

SHOULD CALIFORNIA LOWER THE VOTING AGE TO 17?

A review of the research evidence, California's historical context, and predicted turnout rates for 17-year-olds



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Policy Report

April 2023

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Executive Summary

For over 50 years, the minimum voting age in the U.S. has been 18 years old for national, state, and most local elections. Yet in recent years, researchers, policymakers, and youth advocates across the U.S. and around the world have questioned whether the voting age should be lowered to engage more youth in the democratic process. The intent of this policy report is to inform the debate to lower the voting age in California to 17 for all elections (local, state, and national) as proposed by Senate Constitutional Amendment (SCA) 2.

In the first section, we first review key arguments and evidence from the research-base to lower the voting age below 18. Section two briefly reviews the California context and the state's own history of pushing forward reforms to lower the voting age in both statewide and local elections. The third section presents an analysis of data from the American Community Survey (ACS) along with data from the Cooperative Election Study (CCES) and the Current Population Survey (CPS) to provide estimates of how many 17-year-olds in California would be affected by this policy change, and how many 17-year-olds would have likely turned out to vote during recent presidential and midterm election years if the voting age were lowered. In this executive summary, we review key findings from each section and also offer two recommendations for California lawmakers to consider in the debate to lower the voting age to 17.

Findings from the literature review

We reviewed existing research evidence to answer three key questions in the debate to lower the voting age: 1) Does lowering the voting age create lifelong voting habits? 2) Do 17-year-olds have the political maturity to vote? 3) Do adolescents have the cognitive ability to cast an informed vote? We primarily reviewed research studies from other countries that have laws allowing 16- and 17-year-olds to vote, and also reviewed research from the U.S. in municipalities that have allowed 16-year-olds to vote in school board elections. Importantly, we also relied on literature reviews from leading scholars in the field whose work specializes in youth political engagement and adolescent development (i.e. Oosterhoff, Wray-Lake, & Hart, 2022; Wray-Lake, 2019; Steinberg, 2014). In our review, we find:

Does lowering the voting age create lifelong voting habits? Proponents of lowering the voting age posit that lowering the voting age could improve voter turnout for young people while creating important life-long voting habits that strengthen political participation. Findings from recent studies generally support this argument, but with the important caveat that parents and community networks may influence what type of youth may turnout to vote or develop voting as a habit early on. Civics education, particularly 'action civics' that combines coursework with opportunities for political engagement outside the classroom walls, has been shown to play an important role in providing opportunities for all youth to engage politically. Lowering the voting age to 16- or 17-year-olds while youth are still living at home with parents or other adults, embedded within local communities, and enrolled in high schools with robust civics education can enhance the likelihood of all young people creating a life-long habit of voting.

Do 17-year-olds have the political maturity to vote? In countries that have lowered the voting age, there is evidence that compared to those who are 18+ and eligible to vote, 16- and 17-year-olds express similar levels of political maturity – as measured by concepts such as political knowledge, political interest, and other pro-civic attitudes. However, the overall evidence on political maturity is mixed. On a bright note, one indicator of whether political maturity translates to democratic participation is turnout rates: countries that have lowered the voting age have seen voter turnout for

16- and 17-year-olds that is higher than for first-time voters at 18+. There are concerns in the U.S. context, however, that allowing adolescents to vote will weaken regulations that currently protect those under 18 from special interests during elections, and that changing the voting age will affect other legal definitions of adulthood. Notably, this debate is also present in developmental science scholarship, with several authors arguing that political participation rights can be distinguished from other legal definitions of adulthood by using advances in adolescent cognition (see for example Steinberg, 2014).

Do 17-year-olds have the cognitive ability to vote, and can they vote independently?

Perceptions that 17-year-olds do not have the cognitive ability to vote are not supported by developmental science. Empirical evidence shows that by age 16, adolescents are capable of mature reasoning and decision-making on par with adults 18+; more specifically, adolescents show the same levels as adults in terms of verbal fluency, planning, logical reasoning, and working memory—all cognitive functions that are necessary for the act of voting. There is also evidence showing that youth are no more likely to be influenced by parents or peer networks than older adults.

Findings from the California context

If California lawmakers and voters were to pass a state constitutional amendment making it possible for 17-year-olds to participate in local, state, and national elections, it would be the first U.S. state to do so. SCA 2 comes on the heels of several decades of attempts in California to pass statewide voting laws to enfranchise more young people. The constitutional amendment is being introduced at a time when California has established a growing youth engagement infrastructure and when voting rights have been extended to 16- and 17-year-olds in Berkeley and Oakland for school board elections. Moreover, recent surveys have found support among young people to lower the voting age. Despite support among young people to lower the voting age, current voter turnout rates for 18- to 24-year-olds in California is lower than for older age groups; yet notably, in 2020, voter turnout among 18-34-year-olds in California outpaced the national average by several percentage points.

In response to concerns of low voter turnout, lawmakers have made efforts in recent years to make it easier for all Californians to pre-register to vote, and also extended pre-registration to 16- and 17-years in 2016. Lawmakers and education leaders have also made progress to revamp the state’s History-Social Science framework standards for K-12 education, which now provides civics-oriented learning standards across all grade levels. California does have some work to do, however, to improve civics education across the state. In a recent report, researchers from the Leveraging Equity and Access in Democratic Education (LEADE) Initiative at UCLA found that only 1 in 6 California students attend schools in districts that articulate a substantial focus on civics education (Rogers et al., 2020). Moreover, the UCLA researchers found that just under a third of districts had a staff member dedicated to history and social sciences, and no districts employed more than one person in this area. This raises major concerns that California lawmakers may not be doing enough to provide the infrastructure that is necessary for all students to have equal access to civics education, an important component of encouraging political participation should the voting age be lowered.

Estimates of how many 17-year-olds would vote in California

Using data from the American Community Survey (ACS), we find that the number of 17-year-old citizens residing in the state has declined somewhat in recent years, reaching a peak of about 507,000 in 2011 and hitting a trough of about 456,000 in 2019 – about a 10% decline. Over the past twelve years, we estimate that there was an average of 482,000 17-year-old citizens in the state. In 2018 and 2020, the two election years for which we report our primary estimates, we find that there were 477,000 and 496,000, respectively, 17-year-old citizens in California. If the voting age were lowered to 17, our point

estimates that between 20-27 percent of all 17-year-olds in California would have participated in the 2018 midterm election, and between 26-46 percent of all 17-year-olds would have participated in the 2020 general election (with additional uncertainty within the estimated 95% confidence intervals). Our predictions show that 17-year-olds would have the lowest turnout rate of any age group, but as we note, our estimates do not account for exogenous factors such as the popularity of an election, whether high-quality civics education is offered to 17-year-olds, the novelty of the voting age change and its effect on turnout, or other factors.

Conclusion & recommendations

Based on these findings, we conclude that lawmakers in California should seriously consider extending voting rights to the roughly half million 17-year-olds residing in California. The best available research from developmental science provides strong evidence for the cognitive capacity of 17-year-olds to engage in the act of voting. Moreover, research from other countries that have successfully lowered the voting age shows that young people have higher turnout rates and are more likely to express greater levels of political maturity than those voting for the first-time at 18, and lowering the voting age may encourage lifelong voting habits that improve overall democratic participation. Despite our estimates that 17-year-olds in California may have the lowest turnout of any age group, recent surveys show that young people in California have a strong interest in lowering the voting age, and they are already expressing political engagement in other ways such as protesting or joining youth organizing movements. If California lawmakers do move forward with lowering the voting age to 17 in California, however, we offer two recommendations to consider:

- *Improve California's civic education infrastructure* - Lowering the voting age is not enough to ensure democratic participation among all young people, and can actually lead to inequalities in who ends up voting. Equal access to high-quality civics courses and opportunities for 'active' civic learning have been shown to increase young people's political engagement. Yet California's current civic education infrastructure needs improvement. We therefore recommend that the state legislature also examine improving the state's civic education in public schools alongside its consideration of lowering the voting age. Combining civics education with lowering the voting age has been a successful model in Austria where 16-year-olds have been found to have higher turnout rates than first-time voters 18+. This model was also successful in increasing youth turnout in Hyattsville, Maryland where 16-year-olds can now vote in local school board elections. Strengthening the state's civic education could ensure that all students, regardless of socioeconomic status, have equal opportunities to participate in a broadened democracy.
- *Protect legal definitions of adulthood* - If lawmakers move forward with lowering the voting age, we also recommend that they simultaneously implement strong protections of existing legal definitions of adulthood in other domains such as the criminal justice and social welfare systems, or other laws surrounding the age of consent or access to tobacco and alcohol. Young people are also currently protected by regulations restricting campaign speech aimed at minors, but lowering the voting age makes young people vulnerable to becoming targets of special interests. Some legal scholars express concerns that lowering the voting age could be a 'slippery slope' for definitions of adulthood in other domains that could leave young adults without protections that they are afforded under current law.

Arguments in favor or against lowering the voting age: What does the evidence say?

