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ECONOMIC RECESSIONS AND CONGRESSIONAL PREFERENCES FOR REDISTRIBUTION

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ABSTRACT. We analyze the roots of politicians' preferences for redistribution by exploring whether early life experiences have persistent, long-run effects on U.S. Members of Congress' voting records. We study whether having experienced an economic recession during early adulthood affected their positions on redistribution-specific bills during the period 1957–2012. We find that politicians who experienced a recession hold more conservative positions on redistribution, even compared to members of the same party in the same legislature. We rule out alternative accounts and show that experiencing a recession directly affects future politicians' personal preferences. In light of recent empirical evidence showing that voters become more supportive of redistribution following a recession, our findings suggest that macroeconomic shocks have a polarizing effect: recessions can create an ideological wedge between voters and their future representatives.

KEYWORDS: *Recession*, *Redistribution*, *Members of Congress*, *Impressionable years*.

1. INTRODUCTION

What determines politicians' policy positions? In addition to the role of constituents' interests,[1] and that of party allegiances,[2] a growing body of literature highlights politicians' identity and personal preferences as key determinants of their policy choices. In the context of the U.S. Congress, legislators' voting records on specific issues have been shown to be affected by their class background (Carnes 2012), gender (Swers 2002), military experience (Gelpi and Feaver 2002), occupational background (Witko and Friedman 2008), personality (Ramey et al. 2016), whether they have daughters (Washington 2008), and even their smoking habits (Burden 2007). The relevance of

[1]Miller and Stokes (1963); Fiorina (1974); Gerber and Lewis (2004); Griffin and Newman (2005); Clinton (2006)

[2]Rohde (1991); Cox and McCubbins (1993, 1999); Bartels (2000); Ansolabehere et al. (2001); McCarty et al. (2001).

politicians' personal preferences in shaping policymaking is particularly important in light of evidence that voters *elect* rather than *affect* policies (Lee et al. 2004).

In this article, we analyze the determinants of politicians' views on what is likely the most central issue defining the liberal–conservative divide on economic policies: redistribution. While a long literature has studied the determinants of *voters'* views on redistribution,[3] this paper investigates how *political elites* form their personal preferences on this important issue. We show that politicians' views on redistribution are deeply affected by their early life experiences. We focus specifically on the macroeconomic environment in which politicians grew up, providing evidence that economic recessions can have long-run effects on redistributive policies by shaping the process of preference formation of future political elites.

We study politicians' experiences during their "impressionable years," defined in the context of social psychology as the ages of 18 to 25. A large body of literature in political science and social psychology has shown that individuals' core values and political beliefs are formed during this stage of life (Dawson and Prewitt 1969). Consistent with these views, several studies have documented how individual political preferences formed during this period are long lasting and difficult to change later in life (Newcomb et al. 1967; Sears 1975; Krosnick and Alwin 1989). Looking specifically at partisan affiliation, recent empirical evidence shows how the importance of political events in shaping presidential voting preferences increases until 24 years of age and steeply declines thereafter (Erikson et al. 2002; Ghitza and Gelman 2014).

Whether (and how) economic conditions affect citizens' preferences for redistribution is a long-standing question.[4] A small body of recent work has used quasi-experimental evidence to determine if (and how) macroeconomic shocks affect preferences for redistribution. Margalit (2013) finds increased support for welfare policies in response to personal experiences of economic hardship during the Great Recession. Giuliano and Spilimbergo (2014) focus on recession experiences during early adulthood in a representative sample of US citizens, and show that individuals who grew up during a recession are more supportive of redistribution later in life.

Such results have led to speculation in the popular press that the Great Recession will lead to big policy shifts towards greater government redistribution, not only because

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[3]For an extensive review of this literature, see Alesina and Giuliano (2010).

[4]The literature has analyzed a variety of related aspects. The study of the role of income inequality in shaping preferences for redistribution dates back to Meltzer and Richard (1981) and has recently received empirical support from Kerr (2014). Some papers have emphasized the importance of past experiences and future expectations of mobility in shaping attitudes towards redistributive policies (see, for instance, Alesina and La Ferrara 2005; Piketty 1995). Another strand of the literature examines the role of human capital investment (Iversen and Soskice 2001) and occupational risk (Rehm 2009, 2011) in the labor market in shaping preferences for redistribution.

of a general movement to the left in the electorate but "especially as today's young adults become tomorrow's policymakers and thought leaders" (Time 2009).

However, the assertion that the macroeconomic environment has the same effect on the preferences of both voters and political elites is neither obvious nor supported by empirical evidence. Indeed, recent findings show that educational elites decreased their support for redistribution following the Great Recession (Fisman et al. 2015). This raises the possibility that, rather than causing a general movement to the left for both voters and their representatives, recessions can have a polarizing effect, moving the preferences of voters and political elites further apart. The lack of evidence on how macroeconomic shocks affect the process by which politicians form their personal preferences for government redistribution is a key missing piece in this debate. Our study fills this gap.

We focus on U.S. Members of Congress (MCs) during the period 1957–2012, studying whether having lived in a state hit by a recession when growing up affects their future support for redistribution. We measure preferences for redistribution using an MC's ideology score (associated with her roll-call votes cast on redistributive policies) and, in order to determine whether MCs experienced a recession during their formative years, we collect data on the state(s) in which they lived during this time.

The main result of our paper is that MCs who lived in a state hit by recession when aged 18–25 are more likely to have a *conservative* position on redistribution policies than the rest of the members of the same Congress. To identify this effect, we exploit cross-sectional and time variation in macroeconomic conditions, which allows us to control for both cohort effects and any unobservable state-specific factors that affect the preferences of future MCs.

The effect is politically meaningful: MCs who experienced a recession during their impressionable years are approximately 8 percentage points more likely to vote conservatively on redistribution-related issues than members of the same legislature who did not. Importantly, we show that this result is present within parties as well, indicating that the effect of recessions is not entirely driven by a larger Republican representation among the recession-affected cohorts of MCs: those who experienced a negative economic shock during their impressionable years are less likely to support redistribution than members of their own party in the same Congress who were not subjected to such a shock.

An important advantage of focusing on a politician's experiences during early adulthood is that this allows us to isolate the effect of macroeconomic shocks on a politician's *own* personal preferences. If we studied economic shocks that take place when politicians are already in Congress, we would not be able to disentangle the effect of

politicians' preferences from that of their constituents' preferences, since these shocks would be perfectly correlated. While this strategy minimizes concerns that the effect we uncover is driven by a general movement to the right of an MC's electorate, rather than of the MC herself, we provide several additional tests that further rule out this possibility.

Finally, an alternative interpretation of our results is that, rather than affecting future MCs' preferences, economic recessions shape the pool of future MCs by selecting individuals who were *ex ante* less supportive of redistribution. We provide two pieces of evidence that help prove that a selection channel is not likely to be a major mechanism underlying our results. First, we find that recession-affected politicians are not different, along a set of available pre-treatment individual characteristics correlating with political preferences, from politicians in the same Congress without a comparable recession experience. Second, we show that experiencing a recession at other ages does not affect politicians' preferences in any significant way, which is consistent with the social psychology literature that identifies the impressionable years as those in which core individual beliefs and preferences are formed. Our finding that MCs' voting behavior is only affected by the recessions experienced during their preference-forming years lends further support to the existence of a preference channel.

