

Young People Face Higher Voting Costs and Are Less Informed About State Voting Laws

Charlotte Hill*

August 8, 2020

Word Count: 12,535

Abstract

In this paper, I show that voting costs are unequally distributed by age, and that higher costs predict lower registration and turnout rates. Compared to seniors, today's youth are less informed about the voting process and how to research candidates and issues; struggle more to find the time to vote, to plan ahead to vote, and to balance voting with other life tasks; face greater transportation issues and tradeoffs between voting and earning money; have greater difficulty with the parts of voting that cannot be done online; disproportionately think mail voting is a hassle; and are less likely to own the documentation they need to register and vote. When asked directly, youth are significantly more likely than older Americans to say that registration and voting are difficult. After adjusting for race-ethnicity, gender, education, and family income, being young (relative to being a senior) is a large and statistically significant predictor of voting costs. I also find that young people are the least-informed of any age group about their state's policies on same-day registration, early voting, mail voting, and whether individuals must update their voter registration after moving. These findings have important implications for whose preferences are heard and represented in American policymaking.

I thank Sarah Anzia, Amy Lerman, Gabe Lenz, Henry Brady, and Jake Grumbach. All remaining errors are my own.
*Goldman School of Public Policy, UC Berkeley. Email: charlottehill@gmail.com.

Introduction

For decades, researchers have noted a concerning electoral phenomenon: young Americans consistently vote at far lower rates than older Americans (e.g., Miller and Shanks 1996; Wolfinger and Rosenstone 1980; Rosenstone and Hansen 1993). The contrast is especially stark between youth and senior citizens, who consistently have the highest turnout rates. In the 2016 presidential election, only 46 percent of eligible young adults between the ages of 18 to 29 turned out to vote, whereas close to 71 percent of citizens 65 years and older voted—a gap of nearly 25 percentage points (File 2017). Even in the historically high-turnout midterm election of 2018, youth turnout topped out at 35.6 percent, compared to 66 percent for senior voters (Misra 2019).

One reason for this turnout disparity may be that voting is more costly for young people than for other age groups. Other studies have found that when certain barriers to registration and voting are reduced or eliminated, turnout goes up disproportionately for young people. In particular, same-day voter registration and all-mail voting appear to boost turnout for young adults more than for other age groups (Grumbach and Hill 2019; Bonica et al. 2020).

Yet we know surprisingly little about how voting costs might vary by age. This is a clear oversight. Understanding the ways in which young people are especially burdened by the voting process is essential for diagnosing shortcomings of our current voting system—and for identifying the specific policy changes most likely to increase youth turnout in the future.

To explore how voting costs may be unequally distributed across age groups, I surveyed voting-age Americans about their experiences with registering and voting. I find that young people face higher barriers to voting than other age groups. Compared to seniors, today's youth 1) are less informed about the voting process and how to research candidates and issues; 2) struggle more to find the time to vote, to plan ahead to vote, and to balance voting with other life tasks; 3) face greater transportation issues and tradeoffs between voting and earning money; 4) have greater difficulty with the parts of voting that cannot be done online; 5) disproportionately think mail voting is a hassle; and 6) are less likely to own the documentation they need to register and vote. When asked directly, youth are significantly more likely than older Americans to say that registration and voting are difficult. A series of linear regressions finds that, after adjusting for race-ethnicity, gender, education, and family income, being young (relative to being a senior) is a large and statistically significant predictor of voting costs. In turn, these voting costs are significant predictors of voting, with information costs the strongest predictors: people who report lacking registration and voting information are up to 57 percentage points less likely to have voted in 2018.

One path to reducing voting costs for young people is for policymakers to make the registration and voting process easier. I asked respondents to indicate how much easier voting would be if various voting reforms—same-day registration, early voting, mail voting, automatic voter registration, updating people's registration after they move, and internet voting—were adopted. On average, all ages believe that these voting reforms would make things easier for them, with young people slightly more likely than seniors to believe that internet voting and same-day registration, in particular, would make things easier.

While cost-reducing reforms can shrink the turnout gap between young and old Americans, they are often only modestly effective at boosting youth turnout. This presents a puzzle: if high voting costs

prevent young people from voting, then why does lowering those costs not lead to larger turnout gains? One plausible explanation may be that young people are largely unaware of the cost-reducing voting reforms enacted in their state and therefore less likely to take advantage of them.

I explore this possibility by asking survey participants to answer a series of factual questions about their state's registration and voting laws. I find that, on average, young people are the least-informed of any age group about their state's policies on same-day registration, early voting, mail voting, and whether individuals must update their voter registration after moving. Regression analyses again confirm that young age is a significant predictor of lower information about state voting laws.

In the following sections, I explore reasons why young people may face higher voting costs than older voters, especially seniors, and discuss challenges with past approaches to measuring voting costs. I then lay out my new approach to measuring costs and present the methods and sampling strategy used in my survey. Finally, I present survey results and discuss their implications.

Consequences of low youth turnout

Low youth turnout has substantively important consequences. Most importantly, the characteristics and preferences of the electorate shape both who gets elected and which policies they prioritize and implement (Anzia 2014; Bertocchi et al. 2017; Griffin and Newman 2005, 2013; Lijphart 1997). Young Americans tend to have different candidate preferences than their elders; in an August 2019 poll, a plurality of young people (24%) listed Bernie Sanders as their top choice for president in 2020, while 41 percent of older Americans strongly preferred frontrunner Joe Biden (Pew Research Center 2019). Young people can also be important conduits to immigrant constituencies (McDevitt 2006) whose vote choices are often distinct from those of the broader electorate (e.g., Lopez et al. 2018; Gimpel 2010; Preuhs 2019).

Young people are more liberal than seniors on a range of issues, including racial equality, immigration, LGBT rights, climate change, gun policy, and marijuana (Doherty 2018). They also prioritize issues differently: young voters care more about the environment and the treatment of LGBT individuals and racial and ethnic minorities, whereas older voters care disproportionately about Supreme Court appointments, Social Security, terrorism, foreign policy, and trade (Doherty et al. 2016). Despite a growing recognition that politicians are not always responsive to changing public preferences (Lenz 2012; Achen and Bartels 2016), political leaders do seem to adopt popular stances “on any issue where the public's views are clear cut” and to adjust their votes in anticipation of public sentiment (Schickler 2018, p. 124). When young people fail to turn out, elected leaders have little cause to prioritize young people's issues and vote in line with their preferences.

Low participation begets further low participation, as young voters fail to enact youth-targeted programs that might motivate them to turn out in future elections. By contrast, older Americans have secured policy victories such as Social Security that they then seek to protect in subsequent elections, helping to sustain high participation rates (Weir et al 1998, p. 25–26; Campbell 2003). If young people come to believe that the political system is unresponsive to people like them, this may further depress turnout rates. Given young people's already-high levels of political distrust (Citrin and Stoker 2018) and low satisfaction with regime performance (Norris 2011), this possibility is particularly concerning. Because voting is habitual and persistent (Coppock and Green 2016; Gerber et al. 2003; Meredith 2009;

Fujiwara et al. 2016), these trends could persist through the generations. Establishing patterns of voting early in life, then, is critical to ensuring that individuals turn out not just in their younger years, but also as they age.

While we have become accustomed to young people not voting, there are actually reasons we might expect youth to vote in high numbers. Their financial and physical well-being is inextricably linked to policy outcomes: Social Security risks insolvency before they can reap the benefits of their paycheck contributions, student loan debt is skyrocketing, global warming promises to unsettle the ecosystem young people inherit from older generations, and school shootings threaten college students' personal safety. Young people also participate in other forms of political activity, such as protest, social media engagement, and volunteerism, at high levels (Strama 1998; Norris 2011). Some see these high levels of non-electoral political participation and civic engagement as reasons to be more sanguine about low youth turnout (e.g., Dalton 2009, Zukin et al. 2006), but they are no substitute for voting. Ultimately, politicians do not get protested, tweeted, or volunteered out of office.

To summarize: young people risk suffering unfavorable political outcomes by refraining from voting and are willing and capable when it comes to other forms of political participation. Yet they vote at lower rates than older Americans—a puzzle whose answer may at least partially lie with them facing higher voting costs.

The costs of voting

In the 1950s, rational choice theory posited a straightforward “calculus of voting,” in which an individual’s likelihood of turning out hinges on a rational cost-benefit analysis: she is more likely to vote as the benefits she gains from voting go up and/or the costs she incurs from voting go down (Downs 1957). While the specific “calculus of voting” outlined by Downs has been challenged by numerous scholars, the fundamental premise that people vote when the benefits of doing so outweigh the costs is uncontroversial.

While many scholars have explored the different types of *benefits* individuals might gain from voting, surprisingly little scholarly attention has been paid to the *costs* of voting. Many researchers have assumed that voting is fairly easy, “no more costly than many other kinds of intermittent activities [people] undertake” (Niemi 1976, p. 116; see also Ferejohn and Fiorina 1974; Riker and Ordeshook 1968). Others have questioned this assumption of low costs. Aldrich (1993), after noting that costs were often omitted from models entirely or measured only indirectly, suggested that “if good measures of costs were available in surveys they would also show strong effects” (1993, 257).” Indeed, Downs originally assumed that the information costs of voting—the effort expended in learning about candidates and the electoral process more broadly—were high. As Sanders (1980) laments, the modern notion of low voting costs “bears little or no relationship to the costs of information gathering and processing emphasized by Downs; nor does it acknowledge the physical costs of registering and getting to the polls on a workday—costs measured in time, money, and opportunities foregone” (p. 856). Moreover, even if the absolute costs of voting are quite low, they can still have a large impact on a person’s likelihood of turnout if their perceived benefits of voting are also small (Niemi 1976, p. 117).

A small number of studies have explored heterogeneity in the voting costs borne by different socio-economic and demographic groups. Once again, the early voting turnout literature was better on this

front; several prominent scholars in the 1970s posited differential costs as an explanation for why low-income individuals turned out at lower rates than their richer counterparts (Niemi 1976; Frey 1971; Tollison and Willett 1973). Other early studies noted that varying costs of travel might impact someone's likelihood of voting (Downs 1957; Niemi 1976; Sanders 1980). In the years since the voting franchise was expanded to include people of color, costs have often been higher for non-white individuals, particularly African Americans, whose turnout increased dramatically after a series of barriers to black registration and voting were dismantled by the Voting Rights Act (Rosenstone and Hansen 1993).

More recent research has found that residents in minority-majority precincts face longer wait times on Election Day (Pettigrew 2017; Stewart 2012). Brady and McNulty (2011) highlight how individuals living farther from their polling place faced higher costs of voting in person,¹ and Haspel and Knotts (2005) find that small differences in how far individuals live from the polls have an outsize impact on their likelihood of voting. In addition, multiple studies find that higher residential mobility increases the effort required to remain registered to vote (Ansolabehere et al. 2012; Highton 2000; Squire et al. 1987)—an especially important finding, given young people's disproportionately high mobility rates (US Census Bureau 2016). Yet to my knowledge, no study has specifically examined how a range of voting costs might vary by age, or how variation in those costs predicts registration and turnout rates.

Broadly speaking, individuals could face higher voting costs in two ways. First, they might have to expend disproportionately more resources (e.g., mental effort, free time, or money) than other people in order to register and vote. In other words, they might face higher voting *barriers* than other people. For example, we know that on average, Black and Hispanic Americans face longer voting lines than white Americans. Casting a ballot therefore “costs” them a greater expenditure of time. In other cases, the barriers to voting might be constant across all individuals, but some people might have fewer *resources* to overcome these barriers. Two people may face equally long voting lines, but if one person has less free time, waiting to vote will be more costly for them.

Why young people face higher voting costs

I hypothesize that young people—and especially today's young people—have certain attributes that both lower their starting level of voting resources and also require them to expend relatively more resources than other age groups in order to vote. Following the existing literature on youth turnout, these can be separated into life-cycle and cohort-specific factors: life-cycle factors relate to being at a certain stage of the life cycle, whereas cohort factors relate to being a member of a time-specific birth cohort.

Life-cycle factors

Young people tend to share certain characteristics, as a result of being in the same life stage. For starters, given the minimum voting age of 18, they are more likely to be new voters. Relative to older individuals who have previous experience voting, it likely takes more mental effort for them to learn how to register, find and travel to their registration site, and (correctly) fill out their registration paperwork.

¹ Interestingly, when people's polling places exogenously shifted to a more distant location, older voters were more likely to switch to absentee voting, while younger voters were more likely to abstain from voting entirely (p. 116). The authors theorize that this difference is due to learning about electoral system: “older people (whom we can presume have learned about the voting system) substitute absentee voting for polling place voting” (p. 126).

Once registered, it should again take more mental effort to learn about the voting process, develop a voting plan, find and travel to their polling place, and successfully complete their ballot. New voters may also not know how to go about deciding which candidates and issues to support. They may, for instance, be unaware of common voting resources such as voter guides and advocacy group endorsements.

Young adulthood is typically associated with a series of major life changes, including finishing secondary school, moving out of the family home, and finding new friends and romantic partners. These activities each take a substantial investment of time and may leave young people feeling busier than their older (and more settled) counterparts, raising their opportunity cost of taking time to register and vote. Notably, young people expect voting to take a significant amount of time; a 2012 poll (CIRCLE 2012, p. 4-5) found that nearly 40 percent of young adults expected voting on Election Day to take between 21 and 60 minutes, while another 10 percent thought it would take at least an hour. Researchers have also found an association between shorter polling hours and lower youth turnout (Kawashima-Ginsberg et al. 2009, p. 4), suggesting that schedule restraints prevent some youth from voting. By virtue of being in college or overrepresented in part-time jobs, young people may also have less consistent schedules than other age groups, making it harder to plan ahead to vote. Relatedly, they may struggle to balance voting and registration with all the other things on their plate; one recent study found that young people have worse work-life balance than other age groups (Nagle 2019).

Youth workers might also perceive a greater opportunity cost from taking the time to register and vote, for two reasons: First, young people are overrepresented among hourly wage workers; while young adults age 19-25 make up just 9 percent of the U.S. population (Kaiser Family Foundation 2018), they constitute 20 percent of wage earners. In contrast to salaried workers who earn a consistent amount each pay period regardless of the specific number of hours they work, wage workers forgo income if they spend time they could be working on other, non-work tasks. Exacerbating this issue, young people are disproportionately likely to work in the “gig economy,” where they could theoretically work at any given moment of the day. Second, young people generally have less personal wealth than older Americans, making up a full 50 percent of minimum-wage earners (Bureau of Labor Statistics 2018). The marginal dollar they forego by taking time to register and vote constitutes a larger percentage of their income; this should make it more costly for them to participate.

Because they are poorer, young people likely also have a harder time shouldering the real financial costs of registering and voting. They may need to purchase the official documents needed to obtain a valid voter ID (Thompson 2012), pay to print out registration forms, buy stamps for a mail-in ballot (Armitage 2018), and pay for bus, taxi, or ride-share transportation to and from registration and voting sites. All told, being low-income would be expected to negatively impact youth registration and turnout rates.

Compared to older Americans, young people are also disproportionately mobile. Individuals between the ages of 18 and 29 change addresses more than twice as frequently as those over the age of 30 (US Census Bureau 2016). Many relocate for college just as they become eligible to vote; in one study, more than half of people between the ages of 18 and 21 who reported having moved in the previous year cited education or schooling as a major reason for relocating (Taylor et al. 2008). Unless they are moving within a state with automatic voter registration and they update their home address with their state, these

young people must re-register to vote every time they move (Squire et al. 1987; Kaid et al. 2007; Holbein and Hillygus 2020; Ansolabehere et al. 2012).

Yet having to re-register is just one component of the increased costs that follow from relocation. Individuals who move addresses may also have to exert more effort to learn a host of new information relevant to voting in their new neighborhood, including any differences in registration and voting rules, where to find the closest registration site and polling place, how to navigate to and from those registration and voting sites, and, if they moved to a new jurisdiction, background on the candidates and issues on their ballot.²

New research from Holbein and Hillygus (2020) suggests that young people have underdeveloped “non-cognitive skills” such as conscientiousness and grit—and that this is a feature consistent across generations, not specific to “kids these days.” These skills are necessary to overcome not only traditional voting barriers but also unanticipated obstacles like inclement weather (Fujiwara, Meng and Vogl 2016; Gomez, Hansford and Krause 2007; Henderson and Brooks 2016) or long voting lines (Pettigrew 2016). A voting system that demands participants persevere through numerous setbacks should be more costly for those who lack this capacity.

Despite today’s young Americans earning college degrees at higher rates than previous generations, the youngest voting-eligible adults (ages 18-24) still have lower levels of formal education than older Americans (US Census Bureau 2020). Educational attainment is strongly associated with voter turnout. Burden (2009) offers three explanations for this relationship: education “provides people with skills to make sense of the political world,” “makes for easier navigation of voter registration requirements and other impediments to voting,” and “socialize[s] a sense of civic duty and expose[s] them to elite recruitment efforts” (p. 542). College students tend to turn out at much higher rates than non-college youth; turnout rates for young people with a bachelor’s degree usually range from 60 to 80 percent (Godsay et al. 2012). Yet only 37 percent of Americans under 30 have a bachelor’s degree (US Census Bureau 2019a). For young adults without any college experience, turnout is around 35 percent—about half that of college graduates (Godsay et al. 2012).

Cohort factors

Although the age gap in U.S. turnout has existed for decades, evidence suggests it has grown in recent years (Smets 2010). Cohort-specific factors may help explain this growing gap.

Today’s young people, commonly referred to as Millennials and Gen Z, grew up in the internet age. These “digital natives” are used to completing bureaucratic tasks through online portals, many of which provide streamlined automated or “one-click” services. For example, about 70 percent of 18-29-year old smartphone owners have used their phone to do online banking, compared with only 57 percent of the overall population (Smith 2015). Young people may find it difficult to navigate a voting system

² While several scholars have highlighted the link between youth mobility and low registration rates, none have explicitly incorporated higher youth mobility into a broader theory of heterogeneous voting costs by age or examined other ways that mobility may affect voting costs.

that still requires paper forms, long waits between registration deadlines and Election Day, and in-person trips to the voting booth or post office.

