Education and Male-Female Voting Polarization: The Effect of Compulsory Schooling on Sex-Based Preferences for the Democratic and Republican Parties

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Abstract

One of the most notable developments in U.S. electoral politics over the last 40 years is the increasing divide between male and female voters. While men and women had roughly equivalent levels of support for both the Democratic and Republican parties in 1980, more recent surveys have revealed a roughly 10 to 15-percentage-point gap in preference for the Democratic party among women relative to men. We explain this result by establishing a novel connection between compulsory schooling laws (CSLs), educational attainment, and diverging political preferences by sex. First, we show that the timing of this divergence is coincidental with recent changes in CSLs, and that this divergence is almost entirely due to changes in sex-related preferences for the Democratic party in states where there exists a much stronger effect of CSLs on average educational attainment – very little change in sex-related preferences for the Democratic party is present in other states. Furthermore, in states with more-impactful CSLs, changes in CSLs and their associated increased educational attainment explain almost all of the diverging support for political parties and differences in opinion over major policy issues by sex, such as gun control and abortion. All together, these new facts present an original explanation that relies upon the effect of education to explain the evolution of male and female political preferences in the U.S. over the last 40 years.

1 Introduction

One of the most important developments in U.S. voting trends over the past 40 years has been the profound divergence in the support for the Democratic party exhibited by male and female voters. As noted in Cascio and Shenhav (2020), men and women exhibited roughly equal levels of support and identification with the Democrats in the late 1970s, but by the mid-2010s, female identification with the Democrats was roughly 10 percentage points higher than that of males. Further, despite this divergence in party preference, the existing literature has documented no relative change in sex-based support for key policy issues such as abortion access or gun control. To date, this puzzle has remained unsolved – no causal explanations exist to explain this conundrum.

In this paper, we argue that education and compulsory schooling laws (CSLs) explain much of this divergence of sex-specific political views. To provide a brief motivation for this point, Figure 1 presents two time trends. The left panel of the figure displays the fraction of 18-year-old respondents in a given birth cohort who were bound by a law that prevented them from leaving school before the age of 17.[1] Until the early 1970s, only twenty percent of birth cohorts faced such a law, but this proportion has gradually increased to over forty percent for those who are turning 18 in the year 2000 and beyond. A similar pattern is evident in the right panel of this figure, drawn from Gallup data assembled by Gillion et al. (2020), which shows the relative female membership in the Democratic party over time, compared to males. This gap evolves in a manner that is highly similar to the dynamic of the compulsory schooling laws: it is relatively static until the mid-1970s, and then steadily increases until the early 2000s. Although this is only a simple comparison, it illustrates the plausibility of the main explanation advanced in this paper: that this coincidental movement of the two trends may be causally related.

Further to this point, Figure 2 uses data from the General Social Survey to demonstrate that this change in the relative female preference for the Democratic party[2] was dependent upon the degree to which CSLs impacted average educational attainment in the states where respondents resided at the age of 16. Specifically, recent research has documented that some states have exhibited strong effects of CSLs on educational attainment and political preferences, while others have a very weak

[1] Information on these laws was drawn from Oreopoulos (2009).

[2] In order to create this variable, preference for the Democratic party was coded in a dummy variable equal to one if the respondent reported "Strong" or "Moderate" support for the Democratic party, and zero if the respondent reported "Strong" or "Moderate" support for the Republican party.

relationship in this respect (Abadie et al., 2024; DeCicca and Krashinsky, 2025; DeCicca et al., 2023). DeCicca and Krashinsky (2025), in particular, noted that individuals who were born in states whose historical relative teacher salaries[3] are higher than the median value also exhibit strong effects of CSLs on educational attainment, while individuals born in other states do not exhibit statistically meaningful relationships between CSLs and educational attainment. Figure 2 documents that individuals raised in the former set of states exhibited a fifteen percentage-point divergence in the sex-based support for the Democratic party, while individuals raised in the latter set of states exhibit only modest changes in the relative preference for the Democratic Party. Broadly, the results in Figure 2 would suggest that the intensity of the effect of CSLs on education is broadly related to the degree of divergence in male-female preferences for the Democratic party.

To more formally investigate the impact of CSLs on political preferences, we combine the National Annenberg Election Surveys (NAES) and American Community Surveys (ACS), both collected by Marshall (2019a), to run reduced form and two-sample IV regressions examining the relationship between CSLs, educational attainment, and political preferences by gender between 2000, 2004, and 2008. We first show that the gender difference in support for the Democratic party is eliminated once we account for the effects of CSLs in states where these laws have a meaningful effect on educational attainment. Next, we show that male-female differences are evident for key non-financial policy issues like abortion access and gun control in the states with significant effects of CSLs on education, and both CSLs and education can account for most of this gap in policy preferences, too. Interestingly, the impacts of CSLs are negligible for financially-based issues like support for lower tax rates, so in sum, this evidence suggests that compulsory education had significantly different, causal effects on the political views of men and women, and it is this education-based explanation that is the primary reason why males and females have changed their views on the two major U.S. political parties. More, this effect is being channeled through non-financial issues.

Our paper contributes to two major literatures, including the effects of compulsory education on a wide array of outcomes, as well as the evolution of political preferences over time, and both of these are described in Section 2 of this paper. Section 3 describes our sources for data on political

[3]The "relative" teacher salary is the ratio of average teacher salaries to average manufacturing salaries in a given state in the year at which the individual is 14 years of age. This data was first collected and analyzed by Card and Krueger (1992)

preferences, educational attainment, and compulsory schooling laws, as well as the two-sample two-stage least squares and reduced-form regressions that are used to analyze the effect of education and CSLs on political preferences. Sections and present our methods and results, while section 6 concludes the paper.

2 Literature Review

Our paper touches on two major areas of economic research. First, we build on studies which examine the returns to education and instrument for educational attainment with CSLs. Second, we contribute to studies in this area that are specifically interested in using CSLs to identify a plausibly causal relationship between education and voting. Below we summarize each of these literatures.

2.1 The Effects of Compulsory Schooling Laws on Education

One of the most-studied and important policy questions in empirical economics is the relationship between education and compulsory schooling laws, and how the additional schooling generated by these laws impacts various outcome variables. From Angrist and Krueger (1991) to Dee (2004), Oreopoulos (2006a,b), and Lleras-Muney (2002, 2005), most early studies that use CSLs find that they have a strong effect on educational attainment, and these resulting increases in education have a positive impact on outcomes such as income, longevity and political preferences. But these studies were followed by a set of papers that called into question the effect of compulsory schooling on different outcomes – particularly income. Studies using more-recent non-U.S.[4] and U.S.[5] data sources incorporated updated econometric approaches to cast doubt on the efficacy of CSLs in changing income or non-income outcome measures, such as voting preferences, that are impacted by education.

However, recently-published papers within this literature have argued that CSLs in the U.S. may have been effective within certain states, even after accounting for relevant econometric concerns. Abadie et al. (2024) used novel methods to identify individual states with weak first-stage

[4]Some examples include Pischke and von Wachter (2008) with German data, Devereux and Hart (2010) with British data, and Grenet (2013) with French data.

[5]See Stephens and Yang (2014) for a particularly relevant study in this respect.

relationships between CSLs and educational attainment; when these states are removed from the sample, the remaining states can generate a statistically consistent (and moderately positive) monetary return to education. DeCicca and Krashinsky (2025) takes this point further and shows that states with historically[6] higher relative teacher salaries exhibit positive and significant effects of compulsory schooling laws on educational attainment, and also have positive and significant IV returns to education. By contrast, states with historically lower relative teacher salaries exhibit weaker effects of compulsory schooling laws on educational attainment, and negligible and insignificant IV returns to education. This would suggest that any examination of the effect of CSL-induced changes in education on voting preferences would need to take into account the specific states being analyzed, and the strength of the first-stage relationship therein. Indeed, DeCicca et al. (2023) demonstrated profoundly different effects of CSLs on support for the Republican and Democratic parties, as well as policy issues, depending on the strength of the first-stage relationship between CSLs and education in the subset of states analyzed.

2.2 Education and the Diverging Voting Tendencies of Males and Females

Many papers have documented the way in which male and female voters have changed their voting preferences over time. For example, Cascio and Shenhav (2020), Box-Steffensmeier et al. (2004), and Edlund and Rohini (2002) have shown that males and females have diverged in their support of the Democratic Party over the last 40 years. And there is reason to suggest that educational attainment has played some role in this change. Broadly, Marshall (2019a) and DeCicca et al. (2023) showed that additional education obtained because of changes in compulsory schooling laws induced voters to become less favorable towards the Democratic party, and more favorable towards the Republican party, but the analysis did not differentiate male and female voters. Marshall (2019b) and Scott (2022) found a similar effect that compulsory schooling made voters more conservative in Britain, and Meyer (2017) shows an equivalent result with different European compulsory schooling reforms. Focusing on male-female voting, Cascio and Shenhav (2020) notes that educational attainment can account for a large amount of the divergence between men and women, though the study acknowledges that their result should not be interpreted as causal.