Our findings point towards the creation of an ideological wedge between voters and their future representatives following negative macroeconomic shocks. What are the determinants of this polarizing effect of recessions? We hypothesize that there are strong heterogeneous effects in the response to a recession. In particular, since the individuals in our sample are more likely than the average citizen to come from a more affluent background (Carnes 2013), they are more likely to hold beliefs that are *ex ante* more conservative. Consistent with theoretical work in political psychology and economics (Lord et al. 1979; Taber and Lodge 2006; Baliga et al 2013), individuals starting from different prior beliefs will process the same new information differently and place more emphasis on aspects of the evidence that confirm their pre-existing views. In addition, because of their more affluent social background, and because they were more likely than the average citizen to be attending college during their impressionable years, future politicians are more likely to have been insulated from the most negative experiences associated with an economic downturn. Finally, individuals who managed to become successful citizens *despite* having lived through a recession during their early adulthood will be more likely to believe that effort matters more than luck to achieve economic success – a belief that correlates negatively with support for redistribution (Alesina and Angeletos 2005).

In line with this hypothesis, in the last part of the paper we show that the estimated effect of recession experience on partisan affiliation in Giuliano and Spilimbergo (2014) differs depending on an individual's educational attainment and on the education of her parents, which we use as a proxy for an individual's social background. While on average, experiencing a recession during their impressionable years moves people to the left, those who have at least a bachelor's degree (and whose parents have at least a bachelor's degree) become more *conservative* following a recession experience.[5]

Our findings speak to the literature on the unequal responsiveness of US legislators to the preferences of more- and less-well-off citizens (Bartels 2008; Gilens 2005, 2012). Carnes (2012, 2013) shows that part of this democratic deficit is due to the overrepresentation of more-affluent citizens among US political elites, whose personal preferences are more aligned with those of wealthier citizens. Our paper provides evidence that the ideological wedge between the average American voter and her representatives can be further exacerbated by the polarizing effect of macroeconomic shocks. Not only are political elites drawn from *ex ante* more conservative strata of society, but the way in which individual preferences for government intervention form and evolve in response to economic shocks differs between future politicians and the average voter.

The remainder of the paper is organized as follows. In the next section, we discuss the theoretical considerations motivating the study. In Section 3 we present the data and in Section 4, we describe our empirical strategy. In Section 5 we present the main results. In Section 6, we show that our findings are not driven by constituents' preferences. In Section 7, we address concerns about a selection effect. In Section 8 we discuss likely mechanisms behind our result. Finally, we conclude.

2. Theoretical Considerations

A small yet growing body of research has linked experiences of negative economic shocks to individual preferences for redistribution. In this section, we review these studies and discuss how they relate to our research question and inform our theoretical predictions.

Margalit (2013) uses a panel study to show that personal experiences of economic hardship during the Great Recession increased voters' support for welfare spending in a representative sample of Americans, although the effect was short-lived. Giuliano and Spilimbergo (2014) also find a positive effect of large negative economic shocks on support for redistribution in a representative sample of US citizens, but they focus on recessions during an individual's impressionable years, showing that macroeconomic

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[5]We are thankful to Paola Giuliano for estimating the results described, namely the heterogeneous effects of recession experience across levels of educational attainment, based on the data presented in Giuliano and Spilimbergo (2014).

shocks experienced during this period of life have a long-term effect on preferences. The results of these papers can be rationalized by an increase in risk aversion following the negative personal experiences and economic uncertainty associated with large economic downturns (Malmendier and Nagel 2011), or by the development of a more pessimistic view of the world in which luck, rather than effort, determines economic success (Piketty 1995; Fong 2001; Alesina and La Ferrara 2005; Benabou and Tirole 2006).

While these studies examine a representative sample of citizens, Fisman et al. (2015) find lower levels of support for redistribution in response to the Great Recession in a sample of University of California–Berkeley college students. By using a series of lab experiments, the authors show that the results can be rationalized by subjects' greater selfishness and increased emphasis on efficiency over equality following negative macroeconomic shocks.

We investigate the long-run impact of experiencing an economic recession on future MCs. What results should we expect *ex ante*? On the one hand, if the main effect of recessions is to encourage future MCs to become more risk averse and to develop a more pessimistic view of the world – consistent with the findings in Margalit (2013) and Giuliano and Spilimbergo (2014) – large macroeconomic shocks should make them more favorable to redistribution. On the other hand, if the mechanisms described by Fisman et al. (2015) are at work, the results should run in the opposite direction.

Our paper is closest to Giuliano and Spilimbergo (2014) methodologically. Similarly to Giuliano and Spilimbergo (2014), we do not restrict the recession experience to be a direct experience of economic hardship such as the loss of employment, like in Margalit (2013), but rather focus on whether subjects simply lived in an area hit by a recession. Moreover, we test the joint hypothesis that (1) economic recessions experienced during their impressionable years shift future MCs' preferences *and* (2) that this effect persists in the long run. Giuliano and Spilimbergo (2014) also focus on the impressionable years period and emphasize the long-run effects of macroeconomic downturns on preferences.

The experience of a recession might have substantively different effects on different subsets of citizens. If the pool of future politicians is *ex ante* different from the general public along a series of characteristics, their response to observing the same severe economic downturn could differ from that of the average citizen. The most obvious differences between future MCs and the average citizen is that the former come from more affluent backgrounds (Carnes 2013), on average, and managed to become successful citizens *despite* having lived through a recession during their early adulthood.

Fisman et al. (2015)'s sample is most like our own: Berkeley college students and future MCs are both more likely to experience an economic recession only indirectly,

and to be more successful than the average citizen. *Ex ante*, we could therefore expect that future MCs' preferences would be affected in a similar way, causing a shift towards more conservative positions. Ultimately, however, understanding the long-term impact of a recession on MCs' preferences for redistribution is an empirical question, which we try to answer by linking their early adulthood experiences to their congressional voting records.

3. Data

In order to estimate the effect of experiencing a macroeconomic shock when young on politicians' ideology, we use data on MCs' roll-call votes and economic recessions at the state–year level for the period 1929–2012[6]. Table 1 presents descriptive statistics for all the variables described below.

[Table 1 about here]

3.1. **Data on Economic Recessions.** To measure macroeconomic shocks, we use state-level recession data and information on which state each MC lived in during their impressionable years in order to define whether they experienced a recession between the ages of 18 and 25. We construct a measure of state-level recessions using data on per capita personal income at the state–year level from the Bureau of Economic Analysis[7]. We define a given state in a given year as being hit by a recession if its real per capita GDP growth is lower than -3.4%. This threshold represents the lowest 10th percentile of real per capita GDP growth distribution for all U.S. states from 1929 to 2012.[8] Table 2 shows that this measure of recession is a meaningful indicator of economic hardship at the state level. Using Bureau of Labor Statistics (BLS) data on state-level unemployment from 1976 to 2012, we show that the recession indicator is associated with a sizable increase in the state's unemployment rate, irrespective of the inclusion of a continuous measure of real per capita income as a control: a state experiencing a year of recession sees an increase in the unemployment rate of about 0.7 percentage points (or about a third of a standard deviation in its unemployment rate over the sample period). Therefore, even if our sample excludes the years of the Great Depression due to a lack of data, our definition of recession is associated with periods of significant economic hardship over the last 35 years.[9]

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[6]State-level data on economic growth is only available from 1929.

[7]http://www.bea.gov/, accessed July 2016.

[8]This is the approach used in Giuliano and Spilimbergo (2014) to measure state-level recessions. In Appendix Figure A2, we show that our main results are fairly robust to using different thresholds for real per capita GDP growth distribution to define state-level recessions.

[9]The set of years used in Table 2 is limited by data availability, given that the BLS provides data on state-level unemployment starting from 1976.

[Table 2 about here]

Finally, for our independent variable, we construct an indicator taking value 1 if the MC experienced at least one year of recession (defined as above) during her impressionable years, and 0 otherwise. We use information on the last college attended by each MC when aged 18–25 to determine their state of residence, since this is the most precise available measure of where they lived during their formative years. For instance, we do not have information on the "home state" of each MC, i.e., where their family was living during this time in their lives. Importantly, however, our results are robust to focusing on the subset of MCs who were born and attended university in the same state that they later represented in Congress.