Relatedly, Millennials and Gen Z-ers are also less comfortable using the postal service. A recent USPS report found that young people receive less mail, pick up their mail less frequently, and use the mail to pay their bills less often than members of older generations (USPS 2018). Young people also hold “strong preferences for electronic alternatives to mailed correspondence and bill payment” and believe that sending mail is “conceptually easy” but a “laborious” process. Presumably, young people are also less likely to own stamps, which they may need (or at least *think* they need) to cast a ballot by mail (Armitage 2018). These findings suggest that young people might find it disproportionately difficult to participate in mail-based elections programs, such as those that let people mail in their registration forms or vote by mail. With more states considering all-mail elections, this possibility is particularly concerning.

The current cohort of young people is also driving less. A University of Michigan study found that the percentage of young adults (age 20-24) with driver’s licenses declined steadily from 92% in 1983 to just 77% in 2014. Older Americans, by contrast, drive at far higher rates; in 2014, more than 92% of individuals age 60-64 had a license (Sivak and Schoettle 2016). The two most common reasons why young adults forego driving speak to their limited resources: 37% cited being too busy or not having enough time to get a license, and 32% cited the cost of vehicle ownership and maintenance (Schoettle and Sivak 2013). Unsurprisingly, young people are also overrepresented among public transportation users (Anderson 2016).

Young people’s shift away from driving has several potential ramifications for their turnout. First, when they skip visiting the DMV to get a license, they cannot be asked to register to vote by a DMV employee; this should lower the overall youth registration rate. Second, their marginal costs of traveling to registration and voting sites should increase; this may help explain why, in one study of young non-voters, 30 percent cited transportation issues as a reason why they did not vote (CIRCLE 2018). Third, young people without driver’s licenses may fear getting turned away at the polls due to lack of valid voter ID, even if their jurisdiction does not actually require a driver’s license to vote (Ember 2018).

Another reason why today’s young people may face higher voting costs is that they disproportionately belong to Black, Hispanic, Asian, and other minority racial and ethnic groups. The current cohort of young Americans is the most diverse in our country’s history (Fry and Parker 2018). Previous research suggests that people of color face greater barriers to voting than whites (Rosenstone and Hansen 1993; Pettigrew 2017; Stewart 2012). (In the regression tables included in the appendix, I repeatedly find that people of color face higher voting costs than white people, even after controlling for family income and education.) Racial-ethnic groups may also face qualitatively *different* voting costs as a result of engaging differently with registration and voting processes. According to a recent analysis of US Census data by the Voter Participation Center, Black youth are less likely to register online and more likely to vote in person than young Asians or whites (Lake et al. 2017). When asked why they didn’t vote, Black youth are disproportionately likely to cite being uninterested or feeling their vote does not matter; by contrast, young Latinos are more likely to cite being busy, and young Asian Americans are more likely to cite being away from home or out of town (p. 63-64). When explaining why they are not *registered* to vote, young Asian Americans are more likely to say they do not meet residency requirements, whereas Latino youth disproportionately say they do not know where or how to register (p. 127).

Measuring costs of voting

Challenges to measuring voting costs

Higher voting costs have long been recognized as reducing the likelihood that individuals will participate in elections. But the costs of voting have largely gone unmeasured in past research on voter turnout. A recent paper by Blais, Daoust, Dassonneville, and Pélouquin-Skulski (2019) identifies just one previous study that attempts to directly measure voting costs in aggregate (Blais 2000), along with two studies that highlight variations in the cost of waiting in line to vote (Pettigrew 2017; Stewart 2012). To address this clear shortcoming of the literature, Blais and coauthors conduct two surveys to measure people's perceived costs of voting. Costs are broken into two components: the direct costs of voting, and the information costs associated with learning about parties and candidates and deciding for whom to vote; registration costs are not measured.

In one of the surveys, fielded in British Columbia and Quebec, subjects are asked to rate, on a scale from 1-10, how easy or difficult it is to go to the polling station (a measure of direct costs) or to make up their mind about the parties or party leaders (a measure of information costs). In the second survey, conducted in Canada, France, Germany, Spain and Switzerland, subjects are asked how easy or difficult it is to vote, using a four-point scale ranging from very difficult to very easy.

This study has several limitations, each of which highlights the need for an additional survey measuring voting costs. To begin with, the authors do not survey United States citizens or collect sufficient data to analyze how costs vary across age (or other demographic) groups. The study also does not attempt to measure registration costs, despite the fact that registration is a prerequisite for voting across the U.S.³

Another serious limitation of the Blais et al. study is that it relies on subjects to accurately assess and report the costs they face. The authors justify this approach to measuring costs by arguing that “what matters is whether individual citizens perceive voting to be easy or difficult” (p. 2). Certainly, perceptions of cost matter; an individual who thinks voting will be hard will be less likely to vote than someone who anticipates an easy voting experience, all else being equal. But people's *perceptions* of voting costs, especially as measured via a single question, may not fully capture the costs of registering and voting. Survey respondents may exert insufficient effort when answering the question, thinking only about the most salient aspects of the voting process—perhaps the actual act of casting a ballot at their polling place—and failing to incorporate other costs that are less salient, such as the time and energy required to locate their polling place, find a good time to vote, weigh various transportation options, and so forth. This should downwardly bias the average cost of voting reported by respondents.

Moreover, even if respondents do take the time to think through every step of the voting process, they may be so habituated to certain voting hassles, such as waiting in line at their polling place or buying stamps for their mail-in ballot, that they altogether fail to incorporate these into their calculation of voting costs. Finally, social desirability bias could also downwardly bias survey results: if respondents personally find voting difficult but attribute this to some individual shortcoming, they may feel

³ The one exception is North Dakota, the only state without a registration requirement.

embarrassed, leading them to respond to the cost question in a way they believe is more socially acceptable.⁴

A new measurement approach

To address these potential pitfalls and more effectively estimate the relationship between voting costs and turnout, I take a different approach to measuring costs. In a nationally representative survey, I asked respondents questions about the specific barriers they face at different stages of the registration and voting process, as well as the resources they have at their disposal to overcome those barriers. This more detailed and comprehensive approach avoids the problems associated with more typical, summary measures of voting difficulty that I have just described.

In an initial set of Likert-style questions, I asked whether respondents know the steps they need to take to register and vote, the location of their polling place, how to find information about candidates and issues on their ballot, and how to fill out a ballot. Individuals who lack this information are said to face “information costs” when registering or voting—that is, they must exert additional effort to learn the information they need to participate in elections. I next asked a series of questions aimed at uncovering ways in which young people might face disproportionate barriers related to time, scheduling, and work-life balance: whether they struggle to balance registering and voting with the other things they have to get done, to plan ahead to register and vote, and to find the time to register and vote.

Additional questions addressed whether transportation issues make it hard for them to register and vote, whether registration and voting use up time they could spend earning money instead (a measure of the opportunity cost of voting), and whether they already own the voter ID documentation needed to register and vote. I also asked about specific aspects of the voting process that may disproportionately burden young people: whether respondents feel that sending a registration form or ballot through the mail is a hassle, and whether they struggle to complete the parts of registering and voting that can’t be done online. I supplemented these questions with more typical measures of voting costs, asking individuals to rate how easy or difficult registration and voting are for them personally.⁵

In addition to questions about voting costs, respondents were also asked a series of questions about registration and voting laws. First they were asked to identify, to the best of their knowledge, their state’s approach to various aspects of elections, including registration deadlines and mail voting. Then they were presented with a series of potential voting reforms—including allowing people to register on Election Day at the polls, allowing people to vote ahead of Election Day, automatically registering all eligible citizens to vote, automatically updating voter registration when people move, conducting

⁴ Qualitative interviews conducted by Holbein and Hillygus (2020) suggest that social desirability bias could lead people to say voting is easier than it actually is. In their interviews, individuals appear to interpret difficulties with voting as a reflection of some personal shortcoming, rather than a structural problem. It is quite plausible that these individuals would report that the voting process is somewhat or very easy, even if they personally find it difficult to navigate.

⁵ Due to space limitations, I did not ask respondents about two important attributes described earlier in this paper that should affect voting costs: whether they have moved recently, and whether they lack a driver’s license. Both theory and common sense support the idea that moving and lacking a driver’s license should increase one’s voting costs and reduce their likelihood of turning out, and other researchers have already documented how these attributes vary across age groups.

elections entirely by mail, and allowing people to vote online—and asked whether each reform would make things easier or harder for someone like them.

Respondents were also asked for their registration and voting history, whether they intend to vote in the 2020 presidential election, and for whom they intend to vote. YouGov, who recruited the sample of respondents, also provided demographic information for each respondent, including age, race and ethnicity, sex, educational attainment, and family income. This allowed me to control for these factors when investigating the relationship between age and voting costs, as well as to explore heterogeneous effects across subgroups.

Sampling and data collection

The survey was sponsored by the Berkeley Institute for Young Americans (BIFYA) and fielded by the polling firm YouGov between April 29 and May 13, 2020.

YouGov interviewed 2,448 voting-age American citizens, oversampling on young (18-29) and old (65+) individuals in order to improve statistical precision when comparing findings across age groups. Interviewed individuals were then matched to a nationally representative sampling frame constructed from the 2016 American Community Survey 1-year sample, resulting in a final sample of 2,270 respondents. These individuals were then weighted to the ACS sampling frame using propensity scores that took into account their age, gender, race/ethnicity, years of education, and region, and then post-stratified according to these propensity scores. Finally, the weights were post-stratified on 2016 presidential vote choice and a four-way stratification of gender, age, race, and education, in order to produce the final weights.⁶ These careful sampling and weighting protocols make it possible to generalize my survey findings to the broader universe of voting-age Americans.

Variables were recoded and rescaled for easier interpretation of survey results. Respondents were categorized into six age groups (18-24, 25-29, 30-39, 40-49, 50-64, and 65 and older), five racial/ethnic groups (white, Black, Hispanic, Asian, and other), and four education groups (high school or less, some college, bachelor's, and post-graduate). All Likert-scale items were converted to binary variables to make it easier to interpret results.

I coded data on state election laws based on publicly available information from the National Conference of State Legislatures.⁷ Individuals who correctly identified a policy their state had adopted were coded as being “correctly informed” about that policy. Individuals who incorrectly identified their state’s policy were coded as being “misinformed.” Those who were not sure of their state’s policy were coded as being “unsure.”

⁶ More information on the matching, stratification, and weighting procedures used to conduct the BIFYA/YouGov survey can be obtained by emailing Charlotte Hill at charlottehill@berkeley.edu.

⁷ State laws were coded according to their status at the time of the survey (April 29-May 13, 2020); since then, several states have changed their voting policies, especially around mail and absentee voting.

Results

Costs of registration and voting

For each of the thirteen indicators of registration and voting costs included in the survey, young people reported facing higher voting barriers and having access to fewer voting resources than other age groups, particularly senior citizens.

Respondents were asked to read a series of statements and to answer whether they agreed or disagreed using a 7-point scale. For ease of interpretation, dependent variable values were re-coded on a three-point scale: 0 = disagree, 0.5 = neither agree nor disagree, and 1 = agree.

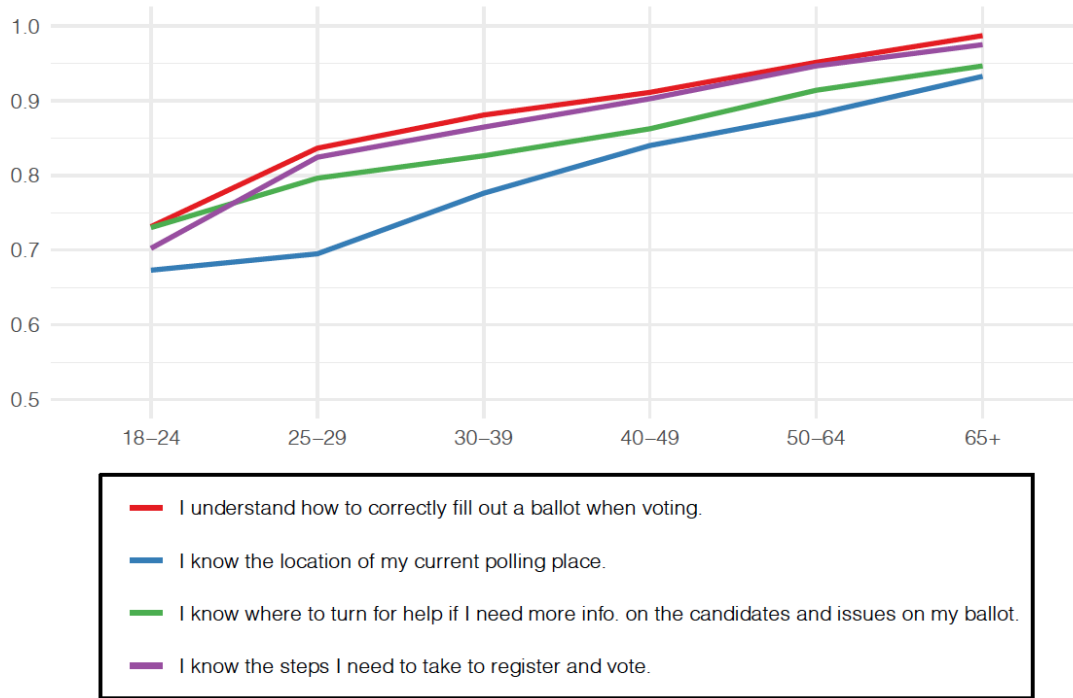
Information costs

The first set of statements had to do with the costs of learning how to vote—both how to navigate the electoral process, and also how to make informed voting choices.

1. I understand how to correctly fill out a ballot when voting.
2. I know the steps I need to take to register and vote.
3. I know where to turn for help if I need more information on the candidates and issues on my ballot.
4. I know the steps I need to take to register and vote.

Figure 1

Young people less likely to have the information they need to vote
Proportion of age group that agrees with each statement



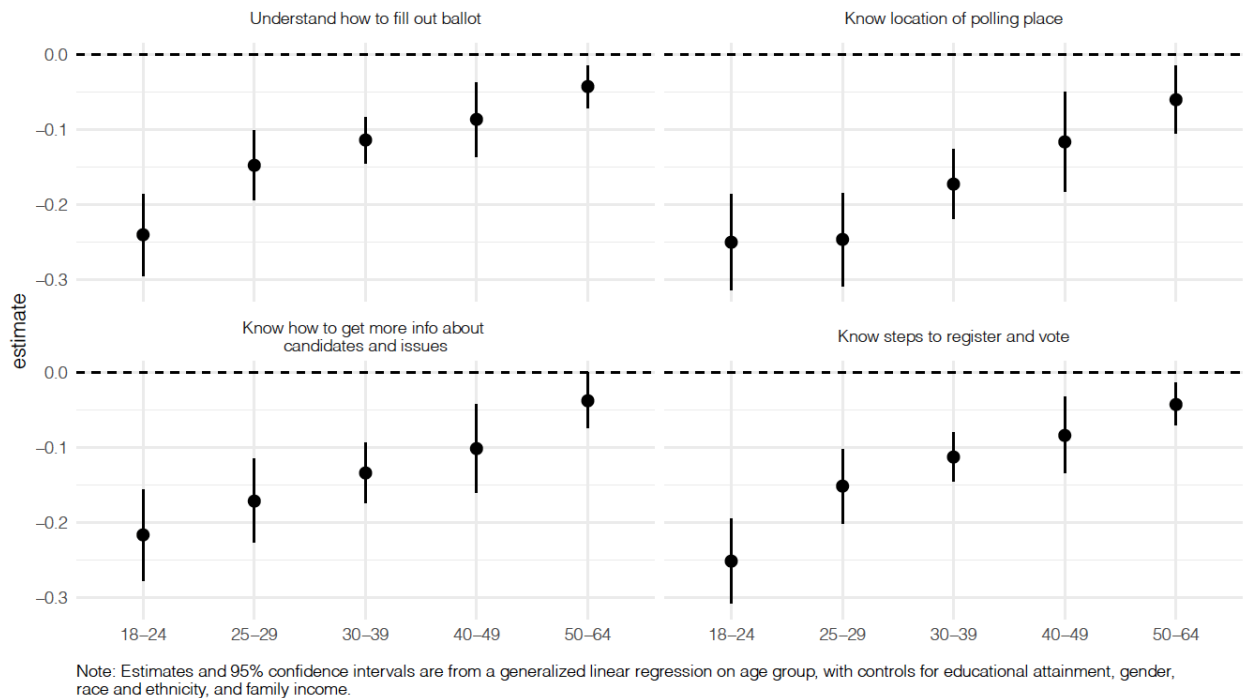
All age groups tend to agree with these statements. However, young people are less likely to agree than older people, as shown in Figure 1. The parallels across measures are striking: the youngest people (ages 18 to 24) are the least likely to agree with each of the four measures of voting information, while voting information is at its highest levels for people 65 and older.

A series of linear regressions confirm that young people have significantly lower levels of voting information than people 65 and older, as shown in Figure 2 (full regression results are shown in Appendix Table A15).⁸ After adjusting for race and ethnicity, educational attainment, gender, and family income, every age group is significantly less likely than seniors to know key voting information.

⁸ There is debate over whether linear regressions or ordinal logit (or probit) regressions are best-suited for analyzing results of Likert survey items (e.g., Bishop and Herron 2015; Knapp 1990). To help address this concern, I first recode all Likert scale-type dependent variables as binary outcomes, eliminating issues over how to interpret *spacing* between levels while preserving some of the information conveyed by the *order* of the levels. Per Hellevik (2009), I then use linear regression to regress these binary outcomes on a series of covariates. As a robustness check, all models were also run using ordinal logistic regression. All substantive results remained the same. Full results of the ordinal logistic regressions can be found in Appendix Tables A1-A14.

Figure 2

Young people least likely to have the information they need to vote
Estimated effect of age on likelihood of agreeing with statement, relative to people 65 and older.



