## Brahmin Left Versus Xenophobic Right? The Effect of Immigration on Political Cleavages

Christoph Albert\*

Ismael Gálvez-Iniesta<sup> $\dagger$ </sup> José L. Groizard<sup> $\ddagger$ </sup>

Brett McCully§

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#### Abstract

This paper examines the impact of immigration on the political realignment of educated voters towards left-leaning parties in the United States over the past four decades. We start by documenting a novel stylized fact: college graduates' attitudes toward immigrants have grown more favorable over time, aligning with their increasing support for the Democratic party. Employing an ethnic enclave instrumental variable, we estimate that immigration has accelerated the realignment of collegeeducated voters to the Democratic party. We further find that failing to account for the time-varying nature of immigration's impact tends to underestimate the speed of college voters' realignment.

*JEL classification*: D72, J11, J15, J61, Z1 *Keywords*: immigration, diversity, culture, politics

<sup>\*</sup>Collegio Carlo Alberto. E-mail: christoph.albert@carloalberto.org

<sup>&</sup>lt;sup>†</sup>Department of Applied Economics, Universitat de les Illes Balears. E-mail: i.galvez@uib.es

<sup>&</sup>lt;sup>‡</sup>Department of Applied Economics, Universitat de les Illes Balears. E-mail: joseluis.groizard@uib.es

Collegio Carlo Alberto. E-mail: brett.mccully@carloalberto.org

## 1 Introduction

A tectonic realignment of educated voters towards left political parties has taken place across many Western democracies in the last 70 years, as documented by Gethin et al. (2022). Moreover, immigration has become an increasingly polarized political issue in many of those same Western democracies in recent decades, as evidenced by the centrality of immigration during the 2016 U.S. presidential campaign and the campaign for the referendum on Brexit.<sup>1</sup>

A key theory advanced to explain the realignment of educated voters posits that classconflict–centered around income redistribution–has been pushed aside by socio-cultural conflict around concepts of identity which vary by education groups (Abou-Chadi and Hix, 2021). Immigration is a focus of both types of conflict: if immigration decreases the wages of less-educated natives, the immigration debate is an extension of class conflict. Similarly, if immigrants bring their different culture with them, immigration is subject to political conflict over cultural identity. Hence, immigration may contribute to the speed of educated-voter realignment, an effect we quantify in this paper.

We start by exploring national trends in voters' views on immigration over time. To do so, we use the American National Election Study, a nationally representative survey of U.S. voters conducted regularly over the last half-century. We examine how voting patterns or attitudes towards immigration have changed across education groups over time. We show that college-educated voters express increasingly pro-immigrant attitudes over time. In particular, college-educated voters increasingly express greater support for more immigration into the United States and are less likely to believe that immigrants take jobs away from natives.

Motivated by these aggregate trends, we estimate the causal effect of immigrants on voting for Republicans across time and quantify immigration's contribution to the

 $<sup>^{1}</sup>$ Card et al. (2022) show that U.S. political parties have become increasingly polarized on immigration based on Congressional and presidential speeches since around 1965.

realignment of educated-voters to the Democrats. To do so, we leverage spatial and over-time variation in immigration, college education, and Republican votes to examine the relationship between the shift in college-educated voters to the left and the rise in immigration. In particular, we estimate a model of the effect of immigration and college education on voting for Republicans over time. To obtain causal identification of the effect of immigration, we use the shift-share ethnic enclave instrument developed by Card (2001).

Consistent with the large literature on the impact of immigration on voting outcomes (Barone et al., 2016; Becker et al., 2016; Brunner and Kuhn, 2018; Coffé et al., 2007; Dustmann et al., 2019; Edo et al., 2019; Halla et al., 2017; Harmon, 2018; Mayda et al., 2022; Otto and Steinhardt, 2014) our analysis reveals that the impact of immigration on the presidential Republican vote share has been positive over the period. Consistent with Gethin et al. (2022), our estimation also delivers the correlational-stylized fact that college-educated voters are increasingly shifting to the left. Relative to the literature, our contribution is to quantify the extent to which immigration has (causally) affected that trend in moving toward the left for college-educated voters.

Next, we test whether immigration has affected the realignment documented by Gethin et al. (2022). We find that omitting immigration from the model, as done by Gethin et al. (2022), tends to underestimate the speed of college voters' realignment to the Democrats.

We employ our estimated coefficients to answer the central empirical question of this paper: how much did immigration contribute to the realignment of college-educated voters? We compute the marginal effect of local college share on presidential Republican vote share under two scenarios. In the first scenario, we use the observed data on immigration across the U.S. In the second, we counterfactually assume there were no new immigrants arriving in the U.S. after 1980. We find that, in 2020, the college voters would have been 44% less likely to vote Republican if there had been no increase in immigration.

With the estimated effects of immigration and college share on Republican vote shares in hand, we run a second counterfactual exercise. Specifically, we maintain the number of immigrants at the 1980 level in each county and employ our model to forecast the Republican vote shares for each election. We conduct this exercise using three models: one that assumes no interaction between college education and immigration, one that assumes the interaction effect is time-invariant, and a third fully flexible model which allows the interaction effect to nonparametrically vary over time. The three models show that cutting immigration inflows to zero would have reduced the Republican vote share across all models examined. However, the inclusion or exclusion of the interaction between migration and college education significantly impacts our predictions. Notably, considering the interaction yields a twofold greater alteration in the Republican vote share compared to the model that disregards this interaction.

