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IMMIGRATION TO THE U.S.:  
A PROBLEM FOR THE REPUBLICANS OR THE DEMOCRATS?

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[Immigration to the U.S.: A problem for the Republicans or the Democrats?](#)

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## **ABSTRACT**

[We empirically analyze the impact of immigration to the U.S. on the share of votes to the Republicans and Democrats between 1994 and 2012. Our analysis is based on variation across states and years – using data from the Current Population Survey merged with election data – and addresses the endogeneity of immigrant flows using a novel set of instruments. On average across election types, immigration to the U.S. has a significant and negative impact on the Republican vote share, consistent with the typical view of political analysts in the U.S. This average effect – which is driven by elections in the House – works through two main channels. The impact of immigration on Republican votes in the House is negative when the share of naturalized migrants in the voting population increases. Yet, it can be positive when the share of non-citizen migrants out of the population goes up and the size of migration makes it a salient policy issue in voters' minds. These results are consistent with naturalized migrants being less likely to vote for the Republican party than native voters and with native voters' political preferences moving towards the Republican party because of high immigration of non-citizens. This second effect, however, is significant only for very high levels of immigrant presence.](#)

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“... the enormous flow of legal immigrants to the country has remade and continues to remake the nation’s electorate in favor of the Democratic Party.” (Center for Immigration Studies (CIS) Background by James G. Gimpel, April 2014)]

“Many white Americans see that America is changing, believe that immigration is driving many of the negative changes and know that one party stands largely on the side of immigrants while the other party stands largely in opposition. For many whites, this is a powerful motivation to vote Republican.” (New York Times Op Ed article, November 20, 2014)]

## **1 Introduction**

The topic of international migration and its consequences frequently occupies the headlines of newspapers and television news shows in many rich countries. Political leaders’ stand vis-a-vis this issue can be a very important determinant of their electoral success or failure. In the United States the presidential debates have focussed over time on all issues related to migration – ranging from illegal migrants to the birth right to citizenship. That migration has a defining effect on political outcomes has already been pointed out in the literature (see for example Ortega (2005) and other works discussed in Section 2) and, as noted above, is definitely taken into account by politicians. Yet, to our knowledge, no study relative to the U.S. case has looked directly and systematically at one crucial aspect of the political effect of immigrants, namely their impact on the U.S. election outcomes and specifically on the share of votes to the two main political parties (Republicans and Democrats).<sup>1</sup> Against this background, this paper contributes to the literature by analyzing the link between migration to the U.S. and the vote share for the Republican and Democratic parties in every election between 1994 and 2012. To that goal, we exploit the large variation in immigration across states and years and the corresponding electoral outcomes. We use data from the Current Population Survey merged with the National Library of Congress Election data and, relying on a new identification strategy, we estimate the causal effect of immigrants on the share of votes to the two parties.

The number and share of immigrants in the U.S. adult population and labor force have been rising steadily over the last four decades. Based on data from the U.S.

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<sup>1</sup>The only exception is a recent paper, Baerg et al. (2014), which estimates a negative impact of the share of unauthorized workers on the proportion of votes going to the Democrats in the U.S. state of Georgia, using variation across counties.

Census, there were 6.2 million foreign-born adults in the labor force in the U.S. (7.1 percent of that group) in 1980, their number grew to 10.3 million (10.1 percent) in 1990, to 15.6 million (14.4 percent) in 2000 and to 22.4 million (19.1 percent) in 2010.<sup>2</sup> Given its magnitude, immigration to the U.S. is likely to have sizable effects on its economy and society, through several different channels. Immigrants may affect native workers' opportunities in the labor market, as investigated by a large literature (see, for example the book by Borjas (2014) and the surveys by Blau and Kahn (2012) and Lewis and Peri (2014) as overviews of this literature). Immigrants are also likely to impact the destination country's government budget, by paying taxes, receiving public welfare and transfers and using public goods (see for instance Edmonston et al. (1997) and Boeri et al. (2002)). In addition, the literature points out several potential social effects of immigration on culture, social norms and on crime and security<sup>3</sup>. Finally, immigrants can also produce political changes in the destination country. The impact through the political channel is very important since it has the potential to affect the democratic support for institutions and policies in the destination country and hence to produce long lasting effects.

One crucial element to understand the effect of immigrants on vote shares is to recognize that election outcomes can be affected by immigration through two channels, captured by the presence of two different groups of immigrants. The first channel is related to the indirect political effect of immigration working through migrants' impact on existing voters, who are mainly natives. It is voters' *perceived* impact of immigrants that affects how they cast their vote – and this perceived effect is likely to be stronger the more numerous migrants are. Votes can shift towards a political party if its policies, related to migration, increase voters' utility and if voters perceive immigration as an important issue. The second channel, instead, is related to the direct political role of immigrants as voters. As they become naturalized, immigrants affect elections, to the extent that they vote differently from natives.

As far as the first (indirect) effect of immigrants is concerned, voters can perceive the local presence of immigrants as associated with local amenities or dis-amenities – such as cultural effects – or with changes in economic variables – such as wages, employment, taxes and public goods – that they care about and that parties' poli-

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<sup>2</sup>For both natives and immigrants, the sample includes wage-earning, civilian employees, age 18-64.

<sup>3</sup>Examples are Giuliano (2007), Alesina and Giuliano (2011) which show how immigrants affect the transmission of social norms. Butcher and Piehl (1998), Chalfin (2015) and Spenkuch (2013) analyze the effect of immigration on crime rates in U.S. cities.

cies can influence. These policies may be directly related to migration, like migration policy, or may be other types of government interventions. In the latter case, for example, if native voters think that immigrants generate a net fiscal transfer from them, they might be pushed to vote for the Republican party which favors less redistribution and less safety-net policies.<sup>4</sup> As far as the second (direct) effect of immigrants is concerned, instead, once they are naturalized, immigrants will also cast their vote expressing their electoral preferences, which are usually different from those of natives. This will affect the aggregate election outcome. In the U.S., where naturalization rates are high<sup>5</sup>, this second channel is likely to be important. Immigration, therefore, may have different impacts depending on the balance of immigrant citizens and non-citizens and on how strong the voting response of citizens is to their presence.

The U.S. press and media, as well as political analysts (e.g. Gimpel (2014)), have for the most part focused on the direct effect (the second described above), pointing out the potential adverse impact that migrants can have on the electoral success of the Republican party, as immigrants seem more likely to vote for the Democratic Party.<sup>6</sup> Many political commentators even see an inevitable demise of the Republican party, in the long-run, as first- and second-generation immigrants become more numerous. Our analysis confirms this prediction by showing that, on average, immigration to the U.S. has a significant and negative impact on the Republican vote share. In particular, we find this effect in the House elections but not in other types of elections (Senate, Presidential and Gubernatorial). However an important aspect of the political effect of migration, which has received less attention, is that natives' votes, too, could be affected by the increase in the share of immigrants, as mentioned above.<sup>7</sup> Our empirical analysis shows that this is the case. When we distinguish between the effect of naturalized and non-naturalized immigrants we find a significant, negative and linear effect of those naturalized on the share of Republican votes in the House elections. On the other hand, when the share of non-naturalized immigrants increases, there is a small negative or insignificant linear effect on the share of Republican votes but, if we allow for a non-linear (quadratic) effect, we actually find a positive impact for large levels of immigrants' shares (above 0.132). In other words, native voters' political preferences move towards the Republican party because of

<sup>4</sup>At the same time, if immigrants have only limited access to the welfare state, as can be the case with illegal immigrants, native voters might vote for the party in favor of redistribution and safety-net policies, if they believe that immigration is negatively affecting their incomes.

<sup>5</sup>In our data set (1994-2012), naturalized immigrants are about 40% of total immigrants.

<sup>6</sup>See first quote at the beginning of the paper.

<sup>7</sup>See second quote at the beginning of the paper.

high immigration of non-citizens. This is interesting and plausible given that, when non-naturalized immigrants – many of whom are new immigrants and some undocumented – become a large share in a state, perceptions by voters become acute, making immigration a salient feature in the voting decision of natives. Our estimates reveal that in states characterized by a very high non-naturalized immigrant share of the population (6 states in 2012: California, District of Columbia, Nevada, New Jersey, New York and Texas), the Republican vote share in House elections is positively and significantly affected by an increase in new (non-naturalized) immigrants. However, when the share of non-naturalized immigrants in the population is less than 13.2%, the impact of an increase in this share on Republican votes is null to negative. In this case, the main effect of immigration is to add voters to the electorate, who tend to vote for the Democratic party. Overall our results are consistent with the hypothesis that naturalized immigrants are less likely to vote for the Republican party than native voters, and that native voters' political preferences are shifted towards the Republicans, but only in states where the presence of non-naturalized immigrants is high. Also note that the average U.S. state is one in which the negative direct impact on Republican votes from naturalized immigrants prevails. For example, in the year 2012, the average share of non-citizen immigrants was 6.8% significantly below the 13.2% threshold value.

As mentioned above, we find that on average immigration to the U.S. has a significant and negative impact on the Republican vote share. Yet, empirical evidence from some European countries is exactly the opposite as it shows that immigrant inflows improve the electoral success of right-wing parties (see Barone et al. (2014) and Halla et al. (2012)). Our results, differentiating between citizen and non-citizen migrants, suggest one possible explanation of the difference between the European and U.S. findings. We find that the political effect of immigration crucially depends on the extent to which migrants can participate in the political process. To the extent that in Europe naturalization rates and/or political participation of immigrants are low, the indirect political effect of migration working through migrants' impact on existing voters' preferences should be the main one at work. In the U.S., where naturalization rates are large, the direct effect of immigrants on votes is sizable and dominates on average. However, when we differentiate across states/years cells according to their share of non-naturalized migrants, we also find that six states have a high enough share of non-naturalized immigrants such that this group has a positive effect on Republican votes, consistent with the European findings.<sup>8</sup>

<sup>8</sup> According to the American Community Survey (ACS), in 2008 the U.S. naturalization rate was 43%. In many European countries naturalization rates were lower in the same year, for example in

Our analysis is both theoretical and empirical. We first develop a simple model, which provides intuition about the main channels at work and which allows us to derive theory-based empirical specifications. Our empirical analysis addresses the key identification issue. A least square estimate of the correlation between votes and immigration could be biased by spurious correlation due to the fact that immigrants self-select into geographical areas – and might go where natives are more favorable to their presence. We use a novel set of instruments for our main explanatory variables, which are the overall share of migrants and, respectively, the naturalized and non-naturalized shares in a state. Shift-share instruments *à la* Card (2001) – based on the size of past settlement of immigrants from a given country of origin across U.S. states – have been widely used in the literature, based on the idea that one important determinant of migration is family and friends networks (Munshi (2003)). However, one concern that has been raised is that the past location of immigrants across destinations might be correlated with past local economic and political conditions. To the extent that these conditions are persistent and hence correlated over time, this would invalidate the exclusion restriction of shift-share instruments *à la* Card (2001). We address this concern. The unifying theme of our novel instruments is that the distance between a country of origin of immigrants and a U.S. state is likely to be an exogenous determinant of the size of settlements of immigrants from that source and, likely, not correlated with other factors affecting the political climate in the state. To construct the instrument for the overall share of immigrants in a U.S. state, we use a shift-share IV, where predicted migration shares are inversely proportional to the state’s distance from the country of origin. Similarly, to construct the instrument for the naturalized migrant share, we use data on aggregate yearly inflows of naturalized immigrants from a given country of origin and apportion these data across states according to shares that are inversely proportional to the distance measure. For the non-naturalized migrant share – which includes, especially in years after 1990, illegal migrants – we combine data on national-level yearly border apprehensions, that provide a proxy for total undocumented immigration in a year, with information on distance of each U.S. state from the U.S.–Mexico border. One can argue that the instrument for non-naturalized immigrants mainly captures the changes in the group of undocumented Mexicans and Central Americans. We think of this point as a strength of our identification. First, this is a very large and significant group among the non-naturalized immigrants. Second, this is the group that likely

Italy (14%) and in Austria (34%) (Reichel (2012)). The analysis of the difference in the political impact of migration in the U.S. vs. Europe is beyond the scope of this paper and is the focus of Mayda et al. (2015).

encourages the strongest political response of citizens in terms of their vote. After all, it is by leveraging the discomfort of citizens at the presence of large numbers of undocumented immigrants that several Republican candidates try to rally their base.

The outline of the paper is as follows. Section 2 surveys the existing literature related to this paper. In Section 3, we develop a theoretical model that characterizes the indirect effect of new migrants (through changes in existing voters' voting behavior) separately from their direct effect (through the inclusion of naturalized migrants as new voters). We then describe the data and how we construct the key variables in Section 4. In Section 5 we present, respectively, a naive and a model-based empirical specification that we use for estimation. We also discuss identification and present the main empirical results. In section 6 we calculate the effect of different policies on the vote share of the Republican party as predicted by our estimates. We also use data on immigration and voting behavior in some representative U.S. states in 2008 and 2012 to illustrate the relevance and plausibility of the estimated effects. In Section 7, we investigate potential channels through which non naturalized immigrants affect the voting behavior of existing voters. Finally, Section 8 concludes.