Lowering the voting age in the U.S. is not a new concept – with the ratification of the Twenty-Sixth Amendment to the U.S. Constitution, the voting age was lowered from 21 to 18 in 1971 (Wray-Lake et al. 2020). Yet in recent years, researchers, policymakers, and youth advocates across the U.S. and internationally have questioned whether the voting age should be maintained at age 18 or lowered even further (Hart & Atkins, 2011; Oosterhoff, Wray-Lake, & Hart, 2022; Vote16 USA, 2021). In fact, many countries have moved forward with lowering the voting age in national elections (National Youth Rights Association, 2023), while some jurisdictions in the U.S. have successfully lowered the voting age to 16 years old in local elections (Douglas, 2016). About a third of U.S. states have also allowed 17-year-olds to vote in primaries or party caucuses if they will turn 18 by the time of the general election, and many states – including California – have made it easier for young people to preregister to vote at earlier ages (National Youth Rights Association, 2023; National Conference of State Legislatures, 2023).

In the debate surrounding lowering the voting age in the U.S. and internationally, two arguments in favor of making this change stand out: lowering the voting age can improve voter turnout both for youth and the general population, and create lifelong voting habits that improve democratic participation (Douglas, 2016; Hart & Atkins, 2011; Oosterhoff, Wray-Lake, & Hart, 2022). On the other hand, some opponents contend that youth are not mature enough to participate in politics or lack the cognitive capacity to vote, arguing that lowering the voting age will create more uninformed voters that weakens the democratic process (Bergh, 2013; Chan & Clayton, 2006; Maheo & Belanger, 2020; McAllister, 2014). Researchers studying this debate have documented the empirical evidence extensively in other articles (for excellent reviews, see Eichhorn & Berg, 2020, 2021; Oosterhoff, Wray-Lake, & Hart, 2022; Wray-Lake, 2019; Steinberg, 2014); in this section, we highlight the main arguments and evidence from the research literature to inform lawmakers about the key elements of the debate to lower the voting age.¹

Does lowering the voting age create life-long voting habits?

One of the most popular arguments in support of lowering the voting age is that including more youth could create lifelong voting habits and therefore increase voter turnout among young people, who historically vote at low rates compared to other age groups. Central to this argument is the idea that early voting habits influence lifelong voting behavior. Researchers have found that if someone votes during the first elections in which they are eligible to vote, the voter is more likely to continue voting throughout their lifetime (Franklin, 2004; Plutzer, 2002).² This makes the first few eligible voting years a crucial time in every individual's life to foster lifelong democratic habits. However, most countries grant voting rights to young people at age 18, an age at which young people typically experience major life transitions such as moving away from home or starting college or careers. This can lead to low turnout among first time voters, and therefore can stymie habitual voting.

¹ Note that much of the research on this topic is from the European context since several countries have passed and implemented laws to enfranchise 16- and 17-year-olds over the last several decades. Voter enfranchisement of youth in the U.S. or California may have different effects due to unique socioeconomics, culture, and institutional structures; however, we provide this evidence as a 'proxy' of what could be expected given other countries' experiences.

² Many other variables affect habit formation and voter turnout such as political climate or the nature and popularity of the election; for an excellent review, see Coppock & Green (2015).

There is new evidence supporting the argument that expanding voting to 16- and 17-year-olds does encourage youth to have higher turnout rates and develop voting habits in the long-run. In an ambitious cross-national analysis, Franklin (2020) tests whether countries that have lowered the voting age to 16 see higher overall turnout levels across the population over time. He finds that 16- and 17-year-olds have higher turnout rates than first-time voters 18+; moreover, he finds a positive effect on turnout in the long-run for countries that have passed such measures, suggesting that 16- and 17-year-olds may be engaging more in the political process and forming life-long voting habits that improve overall turnout. To uncover why this may be the case is a question that is best answered by researchers who study 'political socialization', or the learning process by which individuals develop political values, beliefs, identities, and motivations.

Engaging young people while they live at home with parents - One hypothesis is that lowering the voting age to 16- and 17-year-olds has the benefit of engaging young people at a time when they are often still living with parents or other adults who vote. In one of the most focused studies on this topic, Bhatti & Hansen (2012) find evidence that young people living in homes with parents are more likely to vote. In a 2009 dataset of Danish local elections, the researchers found that young adults living at home voted more than those who had moved out on their own; when young adults move away from the family home, the researchers found that young people's voting habits decreased due to declining influence from their parents' voting habits and exposure to the weaker voting patterns among their peers.

Engaging young people while they are embedded within local communities - Lowering the voting age below 18 may also encourage political engagement at a time when young people are embedded within local community networks. In a literature review of youth political engagement (that includes political activities beyond voting), UCLA Professor Laura Wray-Lake (2019) documents how other community attachments have also been associated with youth political development and different forms of political engagement. Wray-Lake describes that in adolescence, community attachments among youth primarily form among peers, within schools, through extracurricular activities and community organizations, as well as religious institutions, which in turn, create pathways to political engagement as young people develop a sense of civic duty and responsibility (for example, see Quintelier, 2015; Shaw et al., 2014). Adolescents are often embedded in such communities before turning 18, and therefore may have access to opportunities to develop different forms of political and civic engagement through their local networks (see for example, Duke et al., 2009).

Inequalities in political engagement - Importantly, researchers have found inequalities in the type of adolescent that typically engages politically – to put it simply, much depends on their parents. There are many examples narrowing in on how parents influence their children's political engagement, but to name a few: Parents' socioeconomic status can influence the type of schools their children attend, and therefore the curriculum, social networks, extracurricular activities, and subjects taught in school, which are important 'socializing' agents in young people's civic and political identities (Kahne, Crow, & Lee, 2013). Moreover, parents themselves are important 'socializing agents'; parents who talk openly about current events and public issues at home are more likely to have children that engage in civic and political causes (Shah, McLeod, & Lee, 2009). Importantly, researchers have found that parents' education level, as a proxy for socioeconomic status, is associated with their children's political engagement (Gidengil, Wass, & Valaste, 2016; Jennings, Stoker, & Bowers, 2009; Verba, Burns, & Schlozman, 2003). The result is that youth political engagement is highly variable by race/ethnicity, gender, and socioeconomic status (for a review, see Wray-Lake & Schubert, 2019).

The importance of civics education - To this end, several researchers have suggested that civics education could play an important role in interrupting inequalities of political socialization in the household. Civics education has been found to encourage the habit of voting by increasing political interest and knowledge, and encouraging young people to get involved in the process of social change (Campbell, 2019; Siegel-Stechler, 2019; Wray-Lake, 2019). High school civic classes can provide a space where discussion of pressing societal issues and political candidates can promote civic learning and increase political knowledge. Students can also learn about the registration process and the logistics of voting while enrolled in civics courses. Importantly, civics courses can also provide opportunities for those from disadvantaged backgrounds to access civic learning spaces that they otherwise may not have exposure to (Levinson, 2010).

Importantly, in the U.S., high schools generally lack the education infrastructure necessary to provide all students with adequate civics education. Students with more educated parents, who are white, or who have higher academic achievement have been found to have substantially more classroom-based civic learning opportunities (Kahne & Middaugh, 2008; Levinson, 2010). Since access to civic education can exacerbate racial and socioeconomic inequalities, ensuring equal access to such education should be taken into account when considering lowering the voting age (see Levinson, 2010 for an excellent review). Additionally, broadening access to high-quality civics education – such as ‘action civics’ that connect course curriculum to opportunities for engagement beyond the classroom walls – could pave the way for broader political participation among youth (Fitzgerald et al., 2021).

There is evidence that civics education, if coupled with lowering the voting age to 16 or 17, could lead to higher turnout levels and habitual voting among youth. Austria is the best known example of a country that took this approach in 2007 when the voting age was lowered to 16 at the same time an enhanced civic and citizenship education curriculum was implemented (Schwarzer & Zeglovits 2013). Researchers initially found that newly enfranchised 16- and 17-years were more likely to show satisfaction with democracy and more likely to vote at 18 than first-time voters at 18 (Aichholzer & Kritzinger, 2020). It is also possible that young voters were developing the habit of voting, since one researcher found early evidence of increases in long-term voter turnout rates in the country (Franklin, 2020). Such findings suggest that voter turnout and the habit of voting may be primed by pairing civics education with changes to the voting age.

Of special note: there is one recent study that shows youth political engagement can be weakened after disenfranchising voters – for example, after allowing young people to vote in local school board elections but not allowing them to vote in statewide or national elections (Leininger, 2023). Attention should be paid to legislation that partially lowers the voting age – for example, by lowering the voting age in local elections but not in state or national elections. Leininger (2023) found that when the voting age in Germany was lowered to allow young people to vote in local elections, but did not allow them to vote in a subsequent national election, they experienced temporary disenfranchisement and negative perceptions of their country’s democracy. Such findings could have implications for whether young people develop the habit of voting if they only have voting rights in some elections.