Figure 1 shows which states experienced a recession in each year. There is considerable variation in the presence of recessions across time and space. With the exception of the early 1930s and mid-1960s, during which almost all and almost no states, respectively, were hit by an economic downturn, the remaining years during which the MCs in the sample were aged 18–25 exhibit considerable cross-sectional variation in the presence of recessions. Some of the recessions in our sample represent isolated cases of economic downturn that only affected specific states. For instance, the oil price crash of 1987 hit Alaska particularly hard, making it the only state in which per capita GDP growth fell by more than 3.4% in that year. Similarly, while the rest of the country was experiencing a period of sustained economic growth, North Dakota was in a recession in 1988 due to a severe drought (*Los Angeles Times* 1989). Even in cases that are classified as nationwide economic recessions, not all states were hit in the same way. For example, during the 1958 recession, the lumber, mining, and textile industries were the hardest hit (McClenahan and Becker 2011), leading to a particularly high increase in unemployment concentrated in the Northeast and Midwest.

[Figure 1 about here]

3.2. **Data on Legislators.** Biographical information on MCs, including the college attended, date of graduation, year and state of birth were obtained from the McKibbin ICPSR data (7803)[10] for Congresses up to the 104th. We coded this information ourselves for Congresses 105–112 based on the *Biographical Directory of the U.S. Congress*[11]. We further manually coded the MCs' biographies from this directory to determine the state in which each MC attended high school.

As a measure of ideology and support for redistribution, we use the W-NOMINATE scores (Poole and Rosenthal 1997), which assign higher values to more-conservative

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[10]http://www.icpsr.umich.edu/icpsrweb/RCMD/studies/7803, accessed July 2016.
[11]http://bioguide.congress.gov/biosearch/biosearch.asp, accessed July 2016.

ideological positions.[12] In particular, for each Congress in the sample and for each MC, we calculate the ideology score by applying the W-NOMINATE algorithm to the subset of roll-call votes that is related to redistribution.[13]

We focus on the first dimension of the W-NOMINATE score, which can be interpreted as an MC's ideological position on government intervention in the economy or as her position on the liberal–conservative spectrum in the modern era (Poole and Rosenthal 2011). Finally, for ease of interpretation, we use the Conservative Vote Probability (CVP) developed by Fowler and Hall (2013) as an additional measure of MCs' ideology regarding redistribution-related bills. The advantage of CVP is that the estimates can be clearly interpreted as the likelihood that a given MC will vote more conservatively than the median member of the legislature.[14] Appendix Figure A1 shows that the two ideology measures we employ are highly correlated.

We restrict the sample of MCs and Congresses analyzed in three ways. First, we consider only MCs born after 1911, for whom we have state-level recession data for the whole 18–25 age range. Second, in order to have a meaningful number of MCs in each Congress, we drop representatives before the 85th and senators in Congresses before the 91st Congress.[15] Finally, we drop observations for the eight independent legislators in our sample.

4. Empirical Strategy

In order to estimate the effect of experiencing a recession during one's impressionable years on MCs' voting behavior, we estimate the following model:

$$
(4.1) \qquad
\begin{aligned}
y_{ic} = {}& \alpha + \beta_{s18-25} + \gamma_{birth} + \delta Recession_{s18-25} + \lambda_c \\
& + \beta_{s18-25} \times Congress + \varepsilon_{ic},
\end{aligned}
$$

where y_{ic} is the ideology score for MC i in Congress–chamber c (where higher values mean that the MC votes more conservatively on redistribution-related bills). The

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[12]See Poole and Rosenthal (1997) for a description of the W-NOMINATE procedure.

[13]In order to identify the redistribution-related roll-call votes, we use data provided by *voteview.com*, available at http://voteview.com/dw-nominate_textfile.html, accessed July 2016. This source categorizes all roll-call votes based on their content, using the categorization proposed by Peltzman (1984). We define redistribution-specific roll-call votes as those that fall under the first three categories of the Peltzman issue codes: 1) Budget General Interest (debt limit, budget targets, revenue sharing, unemployment insurance, tax rates, continuing appropriations, etc.); 2) Budget Special Interest (authorization/appropriations for agencies, departments, public works, subsidized housing, NSF, parks, food stamps, etc.); and 3) Regulation General Interest (general tariffs, minimum wage, gasoline rationing, auto emissions, water pollution; etc.).

[14]The CVP method also performs well analyzing small numbers of bills, which is the case in some of the specifications in our empirical analysis.

[15]That is, we focus only on chambers for which we have at least 100 MCs (for the House) or 50 MCs (for the Senate). No result presented in the paper is sensitive to this choice.

variable $Recession_{s18-25}$ is an indicator taking value 1 if the MC experienced at least one year of recession during her impressionable years in the state where she was residing at the time. The baseline specification includes Congress–Chamber fixed effects, λ_c,[16] year of birth fixed effects, γ_{birth}, and state-where-impressionable fixed effects, β_{s18-25}, i.e., fixed effects for the MC's state of residence when aged 18–25.[17] Substantively, we are comparing MCs in the same legislature in two ways: (1) we are cross-sectionally comparing MCs born in the same year who, during their impressionable years lived in states differentially affected by recessions and (2) we are comparing MCs who lived in the same state during their impressionable years, but were born in different years and were therefore differentially exposed to recessions.

Augmented specifications include linear state-where-impressionable trends, $\beta_{s18-25} \times Congress$. We include linear state trends to help rule out the possibility that states experiencing more recessions could be characterized by differential trends in some underlying characteristic that is in turn correlated with the future ideological leaning of their politicians. Throughout the analysis, standard errors are double clustered at the MC and state-where-impressionable levels.[18]

5. Main Results

Table 3 presents the results for ideology position over redistribution-related votes. Columns 1–2 show the results using the redistribution-specific W-NOMINATE scores as the outcome. Column 1 shows the results for the baseline specification with year-of-birth fixed effects, state-where-impressionable fixed effects, and Congress-Chamber fixed effects. The effect of having experienced a recession during one's impressionable years on ideology score is positive, implying a more conservative position, and highly significant. The effect is politically meaningful: having experienced a recession leads to an increase in ideology score of approximately 30% of a standard deviation.

In order to gauge the magnitude of the result, consider that a difference in the redistribution-specific ideology score of 0.172 approximately spans the space covered by up to 15 Democratic senators out of a total of 51 Democratic senators at the beginning of the 112th Congress – moving, for example, from John Kerry to Mark Pryor, a centrist Democrat. Alternatively, if we consider the median Democratic MC in the 112th Congress, Sen. Stabenow, a movement away from her of 0.172 in ideology is equivalent to moving past 10 Democratic senators out of a total of 51.

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[16]That is, for each Congress, we include two separate dummies, one for the House and one for the Senate.

[17]Defined here as the state where each MC attended her last college before turning 25.

[18]In the Appendix, we show that our results are robust to clustering standard errors at the MC and year-of-birth levels.

Column 2 shows the results for the baseline specification augmented with state-where-impressionable linear trends. Including linear trends does not affect the coefficient estimate. For ease of interpretation, Columns 3–4 show the results using CVP as an outcome. Each coefficient represents the impact of a recession experience during an MC's impressionable years on the probability that she votes conservatively on redistribution-related issues. Therefore, the results from the most demanding specification show that MCs who experienced a recession when young are, compared to MCs in the same legislature who did not experience a recession, approximately 8 percentage points more likely to vote conservatively on redistribution-related issues.