## 2 Related Literature

Our analysis is related to the theoretical and empirical contributions in the economics literature that analyze the effect of immigrants on voting behavior.<sup>9</sup>

A large part of the theoretical economic literature has focused on voting behavior on immigration policy as a function of the skill composition of immigrants and natives. The seminal paper in this literature is Benhabib (1996), which derives the skill composition requirements that would be imposed on potential immigrants, under majority voting, assuming that the only effect of migration is through the labor market. Ortega (2005) analyzes the trade-off arising in a dynamic version of Benhabib (1996) model in which immigrants gain the right to vote and, therefore, affect the political balance of the destination country. The arrival in the destination country of immigrants, whose skill composition depends on the existing immigration policy, alters the skilled-to-unskilled labor ratio of the work force in the destination country. This,

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<sup>9</sup>While our work is related to contributions in the political science literature on the same topic, for the sake of space our survey focuses on economics papers. Importantly, though, to our knowledge, no works in the political science literature carry out the same type of analysis as we do.



in turn, affects the current-period skill premium as well as the skill composition of next period's electorate, and thus the political balance and migration policies in the future. On the one hand, skilled (unskilled) natives prefer an immigration policy that admits unskilled (skilled) immigrants to their country because of their wage effects. On the other hand, the arrival of unskilled (skilled) immigrants potentially shifts the political equilibrium by increasing the number of unskilled (skilled) voters in the next period. These two opposite effects could produce a cycle equilibrium in which the political majority switches from one group to the other. Alternatively, a quota equilibrium could prevail in which the group in the majority – either skilled or unskilled – admits immigrants of the opposite type but limits their number through quotas, in order to retain future political power. Finally, Razin et al. (2011) focus on the joint decision of voters on immigration and redistribution policies, respectively. They emphasize how, in terms of immigration and redistribution, a democratic state would produce policies that are consistent with each other so that, when immigration is more open, natives restrict redistribution for fear of net transfers to immigrants, while when immigration is more restricted, they are willing to allow more redistribution. The theoretical models provide predictions on how natives of different skills prefer more or less immigrants, also as a function of the amount of redistribution provided by the state.

The existing empirical literature for the U.S. provides indirect evidence for the effect of immigrants on voting behavior, mainly by analyzing what determines the preferences of U.S. individuals about immigrants. For example, Scheve and Slaughter (2001) analyze the labor-market drivers of individual preferences on immigration policy – using the 1992 NES survey – and find that more-skilled respondents are significantly less likely to be anti-immigration.<sup>10</sup> Hanson et al. (2007) extend the previous analysis by accounting for the impact of public-finance considerations on U.S. migration attitudes. This paper shows that the negative impact of individual skill on anti-migration preferences is weaker in states characterized by high exposure to immigrant fiscal pressures.<sup>11</sup> Looking at similar surveys for European countries, Card et al. (2012) show that while the perception of economic gains from immigrants vary across skills of natives, it is the perception of the impact of immigrants on local

<sup>10</sup>Given that in the U.S. immigrants are on average less skilled than natives, respondents' perceptions are in line with the predictions of the multi-cone HO model (without factor-price insensitivity) and of the factor-proportions-analysis model

<sup>11</sup>For papers analyzing the labor-market and welfare-state determinants of public opinion on migration across countries, see for example Mayda (2006), Facchini and Mayda (2009) and O'rouke and Sinnott (2006)]

communities, culture and amenities that drives the policy preference of natives on immigration (stricter or looser immigration policies).<sup>12</sup>

More directly related to our work are some papers that analyze, for different European countries, how the inflow of immigrants impacts the electoral success of right-wing parties. In particular, Barone et al. (2014) empirically analyze the effect of immigration to Italy on political outcomes in the 2001, 2006 and 2008 national elections. This paper finds that the inflows of immigrants into a municipality increased the share of votes going to the centre-right party, which was more conservative on immigration issues than the centre-left one. Similarly, Halla et al. (2012) estimate the impact of immigrant inflows in Austria on the share of votes for a far-right-wing party (the Freedom Party of Austria). They find evidence of a positive and significant effect at the neighborhood level. Both papers use shift-share instruments à la Card (2001). Finally, Otto and Steinhardt (2014) analyze the impact of the share of foreign citizens on election outcomes, using variation over time across city districts in Hamburg between 1987 and 2000. The authors find evidence of a positive correlation between the district's immigrant share and the share of votes for extreme right-wing parties – with a clearly anti-immigration stand – and of a negative correlation between the district's immigrant share and the share of votes for the Green Party – which had a pro-migration position. The authors give a causal interpretation to these results based on a fixed-effects empirical strategy and additional robustness checks, which account for the endogeneity of the location decision of natives and immigrants. They do not instrument the immigrant flows.

Relative to these papers, our paper is the first to analyze separately the effect of naturalized and non naturalized immigrants. It is also the first to focus on U.S. elections, using variation across U.S. states instrumented with a distance-based proxy for immigration from different countries.

### 3 Theoretical model

In this section we present a simple model that allows us to investigate the direct and indirect effects of immigrants on parties' voting shares. Each of the two effects depends on a well identified group of immigrants. The direct effect of immigrants is

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<sup>12</sup>A related line of research looks at how U.S. politicians vote on topics related to immigration policies, as a function of characteristics of their districts. Interesting examples of this literature are Conconi et al. (2012) and Facchini and Steinhardt (2011).

due to the inclusion of new voters, i.e. citizen migrants<sup>13</sup>, who may have a different voting behavior than natives but, for several demographic characteristics, are similar to natives. Hence a change in the fraction of voting immigrants in the electorate may affect the share of Republican votes because of their different political preferences. Non-voting immigrants (who are not citizens, and often temporary or undocumented) do not affect election outcomes through this channel. The second channel is the indirect effect of new immigrants who are not citizens at first on the vote of citizens. The arrival of new (non-citizen) immigrants may induce voters to respond by altering their party preference in the polls in response to what they perceive as a threat or an opportunity.

To formalize this point, we present a very simple theoretical model that delivers a theory-based estimating equation, showing how each party's percentage of votes depends on the shares of citizen and non-citizen immigrants. Let's define the variable  $r_{it}$  as the share of votes going to the Republican party in state  $i$  in a given election in year  $t$ . The following relation holds:

$$r_{it} \equiv r_{it}^{NAT} \frac{N_{it}}{V_{it}} + r_{it}^{IMMI} \frac{CM_{it}}{V_{it}} \equiv r_{it}^{NAT} + (r_{it}^{IMMI} - r_{it}^{NAT}) \frac{CM_{it}}{V_{it}} \quad (1)$$

where the variable  $r_{it}^{NAT}$  represents the average probability that a U.S.-born individual votes for the Republican party in state  $i$  and year  $t$  and corresponds to the share of Republican voters among natives in that state and year. For each state  $i$  and year  $t$ , the variable  $N_{it}$  denotes the number of natives, the variable  $CM_{it}$  indicates the number of citizen migrants while  $V_{it}$  represents the total voting population, equal to  $N_{it} + CM_{it}$ . The term  $r_{it}^{IMMI}$  is the average probability that a citizen immigrant votes for the Republican party in state  $i$  and year  $t$ . Equation (1) implies that the presence of naturalized immigrants can affect the vote share for the Republicans if they have a different average probability than natives to vote for the Republican party ( $r_{it}^{IMMI} - r_{it}^{NAT} \neq 0$ ). If for example their propensity to vote Republican is lower than natives', i.e.  $r_{it}^{IMMI} - r_{it}^{NAT} < 0$ , possibly because the Democratic party is perceived as more friendly towards immigrants<sup>14</sup>, then equation (1) shows that a larger share of citizen immigrants in the voting population,  $\frac{CM_{it}}{V_{it}}$ , lowers the fraction of votes to the Republicans,  $r_{it}$ .

Next we assume that the probability an individual (native or immigrant) votes for

<sup>13</sup>We will also call them naturalized immigrants or voting immigrants.

<sup>14</sup>Empirical evidence by Conconi et al. (2012) suggests that indeed Democratic legislators are significantly more likely than Republicans to vote for pro-immigration policies.

the Republican party depends on a comparison of his/her expected utility if either the Republican or the Democratic party is elected. This utility is affected by the impact of the different policies that the parties will implement as well as by individual idiosyncratic preferences for each party. An easy way of describing the probability of individual  $j$  of type  $T$  (which can be native or citizen immigrant) in state  $i$  and year  $t$  of voting Republican is as a choice between the utility of two alternatives:

$$r_{j,it}^T \equiv \begin{cases} 1 & \text{if } U(I_{j,it}^D, NP_{j,it}^D, \varepsilon_{j,it}^T) < U(I_{j,it}^R, NP_{j,it}^R) \\ 0 & \text{if } U(I_{j,it}^D, NP_{j,it}^D, \varepsilon_{j,it}^T) \geq U(I_{j,it}^R, NP_{j,it}^R) \end{cases} \quad (2)$$

In expression (2),  $U$  is the utility function of an individual: We assume that it depends on her/his total income (net of taxes and inclusive of transfers and public services) which will be equal to  $I_{j,it}^D$  if the Democratic party is elected and to  $I_{j,it}^R$  if the Republican party is. It is also a function of the non-pecuniary utility of electing either party  $NP_{j,it}^D$  or  $NP_{j,it}^R$ . Non-pecuniary utility can be thought of as reflecting preferences for how the public budget should be spent (e.g. for schools or for national defense, for highways or for national parks) or preferences on policies associated with different ideologies (such as foreign policy, policy towards inequality, discrimination or diversity and so on). Different parties will generate different non pecuniary utility for different people. Finally, it depends on an idiosyncratic preference for the Democratic party  $\varepsilon_{j,it}^T$  which can be negative and varies across individuals with a normal distribution. We assume that the idiosyncratic preference for the Democratic party has average 0 for natives and average  $d \neq 0$  for citizen immigrants. In other words, both  $\varepsilon_{j,it}^N$  and  $\varepsilon_{j,it}^{CM} - d$  equal a standard normal distribution, which we denote  $\varepsilon_{j,it}$ . Linearizing the utility function  $U$  above in its arguments and taking the expected value of  $r_{j,it}^T$  over the realizations of  $\varepsilon_{j,it}$  for the natives, we obtain the expected share of votes for the Republican party by native individuals, namely :

$$\begin{aligned} r_{it}^{NAT} &= E(r_{j,it}^{NAT}) \equiv \Pr[\varepsilon_{j,it} < \alpha_1 (I_{j,it}^R - I_{j,it}^D) + \alpha_2 (NP_{j,it}^R - NP_{j,it}^D)] \\ &\equiv \Phi[\alpha_1 (I_{j,it}^R - I_{j,it}^D) + \alpha_2 (NP_{j,it}^R - NP_{j,it}^D)] \end{aligned} \quad (3)$$

In the above expression  $\Phi$  denotes the cumulative density function of a standard normal, which is strictly increasing in the arguments  $(I_{j,it}^R - I_{j,it}^D) + (NP_{j,it}^R - NP_{j,it}^D)$ . Hence, the share of natives' votes to the Republican party in state  $i$  and year  $t$  is increasing in the utility differential generated by the election of the Republican party vis-a-vis the Democratic party either through an income effect  $I_{j,it}^R - I_{j,it}^D$  or through a non-pecuniary effect  $NP_{j,it}^R - NP_{j,it}^D$ . The parameters  $\alpha_1$  and  $\alpha_2$  capture, respectively, the marginal utility of after tax income and of the non-pecuniary amenities.

The expected share of votes for the Republican party among citizen immigrants is similarly computed but has the extra term  $-d$  capturing their average idiosyncratic preference for the Democrats, as follows:

$$\begin{aligned} r_{it}^{IMMI} &= E[r_{j,it}^{IMMI}] \equiv \Pr[\varepsilon_{j,it} < \alpha_1 (I_{j,it}^R - I_{j,it}^D) + \alpha_2 (NP_{j,it}^R - NP_{j,it}^D) - d] \\ &\equiv \Phi[\alpha_1 (I_{j,it}^R - I_{j,it}^D) + \alpha_2 (NP_{j,it}^R - NP_{j,it}^D) - d] \end{aligned} \quad (4)$$

Comparing expressions (3) and (4) reveals that immigrants and natives have similar terms in determining their probability of voting for the Republican party, except for the term  $-d$ , which will induce a wedge in the probability that *similar* natives and citizen immigrants vote Republican. If naturalized immigrants have a stronger idiosyncratic preference for the Democratic party, i.e.  $d > 0$ , they will be more likely than natives to vote for the Democrats – as long as the effects on income and non-pecuniary utility are equal. In other words,  $r_{it}^{IMMI} - r_{it}^{NAT} < 0$ . Pushing our simplification a step further, we can assume that the policies of each party affect the income and non-pecuniary utility of natives and citizen immigrants in similar ways, given their broadly similar demographic characteristics. Citizen immigrants are long-term immigrants and their skill and income profile is similar to that of natives.<sup>15</sup> Hence the difference between the probability of voting Republican of, respectively, natives and citizen immigrants, can be obtained by linearizing (3) and (4) and simplifying the equal terms. This will produce the following approximation for the differential probability of voting Republican:

$$r_{it}^{IMMI} - r_{it}^{NAT} \simeq -g(d) \quad (5)$$

In expression (5), the term  $g()$  represents a linear function of  $d$  only and hence it can be considered as constant across policies.