Broadly, there are two potential channels through which education could induce men and

[6]This paper focuses on the average relative teacher salaries in each state in the first half of the twentieth century

women to diverge in their political preferences. The first potential impact of education on voting patterns could occur through its effect on income. Some studies (Meltzer and Richard (1981), Alesina and Rodrik (1994), Corneo and Gruner (2000), Cappelen et al. (2022)) have used a median voter framework where individual utility is dependent upon personal income to demonstrate that voters with relatively higher earnings should become more right-wing because they would prefer to have lower taxes. As such, if education increases earnings, then education can make voters more conservative. But in order for this effect to cause a divergence in voting patters for men and women, it's necessary for these two groups to view increases in income differently. To that end, it should be noted that a set of papers (for example, Alesina and La Ferrera (2005), Fong (2001), Piketty (1995), Almas et al. (2020)) have suggested that voters may take a more nuanced view of income when voting. Specifically, if voters believe that an increase in income was predominantly due to effort, then they tend to be more right-wing; higher taxation is less preferred if an individual's efforts caused their higher income. But if voters believe that higher incomes are predominantly the result of luck, instead of effort, then they tend to be more left-wing: redistribution is more justifiable if income variation is mainly due to factors beyond an individual's control. If this type of learning is driven from their own experiences, then education-driven increases in income could increase sex-related differences in voting preferences if men view increases in income as more merit-driven than women.

The second potential way that education can impact sex-specific voting preferences is through its effect on non-financial issues, such as socially-related policies. The seminal study of Dee (2004) showed that compulsory schooling induced voters to be become more liberal on a variety of social issues. More recently, DeCicca et al. (2023) showed that education obtained because of changes in compulsory schooling laws induced changes in voters' opinions about issues such as abortion and gun control, while Margaryan et al. (2022) showed that changes in compulsory schooling in Germany induced more liberal attitudes towards immigration. None of these studies, though, differentiated the impact of compulsory schooling by sex. However, to illustrate how education has impacted men and women differently on specific social issues, Du et al. (2021) showed that compulsory schooling has differential effects across sexes on views about gender roles, and Cesur and Mocan (2018) noted that education caused differential effects across sex about religiosity, as well. So, in addition to potentially contrasting views on effort and luck, men and women can plausibly diverge in their

voting beliefs through these social channels, as well. And this paper will explore the degree to which these two mechanisms differential influence the voting preferences and males and females.

3 Data

We utilize four main sources of data for this paper; (1) data on compulsory schooling laws and teacher salaries collected by Stephens and Yang (2014), Oreopoulos (2006b), and Card and Krueger (1992); (2) data from the U.S. Census; (3) data from the General Social Survey (GSS); and (4) data from both the American Community Survey (ACS) and the National Annenberg Election Surveys (NAES) collected by Marshall (2019a).

3.1 Compulsory Schooling Laws and Human Capital

Data on compulsory schooling laws were compiled by Oreopoulos (2006b); the laws dictate the earliest age at which an individual may cease their educational training. From this, we create two indicators, one for if a student is required to attend school until age 16, and one for if a student is required to attend school until age 17 or higher. We merge these indicators as of the year the individual turned 14 years old.. To formally investigate the impact of compulsory schooling, we employ a strategy that is similar to DeCicca and Krashinsky (2025), and bifurcating states by measures of historical relative teacher salaries affects estimates of the effect of CSLs on educational attainment and labor market outcomes. The motivation for using this bifurcation is that states with higher historical relative teacher salaries have had generally higher opportunity costs of leaving school – if average salaries for teachers (an occupation held by more-educated workers) are higher than manufacturing salaries (an occupation held by less-educated workers), then an earlier cessation of education would represent greater potential loss of earnings. If these historical conditions are correlated with later compliance with CSLs, then it will be possible to examine the way in which differential impacts of CSLs on earnings are present in more-recent data across these two sets of states. To that end, we use the IPUMS 1960, 1970, 1980 and 1990 Census samples, collected from Ruggles et al. (2022), and run an instrumental variables regression that estimates the effect of educational attainment on wages. In the first stage, we predict educational attainment as a

function of CSLs:

$$ED_{icst} = \alpha + \pi_1 CSL16_{st} + \pi_2 CSL17plus_{st} + \gamma X_{icst} + \sigma_s + \theta_{ct} + \epsilon_{isct}, \quad (1)$$

where, ED_{icsy} is the reported years of educational attainment for individual i born in state s and Census Region c in year-of-birth t. The main instruments are $CSL16_{st}$ and $CSL17plus_{st}$, which are dummy variables representing the minimum school-leaving ages for individuals (associated with being legally permitted to leave school at age 16 or 17 and above, respectively) born in state-of-birth s in year-of-birth t. The regression also controls for demographic characteristics in γX_{icst}, as well as state of birth and year of birth $\times$ Census Region of birth fixed effects.[7] The second stage estimates:

$$Y_{icst} = \delta + \beta \widehat{ED_{icst}} + \gamma X_{icst} + \kappa_s + \omega_{ct} + \varepsilon_{isct}. \quad (2)$$

In this case, Y_{icst} represents the log of weekly wages, and β is the I.V. estimate of the return to education.

Table 1 shows the results from these regressions. The first two rows in the first column of the Table estimate equation (1) with the pooled sample of data, which exhibits a decent F-statistic first stage, and the third row displays the second stage estimate of β, which is statistically significant. But following DeCicca and Krashinsky (2025), a split of the sample based upon historical differences in the relative ratio of teacher salaries to manufacturing salaries reveals a stark difference in the results for respondents born in the two sets of states. Column 2 shows that states with historically high ratios exhibit estimates much larger estimates of π_1 and π_2 and a larger first stage F-statistic than were evident in column 1. And more, there also exists a positive and statistically significant effect on earnings that is displayed in the third row.[8] By contrast, column 3 shows the first stage results for respondents born in the other set of states, and the results stand in stark contrast to those in column 2: with this subsample, the first stage F-statistic is too small to suggest that compulsory schooling laws had any meaningful impact on educational attainment, and the effect of the instruments are not monotonically increasing. The I.V. return to education can't be reliably

[7] The sample is restricted to white males between the ages of 25 and 54, and excludes respondents from Alaska and Hawaii as in Stephens and Yang (2014).

[8] The magnitude of the return to education is larger than typical estimates, but this is because the instruments induce a significant effect on graduating from high school. As such, a "sheepskin" (or accreditation) effect is captured by this return, and this accreditation effect is large. For example, see Card (1999)

estimated for this group.[9]

3.2 National Annenberg Election Surveys (NAES)

The 2000, 2004 and 2008 waves of the National Annenberg Election Surveys (NAES) were used for this study, and they are particularly useful for analyzing how voting behavior was altered by changes in compulsory schooling laws. First, the sample size is quite large: pooled across the three waves, there are over 100,000 data points available for analysis, which is much larger than the sample size available in comparable sources like the GSS. Second, the data contain information on each respondent's year of birth and state of birth, which makes it possible to establish a correspondence between compulsory schooling laws and respondents in the data.

We create two variables measuring whether individuals identify as Republicans or Democrats. We then examine a set of variables which examine different aspects of political views. First, we examine three salient issues: support for banning access to abortion, support for lower gun restrictions, support for the government lowering spending on health care for those that don't already have it, and support for lowering income taxes. For each of these issues, we create indicator variables equal to one if the individual supports the issue and zero otherwise. We then use a "Conservative Scale", which is based on a question which asks respondents to rank themselves on a five-point scale indicating their general political preferences, where 1 is "most liberal" and 5 is "most conservative." We normalize this scale into a standard normal distribution.

To provide some basic sample statistics that describe the two subsets of states in our analysis, Appendix Table 1 displays the sample means and standard deviations of variables that represent different political characteristics. The first three rows of the table demonstrate that presidential voting behavior in the two groups is largely similar: the proportion of votes for a Republican candidate for president is similar between the two states when respondents were at the age of 14, 16 and 18, suggesting that national politics were not significantly different between the two groups of states. But the last three rows show that state-level political outcomes were different for the two groups: states with higher-than-median historical relative teacher salaries exhibited a lower tendency to vote for Democratic gubernatorial candidates, as well as Democratic candidates for

[9]Separate regressions were run to explore the possibility that these instruments impact that likelihood of attending at least some college, but this effect was not evident for either men or women.

the state legislature and state senate. To account for the possibility that these three characteristics could be related to the potential divergence in voting patterns of males and females, the econometric models described below will include these three variables.