The remainder of the paper is organized as follows: Section 2 presents aggregate trends on voting and views on migration depending on education level in the U.S. In section 3, we conduct a causal analysis based on exogenous spatial variation in immigration. Section 4 shows counterfactual exercises. Section 5 concludes.

## 2 Examining Aggregate Trends

We start by assessing national trends in views towards immigration among the college educated relative to non-college educated voters. We use the American National Election Studies (ANES), a biennial survey conducted since 1948, which surveys about 1,500 to 3,000 likely voters in the United States. The ANES is unique in that we can observe at the individual level voting choices, voter's education, and the voter's views on immigration.

To understand how voting patterns have changed by voter's education, we estimate the following equation:

$$y_{it} = \alpha + \beta_t x_{it} + \gamma C_{it} + \varepsilon_{it} \tag{1}$$

for individual *i* in year *t* where  $y_{it}$  is a binary outcome (e.g., voting for a Republican or expressing distaste for immigration),  $x_{it}$  is a dummy equal to 1 if *i* has a college degree, and  $C_{it}$  is a vector of controls. The evolution of  $\beta_t$  is of primary interest. The control vector  $C_{it}$  consists of dummies for income percentile<sup>2</sup>, 10-year age groups, gender, religion, church attendance, Census region, employment status, and marital status. We weight observations by the ANES sampling weights.

We first document that Republicans have increasingly lost highly educated voters. We plot the estimate for the coefficient  $\beta_t$  in Figure 1. Consistent with Gethin et al. (2022), we find that Republicans have a decreasing advantage among well-educated voters over time.

Gethin et al. (2022), however, did not examine how political views on certain policy issues changed over time with respect to voter education, as they focused on voting choices. With the richness of the ANES data, we next turn to examine how the gap between college educated and non-college voters' attitudes toward immigration changed over time. The advantage of looking at voters' views is that we can better ascertain the mechanism driving educated voters' shifts in political preferences over time. Our interest is uncovering the extent to which attitudes towards immigration among college educated voters drove changes in voting patterns by education over time.

The ANES has asked several questions in recent decades regarding respondents' attitudes toward immigration. Starting in 1992, for example, respondents were asked whether immigration levels should be higher, lower, or stay the same. The left-hand panel of Figure 2 plots  $\beta_t$  (which is the conditional gap between respondents with a college degree and non-college educated voters) when the dependent variable is desiring lower immigration levels. We find that overall, college educated voters have becomes less likely than other voters to prefer lower levels of immigration.

<sup>&</sup>lt;sup>2</sup>We use the income percentiles available across all waves of the ANES, which are: 0-16, 17-33, 34-67, 68-95, 96-100, and a separate category for DK/NA/refused. The latter category accounts for about 6 percent of observations.



Figure 1: Support for Republican Presidential Candidates by College Education.

*Notes*: The figure plots the coefficients of an interaction of time dummies with a dummy indicating having college education. The dependent variable is a dummy indicating voting for a Republican president. Controls include income percentile, age, gender, Census region, employment status and marital status. Data come from the ANES.

Similarly, the right-hand panel of Figure 2 plots  $\beta_t$  for the question about the voter's belief that immigrants take jobs away from people. The dependent variable is set equal to 1 if the respondent thinks it is 'extremely', 'very', or 'somewhat' likely that immigrants take jobs from people. We find no difference between college and non-college-educated voters in the belief that immigrants take jobs away from people between 2004 and 2012. However, the presidential campaigns in 2016 and 2020 featuring Donald Trump, who made immigration a centerpiece of his run for president, correspond to college-educated voters being much less likely than other voters to believe that immigrants take jobs away from natives.

To supplement the quantitative analysis of voters' attitudes presented in this section, we also discuss Congressional and presidential policy positions on immigration over the



#### Figure 2: Survey Answers by College Education

*Notes*: The figures plot the coefficients of an interaction of time dummies with a dummy indicating having a college education. The dependent variable is a dummy indicating support for less immigration (left-hand panel) and a dummy indicating that a respondent thinks immigrants take away jobs from natives (right-hand panel). Controls include income percentile, age, gender, Census region, employment status and marital status. Data come from the ANES.

past half-century in Appendix A. Consistent with the results shown above, we discuss how the Democratic party has consistently been more pro-immigration than the Republican party, and moreover that the parties have become more polarized on immigration in recent years.

Our simple OLS results using the ANES data show suggestive trends in the gap in pro-immigrant attitudes between college and non-college educated voters. These estimates, however, lack any causal interpretation. We discuss in the next section how we estimate a causal relationship between immigration and political polarization by education level.

## 3 County-level analysis

We next explore how immigration has causally shaped the realignment of educated voters towards the Democratic party. Consistent with Gethin et al. (2022), we allow the

local share of college-educated residents to be determined endogenously. Hence, we only uncover the causal effect of *immigration* on college voters' realignment. To do so, we use county-level variation across time in the local exposure to immigrants.