[Table 3 about here]

One possible interpretation of the results presented so far is that MCs who experienced a recession were more likely to enter the Republican Party than those who did not. To investigate this possibility, we calculate, for each chamber of each Congress, within-party redistribution-specific ideology scores, and we estimate Equation 1 including Congress-Chamber-Party fixed effects (that is, for each Congress, we include 4 dummies: one for the Democrats in the House, one for the Democrats in the Senate, one for the Republicans in the House, and one for the Republicans in the Senate).[19]

As we can see from Table 4, the coefficient remains positive and statistically significant. The magnitude of the coefficient, with respect to the baseline specification without party fixed effects presented in Table 3, is between one-half and one-fourth, depending on the specification, which is consistent with party affiliation being responsible for a substantial portion of the variation in roll-call voting behavior.

Overall, these results show that the effect of recessions on MCs' voting behavior on redistribution-related issues is not solely driven by a greater likelihood that recession-affected MCs will enter the Republican Party. MCs who experienced a negative economic shock during their impressionable years are less likely to support redistribution than other members of their party in the same legislature.

[Table 4 about here]

Table 5 shows that the effect on roll-call voting of having experienced a recession during the impressionable years period is considerably stronger for senators than for House members[20] (even if, given the smaller number of observations for senators, the

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[19]Note that the difference of 13 observations between the within-party W-NOMINATE and CVP scores is due to the fact that the former cannot be calculated for MCs with a very small number of roll calls in a Congress, while the CVP score does not have this issue.

[20]Note that comparison in coefficients' magnitude is only meaningful for Columns 3 and 4, since only the CVP ideology score is comparable across chambers.

estimates are noisier).[21] This suggests that, compared to House members, senators' personal preferences are more influential in guiding their votes on redistribution-related issues than, for instance, party affiliation.

[Table 5 about here]

In Table 6, we investigate whether the length of exposure to recession matters. In particular, we estimate the effect on the redistribution-specific ideology scores of three indicators, taking value of 1 if each MC experienced one, two, or three to five years of recession, respectively. The results show that the preferences-formation effect of economic downturns increases with the severity of the recession experience. For example, Column 3 illustrates that MCs who experienced three to five years of recession are 12.3 percentage points more likely to vote conservatively on redistribution-related issues than members of the same legislature without a recession experience, while MCs who experienced only one year of recession during their impressionable years are 8.1 percentage points more likely to vote conservatively compared to the same group.[22].

[Table 6 about here]

Finally, we expect the experience of a recession to have the strongest impact on MCs' preferences regarding issues that are specific to redistribution. To check that this is the case, for each MC in each Congress we construct an alternative ideology score that is specific to votes on social issues. As with redistribution-related issues, we classify roll-call votes as being about social issues using the Peltzman issue codes. In particular, we classify as social issue-specific any roll-call vote that falls under the fifth category of the Peltzman issue codes: Domestic Social Policy.[23] Given the small number of votes that fall into this category in each Congress, we can only calculate the CVP ideology score (and not the W-NOMINATE) for this subset of votes. Table 7 shows the results for the effect of a recession experienced during their impressionable years on MCs' positions on social issues calculated using the CVP score. We still find a marginally significant effect: MCs who experienced a recession are more likely to vote conservatively on social issues as well. The magnitude of the effect, however, is less than half of the estimated effect on redistribution-related votes.

[Table 7 about here]

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[21]Note that the estimates in Table 3 are closer to those for the House, given the considerably larger number of observations for House members.

[22]The p-value of a test of equality of the two coefficients is 0.14.

[23]Examples of issues in this category include: abortion, school prayer, criminal code and federal courts, immigration, gun control, veterans preference, voting rights, etc.

6. Results Are Not Driven by the Electorate

If the recession experience of political representatives is correlated to that of their electorate, our results could be driven by recession-affected voters electing more conservative politicians. Theoretically, this alternative account is unlikely to play a major role: the correlation between the electorate's recession experience and that of the MCs they elect is unlikely to be strong, since the electorate is composed of many different cohorts of voters, each of whom is exposed to different types of economic shocks throughout their lives. In this section, we present several empirical results that cast further doubt on the possibility that the effect we uncover is solely driven by the electorate and not by the preferences of the recession-affected politicians.

A first approach to rule out this alternative account is to include fixed effects for the state represented by each MC, therefore controlling for any time-invariant characteristic of the state represented. Table 8 shows that the results are robust to the inclusion of state-represented fixed effects.

[Table 8 about here]

As a second test, we divide our sample of MCs between *non-movers*, i.e., MCs who did not move from the state where they lived during their impressionable years, and *movers*, i.e., MCs who represent a different state than the one where they lived between the ages of 18 and 25. The rationale for this separation is that the correlation between the recession experience of MCs and that of their electorate should be the strongest for non-movers, i.e. politicians who lived in the same state as their electorate during their impressionable years. If voters' preferences are behind our results, we should observe that the effect is driven by the sample of non-movers. Table 9 presents the results. For completeness, we define movers in two ways: MCs whose state in which they attended college differs from the state they represent, and MCs whose state of birth differs from the state they represent. As we can see, the estimates are consistent across the three samples, across all specifications. The fact that the sample of non-movers is not driving our results casts doubts on the alternative account, according to which the recession affects the preferences of voters who, in turn, elect more conservative representatives.

[Table 9 about here]

An alternative way to rule out the possibility that the electorate is driving the effect is to control for a time-varying measure of voters' preferences. Therefore, in Table 10 we control for the Republican vote share in the most recent Presidential election (at the congressional district level for all House members and at the state level for all senators). The results are robust to the inclusion of this control, which provides further reassurance that the electorate's preferences are not explaining our results.

[Table 10 about here]

7. Preferences or Selection?

We have established that having experienced a recession during their impressionable years makes MCs more likely to vote conservatively on redistributive issues, even compared to other members of their party. While our theory focuses on preference formation, an obvious concern is that, rather than affecting future MCs' preferences, economic recessions shape the pool of future MCs by selecting individuals who are *ex ante* less supportive of redistribution. According to our theorized mechanism – the *preference* mechanism – experiencing a recession directly affects individual preferences. However, our results could also be consistent with a *selection* mechanism, according to which different pools of future politicians are formed in recession versus non-recession years, with the recession-affected cohorts of future MCs seeing an overrepresentation of *ex ante* more conservative individuals in each party.

In this section, we propose two empirical tests that provide evidence against a selection effect.

7.1. **Evidence from Pre-treatment Characteristics.** If the *selection* mechanism is at work, we expect MCs who experienced a recession to differ from other members in the same Congress along several characteristics that correlate with conservative preferences.

Table 11 shows the results for the effect of having experienced a recession on a series of pre-treatment individual characteristics that are available in the McKibbin (1979) ICPSR data and that are likely to correlate with political preferences. As mentioned previously, this dataset covers only Congresses up to the 94th, limiting the sample size in these regressions. Therefore, Columns 1 and 2 present the results for the main specification calculated for the subsample for which the pre-treatment individual characteristics described below are available. The result is also positive and significant for this subsample. Column 3 shows the effect of a recession experience on an indicator taking value 1 if the last college attended by the MC is an Ivy League school[24]. Column 4 shows the effect on an indicator taking value 1 if the last college attended by the MC was a private school. Column 5 shows the effect on an indicator taking a value of 1 if the MC had relatives who served in Congress. Finally, in Column 6 we regress the recession indicator on a dummy that takes a value of 1 for black MCs (for which we have data for the whole sample period). Being exposed to a recession has little or no impact on MCs' pre-treatment individual characteristics. In particular, recession-affected politicians do not seem to be different in terms of their race or the quality of

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[24]Schools as classified by McKibbin (1979).

their education, and they are not more likely to belong to a political dynasty. While data availability constrains our analysis to these four characteristics, these results cast doubts on the *selection* mechanism.

