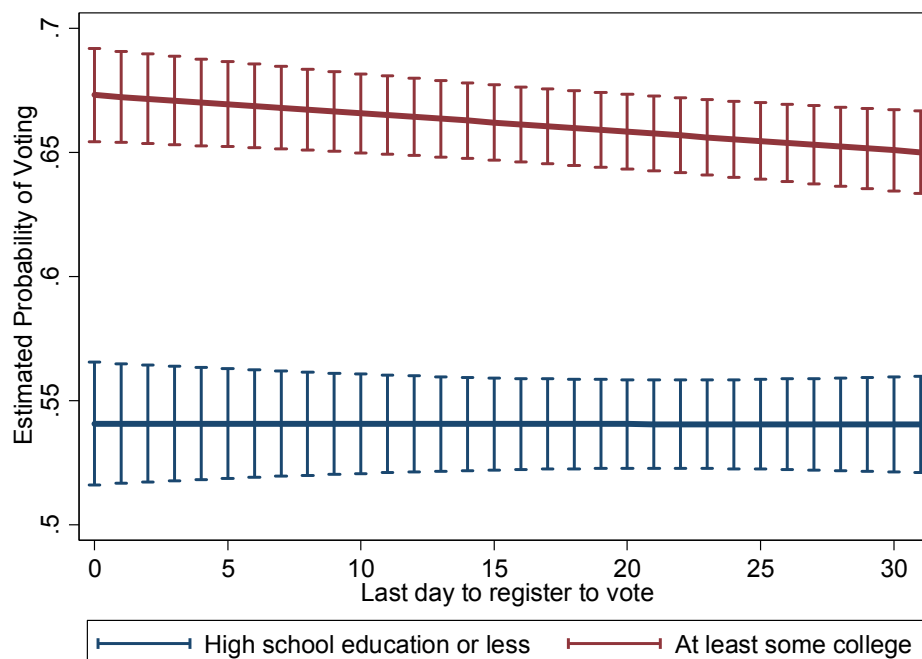


Figure 4-14: Interaction between respondent's education and voter registration deadline in primary election

from zero to thirty days. While this is not a large effect, this indicates that more educated respondents are less able to overcome an increase in this particular cost of voting.

However, there were two other interactions between demographics and registration costs in the primary election that were statistically significant in the regression model but whose slopes were not statistically distinguishable in the graphs. The first of these, employment type is shown in Figure 4-15. The table shows that this interaction is statistically significant but that the coefficient size is very small. In fact, when I graph this interaction in Figure 4-15, the confidence intervals of the slopes overlap with each other and are not statistically distinguishable. It appears that people who are not employed have the sharpest drop-off in their turnout—from 67% to 63%—as

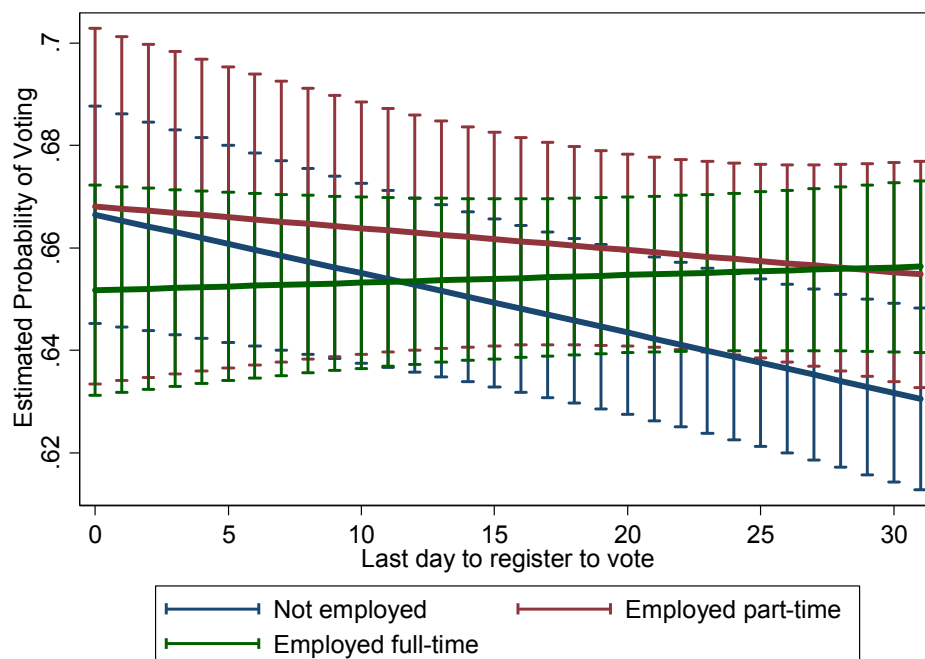


Figure 4-15: Interaction between respondent's employment and voter registration deadline in primary election

the registration cost increases from zero days to thirty days, while turnout among people who are employed part-time has a slight decrease of one percent and turnout among people who are employed full-time stays roughly the same. However, these trends are not distinguishable from each other.

Lastly, the interaction between the respondent's marital status and the voter registration cost then encountered was also statistically significant in the regression model, but the confidence intervals for the interacted variable in this regression overlapped (shown in Figure 4-16). While single/divorced/widowed respondents showed a fairly steep decline in their turnout as this cost increased, the difference between these slopes was not large enough to be statistically distinguishable from zero.

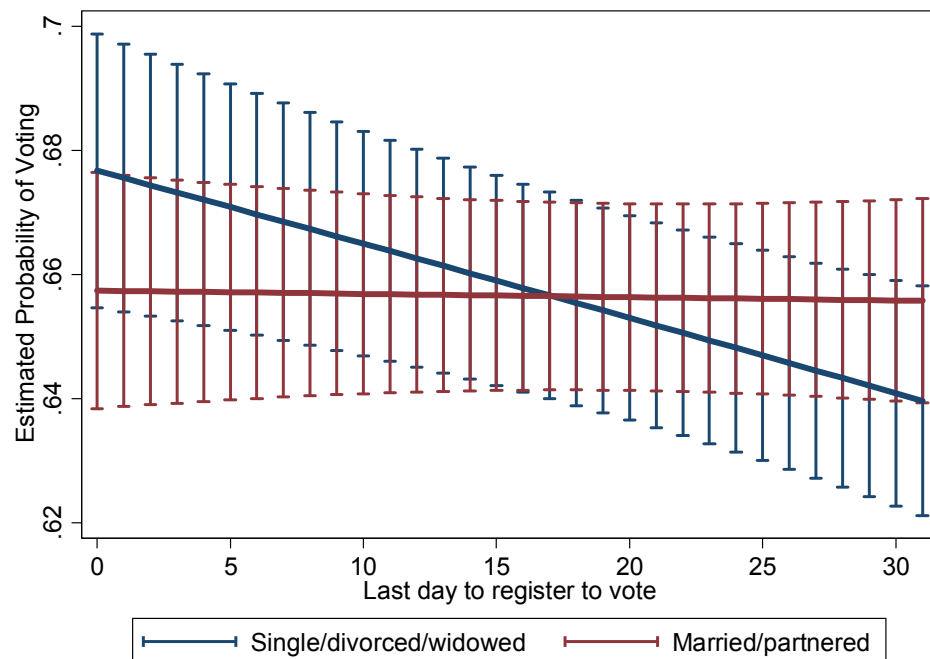


Figure 4-16: Interaction between respondent's marital status and voter registration deadline in primary election

The results I have discussed in this section show that there are several demographic characteristics that show patterns of interaction effects with the registration cost in primary elections. The most significant of these interactions is with education: those with a post-high school education tend to vote more than people with only a high school education or less, but these more highly-educated people also tend to vote less as this registration cost increases, while turnout among less educated people remains the same. This supports my hypothesis that time-intensive voting costs are likely to cause the largest turnout decreases among resource-rich voters. The confidence intervals overlapped for the slopes of the interactions with the variables measuring the respondents' employment and their marital status, but they indicate that those who are

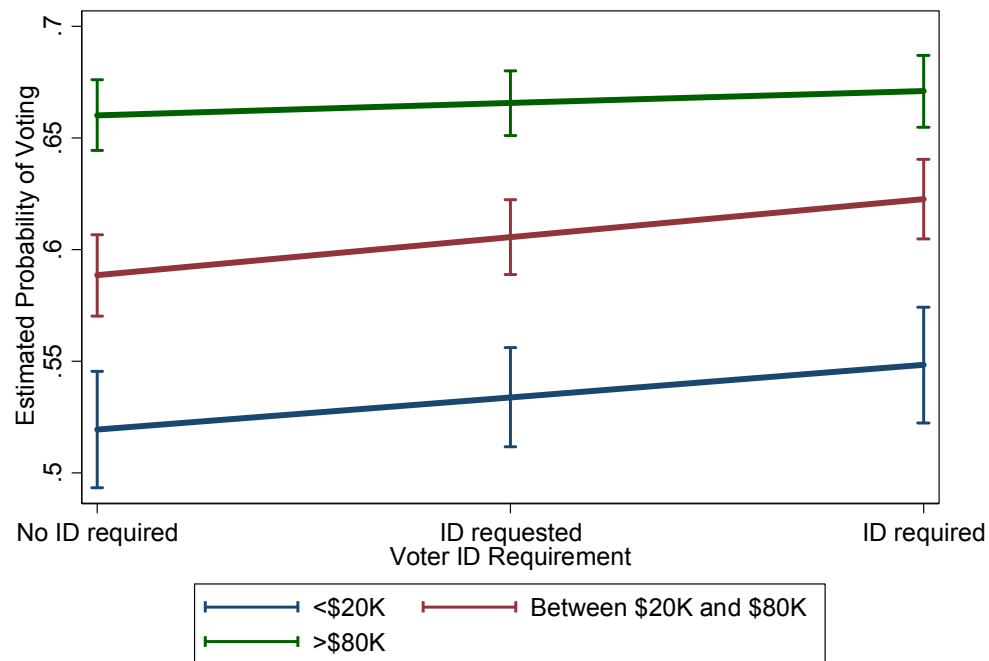


Figure 4-17: Interaction between respondent's income and voter identification requirements in primary election

unemployed and unmarried/unpartnered show the largest declines in turnout as this cost increases. These variables are different from the ones that are statistically significant in general elections. The interaction with education indicates that perhaps less educated people are less able to overcome this cost in primary elections when there is less information available about the election and information costs are higher.

Interactions between Voter Identification Cost and Demographics

Finally, I next move to the interactions between respondents' demographic characteristics and their state's voter identification requirements in primary elections. The first of these interactions, between the respondent's income and the identification

requirements, is shown in Figure 4-17. As with the interaction for the general election, more wealthy respondents are more likely to vote and less wealthy respondents are less likely to vote. This is in line with previous findings of the relationship between income and voter turnout. However, I find in this model that all categories of this demographic group become slightly *more* likely to turn out to vote as this cost increases. The respondents with the lowest incomes have an increase of three percent in their predicted likelihood of turning out to vote—from 52% to 55%—as this cost increases, while middle income respondents have an increase of three percent—from 59% to 62%—and the highest income respondents have only a one percent increase in their turnout—from 66% to 67%. As with some of the other analysis I have discussed in this chapter, this contradicts previous research which finds that voter turnout decreases as costs increase. While these increases in turnout are small, they indicate that perhaps voting costs do not always depress turnout.

There were other demographic characteristics that had statistically significant interaction terms in the regression models but not in the interaction graphs. One of these variables was the interaction between employment type and voter identification requirements, shown in Figure 4-18. This figure shows that more steadily-employed respondents tended to turn out to vote at higher rates, but the three lines representing unemployed, part-time employed, and full-time employed respondents appeared to have different slopes. However, the 95% confidence intervals for these slopes overlapped significantly. The relationship between respondents' marital status and voter identification requirements, shown in Figure 4-19, displays a similar pattern. While single/divorced/widowed respondents and married/partnered respondents appeared to

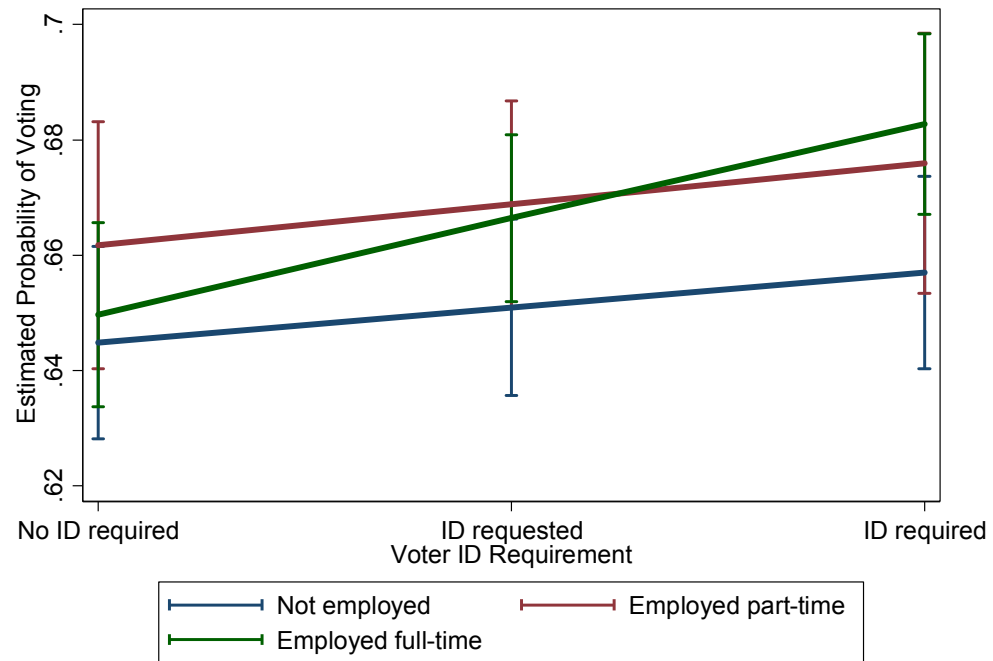


Figure 4-18: Interaction between respondent's employment and voter identification requirements in primary election

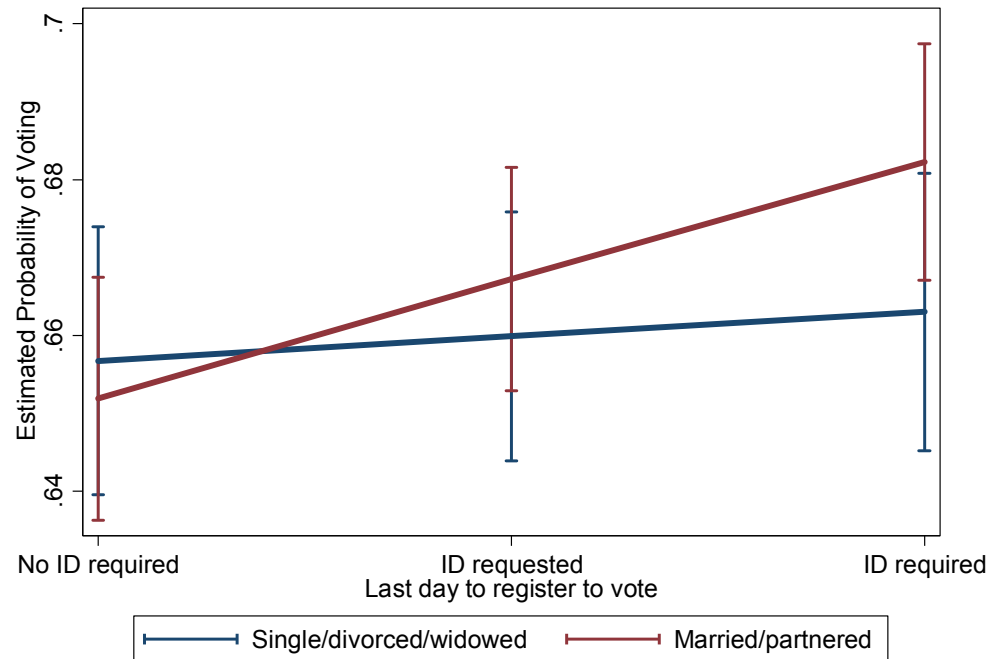


Figure 4-19: Interaction between respondent's marital status and voter identification requirements in primary election

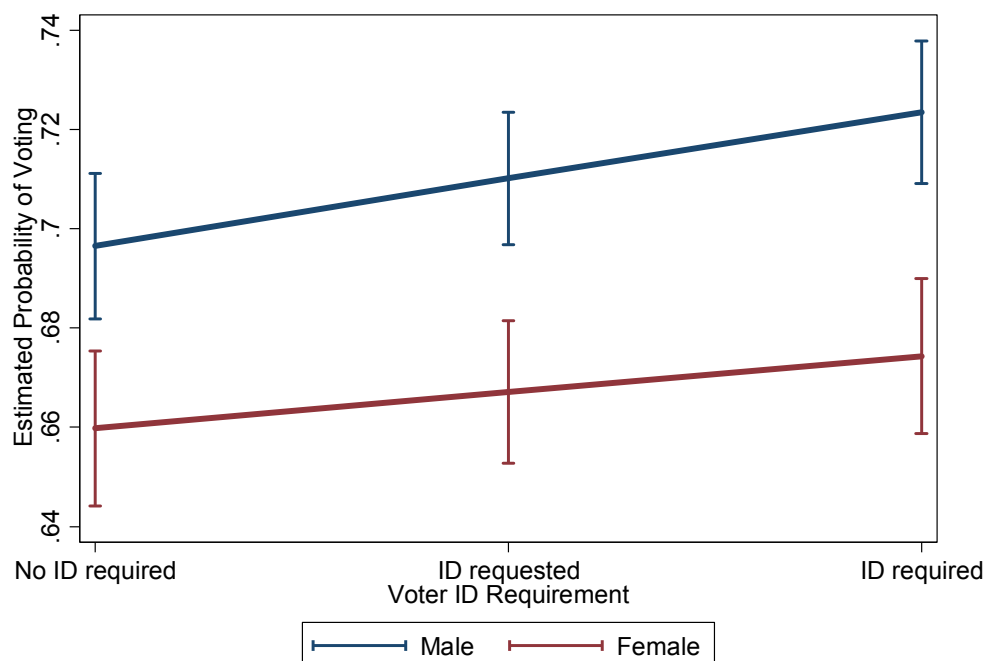


Figure 4-20: Interaction between respondent's sex and voter identification requirements in primary election

have similar turnout levels when no photo identification was required, and while the turnout gap between these two groups increased to two percent as the voting cost increased, these differences were not statistically distinguishable.