#### **3.1** Empirical strategy

We leverage spatial and over-time variation in immigration to estimate the causal effect of immigration on voting over time. To do so, we estimate the following regression specification:

$$r_{ct} = \gamma_c + \gamma_t + \beta^M M_{ct} + \beta^E_t E duc_{ct} + \beta^I M_{ct} \times E duc_{ct} + \epsilon_{ct}$$
(2)

where  $r_{ct}$  is the share of votes cast in county c for the Republican candidate in election year t,  $M_{ct}$  is the immigrant population share, and  $Educ_{ct}$  is the share of college educated individuals among U.S. citizens aged 30 or above.  $\gamma_c$  and  $\gamma_t$  are county and year fixed effects.  $M_{ct}$  is the independent variable of interest. Note that we allow the effect of  $Educ_{ct}$  to vary over time, as we are interested in understanding the college-voter realignment documented by Gethin et al. (2022). As we explain later, we also estimate the same regression but split the immigrant population share between low-skilled and high-skilled immigrant shares ( $M^L$  and  $M^H$ , respectively).

Because immigrants' location decisions may be influenced by local political leanings, we instrument  $M_{ct}$  as in Mayda et al. (2022), who in turn follow Card (2001). To generate our instrument, we first impute the number of natives and immigrants in county c in year t

$$\hat{N}_{ct} = \frac{N_{c,1970}}{N_{1970}} N_t$$
 and  $\hat{I}_{ct} = \sum_j \frac{I_{c,j,1970}}{I_{j,1970}} I_{jt}$ 

where  $N_{c,1970}/N_{1970}$  is the fraction of U.S. citizens living in county c as of 1970 and  $I_{c,j,1970}/I_{j,1970}$  is the share of immigrants from origin j who live in c as of 1970.  $N_t$  and  $I_{jt}$  measure the population of natives and immigrants from j, respectively. The instrumental variable for the immigrant population share  $M_{ct}$  is then defined in terms

of the imputed population counts as

$$\hat{M}_{ct} = \frac{\hat{I}_{ct}}{\hat{I}_{ct} + \hat{N}_{ct}} \tag{3}$$

To causally identify the parameters  $\beta^M$  and  $\beta^I$ , we use instrumental variable (3) and its interaction with  $Educ_{ct}$ . Our primary goal is to evaluate the effect of local immigration on the realignment of college-educated voters documented by Gethin et al. (2022). A negative estimate of  $\beta^I$  would suggest that immigration speeds up the realignment of educated voters towards the Democratic party.

#### 3.2 Data

We collected voting data of U.S. presidential elections between 1952 and 2020 from Leip (2020). We extract both the number of votes and their percentage of the total votes cast for both the Democratic and Republican parties obtained in each of the more than 3,000 counties in the United States.

Data on the composition of the county population come from the Census 1970, 1980, 1990, 2000 and from the ACS for the years 2005 to 2020. We compute the total number of foreign-born (immigrants) and natives above the age of 18 as well as the population counts of those who are U.S. citizens and aged 30 or above by level of education. This age threshold is used to construct the share of college-educated voters. Additionally, we disaggregate the number of immigrants into skill groups based on whether they have a high school degree or not.

The smallest geographical area identified in the data are county groups in 1970 and 1980 and PUMA regions from 1990 onward. To bring the data to the 1990 county level, we use the transition matrices provided by Burchardi et al. (2019). Further, we linearly interpolate the total population, immigrant population, and college-educated population for each county in years with an election but no corresponding Census or ACS available.

#### 3.3 Empirical results

We estimate several specifications. First, we recapitulate the main finding of Gethin et al. (2022) by estimating the association over time between college-educated voters and the Republican vote share. Second, we examine how immigration has causally shifted the realignment of college-educated voters using increasingly flexible econometric specifications. Third, we (*preliminary*) explore the results when we split the immigrant population into low and high skill groups.

We start by replicating the central stylized fact of Gethin et al. (2022): that collegeeducated voters have realigned to the Democratic party in the last several decades. We do so by estimating the simplest version of equation (2) in which we only include college share as a regressor (we label this specification as Gethin et al. model). The blue dots in Figure 3 display the coefficient  $\beta_t^E$ . We find that this simple model delivers a downward trend in the correlation between college-educated voters and support for Republican votes, consistent with Gethin et al. (2022).

Next, we test whether immigration has affected this realignment. We estimate the baseline equation (2), in which we include the share of immigrants and the interaction term between the immigrant share and the share of college-educated voters. The estimated marginal effect of local college share on the Republican vote share by year using this model is depicted by the red squares in Figure 3. We define the "marginal effect" of the college share as  $\beta_t^E + \beta^I \bar{M}_t$ , where  $\bar{M}_t$  is the national average immigrant population share in year t. Note that this marginal effect only has a correlational interpretation (consistent with Gethin et al. (2022)), given that we do not instrument for the college share.