4 Methods

To measure differences in education and gender political viewpoints using the NAES data, we estimate specifications like:

$$POLICY_{icst} = \alpha + \tau(male_{icst}) + \pi_1 CSL16_{st} + \pi_2 CSL17plus_{st} + \pi_{11} CSL16_{st} * male_{icst} + \pi_{22} CSL17plus_{st} * male_{icst} + \gamma X_{icst} + \sigma_s + \chi_t + \theta_{ct} + \epsilon_{isct}. \quad (3)$$

In this case, $POLICY_{icst}$ is represents opinions on support for political parties or political matters for respondent i, in Census area c, in state of birth s, born in year t. In equation (3), we will examine a dummy variable for whether the individual is male ($male_{icst}$) and interact this variable with the measures of CSLs ($CSL16_{st} * male_{icst}$ and $CSL17plus_{st} * male_{icst}$). In addition to controls for age, the variables in X_{icst} also include the three state-level political characteristics described in the prior section.

To complement the reduced form regressions, we examine the causal relationship between education and voting tendencies for men and women. A natural approach to accomplish this goal would have used an instrumental variable procedure with the NAES data. Unfortunately, the NAES data set does not have information on a respondent's education, so it is instead necessary to use a two-sample instrumental variables estimation (TS2SLS) approach and incorporating data from the American Community Survey (ACS). Specifically, in order to match the years in which the NAES data were collected, we pool the 2000, 2001, 2003, 2004, 2007 and 2008 waves of the ACS to estimate a first-stage regression equation similar to equation (1) separately for men and women. We then use the predicted values of educational attainment in the first stage to separately estimate the second stage equation with NAES data:

$$POLICY_{icst} = \delta + \beta \widehat{ED_{icst}} + \gamma X_{icst} + \kappa_s + \psi_t + \omega_{ct} + \varepsilon_{isct}. \quad (4)$$

Because the subset of states with the historically higher relative teacher salaries are the only ones that have a significant relationship between the compulsory schooling laws and educational attainment, the results are only provided for this subsample. In addition, the model incorporates three additional controls in order to account for the potentially confounding effects of the political developments in the respondent's state of residence when they were 14 years of age. These three variables include: (i) a dummy equal to one if the governor was a Democrat, and zero otherwise, when the respondent was 14 years of age; (ii) the percentage of state-senate seats held by Democrats when the respondent was 14 years of age; and (iii) the percentage of seats held by Democrats in the state house of representatives when the respondent was 14 years of age.

5 Results

5.1 Political Preferences by Gender and CSLs

Tables 2 and 3 present the impact of CSLs on identification with the two political parties. Table 2 shows that, in the pooled sample, males report an identification with the Republican party that is 3.5 percentage points greater than women, but this gap disappears to zero once the regression controls for compulsory schooling laws. Furthermore, the coefficient π_{22} is statistically significant, and the two coefficients π_{21} and π_{22} are jointly significant, suggesting that compulsory schooling laws had different effects on Republican membership for males and females. Even more interesting, though, are the results for each subsample. The subsample of states with a higher ratio of teacher salaries to manufacturing salaries exhibits profound effects of compulsory schooling laws on identification with the Republican party. Without these controls in the regression, males report an identification with the Republican party that is 4.4 percentage points greater than women. But once controls for compulsory schooling laws are included in the regression, this identification makes a statistically-significant change to a 7.5 percentage-point deficit for males, and the coefficients π_{21} and π_{22} are both individually and jointly significant. The magnitudes of these coefficients would imply that the introduction of compulsory schooling laws can account for a 12 percentage-point swing in relative support for the Republican party by men relative to women.

By contrast, though, there is no significant effect of compulsory schooling laws for the other group of states: the 2.6 percentage point greater support for the Republican party by males relative

to females does not change in a statistically meaningful way after controls for compulsory schooling laws are included in the model, and the laws themselves do not have a statistically significant effect on male support for the Republican party.

A similar effect is evident for support for the Democratic party in Table 3. The 11 percentage point deficit in support for the Democratic party by men relative to women does not change in a statistically meaningful way once controls are added for the pooled sample of respondents. But focusing on the subset of states with higher historical relative teacher salaries, the inclusion of controls for compulsory schooling laws reduces the male-female deficit in a statistically significant way from approximately 12 percentage points down to approximately 3 percentage points. This is a significant change in the male-female differential, and the coefficients π_{21} and π_{22} are both individually and jointly significant, and their magnitudes roughly match the change in value of τ between columns 3 and 4. It should also be noted that the magnitude of the change in τ, the coefficient on the *male* dummy, in Tables 2 and 3 can account for most of the evolution in the male-female divergence in support for both parties over the last 40 years. And as was the case with support for the Republican party, there is no significant change induced by the inclusion of CSL controls in the other subsample.

5.1.1 Opinion on Salient Policies and CSLs

An additional question identified by the literature is why the male-female gap in support for the Democratic and Republican parties has increased without any corresponding change in support for key policy issues such as abortion, laws restricting access to guns or spending on health care. Fortunately, the NAES surveyed its respondents about these issues, so it is possible to estimate equation (3) while the variable $POLICY_{icst}$ to capture respondents' opinions on these policies. This approach will shed light on the way in which men and women view different policy issues.

Table 4 displays the results from estimating equation (3) with a dependent variable that measures views on abortion by using a dummy variable equal to one if the individual supports banning access to abortion, and zero otherwise. In the pooled sample, there is a small (approximately 1 percentage point), but statistically significant difference between men and women about banning abortion access in column one, and this difference is not meaningfully altered by the inclusion of controls for compulsory schooling laws in column two. But a different pattern is revealed by bi-

furcating the sample into the same two sets of states analyzed in Tables 2 and 3. In states with meaningfully effective compulsory schooling laws, there exists a small difference in opinion about abortion access in column three when there are no controls included in the regression for compulsory schooling, but this difference in opinion changes substantially in column four once these controls are included – in fact, males become approximately 8.5 percentage points *less* likely to favor bans on abortion access once controls for CSLs are included in the regression. Furthermore, the coefficients π_{21} and π_{22} are both individually and jointly significant, and have a different sign than the coefficients π_1 and π_2, which suggest that the introduction of CSLs made women less supportive of abortion bans, but the equivalent effect was not at all evident for men. However, in states where males and females did not diverge in their support for the Republican or Democratic parties, columns five and six show that the differences in views about abortion access are small and remain unchanged after controls for CSLs are included in the regression.

This is both a key and novel piece of evidence for the investigation into differences in male and female voting tendencies. To date, most studies in the literature do not find any meaningful differences in female and male views on policy issues that are relevant to being aligned with the Republican or Democratic parties. The evidence in Table 4 suggests that these male-female policy differences exist in the states where there exist compulsory schooling laws that effectively alter educational attainment. More, the sex-specific evolution of views on abortion access in these states aligns closely with the sex-specific changes in preferences for the Democratic and Republican parties.

Tables 5 through 8 document equivalent evidence for four other key variables that measure a respondent's opinion about key policy issues for Republicans and Democrats. Tables 5 and 6 report the results from regressions that estimate the effect of compulsory schooling laws on gun control and health care spending, respectively, and it documents results that are substantively similar to those in Table 4. In particular, Table 5 shows that in the pooled sample, men are substantially – over 22 percentage points – more likely to favor unfettered access to guns in comparison with women in column one, and this differential remains large and significant even after the inclusion of controls for CSLs in column two. But examining the subsample of states with effective CSLs shows that including controls for compulsory schooling changes the differential in the relative favorability of limiting gun restrictions from approximately 22 percentage points to zero in columns three and four. The compulsory schooling laws themselves also have different effects for men and women:

there are significantly negative coefficients for π_1 and π_2, which suggest that the laws made women more amenable to gun restrictions, while the coefficients π_{21} and π_{22} are significantly positive (and large in magnitude), which shows that additional schooling mandated by the CSLs makes men less amenable to gun restrictions. Columns five and six show that no meaningful effects are evident for the male-female differences in gun control in the other set of states after controls for CSLs are introduced into the model.

Table 6 performs an identical analysis for health care spending, and the impact of CSLs is key to understanding differences in policy preferences for men and women. In the pooled sample, males are approximately 8.7 percentage points more in favor of lowering government spending on health care[10], but this gap is decreased by the introduction of CSL controls. However, it is evident that the reason for this change is very much dependent upon the results in the subsample of states with compulsory schooling laws that meaningfully change educational attainment. In these states, column three shows that men are 8 percentage points more favorable for lowering health care expenditures when there are no CSL controls in the model, but this significantly changes in column four to a 3 percentage-point deficit of male support. As with gun restrictions, the sign of the coefficients on π_1, π_2, π_{21} and π_{22} show that CSLs had a different effect on men and women: the additional, mandated education made males significantly more favorable towards lowering government expenditures on health care, while they made women significantly less favorable towards lowering government expenditures on health care. It should also be noted that results in columns five and six show no significant changes in male-female views on health care spending when controls for CSLs are introduced into the regression for the other subsample.