[Table 11 about here]

7.2. **"Impressionable Years" versus Other Years.** If a *preference* mechanism is behind our results, we expect our findings to be specific to recessions experienced in the preference-forming years – i.e., recessions experienced at other ages should have no effect on MCs' ideological positions over redistribution. This would be consistent with the "impressionable years" literature in social psychology, which shows that experiences and events occurring at different ages have a less important role in the formation of an individual's views of the world. If instead the *selection* mechanism is at work, we have no reason to believe that the impressionable years period should be the only important one in shaping the pool of future MCs.

Table 12 presents the results for recessions experienced by MCs during two other eight-year periods in life. Panel A shows the results for the 9–17 age period, while Panels B1 and B2 display the results when we consider the 26–33 age period.[25] Recessions experienced in these two age ranges generally have no significant impact on MCs' preferences for redistribution. If anything, we find that experiencing a recession at these different points in life makes MCs more supportive of redistribution, even though the magnitude of all the coefficients is significantly lower than those found in the main results.

These results suggest that, if a "selection" channel is driving our results, it must be specific to the 18–25 age range only, which we see as casting doubts on an important role played by a higher likelihood of self-selection into politics for *ex ante* more conservative individuals following a recession experience. Moreover, the fact that only recessions experienced in the preference-forming years have a consistent impact on MCs' voting behavior on redistribution issues lends support to the preference mechanism – i.e., the idea that experiencing a recession directly affects future MCs' preferences.

[Table 12 about here]

8. Discussion of the Mechanism

In the previous sections, we have shown that MCs who experienced an economic recession during their early adulthood are more likely to have a conservative position on redistribution-specific bills. We ruled out the selection of *ex ante* more conservative

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[25]In Panel A, we consider an MC as living, between 9 and 17 years of age, in the state where she graduated from high school. Since we do not have clear information on where an MC was living between 26 and 33 years of age, in Panel B1 we consider the MC as living in the state where she attended college and in Panel B2 we assume the MC lives in the state she represents in Congress.

individuals as a likely channel, arguing that the recession experience directly affects future MCs' preferences.

Our findings run counter to those in Margalit (2013) and Giuliano and Spilimbergo (2014), which show that, on average, voters move to the left following experiences of negative economic shock. Our results are instead in line with those in Fisman et al. (2015), who focus on a specific subset of educational elites.

What is the mechanism behind our findings? We believe that the impact of negative economic shocks on the formation of individuals' political preferences presents strong heterogeneous effects. Theory and evidence from political psychology and economics show that people who start from different prior beliefs are likely to process the same new information differently (Lord et al. 1979; Taber and Lodge 2006; Baliga et al. 2013). This effect may stem from both (1) a tendency to evaluate supportive arguments as stronger and (2) a form of confirmation bias in which people place greater emphasis on aspects of the evidence that confirm their pre-existing views. In the context of our study, the most obvious difference between future politicians and ordinary citizens is the fact that, on average, the former come from more affluent backgrounds (Carnes 2013) – a trait correlated with more conservative political beliefs (Alesina and La Ferrara 2005). In relation to these models, the initial differences in beliefs between politicians and citizens correspond to the different prior beliefs that lead these two groups to update differently on the basis of the same common experience, i.e., the recession. For instance, when faced with a recession, future politicians may devote less attention to situations of hardship resulting from the economic downturn and place more emphasis on the government response to the recession, which from their perspective is therefore more likely to be seen as wasteful spending. Alternatively, citizens starting from a more conservative baseline may be more likely to blame the government for the bad economic outcomes, and react to the recession by increasing their aversion to government intervention in the economy.

Furthermore, the experience of a recession may have very different meanings for future politicians and the average citizen. For the latter, a recession is likely to be associated with the conditions studied by Margalit (2013), i.e., a direct experience of economic hardship such as the loss of employment. Because of their different social backgrounds, future politicians are more likely to be insulated from the direct effects of the recession and to experience the economic downturn only indirectly by observing its effect on the livelihood of others. Additionally, individuals who managed to become successful citizens *despite* having lived through a recession during their early adulthood will be more likely to develop the belief that effort matters more than luck to achieve

economic success – a belief that correlates negatively with support for redistribution (Alesina and Angeletos 2005).

To test our hypothesized mechanism, we provide evidence that the impact of recession experiences on citizens' preferences differs on the basis of their backgrounds. Giuliano and Spilimbergo (2014) use evidence from the General Social Survey to show that citizens who grew up during a recession are more likely to support redistribution later in life. In Figure 2, we show how the estimated effect of recession experience on partisan affiliation in Giuliano and Spilimbergo (2014) differs according to an individual's education and parental background. In particular, Panels A and B show the heterogeneous effects across one's father's and mother's educational levels, respectively, while Panel C shows the heterogeneous effects across different levels of the respondent's own educational attainment. The dependent variable takes values from 0 to 6, increasing with an individual's self-declared identification as a Democrat.[26] Consistent with our hypothesis, we find that more-educated individuals and those whose parents had a higher educational level move less to the left in response to experiencing an economic recession during early adulthood. The effect becomes negative for individuals with a bachelor's or graduate degree, or whose mother obtained a bachelor's or graduate degree, meaning that this subset of citizens becomes more *conservative* following a recession experience.[27] This evidence is consistent with the hypothesis that, relative to the average citizen, politicians are more likely to become more conservative following a negative macroeconomic shock because of their more affluent background. While we do not have systematic data on the educational backgrounds of MCs' parents, we know that politicians are disproportionately drawn from the top strata of American society. During the 1999–2008 period, almost every member of the current Congress held a college degree, and only 20% grew up in a working-class home, compared to 65% of all American citizens (Carnes 2013).

[Figure 2 about here]

9. Conclusion

This article shows that MCs who experienced a recession during a critical period of late adolescence and early adulthood are differentially more likely to have a conservative

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[26]The education variables take five values: less than high school, high school, junior college, bachelor's degree, and graduate education. We interact an indicator that takes a value of 1 if individuals experienced a recession during their impressionable years with a continuous measure of parental or own educational attainment. The distribution of the variables in the sample is presented in Appendix Table A4.

[27]Since the majority of individuals in the sample did not obtain a college degree and had parents without a college degree, the average effect is positive, as documented in Giuliano and Spilimbergo (2014), with individuals moving, on average, closer to the Democratic Party in response to a recession experience during their impressionable years.

position on redistribution policies compared to members of the same party in the same legislature. We rule out a series of alternative accounts and show that our results are driven by a change in politicians' preferences induced by the recession, rather than by the selection of *ex ante* more conservative citizens into the political sector in recession-affected cohorts.

Our results run counter to some recent studies showing that experiencing a negative macroeconomic shock increases support for redistributive policies. In particular, Giuliano and Spilimbergo (2014) also analyze the long-run impact of recessions experienced during an individual's impressionable years, but focus on a representative sample of U.S. citizens. We hypothesize that the very specific nature of our sample, together with the presence of strong heterogeneous effects in the response to a recession experience, is a likely explanation of our opposite findings. In line with this hypothesis, we show that the estimated effect on partisan affiliation in Giuliano and Spilimbergo (2014) differs depending on one's own and one's parents' educational levels, which we use as a proxy for an individual's social background.

Our paper highlights the presence of a novel channel through which macroeconomic shocks can impact policymaking – by shaping future political elites' views on redistribution. In particular, our findings suggest that economic recessions can create a wedge between voters and their future representatives by moving the preferences of the two groups in opposite directions. In light of this evidence, it would be interesting to conduct a more thorough analysis of the ways in which the effect of macroeconomic shocks on preference formation differs across different groups of citizens.