Republicans enact policies, generate expectations and communicate messages which are different from Democrats. This shapes their effect on income and non-pecuniary amenities, as perceived by citizens. First, we posit that the perception of income and non-pecuniary effects of immigrants depends on the *recent* inflow of immigrants (as a share of the population) and note that recent immigrants are non-citizens. Voters in states that have recently experienced a large inflow of new

<sup>15</sup>The average years of education for citizen immigrants is 14.01 compared to 14.07 of natives and the average income of citizen immigrants is \$37609 in 1999 prices compared to \$34228 of natives. On the other hand, the average years of education (12.6) and the average income (\$25614) of non-citizens immigrants differs significantly from the native population

(non-citizen) immigrants as a share of the local population – denoted by  $\frac{NCM_{it}}{M_{it}+N_{it}}$  – are likely to perceive strong effects of these immigrants on their income and non-pecuniary amenities. Hence both terms are a function of the non-citizen migrant share:  $I_{j,it}(\frac{NCM_{it}}{M_{it}+N_{it}})$  and  $NP_{j,it}(\frac{NCM_{it}}{M_{it}+N_{it}})$ . This in turn affects  $I_{j,it}^R - I_{j,it}^D$  and  $NP_{j,it}^R - NP_{j,it}^D$ . Next, we assume that Republicans are associated with more restrictive immigration policies in general, therefore they also admit fewer new (non-citizen) immigrants as a share of the population. Therefore if, for example, the image of “immigrants stealing jobs and reducing wages” or “immigrants being a fiscal drain” prevails, then voters’ perception would imply  $I_{j,it}^R < 0$  and  $NP_{j,it}^R < 0$  and the Democratic party – associated with further increases in  $\frac{NCM_{it}}{M_{it}+N_{it}}$  – could be punished in the elections. On the other hand, if the perception is that recent (non-citizen) immigrants revitalize the local economy, help firms grow and pay their way, it could be that  $I_{j,it}^R > 0$  and  $NP_{j,it}^R > 0$  and the Democratic party would be favored by a large number of new immigrants through this channel.

The non-pecuniary effect of immigrants, in particular, may operate in a non-linear way. When there are few new immigrants, voters may like the diversity and variety they bring or may not consider it too relevant. Local shops, restaurants, and services may benefit from it and their small number is not perceived as a threat to local traditions. However, the perception may become negative and stronger once non-citizen immigrants grow beyond a certain share of the population, as voters might feel that their culture and local environment can be changed and threatened. Hence  $NP_{j,it}(\frac{NCM_{it}}{M_{it}+N_{it}})$  could have a concave shape, i.e. be increasing or relatively flat close to 0 and decreasing at high values of the non-citizen migrant share. Note that also  $I_{j,it}(\frac{NCM_{it}}{M_{it}+N_{it}})$  could have a concave shape if there are phenomena of crowding and saturation that reduce income of voters as a consequence of new immigrants, but only once the non-citizen migrant share passes a given threshold. By introducing this potential nonlinearity of the effect of non-citizen immigrants on income and non-pecuniary utility, we also want to capture the issue of “salience” of the topic of migration in voters’ minds. Immigration may become a salient political issue for natives only when its size is large enough and immigrant presence becomes apparent. In that case the immigration policy of each party can become a deciding factor in voting. On the other hand, migration is likely to always be a salient issue for citizen immigrants who care more about immigration policies that affect family and close friends.

Therefore the share of non-citizen immigrants can affect the utility of voters through  $I_{j,it}(\frac{NCM_{it}}{M_{it}+N_{it}})$  and  $NP_{j,it}(\frac{NCM_{it}}{M_{it}+N_{it}})$  and, as a consequence, the share of the

Republican vote. Whether this effect is negative, null or positive depends on the relative intensity of the above effects which can change, because of the described non-linearity, at different values of the share of non-citizen immigrants. Hence compacting the expression (3), we can write:

$$r_{it}^{NAT} = f_{NAT} \left( \frac{NCM_{it}}{M_{it} + N_{it}}, X_{it} \right) \quad (6)$$

where the function  $f_{NAT}(\cdot)$  captures the overall impact of new (non-citizen) immigrants and of other policy and economic factors  $X_{it}$  in state  $i$  and year  $t$ , on the probability of voting Republican, through the effect on perceived income and non-pecuniary utility. Substituting expressions (5) and (6) into the definition of  $r_{it}$  given in expression (1), we obtain:

$$r_{it} = f_{NAT} \left( \frac{NCM_{it}}{M_{it} + N_{it}}, X_{it} \right) - g(d) \frac{CM_{it}}{V_{it}} \quad (7)$$

Linearizing (7) and capturing with fixed effects a set of state ( $s_i$ ) and year ( $q_t$ ) specific factors which affect the vote share of Republicans, we can derive the following specification for  $r_{it}$ :

$$r_{it} = s_i + q_t + \beta_1 \frac{NCM_{it}}{M_{it} + N_{it}} + \beta_2 \frac{CM_{it}}{V_{it}} + \beta_x X_{it} + \varepsilon_{it} \quad (8)$$

In this specification, we are assuming a linear effect,  $\beta_1$ , of new non-citizen immigrants on the share of Republican votes. However, as mentioned above, it is important to allow for the non-linearity that captures the increased salience of immigration in elections, as the share of new immigrants increase. We can do this in the following linear-quadratic specification:

$$r_{it} = s_i + q_t + \beta_1 \frac{NCM_{it}}{M_{it} + N_{it}} + \beta_Q \left( \frac{NCM_{it}}{M_{it} + N_{it}} \right)^2 + \beta_2 \frac{CM_{it}}{V_{it}} + \beta_x X_{it} + \varepsilon_{it} \quad (9)$$

Equations (8) and (9) above are the basis for our main empirical analysis.

Finally note that the perceived effect of Republicans on voters' income can work through several channels. For example, new immigrants can be thought of, by voters, as the cause of favorable or adverse labor-market effects. According to theory, the latter ones depend on the skill composition of non-citizen immigrants relative to voters and on how skilled voters are. New immigrants are also likely to be associated

with changes in the welfare state, which can be favorable or adverse depending on how rich non-citizen migrants are relative to voters. In particular, if non-citizen migrants are poorer than voters, they are likely to be a fiscal burden. The opposite is true if they are richer than voters. The welfare-state impact of non-citizen migrants will also imply income distribution effects which depend on the type of adjustment of the welfare state to migration (see Facchini and Mayda (2009)) and how rich voters are. Finally, the perceived effect of Republicans on voters' non-pecuniary utility can be linked to the cultural effects of new (non-citizen) migrants, which are likely to depend on how different voters and migrants are in terms of language spoken, religion, historical and institutional background. We will account for these channels through which the non-citizen migrant share affects Republican votes in Section 7 below.

## 4 Data and key variables

As suggested by the model above, to analyze the electoral outcome of state  $i$  in year  $t$ , we need to analyze three groups of individuals. First is the group of natives (whose number is equal to  $N_{it}$ ) who constitute in all states the majority of voters. Second is the group of citizen immigrants who can vote and may have different electoral preference from natives. Finally is the group of non-citizen immigrants who cannot vote but whose presence may affect the vote of citizens. Thus immigrants or foreign-born, whose total number in state  $i$  and year  $t$  is  $M_{it}$ , are divided into citizens, whose number is equal to  $CM_{it}$  and non-citizens, whose number is  $NCM_{it}$ , so that  $M_{it} = NCM_{it} + CM_{it}$ . We obtain data on natives, immigrant citizens and non-citizens from the Current Population Survey (CPS). The sample period consists of the years between 1994 and 2012. We aggregate the individual-level data to the state level using the CPS sampling weights. We estimate our model at the state level since the CPS data set is not representative at a lower level of geographical disaggregation such as county or electoral district<sup>16</sup>. However, recognizing that it is important to provide results at a finer level of geographical disaggregation, we assume in Section 5 below that the effect of different groups of immigrants on the share of Republican votes, estimated at the state-level, holds at the Congressional district level. This way we can provide the magnitude of the simulated effects of immigrants on votes at this level of geography.

<sup>16</sup>Alternative data sets we could have used are the Census data – but these data are only every ten years – or the American Community Survey (ACS) data – but these data are only available from 2000 on and are yearly representative at low geographical level (such as county) only from 2005.



We call  $msh_{it}$  the immigrant share of the (working-age labor-force) population which is defined as follows:

$$msh_{it} \equiv \frac{M_{it}}{M_{it} + N_{it}} \quad (10)$$

It captures the number of foreign-born individuals (both males and females), aged 18-64, as a share of the total labor-force population of that state (aged 18-64).<sup>17</sup> This is a measure of the overall presence of foreign-born individuals in state  $i$ 's population in year  $t$ . We also define the immigrant citizen and non-citizen shares of the population,  $cmsh_{it}$  and  $ncmsh_{it}$ , which are equal to  $CM_{it}/(M_{it} + N_{it})$  and  $NCM_{it}/(M_{it} + N_{it})$ , respectively. The sum of the immigrant citizen and non-citizen shares equals  $msh_{it}$ . To investigate more directly the channel through which citizen immigrants as new voters affect the electoral vote, we also define the citizen migrants *voting* share,  $cmvotesh_{it} = CM_{it}/V_{it}$ , which is the share of citizen migrants in the voting population  $V_{it} = (N_{it} + CM_{it})$ . According to the theoretical model, it is the citizen migrants *voting* share which has an impact on Republican votes proportional to the difference in average propensity to vote Republican of native and immigrant citizens. Finally, the voting population is related to the total population by the following expression:

$$M_{it} + N_{it} = V_{it} + NCM_{it}$$

i.e., the total population is equal to the number of voters plus the number of non-citizen immigrants.

The election data are from the Congressional Quarterly data set and include presidential, congressional (House and Senate) and gubernatorial elections from 1994 to the present. Our main outcome variable is the share of votes that goes to the candidate affiliated with the Republican Party:

$$r_{it} \equiv \frac{Republican\ Votes_{it}}{AV_{it}} \quad (11)$$

$Republican\ Votes_{it}$  represents the number of people that voted for the Republican party, whereas  $AV_{it}$  is the number of votes in state  $i$  and year  $t$ .

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<sup>17</sup>Note that  $M_{it}$  excludes individuals born abroad to American parents.

## 4.1 Summary statistics

After matching the election data with the CPS data at the state-year level, the final sample contains 1306 state-year observations across four types of elections. Table 1 contains the summary statistics of the election and population data, including the control variables which will be used in the empirical analysis. The election data shows that, across all elections and years over the period 1994-2012, the average Republican vote share was 49.0 percent, while the Democratic vote share was lower, at 46.9 percent. The remaining, small, share of votes accrued to third party candidates. Figure 1 in the appendix shows a map of all U.S. states, with darker color for states with larger average Republican vote share pooling all years and elections between 1994 and 2012. The Republican vote share has been higher in states of the South and in the central United States while it has been relatively low in States of the West Coast and of New England.

Figure 2 plots the corresponding spatial distribution of immigrants in the years 1994 and 2012. California had the highest share of immigrants in both years: 28 percent in the year 1994 and 35.4 percent in 2012. New England states, as well as some southern states such as Texas, Arizona and Florida also had high shares. The states with the lowest immigration share are Kentucky in 1994 (0.4 percent) and West Virginia in 2012 (1.3 percent). Overall, the share of immigrants steadily increased over time. The nation-wide average share of immigrants in the total population was 9.1 percent in year 1994 and it rose to 17 percent in the year 2012.

The overall share of immigrants in the population combines the two groups that we want to consider separately. We see from Table 1 that about 39 percent of immigrants are citizens and the remaining 61 percent are non-citizens. The share of citizens has increased over time as the number of naturalized citizens increased by more than the number of new immigrants. Over the past decade, while the share of non-citizen immigrants in the U.S. population increased from 6.3 percent in 1994 to 9.5 percent in 2012, the share of citizen immigrants went from 2.8 percent in 1994 to 7.4 percent in 2012. As more and more citizens become naturalized, their importance in the voting population increases as well. In year 1994, the average share was 3 percent and climbed to 8.2 percent in the year 2012. The share of immigrants that are eligible to vote varies greatly across states. Kentucky has the lowest share of 0.1 percent in 1994 and California the highest with 20.3 percent in 2012. Moreover there is a strong correlation between the share of non-citizen immigrants and the share of citizen immigrants across states. Those states with large presence of citizen immigrants as a share of the voting population also had large presence of non-citizen

immigrants as a share of the population. While one may think that this correlation makes it hard to separately identify the impact of each of these two groups on voting outcomes, the correlation in the changes of these variables, which is the variation used to identify the effects, is much smaller.