Pairing civics education with lowering the voting age in Takoma Park, Maryland

Five municipalities in Maryland – Takoma Park, Greenbelt, Hyattsville, Riverdale Park, and Mount Rainier – have lowered their voting age to 16 for municipal elections over the last decade (Douglas, 2016). We illustrate the experience of Takoma Park, a small suburb north of D.C., which was the first municipality to implement this change for all citywide elections in 2013 (Douglas, 2016). After the voting age was lowered, the new voting cohort turned out in high numbers: approximately 44 percent of newly eligible and registered 16- and 17-year-olds turned out to vote compared to just 11 percent of the citywide registered voters. Takoma Park provides evidence of ongoing high levels of youth turnout, in part because it pairs new enfranchisement laws with strong civics education (Generation Citizen, 2016). At school, students discussed the city’s effort to lower the voting age in 2013 while simultaneously teaching about enfranchisement and the role of citizens in democracy; since that time, teachers report that the decision has made their coursework more relevant to students’ lives by giving them meaningful ‘action projects’ that go beyond the classroom walls. One councilmember noted the change he saw in youth’s political participation:

“Since we made this change, teens have come to candidate debates. They testify at public meetings. They reach out to their elected officials to ask for services or assistance, often quite a bit more politely than older voters. We’ve also had teens organize Rock-the-Vote events. Teens have hosted and moderated candidate debates and participated in other ways that are inspiring. Our city now has a thriving Youth Council, offering expert opinion on the kinds of services and initiatives that would matter most to young people.”

– Councilmember, 2018 (Eichhorn & Bergh 2019)

Do 17-year-olds have the political maturity to vote?

Another argument in support of lowering the voting age is that it could engage more young citizens in important political choices that will have long-term ramifications for a young person’s life, and therefore strengthen democracy. At the heart of this debate are legal and philosophical questions of political maturity and adulthood. Specifically, determining at what age a person exemplifies the political maturity to cast a vote, and whether a definition of political rights and responsibility can be separated from other legal definitions of adulthood in other institutions such as the criminal justice and social welfare systems, the military, or other laws surrounding the age of consent or access to tobacco and alcohol (Hart & Atkins, 2011; Nelkin, 2020; Silbaugh, 2019, 2020). We briefly review the research evidence from this debate.

Political maturity - Some researchers have asked at what age a person is mature enough to take on the responsibilities of community membership by participating in the rule-making of a society. These researchers point out that young people ages 16 and 17 already take on some ‘adult’ roles in society; for example, adolescents can drive, work and pay taxes, consent to sexual activity, and can also be tried and sentenced as adults in the criminal justice system (Douglas, 2016; Hart & Atkins, 2011). The argument follows that if 16- and 17-year-olds are ready to take on these early responsibilities of citizenship and adult life, they should be allowed to take on the responsibility of voting as well.

Exploring this concept in the U.S. context, Hart and Atkins (2011) analyzed a range of survey questions from a 1996 U.S. survey to measure concepts of political citizenship such as civic knowledge, political skill, political efficacy, and political interest among 14-30-year-olds. Overall, the evidence

showed that by 16-years of age, American adolescents developed qualities of citizenship that were similar to the qualities found in those 18+ who were allowed to vote. Notably, the authors find that there were starker differences in the citizenship measures for adolescents younger than 16, with 14- and 15-year-olds less likely to express civic interest, civic knowledge, political skill, and tolerance than at older ages.

Researchers studying other countries that have successfully lowered the voting age have found similar results. In a recent literature review that summarizes empirical findings across countries that have lowered the voting age, Eichhorn & Bergh (2021) find that there are generally higher levels of political trust, political interest, and support for democracy among young voters than for first-time voters 18+, with the strongest effects in countries that have full youth enfranchisement at ages 16-17. They conclude that, across different countries, young people who gained voting rights at 16- or 17-years-old tended to be more engaged than those who gained voting rights at 18-years-old. Despite these findings, researchers studying political maturity by age in other countries that have considered lowering the voting age have found mixed results (Bergh, 2013; Chan & Clayton, 2006; Maheo & Belanger, 2020; McAllister, 2014; Roberts, 2023).

Whether or not maturity for political citizenship equates to democratic participation is an open question, but one indicator is simply whether expanding the voting age to 16- or 17-year-olds results in better turnout. In a study of new 16- and 17-year-old voters in Austria, researchers found that obtaining the right to vote at a lower age is associated with a first-time 'voting boost', where young people are more likely to turnout for the first election for which they are eligible to vote (Zeglovits & Aicholzer 2014). Notably, first-time voting boosts are also found among 18-year-olds (as found in other studies such as Bhatti & Hansen, 2012), but Zeglovitz & Aicholzer (2014) found an even higher voting boost for 16- and 17-year-olds over the 18-year-olds who voted for the first time. Researchers studying the turnout effects of youth in other countries that have lowered the voting age, such as Scotland and Norway, have found similar effects (Huebner & Eichhorn, 2020; Odegard et al., 2020).

Separating political participation rights from other definitions of adulthood - Legal scholar Katharine Silbaugh presents important concerns about whether lowering the voting age could impact other legal definitions of adulthood, for example, in definitions for safety net program eligibility in the child welfare system or criminalization in the justice system (Silbaugh, 2019, 2020). Silbaugh (2019) argues that voting age sets a precedent for legal definition of adulthood in many other areas. This claim is rooted in trends following the passage of the 26th Amendment where, in response, states began to lower the legal age of adulthood from 21 to 18, and made policy changes such as lowering the cutoff for aging out of the foster care system or ending entitlement to child support after the age of 18. There are implications for other areas of policy as well, such as when an individual can make autonomous medical decisions, hold various types of employment, marry, view R-rated movies without an adult chaperone, serve in the military, enter into contracts, and purchase alcohol and tobacco (Steinberg, 2014).

Silbaugh (2020) also argues that young people are currently protected by regulations restricting campaign speech aimed at minors, but lowering the voting age makes young people vulnerable to becoming targets of commercial, governmental, and special interests. Such scholarship suggests that lowering the voting age even further could be a 'slippery slope' for other definitions of adulthood that could leave young adults without protections that they are afforded under current law. Notably, this debate is also present in developmental science scholarship, with several authors arguing that a definition of political 'participation rights' can be distinguished from other legal definitions of adulthood

by using advances in adolescent cognition (for example, see Steinberg et al., 2009; Steinberg, 2014; Steinberg & Icenogle, 2019; Wray-Lake & Oosterhoff, 2022).

The importance of political representation and responsive government

Despite their capacity for civic maturity, many young people have argued that they have to live with the decisions that are made by local, state, and federal lawmakers, since they lack opportunities to weigh in on the policies that directly affect them. Pressing issues affect young people's current lives and futures. Top of mind for young people in one 2022 poll from the Center for Information and Research on Civic Learning and Engagement (CIRCLE) are inflation, gas prices, abortion and reproductive health, jobs that pay a living wage, and climate change (Medina et al., 2022).

Yet even for young people with voting rights (those 18+), in many cases, young people lack political representation of individuals of the same generation who share the same concerns. The U.S. Senate includes just 3 millennials and no Gen Z representation, with the vast majority part of the Baby Boomer generation; the U.S. House includes 52 millennials and only 1 representative from Gen Z (Blazina & Desilver, 2023). In California, just 14 percent of legislators are in their 20s and 30s, despite young people making up nearly 40 percent of California's population (Osborn D'Agostino, Kamal & Gans, 2023). Views of this disproportionate representation are reflected in youth surveys: A survey from Data for Progress found 70 percent of 18- to 29-year-olds felt that their generation was underrepresented in Congress (Adcox, 2022). Expanding voting rights to those under age 18 could provide young people with more opportunities for representation and responsive government.

Do 17-year-olds have the cognitive ability to vote, and can they vote independently?

One prevalent concern around lowering the voting age is related to the cognitive capacity of young people and whether young people ages 16 and 17 have physically developed the cognitive functions to vote, and whether they have the independence to make decisions that reflect their will rather than the will of their parents, peers, or other social networks. Such conceptions dominate public opinion nationally in the U.S. (Carleton, 2010) and within California as well (Wray-Lake et al., 2020). We briefly review each of these points in turn.

Cognitive development - Perhaps the most common argument against lowering the voting age is that young people have underdeveloped cognition and lack the mental capacity to vote. Drawing from literature on developmental science, empirical evidence shows that by age 16, adolescents are capable of mature reasoning and decision-making (what is sometimes referred to as 'cold' cognition by psychologists); they show the same levels of cognitive capacities such as verbal fluency, planning, logical reasoning, and working memory as adults (Icenogle & Cauffman, 2021; Lerner & Steinberg, 2009). Importantly, developmental science researchers tend to make a distinction between 15- and 16-year-olds in cold cognition; they suggest that 15-year-olds are at the lower bound of this kind of neurobiological maturity but by age 16, adolescents are very likely to express reasoned and deliberative decision-making skills. On the other hand, Steinberg and colleagues (2009) find that adolescents are less likely to display socioemotional maturity (sometimes called 'hot' cognition' by psychologists); for example, by being able to perceive risks, control impulses, resist peer influence, or think about long-

term consequences.³ It is more likely that individuals gain socioemotional maturity between the ages of 18 and into their 20s.