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Table 1. Summary Statistics

	Obs.	Mean	Std. Dev.	Min.	Max.
Ideology Measures					
Redistribution W-Nominate	12,411	-0.056	0.561	-1	1
Redistribution CVP	12,411	0.001	0.289	-0.778	0.794
Redistribution W-Nominate (within-party)	12,398	-0.103	0.478	-1	1
Redistribution-CVP (within-party)	12,411	0.011	0.111	-0.408	0.786
Social CVP	12,411	-0.038	0.291	-0.828	0.734
Recession Measures					
Recession when 18-25 (in state of college)	12,411	0.458	0.498	0	1
One Year of Recession	12,411	0.243	0.429	0	1
Two Years of Recession	12,411	0.133	0.34	0	1
Three to Five Years of Recession	12,411	0.082	0.274	0	1
Recession when 10-17 (in state of high school)	11,620	0.603	0.489	0	1
Recession when 26-33 (in state of college)	12,411	0.375	0.484	0	1
Recession when 26-33 (in state represented)	12,411	0.373	0.484	0	1
Other Variables					
Age	12,411	51.85	9.99	25	92
Democrat	12,411	0.554	0.497	0	1
Ivy League	6,304	0.143	0.35	0	1
Private School	5,748	0.147	0.354	0	1
Relative in Congress	6,304	0.051	0.221	0	1
Black	12,411	0.051	0.22	0	1
Republican vote share (Presidential elections)	12,411	0.486	0.094	0.135	0.871

Table 2. State Recessions and Unemployment Rate

	(1) Unemployment Rate	(2) Unemployment Rate
Recession	0.641***	0.749***
	(0.213)	(0.246)
Observations	1,581	1,581
R-squared	0.734	0.742
Year Birth FE	✓	✓
State FE	✓	✓
Real Per Capita Income		✓

Notes: Standard errors clustered at the state level are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 3. Recession and Redistribution-specific Ideology Scores

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Recession when 18–25 (in state of college)	0.172***	0.172***	0.080***	0.079***
	(0.052)	(0.055)	(0.023)	(0.024)
Observations	12,411	12,411	12,411	12,411
R-squared	0.193	0.224	0.325	0.348
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 4. Recession and Redistribution-specific Ideology Scores within Party

	(1) Redistribution W-NOMINATE (within-party)	(2) Redistribution W-NOMINATE (within-party)	(3) Redistribution CVP (within-party)	(4) Redistribution CVP (within-party)
Recession when 18–25 (in state of college)	0.080** (0.036)	0.080** (0.040)	0.018** (0.009)	0.019** (0.009)
Observations	12,398	12,398	12,411	12,411
R-squared	0.321	0.372	0.268	0.318
Birth Year FE	✓	✓	✓	✓
State at 18-25 FE	✓	✓	✓	✓
Congress-Chamber-Party FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 5. Recession and Redistribution-specific Ideology Scores by Chamber

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Panel A: Senate				
Recession when 18–25 (in state of college)	0.260	0.329**	0.113	0.141**
	(0.163)	(0.160)	(0.067)	(0.066)
Observations	1,980	1,980	1,980	1,980
R-squared	0.441	0.533	0.509	0.584
Birth Year FE	✓	✓	✓	✓
State at 18–25 FE	✓	✓	✓	✓
Congress FE	✓	✓	✓	✓
State of College trends		✓		✓
Panel B: House				
Recession when 18–25 (in state of college)	0.160***	0.156***	0.077***	0.073***
	(0.050)	(0.052)	(0.023)	(0.023)
Observations	10,428	10,428	10,428	10,428
R-squared	0.195	0.223	0.333	0.357
Birth Year FE	✓	✓	✓	✓
State at 18–25 FE	✓	✓	✓	✓
Congress FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 6. Years of Recession Exposure and Redistribution-specific Ideology Scores

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
One Year of Recession	0.173***	0.172***	0.081***	0.080***
	(0.054)	(0.057)	(0.023)	(0.025)
Two Years of Recession	0.220***	0.183**	0.099***	0.084**
	(0.078)	(0.078)	(0.036)	(0.035)
Three to Five Years of Recession	0.261**	0.198*	0.123***	0.094**
	(0.100)	(0.102)	(0.044)	(0.045)
Observations	12,411	12,411	12,411	12,411
R-squared	0.194	0.224	0.326	0.348
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
Congress–Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: One Year of Recession, Two Years of Recession, and *Three to Five Years of Recession* are indicators taking a value of 1 if an MC lived through one, two, or more than three years of recession, respectively, during her 18–25 period in her state of college. Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 7. Recession and Social Issues-specific Ideology Scores

	(1) Social CVP	(2) Social CVP
Recession when 18–25 (in state of college)	0.039* (0.020)	0.037* (0.020)
Observations	12,411	12,411
R-squared	0.223	0.236
Birth Year FE	✓	✓
State of College FE	✓	✓
Congress-Chamber FE	✓	✓
State of College trends		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 8. Is the Effect Driven by the Electorate? Robustness to State-Represented Fixed Effects

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Recession when 18–25 (in state of college)	0.145***	0.144***	0.069***	0.067***
	(0.048)	(0.052)	(0.021)	(0.023)
Observations	12,411	12,411	12,411	12,411
R-squared	0.269	0.299	0.381	0.404
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
State Represented FE	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 9. Is the Effect Driven by the Electorate? Movers vs. Non-movers

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Panel A: Sample of movers – state of college different from state represented				
Recession when 18–25 (in state of college)	0.205***	0.228***	0.094***	0.103***
	(0.068)	(0.081)	(0.032)	(0.038)
Observations	4,728	4,728	4,728	4,728
R-squared	0.272	0.315	0.389	0.426
Panel B: Sample of movers – state of birth different from state represented				
Recession when 18–25 (in state of college)	0.201***	0.180**	0.087***	0.078**
	(0.067)	(0.069)	(0.032)	(0.032)
Observations	3,889	3,889	3,889	3,889
R-squared	0.324	0.366	0.434	0.470
Panel C: Sample of non-movers – state of birth same as state of college and state represented				
Recession when 18-25 (in state of college)	0.171**	0.173**	0.080**	0.080**
	(0.077)	(0.083)	(0.033)	(0.037)
Observations	5,989	5,989	5,989	5,989
R-squared	0.297	0.331	0.401	0.431
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 10. Is the Effect Driven by the Electorate? Controlling for Republican Presidential Vote Share

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Recession when 18–25 (in state of college)	0.150***	0.149***	0.070***	0.069***
	(0.053)	(0.054)	(0.023)	(0.024)
Observations	12,411	12,411	12,411	12,411
R-squared	0.223	0.249	0.350	0.367
Republican Presidential Vote Share	✓	✓	✓	✓
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Republican vote share is measured at the congressional district level for House members and at the state level for senators. Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 11. Preferences or Selection? Recession and Pre-treatment Characteristics

	(1) Redistribution W-NOMINATE	(2) Redistribution CVP	(3) Ivy League	(4) Private University	(5) Relative in Congress	(6) Black
Recession when 18–25 (in state of college)	0.157***	0.068***	0.043	0.022	0.020	-0.037
	(0.056)	(0.024)	(0.029)	(0.045)	(0.033)	(0.025)
Observations	5,743	5,743	5,743	5,743	5,743	12,411
R-squared	0.193	0.164	0.531	0.170	0.141	0.197
Birth Year FE	✓	✓	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓	✓	✓

Notes: Standard errors clustered at the MC and state-where-impressionable levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 12. Preferences or Selection? Baseline for Other Age Ranges