Table 7 presents the impact of CSLs on a dependent variable that captures general "liberal" and "conservative" tendencies of respondents in the data. This variable asks respondents to rank themselves on a five-point scale indicating their general political preferences, where 1 is "most liberal" and 5 is "most conservative". For the purpose of the analysis, the variable was converted to have a standard normal distribution, so that the coefficients can be interpreted as a fraction of a one-standard-deviation change in this scale. Results from the pooled sample in column one show that men are 0.15 of a standard deviation more conservative than women, but this gap falls to

[10]Specifically, this variable is equal to one if the respondent believes that the government should spend less money to provide health care coverage for people who don't already have it

0.08 of a standard deviation once CSL controls are included in the model. Yet again, though, this change is due to the dynamics present in the subsample with effectual compulsory schooling laws. Within this subsample, the findings in columns three and four show that the gap changes from males being 0.16 of a standard deviation significantly more conservative than women to being 0.05 of a standard deviation significantly *less* conservative than women once CSL controls are included in the model. Furthermore, the larger magnitude and statistical significance of the coefficients π_{21} and π_{22} demonstrate that compulsory schooling laws had a much more conservative effect on men than they did on women. By contrast, the findings in columns five and six show that there is essentially no change in gap on the liberal-conservative scale in the subsample with less effectual compulsory schooling laws.

Table 8 shows the effects of CSLs on attitudes towards taxes, and the overall results are quite modest. In both the pooled sample and bifurcated subsamples, the inclusion of compulsory schooling laws has only small effects on relative male preferences towards a reduction in taxes. In all three cases, the inclusion of controls for compulsory schooling laws has only small effects on the magnitude of τ, and the coefficients on the CSL variables are not statistically significant for individuals born in the subset of states with laws that significantly altered educational attainment. Overall, this would suggest that there are – at best – only small effects of CSLs on sex-specific views about financially-related variables. In contrast to the findings in Tables 4 through 7, the findings in Table 8 would suggest that the effect of CSLs on political views is not primarily caused by views about redistribution, but instead about socially-related issues. This would represent a novel insight into the rationale for the divergence in the political views of men and women, which necessitates further exploration through alternative econometric approaches.

5.1.2 Event studies

In order to use other methods to analyze the impact of CSLs on male and female respondents' views, we present coefficients from an event study that estimates an amended version of equation (3) separately for men and women:

$$POLICY_{icst} = \alpha + \pi_1 CSL16_{st} + \sum_{j=-9}^{10} \pi_{2,j} CSL17_{stj} + \gamma X_{icst} + \sigma_s + \chi_t + \theta_{ct} + \epsilon_{isct}. \qquad (5)$$

In this case, the variable $POLICY_{icst}$ represents the series of variables that were analyzed in Tables 2 through 8, and $CSL17_{stj}$ is a dummy variable equal to one if $CSL17_{st}$ is equal to one in period j, and zero otherwise.

The first event study results are displayed in Figure 3, which shows the relative male membership in the Democratic party, and the Figure demonstrates men are less likely to become members of the Democratic party, relative to women, after the introduction of the compulsory schooling law requiring that individuals remain in school until at least the age of 17. The insignificant difference between the two groups prior to the change in the law becomes a significantly negative difference after the passing of the law, which indicates a relative movement away from the Democrats for males. Figure 4 shows that there is an even more stark change in relative membership with the Republican party after the introduction of this law. The average Republican membership rate for men relative to women jumps to a significantly positive difference after the change in the law, which stands in contrast to the (basically) zero and statistically insignificant difference between the two groups in the immediate periods prior to the change in the law.

The remaining Figures show the change in relative attitudes towards key policy variables in the data. Figure 5 shows the relative change in male favorability towards having no restrictions on access to firearms, which significantly increases in the immediate aftermath of the change in the CSL. This pattern is also evident in Figure 6 with respect to the relative male support for less government spending on health care. These two figures strongly imply that relative male opinions about these two policy issues became significantly more conservative in comparison with females. Figures 7 and 8 show that males became somewhat more conservative than females on abortion access and on the liberal-conservative scale. In Figure 7, males become slightly more favorable towards introducing abortion bans after the CSL is changed, while Figure 8 shows that males are slightly more conservative than women immediately after the CSL is changed. Lastly, Figure 9 shows that there is only a modest change in relative male attitudes towards reductions in taxes after the compulsory schooling laws are changed. All of these results confirm that the findings in Tables 2 through 8 are primarily driven immediate shifts in attitudes induced by a change the in CSLs, and are not a result of other, less-relevant factors (such as functional form within the regression). And more importantly, they confirm that changes in preferences towards the Republican and Democratic parties is mainly caused by changes in attitudes towards social issues, and is not especially due to

financially-centered issues like redistribution.

5.2 Two Sample Two Stage Least Squares

To complement the findings in Tables 2 through 8 as well as the event study evidence from the prior two sections, we estimate the causal relationship between education and voting tendencies for men and women using the TS2SLS regressions described in equation (). Cascio and Shenhav (2020) document the importance of education in accounting for the between-sex difference in party-specific support, but noted that their approach did not use a causal framework. The TS2SLS model represents the first causal assessment of education's impact in this context, and the results are displayed in Tables 8 and 9, which show the TS2SLS results for the major variables analyzed in Tables 2 through 7. Because the subset of states with the historically higher relative teacher salaries are the only ones that have a significant relationship between the compulsory schooling laws and educational attainment, the results are only provided for this subsample.

The TS2SLS results are similar in spirit to the ones seen in the prior tables. The first two columns of Table 9 shows that the impact of education on Democratic membership is negative but insignificant for women, but significantly negative for men. This would suggest that education causally moved men away from the Democratic party, but had no such effect for women. As a back-of-the-envelope calculation, the difference in the magnitude of the two coefficients is approximately 0.10, and the change in average education between 1980 and 2010 is approximately 1.5 years for both men and women. This would suggest that education can account for an approximate 15 percentage point change for the membership for the Democratic party for men relative to women within this subsample. Given that this is roughly half of the overall sample this would suggest that the increase in education between 1980 and 2020 can account for most of the change in Democratic membership in the overall sample within this time period. This also corresponds to the finding in Cascio and Shenhav (2020), which suggests that education can account for the entirety of the difference in Democratic membership between men and women, but it is confirmed by these results in a causal context.

The remaining columns of Table 9 document an ideologically-consonant effect on the other outcome variables in the model. Columns 3 and 4 show the TS2SLS effect of education on Republican membership: the coefficient β is negative (but insignificant) for women, while it is positive

and significant for men. This reinforces the notion that education has a differential effect for men and women – not only is additional educational attainment is more likely to drive men away from the Democratic party, but it is also more likely to drive them towards the Republican party. This differential effect is also present for the degree to which men and women hold relatively liberal or conservative political views, as well. Columns 5 and 6 show the effect of education on the standard-normally-distributed variable representing the respondent's position on the liberal-conservative scale documented in Table 7. For men, and additional year of education causes a statistically-significant 0.29 standard-deviation increase on this scale; but for women, there exists a significantly negative effect that is approximately 0.5 of a standard deviation. This is entirely consistent with the notion that education has had a polarizing effect on the general political leanings of men and women.

Table 10 separately analyzes the effect of education on particular policy issues, and echoes the general findings in Table 8. The first two columns show that education has no significant effect on males' view of abortion access, but makes women significantly less likely to be supportive of abortion bans – an additional year of education makes women 30 percentage points less likely to be supportive of a ban. Columns three and four show that education causes women to become significantly less supportive of unlimited access to guns, while it has a marginally significant and positive effect on men. And columns five and six show that education has no effect on female views about lowering health care spending, but a significantly negative effect for males. Further, the final two columns in the table show that education has no effect on either male or female views about lowering taxes. All of these results reinforce the earlier findings in the paper that education is has substantially different effects on male and female views of social issues. All together, these findings suggest that education has a causal effect on both political affiliation and views on more socially-related policy issues that make female voters more liberal, and male voters more conservative.

6 Conclusion

The divergence in female and male voters over the past 40 years has been profound, and has become a dominant concern in modern politics. Historically, these two groups had exhibited highly similar voting patterns: both females and males supported Democrats and Republicans in roughly

equal ways until 1980. But by 2010, a profound difference was evident between the two groups: men developed a stronger preference for the Republican party, whereas women developed a stronger preference for the Democratic party. Although Cascio and Shenhav (2020) demonstrated that educational dynamics were strongly correlated with this difference, it was not possible to draw causal conclusions from their work about the relationship between education and the decision to support one party over the other. Furthermore, the overall literature has not been able to document any inter-sex differences in opinion over major policy issues – despite this divergence in party preference – and this puzzle has remained unresolved.