In terms of the control variables that we include in the voting equation, we follow the existing literature, especially Della Vigna and Kaplan (2007) and include the share of the voting population in each education group (high school dropouts, high school graduates, some college, college graduates and more than college), the share of African Americans and Hispanics, the unemployment rate, the share of the state that is urban as well as the share of males, the marriage rate and the income level (shown in Table 1).

## 5 Empirical Analysis

### 5.1 The naive regression

Before analyzing the causal relation between different types of immigrants and electoral outcomes, we show here some simple correlations. Considering total immigrants as a share of the adult population, we analyze whether one detects a correlation in the data between this variable and the share of votes to the Republican Party. As preliminary evidence, in Figure 3 we show the scatterplot of the change between 1994 and 2012 in the fraction of Republican votes in the House of Representatives and the change in the same period in total immigrants as a share of the adult population, across states. The visual impression is clear and confirmed by the statistical significance of a regression line: there is a significant *negative* correlation between the growth in the immigrant share of the population and the Republican vote share in the House. In the scatterplot we focus on House elections since these are the elections for which we find significant effects throughout the paper. Moreover immigration policy is a federal issue and most of the important legislation on it has to be passed by the House of Representatives. A more systematic way to show the negative correlation between the overall share of immigrants and the fraction of Republican votes is to pool all types of elections (Presidential (PE), Senate (SE), House of representatives (HE) and Gubernatorial (GE)) and estimate the following specification:

$$r_{ite} = s_i + r_e + q_t + \beta_M msh_{it} + \beta_x X_{it} + \varepsilon_{ite} \quad (12)$$

where the dependent variable  $r_{ite}$  is the number of votes for the Republican party,

out of the total number of votes, in state  $i$  (50 states), year  $t$  (10 years) and election  $e$  (4 types of elections);  $msh_{it} = M_{it}/(M_{it} + N_{it})$  is the share of foreign-born individuals in state  $i$  and year  $t$ .<sup>18</sup> Controls include a vector of state fixed effects  $s_i$ ; a vector of election-type fixed effects  $r_e$ , and a vector of year fixed effects  $q_t$ . These fixed effects control for systematic differences in election outcomes across states, election types and years which capture, respectively, persistent political differences across states and year-specific or election-specific national tendencies. We also control for variables which affect election outcomes according to the existing literature (see, for example, Della Vigna and Kaplan (2007)). In particular,  $X_{it}$  is a vector of control variables for state  $i$  in year  $t$  which includes the share in the voting population of each education group (high school drop-outs, high school graduates, some college, college graduates, more than college), of African-Americans and Hispanics, of those living in urban areas, males, married individuals, the share of unemployed and, finally, the average income. Note that we define all the control variables over the population of (potential) voters in each state and year, i.e. natives plus citizen immigrants (aged 18-64, in the civilian labor force). We also estimate a regression separately for each election type, where we include the same vector of control variables as well as year and time fixed effects.

First, we estimate equation (12) with ordinary least-squares, which establishes the correlation between the immigrant share and the Republican vote share controlling for an array of confounding factors. Next, we push our “naive” regressions one step further and instrument the share of immigrants, to avoid that unobserved time-varying state characteristics might attract immigrants and at the same time shift votes away from (or in favor of) the Republican party. The instrumental-variable methodology we use is based on Card (2001) but, importantly, differs from it as we replace the past distribution of immigrants from a given origin country to a given state with the inverse measure of distance between the origin and the state. More precisely, let  $M_{ot}$  be the number of immigrants from source country  $o$  who live in the U.S. in year  $t$  and let  $N_t$  be the total number of natives in the U.S. in year  $t$ .<sup>19</sup> We then construct our shift-share instrument, that we call  $(msh_{it})_{IV}$  as follows:

<sup>18</sup>Note that the total number of votes includes those to parties other than the Republican and Democratic parties

<sup>19</sup>To address the possible concern that  $M_{ot}$  may be correlated with local conditions at the state level, we also replicate our analysis by omitting the contribution of state  $i$  to  $M_{ot}$  when constructing the value of the instrument for state  $i$ . The results are unaffected

$$(\widehat{msh}_{it})_{IV} \equiv \frac{\widehat{M}_{it}}{\widehat{M}_{it} + \widehat{N}_{it}} \quad (13)$$

where:

$$\widehat{N}_{it} = \lambda_{Ni} N_t \quad (14)$$

and

$$\widehat{M}_{it} \equiv \sum_o \lambda_{oi} M_{ot} \quad (15)$$

The terms  $\lambda_{Ni}$  and  $\lambda_{oi}$  are the constant shares that we use to “apportion” to each state  $i$  the natives and the immigrants from country  $o$ , in each year  $t$ . We simply distribute the U.S. native population ( $N_t$ ) across states proportionally to how it was distributed in 1980, based on data from the 5 percent sample of the U.S. Census (Integrated Public Use Micro Samples compiled by Ruggles et al. (2004)) and focusing on individuals in the civilian labor force, aged 18-64. This way we avoid that (potentially endogenous) mobility of natives may affect the instrument. Hence we define:

$$\lambda_{Ni} \equiv \frac{N_{i,1980}}{\sum_i N_{i,1980}} \quad (16)$$

We distribute the immigrant population from each country of origin  $o$  in year  $t$  ( $M_{ot}$ ) across states proportionally to how the U.S. native population was distributed in 1980 and, at the same time, we account for the fact that immigrants are more likely to settle in locations closer to their country of origin. Hence, the share  $\lambda_{oi}$  of migrants from country  $o$  in state  $i$  depends inversely on the logarithm of the distance between state  $i$  and the capital of the immigrants’ country of origin  $o$ ,  $d_{oi}$ , and directly on state  $i$ ’s native population in the year 1980,  $N_{i,1980}$ .<sup>20</sup> Hence, the share for state  $i$  and country of origin  $o$  is defined as follows:

$$\lambda_{oi} \equiv \frac{[N_{i,1980} / \ln(d_{oi})]}{\sum_i [N_{i,1980} / \ln(d_{oi})]} \quad (17)$$

Note that we aggregate the countries of origin of immigrants into 20 origin-country

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<sup>20</sup>To calculate the bilateral distances, we follow Mayer and Zignago (2011), i.e. we define the distance in kilometers and calculate it by the Great Circle Distance formula. We use 32.19 kilometers as inner-city distance. All data on latitudes and longitudes are from the Global Administrative Areas (GADM) database, see Hijmans et al. (2010).

groups (such as Western Europe or Eastern Africa), thus the index  $o$  in  $\lambda_{oi}$  varies across these 20 different groups

Importantly, the state by year variation of the instrument is only driven by national-level trends in the number of migrants from each origin – some origins experienced large increases in migration to the U.S. (Central Americans, Chinese/East Asians, Indians/Southwest Asians) while others experienced large declines (Western and Southern Europeans, Central Eastern Europeans) relative to earlier years – and by the geographic location of U.S. states relative to the countries of origin. The time-varying aggregate migration trends and the geographic location of a state are likely to be uncorrelated with the changes in political climate and preferences in the state. If the instrument affects the share of migrants in a state over time, we assume that this is the channel through which it affects political election outcomes.

Table 2 shows the OLS estimates of the coefficients in regression (12) including the fixed effects and all the controls. The first column pools all types of elections, while columns (2) through (6) include respectively Presidential, Senate, House and Gubernatorial. Both specifications (4) and (5) focus on House elections, but regression (4) uses the share of votes to the Republicans as dependent variable, while regression (5) uses the percentage of seats won by the Republicans. Table 3 shows the same estimates based on the 2SLS strategy. Three results emerge. First, the impact of the share of immigrants on Republican votes is negative in all estimates but for one type of election (Gubernatorial). Second, the negative estimates are significant in both OLS and IV specifications only for the House elections, while for the other elections the effects are not robust. Third the negative significant estimates in the IV are larger than in the OLS, which indicates the presence of omitted variables that, at the same time, increase immigration and the share of the Republican vote. Such omitted variables could be economic shocks that increase local business income – immigrants are attracted by booming states and higher income is associated with Republican votes – or demographic shifts of the local population – aging local population create more jobs for immigrants and more votes for the Republicans.

Concerning the control variables the results show that, on average, states with a higher share of high-school dropouts (the omitted reference group of education) tend to have a lower Republican vote share (the significance level varies across types of elections). The average income of voters does not have a significant impact in any type of election. Finally, states with higher unemployment rates are more likely to vote Democrat. Overall, these results are in line with the findings of the literature

on the determinants of elections and specifically similar to Della Vigna and Kaplan (2007).

So, to a first inspection, the overall share of immigrants has a strong and quantitatively large negative correlation with the share of Republican votes and the IV estimates suggest that such correlation is consistent with a negative causal effect. An increase of immigrants by one percentage point of adult population is associated, in the House elections, with a decrease of the Republican vote share of 1.36 percentage points, which is not significantly different from 1. Such a large and negative coefficient is consistent with a situation in which the direct effect of citizen immigrants is negative and strong and the indirect effect either works in the same direction as the direct one, or does not favor Republicans enough to offset the direct effect. In order to analyze those effects in more detail, we turn next to estimating an equation that includes, separately, the variables considered by our model.

## 5.2 The model-based estimating equation

In this section we bring to the data, respectively, the linear and the linear-quadratic specifications we derived from the model. We first estimate the models with all elections pooled and, next, we focus on House elections, which are the only ones where we found a significant correlation on average between the immigrant share and the Republican vote share, both in the OLS and in the IV regressions.

In the linear specification (8), the coefficient  $\beta_1$  represents the indirect political effect of immigration, which works through the impact of the non-citizen immigrant share. The empirical evidence from some European countries (see Barone et al. (2014), Halla et al. (2012) and Otto and Steinhardt (2014)) – where the indirect political effect of migration is more relevant than the direct one, as naturalization rates tend to be small – suggests that natives become more politically conservative when migration increases. If a similar effect takes place in the United States, the Republican vote share should increase when the fraction of non-citizen immigrants goes up, in which case we expect  $\beta_1 > 0$ . If, on the other hand, the indirect effect is not very strong on average in the U.S., we may observe  $\beta_1 = 0$ . Alternatively, the indirect political effect may become relevant only for high values of the non-citizen immigrant share, given that only then immigration becomes a visible and salient political issue for voters. If this is the case, in specification (9) we should estimate a zero or negative linear term and a positive quadratic, namely  $\beta_L \leq 0$  and  $\beta_Q > 0$ , so that a higher share of non-citizen immigrants produces a boost to the Republican

vote only when non-citizen immigrants are a large group.

In both specifications (8) and (9), the coefficient  $\beta_2$  on the variable  $cmvotesh_{it} = \frac{CM_{it}}{V_{it}}$  represents the direct political effect of migration, i.e. the difference in average voting propensity for the Republican party between naturalized immigrants and natives. According to anecdotal evidence (see for example the citation at the beginning of the paper), naturalized immigrants in the U.S. tend to vote for the Democratic party. Thus we expect to observe  $\beta_2 < 0$ .

Finally note that, in the empirical analysis below, we will focus on regressions that either pool all election types or that focus on House elections, for which we found the most robust results. One possible explanation of the latter findings is the following. In Presidential, Gubernatorial and Senate elections, very few candidates are up for vote – this is of course true in Presidential elections for which there is only one candidate per party common to all states, while in the other elections there are either one (Gubernatorial) or two (Senate) candidates per party in each state. As a result, Presidential, Gubernatorial and Senate election campaigns are more focused on the program of the individual candidate rather than on the party program and, importantly, the individual candidate’s program may differ from his/her party’s one in relation to migration. On the contrary, in House elections, there are many seats in each state – in the case of California, there are 53 seats – and therefore as many candidates for each party and state. Voters may not be as aware of the individual candidate’s program and will likely vote based on the party’s political agenda. This suggests that House elections may be more affected by the overall program of each party and may face less noise due to the individual program of the various candidates.

<sup>21</sup>

### 5.3 Instrumental Variables

Before implementing the IV strategy, we first estimate specifications (8) and (9) using OLS and report these results in Table 4: Column (1) shows the estimates pooling all elections together while the other columns focus on House elections.

In our 2SLS estimation, we use a novel set of instruments for, respectively, the citizen immigrants as a share of the voting population  $\frac{CM_{it}}{V_{it}}$  and non-citizen immi-

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<sup>21</sup>An alternative explanation might be that House candidates run a more extreme and polarizing campaign because they have to appeal to local conditions.



grants as share of the adult population  $\frac{NCM_{it}}{M_{it}+N_{it}}$ . To construct the imputed number of citizen immigrants in state  $i$  and year  $t$ ,  $\widehat{CM}_{it}$ , we apply a similar variation of the shift-share method described in section 5.1 above. In this instance, we apportion the aggregate time-varying number of citizen migrants from each origin country in the U.S. in year  $t$ , denoted as  $CM_{ot}$ , to each state  $i$  according to the share  $\lambda_{oi}$  exactly defined as in equation (17).<sup>22</sup> We also construct the imputed number of native citizens in state  $i$  and year  $t$ ,  $\widehat{N}_{it}$ , by apportioning the total national native population as in equation (14) above. Hence the shift-share instrument for citizen immigrants, as a share of the voting population, which we call  $(cmvotesh_{it})_{IV}$ , is as follows:

$$[(cmvotesh_{it})_{IV}] \equiv \frac{\widehat{CM}_{it}}{\widehat{CM}_{it} + \widehat{N}_{it}} \quad (18)$$

where:

$$\widehat{CM}_{it} = \sum_o \lambda_{oi} CM_{ot} \quad (19)$$

Similarly to (13), the imputed share (18) varies across years because of the national-level time-variation in immigration from each origin-country-group and in their naturalization rate. It varies across states because of the distance of each U.S. state from the country of origin of the immigrants. Distance from the origin affects the share of immigrants – from that country present in the state – because of mobility costs. Differently from the standard instrument based on Altonji and Card (1991), in this case the distribution of immigrants only depends on distance from the country of origin. Hence preferences of early settlers which threaten the exclusion restriction – they may have been correlated with economic and political characteristics of a state and be persistent over time – do not play any role in this instrument.