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Panel A: Recession when 9–17 years of age				
Recession when 10–17 (in state of high school)	-0.066	-0.058	-0.031	-0.027
	(0.053)	(0.056)	(0.025)	(0.027)
Observations	11,620	11,620	11,620	11,620
R-squared	0.218	0.241	0.343	0.366
State of high school FE	✓	✓	✓	✓
State of high school trends		✓		✓
Panel B1: Recession when 26–33 years of age (in state of college)				
Recession when 26–33 (in state of college)	-0.080	-0.113*	-0.033	-0.051*
	(0.061)	(0.062)	(0.028)	(0.028)
Observations	12,411	12,411	12,411	12,411
R-squared	0.188	0.212	0.320	0.345
State of college FE	✓	✓	✓	✓
State of college trends		✓		✓
Panel B2: Recession when 26–33 years of age (in state represented)				
Recession when 26–33 (in state represented)	-0.061	-0.087	-0.028	-0.042*
	(0.054)	(0.056)	(0.024)	(0.025)
Observations	12,411	12,411	12,411	12,411
R-squared	0.240	0.262	0.356	0.378
State represented FE	✓	✓	✓	✓
State represented trends		✓		✓

Notes: All specifications include birth year fixed effects and congressional chamber fixed effects. Standard errors shown in parentheses are clustered at the MC and state-of-high-school levels in Panel A, at the MC and state-of-college levels in Panel B1, and at the MC and state represented levels in Panel. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

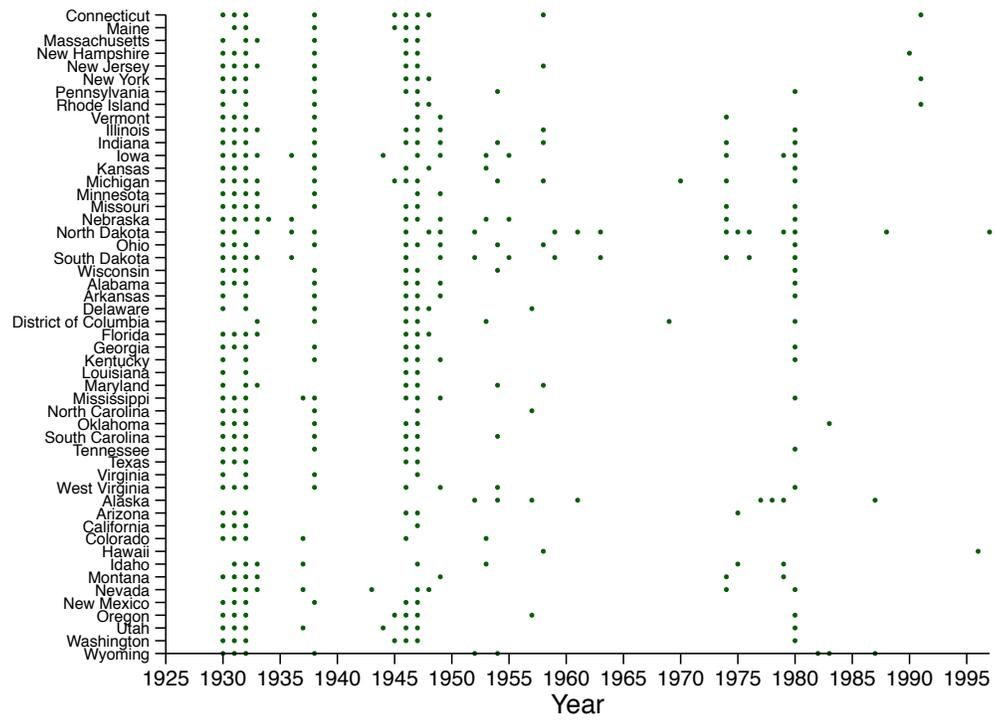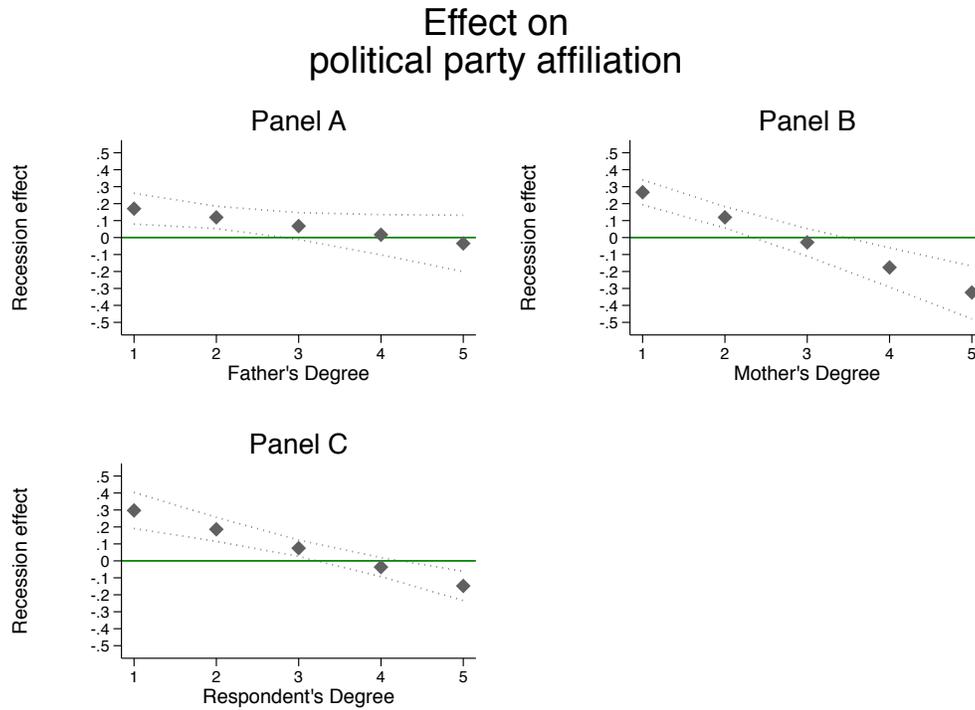**Figure 1.** Distribution of Recessions across States over Sample Period

Figure 2. Heterogeneous Recession Experience Effect across Levels of Respondent and Parental Educational Attainment using GSS Data

Effect on
political party affiliation

Notes: The data used for the figure is from the General Social Survey. *Father's Degree*, *Mother's Degree*, and *Respondent's Degree* take a value of 1 if the highest degree is *less than high school*, 2 for *high school*, 3 for *associate/junior college*, 4 for *bachelor's*, and 5 for *graduate*. Appendix Table A4 shows the descriptive statistics for the variables depicted above.

In this Appendix we present descriptive statistics for the sample used for Figure 2 (Table A3), we show graphically the correlation between the redistribution-specific W-NOMINATE and CVP scores (Figure A1), and we present a series of robustness checks (described below).

Standard Errors. In our analysis so far we have clustered standard errors at the MC and state-where-impressionable levels (state where impressionable indicates either the state of the college or the high school, depending on the specification). Here we replicate the main results from Table 3, clustering the standard errors at the MC and year-of-birth levels. Table A1 presents the results.

Excluding the Great Depression. One concern is that the effect we uncover is driven solely by the MCs who experienced the Great Depression, the hardest and most pervasive recession event in our sample. In order to address this concern, we repeat our analysis excluding all MCs who were impressionable during this period. We exclude any MC born before 1921, since they would have been 18 years old in 1939 (the last year of the Great Depression), i.e., they lived at least one of their impressionable years during the Great Depression. Table A.2 presents estimates for this subsample. These results are consistent with the main estimates for the whole sample presented in Table 3, which shows that the effect is not solely driven by the cohort of MCs that experienced the Great Depression.

Definition of Recession. We have defined state-level recessions as years in which a state's real per capita GDP growth is lower than -3.4%. This threshold represents the lowest 10th percentile of real per capita GDP growth distribution for all U.S. states from 1929 to 2012. Here we illustrate the robustness of our results to defining recessions using alternative thresholds. We estimate 16 versions of Equation 4.1 using thresholds that range from the lowest 5th to the lowest 20th of real per capita GDP growth distribution. We use W-NOMINATE on redistribution-specific bills as the

dependent variable. Figure A2 shows coefficients and 95% confidence intervals across the different specifications. The coefficients are positive and statistically significant at the 5% level using thresholds that range from the bottom 8% to the bottom 15% of GDP growth distribution. As expected, the estimates shrink towards zero as we increase the threshold to include less severe negative economic shocks in the definition of recessions. We lose statistical significance as we decrease the threshold below 8%, since the smaller number of recession-affected MCs means that we have less and less power to detect statistically significant effects.