In order to shed new light on both the issue of the causality of education on sex-related differences in voting and the mystery regarding a lack of between-sex differences on policy issues, we leverage changes in compulsory schooling laws combined with relatively novel data and document four new facts. First, we extend the work of others, including Cascio and Shenhav (2020), to document that the divergence in political opinions by gender is not present in all states. Second, the states with significant divergence in male and female support for the two parties also exhibit strong effects of compulsory schooling laws on educational attainment; states where the divergence does not occur also do not have compulsory schooling laws that meaningfully impact educational attainment. Third, focusing on the states where the compulsory schooling laws had a meaningful effect, we find a remarkably consistent, and plausibly causal effect of education on political preferences that significantly differ for men and women. Using novel data from the NAES, along with evidence from reduced-form, event study, and TS2SLS frameworks, we show that education causes women to become both more favorable towards the Democratic party and more liberal on key social policy issues such as abortion access, gun control and spending on government-provided health care. These same frameworks show an opposite effect for males. Finally, compulsory education do not have a strong impact on issues related to redistribution through higher or lower tax rates.

Overall, this is the first evidence compiled on the causal effect of education on sex-specific party or issue preference, and it can help to understand exactly the key motivation for the increasing differences between males and females in their voting patterns and ideological preferences.

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Table 1: The Effect of Compulsory Schooling Laws on Educational Attainment and Income

	Pooled Sample	Higher than Median	Lower than Median
First Stage			
Dropout Age = 16	0.134***	0.293***	0.090***
	(0.027)	(0.051)	(0.028)
Dropout Age ≥ 17	0.158***	0.392***	0.092***
	(0.032)	(0.067)	(0.032)
F-statistic	13.27	19.20	5.32
Second Stage			
	0.199	0.215	…
	[0.130, 0.310]	[0.170, 0.306]	
N	3,664,351	1,929,558	1,734,793

Notes: The data are drawn from the U.S. Census extracts from 1960, 1970, 1980 and 1990 for white males between the ages of 25 and 54. Columns entitled "pooled sample" include all observations in the sample; columns entitled "Higher than Median" use individuals born in states with relative average teacher salaries above the population-weighted median; columns entitled "Lower than Median" use individuals born in states with relative average teacher salaries below the population-weighted median. The first two rows of the table report regression results for the impact of two variables on educational attainment: the first row displays the coefficient on a dummy variable equal to one if the school leaving age for the individual is 16, and the second row shows the coefficient on a dummy variable equal to one if the individual's school leaving age is 17 and older. Both dummy variables are assigned by birth cohort for individuals born in a particular state. The third row reports the I.V. regression for the effect of education on the log of weekly earnings. All regressions include year-of-birth and state-of-birth indicator variables, census extract dummies, and region-by-year-of-birth indicator variables.

Table 2: Compulsory Schooling and Republican Membership

	Pooled Sample		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.328 Females Avg = 0.293		Male Avg = 0.321 Female Avg = 0.279		Male Avg = 0.337 Female Avg = 0.310	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.036*** (0.003)	-0.003 (0.020)	0.044*** (0.003)	-0.076*** (0.005)	0.026*** (0.005)	0.015 (0.017)
Dropout Age = 16		-0.003 (0.014)		-0.015 (0.011)		0.005 (0.018)
Dropout Age ≥ 17		0.012 (0.019)		-0.004 (0.019)		0.015 (0.024)
Male*(Dropout Age = 16)		0.037 (0.021)		0.120*** (0.006)		0.008 (0.019)
Male*(Dropout Age ≥ 17)		0.045** (0.020)		0.120*** (0.007)		0.025 (0.018)
F test for CSL variables		1.97 [0.150]		1.52 [0.243]		0.41 [0.670]
F test for male*CSL variables		3.33 [0.0442]		223.23 [<0.001]		4.68 [0.018]
F test for CSL and male*CSL variables		4.21 [0.0053]		155.01 [<0.001]		4.21 [0.009]
Test of equality of Male Coefficients	F = 4.51 p = 0.034		F = 8.89 p = 0.003		F = 0.32 p = 0.572	
N	164606	164606	91520	91520	73086	73086

Notes: The dependent variable in this case is a dummy equal to one if the respondent is member of the Republican party, and zero otherwise. The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 3: Compulsory Schooling and Democratic Membership

	Pooled		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.267 Female Avg = 0.379		Male Avg = 0.280 Female Avg = 0.400		Male Avg = 0.251 Female Avg = 0.353	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	-0.109*** (0.004)	-0.092*** (0.020)	-0.119*** (0.006)	-0.032*** (0.002)	-0.097*** (0.003)	-0.106*** (0.018)
Dropout Age = 16		-0.009 (0.013)		0.003 (0.013)		-0.011 (0.016)
Dropout Age ≥ 17		-0.023 (0.016)		-0.022 (0.021)		-0.020 (0.018)
Male*(Dropout Age = 16)		-0.018 (0.019)		-0.089*** (0.006)		0.011 (0.017)
Male*(Dropout Age ≥ 17)		-0.018 (0.018)		-0.081*** (0.007)		0.001 (0.016)
F test for CSL variables		2.05 [0.140]		1.46 [0.256]		1.08 [0.353]
F test for male* CSL variables		0.50 [0.611]		140.01 [<0.001]		0.82 [0.451]
F test for CSL and male*CSL variables		1.85 [0.135]		111.55 [<0.001]		2.98 [0.037]
Test of equality of Male Coefficients	F = 0.89 p = 0.346		F = 221.5 p < 0.001		F = 0.29 p = 0.590	
N	164606	164606	91520	91520	73086	73086

Notes: The dependent variable in this case is a dummy equal to one if the respondent is member of the Democratic party, and zero otherwise. The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 4: Compulsory Schooling and Banning Access to Abortion

	Pooled		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.197 Female Avg = 0.210		Male Avg = 0.170 Female Avg = 0.181		Male Avg = 0.231 Female Avg = 0.246	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	-0.013*** (0.002)	-0.038 (0.019)	-0.010*** (0.003)	-0.086*** (0.005)	-0.017*** (0.003)	-0.025 (0.021)
Dropout Age = 16		-0.021 (0.019)		-0.106*** (0.007)		0.015 (0.015)
Dropout Age ≥ 17		-0.030 (0.019)		-0.119*** (0.008)		0.003 (0.014)
Male*(Dropout Age = 16)		0.023 (0.020)		0.075*** (0.006)		0.006 (0.022)
Male*(Dropout Age ≥ 17)		0.032 (0.020)		0.081*** (0.007)		0.018 (0.022)
F test for CSL variables		2.92 [0.064]		159.03 [<0.001]		1.89 [0.171]
F test for male* CSL variables		2.97 [0.061]		102.77 [<0.001]		1.85 [0.177]
F test for CSL and male*CSL variables		2.06 [0.100]		288.00 [<0.001]		1.46 [0.241]
Test of equality of Male Coefficients	F = 1.79 p = 0.181		F = 3.67 p = 0.055		F = 0.14 p = 0.706	
N	123378	123378	68613	68613	54765	54765

Notes: The dependent variable in this case is a dummy equal to one if the respondent believes abortion should never be permitted, and zero otherwise. The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 5: Compulsory Schooling and Support for Lower Gun Restrictions

	Pooled		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.509 Female Avg = 0.280		Male Avg = 0.466 Female Avg = 0.247		Male Avg = 0.561 Female Avg = 0.320	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.227*** (0.005)	0.161*** (0.039)	0.217*** (0.007)	0.002 (0.004)	0.239*** (0.005)	0.200*** (0.022)
Dropout Age = 16		0.001 (0.028)		-0.079*** (0.018)		0.024 (0.029)
Dropout Age ≥ 17		-0.020 (0.029)		-0.096*** (0.031)		-0.004 (0.029)
Male*(Dropout Age = 16)		0.062 (0.039)		0.212*** (0.009)		0.034 (0.022)
Male*(Dropout Age ≥ 17)		0.082** (0.039)		0.229*** (0.007)		0.059** (0.027)
F test for CSL variables		2.69 [0.078]		9.81 [0.001]		2.63 [0.091]
F test for male* CSL variables		3.19 [0.050]		881.24 [<0.001]		2.39 [0.110]
F test for CSL and male*CSL variables		3.38 [0.016]		442.91 [<0.001]		5.33 [0.003]
Test of equality of Male Coefficients	F = 6.21 p = 0.013		F = 13.82 p < 0.001		F = 1.63 p = 0.202	
N	74409	74409	41167	41167	33242	33242

Notes: The dependent variable in this case is a dummy equal to one if the respondent believes that the government should diminish restrictions for purchasing firearms, and zero otherwise. The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 6: Compulsory Schooling and Support for Lower Health Care Spending