Information barriers are highest for 18- to 24-year-olds, who are 23 percentage points less likely than seniors to understand how to correctly fill out a ballot, 24 percentage points less likely to know the location of their polling place, 21 percentage points less likely to know where to turn for help to find more information on the candidates and issues on their ballot, and 24 percentage points less likely to know the steps they need to take to register and vote. When these four measures are combined into a scale, the average 18-24-year-old scores 22 percentage points lower on voting information than the average senior. Substantively, the magnitude of these relationships—in either individual or scale form—are larger than those for race, education, gender, or family income alone.

Time and scheduling costs

Next, respondents were asked to read a set of statements about time and scheduling barriers to voting.

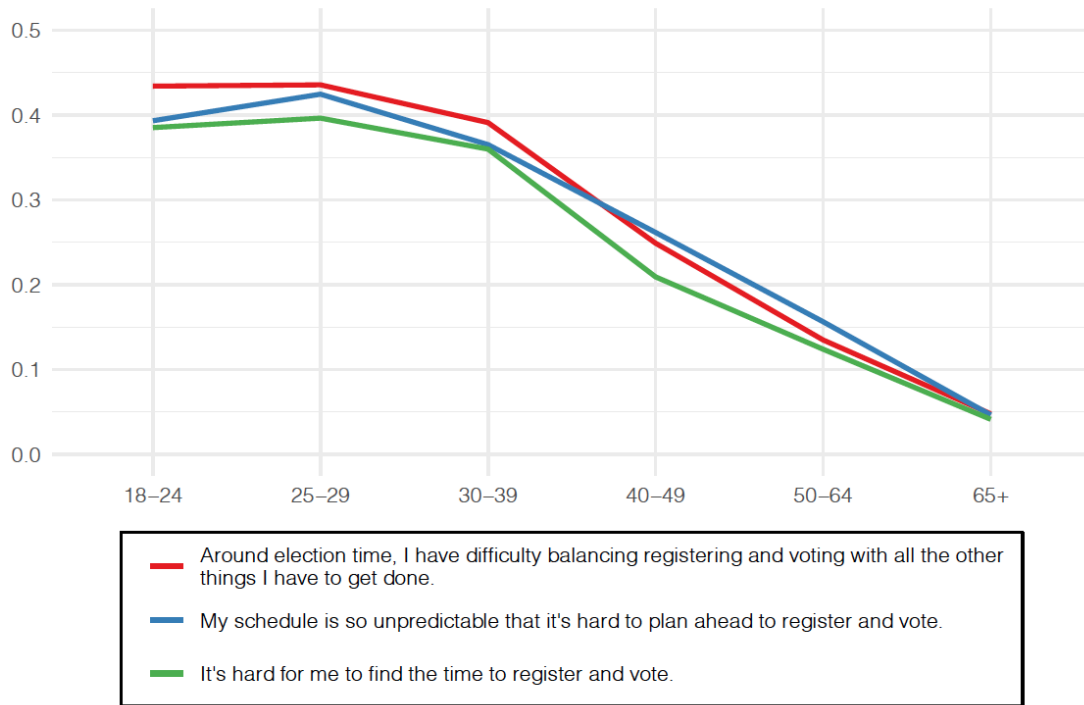
1. Around election time, I have difficulty balancing registering and voting with all the other things I have to get done.
2. My schedule is so unpredictable that it's hard to plan ahead to register and vote.
3. It's hard for me to find the time to register and vote.

While all age groups tend to disagree with these statements, young people are much more likely to report facing these particular voting barriers than older people, as shown in Figure 3. Around 4 in 10 people in their twenties agree that they have difficulty balancing voting with other tasks, that unpredictable schedules make it hard to plan to vote, and that it is hard to find the time to vote.

Agreement declines with age, with 95 percent of individuals 65 and older disagreeing with these statements.

Figure 3

Young people face greater time and scheduling barriers to voting
Proportion of age group that agrees with each statement

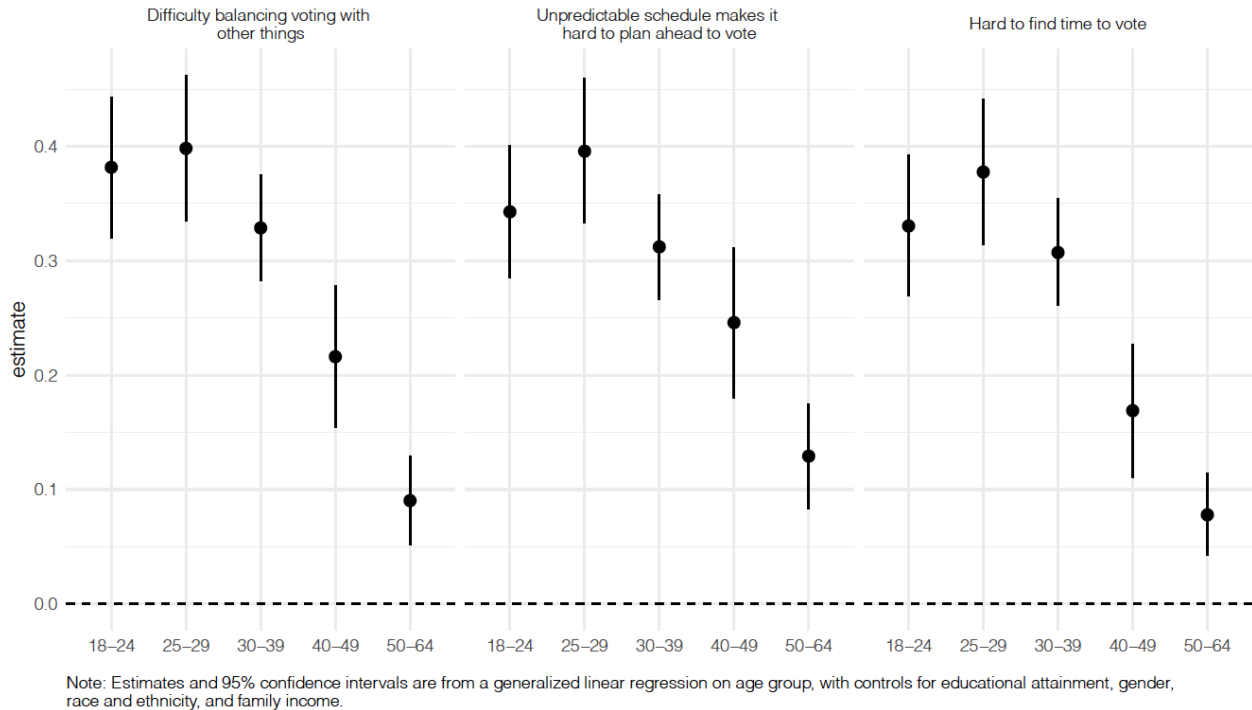


After adjusting for race and ethnicity, education, sex, and income, being young is a significant predictor of higher time, scheduling, and work-life balance costs (Figure 4; see full regression results in Appendix Table A16). Relative to those 65 and older, young adults age 18-24 and 25-29 are more likely to have difficulty balancing registering and voting with other tasks (+38 and +40 percentage points, respectively), to say it is hard to find the time to register and vote (+33 and +38 percentage points), and to say their schedule is so unpredictable that it's hard to plan ahead to register and vote (+34 and +40 percentage points). As before, these relationships are substantively much larger than those for race, education, income, and gender.

Figure 4

Young people face greater time and scheduling barriers to voting

Estimated effect of age on likelihood of agreeing with statement, relative to people 65 and older.



Transportation and opportunity costs

Two additional statements addressed the transportation and opportunity costs associated with voting. Because voters are not technically required to pay to vote, these costs represent key ways in which voters must draw on personal resources—or forego the opportunity to increase their resources—in order to vote.

1. Registering and voting use up time I could spend earning money instead.
2. Transportation issues make it hard for me to register and vote.

Figure 5 shows a similar pattern to the results presented earlier. Young people are most likely to agree with both of these statements: around 4 in 10 of people in their twenties and thirties face transportation and opportunity costs, compared to fewer than 1 in 10 seniors.

Figure 5

Young people more burdened by transportation and opportunity costs
Proportion of age group that agrees with each statement

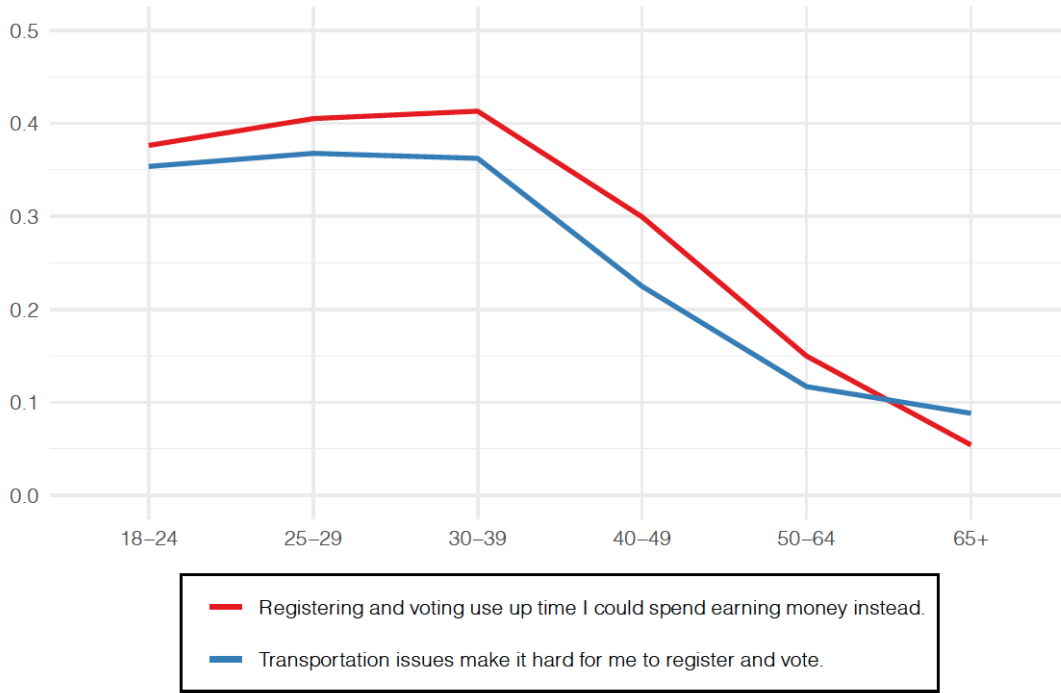
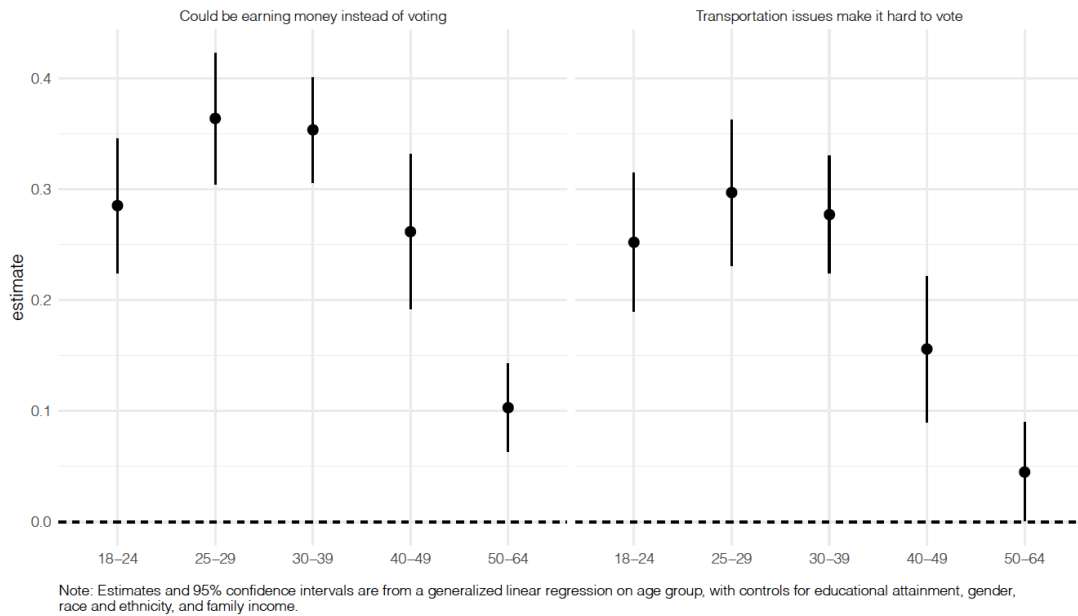


Figure 6

Young people more burdened by transportation and opportunity costs
Estimated effect of age on likelihood of agreeing with statement, relative to people 65 and older.



Differences in transportation and opportunity costs by age group are statistically significant, as shown in Figure 6. After standard controls, young Americans aged 18-24 and 25-29 are between 25 and 30 percentage points more likely to agree that transportation issues make it hard for them to register and

vote and between 29 and 36 percentage points more likely to agree that registration and voting use up time they could spend earning money instead. People in their 30s are similarly more likely to agree with these statements. Again, these effect sizes are much larger in magnitude than the effects for race, education, gender, and income, as shown in Appendix Table A17.

Voting procedure costs

Respondents were also presented with two statements about America’s voting procedures.

1. I struggle to complete the parts of registering and voting that can’t be done online.
2. I feel that sending a voter registration form or ballot through the mail is a hassle.

Young people once again report higher agreement with these statements, as shown in Figure 7. Around 40 percent of 18 to 24-year-olds, 25 to 29-year-olds, and 30 to 39-year-olds feel burdened by having to complete some registration and voting tasks offline and by the mail-in voting process. Agreement falls somewhat for those in their forties and reaches its lowest levels for people in their fifties and older, with seniors far less likely than young adults to report struggling with offline and mail voting procedures.

Figure 7

Young people burdened by offline voting procedures, mail voting
Proportion of age group that agrees with each statement

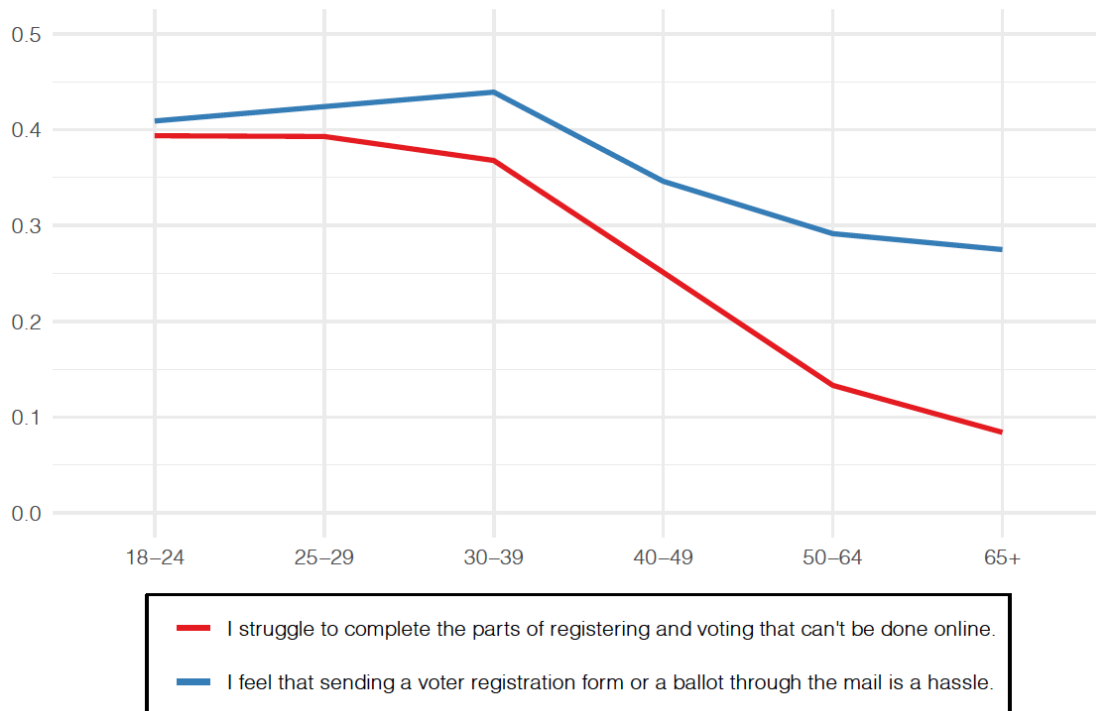
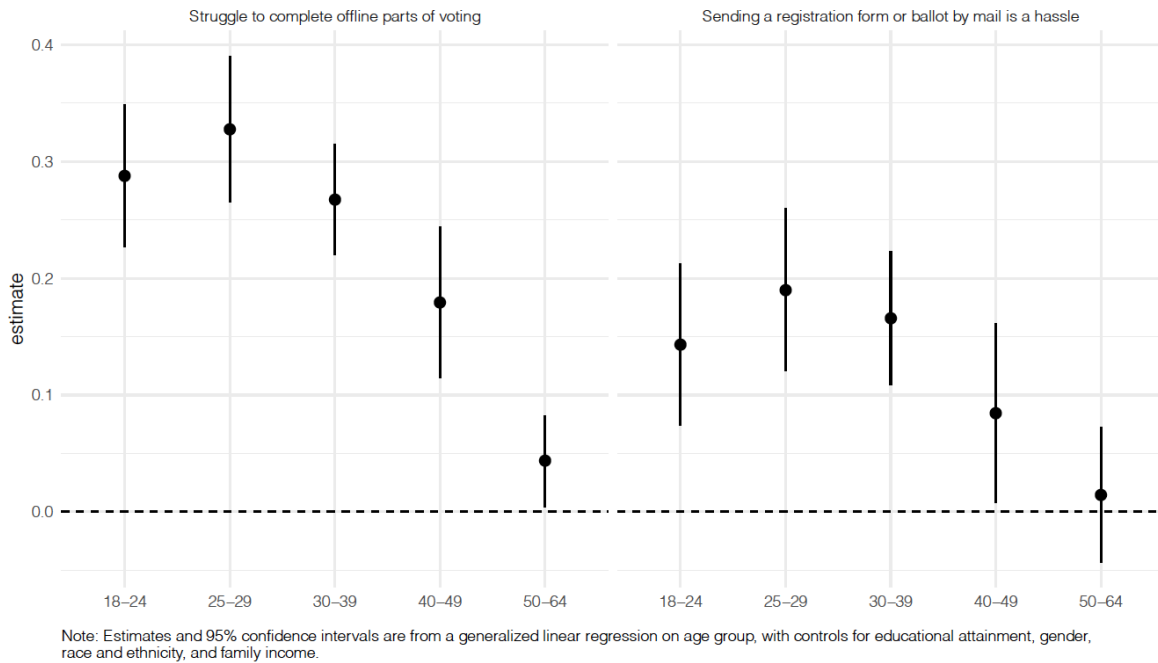


Figure 8

Young people burdened by offline voting procedures, mail voting
Estimated effect of age on likelihood of agreeing with statement, relative to people 65 and older.