Comparing the marginal effects between the model of Gethin et al. (2022) (the blue dots) and our baseline model (the red squares), one can see that adjusting for a time invariant effect of immigration shifts the marginal effect of college downwards for each year. In 1980, the two coefficients are not statistically different, but a gap opens up in



Figure 3: Marginal effect of college share on Republican vote share over time

Notes: The figure plots the marginal effect of college share evaluated at the mean in each of the three specifications. The "Gethin et al. model" is  $r_{ct} = \gamma_c + \gamma_t + \beta_t^E E duc_{ct} + \epsilon_{ct}$  which is comparable to the specifications. The "Getinn et al. model" is  $r_{ct} = \gamma_c + \gamma_t + \beta_t Educ_{ct} + \epsilon_{ct}$  which is comparable to the specification of Getinn et al. (2022); the "Time-invariant immigration effect" model is  $r_{ct} = \gamma_c + \gamma_t + \beta^M M_{ct} + \beta_t^E Educ_{ct} + \beta^I M_{ct} \times Educ_{ct} + \epsilon_{ct}$ ; the "Time-variant immigration effect" model is  $r_{ct} = \gamma_c + \gamma_t + \beta^M M_{ct} + \beta_t^E Educ_{ct} + \beta_t^I M_{ct} \times Educ_{ct} + \epsilon_{ct}$ ; The "Time-invariant immigration by skills effect" model is  $r_{ct} = \gamma_c + \gamma_t + \beta_L^M M_{ct}^L + \beta_t^E Educ_{ct} + \beta_t^I M_{ct} \times Educ_{ct} + \epsilon_{ct}$ ; The "Time-invariant immigration by skills effect" model is  $r_{ct} = \gamma_c + \gamma_t + \beta_L^M M_{ct}^L + \beta_t^E Educ_{ct} + \beta_t^{IL} M_{ct}^L \times Educ_{ct} + \beta_t^{IL} M_{ct}^L \times Educ_{ct} + \epsilon_{ct}$ .

subsequent years. This is consistent with college educated voters having more positive views of immigration, which thus accelerates their realignment from the Republican to the Democratic party. Therefore, omitting immigration from the model, as in Gethin et al. (2022), tends to overestimate the relationship between education and voting.

We provide the regression table counterpart to the red series in Figure 3 in Table 1. In particular, in column (1) we display the two-stage least squares coefficients of  $\beta^M$ and  $\beta^I$ . The bottom panel shows that the 1st-stage F-statistic is sufficiently large for our baseline model in column 1.

As expected, we estimate a positive and significant effect of immigration on the Republican vote share. This is consistent with the large body of evidence showing that conservative political parties benefit from a rise in immigration. We also observe that the interaction term is significantly negative. This suggests that an increase in the share of immigrants reduces the impact of the college share on voting for the Republican party. The negative sign of the interaction coefficient aligns with immigration accelerating the political realignment of college-educated voters.

One concern with the baseline model of equation 2 is that the effect of the interaction term between immigrant and college shares is time-invariant. If, for example, the skill composition of immigrants changed over time (and hence the degree of labor market competition posed by immigrants changed), then the college- and immigrant-share interaction effect may change over time.

To address this concern, we employ an extended version of equation 2 that incorporates a nonparametric variation of the immigration-education interaction for each year. This allows us to estimate  $\beta_t^I$ , where the interaction coefficient is permitted to change annually.<sup>3</sup> The estimated marginal effect of education for each election year is depicted by the green dots in Figure 3. Our model suggests that immigration had a more pronounced

 $<sup>^{3}</sup>$ We also estimate a version of the model where we allow the effects of both the immigration-education interaction and the immigration share to vary each year. The predicted marginal effect of college share over time is very similar in the two estimations, but the F-statistics are much lower. Figure D.1 in the Appendix displays the results.

impact in the initial years of the sample. However, as we allow the nonparametric variation of the interaction, its effect becomes nearly negligible in the most recent elections. Thus, by relaxing the assumption that the coefficients are constant, we were able to further adjust the effect found by Gethin et al. (2022).

We show the regression coefficient  $\beta^M$  on the immigrant share term in Column (2) of Table 1. The estimated coefficient is again positive and significant. However, the first stage F-statistic is much lower and very close to the conventional weak-instruments threshold. The weaker first-stage is largely a consequence of having the number of endogenous and instrumental variables equal to the number of time periods (in our case, 11). Due to the simplicity and stronger first-stage of our baseline estimation of equation 2, we prefer our baseline specification.

We next explore how the skill composition of immigrants affects the realignment of college-educated voters. Such voters may be at greater risk from direct labor market competition from high-skilled immigrants (Doran et al., 2022) or appreciate the greater amenities from having more similarly-educated neigbors (Diamond, 2016). Additionally, college-educated voters may benefit through lower prices from an influx of low-skilled immigrants (Cortes, 2008).