As shown in Figure 4-20, while the differences in turnout between males and females were statistically significant when I interacted the respondents' gender with the voter identification requirement, there was little difference between men and women in how their turnout changed as this voting cost increased. The turnout gap between men and women was about four percent no matter what the respondents' voter identification requirement was, with men being more likely to turn out to vote than women in the primary elections I studied.

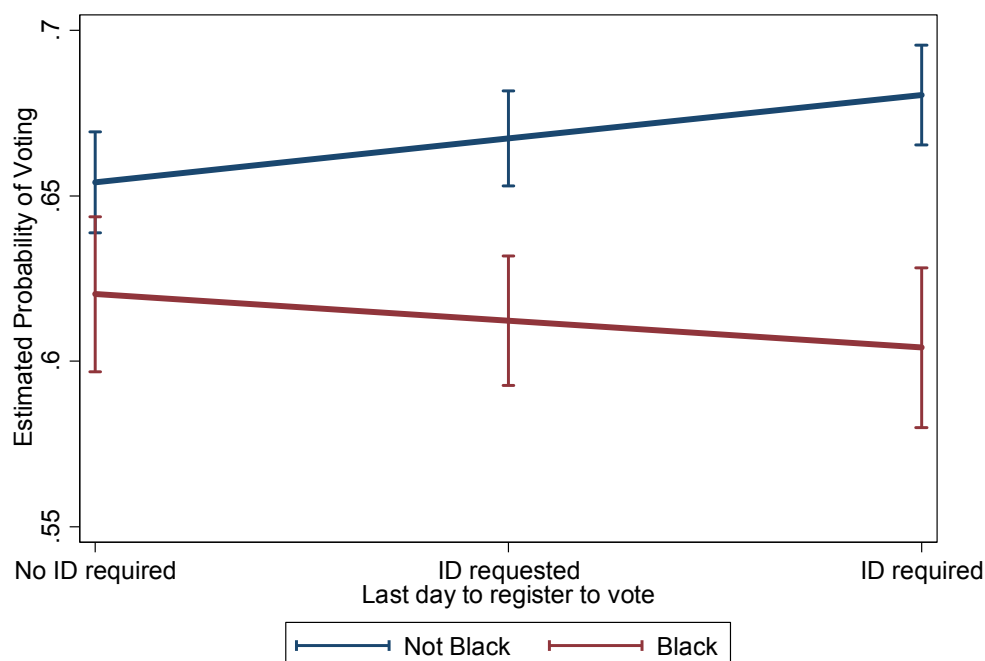


Figure 4-21: Interaction between black vs. non-black respondents and voter identification requirements in primary election

However, the interactions between the respondents' race and voter identification were statistically significant and showed strong effects. The graph of this interaction in Figure 4-21 shows that blacks and non-blacks had statistically indistinguishable turnout rates when their state did not require them to show photo identification in order to vote: non-blacks turned out at an estimated rate of 65%, and blacks turned out at a rate of 62%. However, as the identification requirement became more burdensome and voters were required to show identification, the turnout gap between these two groups widened and became statistically significant. The estimated turnout rate among non-blacks rose by three percent to 68%, and the estimated turnout rate among blacks decreased by two percent to 60%.

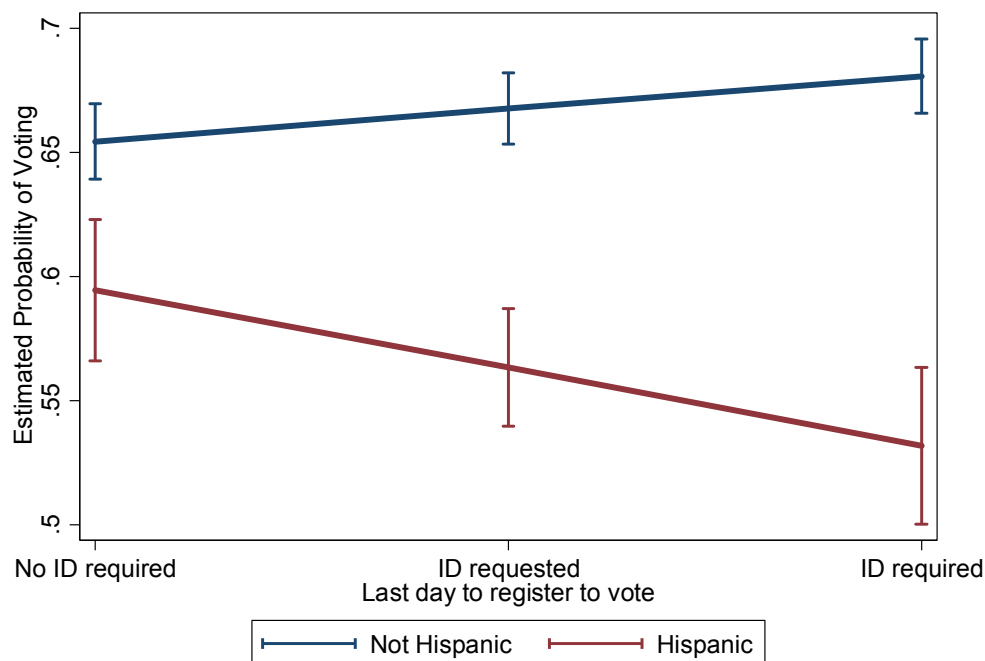


Figure 4-22: Interaction between Hispanic vs. non-Hispanic respondents and voter identification requirements in primary election

The interaction between Hispanic respondents and voter ID showed an even stronger pattern. This interaction is shown in Figure 4-22. When no photo identification was required to vote, the turnout gap between Hispanics and non-Hispanics was five percent. My model predicted that Hispanics would turn out at a rate of 60% and that non-Hispanics would turn out at a rate of 65%. However, this turnout gap widened significantly as the voter identification requirement became more burdensome. When states required their voters to show identification, turnout among non-Hispanics rose slightly to 68%, and turnout among Hispanics dropped significantly to 53%. Each of these differences was statistically significant.

These results show that there are several statistically significant interactions between demographics and the voting cost of identification requirements in primary elections. I found significant interactions for income (where turnout among all groups increased slightly as the voting cost became more burdensome but the highest increases in turnout happened for middle- and low-income respondents), employment type (confidence intervals between the slopes overlapped but indicated that respondents who were employed full-time had the largest turnout increase), marital status (confidence intervals overlapped, but married respondents showed the greatest increase in turnout), gender (both men and women were more likely to vote as this cost increased, but men had a larger increase), and race (non-minorities were slightly more likely to vote as this cost increased, but black and Hispanic respondents were less likely to turn out).

These findings also support my hypothesis that a money-intensive voting cost should cause the largest turnout decreases among low-resource potential voters. I show here that turnout among racial minorities decreases as identification requirements become more burdensome, while turnout among voters with more political resources (including wealthier, more securely-employed, married, and male respondents) actually increases. These findings support the arguments of opponents of voter identification requirements: racial minorities appear to be particularly negatively affected by these laws, while high-resource people (people with full-time employment, married or partnered, and men) experience little difficulty in overcoming this voting cost.

Summarizing the Primary Election Results

The findings I have discussed in this section show that the way people respond to costs differs between primary and general elections. Primary elections tend to attract a smaller and more partisan electorate than do general elections, so costs appear to matter less than do partisan interests when potential voters are deciding whether to participate in a primary election. While registration costs appeared to have the greatest negative effect among resource-rich voters and identification costs appeared to have the greatest negative effect among resource-poor voters in general elections, the story is not so clear-cut for primary elections. In these elections, registration costs appeared to matter most for the highly educated, the unemployed, and the unmarried, while identification costs mattered most for middle/low income respondents, full-time employed respondents, married respondents, males, and blacks and Hispanics. The magnitude of turnout changes also differed from the turnout changes in the general elections.

Taken together, these results suggest that voters use a different set of conditions to calculate whether it is rational for them to vote in a primary election as compared to a general election. Primary elections tend to be lower-salience elections, and in many cases the stakes are often lower as the final officeholder is not being elected and many localities have uncompetitive primary elections, particularly on the congressional and local level (Ansolabehere, Hansen, Hirano, and Snyder 2005; Nielson and Visalvanich 2014). Many prospective voters may judge that it is less important for them to turn out in a primary election than it is in a general election, and so an increased cost in a primary election can lead to a larger turnout drop-off in a primary election. It appears that this is especially the case with the voter identification cost.

Conclusions

In this chapter I have presented compelling evidence that not all demographic groups are equally equipped to overcome changes in costs. There are many important findings to be gleaned from the analysis I have discussed. First, certain types of people are disadvantaged by certain types of costs. Nearly every demographic group I studied exhibited significant interaction effects. A respondent's education interacted with the voter registration deadline in primary elections. A respondent's income interacted with the voter registration deadline in the general election and with both the voter registration deadline and the voter identification requirement in the primary election. A respondent's employment interacted with the voter identification requirement in the general election and with both the voter registration deadline and the voter identification requirement in the primary election. A respondent's gender interacted with both the voter registration deadline and the voter identification requirement in the general election and with the voter identification requirement in the primary election. A respondent's marital status interacted with the voter identification requirement in the general election and with both the voter registration deadline and the voter identification requirement in the primary election. A respondent's race interacted with both costs in both types of elections. The only demographic that did not show any statistically significant interaction patterns was age, and this is likely because age correlates somewhat with other demographic factors (including income, education, and marital status) and so it is likely that the variation that would have been displayed in the age interactions was instead subsumed by the other demographic variables.

Second, not all costs are equally burdensome to everyone: the people who are burdened by the voter registration deadline are not demographically the same as the people who are burdened by the voter identification cost. In general, a more burdensome voter registration deadline tends to disadvantage people with traditionally higher levels of political resources (those who are more wealthy, male, and white) while a more burdensome voter identification requirement tends to disadvantage people with traditionally lower levels of political resources (low-income people, people who were not employed or worked only part-time, those who were not married or partnered, and women). This underscores the difference between transaction and information costs that I outlined in my second chapter and how they require different types of resources to overcome. An information cost such as the voter registration deadline is most likely to disadvantage potential voters who have little free time to spend on politics, and a transaction cost such as the voter identification requirement is likely to disadvantage potential voters who have few available monetary resources to devote to politics.

In addition, I find an important counterintuitive finding that not all increases in costs lead to decreases in turnout. In particular, I find that the turnout of some racial minority groups increases as costs (particularly the voter identification requirement) increase. I suspect that this is mostly due to a mobilization effect among these people. Given the sense that increased costs lead to decreased turnout, it may be that political groups (including campaigns, parties, and interest groups) make a special effort to mobilize minority voters in states that have high identification costs because they want to make sure their core electorate votes in elections.

Third, there are important differences in how people respond to cost changes in primary and general elections. As I have mentioned, primary and general elections do not have the same information costs—primary elections receive less media attention and so impose a higher information burden on potential voters—and people do not use the same set of considerations when deciding whether to vote in primary elections as they do in general elections. This means that a cost which a voter might be able to overcome in a general election would be insurmountable in a primary election. Furthermore, primary elections see less campaign activity and less mobilization than do general elections. This highlights the need to consider primary elections separately from general elections in turnout research.

While the analysis I have presented in this chapter is nationally representative and considers important voting costs, it does have some drawbacks. First, because of the nature of this data, I cannot examine costs that vary at the individual level using CCES data. In addition, there are important environmental factors I have not controlled for in these models. As I discussed in Chapter 2, there are reasons to believe that the community and campaign environment in which a person lives influences whether or not it is practical for him or her to vote. My next chapter is an attempt to overcome those limitations and present a more complete model of voter turnout.

CHAPTER 5: THE MICROTARGETING RESULTS

To further test my theory, I next use a dataset that allows me to better control for the campaign environment a person is voting in. The goal of this chapter is two-fold: I examine models that incorporate a wider range of factors which influence whether a person votes, and I assess other voting costs to see if they matter to turnout and whether they have differential effects similar to the effects seen in Chapter 4.

As I discuss in Chapter 2, an increasing amount of research demonstrates that the larger context a person votes in is important. It is not simply a potential voter's personal characteristics or voting costs that matter; community and campaign influences are important as well (Jacobson and Kernell 1981; Ansolabehere and Iyengar 1996; Freedman, Franz, and Goldstein 2004; Clinton and Lapinski 2004; Barreto, Segura, and Woods 2004; Cho, Gimpel, and Dyck 2006; Campbell 2006; Barreto 2007; Karpowitz et al. 2011). Thus, I have replicated the models from Chapter 4 with microtargeting data from Ohio and Pennsylvania so I can include variables that control for a person's community context and campaign environment (see Chapter 3 for a full description of this dataset).

While the microtargeting data allow me to create richer models of turnout than the CCES data and to examine additional voting costs, I must caution that the microtargeting data is not without its drawbacks. First, it incorporates only two states that typically see a lot of campaign activity, particularly in presidential elections. Thus, they do not perfectly replicate the campaign environment of all states. Second, this dataset has more missing

demographic information than the CCES data. Third, the respondents in this dataset were overwhelmingly white—91.22% of respondents were white, compared to only 6.08% who were black, 1.69% who were Hispanic, and 0.95% who were Asian. In fact, because the racial identity variable had so much missing data, I was unable to include it in my regression models. Fourth, I do not have enough data on primary elections to be able to run reliable models, so I must restrict my findings from this dataset to general elections. Fifth, this dataset has significantly fewer respondents than the CCES data. Because of this, the effects are not as reliable as those from the models that use CCES data.

Variations in Voting Costs

To illustrate the wide range of voting costs which potential voters encounter, I first present descriptive statistics on the voting costs that I found to be significant in the interaction regression models I created.²⁴ Similar graphs for the non-significant voting costs can be found in the Appendix. Both the information and transaction voting costs were significant in my analysis. It is evident from this analysis that not everyone encounters the same voting costs. First, in Figure 5-1 I show a density distribution of the distance that voters traveled to their assigned voting locations.²⁵ The distribution of this voting cost is extremely right-tailed; 75% of the respondents in my study lived 2.6 miles or less from their polling place, but a small handful of voters had to travel much longer

²⁴ I describe how each of the costs in this chapter were measured in Chapter 3.

²⁵ In my dissertation prospectus I ran similar analysis on a dataset that had both a polling place distance cost and an estimated polling place travel time cost. I found that distance correlated with estimated travel time at more than 91%. Estimating travel time is difficult and can be highly irregular, as it involves making assumptions about road conditions, traffic conditions, weather, and other factors. Because travel distance is a more reliable measure and correlates highly with estimated travel time, I have chosen to use the distance cost in the analysis for this chapter.

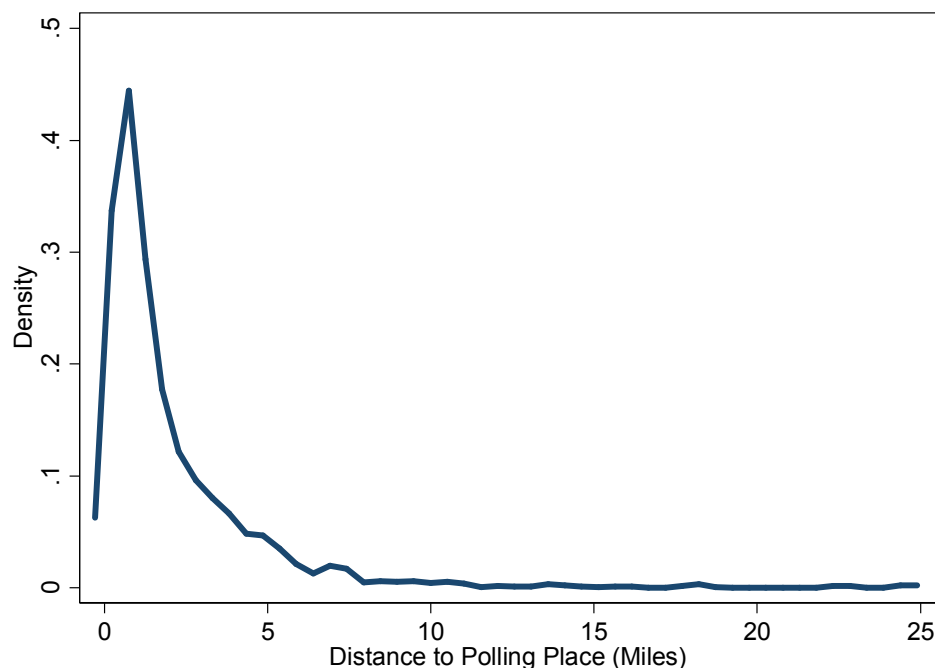


Figure 5-1: Variation in polling place distances

distances, in some cases up to 25 miles. The people who live more than a couple of miles from their polling places tend to be those who live in less-populated areas. This is demonstrated in Figure 5-2, which shows the distance to the polling place for people who live in rural areas (less than 2,500 residents in their city), urban clusters (between 2,500 and 50,000 residents), and urban areas (more than 50,000 residents).²⁶ This graph shows that people who live in urban areas and urban clusters tend to travel shorter distances to their polling places—in most cases a distance of one mile or less—than people who live in rural areas. Because rural areas are far more spread out and less densely populated, residents of these areas travel significantly longer distances. On average, rural residents

²⁶ These categories were defined by the U.S. Census.