After adjusting for standard controls, these differences by age are statistically significant and large in magnitude, as shown in Figure 8 (see Appendix Table A18 for full regression results). 18- to 24-year-olds are 29 percentage points more likely to struggle to complete the parts of registering and voting that can't be done online and 14 percentage points more likely to feel that sending a registration form or ballot through the mail is a hassle. Costs appear to be even higher for 25- to 29-year-olds, who are 33 and 19 percentage points more likely than seniors to struggle with offline and mail-based voting procedures, respectively. Results are similar for people in their thirties, as well.

Voter ID costs

Respondents were next asked whether they own the documentation they believe they need to register and vote. Figure 9 shows that just 63 percent of young people said they “probably” or “definitely” already have this documentation, compared to nearly 95 percent of seniors.

Figure 9

Young people less likely to own voter ID documentation

Proportion of age group saying they own the documentation needed to register and vote

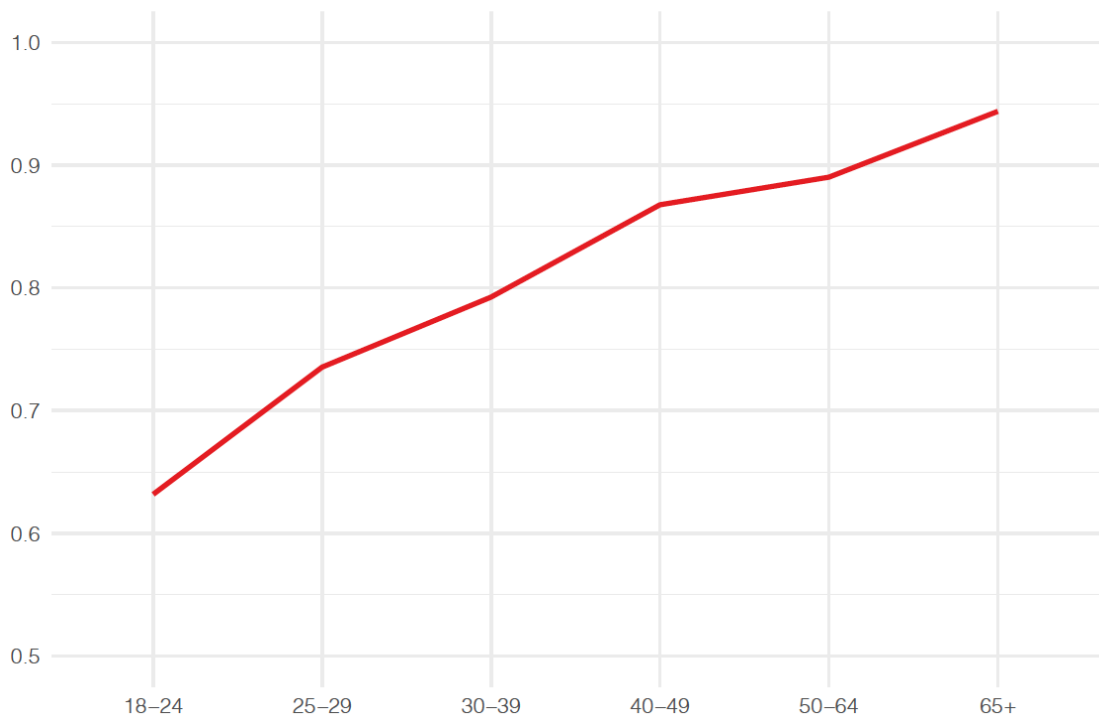
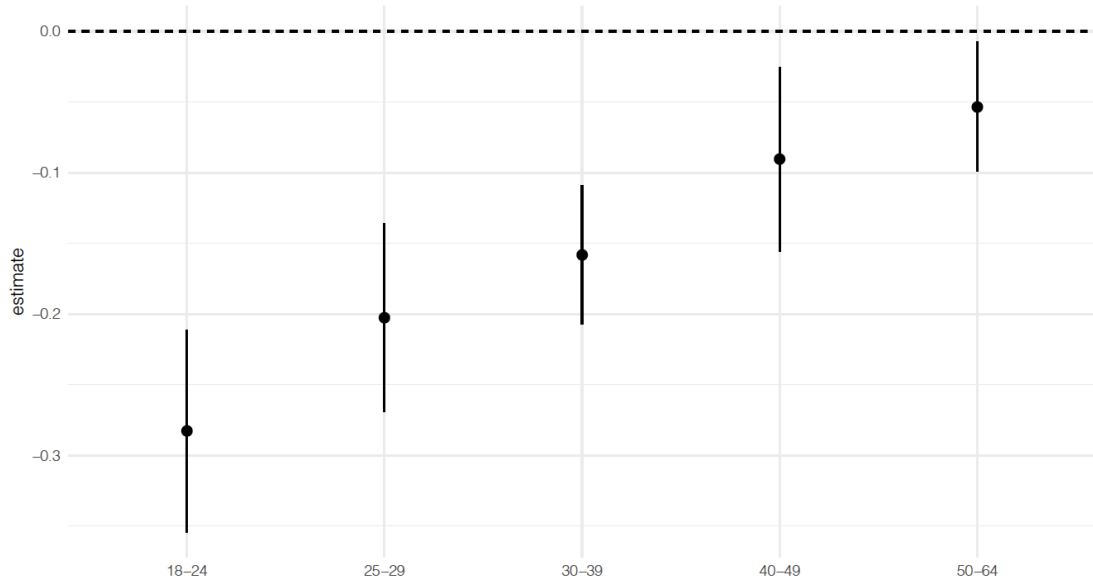


Figure 10

Already own the identification documents needed to register and vote
Estimated effect of age on likelihood of owning ID documents, relative to people 65+.



Note: Estimates and 95% confidence intervals are from a generalized linear regression on age group, with controls for educational attainment, gender, race and ethnicity, and family income.

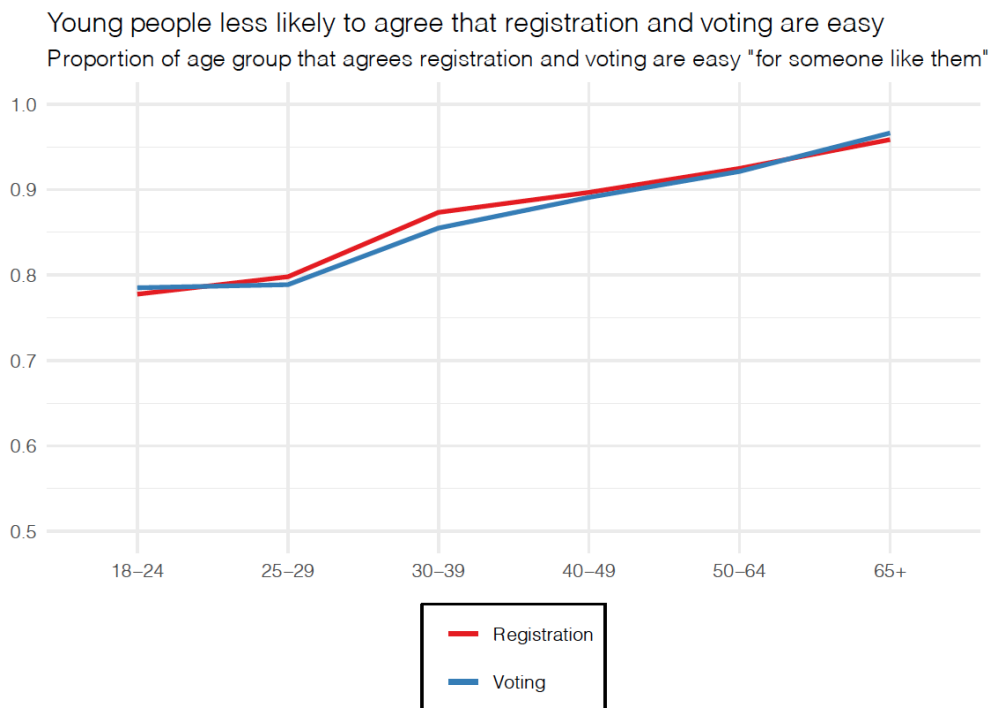
After adjusting for race, education, gender, and income, young adults between 18 and 24 are a full 28 percentage points less likely than seniors to say they have the voter ID documentation they believe

they need to register and vote, as shown in Figure 10. This finding is statistically significant (Appendix Table A19).

Perceived ease of voting

After being asked these questions about voting and registration information and barriers, respondents were asked to reflect on “how easy or difficult it is for someone like you to register to vote” and “to vote.” Overall, most people answered that registration and voting are easy (Figure 11). However, answers once again differed across age groups. Just under 80 percent of people between 18 and 24 say that registration and voting are easy for someone like them, compared to more than 95 percent of people 65 and older, a 15 percentage-point gap.

Figure 11



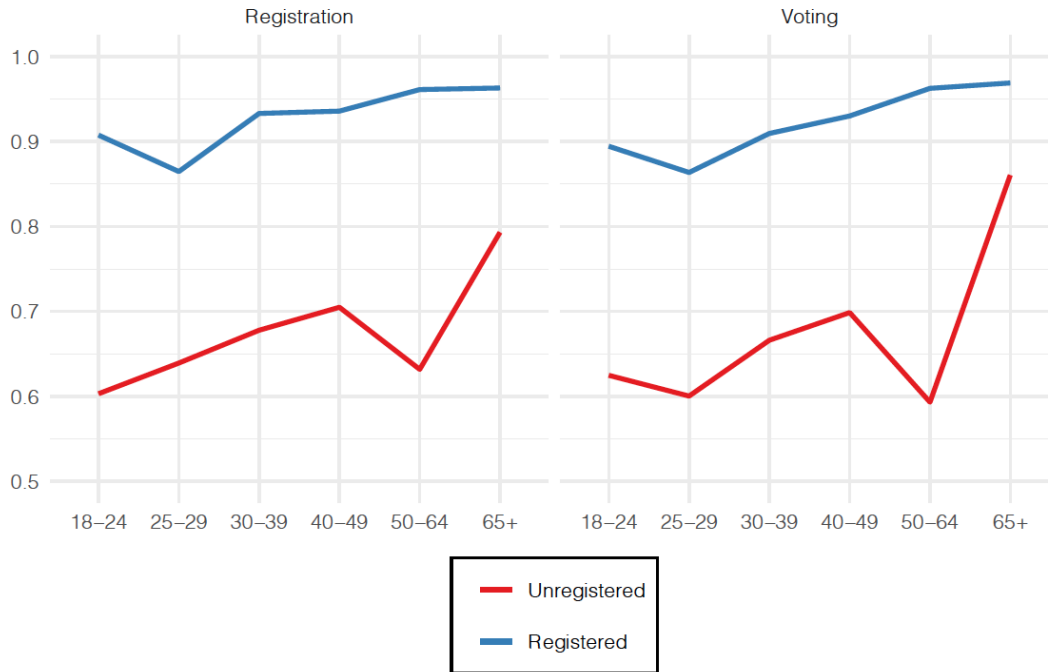
Notably, unregistered individuals are much less likely than their registered counterparts to find registration and voting easy (Figure 12).⁹ This is not especially surprising: those who perceive the registration process as easy are more likely to complete it, and those who complete it. Yet the gap in perceived ease between registered and unregistered people is much larger among youth. More than 90 percent of registered youth believe voter registration and voting are easy, compared to just 60 percent of unregistered young people feel the same. For seniors, this gap between registrants and unregistered people

⁹ I also analyze how each individual voting cost varies by registration status. When data are stratified by registration status, voting costs appear higher for unregistered young people than for their registered counterparts. Unregistered youth are less likely than registered youth to have any of the four types of voting information (Appendix Figure A1) and more likely to face every other voting barrier measured by the survey (Appendix Figure A2). However, perhaps due to the relatively small sample size of this survey, differences in reported costs by the interaction of age and registration status do not reach the level of statistical significance.

remains, but it is much smaller (17 percentage points for registering and 11 percentage points for voting).¹⁰ This difference by age suggests that being an unregistered young person might be qualitatively different from being an unregistered senior. Younger people may be more likely to remain unregistered because they find the registration process complicated or difficult, whereas older people may perceive the registration process as relatively easy but stay unregistered for other reasons, such as a lack of interest.

Figure 12

Ease of registering and voting varies by registration status, age
 Proportion of age group that agrees registration and voting are easy "for someone like them"



Yet even after controlling for registration status, young Americans are still less likely than older people to perceive registration and voting as easy. In other words, registration status alone does not account for why young people disproportionately believe voting is difficult.

Age, education, race, and voting costs

To what extent can the differences in voting costs across age groups be explained by young people's lower levels of formal education and greater racial diversity? Some evidence on these questions can be found in the linear regression results presented in the previous section. After accounting for education and race, voting costs tend to be higher for young people than for seniors. For every voting barrier explored above, adjusting for race and education only slightly reduced the coefficient on age.¹¹ In other words, being young appears to have a meaningfully large and statistically significant effect on the cost of voting, above and beyond the direct effects of race and education.

¹⁰ Despite the relatively small sample size, a regression analysis interacting age with registration status confirms a statistically significant difference ($p < 0.05$) in perceived ease of voting between unregistered and registered young adults and a nearly significant difference ($p < 0.10$) in perceived ease of registration (Appendix Table A20).

¹¹ Data to this effect is available upon request.

To shed additional light on this question, I predict young people’s voting costs for two scenarios: one in which they have their existing levels of racial diversity and educational experience, and one in which they share the racial and educational composition of senior citizens.¹² Interestingly, shifting from their true racial and educational makeup to that of seniors has only a small effect on predicted costs; for instance, when young people adopt the characteristics of seniors, they become only 2 percentage points more likely to have the information they need to register and vote, leaving a 22 percentage-point gap between age groups.

One interpretation of these findings is that race and education play only a limited role in shaping how voting costs are distributed across age groups. Yet both race and education matter immensely for at least one critical step in the voting process: registration. After adjusting for age, gender, and family income, both race and education continue to be meaningfully large and statistically significant predictors of whether a person registers to vote. Compared with white individuals, Black, Hispanic, and Asian people are 11, 12, and 19 percentage points less likely to be registered, respectively. Compared to those with only a high school education or less, people with some college experience, a bachelor’s degree, or a postgraduate degree are 12, 13, and 12 percentage points *more* likely to be registered (Appendix Table A21). Registration is, in turn, an important predictor of voting costs, with unregistered Americans consistently facing higher costs than their registered counterparts. To the extent that being more racially diverse and lower-education directly reduces young people’s registration rates, this may have the downstream effect of increasing their costs at later stages of the voting process.

Predicting registration and voter turnout

I next use the voting cost indicators identified above to predict the likelihood of turning out to vote in the 2018 midterm election, as well as currently being registered to vote. For all indicators except one—considering mail voting to be a hassle—voting costs are significant predictors of turnout, after adjusting for age, race, education, gender, and income. (Including age as a control variable is important; otherwise, we could not know whether a significant relationship between voting costs and turnout was in fact due to other age-related factors.) Similarly, all voting cost indicators (including thinking mail voting is a hassle) predict a lower likelihood of being registered to vote (Appendix Figures A3-A4).