To explore the effect of immigrant skill composition, we re-estimate our baseline equation 2 splitting immigrants into low- and high-skill bins. To achieve this, we categorize the immigrant population shares, denoted as  $M_{ct}$ , based on their educational attainment, distinguishing individuals who have not completed high school as low-skilled and those who have completed high school as high-skilled. To account for the varying effects of immigration on voting patterns, we replicate the regression analysis presented in column 1 of Table 1 (representing the time-invariant immigration effect) by considering separate groups of low-skilled and high-skilled immigrants, as well as an interaction term between immigrant skills and the share of college-educated individuals. This modeling approach acknowledges the well-established finding in the existing literature that the impact of

	(1)	(2)	(3)
	Time-invariant	Time-variant	Time-invariant
	immigration effect	immigration effect	immigration by skill
Share of migrants $(\beta^M)$	$0.474^{***}$	$0.639^{***}$	
	(0.0865)	(0.0927)	
Share of migrants $\times$ Educ	-2 393***		
	(0.368)		
	(0.000)		
Share of low-skilled migrants			$2.089^{***}$
-			(0.249)
Share of high-skilled migrants			-1.171***
			(0.263)
Share of low-skilled mig. $\times$ Educ			-1.528
2			(1.290)
Share of high-skilled mig. $\times$ Educ			$1.991^{***}$
			(0.530)
Time-varying effect of college share	$\checkmark$	$\checkmark$	$\checkmark$
Time-varying effect of		.(	
college share $\times$ Educ		v	
Observations	33983	33983	33983
1st-stage F-statistic	116.8	11.33	76.11

Table 1: Estimated results of the baseline and extended model

Notes: The dependent variable is the Republican vote share. Standard errors clustered at the county-level in parentheses. Each specification controls for the time-varying effect of the local college share. In column 2, we allow the effect of the interaction between the share of migrants and the college share to vary nonparametrically in each time period. In column 3 we are back to colum 1 but we split the migrant share in skills. \*, \*\*, and \*\*\* denote statistical significance at the 10%, 5%, and 1% levels, respectively.

immigration on voting outcomes can differ depending on the skill level of immigrants (see, for example, Mayda et al. (2022)). Moreover, by interacting each immigrant share by skill with the share of natives with a college education, we allow for the effect of immigration to depend on the immigrants' skills.

Our analysis confirms that low-skill migrants tend to promote support for the Republican party among voters, while high-skill migrants elicit the opposite effect, consistent with Mayda et al. (2022). We show the regression coefficients in Column 3 of Table 1. We are primarily interested in the interaction term between immigrant share by skill and the college share. We find that the interaction is positive and statistically significant for the high-skilled group of immigrants, while it is not statistically significant for the low-skilled. This implies that once we control for the skill composition of immigrants, the main results obtained in the baseline estimation change substantially. When allowing the effect of immigrants to differ by immigrant skill group, we find that immigration actually slows down the political realignment of college-educated voters. The orange diamonds of Figure 3 display the marginal effect of local native college share on voting for Republicans (i.e., the central result of Gethin et al. (2022)) when adjusting for immigrants' skills.

Last, in a supplementary analysis laid out in Appendix  $\mathbf{C}$  we leverage individual-level from the American National Election Studies to estimate the effect of local immigration on voting choices. We relegate this analysis to an appendix, however, due to the small sample size of the ANES each wave, which results in only a small number of observations per U.S. county. Overall, we find results consistent with the baseline analysis presented above, albeit with less precision.

## 4 Counterfactual analysis

In this section, we leverage the empirical model specified above (equation 2) and the estimated coefficients to conduct two simple counterfactual exercises.<sup>4</sup> In the first one, we assess the degree to which immigration contributed to the realignment of college-educated voters towards the Democratic Party documented by Gethin et al. (2022). Second, we use our model to assess how significant immigration has been in changing the share of Republican votes in the U.S. and, importantly, how that computation varies if we take into account the second-order impact that immigration had on college-educated voters.

Immigration and the realignment of college-educated voters. In our first counterfactual, we return to the central empirical question of this paper: how much did immigration contribute to the realignment of college-educated voters documented by Gethin et al. (2022)? We do so using the estimated model of equation 2. In particular, we compute the marginal effect of local college share on Republican vote share under two scenarios. In the first scenario, we use the observed data on immigration across the U.S. In the second, we construct a counterfactual immigration series in which no new immigrants arrived in the U.S. after 1980. We then compare the estimated marginal effect of college share between the actual and counterfactual marginal effects over time.

Figure 4 displays the changes in the actual and counterfactual marginal effects over time. For example, in 2020, the marginal effect of college share would have been 44% lower if there had been no increase in migration.

<sup>&</sup>lt;sup>4</sup>The analysis presented in this section relies on an estimation method that combines all immigrants together, without taking into account the specific composition of immigrant skills.



Figure 4: Marginal effect of college share, actual vs. no migration

*Notes*: The blue dots display the marginal effect of an increase in the share of college predicted by the model, given the actual number of migrants. The red dots display the marginal effect of an increase in the share of college predicted by the model if the number of migrants is fixed at its level in 1980.

**Varying the Econometric Specification** In our second counterfactual we quantify the importance of our different specifications which allow immigration to affect the realignment of college voters. We add immigration in three increasingly flexible ways to the baseline specification of Gethin et al. (2022).

To do so, we create counterfactual scenarios in which we hold the number of immigrants constant at its 1980 level and use the estimated coefficients of equation 2 to predict the Republican vote share in each election year. We repeat this exercise using three different empirical models: (1) the model of Equation 2 but where we exclude the interaction term (i.e., we set  $\beta^{I} = 0$ , the "No interaction" model); (2) the model of Equation 2 with time-invariant immigration effect (i.e. the "Time-invariant immigration effect" model from Figure 3); (3) the model of Equation 2 with time-variant immigration effect (i.e. the "Time-variant immigration effect" model in Figure 3).