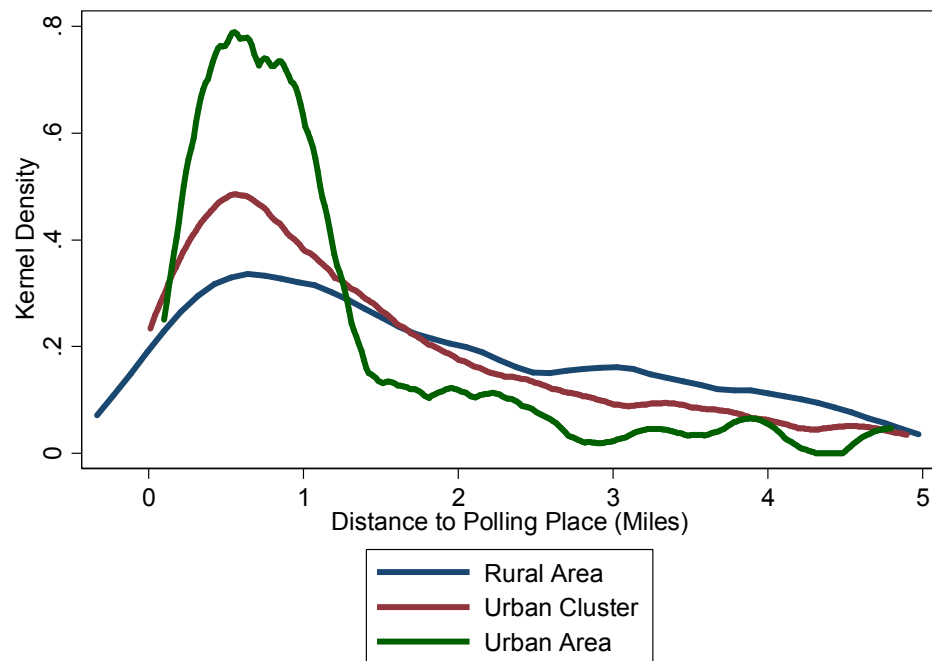


Figure 5-2: Variation in polling place distances by urbanicity

traveled nearly a mile more to their polling places (average of 2.7 miles) than did residents of urban clusters (average of 1.95 miles) or urban areas (1.78 miles).

Differences of means tests confirm that rural residents travel longer distances than urban residents ($p < 0.001$).

In addition, there are other important demographic variations that affect the distance people traveled to their assigned polling place. This is shown in Table 5-1, which displays an OLS fixed-effects regression model with the polling place distance that a respondent had to travel to his or her assigned polling place in the general election as the dependent variable while controlling for the respondent's demographics and the characteristics of the respondent's community, with fixed effects for the respondent's

Table 5-1: Regression of polling place distance on demographic and community factors

	Distance to Polling Place
Age	-0.002 (0.006)
Post-high school education	-0.747 (0.168)***
Income (low, medium, high)	-0.285 (0.160)*
Female	0.567 (0.164)***
Married/partnered	0.898 (0.239)***
Employment type	0.171 (0.107)
Community urbanicity	-0.021 (0.003)***
Community percentage of minorities	0.014 (0.010)
Community average age	0.008 (0.021)
Community percentage of homeowners	0.009 (0.008)
Community average education	-0.074 (0.097)
Community median income (thousands of dollars)	0.024 (0.008)***
Constant	1.792 (1.213)
Prob > F	0.0000
R ²	
within	0.1231
between	0.0018
overall	0.0759
<i>N</i>	903
<i>N of groups</i>	49

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Fixed effects for respondent's county and election year are not displayed in this table

county to account for other county-level variations that I cannot measure with the variables in my dataset.²⁷ While county-level election officials are the ones who determine where polling places will be located and which registered voters will be assigned to vote where—and presumably try to minimize both the costs of administering the polling places and the distances that individuals must travel to vote—this model shows that there are some important inequalities in how far people travel to their polling places. In particular, registered voters who have a post-high school education or higher incomes tend to have lower polling place distances, and registered voters who are female and married or partnered tend to travel longer distances. As shown in Figure 5-2, respondents who live in more urbanized areas also travel slightly shorter distances. Respondents who lived in wealthier communities travel slightly longer distances. The results of this model highlight that polling place distances are not equally distributed among all potential voters.

In terms of information costs, the number of offices and the number of ballot measures that respondents were asked to vote on in an election were statistically significant. Figure 5-3 shows a density distribution for the number of offices in general elections. While this particular cost ranged anywhere from three to 41 offices, most people in these elections were asked to vote on between ten and thirty offices in a general election, with an average of 20.95 offices. Figure 5-4 shows a histogram of the number of ballot measures people were asked to vote on, which ranged from zero to eleven; 90% of respondents voted on six ballot measures or less (with an average of 2.56 ballot

²⁷ I also ran similar models for the information voting costs I discuss in this chapter, but I did not find any statistically significant results. Presumably this is because the ballot-related information voting costs I discuss here are determined by forces outside of election officials' control.

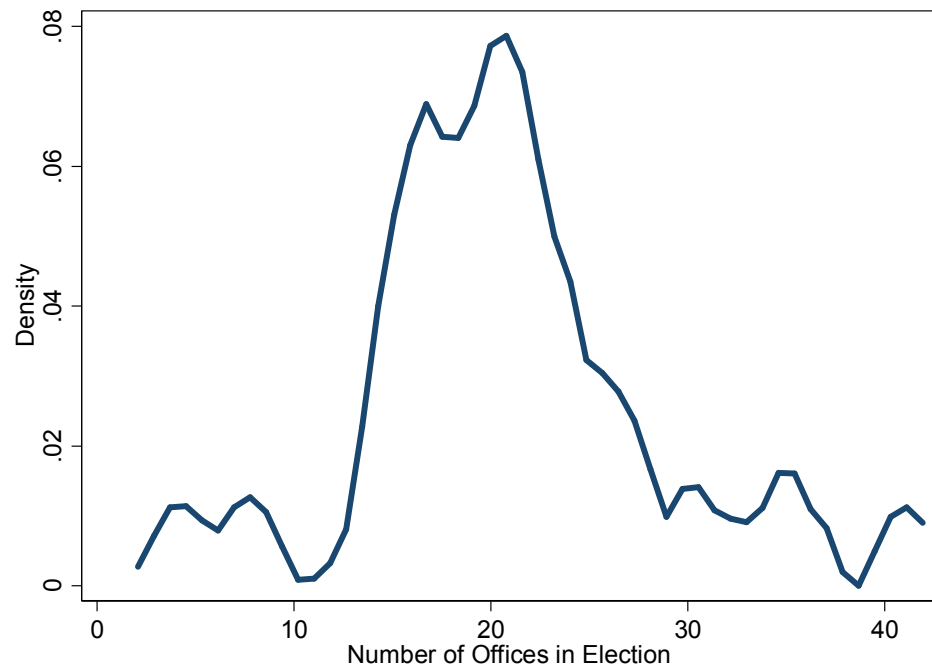


Figure 5-3: Variation in number of offices on ballot

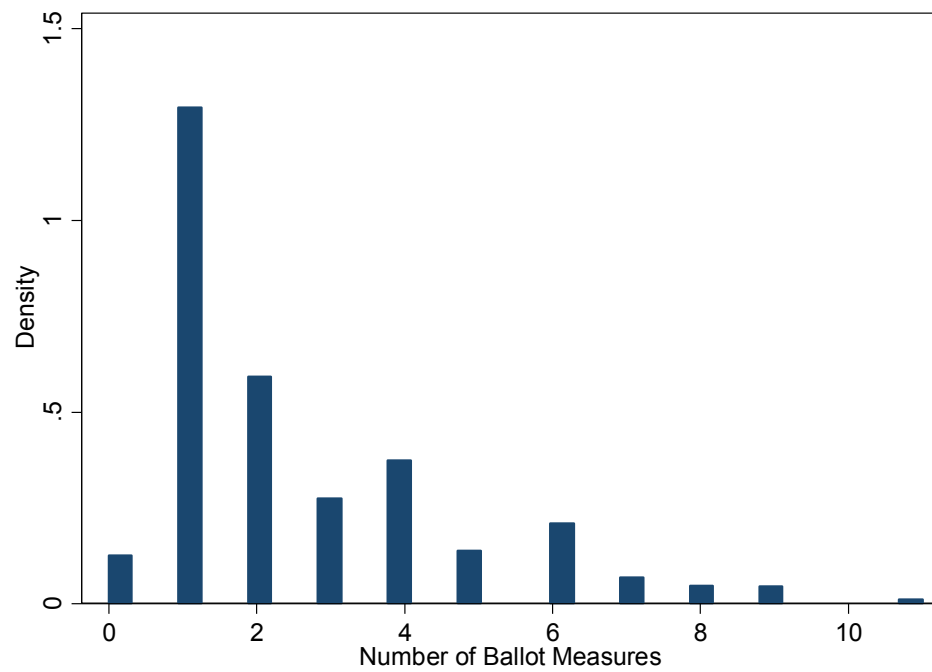


Figure 5-4: Variations in number of ballot measures

measures). These two figures show that while some people experience no or minimal informational voting costs, others are heavily burdened by costs. When respondents are asked to vote on so many offices and ballot measures, this places a heavy burden on the potential voters to gather information when compared to an election that has only one or two ballot measures or few offices. As my analysis will show, in some cases these increased information costs can lead people to choose not to vote at all in an election.

General Election Microtargeting Models

As I did in Chapter 4, before turning to the interaction models, I first wish to examine the demographic differences between voters and non-voters. These differences are shown in Table 5-2. Just as in Chapter 4, I find important differences between these two groups of people. In particular, those who voted were far more likely to be older than were non-voters. The average age among voters was 53.03 years, compared to 45.08 for non-voters—a difference of eight years. Voters were also significantly more likely to be college-educated and to be married or partnered. These findings match what I found in Chapter 4 using CCES data. However, there were not significant differences between voters and non-voters in terms of income, employment type, and gender in this dataset. This could be due to the unique demographics of Ohio and Pennsylvania that do not match national demographics—according to data from the 2010 U.S. Census, both states have fewer racial minorities, lower median incomes, and more people below the federal poverty level than the United States as a whole²⁸—or due to the fact that this data comes

²⁸ See <http://quickfacts.census.gov/qfd/states/39000.html> and <http://quickfacts.census.gov/qfd/states/42000.html> for a more thorough elucidation of the demographic differences between the United States as a whole and the states of Ohio and Pennsylvania.

Table 5-2: Demographics of general election voters and non-voters, microtargeting data

		General Voters	General Non-Voters
Age	18-34	12.99	31.19
	35-49	30.26	31.72
	50-64	30.82	20.92
	65-79	19.79	9.83
	80+	6.14	6.34
Education	HS or less	49.78	57.76
	Some college	50.22	42.24
Income	< \$20,000	12.33	15.21
	\$20K - \$80K	55.56	53.03
	> \$80,000	32.11	31.76
Employment	Self-employed	33.99	28.69
	Blue collar	10.35	14.02
	White collar	55.66	57.29
Gender	Male	46.67	48.36
	Female	53.33	51.64
Marital Status	Single	22.44	28.52
	Partnered	77.56	71.48

from different years than the CCES data. However, the findings in this table indicate that people who vote are demographically different than people who do not vote, providing an early indication that there is variation in voting patterns for my theory to explain.

I next include all of these demographic factors in a regression model to analyze which factors are most important in determining whether a person votes. To examine the robustness of this regression model, I have run several different versions. The results of the models are shown in Table 5-3. In Model 1 I have essentially replicated the CCES models from Chapter 4 by including the demographic, partisan, cost, and election year

control variables along with a variable measuring what percentage of previous elections the respondent voted in. As Model 1 shows, previous voting habits are by far the most important factor in determining whether one votes in an election, to the point that this variable far overpowers the influence of the other variables in the model. Model 2 in this table displays the same model with the voting habit variable removed, which essentially replicates the regression models from Chapter 4. Because the voting habit variable in Model 1 correlates with many of the demographic factors I use in my models and likely picks up the significance of the demographic factors, I have chosen to run the rest of my models without controlling for previous voting habits.

The results of Model 2 of Table 5-3 closely mirror the findings of the general election regression in Table 4-2. A respondent's age is strongly positively correlated with voter turnout, as are the respondent's income and employment type. Also, as expected, partisans were far more likely to vote than were independents. However, I did not find that a respondent's education was an influence on turnout in Model 2. That variable had a large positive coefficient, but it was not statistically significant in either Model 1 or Model 2. The final demographic variables in Model 2, gender and marital status, were as expected. The political science literature has not yet firmly established whether gender or marital status are statistically significant influences on turnout, and neither of these variables were significant in my model. In addition, much like Table 4-2, I find little evidence that costs are statistically significant in a regression model that does not incorporate interactions. Only the percentage of nonpartisan offices is statistically significant in Model 2. Overall, these results confirm the basic skew of turnout—more

Table 5-3: General election microtargeting turnout model with no interactions

	Model 1	Model 2	Model 3	Model 4
Age	-0.002 (0.015)	0.036 (0.009)***	0.040 (0.010)***	0.037 (0.010)***
Post-high school education	0.554 (0.432)	0.395 (0.279)	0.312 (0.292)	0.258 (0.300)
Income (low, medium, high)	0.349 (0.377)	0.464 (0.245)*	0.448 (0.270)*	0.415 (0.283)
Employment type	-0.345 (0.297)	0.367 (0.173)**	0.362 (0.180)**	0.428 (0.189)**
Female	-0.150 (0.419)	-0.135 (0.271)	-0.009 (0.284)	-0.087 (0.296)
Married/partnered	-0.818 (0.613)	0.328 (0.418)	0.352 (0.428)	0.378 (0.443)
Democrat	0.548 (0.529)	1.466 (0.356)***	1.556 (0.366)***	1.521 (0.384)***
Republican	0.312 (0.477)	1.469 (0.313)***	1.559 (0.327)***	1.704 (0.346)***
Percentage of previous elections voted in	10.394 (1.289)***			
Number of offices on ballot	-0.107 (0.087)	-0.058 (0.057)	-0.045 (0.061)	-0.044 (0.064)
Ratio of candidates to offices	-0.017 (0.015)	-0.002 (0.008)	-0.001 (0.009)	-0.003 (0.009)
Percentage of nonpartisan offices	0.057 (0.029)*	0.040 (0.018)**	0.044 (0.019)**	0.053 (0.020)***
Percentage of third- party candidates	-0.105 (0.087)	-0.068 (0.059)	-0.070 (0.061)	-0.069 (0.067)
Percentage of non- federal offices	-0.039 (0.092)	-0.008 (0.067)	0.018 (0.070)	0.009 (0.072)
Number of ballot measures	-0.282 (0.241)	-0.185 (0.143)	-0.219 (0.148)	-0.265 (0.150)*
Distance to polling place	-0.025 (0.146)	0.051 (0.080)	0.017 (0.080)	0.023 (0.082)
2002	-3.490 (1.986)*	-2.184 (1.280)*	-2.387 (1.331)*	-2.174 (1.498)
2004	0.835 (1.722)	1.525 (1.169)	1.499 (1.197)	1.253 (1.301)
2006	-2.187 (1.547)	-1.034 (0.940)	-1.099 (0.956)	-1.391 (1.041)
Community urbanicity			-0.008 (0.004)**	-0.009 (0.004)**

Table 5-3: General election microtargeting turnout model with no interactions, continued

	Model 1	Model 2	Model 3	Model 4
Community percentage of minorities			0.014 (0.019)	0.016 (0.020)
Community average age			-0.061 (0.033)*	-0.045 (0.035)
Community percentage of homeowners			0.001 (0.012)	-0.007 (0.013)
Community average education			0.193 (0.184)	0.179 (0.189)
Community median income (thousands of dollars)			-0.006 (0.012)	-0.004 (0.013)
Ad spending in respondent's media market (logged)				0.140 (0.308)
Constant	7.925 (9.295)	-0.187 (6.673)	-2.601 (6.909)	-3.542 (8.474)
R ²	0.58	0.23	0.24	0.26
N	529	556	556	521

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

resource-advantaged and well-off people vote to a greater extent than those who are resource-poor.

The unique nature of the microtargeting dataset also allows me to consider various community influences on a person's decision to vote. Model 3 in Table 5-3 includes variables controlling for respondents' community characteristics—the average age, education, and income; the racial makeup; and the stability and urbanicity of their community. These variables mirror the individual-level demographic variables I include in the regression models. Model 3 shows that few community characteristics matter to voter turnout. Only two variables were statistically significant: as the urbanicity of a

respondent's community increases, the respondent is slightly less likely to vote; and as the average age of a respondent's community increases, the respondent becomes slightly less likely to vote. Including these community factors does not change the significance of the demographic or cost factors or the coefficient sizes. This indicates that the community factors I have measured here are not very important in determining whether an individual votes. This does not mean that all community factors are unimportant, however. As experimental research has found, a community-wide norm of turnout is an important predictor of voting (Gerber, Green, and Larimer 2008; Green and Gerber 2010).

Finally, in Model 4 I control for the last factor—a logged measure of campaign spending. The data for spending was provided by the Wisconsin Ad Project and measures the totality of all campaign advertising spending in the respondent's media market in each election. However, I find that this variable is not a significant predictor of turnout. Moreover, including the campaign spending measure does little to change the demographic and cost variables. In Model 4, age and employment type are still statistically significant, though income is no longer significant. In addition, the percentage of nonpartisan offices remains significant in addition to the number of ballot measures in the election. Because Model 4 represents a much better way of accounting for the context a person is voting in, the remainder of the regression models in this chapter are based on this model specification.

The several models shown in Table 5-3 demonstrate that the relationship between demographics and turnout remains robust across different model specifications and that many of the demographic influences are in line with predictions made by previous scholars of voter turnout. In addition, these models show similar patterns as the CCES

turnout models: voting costs appear to have only marginal significance, and turnout appears to be largely driven by individual-level influences, including demographic and partisan factors. However, as I show in the remainder of this chapter, a turnout model that only controls for demographics and costs without interacting the two factors does not fully explain turnout.

Interactions between Voting Costs and Demographics

The first interaction I explore with this dataset is between the respondents' age and the distance they travel to their assigned polling place. This interaction is shown in Figure 5-5.²⁹ Like the graphs used in Chapter 4, this graph traces the estimated likelihood of voting for respondents based on their education level as the distance they travel increases from zero miles to five miles.³⁰ Figure 5-5 shows very similar effects as the graphs I discussed in Chapter 4, although the effects cannot be estimated as reliably because of the smaller size of this dataset. This figure demonstrates that not all people respond the same when this voting cost is increased. For people who have a high school diploma or less education, as the distance to their polling place increases they become

²⁹ The regression model this graph is based on, as well as the other interaction regression models used in this chapter, can be found in the Appendix. Like the graphs used in Chapter 4, any variables that are not being varied in the interaction terms are held constant at their mean or modal values. This meant a married, female respondent who was 50.97 years old; made between \$20,000 and \$80,000 per year; had a white-collar job; was a Democrat; traveled 2.06 miles to her polling place; voted on 20.95 offices, 2.04 candidates per office, and 2.56 ballot measures in the election (37.09% of which were nonpartisan offices, 12.63% of which were third-party candidates, and 87.18% of which were non-federal offices); lived in a community that was 66.53% urban, 11.83% racial minorities, 62.47% of whom had lived at their address longer than seven years, had an average age of 37.91 years, had on average 12.76 years of education, and had a median income of \$49,109; and saw \$1.94 million in campaign advertising spending in their media market.