	Pooled		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.360 Female Avg = 0.276		Male Avg = 0.341 Female Avg = 0.259		Male Avg = 0.384 Female Avg = 0.297	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.087*** (0.004)	0.031 (0.032)	0.084*** (0.006)	-0.030*** (0.007)	0.090*** (0.006)	0.047 (0.037)
Dropout Age = 16		0.003 (0.021)		-0.032 (0.017)		0.018 (0.027)
Dropout Age ≥ 17		0.001 (0.024)		-0.073*** (0.024)		0.032 (0.030)
Male*(Dropout Age = 16)		0.054 (0.031)		0.107*** (0.010)		0.045 (0.036)
Male*(Dropout Age ≥ 17)		0.067 (0.033)		0.135*** (0.013)		0.039 (0.041)
F test for CSL variables		0.03 [0.971]		5.00 [0.017]		0.87 [0.431]
F test for male* CSL variables		2.34 [0.107]		77.78 [<0.001]		0.99 [0.385]
F test for CSL and male*CSL variables		1.22 [0.315]		72.02 [<0.001]		0.72 [0.585]
Test of equality of Male Coefficients	F = 4.04 p = 0.044		F = 3.22 p = 0.073		F = 1.79 p = 0.181	
N	63171	63171	34895	34895	28276	28276

Notes: The dependent variable in this case is a dummy equal to one if the respondent believes that the government should lower spending on health care for those that don't already have it, and zero otherwise. The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 7: Compulsory Schooling and Liberal-Conservative Scale

	Pooled		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.098 Female Avg = -0.043		Male Avg = 0.026 Female Avg = -0.126		Males Avg = 0.187 Female Avg = 0.060	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.151*** (0.007)	0.082** (0.031)	0.162*** (0.010)	-0.047*** (0.007)	0.138*** (0.010)	0.111*** (0.018)
Dropout Age = 16		0.024 (0.030)		-0.048 (0.035)		0.068** (0.033)
Dropout Age ≥ 17		0.032 (0.028)		-0.034 (0.038)		0.076** (0.030)
Male*(Dropout Age = 16)		0.071** (0.031)		0.211*** (0.013)		0.027 (0.022)
Male*(Dropout Age ≥ 17)		0.071** (0.033)		0.205*** (0.020)		0.031 (0.022)
F test for CSL variables		0.74 [0.481]		1.03 [0.374]		3.16 [0.059]
F test for male* CSL variables		2.55 [0.088]		146.8 [<0.001]		1.10 [0.346]
F test for CSL and male*CSL variables		2.83 [0.034]		160.28 [<0.001]		4.08 [0.010]
Test of equality of Male Coefficients	F = 3.13 p = 0.077		F = 5.63 p = 0.018		F = 0.37 p = 0.542	
N	160593	160593	89418	89418	71175	71175

Notes: The dependent variable in this case is a converted scale variable with a standard normal distribution representing the respondent's relative liberalism or conservatism (larger values represent increasing conservatism). The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 8: Compulsory Schooling and Support for Reducing Taxes

	Pooled		Higher-than-Median Relative Teacher Salary		Lower-than-Median Relative Teacher Salary	
Dependent variable average	Male Avg = 0.098 Female Avg = -0.043		Male Avg = 0.026 Female Avg = -0.126		Males Avg = 0.187 Female Avg = 0.060	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.024*** (0.007)	-0.007 (0.024)	0.021*** (0.006)	-0.006 (0.028)	0.031*** (0.005)	-0.010 (0.006)
Dropout Age = 16		0.028 (0.020)		0.027 (0.024)		0.055 (0.036)
Dropout Age ≥ 17		0.038* (0.022)		0.033 (0.026)		0.067* (0.030)
Male*(Dropout Age = 16)		0.032 (0.024)		0.026 (0.029)		0.040*** (0.008)
Male*(Dropout Age ≥ 17)		0.033 (0.026)		0.030 (0.031)		0.044*** (0.012)
F test for CSL variables		2.32 [0.109]		0.94 [0.405]		3.23 [0.058]
F test for male* CSL variables		0.85 [0.433]		0.49 [0.621]		12.37 [<0.001]
F test for CSL and male*CSL variables		4.28 [0.005]		2.00 [0.127]		25.26 [<0.001]
Test of equality of Male Coefficients	F = 3.13 p = 0.077		F = 5.63 p = 0.018		F = 0.37 p = 0.542	
N	111375	111375	71971	71971	39404	39404

Notes: The dependent variable in this case is a dummy equal to one if the respondent favors a reduction in taxes and zero otherwise. The rows reporting F tests show the F statistic and its p-value listed in brackets underneath the F statistic. The symbols *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. The final row of the table reports a test of the difference in the value of the coefficient on "Male" both with and without the CSL controls in the regression.

Table 9: Two-Sample 2SLS Effect of Education on Party Membership and General Liberal Views

	Democratic Party Member		Republican Party Member		Liberal-Conservative Scale	
	Men	Women	Men	Women	Men	Women
	(1)	(2)	(3)	(4)	(5)	(6)
TS2SLS Estimate	-0.125*	-0.017	0.196***	-0.067	0.294**	-0.473***
	(0.066)	(0.050)	(0.080)	(0.050)	(0.140)	(0.192)
	First Stage		First Stage		First Stage	
Dropout age = 16	0.469***	0.259***	0.469***	0.259***	0.469***	0.259***
	(0.039)	(0.034)	(0.039)	(0.034)	(0.039)	(0.034)
Dropout age ≥ 17	0.527***	0.431***	0.527***	0.431***	0.527***	0.431***
	(0.055)	(0.086)	(0.055)	(0.086)	(0.055)	(0.086)
F-Statistic	73.81	41.76	73.81	41.76	73.81	41.76
ACS Obs	80,564	101,658	80,564	101,658	80,564	101,658

Notes: The first stage of the Two-Sample IV model was estimated with data from the ACS, and the results are listed in the final four rows of the table, including the coefficients on the two instruments, the F-statistic for a test of the joint significance of the two instruments, and the sample size from the ACS. The first row displays the Two-Sample IV estimate of the effect of education on each dependent variable in the table.

Table 10: Two-Sample 2SLS Effect of Education on Specific Policy Issues

	Support Banning Abortion		Reduce Gun Restrictions		Spend Less on Health Care		Reducing Taxes	
	Males	Females	Males	Females	Males	Females	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TS2SLS Estimate	-0.061	-0.312***	0.120*	-0.261**	-0.138*	-0.001	-0.023	-0.009
	(0.050)	(0.104)	(0.069)	(0.104)	(0.074)	(0.074)	(0.057)	(0.067)
	First Stage		First Stage		First Stage		First Stage	
Dropout age = 16	0.477***	0.271***	0.480***	0.363***	0.480***	0.363***	0.477***	0.271***
	(0.039)	(0.033)	(0.042)	(0.037)	(0.042)	(0.037)	(0.039)	(0.033)
Dropout age ≥ 17	0.532***	0.440***	0.573***	0.554***	0.573***	0.554***	0.532***	0.440***
	(0.055)	(0.084)	(0.054)	(0.105)	(0.054)	(0.105)	(0.055)	(0.084)
F-Statistic	74.75	47.94	67.59	56.61	67.59	56.61	74.75	47.94
ACS Obs	80,137	101,066	55,862	70,803	55,862	70,803	80,137	101,066

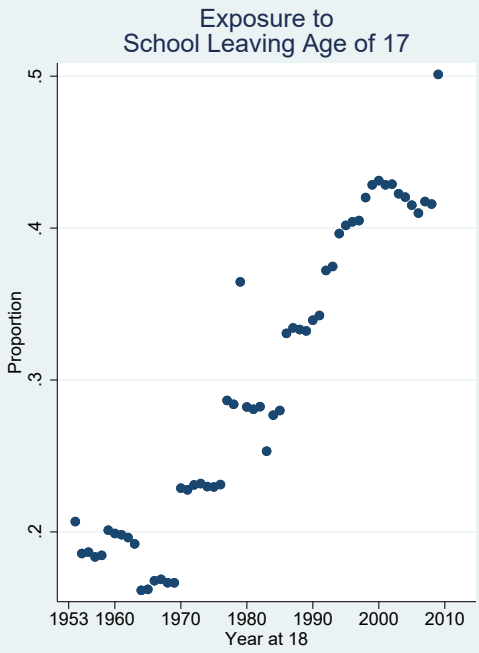
Notes: The first stage of the Two-Sample IV model was estimated with data from the ACS, and the results are listed in the final four rows of the table, including the coefficients on the two instruments, the F-statistic for a test of the joint significance of the two instruments, and the sample size from the ACS. The first row displays the Two-Sample IV estimate of the effect of education on each dependent variable in the table.