Table A1. Robustness to Different Clusterings of Standard Errors

	(1) Redistribution W-NOMINATE	(2) Redistribution W-NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Recession when 18–25 (in state of college)	0.172*** (0.046)	0.172*** (0.047)	0.080*** (0.021)	0.079*** (0.021)
Observations	12,411	12,411	12,411	12,411
R-squared	0.193	0.224	0.325	0.348
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and year-of-birth levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

**Table A2.** Robustness to Excluding MCs who Experienced the Great Depression

	(1) Redistribution W–NOMINATE	(2) Redistribution W–NOMINATE	(3) Redistribution CVP	(4) Redistribution CVP
Recession when 18–25 (in state of college)	0.187***	0.186***	0.090***	0.089***
	(0.051)	(0.056)	(0.023)	(0.025)
Observations	10,435	10,435	10,435	10,435
R-squared	0.210	0.236	0.356	0.375
Birth Year FE	✓	✓	✓	✓
State of College FE	✓	✓	✓	✓
Congress-Chamber FE	✓	✓	✓	✓
State of College trends		✓		✓

Notes: Standard errors clustered at the MC and state-of-college levels are shown in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table A3. Descriptive Statistics for Figure 2

	Obs	Mean	Std. Dev.	Min	Max
Sample for Panel A: *Father's Degree*					
Recession	37.347	0.588	0.492	0	1
Respondent's Degree	37.347	1.849	1.141	1	5
Political Party Affiliation	37.347	3.233	2.009	0	6
Sample for Panel B: *Mother's Degree*					
Recession	42.999	0.573	0.495	0	1
Respondent's Degree	42.999	1.811	0.953	5	5
Political Party Affiliation	42.999	3.294	2.002	0	6
Sample for Panel C: *Respondent's Degree*					
Recession	49.246	0.575	0.494	0	1
Respondent's Degree	49.246	2.316	1.318	1	5
Political Party Affiliation	49.246	3.321	1.995	0	6

Figure A1. Correlation between the Redistibution-specific W-NOMINATE and CVP Scores
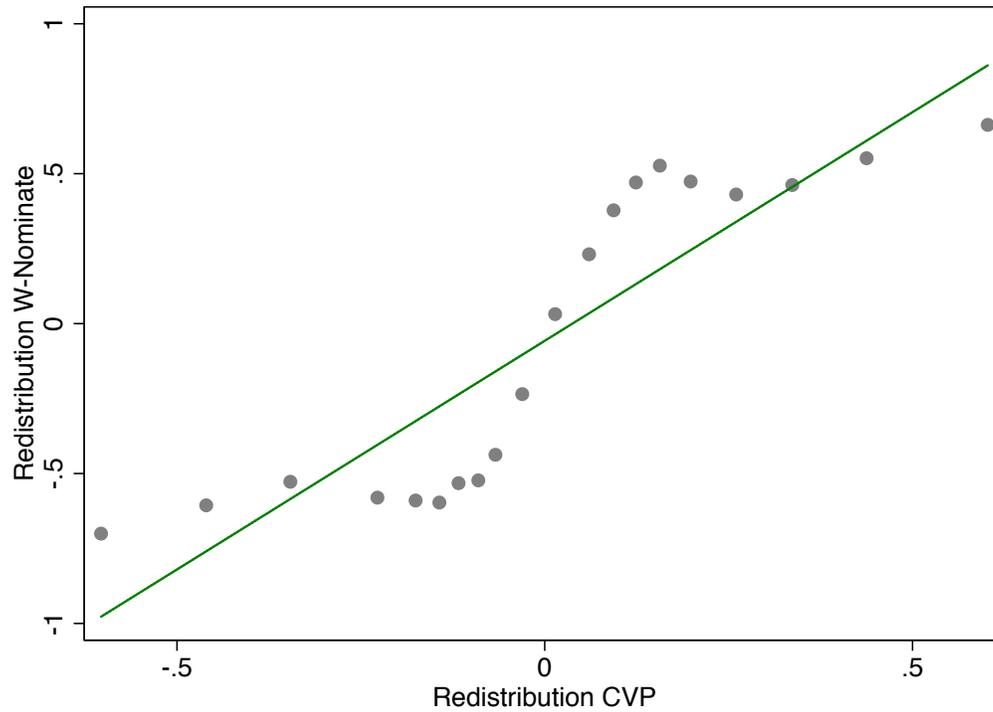
Notes: The binned scatter plot above displays the relationship between the redistribution-specific W-NOMINATE scores and the redistribution-specific CVP scores. Points represent averages in equal-sized bins of the CVP scores. The fit line is calculated based on the underlying data.

Figure A2. Robustness to Different Thresholds for Definition of Recession
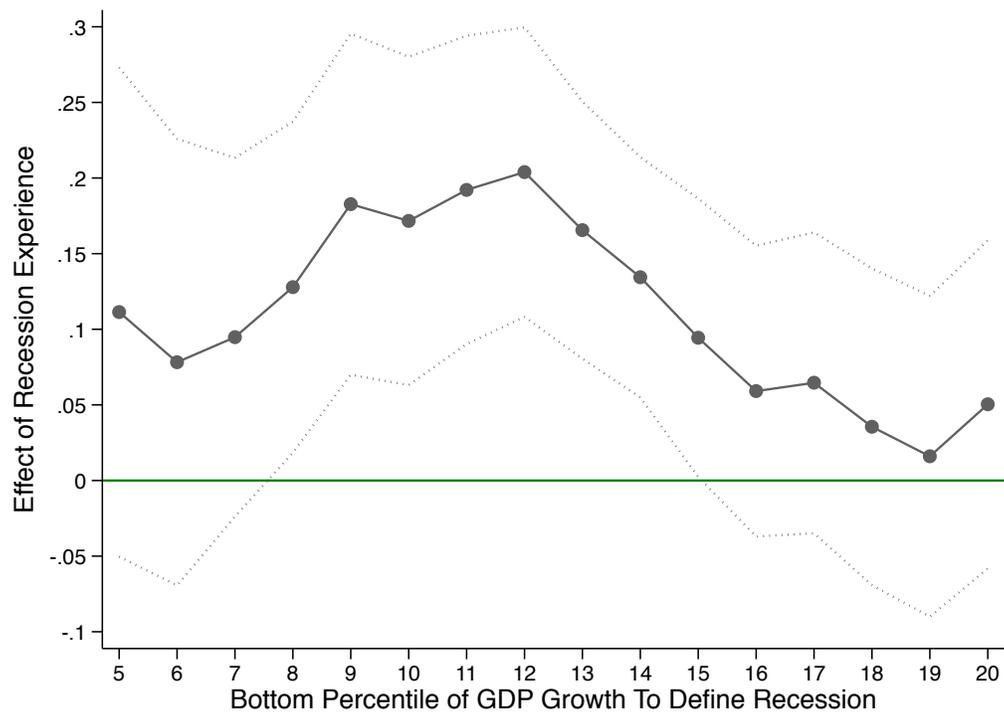
Notes: We estimate 16 versions of Equation 4.1 using thresholds that range from the lowest 5th to the lowest 20th of real per capita GDP growth distribution. The dependent variable is W-NOMINATE on redistribution-specific bills. The figure shows coefficients and 95% confidence intervals across the different specifications. The threshold used to define the recession is on the x-axis.