³⁰ While some respondents travel more than five miles to their polling place, this is far outside the norm. I have restricted this graph to show distances from zero to five miles because very few respondents travel farther than this, so there is not enough data to reliably estimate interactions effects at distances longer than five miles. I have likewise not displayed extreme outliers in the interaction graphs I show in this chapter to avoid making estimations based on insufficient data.

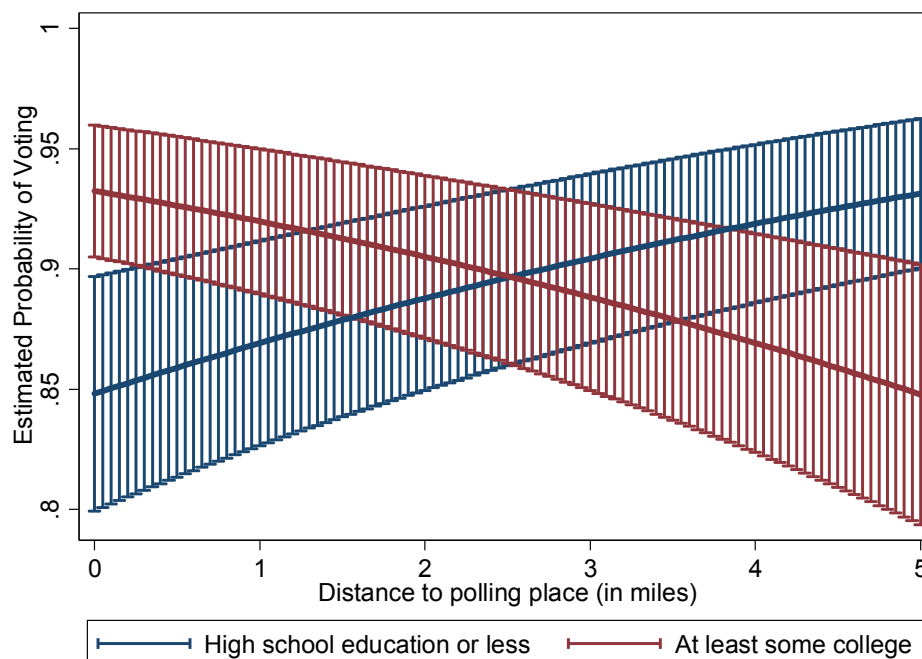


Figure 5-5: Interaction between respondent's education and polling place distance in general election

more likely to vote. Their estimated probability of voting, according to my models, increases from 85% to 93% as the polling place distance increases to five miles, an increase of eight percentage points. For people who have at least some college education, their estimated probability of voting decreases by a similar amount—from 93% to 84%—as the distance to their polling place increases.

This mirrors my findings from Chapter 4 in that certain groups of people are less able to overcome increases in voting costs, but this finding is surprising. Based on the theory I outlined in Chapter 2, I would expect potential voters with traditionally high levels of political resources, including those who have higher education levels, to be

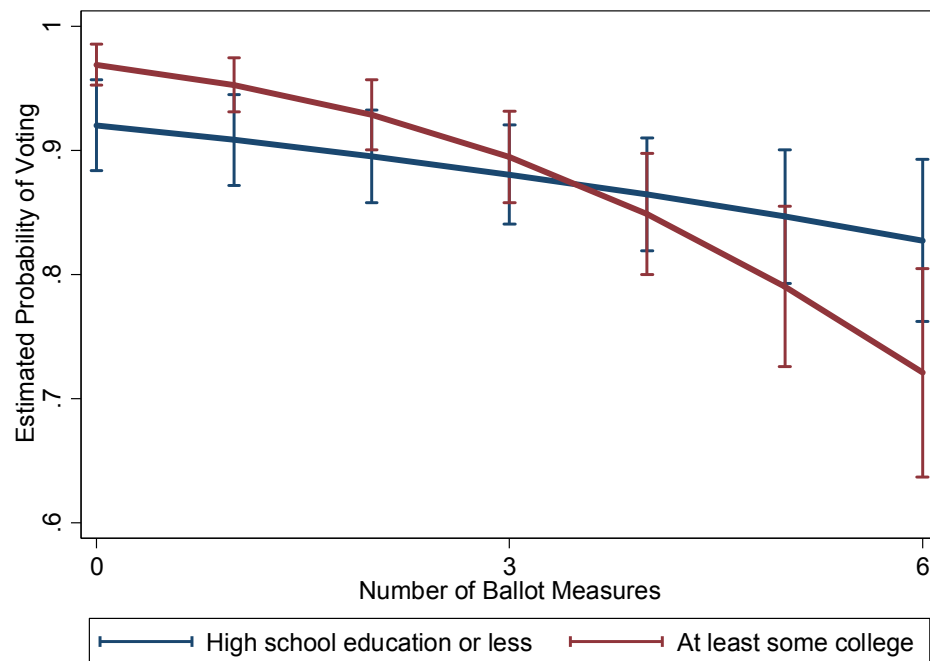


Figure 5-6: Interaction between respondent's education and number of ballot measures in general election

more equipped to handle increases in transaction costs than information costs. This is because increases in transaction costs such as polling place distance typically require some sort of monetary investment to overcome, whereas increases in information costs typically require an investment of time to overcome. Highly educated people tend to have higher employment rates and more stable jobs which would allow them to overcome an increase in monetary voting costs. It is also surprising that less-educated potential voters have such a marked increase in their turnout even as this cost of voting increases. While the interaction between education and distance was statistically significant, I did not find significant interaction effects between polling place distance and other demographic variables (age, income, occupation type, gender, and marital status).

I also found statistically significant interaction effects between the respondents' education levels and the information costs of voting, particularly in the number of ballot measures in the election. This interaction is shown in Figure 5-6. This graph shows that people who have some college education experience a sharper decrease in their estimated turnout levels than do people with a high school education or less. As the number of ballot measures increases from zero to six, the estimated turnout of respondents with no more than a high school education decreases only slightly, from 91% to 87%. However, more highly educated respondents see a turnout decrease of more than twenty points, from 98% to 77%. The effects in this graph are more in line with what my theory would predict. All respondents experience some decrease in their turnout as this voting cost increases since it means they must expend more effort gathering information in order to cast their ballot. However, more highly-educated voters are more likely to decide not to vote as this cost increases. Perhaps these educated voters put a higher premium on their time than do less-educated voters, meaning that as voting becomes more burdensome on their time they are less likely to decide that it is worthwhile for them to vote.

I also find similar effects when I look at the interaction between respondents' occupation type and the number of ballot measures in an election, shown in Figure 5-7. This figure displays the differences in the estimated probability of voting for respondents who are self-employed, employed in blue-collar occupations, and employed in white-collar occupations as the number of ballot measures in an election increases. This graph shows that while estimated turnout among self-employed respondents stays fairly stagnant at 76% as this voting cost increases from zero to six ballot measures, turnout among respondents who are employed in blue-collar or white-collar jobs decreases

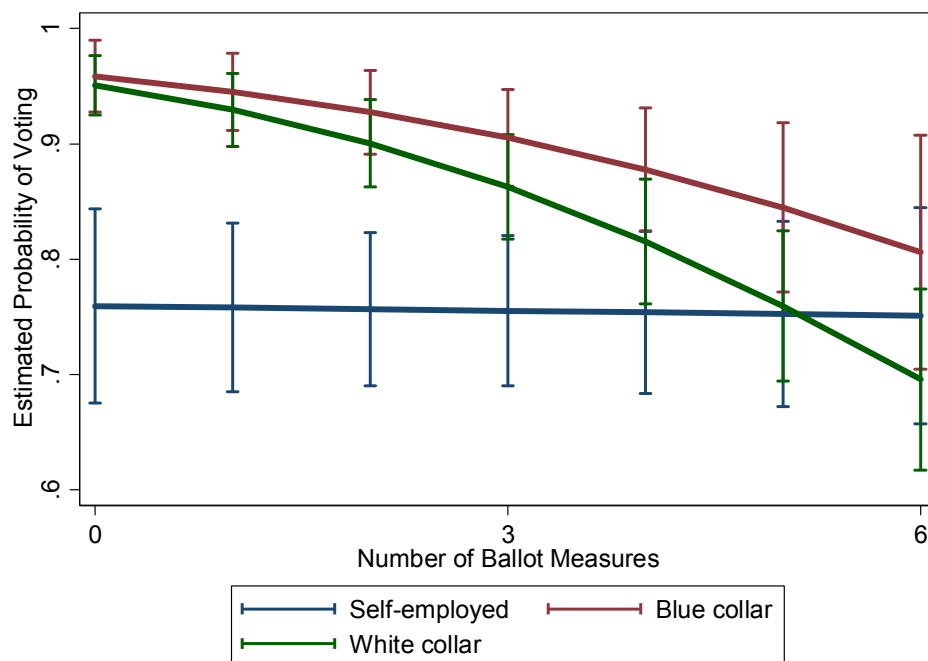


Figure 5-7: Interaction between respondent's occupation type and number of ballot measures in the general election

markedly. Blue-collar respondents experience a turnout decrease from 95% to 82%, and white-collar respondents experience an even larger turnout decrease from 95% to 70%. This again confirms my previous findings that high-resource potential voters tend to be more affected by the voting costs that require them to spend more time on voting, and low-resource potential voters tend to be more affected by voting costs that require them to spend more money on voting. Because increasing the number of ballot measures that people are asked to vote on puts a higher burden on them to gather information, people who place a high premium on their time—including those who work longer hours—are less likely to vote when this particular voting cost is increased.

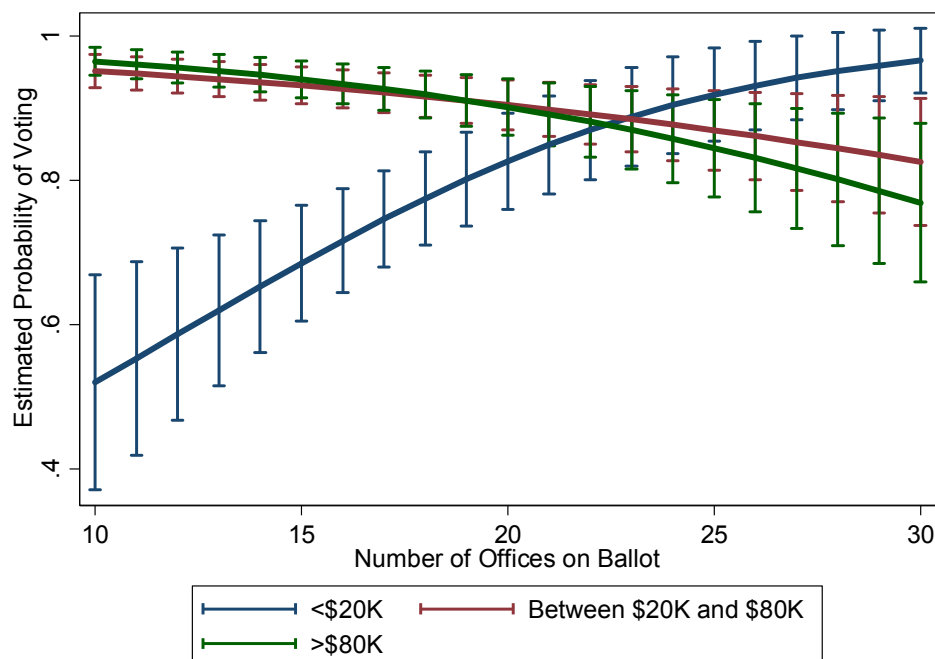


Figure 5-8: Interaction between respondent's income and number of offices on ballot in general election

A final significant interaction was between the respondent's income and the number of offices on the ballot in the general election. This interaction is shown in Figure 5-8. This figure shows distinct differences in turnout patterns according to a respondent's income. Low-income respondents—those making less than \$20,000 per year—saw a fairly large increase in their turnout as the number of offices on the ballot increased, from an estimated 52% probability of voting at ten offices to a nearly 100% estimated probability of voting at thirty offices. At the same time, turnout among higher-income respondents decreased. When there were ten offices on the ballot, respondents making more than \$20,000 annually were nearly always likely to vote, and as the number of offices on the ballot increased to thirty offices, these people became nearly twenty

percentage points less likely to vote, with respondents making more than \$80,000 experiencing a slightly larger decrease in turnout than respondents making between \$20,000 and \$80,000. Like Figures 5-6 and 5-7, this confirms that high-resource respondents were especially affected by the information costs of voting and that increases in information costs were most likely to cause these respondents not to vote.

However, not all information costs were statistically significant in my models. In particular, the ratio of candidates per office, the percentage of nonpartisan offices, the percentage of third-party candidates, and the percentage of non-federal offices in the election were not statistically significant in any of the interaction models. There are several possible reasons why these particular costs were insignificant. First, even if a candidate is running for an office that is listed on the ballot as non-partisan, they may still campaign as a partisan. This essentially negates the informational voting cost for that office. Second, many non-partisan offices have only one candidate running, which again means that only minimal information costs are imposed on voters for these offices. Third, potential voters may be largely unaware of the magnitude of these voting costs. They may simply not pay attention to down-ballot races, including those for non-federal and non-partisan offices or third-party candidates running against candidates from one of the two major political parties. If people are not aware of these costs, then they do not factor into their cost/benefit voting calculation. Even if people are aware of these costs, they can choose not to cast a vote for the offices or candidates that they are unfamiliar with, meaning that it is not necessary for the respondents to gather this information before they decide whether to vote. Unfortunately, I do not have information on whether respondents actually cast their vote on all the items on the ballot in these elections—only whether

they showed up to vote in the election—so I cannot say for certain why these particular voting costs were unimportant. However, a number of other scholars have found that voters are less likely to cast a vote as they move down the ballot to less well-known elections or as they become fatigued, a concept known as “roll-off” (Bowler, Donovan, and Happ 1992; Selb 2008; Augenblick and Nicholson 2012).

In addition, there were several demographic variables I studied that were insignificant in the interaction models. I found no significant results for interactions with a respondent’s age, gender, or marital status. The results for the age interactions could be partially explained by the fact that age correlates with some of the other demographic factors in my study, particularly with education, income, and occupation type. In addition, because I did not find any strong interaction effects with age in the CCES models, I am not particularly surprised that age was not significant in the microtargeting models. However, given that gender and marital status were significant in some of the CCES models, it is perhaps puzzling why these variables do not show any significant interaction effects in the microtargeting models. It may be that because this dataset had far fewer respondents, the effects were not statistically significant. It might also be due to unique dynamics within the states of Ohio and Pennsylvania. Because these states see much more campaign activity than most other states in the country, perhaps the cost/benefit calculation that potential voters use is different in some way. However, the other findings I present in this chapter provide an important test of my theory.

Conclusions

The findings I have discussed in this chapter provide another important test of my theory that potential voters are not equally equipped to handle increases in voting costs. I find that these interactions are statistically significant and are driving changes in voter turnout, particularly when I examine education, income, and employment type and how they interact with the distance these people must travel to their assigned polling place, the number of offices on the ballot in the election, and the number of propositions and initiatives on the ballot in the election. To generalize the findings I have presented here, it is evident that higher-resource potential voters, meaning those who are more educated, have higher incomes, and have higher-status jobs, are disadvantaged by both the transaction costs of voting and the information costs of voting. This is very much in line with what my theory predicts. Information costs, in particular, generally must be overcome by expending extra time, and if these people put a high premium on their time, then they are more likely to decline to vote as these costs increase. However, I do not find similar results among lower-resource potential voters. While my theory would predict that these voters would be most disadvantaged by transaction costs, which generally require some sort of monetary expenditure to overcome, in fact I find that there is no common reaction to increases in voting costs. Lower-resource voters experienced decreases in their predicted turnout as some costs (ballot measures) increased, but they actually became more likely to vote as other costs (polling place distance, number of offices on ballot) increased.

The results I have presented here also correlate very well with the findings from the CCES models in Chapter 4. As in those models, the analysis I have shown here

demonstrates that increases in voting costs are not always tied to decreases in turnout—in fact, in some cases turnout can increase even as voting becomes more costly. My findings from Chapter 4 indicated that racial minorities were primarily the people whose turnout increased as costs increased, leading me to conclude that there was some mobilization effect working to counteract the increased voting costs. However, in this chapter I have shown that people with traditionally low levels of political resources—those who make less than \$20,000 per year or who have a high school education or less—tend to be more likely to turn out as the costs of polling place distance and number of offices on the ballot increase.

The analysis I have presented here shows that the interaction terms that I described in Chapter 2 exist across a broad spectrum of voting costs. In Chapter 4 I examined how state-level factors (voter registration deadline and voter identification requirements) interact with demographics, and here I have examined factors that vary on the county or individual level. This analysis shows that no matter the source of the cost, not all people are equally equipped to overcome increases in voting costs. In addition, the control variables for community and campaign factors that I have included in these models show that the interaction effects which my theory predicts still exist even when a broader range of turnout influences are controlled for. Most previous models of turnout have focused on only a few factors, and very few scholars have been able to control for the broad range of factors that I have examined in this chapter. The models that I have shown in this chapter represent one of the most comprehensive examinations of voter turnout to date.

However, I must reiterate that these models are not without their drawbacks. I could not include variables measuring the respondents' race, and the sample of this dataset restricts me to only two states that see a lot of campaign activity and may not be representative of other states. I also cannot estimate models for primary elections due to insufficient data. Most importantly, the microtargeting data have a much smaller sample size than the CCES, and I expect the effects I show here to be overestimated. Regardless of this, the results I have discussed in this chapter provide an important test of my theory. They show that certain types of people tend to be disadvantaged by increases in voting costs, and there are important demographic inequalities in who tends to opt out of the voting process as costs increase.