Figure 5 illustrates the outcomes of our analysis. Each bar in the figure represents the disparity between the counterfactual Republican vote share, obtained by keeping the number of immigrants constant, and the actual vote share considering the observed number of immigrants. The grey, red and green bars compare the results in the model with no interaction, with time-variant and with time-invariant effects of immigration, respectively.

As expected, the three models show that the absence of the observed influx of immigrants would have resulted in a decrease in the Republican vote share. Notably, the model incorporating a time-variant immigration effect exhibits the most pronounced variations in the predicted outcomes within this counterfactual scenario. The disparities between the models are substantial, particularly evident in the context of the most recent elections in 2020. Specifically, when considering the varying impact of immigration over time, our model predicts a twofold increase in the decline of the Republican vote share in the absence of immigration (from 1 percentage point in the model without interaction to over 2 percentage points).



Figure 5: Change in Republican vote share in the counterfactual where the number of immigrants is fixed

*Notes*: Predicted difference in the Republican vote share obtained in a counterfactual scenario that keeps the number of immigrant constants and the actual vote share considering the observed number of immigrants. The grey, red, and green bars compare the results in the model with no interaction, with time-variant and with time-invariant effects of immigration, respectively.

## 5 Conclusion

Understanding why educated voters are shifting to the left (i.e., the "Brahmin" left) in developed democracies is a crucial question in political economy given the patterns uncovered by Gethin et al. (2022). In this paper, we analyze the role of immigration on the realignment of educated voters to left-of-center political parties using a broad set of county-level data over nearly a half century in the United States. We show that elevated immigration significantly affected this realignment.

### References

- Abou-Chadi, Tarik and Simon Hix, "Brahmin Left versus Merchant Right? Education, class, multiparty competition, and redistribution in Western Europe," *The British Journal of Sociology*, 2021, 72 (1), 79–92.
- Barone, Guglielmo, Alessio D'Ignazio, Guido De Blasio, and Paolo Naticchioni, "Mr. Rossi, Mr. Hu and politics. The role of immigration in shaping natives' voting behavior," *Journal of Public Economics*, 2016, 136, 1–13.
- Becker, Sascha O, Thiemo Fetzer et al., "Does migration cause extreme voting?," Center for Competitive Advantage in the Global Economy and The Economic & Social Research Council, 2016, pp. 1–54.
- Brunner, Beatrice and Andreas Kuhn, "Immigration, cultural distance and natives' attitudes towards immigrants: Evidence from Swiss voting results," *Kyklos*, 2018, 71 (1), 28–58.
- Burchardi, Konrad B, Thomas Chaney, and Tarek A Hassan, "Migrants, ancestors, and foreign investments," *Review of Economic Studies*, 2019, 86 (4), 1448–1486.
- Card, Dallas, Serina Chang, Chris Becker, Julia Mendelsohn, Rob Voigt, Leah Boustan, Ran Abramitzky, and Dan Jurafsky, "Computational analysis of 140 years of US political speeches reveals more positive but increasingly polarized framing of immigration," *Proceedings of the National Academy of Sciences*, 2022, 119 (31), e2120510119.
- Card, David, "Immigrant inflows, native outflows, and the local labor market impacts of higher immigration," *Journal of Labor Economics*, 2001, 19 (1), 22–64.
- Coffé, Hilde, Bruno Heyndels, and Jan Vermeir, "Fertile grounds for extreme right-wing parties: Explaining the Vlaams Blok's electoral success," *Electoral Studies*, 2007, 26 (1), 142–155.
- Coleman, Sarah R, The Walls Within: The Politics of Immigration in Modern America, Princeton University Press, 2021.
- Cortes, Patricia, "The effect of low-skilled immigration on US prices: evidence from CPI data," *Journal of political Economy*, 2008, *116* (3), 381–422.
- Diamond, Rebecca, "The determinants and welfare implications of US workers' diverging location choices by skill: 1980–2000," American Economic Review, 2016, 106 (3), 479–524.
- **Doran, Kirk, Alexander Gelber, and Adam Isen**, "The Effects of High-Skilled Immigration Policy on Firms: Evidence from Visa Lotteries," *Journal of Political Economy*, 2022, 130 (10), 2501–2533.

- Dustmann, Christian, Kristine Vasiljeva, and Anna Piil Damm, "Refugee migration and electoral outcomes," *Review of Economic Studies*, 2019, 86 (5), 2035–2091.
- Edo, Anthony, Yvonne Giesing, Jonathan Öztunc, and Panu Poutvaara, "Immigration and electoral support for the far-left and the far-right," *European Economic Review*, 2019, 115, 99–143.
- Gethin, Amory, Clara Martínez-Toledano, and Thomas Piketty, "Brahmin left versus merchant right: Changing political cleavages in 21 Western Democracies, 1948– 2020," *Quarterly Journal of Economics*, 2022, 137 (1), 1–48.
- Halla, Martin, Alexander F Wagner, and Josef Zweimüller, "Immigration and voting for the far right," *Journal of the European Economic Association*, 2017, 15 (6), 1341–1385.
- Harmon, Nikolaj A, "Immigration, ethnic diversity, and political outcomes: Evidence from Denmark," The Scandinavian Journal of Economics, 2018, 120 (4), 1043–1074.
- Leip, David, "Dave Leip's Atlas of US Presidential Elections," 2020.
- Mayda, Anna Maria, Giovanni Peri, and Walter Steingress, "The political impact of immigration: Evidence from the United States," *American Economic Journal: Applied Economics*, 2022, 14 (1), 358–89.
- Otto, Alkis Henri and Max Friedrich Steinhardt, "Immigration and election outcomes—Evidence from city districts in Hamburg," *Regional Science and Urban Economics*, 2014, 45, 67–79.