Separately we proxy non-citizen immigrants with another novel instrument. A large part of those immigrants in the last two decades is represented by the group of undocumented immigrants. Undocumented non-citizen immigrants are also quite different from natives in their demographics (less educated, younger, poorer) and they are more likely to affect the vote of citizens. Hence we construct a proxy for the inflow of undocumented immigrants to each U.S. state through the border with

<sup>22</sup>As in the shift-share instrument used for the naive specification, we address the possible concern that  $CM_{ot}$  may be correlated with local conditions at the state level and replicate our analysis by omitting the contribution of state  $i$  to  $CM_{ot}$  when constructing the value of the instrument for state  $i$ . The results are unaffected

Mexico and we use this imputation as an instrument for non-citizen immigrants. Let's call  $UM_t$  the total inflow of undocumented immigrants to the U.S. through the Mexican border in year  $t$ <sup>23</sup>. Since we do not have a measure of this flow, we use the number of apprehensions at the border with Mexico, that we call  $AP_t$ , which captures a share of all individuals who tried to cross illegally. These data are from the U.S. Border Patrol Agency. Looking at the period, which goes from 1990 to 2014, there was first a large increase in the number of apprehensions between 1990 and 2001 and, next, a long and steady decline, only inverted for a one-year increase in 2003-2004. We assume that the number of apprehensions  $AP_t$  is proportional to the number of illegal immigrants ( $AP_t = \theta UM_t$ ) who passed the border that year. If there is a certain number of individuals trying to cross the border and only a fraction (constant over time) is apprehended, then our formula is accurate. While the share of undocumented people passing the border and being apprehended can depend on several variables (economic and enforcement related), as a first approximation we consider these variables as constant over time. We then apportion the estimated number of undocumented immigrants passing the border, across U.S. states, using shares that depend inversely on the logarithm of the distance from the Mexican border,  $distbord_i$ , and directly on the state native population in 1980,  $N_{1980,i}$ . Hence the imputed share for state  $i$  is:

$$\widehat{sh}_i = \frac{N_{1980,i} / \ln(distbord)_i}{\sum_i (N_{1980,i} / \ln(distbord)_i)} \quad (20)$$

Hence, the imputed change in undocumented immigrants in state  $i$  between year  $t$  and  $t + 1$  is  $\widehat{sh}_i (AP_t) / \theta$ . We can use the latter to predict the change in non-citizen immigrants in state  $i$  between  $t$  and  $t + 1$  by running an OLS regression of the variable  $\Delta NCM_{it}$  on  $\widehat{sh}_i (AP_{t+1})$  and using the predicted values  $\Delta \widehat{NCM}_{it}$  to estimate  $\widehat{NCM}_{it} = NCM_{i,1990} + \sum_{s=1990}^t (\Delta \widehat{NCM}_{is})$  and then construct:

$$[(ncmsh_{it})_{IV}] \equiv \frac{\widehat{NCM}_{it}}{(\widehat{NCM}_{it} + \widehat{N}_{it})} \quad (21)$$

where  $\widehat{N}_{it}$  is defined as in (14). The instrument defined in (21) proxies the change in non-citizen immigrants in a state using the imputed inflow of undocumented based on the total inflows (as inferred from apprehensions) and the proximity to the Mex-

<sup>23</sup>While not all undocumented immigrants enter through the Mexican border, as some of them overstay their visa, about 80% of undocumented immigrants are Mexican or Central American. Hence our strategy focuses on this group.

ican border. This variable may capture only a part of changes in non-citizen immigrants, however if that part is a significant part of the overall changes, this strategy provides a novel way to analyze the potential impact of the yearly flows of undocumented, and their presence across states, on the vote of U.S. citizens. Finally, as an instrument for the square of the share of non-citizen immigrants, we simply square the instrument of the non-citizen immigrant share.

## 5.4 Main results

Using both OLS and IV, we estimate a significant negative effect of immigrants on the Republican vote share through the vote of citizen immigrants. As discussed above, this result is consistent with anecdotal evidence and could be explained by the fact that naturalized migrants favor a more open migration policy which would allow them to be joined by family members abroad. An alternative explanation is that migrants are often from countries where many political parties are to the left of Democrats and few are as socially conservative as Republicans, thus they are voting for the same type of ideology they grew up with.

We also find evidence of non-linear effects of the population share of non-citizen immigrants so that the marginal impact of new immigrants on the Republican vote turns positive when the share is very high, i.e. when recent immigration becomes a salient feature at the polls.<sup>24</sup> Columns (1) through (3) in Table 4 show the OLS estimates corresponding to the linear specification using data for, respectively, all elections (regression (1)) and House elections (regressions (2) and (3)). Columns (4) and (5) present the OLS estimates of the quadratic specification for House elections. While the coefficient on the share of citizen immigrants is very significant and negative in all specifications, the impact of the share of non-citizen immigrants is small and negative or non significant when entered linearly, but has a significant convex effect when entered as linear-quadratic.

Table 5 focuses on House elections only and shows the 2SLS estimates for the linear specification (columns (1) and (2)) and for the linear-quadratic specification (columns (3) and (4)). The top panel of Table 5 shows the second-stage estimates, while the bottom panel shows the first-stage estimates. At the bottom of the top panel, we include the Kleibergen-Paap F statistic, which provides an indication of

<sup>24</sup>Note that this result is consistent with the finding in Baerg et al. (2014), that the negative reaction in terms of Democratic votes to the presence of unauthorized immigrants is strongest when this presence reaches a certain threshold.

the significance of the instrument. Note that since our estimation includes robust standard errors, the standard critical values of Stock-Yogo do not apply (Stock and Yogo (2002)). Due to the lack of alternative critical values, we apply the same rule of thumb as suggested by Stock and Yogo, i.e. an F-statistic above 10 indicates that the IV is acceptable. In addition, we also test for the joint significance of endogenous regressors by including the Anderson Rubin Wald test. A p-value above 0.1 indicates that we cannot reject the null hypothesis that the instruments are jointly insignificant and thus robust to the presence of weak instruments.

One result stands out. In each specification and for each method of estimation we find strong evidence of the negative effect of citizen immigrants on the Republican vote share. Specifically, we estimate a negative and significant value for the coefficient  $\beta_2$  in all regressions. Using the share of Republican votes in the House elections, the point estimate in Table 5 is 1.75 and 1.81, but not significantly different from one (because of the large standard error). An increase in immigrant citizens as a share of voters by one percentage point decreases the share of the Republican vote by 1.75 to 1.81 percentage points. As for the indirect political effect of immigration, when we model the impact of the variable  $\frac{NCM_{it}}{M_{it}+N_{it}}$  as linear, in specification (8), the estimated coefficient is negative and (marginally) significant in column (1) but insignificant in column (2). However, in the non-linear specification, the impact of the non-citizen immigrant share is significant with a negative linear effect and a positive quadratic effect, hence it is clearly convex. This implies that, while at low values of the share of non-citizen immigrants, their impact on the share of Republican votes is likely non-significant or even negative, for high values of that share their impact turns positive. Such a convex relation between the share of non-citizen immigrants and the Republican vote share suggests that the perceptions of new migrants affect voters' behavior only when their share is large and their presence is rather conspicuous. In the next section, we will show the relation between the marginal effect of the non-citizen share on Republican votes and the initial share and calculate the threshold value at which the effect turns positive.

Thus the results in Table 5 emphasize the different effect of citizens and non-citizen immigrants. In Tables 2 and 3 we detected an overall negative association between immigrants and Republican votes. However, the estimates in Tables 4 and 5 provide a more complex picture of the political impact of migration to the U.S.. We find that, while the share of citizen immigrants is a significant boost to the Democratic party, the effect of non-citizen immigrants is somewhat more complex and non-linear. In particular new immigrants, who are mainly non-citizen immigrants,

have a negative or non-significant effect on the Republican vote share when their share is low, but a positive one at higher values of that share. These results are consistent with naturalized migrants being less likely to vote for the Republican party than native voters and with citizens' political preferences moving towards the Republican party because of high immigration, i.e. when migration is supposedly a salient issue in voters' minds.

## 6 Effect of Different Policies

To illustrate the implications of these estimates, it is useful to calculate how these coefficients map into the effects of changes in different types of immigrants on the share of Republican votes. Using the estimated coefficients of the linear specification in Table 5 ( $\beta_L = -0.80$  and  $\beta_2 = -1.81$ ), we can evaluate which one of the following policies is most beneficial/harmful for the Republican vote share<sup>25</sup>:

*1) Increase in newly arrived immigrants:* An inflow of new immigrants, typically entering the U.S. without citizenship rights (hence as non-citizens), by 1 percent of the population will have an impact equal to  $\beta_L$  on the Republican share of votes. This could be driven by a more open immigration policy that admits extra immigrants. The negative estimate of  $\beta_L$  implies that, on average, the republican party will loose 0.8 percent of the votes per percentage point increase. However, once we recognize the salient feature of non-citizen immigration, the impact on the republican vote can turn positive. Given our estimates in Table 5, column 3, the marginal effect of a 1 percent increase of non-citizen immigrants equals  $\beta_L + 2\beta_Q \frac{NCM_{it}}{N_{it} + M_{it}}$ . It is positive for values above 13.2%. Figure 4 illustrate the dependence of this effect on the share of non-citizen immigrants. As of the last presidential election, in 2012, 6 states (California, District of Columbia, Nevada, New Jersey, New York and Texas) had values larger than this threshold. At the congressional-district level, using estimates of the non-citizen migrant share based on the American Community Survey for the 114th Congress, we find that for 55 out of 434 congressional districts the impact of the above share is positive. For 26 districts the effect is not significantly different from zero and for the remaining 353 the effect is negative, see Figure 7(a). Figure 7(b) plots the geographical distribution of the impact on the Republican vote share for each Congressional-district using ( $\beta_L = -4.29$ ,  $\beta_Q = 16.27$  and  $\beta_2 = -1.75$ ). Hence for the majority of states and congressional districts, the potential positive

<sup>25</sup>The detailed derivation of the marginal effects of each policy, using the definition of the variables and shares, can be found in the Appendix 9

effect of new immigration on the Republican share does not occur at their current level of non-citizen immigrants.

2) *Pure composition (naturalization) effect*: An increase in the share of citizen immigrants, leaving the total number of immigrants and their share in the population constant. In this case, an increase of citizen immigrants by 1 percentage point of the population, accompanied by a corresponding decrease in the share of non-citizen immigrants will have an impact on the share of Republican vote equal to  $\beta_L - \beta_2 \left( \frac{M_{it} + N_{it}}{VP_{it}} \frac{N_{it}}{VP_{it}} \right)$ . This change would be achieved by an increase in the naturalization rate. Given the estimates of Table 5, the first term is negative and the second positive but  $\beta_2$  is smaller in absolute value than  $\beta_L$  and as the term  $\left( \frac{M_{it} + N_{it}}{VP_{it}} \frac{N_{it}}{VP_{it}} \right)$  is close to one, for every state in the 2012 election year, the overall effect of such policy on the Republican share is negative.

3) *Pure Scale effect*: This is an increase (decrease) in the total number of immigrants (and hence increasing in their share of total voting population) keeping the composition of citizen versus non-citizen immigrants constant. Define as  $n_{it} = CM_{it}/M_{it}$  the share of citizens among immigrants, then an increase in immigrants by 1 percentage of the population, keeping the same citizens to non-citizen ratio will have an impact equal to  $\beta_L(1 - n_{it}) + \beta_2 n_{it} \left( \frac{M_{it} + N_{it}}{VP_{it}} \right)^2$  on the share of the Republican vote. Using the estimates from Table 5, this marginal effect is negative for any U.S. state in 2012.