CHAPTER 6: CONCLUSIONS

In the two preceding chapters, I presented persuasive evidence to support the theory I laid out in Chapter 2: that a person's response to changes in voting costs is mediated by his or her political resources (as measured by their demographic characteristics) and that not all voting costs affect potential voters in the same way. I found that most demographic characteristics, except a respondent's age, show significant interactions with several of the costs of voting. Furthermore, people with traditionally higher levels of political resources—meaning those with higher education levels, higher incomes, and white-collar or full-time occupations, and those who are male and white—are more likely to avoid voting when information costs, including voter registration deadlines and the length of the ballot in the election, are increased. In contrast, people with traditionally lower levels of political resources—those who have lower education levels or lower incomes, and those who are racial minorities—are primarily disadvantaged by the transaction costs of voting, such as requiring voter identification. This supports my hypothesis that high-resource people tend to have the largest decreases in turnout when voting costs require them to spend more time on voting, and (to a lesser degree) low-resource people tend to have the largest decreases in turnout when voting costs require them to spend more money on voting.

The results I have presented in this dissertation confirm what many previous studies of turnout have found, namely that there are important correlations between certain demographic characteristics and the propensity to vote and that altering the costs

of voting leads to changes in turnout on the individual level. However, my results take the previous findings a step further by reconciling two divergent strands from the political science literature and testing the theory of how demographics and voting costs interact to affect voter turnout. I have been able to test several important costs that people face when going to the polls and also test how several demographic characteristics interact with these voting costs. These interactions are statistically significant even when I control for community and campaign influences in the election. This analysis closely replicates the environment that people vote in and shows that my findings are robust.

These results also have many practical implications. First, they suggest that scholars are missing important findings by not including interaction terms in models of voter turnout. The regression models I presented in Table 4 of Chapter 4 and Table 3 of Chapter 5 replicated traditional models of turnout by regressing respondents' demographics and voting costs on their turnout, and the models in Chapter 5 also accounted for their community's characteristics and the campaign environment they are in. When I examine these models with no interaction terms, my findings are very similar to what other scholars have found, namely that there are strong correlations between certain demographic characteristics and voter turnout. However, when I include interaction terms between respondents' demographic characteristics and the voting costs they encounter, I find important and significant interaction effects. These findings highlight that scholars cannot assume that all people react in the same way to voting costs. It is important for researchers who study turnout to be aware of how different demographic groups respond to changes in voting costs, which people are being

disadvantaged by a particular type of voting cost, and how that influences turnout on the individual level.

Another important implication is for the election officials, interest groups, and other political actors who (presumably) want to increase voter turnout in the United States. As I have shown in this dissertation, both the type of voting cost and the magnitude of voting cost matter in determining turnout. In the remainder of this chapter, I look individually at the four voting costs I have examined in my models and make suggestions about how these costs can be structured so that voter turnout is both maximized and representative of the population at large.

Ways to Reform Voter Registration Costs

As I discussed in Chapter 2, every state except North Dakota requires its citizens to register before they are allowed to vote in an election. Each state sets its own registration deadline and devises its own system for tracking and updating its lists of registered voters, although the National Voter Registration Act of 1993 requires that states must set their deadlines no earlier than thirty days before a primary or general election. As my analysis in Chapter 4 shows, earlier registration deadlines affect some potential voters more than others. Males, higher-income voters, and blacks are particularly affected by increases in these costs in general elections and have sharper decreases in their predicted level of turnout than do their female, lower-income, and white counterparts. The turnout decreases in primary elections as the voter registration cost increases are not as strong as in general elections.

One important way that states can minimize the impact that this cost has on their turnout is to allow same-day voter registration, which would allow voters to register to vote on the day of the election. These voters who register on election day cast a provisional ballot which is then formally counted once their eligibility to vote is verified. Academic studies have verified that same-day registration is effective at reversing declining voter turnout rates (Burden and Neiheisel 2010) and furthermore that states with same-day registration have turnout rates approximately ten percent higher than states that do not have same-day registration. Allowing same-day registration is particularly effective at increasing participation among racial minorities, non-native citizens, those who moved residences six months or less before the election, and voters between the ages of 18 and 25 (Alvarez, Ansolabehere, and Wilson 2002). Allowing for same-day voter registration would combat the turnout declines that I find among male and high-income potential voters. These people are inclined to vote if the time burdens placed on the act of voting are low. If people are allowed to register at the same time that they vote, this would remove the time burden for these voters and potentially increase their likelihood of turning out to vote.

Another important finding from my research is that blacks find it particularly difficult to vote as registration costs become more burdensome. While some of this decline could be reversed by allowing for same-day registration, another way to encourage blacks to vote is by loosening restrictions that many states have which bar felons from voting. All states except Maine and Vermont³¹ currently place some

³¹ These states allow convicted felons to vote by absentee ballot while in prison and in-person voting rights are restored once felons complete their prison sentences.

restrictions on the voting rights of those convicted of felonies. Thirteen states allow felons to regain their voting rights after they have served their time in prison. Twenty-four states allow felons to regain their voting rights after they have completed their prison sentences and their parole or probation requirements. However, eleven states—Alabama, Arizona, Delaware, Florida, Iowa, Kentucky, Mississippi, Nevada, Tennessee, Virginia, and Wyoming—can restrict felons’ voting rights permanently, particularly for certain egregious crimes like murder, sexual offenses, treason, or bribery.

Given that some of these states have very high percentages of their population in the correctional system and that studies show that blacks experience higher incarceration rates than other ethnic groups (Golinelli and Minton 2014), this means that a substantial percentage of people in this country, particularly blacks, are in danger of losing their voting rights either temporarily or permanently. This is supported by my finding that blacks are particularly disadvantaged by burdensome registration costs. Recent research shows that being incarcerated substantially reduces the likelihood that a person will re-register to vote and participate in elections (Gerber et al. 2013). Because felons are disproportionately poor and racial minorities, this tends to reduce the share of the Democratic vote and could even change the outcome of some elections (Uggen and Manza 2002). However, recent experimental evidence shows that turnout rates among ex-felons can be raised by implementing measures such as automatically restoring voting rights (Meredith and Morse 2014) and informing them of their right to vote (Gerber et al. 2013).

There are other changes that can be made to states’ voter registration systems which would maximize turnout and also reduce costs for election officials. In particular,

the way that voter registration is managed in the United States is problematic and leads to many inefficiencies. The Pew Center on the States notes that:

In the 2008 general election, an estimated 2.2 million eligible Americans were unable to cast ballots due to problems with their voter registrations. Outdated and inaccurate voter rolls and a heavy dependence on new voter registrations submitted by unregulated third-party groups led to troubling questions about the integrity of our elections. To make matters worse, antiquated paper-based registration systems imposed unnecessary costs and administrative burdens on state and county election offices already facing severe constraints (Pew Center on the States 2010).

There are ways to mitigate these burdens on election officials. Mann and Ornstein (2012) suggest modernizing and standardizing the systems that states use to track voter registration. They point out that voter registration is burdensome and costly both for voters and for election officials who must spend valuable time and resources on maintaining, updating, and occasionally culling their records to ensure that their registration list is up-to-date on the day of the election. This takes attention away from administering the election itself.

Mann and Ornstein suggest that states move to an online-based registration system rather than paper-based. This would make it easier for voters to register, and it would reduce data-entry errors and records processing time for election officials. The National Conference of State Legislatures states that as of April 2014, 19 states offer online registration to all their citizens, three states offer limited online registration, and an additional four states have passed legislation to create online voter registration systems.³² Research suggests that states which move to online-based registration systems experience

³² See <http://www.ncsl.org/research/elections-and-campaigns/electronic-or-online-voter-registration.aspx>.

large reductions in the costs of administering their voter registration rolls. For example, Arizona estimated that it spent 83 cents registering a voter by a paper-based registration system and only three cents registering a voter online. This suggests that online registration can drastically cut the costs of administering elections. In addition to online registration, Mann and Ornstein recommend that states contract with private companies to maintain their voter lists³³ and to allow for same-day registration. I concur with their suggestions and believe they would lead to a more equitable registration system that poses a minimal burden to voters.

Another potential way to reform voter registration costs is to do away with them altogether, as North Dakota does. While this is a simple way to eliminate registration costs, and it certainly works for the state of North Dakota, I do not advocate doing this. Our legal and constitutional system places certain restrictions on who is allowed the privilege of voting in our elections—the 14th Amendment to the U.S. Constitution stipulates that only U.S. citizens, either born or naturalized, may vote in federal elections, and the 21st Amendment to the Constitution stipulates that voters must be legal adults who are at least 18 years of age. State and local election officials place additional restrictions on voting—many states require their voters to have lived in the jurisdiction for a certain amount of time, or to be non-felons, or to be mentally competent and capable of casting a vote. I agree that voters in our elections must meet these minimum

³³ Mann and Ornstein also note that this has the advantage of limiting partisan manipulation of the voter rolls. Anecdotal stories abound of partisan election officials removing eligible and registered voters from the voter rolls, whether by accident or on purpose, particularly if the voter is registered with the opposition party. These accusations have been made in Colorado, Florida, Indiana, Michigan, Nevada, North Carolina, Ohio, Pennsylvania, and Virginia. Presumably non-partisan private companies would have fewer incentives for engaging in registration shenanigans like this.

requirements, but this also means that there must be a way to verify a person's eligibility before their vote is counted. The reforms I have suggested above—moving to an online-based registration system, loosening felon voting restrictions, and allowing for same-day registration—will strike a balance between ensuring that only eligible citizens are allowed to vote while also minimizing the burden placed on them.

Ways to Reform Voter Identification Costs

In the past few elections, many states have begun either requesting or requiring their voters to show photo identification before they are allowed to vote. An increasing number of states have been instituting these requirements—research from the Brennan Center for Justice shows that eleven states have introduced legislation that would either establish or strengthen voter identification laws just in 2014 alone (Brennan Center for Justice 2014). As I show in Chapter 4, about half of voters nationwide in my study were not subject to any identification requirement, and half lived in states that had an identification requirement (ten percent were merely asked to show identification and forty percent were required to show identification). My analysis shows that these identification costs have different effects on different demographic groups. In general elections, people with high incomes, people who were employed part-time or not employed, and people who were single or divorced or widowed had steeper turnout declines than their low-income, full-time employed, and married or partnered counterparts as identification requirements became more stringent. However, contrary to the conventional wisdom, I found that Hispanics and Asians actually had higher turnout rates as this cost increased in general elections. I found no statistically significant turnout

differences when examining black respondents. In primary elections, however, minority respondents were especially disadvantaged by having to show photo identification. In these elections, turnout among black and Hispanic respondents decreased by several percentage points.

Since the conventional wisdom is that requiring photo identification disadvantages racial minorities who are less likely to have a passport or driver's license, my findings are surprising. The finding that turnout increases for racial minorities as identification requirements become more burdensome in the general election can perhaps be explained by interest group mobilization in elections. It could be that outside groups are working to counteract the potential turnout-decreasing effects of identification laws by increasing their mobilization efforts among racial minorities as states make their identification requirements in elections more strict. However, this does not explain the turnout decline among the same racial minorities in primary elections. Perhaps the interest groups that work hard to counteract identification requirements in general elections do not have the resources to also mobilize minority voters in primary elections. My findings do indicate, however, that voter identification requirements are working to depress turnout among certain demographic groups in elections.

The primary objection to requiring voters to show identification is that it functions as a type of poll tax. It costs both time and money to obtain the necessary citizenship documents and file the paperwork to get a government-issued photo identification card. For certain people, poverty and geography make it difficult or even impossible to obtain a photo identification without a significant burden. They may not be able to afford to order a certified copy of their birth certificate or may live far enough from the post office or

Department of Motor Vehicles to make it difficult for them to apply for their identification without taking significant time off of work.

Mann and Ornstein (2012) suggest that the effects of identification laws can be counteracted by making identification and documents (including Social Security cards and birth certificates) available for no charge. In addition, states can also expand the types of photo identification they accept. While most states with these requirements accept only government-issued photo identification (such as a driver's license, passport, or military identification), allowing university-issued photo identification would make it easier for college students to vote. Another reform suggested by Mann and Ornstein is to allow voters who do not have an approved identification to cast a provisional ballot that can be counted after the voter's signature is matched with the signature on file with his or her voter registration or after identity is otherwise verified. Some states unfortunately require further action on the part of the voter before a provisional ballot is counted in an election, such as returning to an election office to show identification within a few days of the election. Since my results show that requiring voters to take extra steps to participate in elections means they are less likely to vote, it is clear that these strict photo identification requirements will only further depress turnout.

It is also worthwhile to ask why states have photo identification laws at all if they negatively affect turnout. The most common argument in favor of requiring voters to show identification is that it deters voter fraud by making it more difficult to impersonate another voter and cast a ballot without authorization. However, there is no evidence of in-person voter fraud on any scale, let alone a large one. The instances of confirmed in-person voter fraud are isolated cases—an extensive study of four elections in Wisconsin

uncovered only one case of voter-impersonation fraud that occurred by absentee ballot and no cases of in-person fraud,³⁴ and a study of the 2006 election in Georgia similarly found no evidence of ballots being cast illegally (Hood and Gillespie 2012). Furthermore, recent research confirms what many opponents of identification laws suspect, that some states are instituting these laws specifically to disadvantage minority and Democratic voters. Bentele and O'Brien (2013) state that "proposal and passage [of restrictive voter access policies] are highly partisan, strategic, and racialized affairs."

If there is no systematic evidence of voter impersonation at the polls, there is no reason to require millions of potential voters to go to the expense of obtaining a photo identification. These laws mainly serve to make it more difficult and costly for millions of people to vote. A 2006 survey from the Brennan Center for Justice found that approximately 11 percent of U.S. citizens do not have a government-issued photo identification and that a disproportionately high percentage of the elderly, those with low incomes, and racial minorities lack such identification. The same survey found that seven percent of U.S. citizens do not have ready access to documents that would prove their citizenship so they could obtain a photo identification and furthermore that people with low incomes are less likely to have citizenship documentation. An additional problem is that people may have outdated identification or citizenship documents that do not reflect their current name or address. This is a particular problem for people who have changed their names because of marriage or divorce or for those who move frequently. Although Mann and Ornstein (2012) suggest that the costs voter identification requirements placed

³⁴ *Ruthelle Frank v. Scott Walker*, 11-CV-00128 (District Court of Wisconsin 2014).

on individuals could be mitigated by making photo identification and citizenship documents available for free, this would still place a large burden on government officials to process these requests.

Given that photo identification requirements are costly for individuals and for the government, do not prevent voter fraud, and discourage many people from turning out to vote, I recommend that states repeal these laws. Fortunately, many judges agree that identification laws pose an undue burden. In 2013 and 2014, five states (Arkansas, Pennsylvania, Missouri, Texas, and Wisconsin) had their identification requirements overturned by state or federal judges. However, many state legislatures are currently considering legislation that would enact identification laws (Illinois, Iowa, Maryland, Massachusetts, Minnesota, Nebraska, New York, and West Virginia) and/or strengthen existing laws (Alaska, Colorado, Kentucky, Missouri, New Hampshire, and Oklahoma). In light of my findings, it is my hope that states will reverse these trends and recognize that voter identification laws place too much of a burden on individual voters and pose a risk to turnout levels.

Ways to Reform Polling Place Distance and Location Costs

In Chapter 5 I show that the distance a person travels to his or her assigned polling place has an important and statistically significant effect on whether that person votes. In particular, I found that more highly-educated respondents experienced a decline of ten percent in their estimated probability of voting as the distance to their polling place increased from zero to five miles. I also found that these distance costs are not distributed equally. People who live in urban areas, are more educated, and have higher incomes

tend to live much closer to their polling places, and women and married respondents tend to live farther from their polling places.

These findings highlight the important role that election officials play in determining where polling places are located. Officials must balance several concerns simultaneously when deciding where polling places will be located and who will be assigned to vote at them. They must find polling places with rooms large enough to set up several voting machines and a check-in table and with sufficient parking for hundreds of voters and poll workers, that are compliant with the Americans with Disabilities Act and can accommodate voters with mobility needs, and that are centrally-located. This is no easy feat. It can be difficult to find adequate polling places while still keeping election administration costs low. To make matters worse, research shows that moving a polling place to a new location or reassigning precincts imposes additional search costs on voters as they must re-learn where their new polling place is (Haspel and Knotts 2005, Brady and McNulty 2011).

This leads me to suggest that election officials re-think the way they choose polling places and assign precincts. One way to better manage polling sites is to allow for additional early and absentee voting. States have increasingly loosened their restrictions on voting early or by absentee ballot in the past ten years by allowing for no-excuse early or absentee voting,³⁵ allowing for more early voting times, and allowing voters to register

³⁵ States that require an excuse before they allow a person to vote early or by absentee ballot require a person to furnish an excuse regarding why they cannot vote on election day. These excuses may include being on active military duty, traveling out of town on election day, or being physically incapacitated or otherwise unable to go to their assigned polling place. Other states are categorized as having no-excuse early or absentee voting, which means that they allow their citizens to vote early or absentee without providing an excuse why.

as permanent absentee voters and have an absentee ballot automatically mailed to them in each election. These reforms serve the two-fold purpose of minimizing polling place distance costs for voters (especially in the case of absentee voting) and minimizing election administration costs for officials. However, research has shown that these reforms tend to increase turnout among those who are already predisposed to vote (Karp and Banducci 2000).

Another novel reform that is being tested in some election jurisdictions is the vote center. Rather than using precinct-based voting in residential areas, vote centers are typically located near major population centers and do not use the precinct voting system. Stein and Vonnahme (2008) describe vote centers as follows:

The sites are fewer in number than precinct-voting stations, centrally located to major population centers (rather than distributed among many residential locations), and rely on county-wide voter registration databases access electronically at each polling site. Voters in the voting jurisdiction (a county) are provided ballots appropriate to their voter registration address.

[Election day vote centers] are often located in places more central to the both residential and work place locations, the latter often more accessible and convenient to voters as they commute to and from work, school, shopping, and other activities. Vote centers are equipped for electronic voting machines and staffed with personnel to assist voters.