# Appendix

## A Political Background

Immigration has become an increasingly salient issue in American politics since the 1970s. In this section, we provide a narrative on partisan Congressional and presidential political positions towards immigration across the past half century. Our discussion below is complementary to the quantitative analysis of Congressional and presidential speeches of Card et al. (2022), who similarly find that Democrats have consistently been more pro-immigration than Republicans and that the gap between the parties has been widening in recent years.

One constant across the past five decades is that Republican legislators have disproportionately supported greater restrictions on immigration and immigrants relative to Democrats. The two parties have become significantly more polarized in their stances towards immigration since 1994, when Republicans took back the House of Representatives for the first time in four decades.

Since the 1970s, the Republican party has remained consistently more restrictive towards immigration than Democrats.<sup>5</sup> Consider the Carter administration's stance towards unauthorized immigrants' use of public resources as compared to the Reagan administration. The Carter administration supported the right of unauthorized immigrant children to attend public school Coleman (2021, p. 40), while the Reagan administration later argued the matter should be left to the states to decide Coleman (2021, p. 51).

The most significant piece of immigration legislation since 1965 was the 1986 Immigration Reform and Control Act (IRCA). While both parties had significant internal disagreement, Democrats largely supported the IRCA while Republicans were more likely to oppose it.<sup>6</sup> While signed by a Republican president, the bill which eventually

<sup>&</sup>lt;sup>5</sup>Of course, each party is not a monolith and there have been some notable dissenters at various points on immigration policy within each party.

<sup>&</sup>lt;sup>6</sup>For vote tabulations by party, see https://www.govtrack.us/congress/votes/99-1986/h872 and

became the IRCA started out as the Simpson-Mazzoli bill, which featured tough employer sanctions (supported by Reagan) and a legalization mechanism for unauthorized immigrants. All the 1984 Democratic presidential candidates campaigned against the bill on the grounds that the employer sanctions would increase discrimination against Hispanic Americans, with all candidates supporting the amnesty provisions.<sup>7</sup> While Reagan opposed the Simpson-Mazzoli bill for the 1984 presidential election, he did so trying to appeal to conservative restrictivists, and understanding that his position would likely alienate many Latino voters. Coleman (2021, p. 97)

Pro-business, pro-immigration forces remained a significant force in the Republican party throughout the 1980s and into the early 1990s. During the 1992 presidential election, President H.W. Bush and candidate Clinton hardly mentioned immigration. The only divisive immigration issue highlighted during the campaign was whether to forcibly return Haitian refugees then fleeing post-coup chaos (Bush's position) or to provide asylum hearings and temporary asylum status (Clinton's position). Coleman (2021, p. 109) While Clinton would shift to the right on immigration during his term, he and most Democrats remained more liberal towards immigration than their Republican counterparts.

The restrictivist wing of the Republican party became ascendant with the 1994 midterm elections that swept Republicans into the majority in the House of Representatives. Republican congressmen set to work on reforming and restricting welfare, hoping to obtain additional savings by cutting welfare payments to legal immigrants. While Clinton signed welfare reform into law, he did so criticizing the bill's provisions which removed legal immigrants from many welfare programs' eligibility. Furthermore, Clinton signed an executive order to blunt the worst effects of the reform on immigrants and worked with Democrats on Capitol Hill to amend some of the most egregious provisions

https://www.govtrack.us/congress/votes/99-1986/s738.

 $<sup>^{7} \</sup>rm https://www.nytimes.com/1984/05/03/us/excerpts-from-the-democratic-candidates-debate-intexas.html$ 

related to immigrants. Coleman (2021, p. 136–139)

Republican representatives also pushed hard to allow state and local law enforcement to contribute to enforcing federal immigration laws. Coleman (2021, p. 151-159)

Even when Congress jointly tilted heavily towards restricting inflows of new immigrants, such as with the 1996 immigration reform law, Republicans continued to be the more restrictivist party. For example, Republicans attempted to eliminate due process for asylum seekers without travel documents, to expand the conditions under which legal immigrants could be deport or denied public services, and, with the strong support of 1996 Republican presidential nominee Bob Dole, deny undocumented immigrant children the right to schooling.<sup>8,9</sup>

Since the 1990s, the two parties have drifted further and further away from each other on immigration. The 2006 push for comprehensive immigration reform ended with Republican congresspersons refusing to consider a bill which would grant some kind of amnesty to existing unauthorized immigrants living in the U.S.<sup>10</sup> This party polarization accelerated during the Trump administration, with Republicans almost uniformly in favor of greater border restrictions on immigration (including legal immigration) and Democrats in favor of greater rights for immigrants.