Information costs are the biggest predictor of low turnout. As Figure 13 shows, people who do not know the steps of registering and voting are 53 percentage points less likely to have voted in 2018 than those who report knowing this information. People who do not know the location of their polling place are 40 percentage points less likely to have voted. Not knowing where to find more information about candidates and issues decreases their likelihood of voting by 45 percentage points. And not

¹² For this analysis, I first calculate young people’s and seniors’ average weighted proportions of white, Black, Asian, Hispanic, and ‘other’ members. I do the same for educational attainment. I then use these average proportions to predict average voting costs for 18-24-year-olds and for seniors 65+ according to the following model:

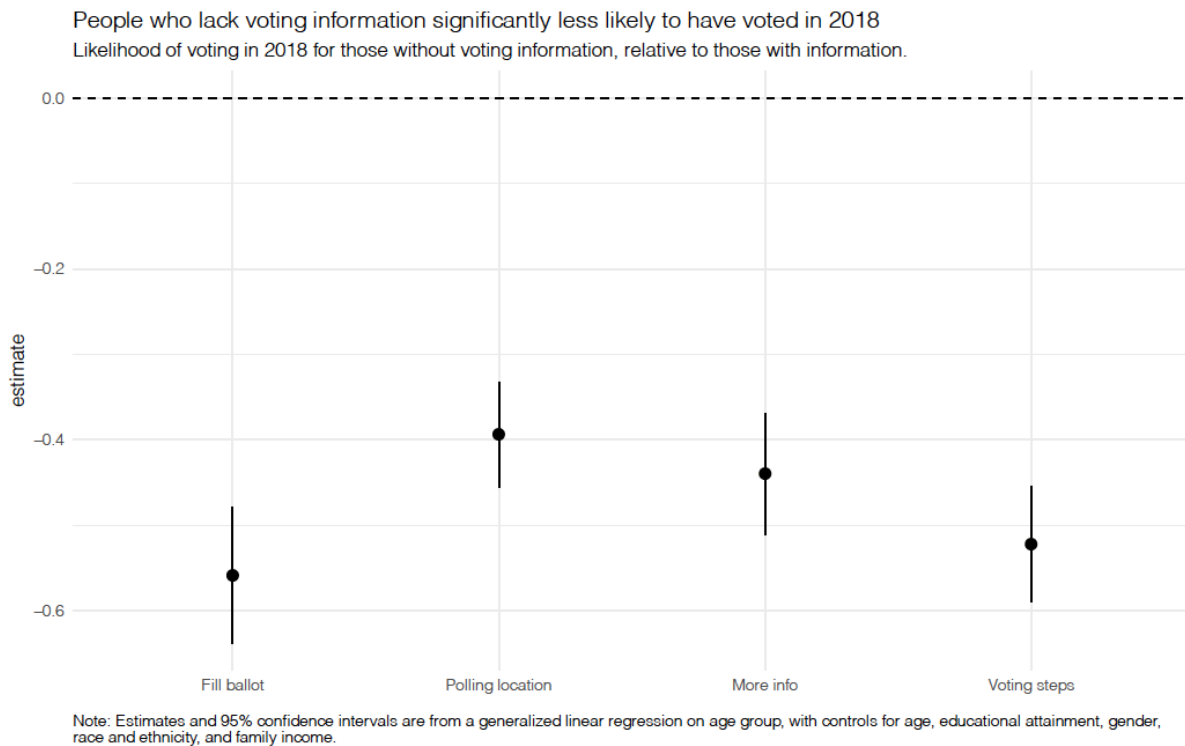
$$cost \sim \beta_1*age_group + \beta_2*race_black + \beta_3*race_hispanic + \beta_4*race_asian + \beta_5*race_other + \beta_6*some_college + \beta_7*bachelors + \beta_8*post_grad$$

I first calculate true cost levels, plugging in each age group’s true race and education proportions. I then construct counterfactuals for each age group using the other group’s race and education proportions. Finally, for each age group, I compare its true predicted costs against its counterfactual costs.

knowing how to fill out a ballot correctly is associated with a 57 percentage-point decrease in the likelihood of voting.

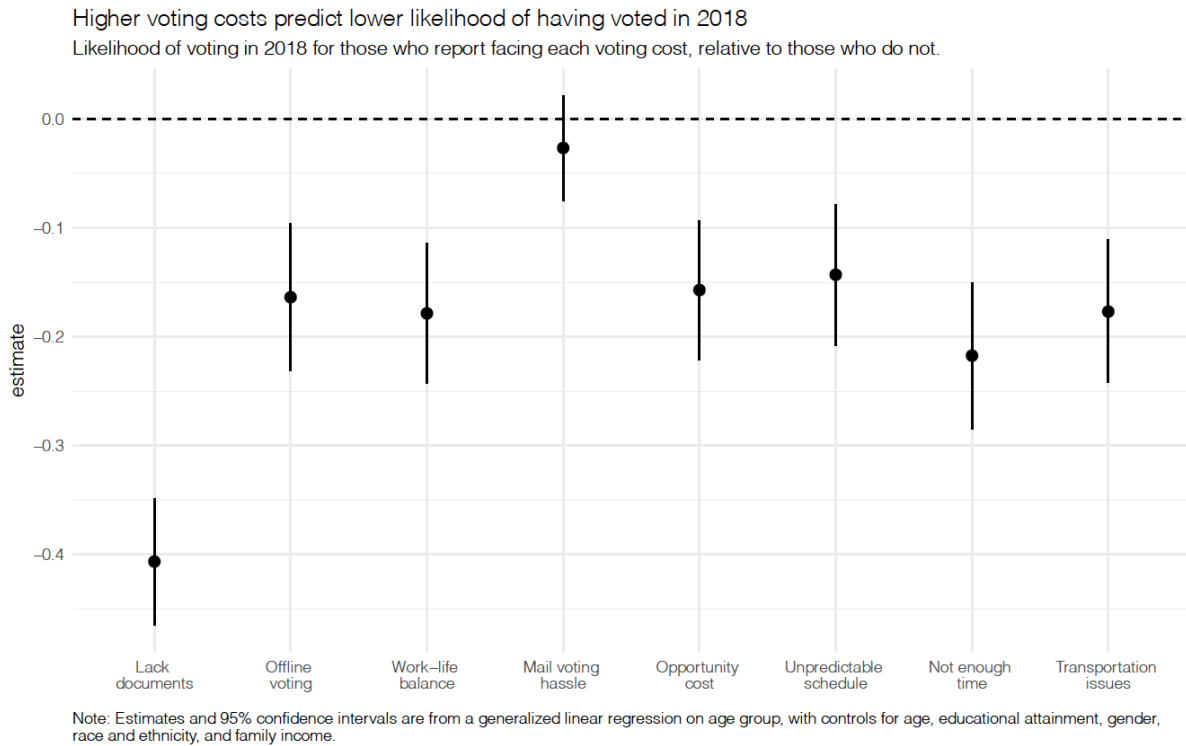
In the original model predicting voting likelihood using age, race, gender, educational attainment, and family income, being 18-24 is associated with a 53 percentage-point decrease in the likelihood of voting, relative to being a senior. Being 25-29 is associated with a 37 percentage-point decrease. Separately adjusting for each information cost shrinks the effect of age for these groups by between 15 and 30 percent. For instance, adjusting for knowledge of how to correctly fill out a ballot reduces the coefficient of “age 18-24” from -0.53 to -0.40, a 25% reduction.

Figure 13



Other voting costs also predict lower turnout (Figure 14). After adjusting for standard controls including age, people who struggle with work-life balance are 19 percentage points less likely to have voted. Not having enough time is associated with a 23 percentage-point decrease in the likelihood of having turned out. An unpredictable schedule predicts a 15 percentage-point decrease. Struggling with transportation reduces one’s likelihood of having voted in 2018 by 19 percentage points; people who report facing a financial opportunity cost to voting are 16 percentage points less likely to have voted. Those who say they struggle with the offline parts of voting are 17 percentage points less likely to have voted than those who do not. Most notably, those who report lacking the documentation they need to vote are a full 42 percentage points less likely to have voted in 2018 than those with proper documentation.

Figure 14



The one exception has to do with perceptions of mail voting. Before adjusting for age, the belief that mail voting is a hassle predicts a 9 percentage-point decrease in turnout likelihood. However, once age is added in as a predictor, this effect drops to 3 percentage points and loses statistical significance.

Again, adjusting for these voting costs shrinks the coefficients on “age 18-24” and “age 25-29.” These reductions range from 6% to 27%, depending on the cost. At the low end, adjusting for a lack of transportation or for facing an opportunity cost to voting reduces the coefficient on being 18-24 by 6%. At the high end, adjusting for not having enough time to vote shrinks the coefficient on being 25-29 by 27%.

Expectations of voting reforms

To what extent do today’s young people believe that registration and voting reforms would make things easier for them? To answer this question, respondents were asked to reflect on a series of voting reforms and mark how much easier or harder they think each would make things for them. To help respondents understand the likely impact of each policy, and to avoid a situation in which respondents simply supported policies favored by their chosen political party, I described these reforms in detail instead of listing them under their common names (e.g., “letting people vote in advance of Election Day” instead of “early voting”). Below is the list of policies as described in the survey; the common names listed in parentheses were not included.

1. “Letting people register to vote on Election Day at their polling place” (same-day registration)
2. “Letting people vote in advance of Election Day” (early voting)
3. “Sending all voters a ballot that they can cast by mail or in person” (mail voting)

4. “Automatically registering eligible people to vote when they interact with the DMV and other government offices” (AVR)
5. “Automatically updating people’s voter registration when they move” (updating registration after moving)
6. “Letting people vote over the internet” (internet voting)

While I expect most people believe these reforms would make things easier for them—a general reflection of broad popular support for voting reforms—I anticipate greater youth support for reforms that would reduce costs disproportionately borne by young adults. As shown earlier in this paper, young people face greater time, transportation costs, and opportunity costs of voting. The three registration-focused reforms described above—SDR, AVR, and updating registration after moving—would reduce these costs by eliminating the need for at least some voters to travel to a registration site such as the DMV and fill out paperwork. They would also reduce the need to plan ahead and balance voter registration with other tasks, two things that young people disproportionately struggle with. I also expect young people to be more likely to believe that internet voting would make things easier, as they report higher levels of difficulty with offline voting. (Internet voting would also reduce time and transportation costs, further benefiting young people.)

By contrast, I anticipate young adults to be *less* likely than older Americans to believe mail voting would make things easier. Youth disproportionately find voting by mail to be a hassle—despite new research indicating that, once implemented, youth turnout can increase under all-mail voting regimes (Bonica et al. 2020). Similarly, I anticipate that young people will not be more likely than seniors to expect early voting to make things easier for them. Early voting is generally seen as benefiting those with predictable lives, who can take advantage of the policy to plan ahead to vote on the most convenient day. It is less beneficial for those whose chaotic schedules prevent them from planning ahead—that is, young people. Supporting this contention, empirical research suggests that early voting primarily boosts turnout for older Americans (Lyons and Scheb 1999).

Figure 15

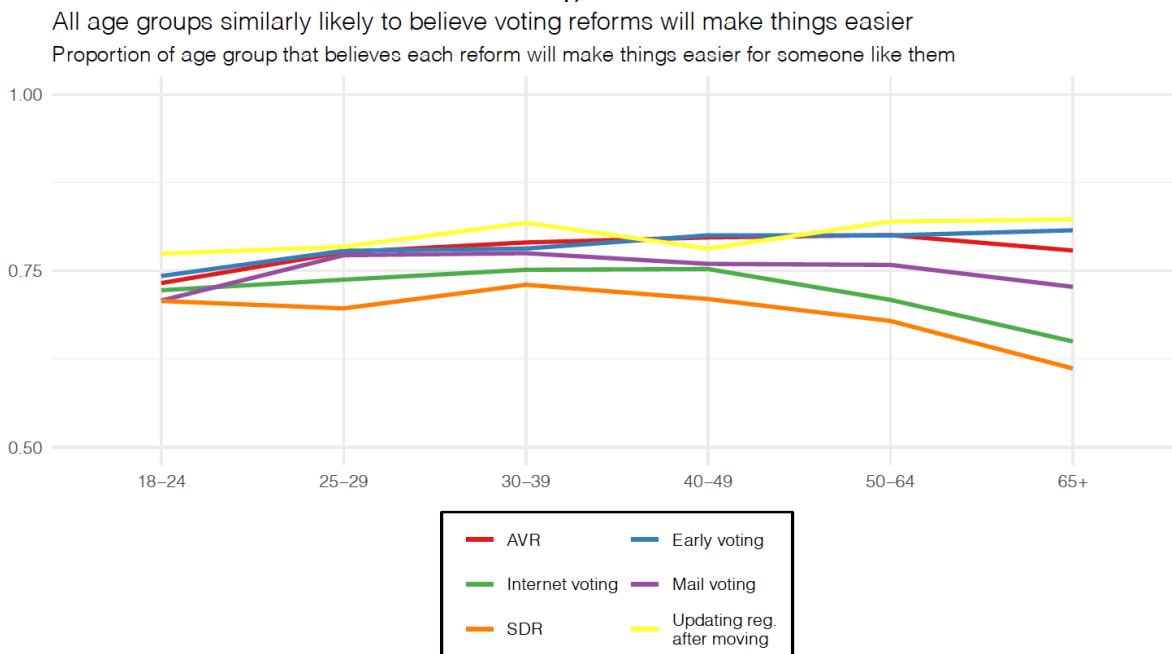


Figure 15 shows attitudes toward each policy broken out by age group. On average, all ages believe that each voting reform would make things easier for them. Young people are slightly more likely

than seniors to believe that internet voting and same-day registration would make things easier; otherwise, responses are quite similar across age groups.

There do appear to be differences by registration status, though these differences are not statistically significant (likely due to the survey's small sample size). Interestingly, for reforms focused on registration, young people who are already registered (and who therefore are less likely to benefit from easier registration policies) are *more* likely than unregistered youth to think the reforms would make things easier. The same is true for voting-focused reforms: young registrants are more likely to perceive a benefit from laws that reduce the costs of voting, while unregistered youth are less likely to think these reforms would make things easier.

Knowledge of voting laws

I next asked survey participants a series of factual questions about their state's registration and voting laws. Lack of knowledge about state voting policies can be problematic in at least two cases. First, people might think their state's voting process is *easier* than it is, leaving them unprepared to complete onerous voting steps when the time comes and ultimately driving down turnout. Second, they might think the process is *harder* than it is, discouraging them from participating. If young people do not know when their legislators adopt policies that make voting easier, this could help explain why voting reforms are sometimes ineffective at increasing youth turnout.

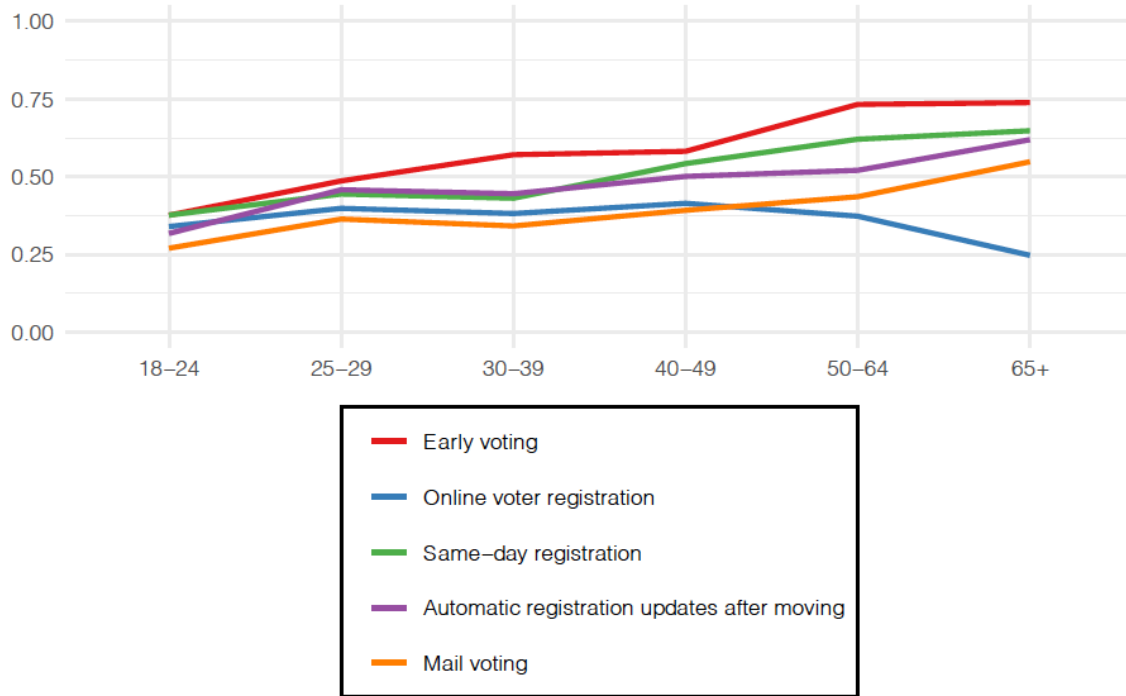
To minimize the risk of people looking up the correct answers before responding, I prefaced these factual questions with an explicit request: "We are trying to get a general sense of what people know about these rules, so please answer to the best of your knowledge, without looking up any additional information." Responses were recoded as binary outcomes for each voting law, with incorrect or "unsure" answers coded as 0 and correct answers coded as 1.

By and large, young people are least likely of any age group to correctly identify their state's voting laws (Figure 16). Fewer than half of 18-24 and 25-29-year-olds can accurately name their state's policy on early voting, same-day voter registration, automatically updating people's voter registrations after they move, and mail voting. The one exception is online voter registration, where young people are slightly *more* likely than seniors (and about as likely as other age groups) to correctly identify their state's policy. Even then, however, only a minority of young people know their state's policy.

Figure 16

Young people less likely to know their state's voting laws

Proportion of age group correctly identifying their state's registration and voting policies

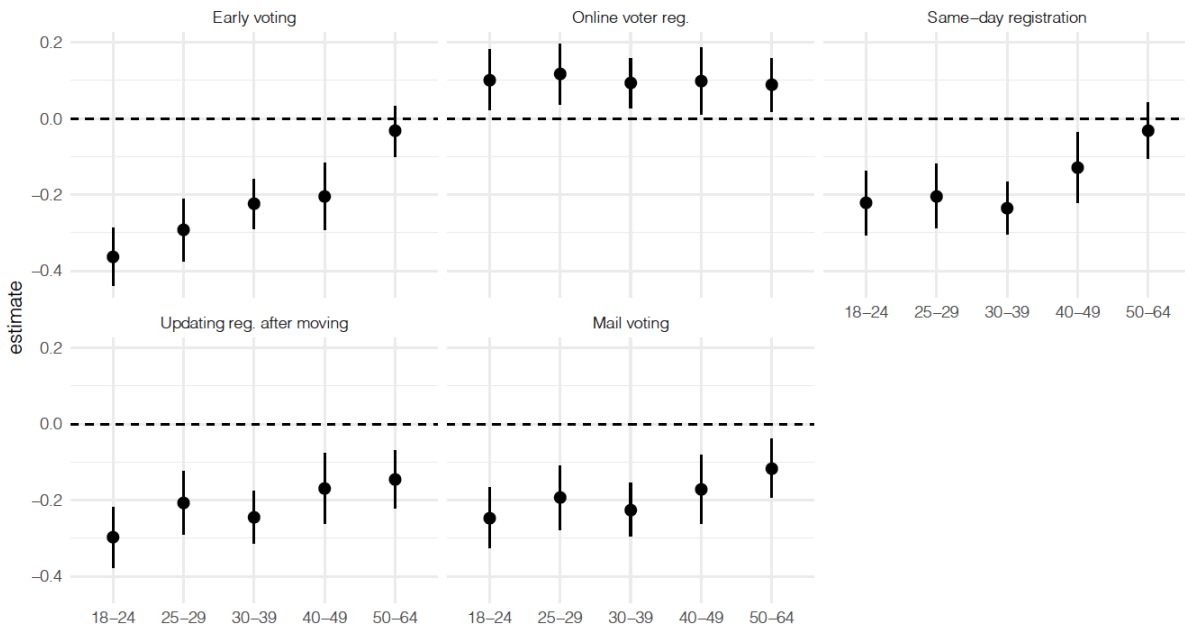


Note: Both incorrect and "unsure" responses coded as 0.