While political scientists have found that many election reforms, such as early voting, merely make voting easier for people who were already inclined to vote, experimental evidence shows that vote centers may in fact encourage infrequent voters or non-voters to participate in elections. A study of Larimer County, Colorado, which abandoned its precinct-based voting model in 2003 in favor of creating 32 vote centers, shows that vote centers have a “positive and substantial effect on individual electoral participation” (Stein

and Vonnahme 2008). Precinct-based voting systems may be outdated given the highly mobile travel patterns that people now have. Giving potential voters the option of voting at a variety of places that better suit their schedules and travel patterns has the potential to increase turnout while also making it easier for election officials to administer elections (Mann and Ornstein 2012).

Ways to Reform Ballot Complexity Costs

Unfortunately, this is the voting cost over which election officials have the least control, since the length of the ballot and the types of candidates on it are usually determined by the number of candidates who decide to run, the number of ballot measures that qualify, and the number of offices that are up for re-election. These factors are outside the discretion of individual election officials. Nonetheless, there are still ways to minimize the costs to potential voters. The analysis that I presented in Chapter 5 shows that high-resource voters, including those with white collar and blue collar jobs, high incomes, and higher education levels, are most likely to not turn out to vote when these ballot complexity costs are high. This is because the more offices or ballot measures they have to vote on, the more time they must spend becoming informed. Because these high-status voters tend to place a high premium on their free time, they are somewhat more likely to decide that it is not worth it to participate in an election in the face of increased time costs.

Given that election officials have little say in how long a ballot is, what can they do to still maximize turnout? It is crucial to provide potential voters easy-to-access information that will help them make their decisions. Election jurisdictions commonly

provide information guides to registered voters ahead of the elections. These guides often contain sample ballots that voters can fill out ahead of time and bring into the voting booth to assist them while they vote, statements from each of the candidates running for office, and information on the measures and propositions placed on the ballot, including summaries of the text of the measure, an impartial analysis of the measure's effects and fiscal impact, and arguments for and against the measure that were written by advocacy groups. While this information is important, it may not be enough to offset increased voting costs for certain high-status potential voters.

Because many people vote primarily based on party affiliation and party endorsement, turnout among high-resource potential voters may be increased by making that information more prominently available. Sample ballot pamphlets could contain information on which candidates and ballot measures are endorsed by political parties or political advocacy groups on a wide variety of issues (such as the American Association of Retired Persons, the American Civil Liberties Union, Americans for Fair Taxation, the Club for Growth, Freedom Works, the Human Rights Campaign, the League of Women Voters, the National Organization for Women, the National Rifle Association, the National Right to Life Committee, People for the American Way, the Sierra Club, the U.S. Chamber of Commerce, and others). Barring this, sample ballot pamphlets could include links to these organizations' websites so that potential voters can learn more about their choices. To minimize the effects of this voting cost, it is important that this information is prominently available and easily accessible so that potential voters can spend little time seeking it out.

Does Having Representative Turnout Matter?

In making my recommendations for reforming our electoral system, I have displayed a clear bias towards making voting easier so that as many people as possible are able to participate in elections. I believe that electoral democracies, which use elections to choose who will represent the will of the people when it comes to making laws, function best when the people who vote are broadly representative of the entire population, both in their demographics and in their policy preferences. The analysis I have discussed in this dissertation shows that the people who vote are not demographically representative of the population at large. A large part of this discrepancy is due to the way voting costs are structured in our elections. As I have shown, different types of voting costs affect different people. In general, information costs tend to decrease turnout among people with traditionally high levels of political resources, (insert comma), and transaction costs tend to decrease turnout among people with traditionally low levels of political resources. Because many of the costs of voting are set by election officials, it is important for officials to be sensitive regarding how their jurisdiction's cost calculus will affect who turns out to vote.

Because voters appear to be demographically different from non-voters, it can be assumed that voters and non-voters also differ in their policy preferences and priorities. I have shown in my analysis that certain groups of people are likely to be under-represented in the electorate based on the type and magnitude of voting costs they must overcome. Highton and Wolfinger (2001b) and Leighley and Nagler (2013) examine the political and policy differences between voters and non-voters in the several presidential elections and find significant differences. Non-voters tend to be more politically

independent and ideologically moderate than voters. Non-voters also tend to have different views on a wide variety of social issues, including government provision of social services, affirmative action for blacks, healthcare, environmental regulation, and a government-guaranteed standard of living. At the same time, non-voters are more likely than voters to answer “don’t know” on a variety of policy questions. It is clear from these analyses that non-voters are very different from voters and would prefer different policies than voters.

The differences between voters and non-voters are especially stark when examining the relationship between the incomes of those who vote and the degree to which the electorate favors policies that encourage income redistribution. Lower-income non-voters tend to be more socially conservative than the general public (Highton and Wolfinger 2001b). There is also a wealth of evidence showing that when poorer voters vote at the same rates as wealthier voters, the resulting policies tend to favor a higher degree of income redistribution (Hill and Leighley 1992, Martin 2003, Bartels 2008). As the findings of these scholars indicate, the way that election officials structure the costs of an election can affect the demographic makeup and policy priorities of the resulting electorate. The results I have discussed in this dissertation show that a large voter identification burden in an election is likely to lead to an under-representation of low-income voters, and a large registration or ballot complexity cost is likely to lead to an under-representation of high-income voters. This could have important policy consequences.

There is also some evidence that non-voting could have an impact on who wins elections. Sides, Schickler, and Citrin (2008, 2011) analyze state-level exit polls and the

Current Population Survey and find that non-voters are disproportionately from demographic groups which favor the Democratic Party. They conclude that universal turnout might have changed the outcomes of presidential elections which were decided by close margins, as in 2000 or 2004. Evidence from studies of local elections in the United States (Hajnal 2010) and from other electoral democracies (Fowler 2013) demonstrates that low or demographically uneven turnout levels lead to sub-optimal policy outcomes that do not represent the preferences of all citizens. For instance, when compulsory voting was introduced in Australia, voters started to be more demographically representative of the population, and pension spending at the national level increased along with turnout (Fowler 2013). This suggests that the United States might see similar changes in its policy outcomes if turnout increased. While I do not go so far as to advocate compulsory turnout in the United States, this research meshes very well with my findings and suggests that who votes in an election is critical in determining who wins the election and what policies are enacted. More broadly, it is important for scholars and policy makers to be aware of how election officials and state laws regulate access to the polls and the consequences that has for election outcomes and political representation.

APPENDIX

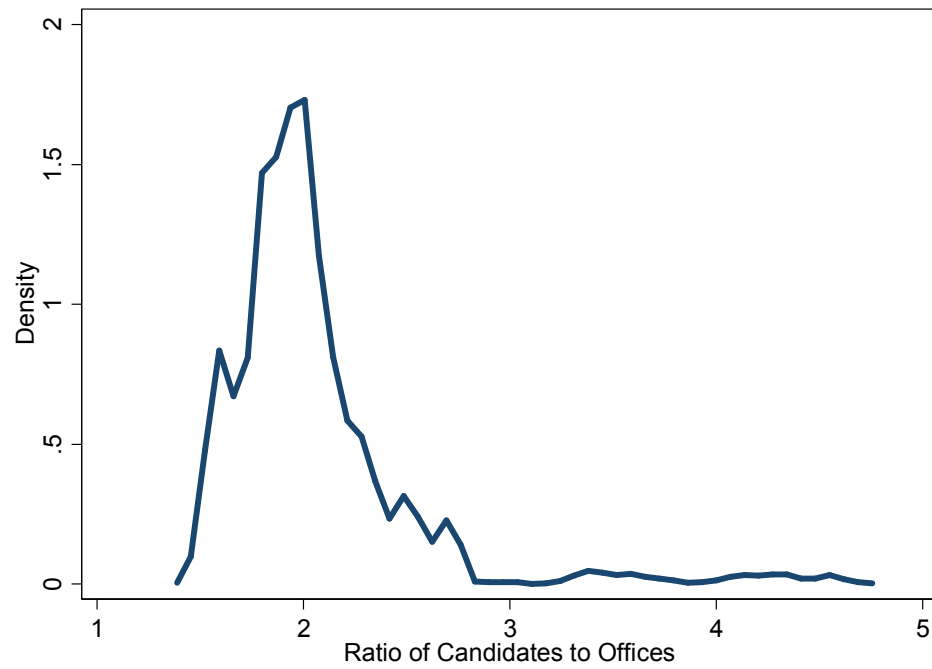


Figure A1: Variation in ratio of candidates to offices

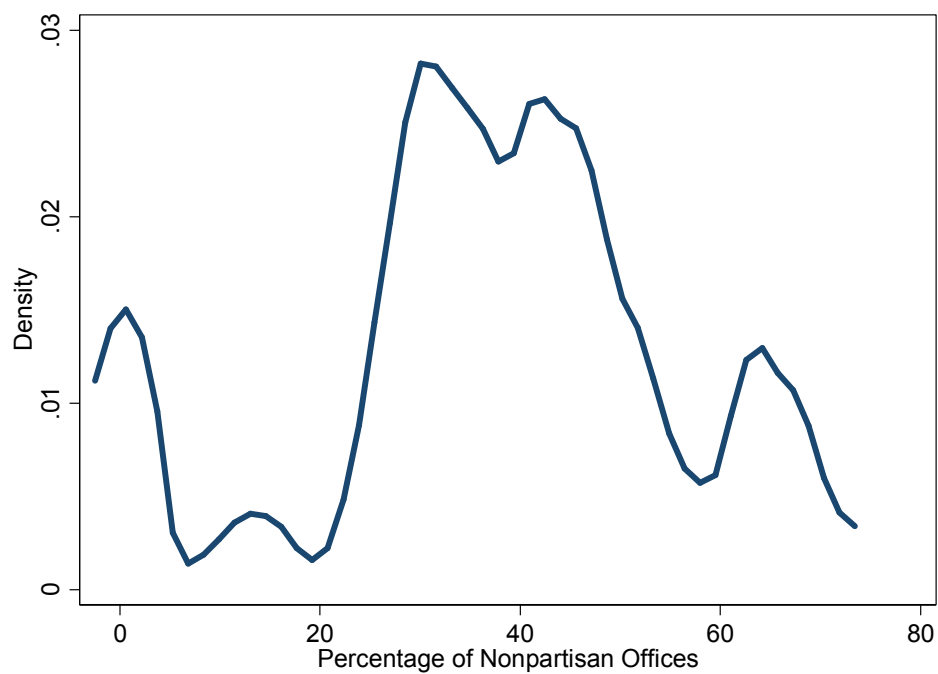


Figure A2: Variation in percentage of nonpartisan offices

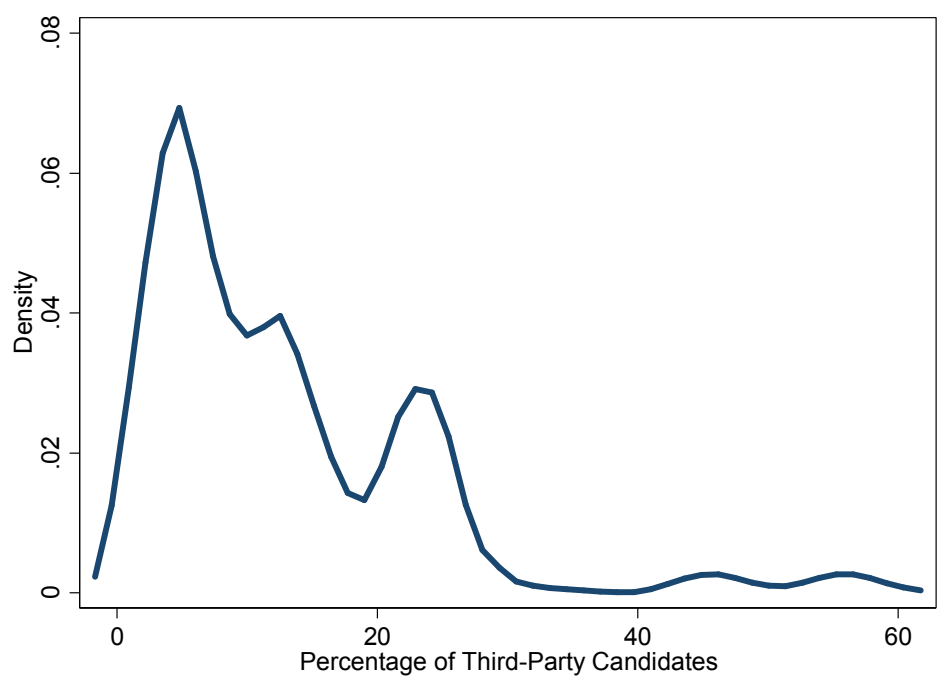


Figure A3: Variation in percentage of third-party candidates

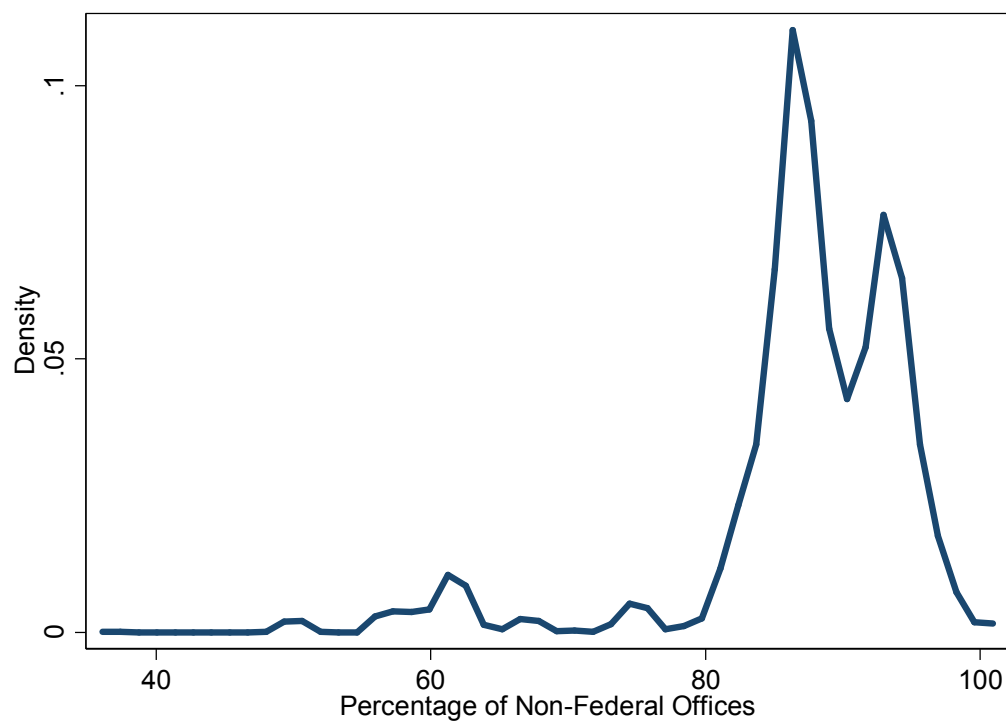


Figure A4: Variation in percentage of non-federal offices

Table A1: General election CCES turnout model, interaction between age and voter registration deadline

	Voted in general election
Interaction: Age and registration cost	-0.000 (0.000)**
Age	0.040 (0.002)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.099 (0.010)***
Race: Black	-0.250 (0.029)***
Race: Hispanic	-0.503 (0.035)***
Race: Asian	-0.941 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.072 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.582 (0.024)***
Registration deadline for general election	-0.000 (0.003)
Voter identification requirement in general election	-0.056 (0.011)***
2008	0.687 (0.019)***
Constant	-2.891 (0.081)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A2: General election CCES turnout model, interaction between income and voter registration deadline

	Voted in general election
Interaction: Income and registration cost	-0.004 (0.001)***
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.396 (0.035)***
Employment: None, part-time, or full-time	0.100 (0.010)***
Race: Black	-0.249 (0.029)***
Race: Hispanic	-0.503 (0.035)***
Race: Asian	-0.945 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.072 (0.019)***
Democrat	0.422 (0.023)***
Republican	0.583 (0.024)***
Registration deadline for general election	0.002 (0.003)
Voter identification requirement in general election	-0.056 (0.011)***
2008	0.688 (0.019)***
Constant	-2.943 (0.087)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A3: General election CCES turnout model, interaction between gender and voter registration deadline

	Voted in general election
Interaction: Female and registration cost	0.004 (0.002)**
Age	0.037 (0.001)***
Post-high school education	0.522 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.100 (0.010)***
Race: Black	-0.249 (0.029)***
Race: Hispanic	-0.504 (0.035)***
Race: Asian	-0.945 (0.066)***
Female	-0.283 (0.047)***
Married/partnered	0.073 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.581 (0.024)***
Registration deadline for general election	-0.008 (0.001)***
Voter identification requirement in general election	-0.056 (0.011)***
2008	0.688 (0.019)***
Constant	-2.703 (0.055)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A4: General election CCES turnout model, interaction between black and voter registration deadline

	Voted in general election
Interaction: Black and registration cost	0.012 (0.004)***
Age	0.037 (0.001)***
Post-high school education	0.520 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.099 (0.010)***
Race: Black	-0.536 (0.091)***
Race: Hispanic	-0.503 (0.035)***
Race: Asian	-0.946 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.072 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.583 (0.024)***
Registration deadline for general election	-0.007 (0.001)***
Voter identification requirement in general election	-0.057 (0.011)***
2008	0.685 (0.019)***
Constant	-2.731 (0.051)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A5: General election CCES turnout model, interaction between age and voter identification requirements

	Voted in general election
Interaction: Age and voter ID cost	-0.001 (0.001)**
Age	0.038 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.311 (0.014)***
Employment: None, part-time, or full-time	0.099 (0.010)***
Race: Black	-0.250 (0.029)***
Race: Hispanic	-0.502 (0.035)***
Race: Asian	-0.939 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.071 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.582 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	0.002 (0.029)
2008	0.688 (0.019)***
Constant	-2.809 (0.057)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A6: General election CCES turnout model, interaction between income and voter identification requirements

	Voted in general election
Interaction: Income and voter ID cost	-0.031 (0.013)**
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.340 (0.019)***
Employment: None, part-time, or full-time	0.100 (0.010)***
Race: Black	-0.248 (0.029)***
Race: Hispanic	-0.502 (0.035)***
Race: Asian	-0.945 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.073 (0.019)***
Democrat	0.422 (0.023)***
Republican	0.582 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	0.012 (0.032)
2008	0.688 (0.019)***
Constant	-2.817 (0.058)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A7: General election CCES turnout model, interaction between employment type and voter identification requirements