When it comes to voting, Oosterhoff and colleagues (2022) argue that voting is more likely to fall in the camp of mature reasoning and decision-making (cold cognition) rather than socioemotional maturity (hot cognition). Among their main arguments, the authors posit that the act of voting takes place across a longer timeframe, since voters must register to vote, know where to vote, arrive at the voting location on the correct day and time, and take time to become informed about candidates and leading issues – therefore, 16- and 17-year-olds have the ability to make thoughtful, deliberate, and independent decisions that stem from mature reasoning and decision-making.⁴ In fact, a prominent psychologist and neuroscientist on adolescent development has come forward to support giving voting rights to 16- and 17-year-olds for the same reason (Steinberg, 2014). In one interesting study of cognitive reasoning across a sample of adolescents and adults, Oosterhoff, Wray-Lake, and Harden (2022) find that adolescents' have more capacity for complex reasoning than adults. When asked about views to lower the voting age, 16- and 17-year-olds were more likely to integrate multiple perspectives to form a judgment about changing the voting age and were more likely to provide multiple reasons to support their judgment than those 18+.

Political independence - Another concern is that young voters lack the cognitive capacity to make voting decisions independent from their parents or social networks. Several studies explore this argument. One salient study from Scotland surveyed over 1,000 14- to 17-year-olds found that 44 percent of youth intended to vote differently from their parents, and 56 percent intended to vote the same as at least one parent (Eichhorn, 2014). While such findings suggest that there is room for youth to be influenced by parents, another study in Maryland and Pennsylvania tested whether teenagers' partisan identifications are any more susceptible to parental and community influence than older adults. The study found that teens' partisan identifications are no more likely to be influenced by families and communities than older adults (Hart et al., 2020).

³ For a full review of the brain changes that take place in adolescence, see Steinberg (2014).

⁴ Other researchers who make similar cases are Douglas (2016), Hart & Atkins (2011), and also Wray-Lake & Oosterhoff (2022).

The costs of voting during important transition periods in young adults' lives

Young people traditionally have lower turnout rates than other age groups. The U.S. Census Bureau has been tracking voter turnout trends since the mid-1960s, and young people ages 18-24 historically have much lower turnout in presidential election years than any other age group by double digit margins (O'Neill, 2022). In 1964, youth voter turnout was at an all-time high around 50 percent; by 2000, youth voter turnout was at an all-time low around 30 percent. Since that time, the youth vote has seen a rebound of young people turning out for the 2020 presidential election, but youth turnout still falls short of turnout rates for other age groups.

There are several reasons that contribute to lower voter turnout for young people. One reason we highlight here are the barriers young people face in the voting process. Charlotte Hill, director of the Democracy Initiative at UC Berkeley's Goldman School of Public Policy, found that young people face 'voting costs' that are unique to young voters. For example, as first-time voters, young people are less likely to have information that is necessary to vote, such as knowing how to register, where to go vote, or where to find information about candidates (Hill, 2020). Young people also struggle more to find the time to vote, to plan ahead to vote, and to balance voting with other competing life priorities.

One reason that young people may experience such voting costs is because young adults are likely to be going through major life transitions at age 18 when they first gain the right to vote. Young people are more likely to move out of their parents' home while also becoming disconnected from community networks such as K-12 schools, youth organizations, or religious or other nonprofit organizations. Young people also move more often, and are likely to take on employment, and start college and/or join the military, which are transitions not conducive to first-time voting (Wray-Lake & Oosterhoff, 2022). Young adults also tend to move out of their family home and into living arrangements with peers who are less likely to have voting habits (Bhatti & Hansen, 2012).

Together, this evidence suggests that establishing strong youth turnout may be even more crucial for 16- and 17-year-olds while they are still living at home and attached to their communities; turnout may become less likely at ages 18 and 19 when young people are going through major life transitions and therefore face higher voting costs.

The California context

Youth voter turnout in California

Figure 1 below shows voter turnout rates in presidential elections for California versus the U.S. since 1996. Following national trends, in California, voter turnout for 18-24-year-olds has been lower than for older age groups, on average, with 55-64-year-olds and 65-74-year-olds having the highest turnout rates. Voter turnout across all age groups in both California and the U.S. increased in the 2020 election. Notably, in 2020, 18-24-year-olds alongside 25-34-year-olds in California outpaced the national average by 4.5-5.1 percentage points, respectively.

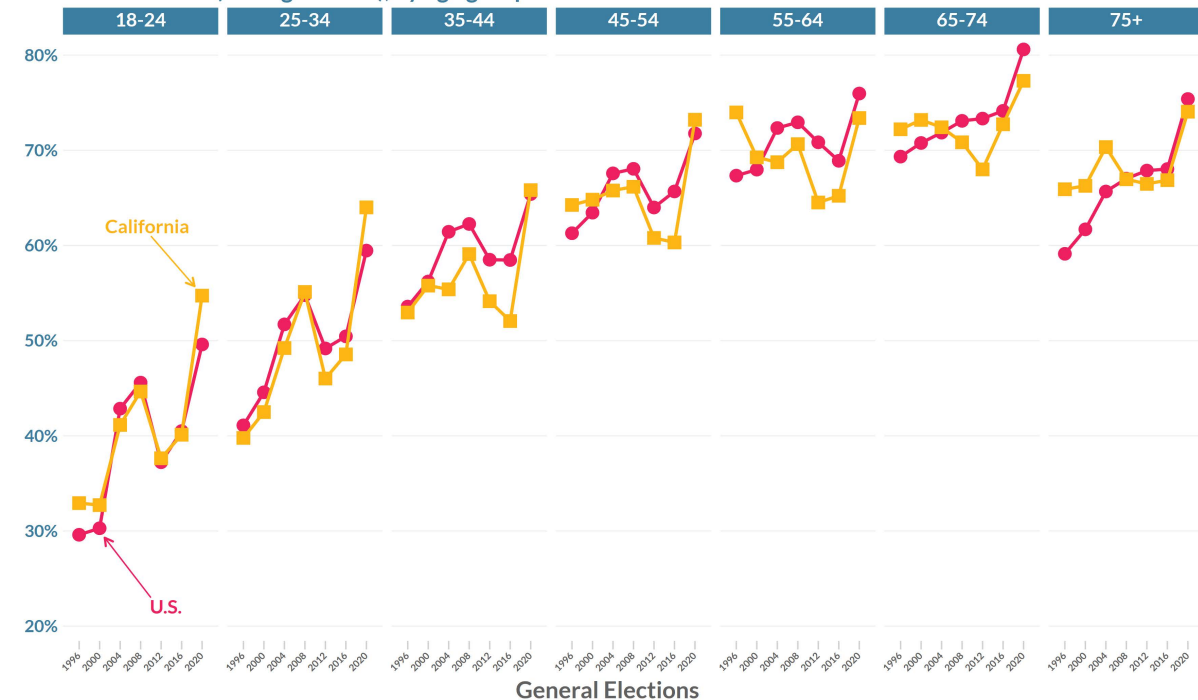
California is also one of the most diverse states in the country and young people especially reflect the state's diversity. California's youth are 47% Latino, 31% white, 10% Asian, and 8% Black (PPIC, 2007). The majority of youth are people of color and voter turnout rates vary considerably by race/ethnicity for young people – Latino and Asian youth have much lower turnout rates than non-Latino/Asian youth in both midterm and presidential election years (California Civic Engagement Project, 2018).⁵

Figure 1

How does voting differ in California vs the U.S.?



Voter turnout rates (among citizens), by age group



Source: Authors' analysis of the Current Population Survey (CPS) via IPUMS-CPS.
 Sample: Citizens 18+. Ages top-coded at 75 years old.
 Notes: Voting turnout rates are based on bias-corrected weights (for non-response and over-reporting) from the US Elections Project.

⁵ For an excellent history of California's expansion of voting rights, alongside rationale for lower voting rates by race/ethnicity, see Katz et al. (2020).

Youth political engagement in California

Despite low levels of youth voter turnout, young people in California are concerned about many public policy issues. Like young people nationwide, young Californians today face new economic, social, health, and environmental risks that were not present for older generations (Berkeley Institute for Young Americans, forthcoming). A recent survey of UC students highlights concerns about such risks, finding that young people named the coronavirus pandemic, gun control, immigration, jobs and the economy, and health care as their top five concerns (Freeling, 2020). Concern about the issues facing younger generations have led to the creation of new youth organizations that are catalyzing youth political engagement across California (Koran, 2020; Terriquez et al., 2020). These organizations are focused on issues ranging from education to racial justice and criminal justice reform and they have been established across the state, from rural parts such as the Inland Empire as well as alongside major metro areas like Los Angeles and the Bay area (Terriquez et al., 2020; Terriquez et al., 2021).

Whether through youth groups or independently, many young people in California are politically engaged in other ways aside from voting. In a 2022 poll from Power California and BSP Research that surveyed 1,400 young people ages 18 to 30, in the last year, 57 percent researched a social issue or event, 55 percent had encouraged friends and family to register to vote, and 54 percent shared perspectives on an issue on social media (Power California, 2022). Young people in California are also well-known to engage in social protest; youth protests against gun violence, climate change, and in support of racial justice have been well-documented in recent years (Green, 2018; Johnson, 2019; Taylor, 2020).