After adjusting for race, education, gender, and family income, young people aged 18-24 are significantly less likely than seniors to correctly identify their state's rules on same-day registration (-22 percentage points), early voting (-36 percentage points), updating registration after moving (-30 percentage points), and mail voting (-25 percentage points), as shown in Figure 17. Conversely, young people are 10 percentage points *more* likely than seniors to correctly identify their state's policy on online voter registration (OVR).

Figure 17

Young people differ from older Americans in knowledge of voting laws
Estimated effect of age on likelihood of correctly identifying state law, relative to people 65 and older.



Note: Estimates and 95% confidence intervals are from a generalized linear regression on age group, with controls for educational attainment, gender, race and ethnicity, and family income.

Knowledge of voting laws by age and type of state

These aggregate levels of voting law knowledge mask interesting variation between types of state: those that have adopted the laws in question, and those that have not. This variation matters. In states that have passed laws to make voting easier, prospective voters often need to know these policies exist before being able to take advantage of them. If many young people think the voting process is harder than it is, this could drive down turnout—and lead researchers to conclude that cost-reducing reforms are relatively ineffective at boosting youth voting rates.

Meanwhile, many young people live in states *without* these policies on the books. If they mistakenly believe these policies *do* exist—or even if they are simply unsure about their state’s laws—they might fail to properly engage in their state’s more cumbersome voting process, under the false expectation that an easier process is available to them. For example, an uninformed voter in states *without* same-day registration might wait to register until Election Day, at which point it will be too late.

In the following section, I analyze each age group’s awareness of voting laws by the type of state—those with cost-reducing reforms on the books, and those without them.

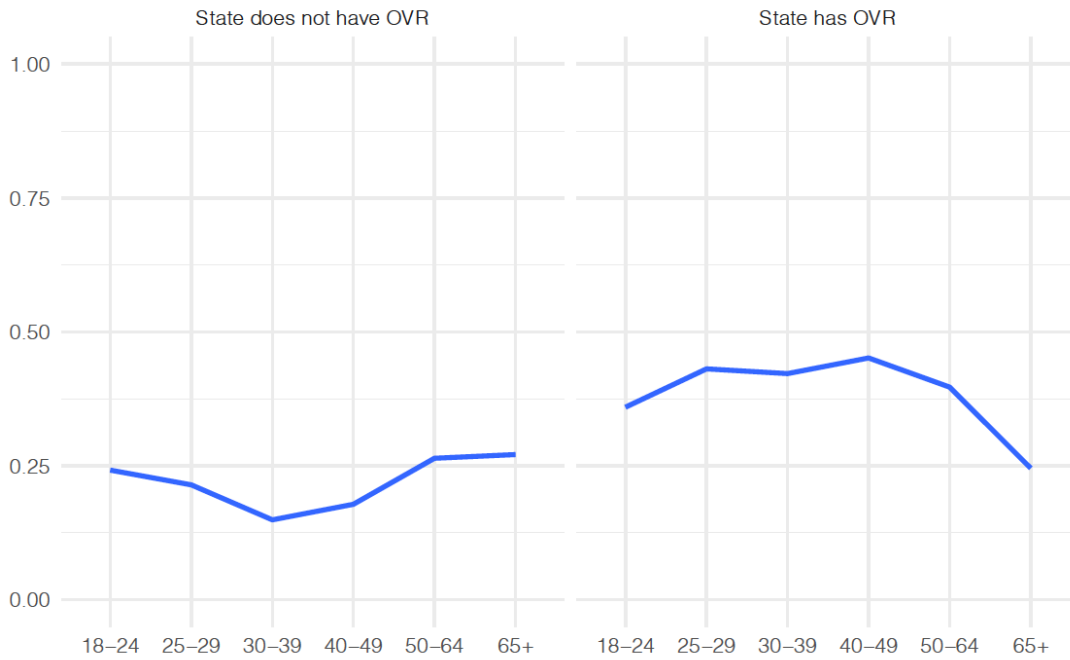
Online voter registration

Figure 18 shows how voter knowledge varies between states with and without OVR. Overall, most voters are uninformed about their state’s policy on OVR: in states without OVR, only a quarter of

young people and seniors alike recognize that voters cannot register online. In states *with* OVR, well under half of people realize they *can* register online.

Figure 18

Knowledge of state OVR policies varies by age, type of state
Proportion of age group correctly identifying their state's OVR policy



Note: "Incorrect" and "unsure" responses coded as 0.

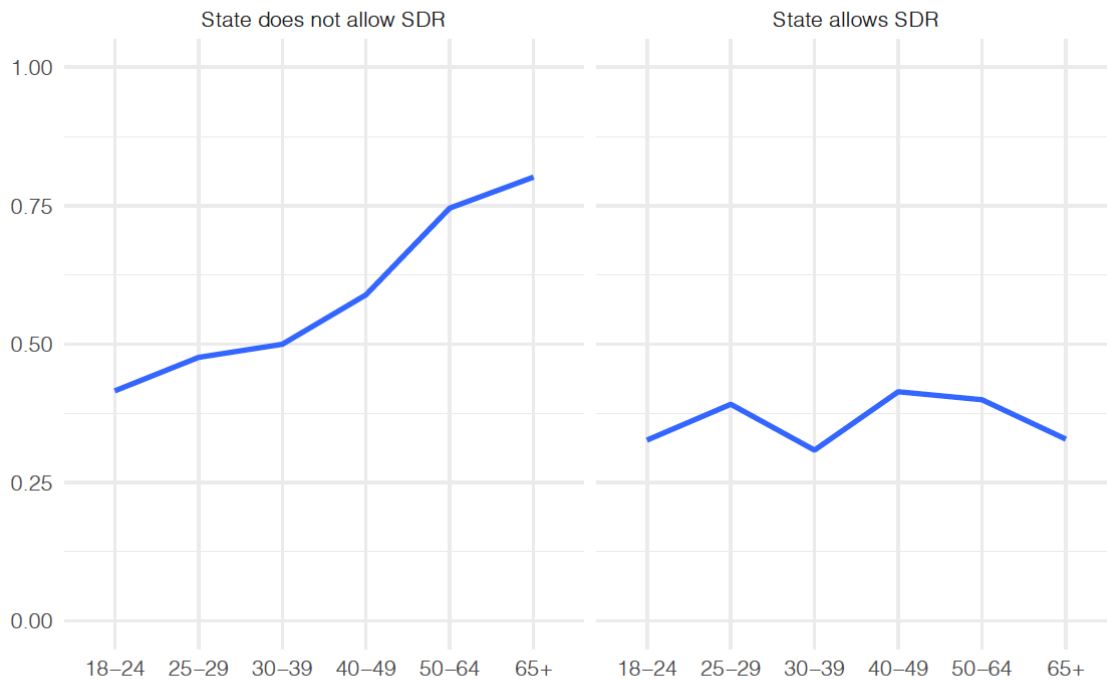
That said, there do appear to be some differences in the relationship between a voter's age and their ability to correctly identify their state's approach to online registration. In states that require voters to register in person or by mail (no OVR), young and old people are slightly better than middle-aged Americans at answering correctly. In states that allow online registration, young and middle-aged individuals are most likely to answer correctly, while seniors are the least informed. It may be that seniors are less likely overall to believe their state has OVR, perhaps because they registered to vote before online registration portals existed. (While nearly 4 in 5 states allow for OVR, most have only adopted the reform in the past decade.) Young people, meanwhile, are more likely to have tried to register online in recent years and are therefore better acquainted with their state's OVR policy.

Same-day registration

Young people are the least informed of any age group about their state's policy on same-day registration (SDR). As Figure 19 shows, however, this difference between age groups only exists in states without SDR, where young people are only half as likely as seniors to know their state's policy. Most young people in these states are not aware that their state has a firm registration deadline in place. In states that do allow people to register and vote on the same day, young people are about as likely as other age groups to know this fact. This is not saying much: in these states, only a minority of people in *every* age group know their state allows for same-day registration.

Figure 19

Knowledge of state SDR policies varies by age, type of state
Proportion of age group correctly identifying their state's SDR policy



Note: "Incorrect" and "unsure" responses coded as 0.

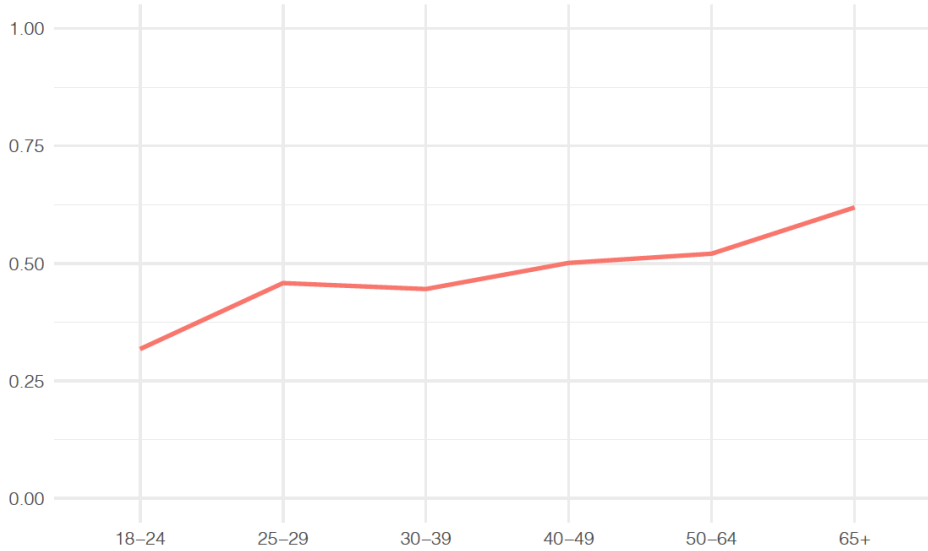
Updating registration after moving

Respondents were asked to identify their state's policy on whether individuals who have recently moved must update their registration before being allowed to vote. In reality, there is no variation in this policy across states; every state requires voters to update their registration after moving (except North Dakota, which does not have voter registration). Yet only about half of people are aware of this requirement. As Figure 20 shows, young people are the least informed; only about a third of young Americans recognize they must update their registration after moving. Seniors are twice as likely to correctly identify their state's policy.

Figure 20

Less than half of young voters know they must update their registration after moving to a new address

Proportion of age group correctly identifying their state's policy



Note: "Incorrect" and "unsure" responses coded as 0.

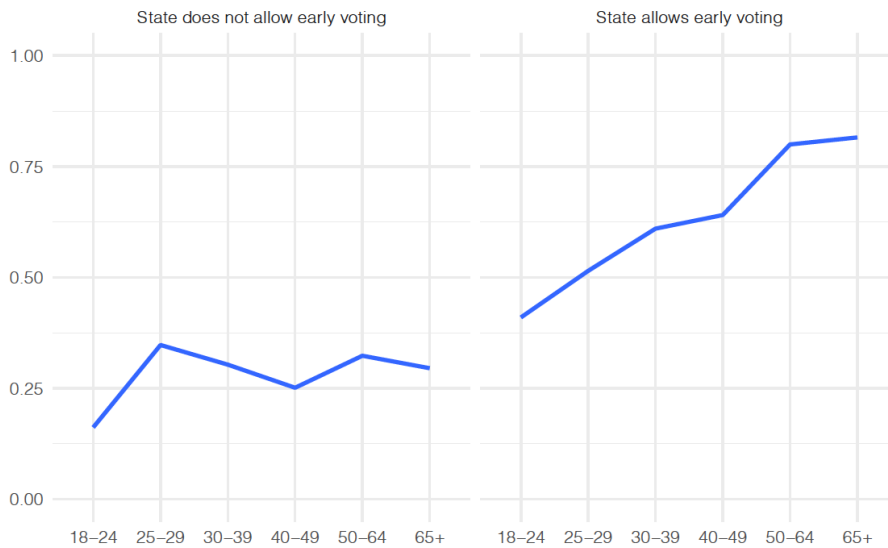
Early voting

Awareness of state early voting laws varies dramatically by both age and type of state (Figure 21). In early voting states, only 41 percent of young people are aware their state allows people to cast their ballot before Election Day, compared with 82 percent of seniors.

Figure 21

Knowledge of state early voting policies varies by age, type of state

Proportion of age group correctly identifying their state's early voting policy



Note: "Incorrect" and "unsure" responses coded as 0.

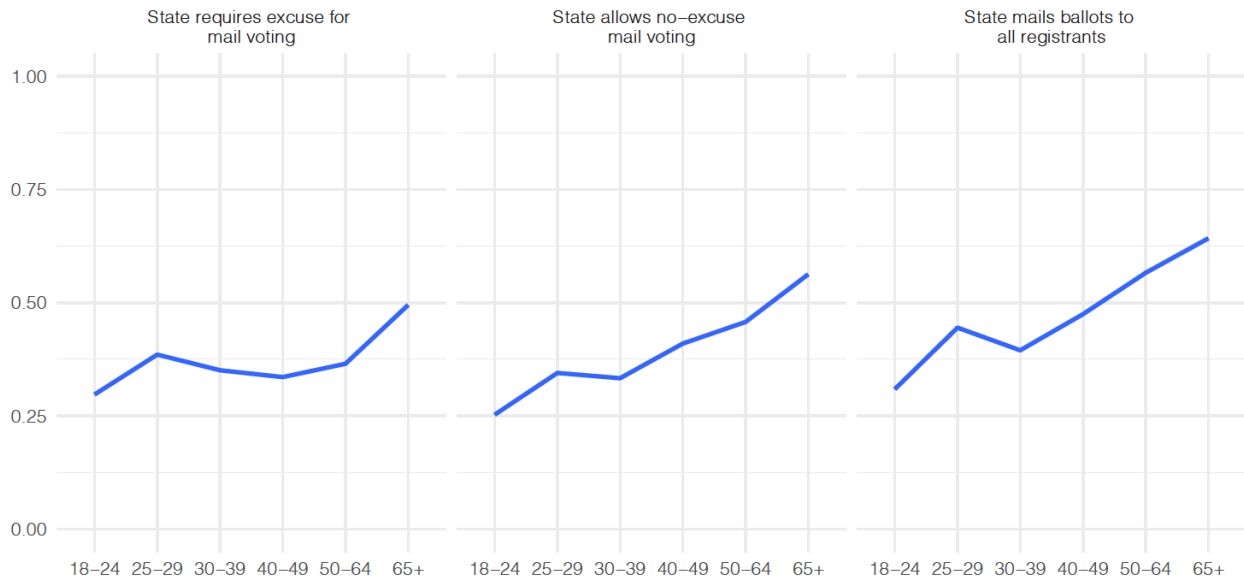
Awareness is generally much lower in states that do not allow for early voting: only a third of Americans in these states recognize that early voting is not permitted. Once again, youth are the least informed: only 16 percent of 18- to 24-year-olds say early voting is not allowed in their state, compared with between 25 and 35 percent of older age groups.

Mail voting

Young people know the least about their state’s policy on voting by mail (Figure 22). Whether their state requires an excuse for mail voting, allows people to vote by mail without providing an excuse, or mails ballots to all registered voters, young people are less likely than others—especially seniors—to correctly identify their state’s policy: Between 25 and 30 percent of people ages 18-24 know their state’s policy on mail voting, compared to between 49 and 64 percent of those 65 and older. Notably, overall awareness of vote-by-mail laws is generally low across age groups and types of state.

Figure 22

Young Americans are consistently less likely to know their state's policy on mail voting
 Proportion of age group correctly identifying their state's vote by mail policy



Note: "Incorrect" and "unsure" responses coded as 0.

Discussion

In this paper, I show that voting costs are unequally distributed by age. Young people face higher barriers to voting: they have less information about the voting process and about the candidates and issues on their ballot, less time and flexibility to engage in registration and voting, and less ability to balance voting with the other things going on in their lives. They disproportionately face transportation issues when registering and voting, and they are more likely to face a tradeoff between participating in elections and earning money. The largely offline nature of voting presents a larger struggle for youth than for older Americans, as do registering and voting by mail. Young people are also less likely to have the voter ID

documentation they think they need to vote—a particularly concerning finding, given the dramatic increase in strict voter ID laws in recent years (NCSL 2020).

Importantly, this is not an exhaustive look at voting costs. Measuring *every* cost of voting may be an impossible endeavor; every action requires some costly expenditure of energy, and trying to catalog every cost would prove extremely time-consuming. These survey results leave open the question of whether young people face higher costs *overall*, relative to older age groups. Yet when asked how easy or difficult registration and voting are for someone like them, young people are more likely to rate these processes as difficult than any other age group. These direct measures of voting costs are imperfect and should be taken with a grain of salt—but they do suggest that young people experience systematically greater voting costs.

Of course, age is not the only predictor of voting difficulty. Consistently, I find that race and education also have a large bearing on voting costs. People of color and less-educated individuals are more likely to face barriers to voting—and to have fewer resources to overcome those barriers. Because today's youth are more racially diverse and have less formal education than older people, this further increases voting costs for young Americans. However, as I note earlier, these differences alone do not fully account for differences in costs across age groups.

In the vast majority of cases, young people also lack essential information about their state's voting laws. They are also less informed than older people—though awareness of voting laws is distressingly low across age groups. While this finding is surely disheartening for those who see voting reforms as a panacea for boosting turnout, it also has a silver lining: the relatively small turnout effects of cost-reducing electoral reforms found by past scholars may be due in good measure to lack of public awareness, not to any inherent flaw or shortcoming of the policies themselves.