	Voted in general election
Interaction: Employment type and voter ID cost	0.028 (0.010)***
Age	0.037 (0.001)***
Post-high school education	0.522 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.072 (0.014)***
Race: Black	-0.250 (0.029)***
Race: Hispanic	-0.505 (0.035)***
Race: Asian	-0.943 (0.066)***
Female	-0.184 (0.018)***
Married/partnered	0.072 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.581 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	-0.085 (0.015)***
2008	0.688 (0.019)***
Constant	-2.726 (0.051)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A8: General election CCES turnout model, interaction between marital status and voter identification requirements

	Voted in general election
Interaction: Married and voter ID cost	0.033 (0.019)*
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.100 (0.010)***
Race: Black	-0.248 (0.029)***
Race: Hispanic	-0.504 (0.035)***
Race: Asian	-0.945 (0.066)***
Female	-0.184 (0.018)***
Married/partnered	0.041 (0.026)
Democrat	0.422 (0.023)***
Republican	0.581 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	-0.076 (0.016)***
2008	0.688 (0.019)***
Constant	-2.735 (0.051)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A9: General election CCES turnout model, interaction between sex and voter identification requirements

	Voted in general election
Interaction: Female and voter ID cost	-0.014 (0.018)
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.099 (0.010)***
Race: Black	-0.248 (0.029)***
Race: Hispanic	-0.503 (0.035)***
Race: Asian	-0.943 (0.066)***
Female	-0.171 (0.025)***
Married/partnered	0.072 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.582 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	-0.049 (0.014)***
2008	0.688 (0.019)***
Constant	-2.758 (0.051)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A10: General election CCES turnout model, interaction between Hispanic and voter identification requirements

	Voted in general election
Interaction: Hispanic and voter ID cost	0.072 (0.035)**
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.099 (0.010)***
Race: Black	-0.249 (0.029)***
Race: Hispanic	-0.571 (0.048)***
Race: Asian	-0.945 (0.066)***
Female	-0.185 (0.018)***
Married/partnered	0.073 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.581 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	-0.062 (0.011)***
2008	0.688 (0.019)***
Constant	-2.743 (0.050)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A11: General election CCES turnout model, interaction between Asian and voter identification requirements

	Voted in general election
Interaction: Asian and voter ID cost	0.131 (0.075)*
Age	0.037 (0.001)***
Post-high school education	0.521 (0.019)***
Income (low, medium, high)	0.310 (0.014)***
Employment: None, part-time, or full-time	0.099 (0.010)***
Race: Black	-0.249 (0.029)***
Race: Hispanic	-0.504 (0.035)***
Race: Asian	-1.023 (0.081)***
Female	-0.185 (0.018)***
Married/partnered	0.072 (0.019)***
Democrat	0.423 (0.023)***
Republican	0.582 (0.024)***
Registration deadline for general election	-0.006 (0.001)***
Voter identification requirement in general election	-0.058 (0.011)***
2008	0.688 (0.019)***
Constant	-2.749 (0.050)***
R ²	0.12
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A12: Primary election CCES turnout model, interaction between education and voter registration deadline

	Voted in primary election
Interaction: Education and registration cost	-0.003 (0.002)*
Age	0.041 (0.001)***
Post-high school education	0.567 (0.050)***
Income (low, medium, high)	0.276 (0.015)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.242 (0.031)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.617 (0.078)***
Female	-0.203 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.586 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.000 (0.002)
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.525 (0.019)***
Constant	-4.065 (0.063)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A13: Primary election CCES turnout model, interaction between employment type and voter registration deadline

	Voted in primary election
Interaction: Employment type and registration cost	0.003 (0.001)***
Age	0.041 (0.001)***
Post-high school education	0.490 (0.019)***
Income (low, medium, high)	0.277 (0.015)***
Employment: None, part-time, or full-time	-0.033 (0.026)
Race: Black	-0.244 (0.031)***
Race: Hispanic	-0.439 (0.040)***
Race: Asian	-0.617 (0.078)***
Female	-0.202 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.587 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.005 (0.002)***
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.525 (0.019)***
Constant	-3.947 (0.061)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A14: Primary election CCES turnout model, interaction between marital status and voter registration deadline

	Voted in primary election
Interaction: Married and registration cost	0.005 (0.002)**
Age	0.041 (0.001)***
Post-high school education	0.491 (0.019)***
Income (low, medium, high)	0.276 (0.015)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.242 (0.031)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.616 (0.078)***
Female	-0.202 (0.018)***
Married/partnered	-0.088 (0.050)*
Democrat	0.586 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.005 (0.002)***
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.526 (0.019)***
Constant	-3.943 (0.062)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A15: Primary election CCES turnout model, interaction between income and voter identification requirements

	Voted in primary election
Interaction: Income and voter ID cost	-0.002 (0.001)
Age	0.041 (0.001)***
Post-high school education	0.490 (0.019)***
Income (low, medium, high)	0.328 (0.036)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.243 (0.031)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.617 (0.078)***
Female	-0.203 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.586 (0.025)***
Republican	0.675 (0.025)***
Registration deadline for primary election	0.003 (0.004)
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.525 (0.019)***
Constant	-4.138 (0.095)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A16: Primary election CCES turnout model, interaction between employment type and voter identification requirements

	Voted in primary election
Interaction: Employment type and voter ID cost	0.003 (0.001)***
Age	0.041 (0.001)***
Post-high school education	0.490 (0.019)***
Income (low, medium, high)	0.277 (0.015)***
Employment: None, part-time, or full-time	-0.033 (0.026)
Race: Black	-0.244 (0.031)***
Race: Hispanic	-0.439 (0.040)***
Race: Asian	-0.617 (0.078)***
Female	-0.202 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.587 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.005 (0.002)***
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.525 (0.019)***
Constant	-3.947 (0.061)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A17: Primary election CCES turnout model, interaction between marital status and voter identification requirements

	Voted in primary election
Interaction: Married and voter ID cost	0.005 (0.002)**
Age	0.041 (0.001)***
Post-high school education	0.491 (0.019)***
Income (low, medium, high)	0.276 (0.015)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.242 (0.031)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.616 (0.078)***
Female	-0.202 (0.018)***
Married/partnered	-0.088 (0.050)*
Democrat	0.586 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.005 (0.002)***
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.526 (0.019)***
Constant	-3.943 (0.062)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A18: Primary election CCES turnout model, interaction between sex and voter identification requirements

	Voted in primary election
Interaction: Female and voter ID cost	0.001 (0.002)
Age	0.041 (0.001)***
Post-high school education	0.490 (0.019)***
Income (low, medium, high)	0.276 (0.015)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.243 (0.031)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.617 (0.078)***
Female	-0.224 (0.048)***
Married/partnered	0.030 (0.020)
Democrat	0.586 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.003 (0.001)*
Voter identification requirement in primary election	0.050 (0.011)***
2008	0.525 (0.019)***
Constant	-4.007 (0.059)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A19: Primary election CCES turnout model, interaction between black and voter identification requirements

	Voted in primary election
Interaction: Black and voter ID cost	0.006 (0.004)
Age	0.041 (0.001)***
Post-high school education	0.490 (0.019)***
Income (low, medium, high)	0.276 (0.015)***
Employment: None, part-time, or full-time	0.034 (0.010)***
Race: Black	-0.388 (0.101)***
Race: Hispanic	-0.438 (0.040)***
Race: Asian	-0.617 (0.078)***
Female	-0.203 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.587 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.002 (0.001)**
Voter identification requirement in primary election	0.049 (0.011)***
2008	0.524 (0.019)***
Constant	-4.008 (0.056)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A20: Primary election CCES turnout model, interaction between Hispanic and voter identification requirements

	Voted in primary election
Interaction: Hispanic and voter ID cost	-0.023 (0.005)***
Age	0.041 (0.001)***
Post-high school education	0.491 (0.019)***
Income (low, medium, high)	0.277 (0.015)***
Employment: None, part-time, or full-time	0.035 (0.010)***
Race: Black	-0.244 (0.031)***
Race: Hispanic	0.096 (0.115)
Race: Asian	-0.613 (0.078)***
Female	-0.202 (0.018)***
Married/partnered	0.030 (0.020)
Democrat	0.585 (0.025)***
Republican	0.674 (0.025)***
Registration deadline for primary election	-0.001 (0.001)
Voter identification requirement in primary election	0.054 (0.011)***
2008	0.526 (0.019)***
Constant	-4.042 (0.056)***
R ²	0.11
N	62,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A21: General election microtargeting turnout model, interaction between education and polling place distance

	Voted in general election
Interaction: Education and polling place distance	-0.389 (0.168)**
Age	0.039 (0.011)***
Post-high school education	0.980 (0.436)**
Income (low, medium, high)	0.461 (0.287)
Employment type	0.457 (0.192)**
Female	-0.169 (0.301)
Married/partnered	0.355 (0.450)
Democrat	1.562 (0.391)***
Republican	1.718 (0.347)***
Number of offices on ballot	-0.045 (0.064)
Ratio of candidates to offices	-0.001 (0.009)
Percentage of nonpartisan offices	0.053 (0.020)***
Percentage of third-party candidates	-0.072 (0.068)
Percentage of non-federal offices	0.015 (0.072)
Number of ballot measures	-0.278 (0.151)*
Distance to polling place	0.192 (0.121)
Community urbanicity	-0.009 (0.004)**
Community percentage of minorities	0.016 (0.019)
Community average age	-0.042 (0.036)
Community percentage of homeowners	-0.010 (0.013)

Table A21: General election microtargeting turnout model, interaction between education and polling place distance, continued

	Voted in general election
Community average education	0.150 (0.190)
Community median income (thousands of dollars)	-0.006 (0.013)
Ad spending in respondent's media market (logged)	0.148 (0.306)
2002	-2.212 (1.502)
2004	1.291 (1.300)
2006	-1.415 (1.048)
Constant	-4.685 (8.540)
R ²	0.27
N	521

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A22: General election microtargeting turnout model, interaction between education and ballot measures

	Voted in general election
Interaction: Education and number of ballot measures	-0.298 (0.158)*
Age	0.038 (0.010)***
Post-high school education	1.048 (0.520)**
Income (low, medium, high)	0.427 (0.284)
Employment type	0.426 (0.190)**
Female	-0.061 (0.298)
Married/partnered	0.349 (0.446)
Democrat	1.562 (0.389)***
Republican	1.731 (0.349)***
Number of offices on ballot	-0.042 (0.064)
Ratio of candidates to offices	-0.001 (0.009)
Percentage of nonpartisan offices	0.057 (0.020)***
Percentage of third-party candidates	-0.079 (0.068)
Percentage of non-federal offices	0.007 (0.072)
Number of ballot measures	-0.162 (0.163)
Distance to polling place	0.016 (0.080)
Community urbanicity	-0.010 (0.004)**
Community percentage of minorities	0.016 (0.020)
Community average age	-0.042 (0.036)
Community percentage of homeowners	-0.009 (0.013)

Table A22: General election microtargeting turnout model, interaction between education and ballot measures, continued

	Voted in general election
Community average education	0.185 (0.190)
Community median income (thousands of dollars)	-0.004 (0.013)
Ad spending in respondent's media market (logged)	0.150 (0.309)
2002	-2.282 (1.501)
2004	1.249 (1.300)
2006	-1.373 (1.048)
Constant	-4.314 (8.477)
R ²	0.27
N	521

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A23: General election microtargeting turnout model, interaction between occupation and ballot measures

	Voted in general election
Interaction: Occupation type and number of ballot measures	-0.203 (0.093)**
Age	0.040 (0.010)***
Post-high school education	0.244 (0.301)
Income (low, medium, high)	0.395 (0.283)
Employment type	0.970 (0.308)***
Female	-0.097 (0.298)
Married/partnered	0.374 (0.446)
Democrat	1.590 (0.391)***
Republican	1.769 (0.351)***
Number of offices on ballot	-0.039 (0.064)
Ratio of candidates to offices	-0.003 (0.009)
Percentage of nonpartisan offices	0.054 (0.019)***
Percentage of third-party candidates	-0.077 (0.067)
Percentage of non-federal offices	0.015 (0.073)
Number of ballot measures	-0.010 (0.192)
Distance to polling place	0.032 (0.084)
Community urbanicity	-0.010 (0.004)**
Community percentage of minorities	0.016 (0.020)
Community average age	-0.051 (0.035)
Community percentage of homeowners	-0.008 (0.013)

Table A23: General election microtargeting turnout model, interaction between occupation and ballot measures, continued

	Voted in general election
Community average education	0.187 (0.188)
Community median income (thousands of dollars)	-0.006 (0.013)
Ad spending in respondent's media market (logged)	0.178 (0.307)
2002	-2.311 (1.482)
2004	1.064 (1.302)
2006	-1.490 (1.040)
Constant	-5.175 (8.549)
R ²	0.27
N	521

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A24: General election microtargeting turnout model, interaction between income and number of offices

	Voted in general election
Interaction: Income and number of offices	-0.097 (0.049)**
Age	0.039 (0.011)***
Post-high school education	0.233 (0.304)
Income (low, medium, high)	2.251 (0.971)**
Employment type	0.387 (0.193)**
Female	-0.098 (0.298)
Married/partnered	0.339 (0.445)
Democrat	1.611 (0.394)***
Republican	1.744 (0.349)***
Number of offices on ballot	0.171 (0.129)
Ratio of candidates to offices	-0.003 (0.009)
Percentage of nonpartisan offices	0.055 (0.020)***
Percentage of third-party candidates	-0.069 (0.068)
Percentage of non-federal offices	0.010 (0.072)
Number of ballot measures	-0.263 (0.153)*
Distance to polling place	0.012 (0.082)
Community urbanicity	-0.010 (0.004)**
Community percentage of minorities	0.018 (0.020)
Community average age	-0.044 (0.035)
Community percentage of homeowners	-0.008 (0.013)

Table A24: General election microtargeting turnout model, interaction between income and number of offices, continued

	Voted in general election
Community average education	0.197 (0.190)
Community median income (thousands of dollars)	-0.004 (0.013)
Ad spending in respondent's media market (logged)	0.138 (0.311)
2002	-2.199 (1.507)
2004	1.230 (1.307)
2006	-1.432 (1.050)
Constant	-7.908 (8.848)
R ²	0.27
N	521

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

REFERENCES

- Achen, Christopher H. and André Blais. 2010. "Vote Intention, Self-reported Turnout, and Validated Vote." Presented at the 2010 annual meeting of the American Political Science Association.
- Aguiar, Mark, and Erik Hurst. 2007. "Measuring Trends in Leisure: The Allocation of Time over Five Decades." *Quarterly Journal of Economics* 122 (3): 969–1006.
- Aldrich, John H. 1993. "Rational Choice and Turnout." *American Journal of Political Science* 37 (1): 246–278.
- Alvarez, R. Michael, Stephen Ansolabehere, and Catherine H. Wilson. 2002. "Election Day Voter Registration in the United States: How One-Step Voting Can Change the Composition of the American Electorate." VTP Working Paper. Caltech/MIT Voting Technology Project. Pasadena, California and Cambridge, Massachusetts.
- Anderson, Barbara A., and Brian D. Silver. 1986. "Measurement and Mismeasurement of the Validity of the Self-Reported Vote." *American Journal of Political Science* 30 (4): 771–785.
- Ansolabehere, Stephen. 2010. Cooperative Congressional Election Study, 2010: Common Content. [Computer File] Version 3, released August 10, 2012. Cambridge, MA: Harvard University [producer]. Available at <<http://hdl.handle.net/1902.1/17705>>.
- Ansolabehere, Stephen. 2011. Cooperative Congressional Election Study, 2008: Common Content. [Computer File] Version 6, released January 6, 2010. Cambridge, MA: Harvard University [producer]. Available at <<http://hdl.handle.net/1902.1/14003>>.
- Ansolabehere, Stephen. 2011. "Guide to the 2008 Cooperative Congressional Election Survey." Available at <<http://hdl.handle.net/1902.1/14003>>.
- Ansolabehere, Stephen. 2012. "Guide to the 2010 Cooperative Congressional Election Survey." Available at <<http://hdl.handle.net/1902.1/17705>>.
- Ansolabehere, Stephen, and Eitan Hersh. 2012. "Validation: What Big Data Reveal about Survey Misreporting and the Real Electorate." *Political Analysis* 20 (4): 437–459.
- Ansolabehere, Stephen, John Mark Hansen, Shigeo Hirano, and James M. Snyder, Jr. 2005. "The Decline of Competition in U.S. Primary Elections, 1908-2004."

Working paper. Available at <http://www.columbia.edu/~sh145/papers/primary_competition.pdf>.

- Ansolabehere, Stephen, and Shanto Iyengar. 1996. "The Science of Political Advertising." In Richard Brody, Diana Mutz, Paul Sniderman, eds., *Political Persuasion and Attitude Change*. Ann Arbor, MI: University of Michigan Press.
- Ansolabehere, Stephen, and David M. Konisky. 1994. "The Introduction of Voter Registration and Its Effect on Turnout." *Political Analysis* 14 (1): 83–100.
- Atkeson, Lonna, Lisa Ann Bryant, Thad E. Hall, Kyle Saunders, and Michael R. Alvarez. 2010. "A New Barrier to Participation: Heterogeneous Application of Voter Identification Policies." *Electoral Studies* 29 (1): 66–73.
- Augenblick, Ned, and Scott Nicholson. 2012. "Ballot Position, Choice Fatigue, and Voter Behavior." Working paper. Available at <http://faculty.haas.berkeley.edu/ned/Choice_Fatigue.pdf>.
- Barreto, Matt A. 2007. "*Si Se Puede!* Latino Candidates and the Mobilization of Latino Voters." *American Political Science Review* 101 (3): 425–441.
- Barreto, Matt A., Gary M. Segura, and Nathan D. Woods. 2004. "The Mobilizing Effect of Majority-Minority Districts on Latino Turnout." *American Political Science Review* 98 (1): 65–75.
- Barry, Brian. 1978. *Sociologists, Economists & Democracy*. Chicago: University of Chicago Press.
- Bartels, Larry. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton, NJ: Princeton University Press.
- Bentele, Keith G., and Erin E. O'Brien. 2013. "Jim Crow 2.0? Why States Consider and Adopt Restrictive Voter Access Policies." *Perspectives on Politics* 11 (4): 1088–1116.
- Bernstein, Robert, Anita Chadha, and Robert Montjoy. 2001. "Overreporting Voting: Why it Happens and Why it Matters." *Public Opinion Quarterly* 65 (1): 22–44.
- Blais, André. 2000. *To Vote or Not To Vote? The Merits and Limits of Rational Choice Theory*. Pittsburg, PA: University of Pittsburg Press.
- Bowler, Shaun, Todd Donovan, and Trudi Happ. 1992. "Ballot Propositions and Information Costs: Direct Democracy and the Fatigued Voter." *Political Research Quarterly* 45 (2): 559–568.