Appendix Table 1: Political Differences Between the Two Subsamples

	States with Historically Higher-than-Median Relative Teacher Salaries	States with Historically Lower-than-Median Relative Teacher Salaries
Share of vote for Republican Presidential Candidate at Age 14	0.491 (0.091)	0.487 (0.129)
Share of vote for Republican Presidential Candidate at Age 16	0.491 (0.090)	0.492 (0.123)
Share of vote for Republican Presidential Candidate at Age 18	0.490 (0.090)	0.493 (0.121)
Governor is a Democrat at age 14	0.497 (0.500)	0.702 (0.457)
State Senate has Democratic majority at age 14	0.551 (0.225)	0.655 (0.284)
State House has Democratic majority at age 14	0.558 (0.207)	0.665 (0.286)

Notes: The data is assembled from the 2000, 2004 and 2008 waves of the National Annenberg Election Surveys for all voters who are at least 18 years of age.

Figure 1: CSLs and Partisanship



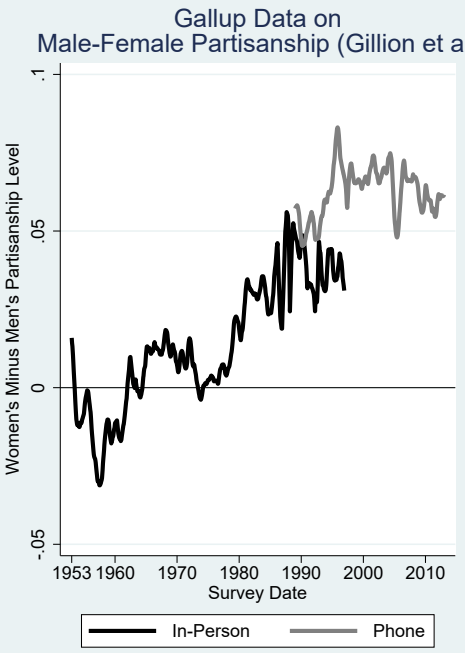


Figure 2: Relative Female Preference for Democratic Party

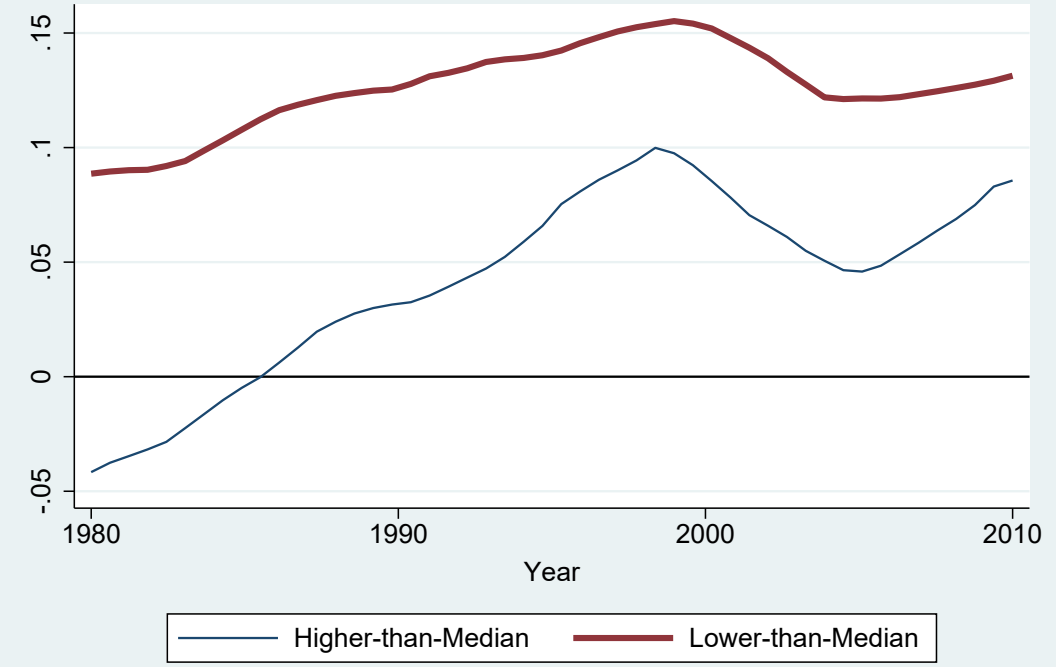


Figure 3: Democractic Membership

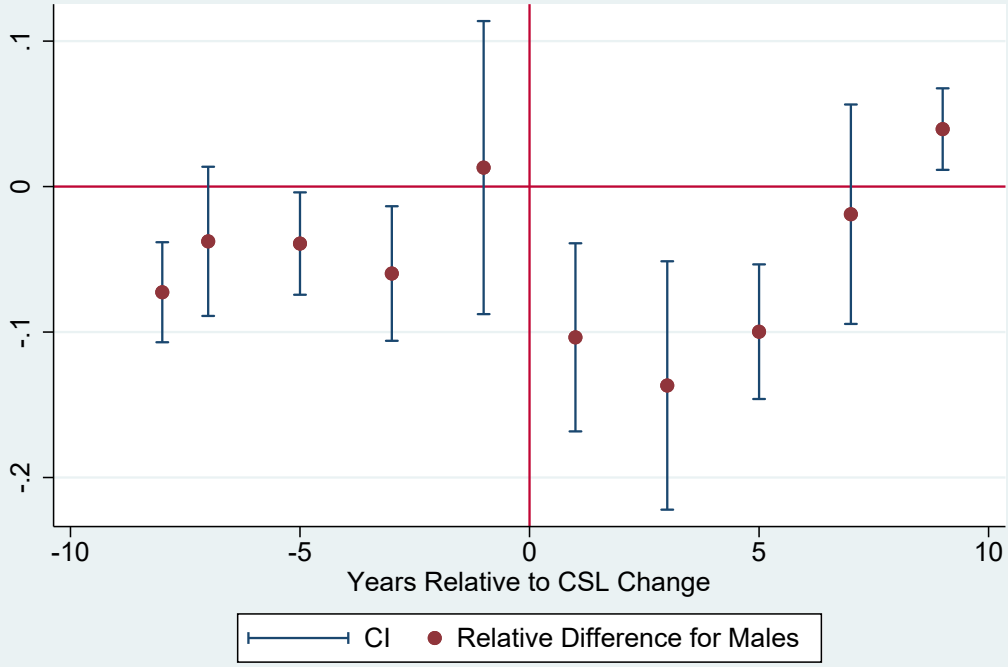


Figure 4: Republican Membership

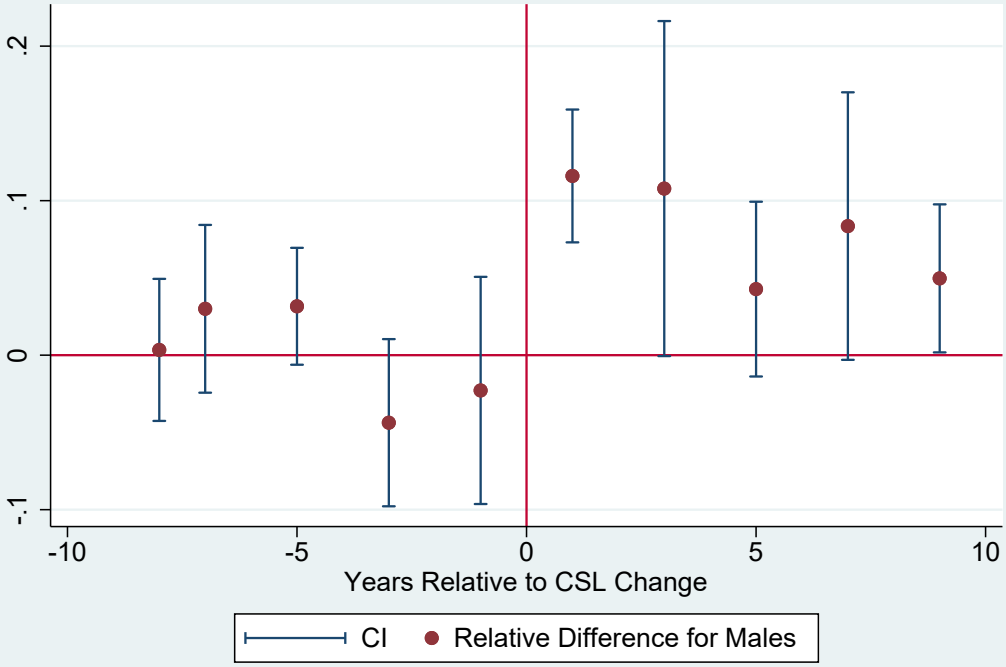


Figure 5: No Restricted Access to Firearms

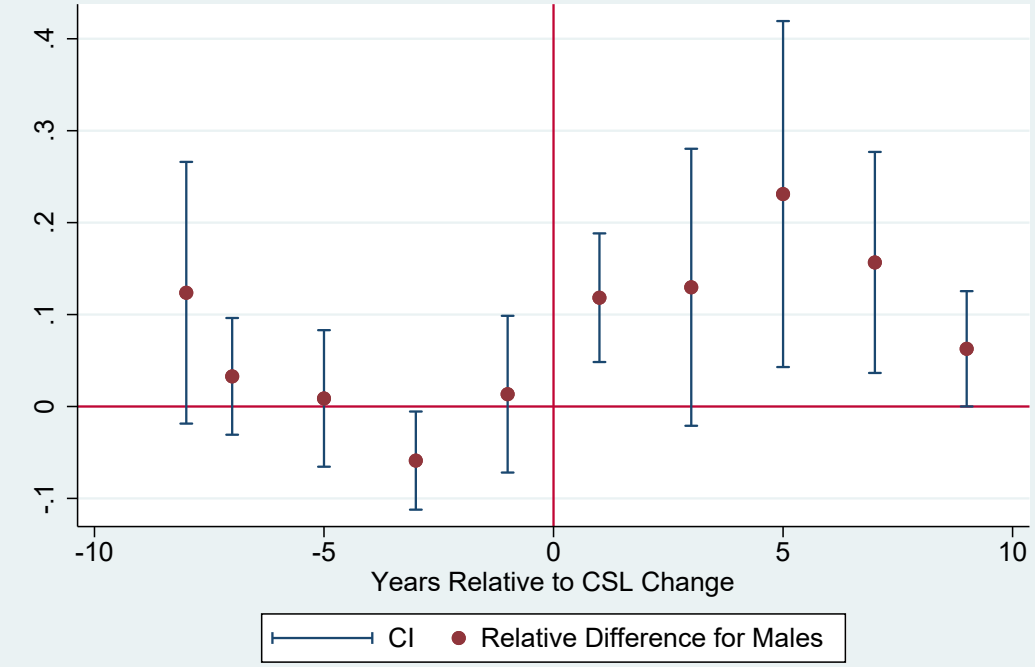


Figure 6: Less Government Spending On Health Care

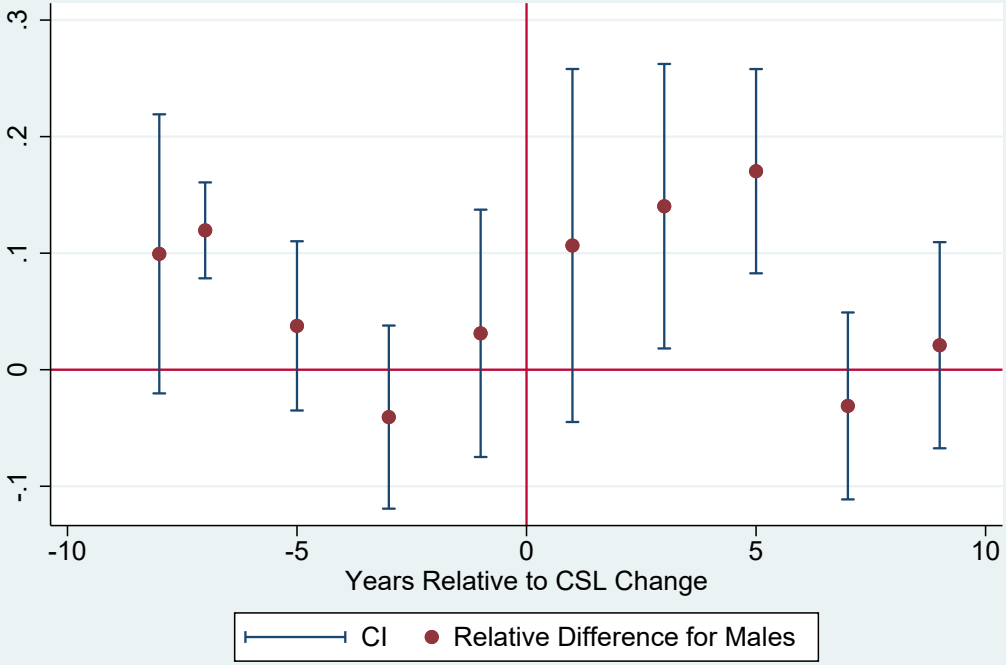


Figure 7: Abortion Ban

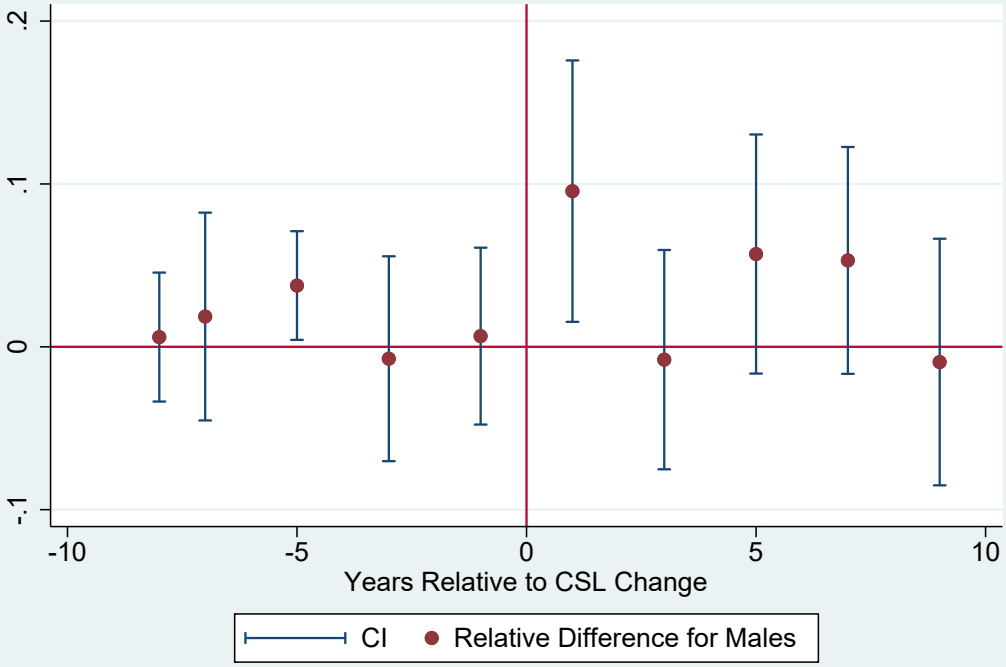


Figure 8: Liberal-Conservative Scale

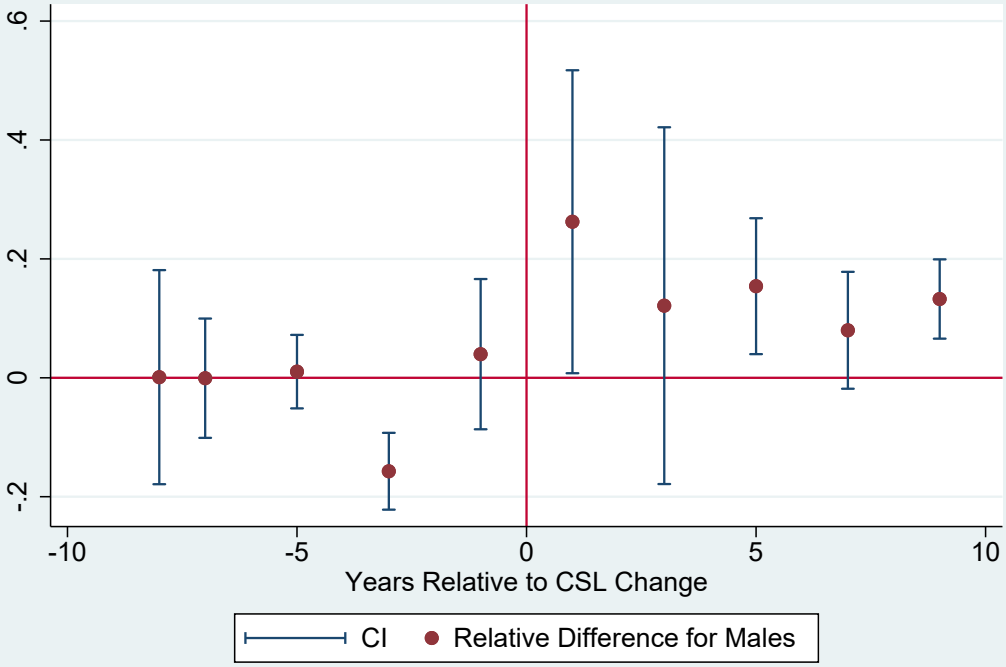


Figure 9: Dislike Taxes