Summarizing the main results, we can emphasize three findings. First, all our estimates suggest that an increase in the share of naturalized immigrants increases significantly the share of vote to the democratic party. This may be because they tend to vote for the Democratic party more intensively than natives (which is the explanation suggested by our framework) but we cannot rule out that part of the effect proceeds from increases democratic preferences of natives in response to more naturalized immigrants. Second, our findings also indicate that when the share of non-citizen immigrants is large, further increases in the non-citizen migrants share can increase the share of votes to the Republicans. Through this channel, large populations of new immigrants (or non-citizen immigrants) in a state might increase the chances of electoral success of the Republican party, when the share of non-citizen migrants is high. As these immigrants do not vote, the effect we identify is consistent with the idea that voters' preferences can be moved towards a more conservative immigration stand, especially in the House elections, when these immigrants become

a large and noticeable presence in the state. Third, and final, such adverse electoral response to non-citizen immigrants is relevant only at very high population shares of non-citizen immigrants, which in 2012 only characterized 12% of electoral districts. If we focus on the combined effect through both channels, we now estimate it to be negative in all districts. However, it is important to understand that this average impact is the outcome of two opposing effects and that the relative strength of the latter ones could change over time and reverse the sign of the combined effect. In particular, to the extent that the indirect effect is considered as the relevant one, when discussing how the presence of undocumented immigrants may affect the vote of citizens, our mechanism may rationalize the frequent attempt of some republican candidates to make this a salient issue for the elections. However, we also estimate that the effect on Republican vote share in response to undocumented immigrants would be positive only in very few districts.

## 7 Channels

### 7.1 Labor-market, welfare-state and non-economic channels

Our empirical results so far show that, on average, an increase of the share of non-citizen migrants has a negative or insignificant impact on Republican votes (see regressions (1)-(2) in Table 5) when included linearly. In this section, we present evidence that the average impact of the share of non-citizen migrants on the vote of citizens is consistent with the operating of different channels. In particular, we consider three of them – the labor-market one, the welfare-state one and a non-economic one driven by a preference for people with a culture similar to one's own. We provide evidence on the operating of these channels by estimating the following specification:

$$r_{it} = s_i + q_t + \beta_1 \frac{NCM_{it}}{M_{it} + N_{it}} + \beta_2 \frac{CM_{it}}{V_{it}} + \beta_{LC} \left( \frac{NCM_{it}}{M_{it} + N_{it}} \right) \left( \frac{US_i}{S_i} \right) + \beta_{WC} \left( \frac{NCM_{it}}{M_{it} + N_{it}} \right) I_i + \beta_{NE} \left( \frac{NCM_{it}}{M_{it} + N_{it}} \right) NE_i + \beta_x X_{it} + \varepsilon_{it}$$

where  $\frac{US_i}{S_i}$  is the unskilled-to-skilled labor ratio in state  $i$  in 1994 – measured as the share of high school dropouts in the voting population –  $I_i$  is the average income of voters in state  $i$  in 1994 – where income is measured in 1994 U.S. dollars –  $NE_i$  represents a dissimilarity index (along several cultural traits) between immigrants

and natives in state  $i$  in 1994. We use beginning-of-the-period (1994) values for citizens in a state to minimize endogeneity concerns.

We show that, consistent with non-citizen immigrants being (relatively) unskilled in comparison to the native population,<sup>26</sup> in states where voters are less educated, an increase in the share of non-citizen migrants increases the Republican vote share ( $\beta_{LC} > 0$ ). This result is consistent with citizens feeling the labor-market competition of immigrants to a stronger extent, the less educated they are. Thus, an increase in the immigrant share increases the electoral success of the party less favorable to migration, i.e. the Republican party, more in states with a large population of low educated (see columns 1 to 10 in Table 6 –  $\beta_{LC}$  is significant in columns 1,3,4,5,9 and 10). We also find evidence that, controlling for education (share of low educated) in states where voters are richer, an increase in the share of non-citizen immigrants increases the Republican vote share. This result is consistent with a rational response of citizens to welfare-state channel under the tax-adjustment model (Facchini and Mayda (2009)). Non-citizen immigrants are (relatively) poor<sup>27</sup>, thus they are likely perceived as a fiscal burden, being on the receiving end of the welfare state. The tax adjustment model assumes that the welfare state adjusts to migration through a change in tax rates. Given that migrants are poorer than voters, they give rise to a deficit in the government’s budget constraint, which in the tax-adjustment model is brought back to balance through an increase in tax rates. Higher tax rates hurt all voters, but rich ones to a greater extent (because of progressive taxes). Therefore, through the welfare-state channel under the tax adjustment model, we should find that in states where voters are richer, an increase in the share of non-citizen migrants should increase the Republican vote share. Our results in Table 6, ( $\beta_{WC} > 0$  in all regressions and significant in columns 1,2,4,6, 7 and 8) is consistent with this explanation. Finally the negative and significant estimate of the main effect of the variable “Share of non-citizen immigrants” on the share of republican vote implies that, in states where voters are relatively skilled and low income, the impact of the non-citizen migrant share on Republican votes is negative and significant ( $\beta_1 < 0$ ). This is again consistent with both the labor-market channel and with the welfare-state channel under the tax adjustment model. Educated voters do not perceive to be in competition with immigrants in the labor market and, if their income is not too high, they will not be as affected by increases in tax rates. Thus the response of

<sup>26</sup>Over the considered period, the average number of years of education of non-citizens immigrants was 12.6 while it was 14.1 for the voting population.

<sup>27</sup>In the period we analyze, the average income at constant 1999 prices is 25614 USD for non-citizen migrants compared to 34228 USD for the voting population.



skilled and lower income voters to immigrants will decrease the electoral success of the Republican party. All these results, on both economic channels, produce a picture of the perceived economic impact of migration which matches well the evidence from the literature on individual attitudes towards immigrants (see Scheve and Slaughter (2001), Hanson et al. (2007), Mayda (2006), and Facchini and Mayda (2009)).

Note that, at the individual level, skill and income tend to be positively correlated, therefore the labor-market and welfare-state channels (under the tax-adjustment model) imply opposite effects. For example, the very same skilled and rich Californians will welcome non-citizen migrants, because of their (perceived) labor-market effects, and oppose them, because of their (perceived) welfare-state effects. These effects working in opposite directions could explain why the impact of the non-citizen migrant share is small or not significant in the linear specification.

Finally, we analyze the non-economic channel by introducing several measures of cultural dissimilarity between immigrants and natives and interacting each of them with the non-citizen migrant share. The measures we consider focus on, respectively, language, religious and historical differences (see columns 3 through 8, Table 6) – by historical differences we mean lack of a common colonial relationship. We also average these measures into a composite one (see columns 9 and 10). The different measures of cultural differences deliver the same message captured by the coefficient  $\beta_{NE}$ , which is always positive and often significant: Cultural dissimilarity with immigrants pushes votes to the Republican party, the higher is the non-citizen migrant share.

## 7.2 Participation channel

Immigrants may also affect the decision of voters to participate in an election, particularly in states where the immigrant population changed a lot. Some of the effects attributed to the direct and indirect channel could be due to attracting or discouraging some marginal voters. In particular if the main effect of citizen immigrants is their own vote, while the main impact of non-citizen immigrants is in altering the vote behavior of citizens we should observe such differential impact on voting turnout. For this reason, we consider an additional specification, where we investigate the impact of citizen and non-citizen immigrants on the voter turnout. We expect that, as the share of non-citizen immigrants increases, their indirect effect may become stronger as they affect voter's turnout. To the contrary the presence of citizen immigrants should not affect citizens turnout much. To shed light on this

hypothesis, we estimate the following regression:

$$VT_{it} = s_i + q_t + \beta_1 \frac{NCM_{it}}{M_{it} + N_{it}} + \beta_2 \frac{CM_{it}}{V_{it}} + \beta_x X_{it} + \varepsilon_{it} \quad (22)$$

where the dependent variable, Voter Turnout  $VT_{it}$  in state  $i$  at time  $t$ , is defined as the ratio of the number of actual votes divided by the eligible voting population. Note that the eligible voting population excludes non-citizen immigrants, prisoners, people on probation as well as people on parole from the voting age population, i.e. everyone residing in the United States, age 18 and older, as defined by the Census Bureau.<sup>28</sup> The independent regressors are the same variables as in the previous regression specification. To account for the endogeneity of immigration on election participation, we estimate equation 22 via 2SLS.

The results in Table 7 show the linear and non-linear results. In the linear specification, Column (1), voter turnout increases in the share of non-citizen immigrants by 0.8 percent, while the effect of citizen immigrants is not significant. Turning the attention to the non-linear specification, the results in Column (2) show that non-citizen immigrants increase the voter turnout at a declining rate. Figure 6 plots the marginal effects of 1 percentage point increase of the share of non-citizen immigrants on the Voter Turnout. In the case of California, the state with the highest share of non-citizen immigrants in the year 2012 (18%), the marginal effect can even be negative. On the other hand, in all other states the share of non-citizen immigrants has a positive impact on voters participation. Overall, our results are consistent with the view that higher shares of non-citizen immigrants spur election participation of natives, while having no effect on the participation of citizen immigrants.

## 8 Conclusion

Looking at the debate surrounding immigration policy reform in the U.S., one message is clear: For the most part Republicans are hesitant to push forward with migration policy reforms, especially those that would give a path to citizenship to currently undocumented immigrants. In addition, in electoral times, their average attitude towards migrants is to talk “tough” about the presence of undocumented immigrants. In this paper, we analyze the impact of immigrants on the vote to the Republican party and find some regularities that may help understand this politi-

<sup>28</sup>The voter turnout is public available data compiled by McDonald (2002) and freely available at <http://www.electproject.org/>

cal behavior. Political analysts often refer to the pro-Democrat electoral behavior of naturalized immigrants (and second-generation ones) to explain the reluctance of the Republican Party to push forward with migration policy reform. However, we note that this view is inconsistent with recent research based on European data showing that, actually, high immigrant shares might be driving votes towards conservative parties, which promise a reduction in immigration. We shed light on the difference between the European findings and the views of U.S. political analysts by separately considering two groups of immigrants and their effects.

Our results lead us to two conclusions. First, non-citizen/undocumented immigrants are both the enemy and the *raison d'être* of some politicians: right-wing parties in Europe and vocal anti-immigration Republicans in the U.S. flourish in localities and times characterized by high non-citizen immigrant share. Focusing on the U.S., Republicans can gain votes from (non-citizen/undocumented) migrants as their presence seem to make U.S. citizen voters more conservative. Second, the latter finding is consistent with Republicans talking tough about migration during electoral times. However we note that the political returns to talking tough on migration by Republicans may be limited since we find that the non-citizen migrant share has a positive impact on Republicans' political success only when this share is high, which presumably makes the topic of migration salient in voters' minds or increases the concern of citizens. Based on data from 2012, the year of the last presidential election, six states (California, District of Columbia, Nevada, New Jersey, New York and Texas) had values of the non-citizen migrant share high enough to make its impact positive. As we only found the effect to be present in House elections, however, it is more meaningful to look at congressional districts, rather than states. At the Congressional-district level, using estimates of the non-citizen migrant share based on the American Community Survey for the 114th Congress, we find that only 55 out of 434 Congressional districts (less than 13% of them) had large enough non-citizen share to produce a positive impact on the Republican vote.

## References

- ALESINA, A. AND P. GIULIANO (2011): “Family ties and political participation,” *Journal of the European Economic Association*, 9, 817–839.
- ALTONJI, J. G. AND D. CARD (1991): “The effects of immigration on the labor market outcomes of less-skilled natives,” in *Immigration, trade, and the labor market*, University of Chicago Press, 201–234.
- BAERG, N., J. L. HOTCHKISS, AND M. QUISPE-AGNOLI (2014): “Unauthorized Immigration and Electoral Outcomes,” *Andrew Young School of Policy Studies Research Paper Series*.
- BARONE, G., G. DE BLASIO, AND P. NATICCHIONI (2014): “Mr. Rossi, Mr. Hu and Politics: The Role of Immigration in Shaping Natives’ Political Preferences,” *IZA Discussion Paper*, 8228.
- BENHABIB, J. (1996): “On the political economy of immigration,” *European Economic Review*, 40, 1737–1743.
- BLAU, F. D. AND L. M. KAHN (2012): “Immigration and the Distribution of Incomes,” Tech. rep., National Bureau of Economic Research.
- BOERI, T., G. HANSON, AND B. MCCORMICK (2002): *Immigration policy and the welfare system: a report for the Fondazione Rodolfo De Benedetti*, Oxford University Press.
- BORJAS, G. J. (2014): *Immigration economics*, Harvard University Press.
- BUTCHER, K. F. AND A. M. PIEHL (1998): “Recent immigrants: Unexpected implications for crime and incarceration,” *Industrial & Labor Relations Review Labor Relations Review*, 51, 654–679.
- CARD, D. (2001): “Immigrant Inflows, Native Outflows and the Local Labor Market Impacts of Higher Immigration,” Tech. rep., Journal of Labor Economics.
- CARD, D., C. DUSTMANN, AND I. PRESTON (2012): “Immigration, wages, and compositional amenities,” *Journal of the European Economic Association*, 10, 78–119.
- CHALFIN, A. (2015): “The Long-Run Effect of Mexican Immigration on Crime in U.S. Cities: Evidence from Variation in Mexican Fertility Rates,” *American Economic Review, Papers & Proceedings*.