- Brady, Henry E., and John E. McNulty. 2011. "Turning Out to Vote: The Costs of Finding and Getting to the Polling Place." *American Political Science Review* 105 (1): 115–134.
- Brennan Center for Justice at the New York University School of Law. 2006. "Citizens without Proof: A Survey of American's Possession of Documentary Proof of Citizenship and Photo Identification." Available at <http://www.brennancenter.org/sites/default/files/legacy/d/download_file_39242.pdf>.
- Brennan Center for Justice at the New York University School of Law. 2013. "Voting Laws Roundup 2013." Available at <<http://www.brennancenter.org/analysis/election-2013-voting-laws-roundup>>, accessed September 5, 2013.
- Brennan Center for Justice at New York University School of Law. 2014. "Voting Laws Roundup 2014." Available at <<http://www.brennancenter.org/analysis/voting-laws-roundup-2014>>, accessed May 29, 2014.
- Burden, Barry C., and Jacob R. Neiheisel. 2010. "The Impact of Election Day Registration on Voter Turnout and Election Outcomes." Working paper. Available at <[http://users.polisci.wisc.edu/apw/archives/Burden_and_Neiheisel_11-30-2010\[2\].pdf](http://users.polisci.wisc.edu/apw/archives/Burden_and_Neiheisel_11-30-2010[2].pdf)>.
- Caldeira, Gregory A., and Samuel C. Patterson. 1982. "Contextual Influences on Participation in U.S. State Legislative Elections." *Legislative Studies Quarterly* 7 (3): 359–382.
- Campbell, David E. 2006. *Why We Vote: How Schools and Communities Shape Our Civic Life*. Princeton, NJ: Princeton University Press.
- Cassel, Carol A. 2003. "Overreporting and Electoral Participation Research." *American Politics Research* 31 (1): 81–92.
- Cho, Wendy K. Tam, James G. Gimpel, and Joshua J. Dyck. 2006. "Residential Concentration, Political Socialization, and Voter Turnout." *Journal of Politics* 68 (1): 156–167.
- Clinton, Joshua D., and John S. Lapinski. 2004. "'Targeted' Advertising and Voter Turnout: An Experimental Study of the 2000 Presidential Election." *Journal of Politics* 66 (1): 69–96.
- Coffé, Hilde, and Catherine Bolzendahl. 2010. "Same Game, Different Rules? Gender Differences in Political Participation." *Sex Roles* 62 (5–6): 318–333.
- Cox, Gary W., and Michael C. Munger. 1989. "Closeness, Expenditures, and Turnout in the 1982 U.S. House Elections." *American Political Science Review* 83 (1): 217–230.

- Dalton, Russell J., and Martin P. Wattenberg. 2000. *Parties without Partisans: Political Change in Advanced Industrial Democracies*. New York: Oxford University Press.
- Dietrich, Michael. 1994. *Transaction Cost Economics and Beyond: Towards a New Economics of the Firm*. New York City: Routledge.
- DiPasquale, Denise, and Edward L. Glaeser. 1999. "Incentives and Social Capital: Are Homeowners Better Citizens?" *Journal of Urban Economics* 45 (2): 354–384.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York City: Harper and Row.
- Dyck, Joshua J., and James G. Gimpel. 2005. "Distance, Turnout, and the Convenience of Voting." *Social Science Quarterly* 86 (3): 531–548.
- Fiorina, Morris P. 1999. "A Dark Side of Civic Engagement." In *Civic Engagement in American Democracy*, ed. Theda Skocpol and Morris Fiorina. Washington, DC: Brookings Institute.
- Fowler, Anthony. 2013. "Electoral and Policy Consequences of Voter Turnout: Evidence from Compulsory Voting in Australia." *Quarterly Journal of Political Science* 8 (2): 159–182.
- Freedman, Paul, Michael Franz, and Kenneth Goldstein. 2004. "Campaign Advertising and Democratic Citizenship." *American Journal of Political Science* 48 (4): 723–741.
- Gerber, Alan S., Donald P. Green, and Christopher W. Larimer. 2008. "Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment." *American Political Science Review* 102 (1): 33–48.
- Gerber, Alan S., Donald P. Green, and Ron Shachar. 2003. "Voting May Be Habit-Forming: Evidence from a Randomized Field Experiment." *The American Journal of Political Science* 47 (3): 540–550.
- Gerber, Alan S., Gregory A. Huber, Marc Meredith, Daniel R. Biggers, and David J. Hendry. 2013. "Felony Status, Participation, and Political Reintegration: Results from a Field Experiment." Working paper. Available at <<http://www.sas.upenn.edu/~marcmere/workingpapers/CTFelon.pdf>>.
- Geys, Benny. 2006. "Explaining Voter Turnout: A Review of Aggregate-Level Research." *Electoral Studies* 25 (4): 637–663.
- Gimpel, James G., Joshua J. Dyck, and Daron R. Shaw. 2004. "Registrants, Voters, and Turnout Variability across Neighborhoods." *Political Behavior* 26 (4): 343–375.

- Goldstein, Kenneth, Michael Franz, and Travis Ridout. 2002. "Political Advertising in 2000." Combined File [dataset]. Final release. Madison, WI: The Department of Political Science at The University of Wisconsin-Madison and The Brennan Center for Justice at New York University.
- Goldstein, Kenneth, and Joel Rivlin. 2005. "Political Advertising in 2002." Combined File [dataset]. Final release. Madison, WI: The Wisconsin Advertising Project, The Department of Political Science at The University of Wisconsin-Madison.
- Goldstein, Kenneth, and Joel Rivlin. 2007. "Congressional and Gubernatorial Advertising, 2003-2004." Combined File [dataset]. Final release. Madison, WI: The University of Wisconsin Advertising Project, The Department of Political Science at The University of Wisconsin-Madison.
- Goldstein, Kenneth, and Joel Rivlin. 2009. "Congressional and Gubernatorial Advertising, 2005-2006." Combined File [dataset]. Final release. Washington, DC: The University of Wisconsin Advertising Project, The Department of Political Science at The University of Wisconsin-Madison, Campaign Media Analysis Group, Kantar Media.
- Golinelli, Daniela, and Todd D. Minton. 2014. "Prison and Jail Inmates at Midyear 2013." Bureau of Justice Statistics. Available at <<http://www.bjs.gov/content/pub/pdf/jim13st.pdf>>.
- Green, Donald, and Alan Gerber. 2010. "Introduction to Social Pressure and Voting: New Experimental Evidence." *Political Behavior* 32 (3): 331–336.
- Gronke, Paul, Benjamin Bishin, Daniel Stevens, and Eva Galanes-Rosenbaum. 2005. "Early Voting in Florida, 2004." Paper presented at the annual meeting of the American Political Science Association, Washington, D.C.
- Hajnal, Zoltan L. 2010. *America's Uneven Democracy: Race, Turnout, and Representation in City Politics*. New York, NY: Cambridge University Press.
- Haspel, Moshe, and H. Gibbs Knotts. 2005. "Location, Location, Location: Precinct Placement and the Costs of Voting." *Journal of Politics* 67 (2): 560–573.
- Highton, Benjamin, and Raymond E. Wolfinger. 2001a. "The First Seven Years of the Political Life Cycle." *American Journal of Political Science* 45 (1): 202–209.
- Highton, Benjamin, and Raymond E. Wolfinger. 2001b. "The Political Implications of Higher Turnout." *British Journal of Political Science* 31 (1): 179–223.
- Holbrook, Thomas, and James C. Garand. 1996. "Homo Eonomus? Economic Information and Economic Voting." *Political Research Quarterly* 49 (2): 351–375.

- Hood, M.V. III, and William Gillespie. 2012. "They Just Do Not Vote Like They Used To: A Methodology to Empirically Assess Election Fraud." *Social Science Quarterly* 93 (1): 76–94.
- Huckfeldt, Robert. 1986. *Politics in Context: Assimilation and Conflict in Urban Neighborhoods*. New York: Agathon Press.
- International Institute for Democracy and Electoral Assistance. 2002. "Voter Turnout Since 1945: A Global Report." Available at <<http://www.idea.int/publications/vt/index.cfm>>.
- Issenberg, Sasha. 2012. *The Victory Lab: The Secret Science of Winning Campaigns*. New York, NY: Crown Publishers.
- Jaccard, James, and Robert Turrissi. 2003. *Interaction Effects in Multiple Regression*. 2nd edition. London: Sage Publications.
- Jacobson, Gary C. 2009. *Politics of Congressional Elections*. New York: Pearson Publishers.
- Jacobson, Gary C., and Samuel Kernell. 1981. *Strategy and Choice in Congressional Elections*. New Haven, CT: Yale University Press.
- Karp, Jeffrey A., and Susan A. Banducci. 2000. "Going Postal: How All-Mail Elections Influence Turnout." *Political Behavior* 22 (3): 223–239.
- Karpowitz, Christopher F., J. Quin Monson, Lindsay Nielson, Kelly D. Patterson, and Steven A. Snell. 2011. "Political Norms and the Private Act of Voting." *Public Opinion Quarterly* 75 (4): 659–685.
- Katosh, John P., and Michael W. Traugott. 1981. "The Consequences of Validated and Self-Reported Voting Measures." *Public Opinion Quarterly* 45 (4): 519–535.
- Kingston, Paul William, and Steven E. Finkel. 1987. "Is There a Marriage Gap in Politics?" *Journal of Marriage and the Family* 49 (1): 57–64.
- Laird, Jennifer. 2012. "Stratification in U.S. Voter Turnout by Class and Occupation, 1984-2002." Paper presented at the annual meeting of the American Sociological Association Annual Meeting, Denver, CO, August 16.
- Lassen, David Dreyer. 2005. "The Effect of Information on Voter Turnout: Evidence from a Natural Experiment." *American Journal of Political Science* 49 (1): 103–118.
- Leighley, Jan E., and Jonathan Nagler. 2013. *Who Votes Now?: Demographics, Issues, Inequality, and Turnout in the United States*. Princeton, NJ: Princeton University Press.

- Levin, Ines. 2011. "Political Participation is More than Just Resources: A New Approach to the Study of Civic Engagement." Paper presented at the 7th Annual UCI Center for the Study of Democracy (CSD) Graduate Student Conference, University of California, Irvine.
- Lien, Pei-te. 2001. *The Making of Asian America Through Political Participation*. Philadelphia: Temple University Press.
- Lohmann, Susanne. 1993. "A Signaling Model of Informative and Manipulative Political Action." *American Political Science Review* 87 (2): 319–333.
- Mann, Thomas E., and Norman J. Ornstein. 2012. *It's Even Worse Than It Looks: How the American Constitutional System Collided with the New Politics of Extremism*. New York City: Basic Books.
- Martin, Paul S. 2003. "Voting's Rewards: Voter Turnout, Attentive Publics, and Congressional Allocation of Federal Money." *American Journal of Political Science* 47 (1) 110–127.
- Masuoka, Natalie. 2006. "Together They Become One: Examining the Predictors of Panethnic Group Consciousness Among Asian Americans and Latinos." *Social Science Quarterly* 87 (5): 993–1011.
- Matusaka, John G. 1995. "Explaining Voter Turnout Patterns: An Information Theory." *Public Choice* 84 (1-2): 91–117.
- Meredith, Marc, and Michael Morse. 2014. "The Politics of the Restoration of Ex-Felon Voting Rights: The Case of Iowa." Forthcoming in *Quarterly Journal of Political Science*.
- Michelson, Melissa, and David W. Nickerson. 2011. "Voter Mobilization." In *Cambridge Handbook of Experimental Political Science*, ed. James N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia. New York, NY: Cambridge University Press.
- Nielson, Lindsay, and Neil Visalvanich. 2014. "Primaries and Candidates: Examining the Influence of Primary Electorates on Candidate Ideology." Working paper.
- Niemi, Richard G. 1976. "Costs of Voting and Nonvoting." *Public Choice* 27 (1): 115–119.
- Nownes, Anthony. 1992. "Primaries, General Elections, and Voter Turnout: A Multinomial Logit Model of the Decision to Vote." *American Politics Quarterly* 20 (2): 205–226.

- Oliver, Pamela, Gerald Marwell and Ruy Teixeira. 1995. "A Theory of the Critical Mass: Interdependence, Group Heterogeneity, and the Production of Collective Action." *American Journal of Sociology* 91 (3): 522–556.
- Overton, Spencer. 2007. "Voter Identification." *Michigan Law Review* 112 (4): 631–681.
- Pew Center on the States. 2010. "Upgrading Democracy: Improving America's Elections by Modernizing States' Voter Registration Systems." Available at <http://www.pewstates.org/uploadedFiles/PCS_Assets/2010/Upgrading_Democracy_report.pdf>.
- Pew Hispanic Center. 2009. "Dissecting the 2008 Electorate: Most Diverse in U.S. History." Available at <<http://www.pewhispanic.org/2009/04/30/dissecting-the-2008-electorate-most-diverse-in-us-history/>>.
- Pew Hispanic Center. 2011. "The Latino Electorate in 2010: More Voters, More Non-Voters." Available at <<http://www.pewhispanic.org/2011/04/26/the-latino-electorate-in-2010-more-voters-more-non-voters/>>.
- Popkin, Samuel L. 1994. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. Chicago: University of Chicago Press.
- Powell, G. Bingham, Jr. 1986. "American Voter Turnout in Comparative Perspective." *American Political Science Review* 80 (1): 17–43.
- Quattrone, George A., and Amos Tversky. 1988. "Contrasting Rational and Psychological Analyses of Political Choice." *The American Political Science Review* 82 (3): 719–736.
- Ranney, Austin. 1972. "Turnout and Representation in Presidential Primary Elections." *American Political Science Review* 66 (1): 21–37.
- Rao, P.K. 2003. *The Economics of Transaction Costs: Theory, Methods, and Applications*. New York City: Palgrave Macmillan.
- Riker, William, and Peter Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 62 (1): 25–42.
- Rosenstone, Steven J., and John Mark Hansen. 1993. *Mobilization, Participation, and Democracy in America*. New York, NY: Macmillan.
- Sanchez, Gabriel, and Natalie Masuoka. 2008. "Brown-Utility Heuristic? The Presence and Contributing Factors to Latino Linked Fate." Paper presented at the annual conference of the Western Political Science Association, San Diego, CA.
- Selb, Peter. 2008. "Supersized Votes: Ballot Length, Uncertainty, and Choice in Direct Legislation Elections." *Public Choice* 135 (3-4): 319–336.

- Sides, John, Eric Schickler, and Jack Citrin. 2008. "If Everyone Had Voted, Would Bubba and Dubya Have Won?" *Presidential Studies Quarterly* 38 (3): 521–539.
- Sides, John, Eric Schickler, and Jack Citrin. 2011. "Who Governs if Everyone Votes?" In *Facing the Challenge of Democracy: Explorations in the Analysis of Public Opinion and Political Participation*, ed. Paul M Sniderman and Benjamin Highton. Princeton, NJ: Princeton University Press.
- Squire, Peverill, Raymond E. Wolfinger, and David P. Glass. 1987. "Residential Mobility and Voter Turnout." *American Political Science Review* 81 (1): 45–66.
- Stein, Robert M., and Patricia Garcia-Monet. 1997. "Voting Early, But Not Often." *Social Science Quarterly* 62 (3): 57–69.
- Stein, Robert M., Jan Leighley, and Christopher Owens. 2005. "Who Votes, Who Doesn't, Why, and What Can Be Done?" Report to the Federal Commission on Election Reform, 10 June.
- Stein, Robert M., and Greg Vonnahme. 2008. "Engaging the Unengaged Voter: Vote Centers and Voter Turnout." *Journal of Politics* 70 (2): 487–497.
- Stoker, Laura, and M. Kent Jennings. 1995. "Life-Cycle Transitions and Political Participation: The Case of Marriage." *American Political Science Review* 89 (2): 421–433.
- Timpone, Richard J. 1998. "Structure, Behavior, and Voter Turnout in the United States." *American Political Science Review* 92 (1): 145–158.
- Uggen, Christopher, and Jeff Manza. 2002. "Democratic Contraction? Political Consequences of Felon Disenfranchisement in the United States." *American Sociological Review* 67 (6): 777–803.
- Uslaner, Eric M. 1989. "Looking Forward and Looking Backward: Prospective and Retrospective Voting in the 1980 Federal Elections in Canada." *British Journal of Political Science* 19 (4): 495–513.
- Verba, Sidney, and Norman H. Nie. 1972. *Participation in America: Political Democracy and Social Equality*. Chicago: University of Chicago Press.
- Verba, Sidney, Kay Lehman Schlozman, Henry Brady and Norman H. Nie. 1993. "Citizen Activity: Who Participates? What Do They Say?" *American Political Science Review* 87 (2): 303–318.
- Vercellotti, Timothy, and David Anderson. 2006. "Protecting the Franchise or Restricting It? The Effects of Voter Identification Requirements on Turnout." Paper prepared for presentation at the 2006 annual meeting of the American Political Science Association.

Weiser, Wendy R., and Lawrence Norden. 2011. "Voting Law Changes in 2012." Report issued by the Brennan Center for Justice at the New York University School of Law. Available at <http://www.brennancenter.org/sites/default/files/legacy/Democracy/VRE/Brennan_Voting_Law_V10.pdf>.

Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. *Who Votes?* New Haven, CT: Yale University Press.