Legislative efforts to broaden democracy for young Californians

Acknowledging the importance of young people in a democratic society, lawmakers in California have made it easier for all Californians, including 16- and 17-year-olds to register to vote, and education leaders have fostered youth political engagement by supporting efforts to revamp civics education. We review these points in turn below.

Civics education - Lawmakers have fostered youth political engagement in recent years by providing opportunities to revamp civics education across the state. In 2014, then California Supreme Court Chief Justice, Tani G. Cantil-Sakauye, and former State Superintendent of Public Instruction, Tom Torlakson, created a California Task Force on K-12 Civic Learning that issued a report to revitalize civic education in schools (California Task Force on Civic Learning, 2014). In 2016, the State Board of Education adopted the History-Social Science framework standards, which are now used for every grade level with different learning content implemented each year; by 11th and 12th grade, students are expected to learn about U.S. history and American democracy (CDE, 2022).⁶ Importantly, the new standards move away from simply encouraging fact-based learning and instead emphasize active, participatory skills. California is also one of just a few states to offer a state seal of civic engagement to recognize students who have demonstrated excellence in civics education and participation; the seal is placed on students' transcripts, diplomas, or certificates of completion (Fensterwald, 2022).

Yet in a recent review of civics education in California, researchers from the Leveraging Equity and Access in Democratic Education (LEADE) Initiative at UCLA found that only 1 in 6 California students

⁶ The previous standards had not been substantially updated since 2005. Even before the new standards were put in place, all California 12th graders were required to take a civics course, the Principles of American Democracy, and that requirement remains today as well. For more information, see McTygue (2016).

attend schools in districts that articulate a substantial focus on civics education (Rogers et al., 2020). Moreover, just under a third of districts had a staff member dedicated to history and social sciences, and no districts employed more than one person in this area. This report raises major concerns that California lawmakers may not be doing enough to provide the infrastructure that is necessary for civics education, including resources for adequate staffing. This may be why a recent poll of Californians found a high demand for more civics education in the K-12 system (Tadayon, 2023), and why researchers consistently call for more civic education to engage Californians in the political process (Baldassare et al., 2019).

Reducing pre-registration voting restrictions for all Californians - In recent years, lawmakers have made progress to reduce restrictions to pre-register to vote for all Californians. The state enacted internet voter registration in 2008 where people can now access voter registration online at <https://registertovote.ca.gov/>.⁷ Lawmakers implemented same-day registration in 2012 to allow voters to register to vote on election day (McGreevy, 2012). In addition, after voter turnout for all ages reached historic lows in the 2014 midterms, the legislature made it easier for all Californians to participate in elections by automatically registering voters through the DMV and authorizing counties to conduct elections primarily through mail ballots. The New Motor Voter (CNMV) program was implemented in 2018, and the number of people that registered through the DMV doubled, with overall voter registration rising by 15 percent in the last six years (McGhee et. al, 2021, 2020).

Passing youth pre-registration legislation - California is unique in that it has been much friendlier to youth voter preregistration than many other states. California lawmakers passed the Student Voter Registration Act of 2003 that mandates that the Secretary of State provide voter registration forms to every public high school and higher education institution. Teenagers 16 and older have been able to pre-register to vote since 2016 with the passage of SB 113, which allowed for youth to preregister to vote with the state's pre-registration database, VoteCal, as long as they had a signature on file with the DMV (Senator Henry Stern, 2019).⁸ According to Secretary of State Alex Padilla, more than a million teenagers have pre-registered to vote since 2016 when the state began allowing pre-registration (Weber, 2023). While such reforms have been promising to encourage more youth to register to vote, improvements can still be made. For example, lawmakers could consider automatically updating people's voter registration when they move (Hill, 2020).

Support for lowering the voting age?

While California would be the first state to allow 17-year-olds to vote if SCA-2 passes, it certainly would not be the first state to attempt to do so – other states such as Oregon and the District of Columbia have also proposed similar efforts in recent years (Lou & Griggs, 2019; Wong, 2023 Vote16 USA, 2021). Oregon currently has three bills this session that could broaden voting rights for 16- and 17-year olds, including a constitutional amendment to lower the voting age to 16 for all elections, a bill to allow 17-year-olds who will be 18 by the time of the general election to participate in primaries, and a third bill to allow 16- and 17-year-olds to participate in school board elections (Wong, 2023). Members of the U.S. House of Representatives also attempted to pass legislation to lower the voting age to 16 for all elections in 2019; the bill was reintroduced in 2021 (Congresswoman Grace Meng, 2021).⁹ Despite

⁷ VoteCal, the online registration site, was not implemented until 2010. For more information, see Cathcart (2008).

⁸ Legislators also made some headway with proposal SB 727, which would have allowed for pre-registration of 15 year-olds.

⁹ For more information on state efforts to lower the voting age, see Vote16 USA (2021).

the efforts of lawmakers to lower the voting age, public support remains mixed. National polls find most Americans are not ready to accept lowering the voting age to either 16 or 17 (The Hill, 2019). Concerns are often related to the cognitive capacity of young people and whether young people ages 16 and 17 can make independent choices and understand the consequences of their actions. Such conceptions dominate public opinion nationally in the U.S. and within California as well (Carleton, 2010; Wray-Lake et al., 2020).

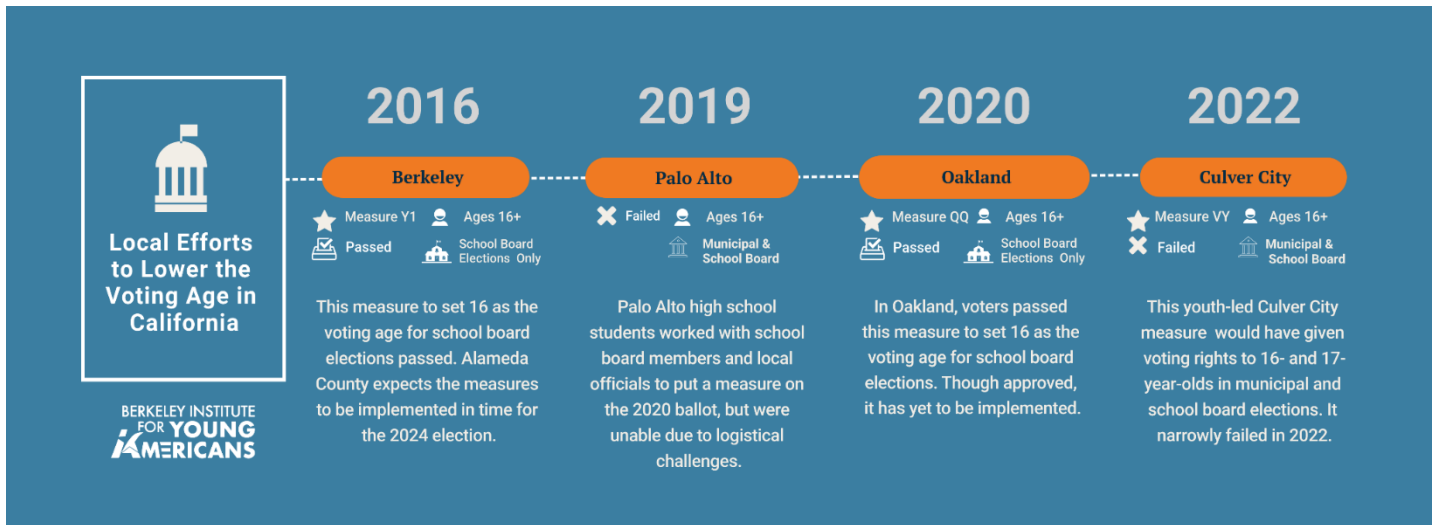
Yet when young people are asked their opinion, they tend to be in favor of lowering the voting age. In a 2020 Power California Youth Poll of young people ages 18-30, 64 percent of respondents expressed support for lowering the voting age to include 16- and 17-year-olds (Power California, 2020). In 2022, 55 percent of 18-30-year-olds were in favor (Power California, 2022). Likewise, in a survey of 16- and 17-year-olds and adults 18+ in Los Angeles, Laura Wray-Lake and colleagues (2022) found that young people support expanding voting rights for youth more so than other age groups. In a more detailed survey that asked for perceptions of lowering the voting age in school board, city, state, and national elections, they found that 16- and 17-year-olds consistently expressed more support for lowering the voting age than adults 18-30 and 31+ across all election types. The survey found that voters 18-30-year-olds and those 31+ tended to support lowering the voting age as elections became more local (for example, for school board or city elections), but were generally opposed toward lowering the voting age for statewide and national elections.

California's state & local efforts to lower the voting age

California has a history of attempting to lower the voting age in both local and statewide elections, with some success. Below, we briefly cover local and statewide attempts and detail why they either passed or failed.