- CONCONI, P., G. FACCHINI, M. F. STEINHARDT, AND M. ZANARDI (2012): "The political economy of trade and migration: Evidence from the US Congress,".
- DELLA VIGNA, S. AND E. KAPLAN (2007): "The Fox News Effect: Media Bias and Voting," *Quarterly Journal of Economics*, 122, 1187–1234.
- EDMONSTON, B., J. P. SMITH, ET AL. (1997): *The New Americans:: Economic, Demographic, and Fiscal Effects of Immigration*, National Academies Press.
- FACCHINI, G. AND A. M. MAYDA (2009): "Does the welfare state affect individual attitudes toward immigrants? Evidence across countries," *The review of economics and statistics*, 91, 295–314.
- FACCHINI, G. AND M. F. STEINHARDT (2011): "What drives US immigration policy? Evidence from congressional roll call votes," *Journal of Public Economics*, 95, 734–743.
- GIMPEL, J. G. (2014): "Immigration's Impact on Republican Political Prospects, 1980 to 2012," *Center of Immigration Studies Report*.
- GIULIANO, P. (2007): "Living arrangements in western europe: Does cultural origin matter?" *Journal of the European Economic Association*, 5, 927–952.
- HALLA, M., A. F. WAGNER, AND J. ZWEIMÜLLER (2012): "Does Immigration into Their Neighborhoods Incline Voters Toward the Extreme Right? The Case of the Freedom Party of Austria," *IZA Discussion Paper*, 6575.
- HANSON, G. H., K. SCHEVE, AND M. J. SLAUGHTER (2007): "Public finance and individual preferences over globalization strategies," *Economics & Politics*, 19, 1–33.
- HJLMANS, R., N. GARCIA, AND J. WIECZOREK (2010): "GADM: database of global administrative areas,".
- LEWIS, E. AND G. PERI (2014): "Immigration and the Economy of Cities and Regions," Tech. rep., National Bureau of Economic Research.
- MAYDA, A., G. PERI, AND W. STEINGRESS (2015): "The political impact of migration: A Cross-Country Perspective," *mimeo*.
- MAYDA, A. M. (2006): "Who is against immigration? A cross-country investigation of individual attitudes toward immigrants," *The Review of Economics and Statistics*, 88, 510–530.

- MAYER, T. AND S. ZIGNAGO (2011): "Notes on CEPII's distances measures: The GeoDist database,"
- MCDONALD, M. P. (2002): "The turnout rate among eligible voters in the states, 1980–2000," *State Politics & Policy Quarterly*, 2, 199–212.
- MUNSHI, K. (2003): "Networks in the modern economy: Mexican migrants in the US labor market," *The Quarterly Journal of Economics*, 549–599.
- O'ROURKE, K. H. AND R. SINNOTT (2006): "The determinants of individual attitudes towards immigration," *European Journal of Political Economy*, 22, 838–861.
- ORTEGA, F. (2005): "Immigration quotas and skill upgrading," *Journal of Public Economics*, 89, 1841–1863.
- OTTO, A. H. AND M. F. STEINHARDT (2014): "Immigration and election outcomes: Evidence from city districts in Hamburg," *Regional Science and Urban Economics*, 45, 67–79.
- RAZIN, A., E. SADKA, AND B. SUWANKIRI (2011): "Migration and the welfare state," *Political economy formation*, MIT Press (Cambridge).
- REICHEL, D. (2012): "Regulating Political Incorporation of Immigrants – Naturalisation Rates in Europe," *ICMPD Working Paper*, 4.
- RUGGLES, S., M. SOBEK, T. ALEXANDER, C. A. FITCH, R. GOEKEN, P. K. HALL, M. KING, AND C. RONNANDER (2004): "Integrated Public Use Microdata Series (IPUMS): Version 3.0," *Minneapolis, MN: Minnesota Population Center*. Available at: [http://www.ipums.org/her, GA \(1966\).](http://www.ipums.org/her, GA (1966).)
- SCHEVE, K. F. AND M. J. SLAUGHTER (2001): "Labor market competition and individual preferences over immigration policy," *Review of Economics and Statistics*, 83, 133–145.
- SPENKUCH, J. L. (2013): "Understanding the impact of immigration on crime," *American law and economics review*.
- STOCK, J. H. AND M. YOGO (2002): "Testing for weak instruments in linear IV regression,"

## 9 Appendix

This section calculates the derivatives for the different policy experiments.

1) **Increase in newly arrived immigrants:** An inflow of new immigrants, typically entering the U.S. without citizenship rights (hence as non-citizens), by 1 percent of the voting population will have an impact equal to

$$\frac{\frac{\partial R_{ijt}}{V_{ijt}}}{\frac{\partial \frac{MN_{it}}{N_{it}+M_{it}}}} \equiv \beta_I$$

under the constraint that  $\partial M_{it} = \partial NCM_{it}$ ,  $\partial M_{it} = 0$  and  $\partial N_{it} = 0$ .

2) **Pure composition effect:** This is an increase in the share of citizen immigrants, leaving the total number of immigrants constant and hence their share of the population also constant.

$$\frac{\frac{\partial R_{ijt}}{V_{ijt}}}{\frac{\partial \frac{CM_{it}}{M_{it}+N_{it}}}} \equiv -\beta_L + \beta_I \left( \frac{M_{it}+N_{it}}{VP_{it}} \frac{N_{it}}{VP_{it}} \right)$$

under the constraint that  $\partial CM_{it} = -\partial NCM_{it}$ ,  $\partial M_{it} = 0$  and  $\partial N_{it} = 0$ .

**Proof**

$$\frac{\frac{\partial NCM_{it}}{M_{it}+N_{it}}}{\frac{\partial \frac{CM_{it}}{M_{it}+N_{it}}}} \equiv \frac{\left( \frac{\partial NCM_{it}}{M_{it}+N_{it}} \frac{NCM_{it}}{(M_{it}+N_{it})^2} \right)}{\left( \frac{\partial CM_{it}}{M_{it}+N_{it}} \frac{CM_{it}}{(M_{it}+N_{it})^2} \right)}$$

which can be simplified under to

$$\frac{\frac{\partial NCM_{it}}{M_{it}+N_{it}}}{\frac{\partial \frac{CM_{it}}{M_{it}+N_{it}}}} \equiv -1$$

because  $\partial M_{it} = 0$  and  $\partial CM_{it} = \partial NCM_{it}$ . Similar, the derivative for the third term equals

$$\frac{\frac{\partial \frac{CM_{it}}{CM_{it}+N_{it}}}}{\frac{\partial \frac{CM_{it}}{M_{it}+N_{it}}}} \equiv \frac{\left( \frac{\partial CM_{it}}{CM_{it}+N_{it}} \frac{CM_{it}}{(CM_{it}+N_{it})^2} \right)}{\left( \frac{\partial CM_{it}}{M_{it}+N_{it}} \right)}$$

which we can simplify to

$$\equiv \left( \frac{M_{it} + N_{it}}{CM_{it} + N_{it}} \right) \left( 1 - \frac{CM_{it}}{CM_{it} + N_{it}} \right) \frac{\partial CM_{it}}{\partial CM_{it}}$$

and using the fact  $CM_{it} + N_{it} = VP_{it}$ , we finally get:

$$\equiv \left( \frac{M_{it} + N_{it}}{VP_{it}} \right) \left( \frac{N_{it}}{VP_{it}} \right)$$

3) **Pure Scale effect:** This is an increase in the total number of immigrants keeping the composition Citizen/Non-citizen constant.

$$\frac{\partial \frac{R_{ijt}}{V_{ijt}}}{\partial \frac{M_{it}}{M_{it} + N_{it}}} \equiv \beta_L(1 - n_{it}) + \beta_2 n_{it} \left( \frac{M_{it} + N_{it}}{VP_{it}} \right)^2$$

where the share of non-citizens immigrants  $n_{it} \equiv \frac{CM_{it}}{M_{it}}$  is constant, i.e.  $\partial n_{it} \equiv 0$ .

Proof:

$$\frac{\partial \frac{NCM_{it}}{M_{it} + N_{it}}}{\partial \frac{M_{it}}{M_{it} + N_{it}}} \equiv \frac{\left( \frac{\partial NCM_{it}}{M_{it} + N_{it}} - \frac{NCM_{it} \partial M_{it}}{(M_{it} + N_{it})^2} \right)}{\left( \frac{1}{M_{it} + N_{it}} - \frac{M_{it}}{(M_{it} + N_{it})^2} \right) \partial M_{it}}$$

because  $\partial N_{it} = 0$ . Using the fact that  $NCM_{it} = (1 - n_{it})M_{it}$  and  $\partial CM_{it} \equiv n_{it} \partial M_{it}$ , we can substitute

$$\equiv \frac{\left( \left( (1 - n_{it}) - \frac{(1 - n_{it})M_{it}}{(M_{it} + N_{it})} \right) \partial M_{it} \right)}{\left( \left( 1 - \frac{M_{it}}{(M_{it} + N_{it})} \right) \right) \partial M_{it}}$$

and simplify to

$$\equiv (1 - n_{it})$$

□

Similarly, the derivative for the third term is:

$$\frac{\partial \frac{CM_{it}}{CM_{it} + N_{it}}}{\partial \frac{M_{it}}{M_{it} + N_{it}}} \equiv \frac{\left( \frac{1}{CM_{it} + N_{it}} - \frac{CM_{it}}{(CM_{it} + N_{it})^2} \right) \partial CM_{it}}{\left( \frac{1}{M_{it} + N_{it}} - \frac{M_{it}}{(M_{it} + N_{it})^2} \right) \partial M_{it}}$$

which we can simplify to



$$\equiv \beta_2 \left( \frac{M_{it} + N_{it}}{CM_{it} + N_{it}} \right) \left( \frac{N_{it}}{\frac{CM_{it} + N_{it}}{N_{it}}}} \right) \frac{\partial CM_{it}}{\partial M_{it}}$$

and using the fact  $\partial CM_{it} \equiv n_{it} \partial M_{it}$  and  $CM_{it} + N_{it} \equiv VP_{it}$ , we finally get:

$$\equiv n_{it} \left( \frac{M_{it} + N_{it}}{VP_{it}} \right)^2$$

## Tables

**Table 1: Summary statistics**

		Obs.	Mean	Std. Dev.	Min	Max
<b>Election data</b>						
	Republican vote share	1306	49.0	12.5	0.0	100.0
	Democrat vote share	1306	46.9	13.1	0.0	92.5
<b>House Election</b>						
	Republican vote share	500	48.6	10.7	0.0	81.6
	Democrat vote share	500	48.1	11.4	0.0	87.8
<b>Senate Election</b>						
	Republican vote share	334	47.5	14.1	0.0	100.0
	Democrat vote share	333	48.6	14.6	0.0	80.0
<b>Presidential Election</b>						
	Republican vote share	255	46.9	10.1	6.5	72.8
	Democrat vote share	255	49.9	9.8	24.8	92.5
<b>Gubernatorial Election</b>						
	Republican vote share	217	49.3	10.8	18.7	79.2
	Democrat vote share	217	45.7	11.3	0.0	74.0
<b>Demographic data</b>						
	Share of immigrants	1306	8.9	7.6	0.4	36.1
	Share of non-citizen immigrants	1306	5.4	4.5	0.0	22.4
	Share of citizen immigrants in voting population	1306	4.2	4.5	0.1	25.6
	HS dropouts	1306	8.1	2.7	3.1	17.9
	HS graduates	1306	32.6	4.8	16.0	47.5
	Some college	1306	21.3	3.5	9.7	34.2
	College graduates	1306	29.0	4.9	14.6	44.7
	More than college	1306	9.0	2.9	3.6	35.7
	African American	1306	9.8	9.8	0.0	62.3
	Hispanic	1306	3.6	6.1	0.0	44.4
	Share of urban population	1306	51.5	28.7	0.0	100.0
	Average income	1306	34243	5258	22313	52464
	Unskilled to Skilled ratio	1306	11.17	3.94	5.56	21.06
	Males	1306	52.3	1.5	46.0	57.6
	Married	1306	58.3	4.3	24.7	70.1
	Unemployment rate	1306	5.6%	2.1%	1.3%	14.2%

**Note:** The electoral variables are from the Congressional Quarterly data set, while the Demographic data are from the CPS. The averages, standard deviations and other statistics are taken across 50 states and all years between 1994 and 2012.