The survey results presented here drive home that there is no universal voting experience. Some groups face greater barriers to electoral participation than others, while others have less time, money, information, and other resources to complete the many steps of registering and casting a ballot. Young adults, people of color, and those with less formal education face particularly high voting costs. It is little surprise that these groups, in turn, tend to turn out at lower rates and have less power within the political system. To improve the representativeness of America's elections and political outcomes, it is critical that we acknowledge head-on these inequities within our voting system.

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Appendix

Ordinal Logistic Regression Results

Table A1
("Fill ballot")

	Value	Std. Error	t value	p value
age_50-64	-1.392145115	0.423017010	-3.2909909	0.001
age_40-49	-2.148826524	0.445922922	-4.8188295	0.000
age_30-39	-2.516756987	0.379780451	-6.6268735	0.000
age_25-29	-2.765122581	0.399191588	-6.9268057	0.000
age_18-24	-3.225047272	0.389602844	-8.2777816	0.000
race_Black	-0.893892518	0.228832203	-3.9063231	0.000
race_Hispanic	-0.637206895	0.189326030	-3.3656592	0.001
race_Asian	-1.192684618	0.268050714	-4.4494738	0.000
race_Other	-0.659712023	0.293320530	-2.2491164	0.025
educ_Some college	0.628075488	0.169517848	3.7050700	0.000
educ_Bachelor's	1.307995043	0.248872580	5.2556816	0.000
educ_Post-grad	1.385388608	0.319297938	4.3388586	0.000
female	0.299797606	0.151446935	1.9795555	0.048
faminc_new	0.001023006	0.001966817	0.5201326	0.603

Table A2
("Polling location")

	Value	Std. Error	t value	p value
age_50-64	-0.729407077	0.259446220	-2.811400	0.005
age_40-49	-1.206321154	0.294776566	-4.092324	0.000
age_30-39	-1.623261675	0.227430774	-7.137388	0.000
age_25-29	-1.998228492	0.245476860	-8.140191	0.000
age_18-24	-1.930948908	0.242559852	-7.960711	0.000
race_Black	-0.233627044	0.183451422	-1.273509	0.203
race_Hispanic	-0.221366926	0.156873071	-1.411121	0.158
race_Asian	-0.822916549	0.238067204	-3.456657	0.001
race_Other	-0.592018344	0.289051306	-2.048143	0.041
educ_Some college	0.321965503	0.136637470	2.356349	0.018
educ_Bachelor's	0.785045332	0.178315857	4.402555	0.000
educ_Post-grad	1.151251048	0.246422775	4.671853	0.000
female	0.247266231	0.120778210	2.047275	0.041
faminc_new	0.001927176	0.001571342	1.226452	0.220

Table A3
 (“More info”)

	Value	Std. Error	t value	p value
age_50-64	-0.510536538	0.267870887	-1.905905	0.057
age_40-49	-1.155869810	0.305419280	-3.784535	0.000
age_30-39	-1.488859283	0.232261224	-6.410279	0.000
age_25-29	-1.687861697	0.258081810	-6.540026	0.000
age_18-24	-1.818635203	0.253666472	-7.169395	0.000
race_Black	-0.494516753	0.214900918	-2.301138	0.021
race_Hispanic	-0.298854204	0.175226643	-1.705529	0.088
race_Asian	-0.704260957	0.258095756	-2.728681	0.006
race_Other	-0.805291589	0.267817268	-3.006870	0.003
educ_Some college	0.585547670	0.145817611	4.015617	0.000
educ_Bachelor's	1.108548768	0.192021601	5.773042	0.000
educ_Post-grad	1.408117833	0.260635229	5.402638	0.000
female	0.449356244	0.133376904	3.369071	0.001
faminc_new	-0.002922275	0.001624867	-1.798470	0.072

Table A4
 (“Voting steps”)

	Value	Std. Error	t value	p value
age_50-64	-0.9551933048	0.3527400	-2.7079249	0.007
age_40-49	-1.5063619941	0.3893513	-3.8689018	0.000
age_30-39	-1.9609968891	0.3106103	-6.3133681	0.000
age_25-29	-2.1898406758	0.3339467	-6.5574551	0.000
age_18-24	-2.6562003269	0.3241305	-8.1948474	0.000
race_Black	-0.6347496389	0.2203766	-2.8802953	0.004
race_Hispanic	-0.3253739465	0.1786596	-1.8211945	0.069
race_Asian	-0.9993557927	0.3050651	-3.2758777	0.001
race_Other	-0.2964282475	0.3583247	-0.8272615	0.408
educ_Some college	0.4420581740	0.1633794	2.7057157	0.007
educ_Bachelor's	1.0642181478	0.2265352	4.6978044	0.000
educ_Post-grad	1.3577331450	0.3150528	4.3095411	0.000
female	0.4191046962	0.1471752	2.8476584	0.004
faminc_new	-0.0009072333	0.0018752	-0.4838062	0.629

Table A5
 (“Not enough time”)

	Value	Std. Error	t value	p value
age_50-64	1.205683373	0.259812186	4.6405959	0.000
age_40-49	1.860044459	0.274172248	6.7842186	0.000
age_30-39	2.594080705	0.235649102	11.0082350	0.000
age_25-29	2.919794314	0.254567088	11.4696457	0.000
age_18-24	2.665551974	0.255983535	10.4129821	0.000
race_Black	0.260068121	0.190337025	1.3663559	0.172
race_Hispanic	0.635398901	0.142934150	4.4453960	0.000
race_Asian	0.949744162	0.254487023	3.7319945	0.000
race_Other	0.321432537	0.284070889	1.1315223	0.258
educ_Some college	-0.544182689	0.134967998	-4.0319387	0.000
educ_Bachelor's	-0.729593836	0.171638501	-4.2507586	0.000
educ_Post-grad	-0.892341959	0.244215557	-3.6539112	0.000
female	-0.069551199	0.116410991	-0.5974625	0.550
faminc_new	-0.004109405	0.001565737	-2.6245823	0.009

Table A6
 (“Unpredictable schedule”)

	Value	Std. Error	t value	p value
age_50-64	1.574376562	0.264680504	5.9482151	0.000
age_40-49	2.329653771	0.272357328	8.5536666	0.000
age_30-39	2.661329219	0.235021136	11.3237867	0.000
age_25-29	3.046646489	0.253364327	12.0247650	0.000
age_18-24	2.791865293	0.246603134	11.3212888	0.000
race_Black	0.231470999	0.172541445	1.3415386	0.180
race_Hispanic	0.537016077	0.142496377	3.7686297	0.000
race_Asian	0.800003319	0.213595667	3.7454099	0.000
race_Other	0.420145580	0.272668514	1.5408658	0.123
educ_Some college	-0.371378339	0.127081125	-2.9223721	0.003
educ_Bachelor's	-0.533709703	0.167155652	-3.1928906	0.001
educ_Post-grad	-0.775575228	0.242032685	-3.2044235	0.001
female	-0.036799502	0.112047959	-0.3284263	0.743
faminc_new	-0.003193009	0.001404696	-2.2730951	0.023

Table A7

	Value	Std. Error	t value	p value
age_50-64	1.200659674	0.245498011	4.8907104	0.000
age_40-49	2.045001260	0.250856020	8.1520916	0.000
age_30-39	2.609154540	0.214375018	12.1709822	0.000
age_25-29	2.932545529	0.237718146	12.3362292	0.000
age_18-24	2.838062219	0.234890524	12.0824892	0.000
race_Black	0.224680479	0.174397128	1.2883267	0.198
race_Hispanic	0.563207121	0.147666182	3.8140562	0.000
race_Asian	0.741365638	0.237683252	3.1191329	0.002
race_Other	-0.096896291	0.260374878	-0.3721415	0.710
educ_Some college	-0.408971165	0.131042727	-3.1208994	0.002
educ_Bachelor's	-0.327431555	0.159006339	-2.0592359	0.039
educ_Post-grad	-0.517126092	0.234698948	-2.2033592	0.028
female	0.038468878	0.112143510	0.3430326	0.732
faminc_new	-0.003753378	0.001442759	-2.6015272	0.009

Table A8

“Transportation issues”

	Value	Std. Error	t value	p value
age_50-64	0.523324650	0.235956526	2.2178859	0.027
age_40-49	1.305852107	0.253336349	5.1546180	0.000
age_30-39	1.942354989	0.211236243	9.1951786	0.000
age_25-29	2.062950927	0.227481422	9.0686567	0.000
age_18-24	1.808338131	0.222285547	8.1352034	0.000
race_Black	0.466134170	0.174248383	2.6751133	0.007
race_Hispanic	0.490481110	0.144178502	3.4019018	0.001
race_Asian	0.733640043	0.220101150	3.3331949	0.001
race_Other	0.472212680	0.292378039	1.6150758	0.106
educ_Some college	-0.613202925	0.128275667	-4.7803526	0.000
educ_Bachelor's	-1.026708654	0.168686115	-6.0865037	0.000
educ_Post-grad	-1.007688972	0.242569271	-4.1542318	0.000
female	-0.040978983	0.113494170	-0.3610669	0.718
faminc_new	-0.002047524	0.001481012	-1.3825166	0.167

Table A9
 “Could be earning money”

	Value	Std. Error	t value	p value
age_50-64	1.239342272	0.229708261	5.3952882	0.000
age_40-49	2.166807552	0.254239035	8.5227178	0.000
age_30-39	2.629619017	0.209306738	12.5634704	0.000
age_25-29	2.672341593	0.222898662	11.9890428	0.000
age_18-24	2.276660393	0.231479647	9.8352508	0.000
race_Black	0.438346134	0.161218603	2.7189550	0.007
race_Hispanic	0.398079577	0.148174930	2.6865515	0.007
race_Asian	0.785559798	0.222861907	3.5248725	0.000
race_Other	0.269541593	0.261314282	1.0314844	0.302
educ_Some college	-0.279554397	0.128383396	-2.1774965	0.029
educ_Bachelor's	-0.534650914	0.163578716	-3.2684626	0.001
educ_Post-grad	-0.435977643	0.231897801	-1.8800422	0.060
female	0.179881629	0.109175940	1.6476307	0.099
faminc_new	-0.001078373	0.001393722	-0.7737363	0.439

Table A10
 “Offline parts of voting”

	Value	Std. Error	t value	p value
age_50-64	0.452658862	0.204308358	2.2155670	0.027
age_40-49	1.338544663	0.228552214	5.8566252	0.000
age_30-39	1.821645440	0.179742294	10.1347624	0.000
age_25-29	2.102230114	0.202020181	10.4060402	0.000
age_18-24	1.897355654	0.202321612	9.3779188	0.000
race_Black	0.312155504	0.174068824	1.7932878	0.073
race_Hispanic	0.584779106	0.143228585	4.0828380	0.000
race_Asian	0.793211429	0.240623077	3.2964894	0.001
race_Other	0.072004861	0.273245980	0.2635166	0.792
educ_Some college	-0.448165839	0.127817680	-3.5062899	0.000
educ_Bachelor's	-0.585520213	0.154936555	-3.7790966	0.000
educ_Post-grad	-0.846920415	0.235889725	-3.5903235	0.000
female	0.116819888	0.108863193	1.0730889	0.283
faminc_new	-0.002666329	0.001429154	-1.8656693	0.062

Table A11
 “Mail voting a hassle”

	Value	Std. Error	t value	p value
age_50-64	0.0964859370	0.15438427	0.62497257	0.532
age_40-49	0.4120325547	0.19019518	2.16636699	0.030
age_30-39	0.7940144489	0.14014242	5.66576823	0.000
age_25-29	0.9121413102	0.16304841	5.59429738	0.000
age_18-24	0.6872338685	0.16708606	4.11305326	0.000
race_Black	-0.0670160303	0.15122668	-0.44314953	0.658
race_Hispanic	0.1635675012	0.13267082	1.23288225	0.218
race_Asian	-0.2125117693	0.22507476	-0.94418302	0.345
race_Other	0.1049919175	0.23044244	0.45561016	0.649
educ_Some college	-0.3304763058	0.11197648	-2.95130102	0.003
educ_Bachelor's	-0.1830128555	0.13853698	-1.32103971	0.186
educ_Post-grad	-0.1550634490	0.18001051	-0.86141330	0.389
female	0.2602509100	0.09498054	2.74004462	0.006
faminc_new	-0.0001242671	0.00126871	-0.09794754	0.922

Table A12
 “Voter documentation”

	Value	Std. Error	t value	p value	p value
age_50-64	0.0964859370	0.15438427	0.62497257	0.532	0.532
age_40-49	0.4120325547	0.19019518	2.16636699	0.030	0.030
age_30-39	0.7940144489	0.14014242	5.66576823	0.000	0.000
age_25-29	0.9121413102	0.16304841	5.59429738	0.000	0.000
age_18-24	0.6872338685	0.16708606	4.11305326	0.000	0.000
race_Black	-0.0670160303	0.15122668	-0.44314953	0.658	0.658
race_Hispanic	0.1635675012	0.13267082	1.23288225	0.218	0.218
race_Asian	-0.2125117693	0.22507476	-0.94418302	0.345	0.345
race_Other	0.1049919175	0.23044244	0.45561016	0.649	0.649
educ_Some college	-0.3304763058	0.11197648	-2.95130102	0.003	0.003
educ_Bachelor's	-0.1830128555	0.13853698	-1.32103971	0.186	0.186
educ_Post-grad	-0.1550634490	0.18001051	-0.86141330	0.389	0.389
female	0.2602509100	0.09498054	2.74004462	0.006	0.006
faminc_new	-0.0001242671	0.00126871	-0.09794754	0.922	0.922

Table A13
 “Ease of registration”

	Value	Std. Error	t value	p value
age_50-64	-0.787361226	0.280192915	-2.8100683	0.005
age_40-49	-1.100986592	0.346525197	-3.1772194	0.001
age_30-39	-1.477866049	0.243467176	-6.0700833	0.000
age_25-29	-2.085600173	0.267756717	-7.7891610	0.000
age_18-24	-2.005124934	0.258112081	-7.7684273	0.000
race_Black	-1.008986074	0.216480056	-4.6608731	0.000
race_Hispanic	-0.957043504	0.177640694	-5.3875240	0.000
race_Asian	-0.893214170	0.293021111	-3.0482929	0.002
race_Other	-0.994266286	0.286902588	-3.4655187	0.001
educ_Some college	0.758024844	0.165343110	4.5845566	0.000
educ_Bachelor's	0.827172564	0.217511762	3.8028866	0.000
educ_Post-grad	0.676590111	0.294569464	2.2968780	0.022
female	0.105871494	0.144525346	0.7325462	0.464
faminc_new	-0.002431592	0.001923254	-1.2643114	0.206

Table A14
 “Ease of voting”

	Value	Std. Error	t value	p value
age_50-64	-1.120638858	0.302816866	-3.7007148	0.000
age_40-49	-1.670060107	0.347974821	-4.7993705	0.000
age_30-39	-2.037826260	0.259802006	-7.8437665	0.000
age_25-29	-2.458496577	0.282660753	-8.6976934	0.000
age_18-24	-2.338625011	0.278622213	-8.3935340	0.000
race_Black	-0.854599217	0.215253941	-3.9701908	0.000
race_Hispanic	-0.744386001	0.171568600	-4.3387077	0.000
race_Asian	-0.862926945	0.313098009	-2.7560921	0.006
race_Other	-1.166046647	0.294526937	-3.9590492	0.000
educ_Some college	0.547752585	0.160398865	3.4149405	0.001
educ_Bachelor's	0.870943252	0.218354410	3.9886680	0.000
educ_Post-grad	1.414102313	0.307939976	4.5921362	0.000
female	0.215844293	0.141444841	1.5259962	0.127
faminc_new	0.001582686	0.002033971	0.7781262	0.436

Generalized Linear Regression Results

Table A15

	Regression Results				
	<i>Dependent variable:</i>				
	Fill ballot (1)	Polling location (2)	More info (3)	Voting steps (4)	Voting info. scale (5)
Age 50-64	-0.038*** (0.014)	-0.055** (0.023)	-0.033* (0.019)	-0.036** (0.014)	-0.038*** (0.014)
Age 40-49	-0.085*** (0.025)	-0.115*** (0.034)	-0.101*** (0.030)	-0.083*** (0.026)	-0.097*** (0.023)
Age 30-39	-0.112*** (0.015)	-0.170*** (0.024)	-0.133*** (0.020)	-0.112*** (0.017)	-0.129*** (0.014)
Age 25-29	-0.148*** (0.023)	-0.247*** (0.032)	-0.172*** (0.028)	-0.154*** (0.025)	-0.177*** (0.021)
Age 18-24	-0.234*** (0.027)	-0.242*** (0.032)	-0.212*** (0.031)	-0.244*** (0.029)	-0.222*** (0.022)
Black	-0.088*** (0.027)	-0.030 (0.029)	-0.064** (0.031)	-0.066** (0.028)	-0.058** (0.023)
Hispanic	-0.054*** (0.020)	-0.026 (0.026)	-0.031 (0.024)	-0.019 (0.020)	-0.028 (0.017)
Asian	-0.103*** (0.036)	-0.124*** (0.048)	-0.065* (0.039)	-0.114** (0.046)	-0.103*** (0.033)
Other race	-0.045* (0.026)	-0.082* (0.046)	-0.101** (0.040)	-0.025 (0.031)	-0.056** (0.026)
Some college	0.055*** (0.016)	0.044** (0.021)	0.068*** (0.019)	0.037** (0.017)	0.053*** (0.014)
Bachelor's	0.093*** (0.016)	0.101*** (0.023)	0.117*** (0.019)	0.086*** (0.017)	0.102*** (0.015)
Post-grad	0.084*** (0.016)	0.127*** (0.024)	0.123*** (0.019)	0.087*** (0.017)	0.106*** (0.015)
Female	0.019 (0.013)	0.033* (0.017)	0.046*** (0.015)	0.029** (0.013)	0.032*** (0.011)
Family income	0.0002 (0.0002)	0.0004* (0.0002)	-0.0002 (0.0002)	-0.00000 (0.0002)	0.0001 (0.0001)
Constant	0.954*** (0.011)	0.877*** (0.021)	0.894*** (0.019)	0.941*** (0.013)	0.914*** (0.012)
Observations	1,961	1,956	1,962	1,960	1,913