Local attempts - Recently, several municipalities in the state have attempted to lower the voting age for local school board elections (see Figure 2). In 2022, Culver City youth led a campaign to pass Measure VY, which would have allowed 16- and 17- year-olds to vote in city and school board elections. The election was close. With 49.95% of the votes in favor of the measure, VY lost by only 16 votes (LA County Registrar-Recorder/County Clerk 2022). Arguments against the measure centered on the maturity of teens and the costs incurred (City of Culver City, n.d.). Similar measures in San Francisco and Palo Alto also failed in previous years. Notably, San Francisco's 2016 youth-led movement included an education campaign to help voters learn about benefits of lowering the voting age and changed the narrative around the cognitive decision-making capacity of 16-year-olds to cast a vote, which successfully raised support of the measure from 36 percent (at the time of a pre-election poll) to 48 percent (on Election Day). Though the campaign ultimately failed, it saw a close margin as a result of the education campaign (Douglas, 2020). In Palo Alto in 2019, youth organized as a result of their desire to have a say in school-related decisions that affect them. They faced logistical hurdles since Palo Alto's city council and school board boundaries do not line up, and eventually discontinued the project in 2021 (Stull 2020, Sheyner 2020).

Figure 2¹⁰

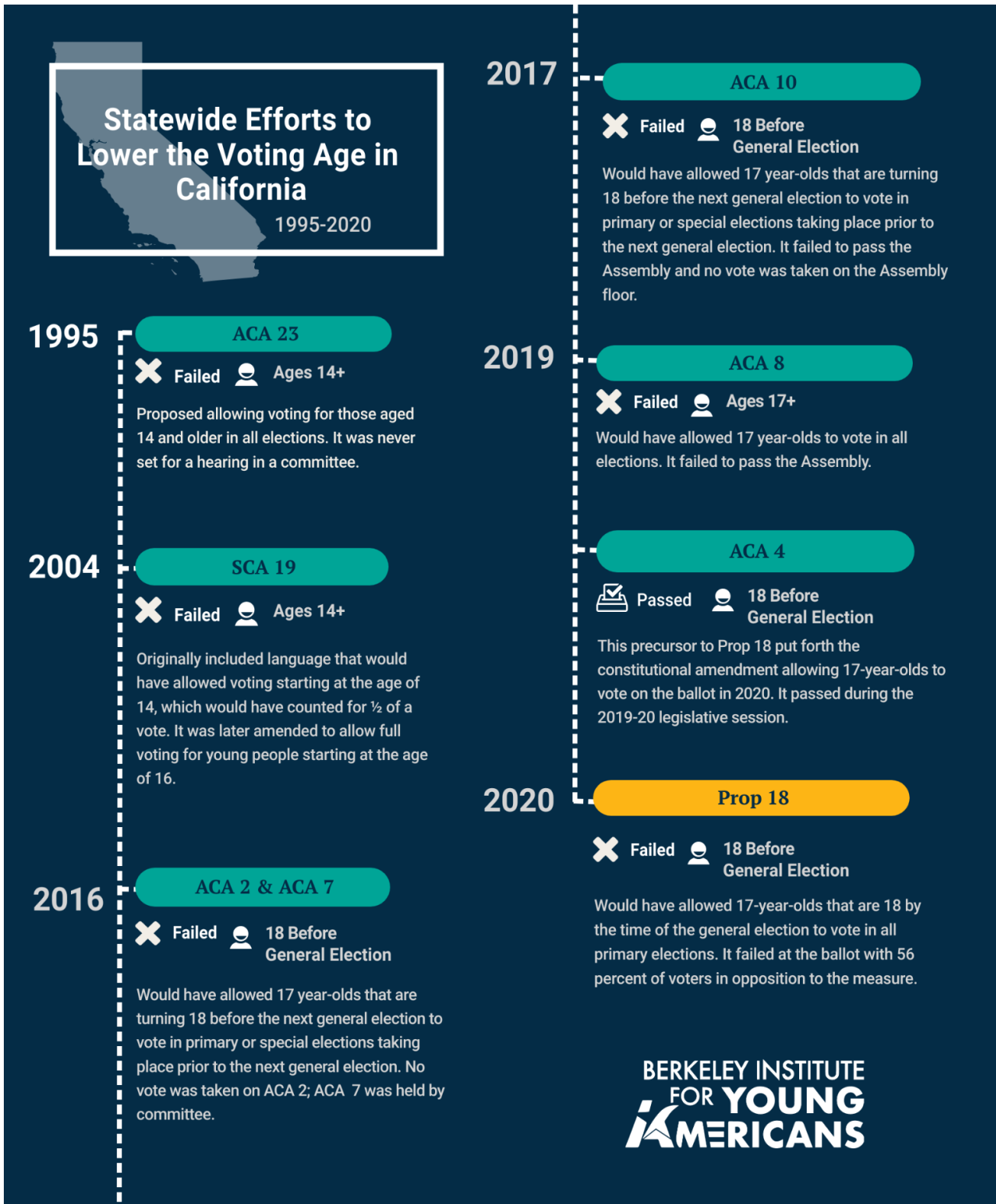


Some municipal measures have been successful. In 2016, Berkeley and Oakland youth-led efforts successfully lowered the voting age for school board elections for 16- and 17- year olds. Outside of a few municipalities in Maryland, these Bay Area cities became some of the first in the country to allow adolescents to participate in local school board elections. As of 2022, implementation hurdles mean that youth are not yet participating in these municipalities. The Alameda County has cited specific implementation challenges including designing logistics of a vote for a select subset of the population for only the school board race, ensuring multilingual ballots and disability accessibility accommodations, and integrating voters from this election into the main voter rolls when young voters turn 18 (Jones 2022). The County expects the measures to be implemented in time for the 2024 election (Bolingit, 2022). Despite these implementation challenges, these Bay Area cities reflect a historic development as the first cities in California to enfranchise youth voters in this way.

Statewide attempts - At the state level, much legislation has been proposed in the last 25 years (see Figure 3). Most recently, lawmakers put Proposition 18 on the 2020 ballot, which would have allowed 17-year-olds who would be 18 by the time of the general election to participate in primaries (CalMatters 2020). Voters failed to pass the measure by a 12 percent margin (56% no; 44% yes). Arguments against the proposition were that 17-year-olds did not have the maturity and life experience to participate, and that 17-year-olds were not ready to make decisions about tax and bond measures (CalMatters 2020).

¹⁰ For the source of this information, see: City of Culver City (n.d.), Douglas (2020), LA County Registrar-Recorder/County Clerk (2022), Stull (2020), Sheyner (2020)

Figure 3¹¹



¹¹ For the source of this information, see: Wray-Lake et al. (2020) and CalMatters (2020).

Potential effects of lowering the voting age to 17 in California

How many 17-year-olds live in California?

In this section, we use the best available data from publicly available surveys to produce counterfactual estimates of how many 17-year-olds *would have* voted if the minimum voting age had been lowered to 17 years old in 2018 and 2020. These estimates may help to inform a range of possibilities for 17 year-old turnout based on recent voter turnout experience in both a midterm and general election setting. However, the estimates provided in this section should be considered the best available to a first approximation; there is significant uncertainty regarding what would have been the actual voting rates among 17-year-olds in the 2018/2020 elections or any future elections, contingent upon a number of factors that are outside the scope of our model.¹² For instance, if the voting age was lowered in a future election, ultimate voting rates may depend on a range of factors, including: the magnitude of election spending targeted at 17-year-olds, whether civics education encourages voter turnout, the salience of particular issues in that election, the novelty of the voting age change and its effect on turnout, or other factors not listed here. In all of our analysis, we restrict the sample to survey respondents who self-report as citizens and self-report their residence as California.¹³

To produce our estimates, we first estimate the total number of 17-year-olds in California using the American Community Survey (ACS) – the largest publicly available survey of the state from the U.S. Census Bureau – via IPUMS-USA (Ruggles et al., 2023). As we show in Figure 4, we find that the number of 17-year-old citizens residing in the state has declined somewhat in recent years, reaching a peak of about 507k in 2011 and hitting a trough of about 456k in 2019 – about a 10% decline. Over the past twelve years, we estimate that there was an average of 482,000 17-year-old citizens in the state. In 2018 and 2020, the two election years for which we report our primary estimates, we find that there were 477k and 496k, respectively, 17-year-old citizens in California.