## **B** Analysis by skill

<sup>&</sup>lt;sup>8</sup>"Conferees Approve a Tough Immigration Bill." Eric Schmitt. New York Times, Sep 25, 1996.

<sup>&</sup>lt;sup>9</sup>Congressional vote margins for the 1996 immigration reform bill are uninformative since the bill was combined with a larger omnibus appropriations bills.

<sup>&</sup>lt;sup>10</sup>"G.O.P. in Senate Narrows Immigration Focus to 700-Mile Fence," Carl Hulse, *New York Times*, Sep 21, 2006.

Figure B.1: Non-parametric estimates of the effect of low-skilled and high-skilled migration on the Republican vote over time.



*Notes*: Figures (a) and (b) plot the coefficients of an interaction of time dummies with the county-level low-skilled and high-skilled migrant share, respectively. The dependent variable is the share of votes for the Republican party in presidential elections. The estimated model is the constrained model of equation (2). Regressions follow the IV strategy based on Card (2001) described in the text. Data come from the U.S. Census and ACS.

## C Analysis of Restricted-Use American National Election Studies Data

Our main analysis in Section 3 consists of exploring the aggregate county-level relationship between local immigration and county Republican vote shares. We further explore the relationship between immigration and voting by education levels by looking at individual-level data from the American National Election Studies (ANES). The ANES is a nationally representative survey of eligible voters which collects data on respondents' demographics, voting patterns, and views on a variety of political issues. The survey is conducted every other year, corresponding to federal elections. Between about 1,500 and 3,000 individuals are surveyed each wave.

The ANES allows us to see exactly which individuals' voting choices are affected by local immigration, and thereby allows us to more precisely nail down the relationship of interest. However, the increased granularity of the ANES data comes at the cost of a loss of statistical power, as we only have a small number of observations per county across all survey waves. We therefore consider this analysis as supplementary but not superior to our baseline analysis.

We estimate the effect of location immigration on Republican voting choices using the following linear probability model:

$$Vote Repub_{it} = \alpha_c + \alpha_t + \beta_{1t} M_{c(i)t} + \beta_{2t} College_{it} + \gamma X_{it} + \epsilon_{it}$$
(C.1)

where *Vote*  $Repub_{it}$  is a dummy variable equal to 1 if the respondent voted for a Republican,  $\alpha_c$  and  $\alpha_t$  are county and survey wave fixed effects,  $M_{c(i)t}$  is the number of immigrants living in *i*'s county of residence *c* at time *t* calculated from the Census and ACS, and  $College_{it}$  is a dummy variable equal to 1 if *i* has graduated college.  $X_{it}$  are a vector of controls, including all the individual-level controls described in Section 2 as well as the local share of citizens with college degrees used in the baseline analysis.

We estimate equation C.1 on a pooled sample of ANES waves between 1980 and 2020. Our estimated sample size is 32,903 respondents. We cluster standard errors at the county level.

We show our results in Figure C.1, which is comparable to Figure ??. In Figure C.1a, we plot  $\beta_{1t}$  over time. We find that local immigration increases Republican vote share, and this effect modestly declines over time. Unfortunately, due to the limited statistical power of the ANES, we do not observe a statistically significant decline in coefficients as shown in Figure ?? using county-level data.

Using the ANES, we again replicate the finding of Gethin et al. (2022) in Figure C.2. In particular, we show that college-educated voters have shifted away from the Republican party over the last several decades.

Next, as in our baseline analysis, we consider the interacted effect of local immigration

Figure C.1: Non-parametric estimates of the effect of immigration and education on Republican voting over time (American National Election Studies)



*Notes*: Figures (a) and (b) plot the coefficients of an interaction of time dummies with the county-level migrant share and the individual's college status, respectively. The dependent variable is whether the individual voted for the Republican party in presidential elections. Regressions follow the IV strategy based on Card (2001) described in the text. Data come from the restricted-use American National Election Studies.

and own-college education with the following specification:

$$Vote Repub_{it} = \alpha_c + \alpha_t + \beta_{1t} M_{c(i)t} + \beta_{2t} College_{it} + \beta_{3t} M_{c(i)t} \times College_{it} + \gamma X_{it} + \epsilon_{it} \quad (C.2)$$

Each variable is defined as in equation C.1.

We find a modest increase in the interaction coefficient over time, as shown in Figure C.2, and consistent with baseline analysis Figure ??. Again, the weak statistical power of the ANES precludes more precise statements.

Overall, we consider the ANES results to broadly support our more precise baseline findings.

## **D** Other Figures

Figure C.2: Immigration-education interaction over time  $(\beta_{3t})$  (American National Election Studies).



*Notes*: The figure plots the coefficients of an interaction term between election year dummies, the county-level migrant share and the individual's college education status. The dependent variable is a dummy for whether the individual voted for the Republican party in presidential elections. Regressions follow the IV strategy based on Card (2001) described in the text. Data come from restricted-use American National Election Studies.



Figure D.1: Marginal effect of college share on Republican vote share over time

 $\it Notes:$  The figure plots the marginal effect of college share (at the mean) in each of the three specifications.