Note:

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

Table A16

Regression Results			
	<i>Dependent variable:</i>		
	Difficulty balancing	Hard to find the time	Unpredictable schedule
	(1)	(2)	(3)
Age 50-64	0.090 ^{***} (0.020)	0.078 ^{***} (0.018)	0.129 ^{***} (0.023)
Age 40-49	0.216 ^{***} (0.032)	0.169 ^{***} (0.030)	0.246 ^{***} (0.034)
Age 30-39	0.329 ^{***} (0.023)	0.308 ^{***} (0.024)	0.312 ^{***} (0.024)
Age 25-29	0.398 ^{***} (0.033)	0.377 ^{***} (0.032)	0.396 ^{***} (0.032)
Age 18-24	0.381 ^{***} (0.031)	0.331 ^{***} (0.031)	0.343 ^{***} (0.029)
Black	0.029 (0.028)	0.038 (0.030)	0.030 (0.029)
Hispanic	0.107 ^{***} (0.029)	0.115 ^{***} (0.027)	0.099 ^{***} (0.028)
Asian	0.133 ^{***} (0.051)	0.160 ^{***} (0.052)	0.135 ^{***} (0.048)
Other race	-0.008 (0.036)	0.052 (0.040)	0.058 (0.042)
Some college	-0.055 ^{***} (0.020)	-0.073 ^{***} (0.020)	-0.054 ^{***} (0.021)
Bachelor's	-0.037 (0.025)	-0.089 ^{***} (0.024)	-0.068 ^{***} (0.026)
Post-grad	-0.055 [*] (0.030)	-0.096 ^{***} (0.027)	-0.088 ^{***} (0.030)
Female	0.010 (0.017)	-0.001 (0.017)	-0.004 (0.017)
Family income	-0.001 ^{***} (0.0002)	-0.001 ^{***} (0.0002)	-0.001 ^{***} (0.0002)
Constant	0.066 ^{***} (0.016)	0.081 ^{***} (0.015)	0.070 ^{***} (0.016)
Observations	1,969	1,964	1,960

Note:

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

Table A17

	Regression Results	
	<i>Dependent variable:</i>	
	Transportation issues (1)	Earning money instead (2)
Age 50-64	0.045** (0.023)	0.103*** (0.020)
Age 40-49	0.156*** (0.034)	0.262*** (0.036)
Age 30-39	0.277*** (0.027)	0.353*** (0.024)
Age 25-29	0.297*** (0.033)	0.364*** (0.030)
Age 18-24	0.252*** (0.032)	0.285*** (0.031)
Black	0.076** (0.032)	0.069** (0.029)
Hispanic	0.086*** (0.028)	0.069** (0.028)
Asian	0.119** (0.049)	0.141*** (0.049)
Other race	0.076* (0.045)	0.040 (0.040)
Some college	-0.100*** (0.021)	-0.041** (0.021)
Bachelor's	-0.149*** (0.024)	-0.072*** (0.025)
Post-grad	-0.133*** (0.030)	-0.054* (0.031)
Female	-0.004 (0.018)	0.035** (0.017)
Family income	-0.0004* (0.0002)	-0.0003 (0.0002)
Constant	0.141*** (0.023)	0.050*** (0.016)
Observations	1,957	1,961

Note: * p<0.1; ** p<0.05; *** p<0.01

Table A18

Regression Results		
	<i>Dependent variable:</i>	
	Not online	Mail hassle
	(1)	(2)
Age 50-64	0.043** (0.020)	0.015 (0.029)
Age 40-49	0.179*** (0.033)	0.085** (0.039)
Age 30-39	0.267*** (0.024)	0.166*** (0.029)
Age 25-29	0.328*** (0.032)	0.190*** (0.036)
Age 18-24	0.288*** (0.031)	0.143*** (0.035)
Black	0.044 (0.030)	-0.022 (0.032)
Hispanic	0.105*** (0.027)	0.036 (0.030)
Asian	0.130*** (0.050)	-0.058 (0.049)
Other race	0.017 (0.039)	0.027 (0.049)
Some college	-0.072*** (0.021)	-0.065*** (0.023)
Bachelor's	-0.087*** (0.023)	-0.031 (0.029)
Post-grad	-0.099*** (0.030)	-0.023 (0.037)
Female	0.026 (0.017)	0.057*** (0.020)
Family income	-0.001** (0.0002)	-0.00005 (0.0003)
Constant	0.114*** (0.020)	0.271*** (0.024)
Observations	1,958	1,962

Note: * p<0.1; ** p<0.05; *** p<0.01

Voter ID Documentation

Table A19

Regression Results	
	<i>Dependent variable:</i>
	Voter ID documentation
Age 50-64	-0.053** (0.023)
Age 40-49	-0.091*** (0.033)
Age 30-39	-0.158*** (0.025)
Age 25-29	-0.203*** (0.034)
Age 18-24	-0.283*** (0.037)
Black	-0.103*** (0.035)
Hispanic	-0.174*** (0.032)
Asian	-0.175*** (0.057)
Other race	-0.043 (0.036)
Some college	0.109*** (0.023)
Bachelor's	0.149*** (0.023)
Post-grad	0.153*** (0.023)
Female	0.038** (0.018)
Family income	-0.0005* (0.0003)
Constant	0.901*** (0.018)
Observations	1,962

Note: * p<0.1; ** p<0.05; *** p<0.01

Voting Costs by Registration Status

Figure A1

Voting information varies by registration status, age
Proportion of age group that agrees with each statement

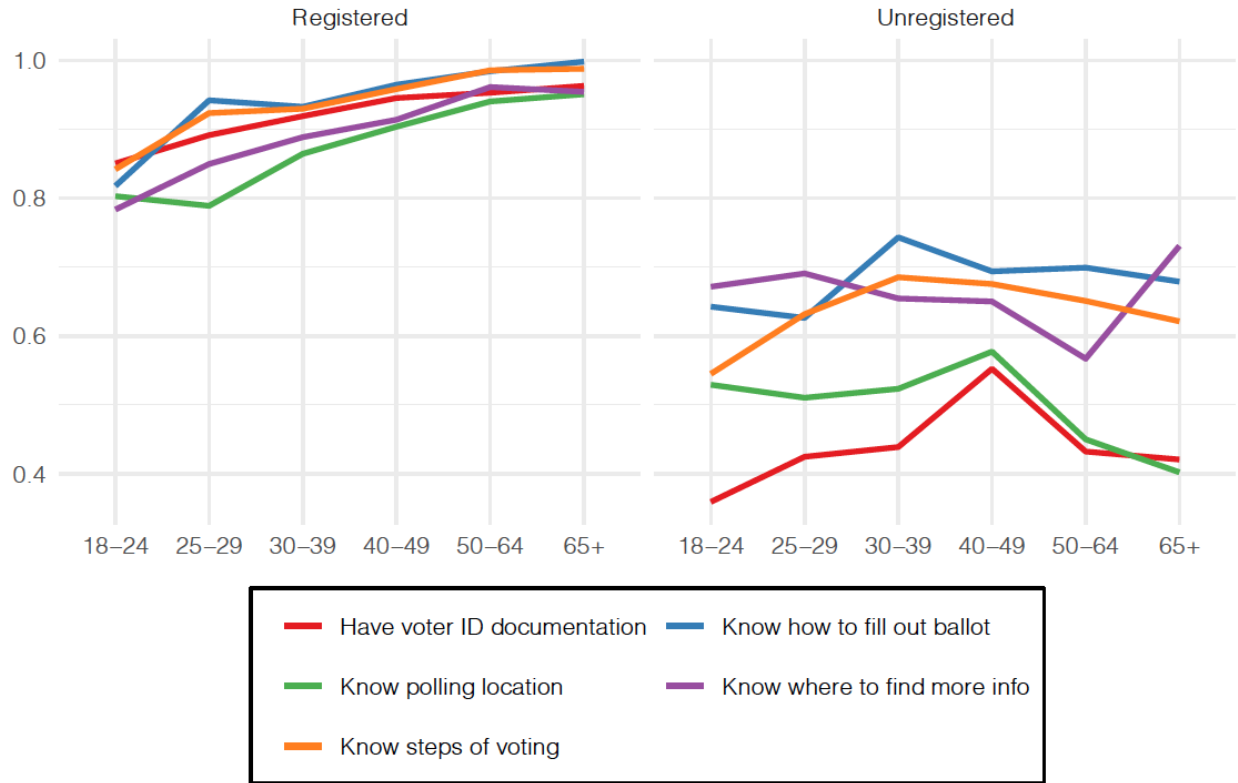


Figure A2

Voting barriers vary by age, registration status

Proportion of age group that agrees with each statement

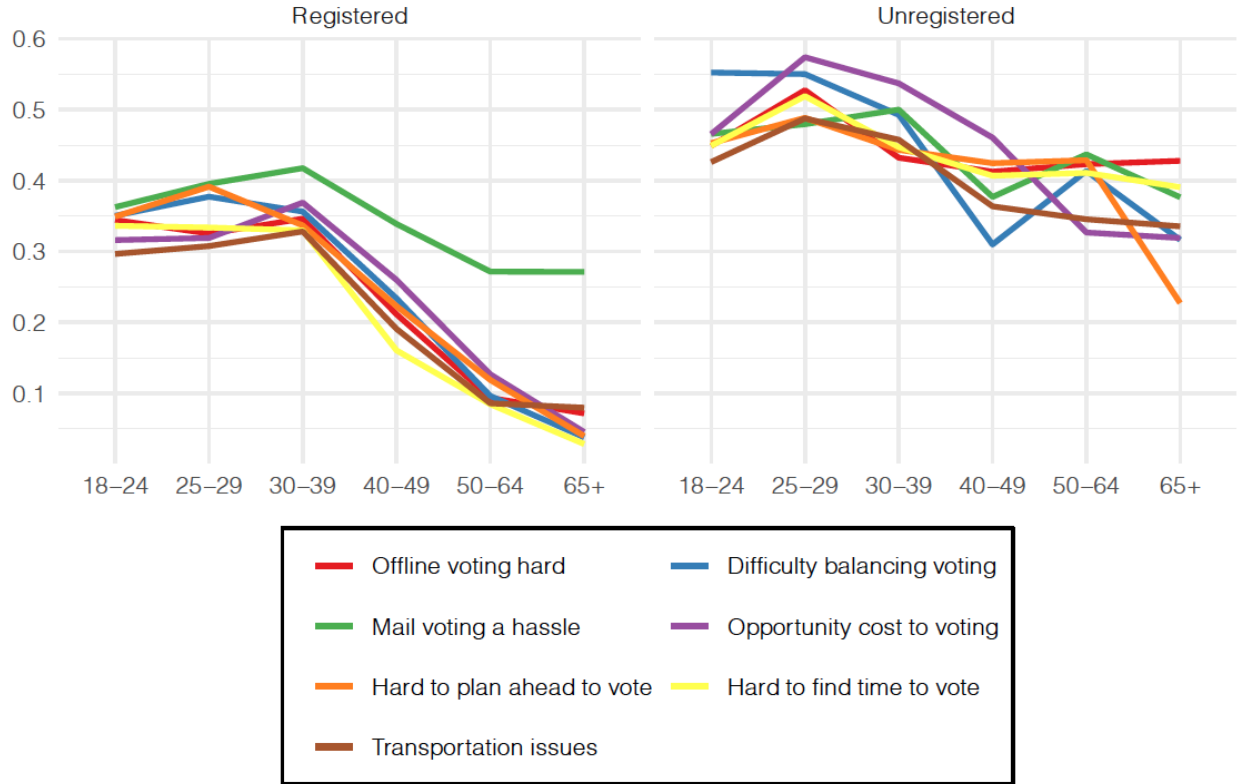


Table A20

Regression Results		
	<i>Dependent variable:</i>	
	Registration easy (1)	Voting easy (2)
age_50-64	-0.213** (0.106)	-0.281*** (0.103)
age_40-49	-0.135 (0.112)	-0.168* (0.101)
age_30-39	-0.136 (0.088)	-0.169** (0.076)
age_25-29	-0.211** (0.092)	-0.281*** (0.081)
age_18-24	-0.221** (0.090)	-0.236*** (0.078)
registered	0.120 (0.078)	0.100 (0.065)
race_Black	-0.072*** (0.027)	-0.061** (0.028)
race_Hispanic	-0.066*** (0.022)	-0.040** (0.020)
race_Asian	-0.052 (0.039)	-0.056 (0.040)
race_Other	-0.085*** (0.032)	-0.129*** (0.039)
educ_Some college	0.040** (0.016)	0.017 (0.016)
educ_Bachelor's	0.040** (0.017)	0.039** (0.018)
educ_Post-grad	0.027 (0.023)	0.068*** (0.017)
female	-0.009 (0.013)	0.003 (0.013)
faminc_new	-0.0002 (0.0002)	0.0002 (0.0002)
age_50-64:registered	0.201* (0.107)	0.268** (0.104)
age_40-49:registered	0.099 (0.114)	0.113 (0.103)
age_30-39:registered	0.091 (0.088)	0.090 (0.077)
age_25-29:registered	0.101 (0.097)	0.168** (0.085)
age_18-24:registered	0.164* (0.093)	0.168** (0.082)
Constant	0.854*** (0.079)	0.866*** (0.066)
Observations	1,875	1,848
<i>Note:</i>	* p<0.1; ** p<0.05; *** p<0.01	

Table A21
 “Registered to vote”

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	0.9000807	0.0180499	49.866	< 2e-16	***
age_50-64	-0.0853894	0.0224037	-3.811	0.000142	***
age_40-49	-0.1880005	0.0349630	-5.377	8.47e-08	***
age_30-39	-0.2228094	0.0244964	-9.096	< 2e-16	***
age_25-29	-0.3045105	0.0349226	-8.720	< 2e-16	***
age_18-24	-0.4088480	0.0357859	-11.425	< 2e-16	***
race_black	-0.1116281	0.0350589	-3.184	0.001475	**
race_hispanic	-0.1237578	0.0309871	-3.994	6.74e-05	***
race_asian	-0.1857000	0.0590086	-3.147	0.001674	**
race_other	0.0381039	0.0350844	1.086	0.277584	
some_college	0.1183955	0.0226454	5.228	1.89e-07	***
bachelors	0.1333513	0.0253587	5.259	1.61e-07	***
post_grad	0.1223909	0.0278370	4.397	1.16e-05	***
female	0.0760287	0.0182306	4.170	3.17e-05	***
faminc_new	-0.0004302	0.0002605	-1.651	0.098859	.

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1					

Race and education are significant predictors of registration status.

Predicting Voter Registration

Figure A3

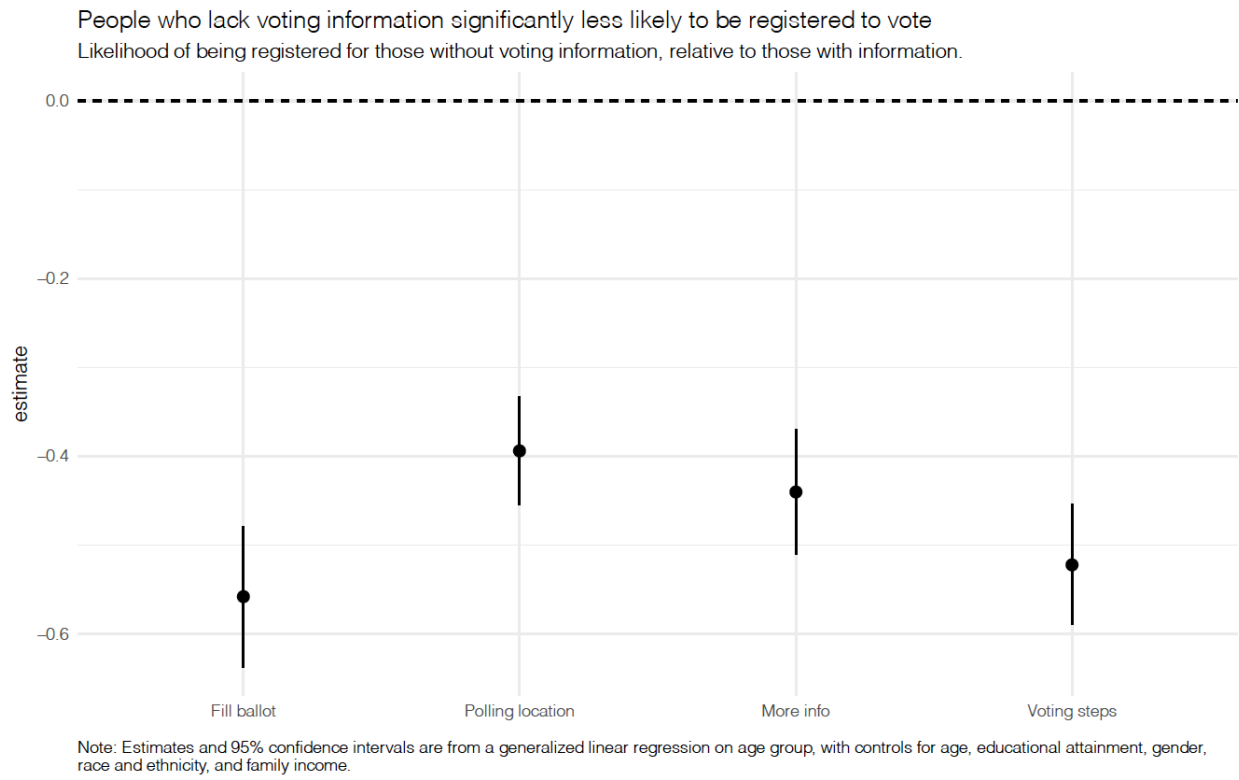


Figure A4