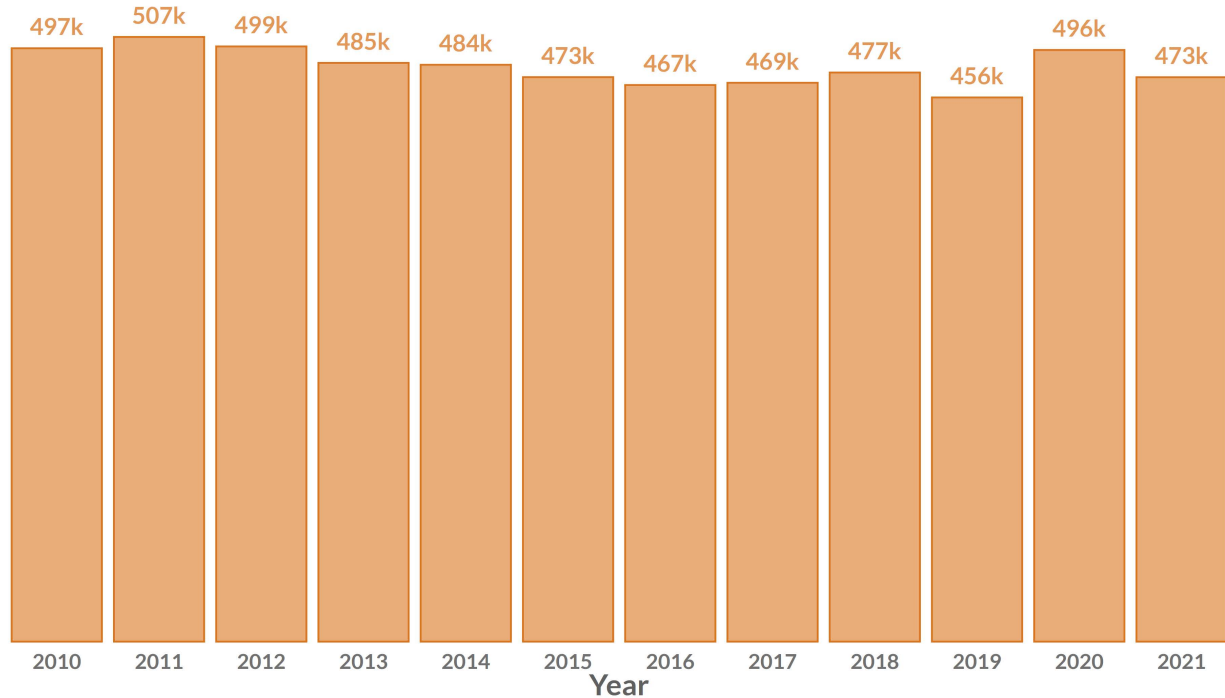
¹²While better estimates could be made using empirical results from a quasi-experimental research design, to the best of our knowledge no such research exists in the U.S. context.

¹³ The public repository for our analysis, with accompanying Stata scripts, is available [here](#) [Forthcoming].

Figure 4

How many 17-year-olds live in California?

The population of 17-year-old citizens in California



Source: Authors' analysis of the American Community Survey (ACS) via IPUMS-USA.
Sample: California citizens 17 years of age.

What is the predicted turnout rate for 17-year-olds?

Next, we use publicly available data from the Cooperative Election Study (CCES) and the November Voter Supplement to the Current Population Survey (CPS) via IPUMS-CPS to produce a range of estimates of voting rates in 2018 and 2020 among all ages between 18 and 75 or older using the appropriate survey weights to ensure our survey-based estimates are representative of the California population (Shiro, 2022; Flood et al., 2022).¹⁴ We implement adjustments to the CPS to correct for documented over-reporting non-response bias in the survey based on Stata scripts provided by the US Elections Project (Hur & Achen, 2013; McDonald, n.d.). For the CCES, we use the primary voter turnout formulation that counts any respondent as a voter if they can be successfully linked to an administrative record and any respondent as a non-voter if they either have no administrative record linkage or were linked to an administrative record and recorded as a non-voter.¹⁵ For each survey, we calculate the

¹⁴ We top-code the age of any survey respondents older than 75 to 75 years old.

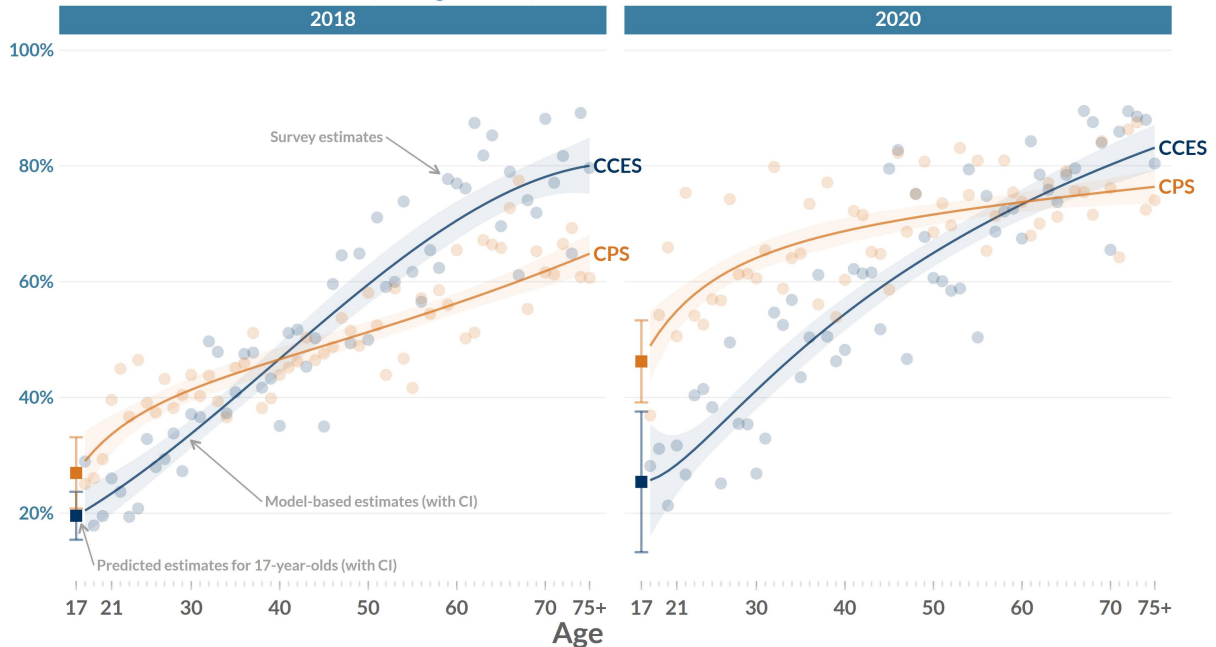
¹⁵ The CCES and CPS are two widely used surveys for measuring voter turnout, and each produces different estimates depending on the methodological design/assumptions, particularly when examining turnout by age groups. As we show in previous work from the Berkeley Institute for Young Americans, particularly for the CCES, the definition of voter turnout matters and can yield varying results (Anzia & Hawkins, 2020). In this memo, we elect to use the turnout measure recommended by CCES staff and the one shows results closest to the CPS. The November Voter Supplement to the CPS is the most widely used survey when reporting voter turnout rates in the U.S.; therefore, we report bias-corrected estimates for the CPS alongside those of the CCES to provide a range of

weighted age-specific voter turnout rates in both 2018 and 2020. After obtaining the weighted age-specific voter turnout rates, we fit a fractional polynomial model to the survey-based estimates in each year to produce smoothed estimates of voter turnout across all age groups.

Figure 5

At what rate do Californians vote?

Voter turnout rates in 2018 and 2020 (among citizens)



Source: Authors' analysis of the Cooperative Election Study (CCES) and the Current Population Survey (CPS) via IPUMS-CPS.
 Sample: California citizens 18+. Ages top-coded at 75 years old.
 Notes: The CPS results are based on bias-corrected weights (for non-response and over-reporting) from the US Elections Project. The model-based estimates are calculated based on the predicted values from fitting a weighted fractional polynomial regression model based on the survey-provided person weights. The predicted values for 17-year-olds are based on out-of-sample prediction from the corresponding fractional polynomial model. Error bars report 95% confidence intervals (CIs).

In Figure 5 (above), we show the survey-based estimates of voter turnout with a transparent circle and the smoothed model-based estimates (based on a fractional polynomial model) with solid lines. Given that we derive these point estimates from surveys, and there is associated sampling bias attributable to the fact that those surveys are a sample of the full population, we report the 95% confidence interval (CI) for all age groups as a shaded area around the smoothed model-based estimates. CCES estimates are given in blue and CPS estimates are given in orange. Our results replicate the findings of previous research: voter turnout rates show a steep and positive age gradient, with young voters showing the lowest voter turnout rates and elderly voters showing the highest rates of turnout. We find that the CCES records higher rates for seniors than the CPS, with our model-based point estimates in 2018 showing 79.8% and 64.8% of 74-year-olds voting based on the CCES and CPS, respectively, and 82.6% and 76.2% of 74-year-olds voting in 2020 based on the CCES and CPS, respectively. Conversely, our results show that voter turnout rates are lower in the CCES than the CPS

outcomes. The primary advantage of the CCES is that it is based on linked administrative records, which in theory should provide a more reliable measure of voting than the CPS. There is some evidence, however, that the CCES may underreport youth voter turnout due to young adults' higher rates of mobility (Agadjanian, 2018).

for young adults.¹⁶ Our model-based point estimates show 20.5% and 29% of 18-year-olds turning out to vote in 2018 in the CCES and CPS, respectively. In 2020, we find that 25.7% and 48.9% of 18-year-old turnout in the CCES and CPS, respectively.

To estimate 17-year-old voting rates under a counterfactual scenario where the minimum voting age was lowered in 2018 and/or 2020, we use the smoothed model-based estimates to calculate out-of-sample predicted values for 17-year-old citizens.¹⁷ In Figure 5 (above), we report these predicted values for each survey and in each year with a semi-transparent square. 95% confidence intervals (CI) are shown as capped spikes around the point estimates. We estimate that in 2018, 17-year-old turnout rates would have been 19.6% and 27% based on the CCES and CPS, respectively. In 2020, we estimate that turnout rates among 17-year-olds would have been 25.3% and 46.2% based on the CCES and CPS, respectively.^{18, 19}

What is the total predicted number of 17-year-old voters?

Next, we combine our estimates of the predicted voting rates for 17-year-olds with our estimates of the number of 17-year-old citizens in the state, and visualize the total predicted number of 17-year-old voters in Figure 6 (below). We estimate that in 2018, 93k and 129k 17-year-olds would have voted based on our estimates from the CCES and CPS, respectively. In 2020, our estimates from the CCES show 126k 17-year-old turnout, while our estimates from the CPS show a much larger 229k turnout.²⁰ The wide range in predicted turnout between surveys is attributable to both differences in voting rates in midterms versus general elections and differences between estimated voting rates in the CCES and CPS. Even in a general election and using point estimates from the CPS – which shows the highest voting rates – based on our model, we would expect less than half of all eligible 17-year-olds to vote. As we stated previously, this cannot be seen as a definitive estimate of what 17-year-old turnout would be if the voting age were lowered. These estimates are a reasonable approximation of the counterfactual of a lowered voting age, conditional on 17-year-old voting ultimately exhibiting a similar pattern as other age groups; however, there are many unknowns that we cannot incorporate into our model. If the voting age were lowered and 17-year-olds exhibited abnormal voting behavior (either higher or lower rates of

¹⁶ Interestingly, the gap between CPS and CCES estimates is large and positive among young adults, before narrowing and flipping to signs to large and negative for older age groups: we find a gap between the CPS and CCES of 9.8 and 22.8 percentage points for 18-year-olds in 2018 and 2020, respectively, and a gap of -12.6 and 7.8 percentage points for 18-year-olds in 2018 and 2020, respectively.

¹⁷ We use the equation from our fractional polynomial models, which uses age as an input, and substitute 17-year-olds into the equation to output a predicted turnout rate for that age group in each survey and each year.

¹⁸ An important feature of Figure 5 to note, particularly for the CPS, is that turnout rates drop precipitously for young adults, relative to the more linear and shallow decline in rates when moving from older to middle aged groups. This is due to the fact that we estimate substantially lower voter turnout among young adults 18-22 than for older groups. Particularly for 18-year-olds in 2020 in the CPS, the raw survey-based estimate is quite low, which serves to drag down our model-based estimates for adjacent ages. This also leads to lower predicted estimates for 17-year-olds than if we were to use a linear model rather than a fractional polynomial model.

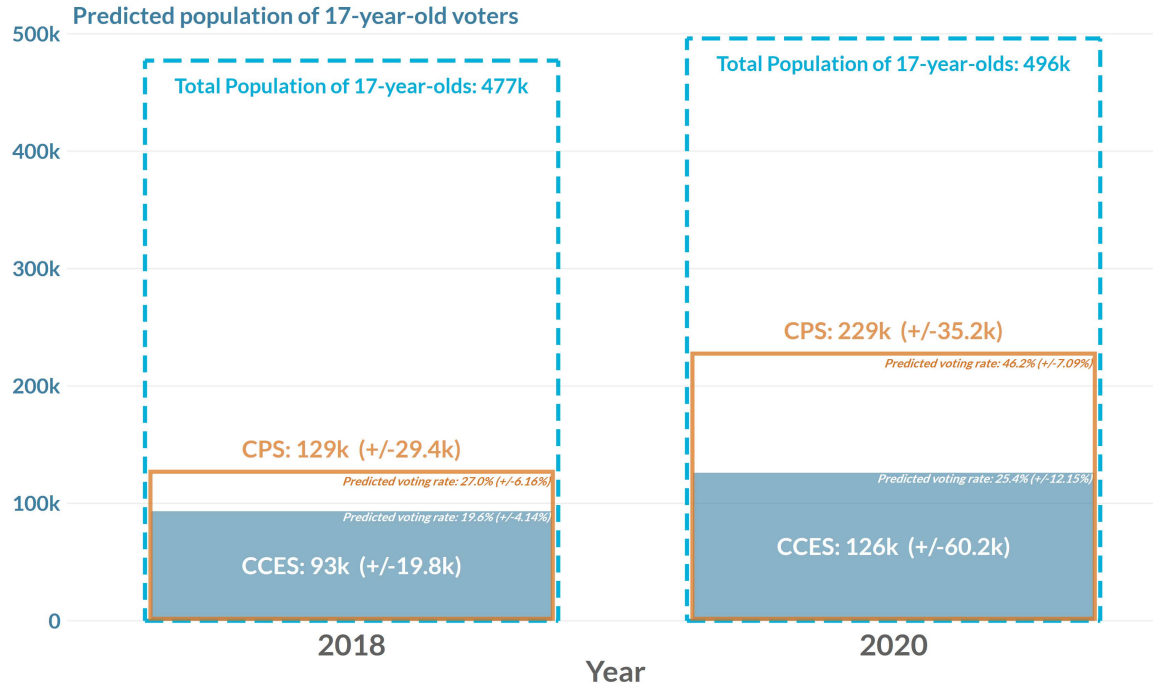
¹⁹ For the 95% confidence intervals we estimate a range of 15.46%-23.74% and 20.84%-33.16% for the CCES and CPS, respectively in 2018. For the CCES and CPS, respectively, in 2020, we estimate CI's of 13.25%-37.55% and 39.11%-53.29%.

²⁰ For the 95% confidence intervals we estimate a range of 73.2k to 112.8k and 99.6k to 158.4k for the CCES and CPS, respectively in 2018. For the CCES and CPS, respectively, in 2020, we estimate CI's of 65.8k to 186.2k and 193.8k to 264.2k.

turnout) relative to the rest of the population, then we would expect substantially different results than we present here.

Figure 6

An estimation: How many 17-year-olds would vote?



Source: Authors' analysis of the Cooperative Election Study (CCES) and Current Population Survey (CPS) via IPUMS-CPS.

Sample: California citizens 18+.

Notes: We calculate the predicted population of 17-year-olds by taking the product of the total population of 17-year-olds in the state and the predicted out-of-sample voter turnout rate among 17-year-olds (i.e., with a fractional polynomial regression model). The reported 'plus or minus' margin of error displays the 95% confidence interval.

Conclusion

If California lawmakers and voters were to pass a state constitutional amendment making it possible for 17-year-olds to participate in local, state, and national elections, it would be the first U.S. state to do so. SCA 2 comes on the heels of several decades of attempts in California to pass statewide voting laws to enfranchise more young people. The constitutional amendment is being introduced at a time when California has established a growing youth engagement infrastructure and when voting rights have been extended to 16- and 17-year-olds in Berkeley and Oakland for school board elections. Moreover, recent surveys have found support among young people to lower the voting age to 16- and 17-year-olds in state and national elections. While California would be the first state to allow 17-year-olds to vote if the constitutional amendment passes, it certainly would not be the first state to attempt to do so – other states such as Oregon and the District of Columbia in Maryland have also proposed similar efforts in recent years; the U.S. House of Representatives also recently attempted to pass legislation to lower the voting age to 16 for all elections. If the voting age were lowered to 17, our point estimates show that between 20-27 percent of all 17-year-olds in California would have participated in the 2018 midterm election, and between 26-46 percent of all 17-year-olds would have participated in the 2020 general election (depending on estimates from the CCES and CPS).²¹ Notably, our predictions show that 17-year-olds would have the lowest turnout rate of any age group, but as we note, our estimates do not account for exogenous factors such as the popularity of an election, whether civics education is offered to 17-year-olds, the novelty of the voting age change and its effect on turnout, or other factors.

Whether or not 17-year-olds in California are *ready to vote* is a question best addressed by existing research. Drawing from the evidence-base of other countries and jurisdictions in the U.S. that have enfranchised 16- and 17-year-olds, it can be inferred that lowering the voting age has potential to increase turnout rates and establish life-long voting habits. If the voting age is lowered, civics education has shown to have an important role to play in improving voter turnout. Importantly, perceptions that 16- and 17-year-olds do not have the political maturity or cognitive ability to vote are not supported by developmental science. Researchers in the field of neuroscience and adolescent development have determined that by age 16, adolescents are capable of mature reasoning and decision-making on par with the cognitive functioning of adults. Concerns about political maturity have also been studied in recent research. In countries where the voting age has been lowered under age 18, researchers have found that youth show levels of political trust, political interest, and other pro-civic attitudes that are higher than first-time voters at age 18; however, the evidence from countries that have debated lowering the voting age (but not implemented) is mixed. There is also evidence showing that youth are no more likely to be influenced by parents or peer networks than older adults. There are concerns, however, that allowing young people to vote will weaken regulations that currently protect adolescents from special interests during election campaigns, and that changing the voting age will affect other legal definitions of adulthood. If the voting age is lowered in the U.S., these concerns will ultimately need to be addressed.

²¹ It is important to note, however, that due to sampling error attributable to the fact that we derive these estimates from surveys, the margin of error around these point estimates indicates an even wider range of potential outcomes. See Section 3 for further discussion of the potential range of these results.

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