**Table 2: Republican vote share and immigrant share**

OLS estimates, all elections 1994-2012

	(1)	(2)	(3)	(4)	(5)	(6)
Election Types	Pooled	PE	SE	HE	HE	GE
Share of Immigrants	-0.385** [0.160]	-0.183 [0.125]	-0.588* [0.344]	-0.686*** [0.179]	-2.097*** [0.544]	0.820 [0.537]
<b>Other Controls:</b>						
Share of HS graduates	0.492** [0.236]	0.140 [0.202]	0.576 [0.566]	0.747*** [0.259]	1.972** [0.797]	0.699 [0.990]
Share of some college	0.485** [0.242]	0.190 [0.191]	0.948 [0.584]	0.641** [0.269]	2.286*** [0.710]	0.482 [0.978]
Share of college graduates	0.659*** [0.249]	0.254 [0.204]	0.739 [0.592]	0.747*** [0.271]	2.393*** [0.708]	0.489 [0.939]
Share of more than college	0.722** [0.315]	0.186 [0.211]	2.163** [0.885]	0.454 [0.344]	1.318 [0.928]	1.959 [1.185]
Share of African American	0.0208 [0.229]	0.257 [0.156]	0.0973 [0.579]	-0.0425 [0.282]	-0.556 [0.748]	0.257 [0.769]
Share of Hispanics	0.0499 [0.0612]	-0.124*** [0.0437]	0.141 [0.110]	0.0990 [0.0606]	0.360* [0.195]	0.108 [0.445]
Share of urban population	0.0584 [0.0454]	0.130*** [0.0357]	-0.0392 [0.126]	0.157*** [0.0518]	0.0340 [0.154]	-0.0603 [0.117]
Share of unemployed	-0.489* [0.267]	-0.301* [0.167]	-0.441 [0.661]	-0.520** [0.250]	-1.951** [0.784]	0.153 [1.080]
Share of males	0.157 [0.278]	0.214 [0.172]	-1.339** [0.667]	0.398 [0.262]	1.064 [0.824]	2.884*** [0.940]
Share of married	-0.225 [0.140]	-0.0623 [0.105]	0.0775 [0.337]	-0.426*** [0.153]	-0.620 [0.472]	-0.425 [0.390]
Voter income	0.102 [0.202]	-0.0595 [0.119]	-0.0978 [0.463]	0.176 [0.206]	0.600 [0.763]	-0.107 [0.751]
Constant	0.181 [0.265]	0.190 [0.195]	0.645 [0.671]	-0.0114 [0.276]	-1.217 [0.778]	-1.346 [1.047]
State fixed effects	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes
Observations	1,306	255	334	500	500	217
R-squared	0.518	0.961	0.638	0.802	0.728	0.444

**Note:** With the exception of Column (5), the dependent variable is the Republican vote share. The dependent variable in Column (5) is the share of seats obtained by the Republican party. We distinguish between four types of elections: Presidential election (PE), Senate elections (SE), House elections (HE) and Gubernatorial elections (GE). Sample period is 1994 to 2012. Each regression is weighted by the population of the state. All regressions include state as well as year fixed effects. Robust standard errors in parentheses: \*\*\*, \*\*, \* indicate the statistically significant difference from zero at the 1%, 5% and 10% levels respectively.

**Table 3: IV: Republican vote share and immigrant share**

2SLS estimates, all elections 1994-2012

	(1)	(2)	(3)	(4)	(5)	(6)
Election Types	Pooled	PE	SE	HE	HE	GE
Share of Immigrants	-0.0808 [0.488]	-1.058* [0.561]	-0.359 [0.797]	-1.362** [0.540]	-6.816*** [1.951]	2.782 [1.673]
<b>Other Controls</b>						
Share of HS graduates	0.549** [0.240]	0.107 [0.190]	0.724 [0.536]	0.662*** [0.249]	1.380* [0.839]	1.403 [0.975]
Share of some college	0.535** [0.245]	0.182 [0.176]	1.030* [0.533]	0.574** [0.262]	1.818** [0.744]	1.308 [1.012]
Share of college graduates	0.697*** [0.247]	0.286 [0.210]	0.763 [0.531]	0.701*** [0.264]	2.067*** [0.768]	1.224 [0.974]
Share of more than college	0.732** [0.306]	0.289 [0.213]	2.206*** [0.794]	0.447 [0.325]	1.268 [0.954]	2.750** [1.204]
Share of African American	0.0215 [0.223]	0.199 [0.148]	0.0590 [0.523]	-0.0413 [0.268]	-0.547 [0.806]	0.452 [0.681]
Share of Hispanics	0.0302 [0.0629]	-0.0772 [0.0604]	0.0711 [0.120]	0.133** [0.0654]	0.598** [0.243]	-0.0146 [0.388]
Share of urban population	0.0500 [0.0457]	0.159*** [0.0351]	-0.0748 [0.114]	0.177*** [0.0530]	0.169 [0.154]	-0.0862 [0.104]
Share of unemployed	-0.544** [0.267]	-0.189 [0.190]	-0.690 [0.633]	-0.441* [0.252]	-1.398* [0.819]	-0.455 [1.016]
Share of males	0.196 [0.276]	0.0101 [0.214]	-1.224** [0.602]	0.336 [0.250]	0.628 [0.813]	3.089*** [0.798]
Share of married	-0.231* [0.137]	-0.0774 [0.100]	0.113 [0.305]	-0.402*** [0.146]	-0.451 [0.470]	-0.483 [0.332]
Voter income	0.0512 [0.219]	0.0478 [0.137]	-0.317 [0.465]	0.265 [0.200]	1.222 [0.772]	-0.599 [0.765]
State fixed effects	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes
Observations	1,306	255	334	500	500	217
R-squared	0.516	0.949	0.630	0.795	0.678	0.395
IV F-stat	116.10	8.13	42.55	33.46	33.46	36.23
Anderson Rubin Wald test	0.873	0.24	0.686	0.149	0.211	0.0825

Note: With the exception of Column (5), the dependent variable is the Republican vote share. The dependent variable in Column (5) is the share of seats obtained by the Republican party. We distinguish between four types of elections: Presidential election (PE), Senate elections (SE), House elections (HE) and Gubernatorial elections (GE). Sample period is 1994 to 2012. Each regression is weighted by the population of the state. All regressions include state as well as year fixed effects. Robust standard errors in parentheses: \*\*\*, \*\*, \* indicate the statistically significant difference from zero at the 1%, 5% and 10% levels respectively.

**Table 4: Republican vote share, Citizen and non-citizen immigrants***OLS, House Elections, 1994-2012*

	(1)	(2)	(3)	(4)	(5)
	All election				HE seats -
VARIABLES	types	HE	HE - seats	HE - quad	quad
Share of non-citizen immigrants	-0.0444 [0.217]	-0.381 [0.236]	-1.457** [0.735]	-1.424*** [0.459]	-4.603*** [1.398]
Share of non-citizen immigrants squared				5.394*** [1.756]	16.27*** [5.443]
Share of citizen immigrants in voting population	-0.741*** [0.232]	-0.939*** [0.198]	-2.523*** [0.555]	-1.047*** [0.202]	-2.848*** [0.562]
Constant	0.251 [0.268]	0.0683 [0.280]	-1.051 [0.778]	0.117 [0.275]	-0.903 [0.773]
Control variables	yes	yes	yes	yes	yes
State fixed effects	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes
Observations	1,306	500	500	500	500
R-squared	0.517	0.803	0.730	0.806	0.734

Note: The dependent variable in Column (1), (2), (4) is the Republican vote share, while in Column (3) and (5) the share of seats obtained by the Republican party. Sample period is 1994 to 2012. Each regression is weighted by the population of the state. All regressions include state as well as year fixed effects. Robust standard errors in parentheses: \*\*\*, \*\*, \* indicate the statistically significant difference from zero at the 1%, 5% and 10% levels respectively.

**Table 5: 2SLS Estimates: Republican vote share in House Elections (HE) between 1994 and 2012**

*IV are based on inverse distance and border apprehensions*

	(1)	(2)		(3)	(4)
<b>SECOND STAGE</b>	Rep Vote	Rep seats won		Rep Vote	Rep seats won
	percentage	percentage		percentage	percentage
Share of non-citizen immigrants	-0.801*	-1.260		-4.287***	-13.45***
	(0.453)	(1.350)		(1.274)	(3.340)
Share of citizen immigrants in voting population	-1.810**	-8.365***		-1.749**	-8.153***
	(0.741)	(3.001)		(0.736)	(2.869)
Share of non-citizen immigrants squared				16.27***	56.90***
				(4.724)	(12.62)
Control variables	yes	yes		yes	yes
State fixed effects	yes	yes		yes	yes
Year fixed effects	yes	yes		yes	yes
Observations	500	500		500	500
R-squared	0.795	0.685		0.786	0.681
IV F-stat	10.31	10.31		6.415	6.415
Anderson Rubin Wald test	0.298	0.298		0.128	0.128

	(1)	(2)		(3)	(4)	(5)
<b>FIRST STAGE</b>	non-citizen	citizen		non-citizen	citizen	non-citizen
	immigrant share	immigrant share		immigrant share	immigrant share	immigrant share
Share of non-citizens instrumented	0.361***	-0.119		0.241***	-0.153*	-0.0102
by border apprehension	(0.0542)	(0.0747)		(0.0853)	(0.0810)	(0.0139)
Share of citizen immigrants instrumented	0.329***	0.655***		0.283**	0.642***	0.0346
by distance	(0.119)	(0.173)		(0.122)	(0.178)	(0.0258)
Share of non-citizens instrumented				0.479*	0.137	0.351***
by border apprehension squared				(0.280)	(0.312)	(0.0625)
Observations	500	500		500	500	500
R-squared	0.974	0.966		0.974	0.966	0.975

Note: The dependent variable in Column (1) and (3) is the Republican vote share, while in Column (2) and (4) the share of seats obtained by the Republican party. Sample period is 1994 to 2012. Each regression is weighted by the population of the state. All regressions include state as well as year fixed effects. Robust standard errors in parentheses: \*\*\*, \*\*, \* indicate the statistically significant difference from zero at the 1%, 5% and 10% levels respectively.

**Table 6: 2SLS estimates: Labour market and Welfare Channel specification, Republican vote share in House Elections (HE) 1994- 2012**

*IV are based on inverse distance and border apprehensions*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Rep Vote	Rep Vote	Rep Vote	Rep Vote	Rep Vote	Rep Vote	Rep Vote	Rep Vote	Rep Vote	Rep Vote
VARIABLES	percentage	percentage	percentage	percentage	percentage	percentage	percentage	percentage	percentage	percentage
Share of non-citizen immigrants	-14.60** (6.566)	-47.18** (22.40)	-24.30*** (9.178)	-62.57** (25.29)	-20.59** (8.189)	-63.09** (28.46)	-42.82 (52.35)	-62.68 (71.02)	-21.71*** (7.470)	-69.35*** (24.89)
Share of citizen immigrants in voting population	-2.422** (1.173)	-11.01** (5.283)	-0.811 (1.763)	-8.449 (5.762)	-2.152* (1.136)	-10.29** (4.791)	-2.477** (1.263)	-11.04** (5.129)	-1.773 (1.111)	-8.982** (4.344)
Unskilled to skilled 1994 x share of non-citizens immigrants	19.79* (11.03)	48.08 (32.55)	32.54* (17.20)	68.32* (40.48)	17.56* (10.68)	42.16 (30.92)	24.54 (18.86)	50.68 (39.80)	22.03* (11.34)	55.08* (29.61)
Income 1994 x share of non-citizens immigrants	0.390* (0.201)	1.361* (0.749)	0.320 (0.207)	1.250* (0.657)	0.306 (0.189)	1.137* (0.667)	0.468** (0.205)	1.404** (0.644)	0.199 (0.193)	0.765 (0.621)
Language differences x share of non-citizens immigrants			12.51 (8.165)	19.85 (20.84)						
Religious differences x share of non-citizens immigrants					14.57* (7.775)	38.70 (28.55)				
Colonial past differences x share of non-citizens immigrants							27.33 (52.36)	15.01 (76.06)		
Average differences x share of non-citizens immigrants									20.92** (8.187)	65.27** (27.61)
Control variables	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
State fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	500	500	500	500	500	500	500	500	500	500
R-squared	0.781	0.634	0.764	0.691	0.776	0.648	0.741	0.639	0.781	0.679
IV F-stat	2.264	2.264	0.745	0.745	2.012	2.012	0.051	0.051	1.678	1.678
Anderson Rubin Wald test	0.0040	0.0031	4.36e-05	4.11e-05	0.0040	0.0040	0.00035	0.00014	0.00017	0.00017

Note: The control variables do not contain the education shares. Sample period is 1994 to 2012. Each regression is weighted by the population of the state. All regressions include state as well as year fixed effects. Robust standard errors in parentheses: \*\*\*, \*\*, \* indicate the statistically significant difference from zero at the 1%, 5% and 10% levels respectively.

**Table 7: 2SLS Estimates: Voter Turnout in House Elections (HE) 1994-2012.**

*IV are based on inverse distance and border apprehensions*

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	(1)	(2)
	Voter Turnout	Voter Turnout
	percentage	percentage
Share of non-citizen immigrants	0.812**	2.419***
	(0.322)	(0.764)
Share of citizen immigrants in voting population	0.141	0.300
	(0.488)	(0.505)
Share of non-citizen immigrants squared		-7.404**
		(3.072)
Constant	-0.388	-0.273
	(1.200)	(1.165)
Control variables	yes	yes
State fixed effects	yes	yes
Year fixed effects	yes	yes
Observations	500	500
R-squared	0.916	0.901
IV F-stat	9.321	5.869

Note: The dependent variable is the share of actual voters among the voting population (voter turnout). Sample period is 1994 to 2012. Each regression is weighted by the population of the state. All regressions include state as well as year fixed effects. Robust standard errors in parentheses: \*\*\*, \*\*, \* indicate the statistically significant difference from zero at the 1%, 5% and 10% levels respectively.

□

□

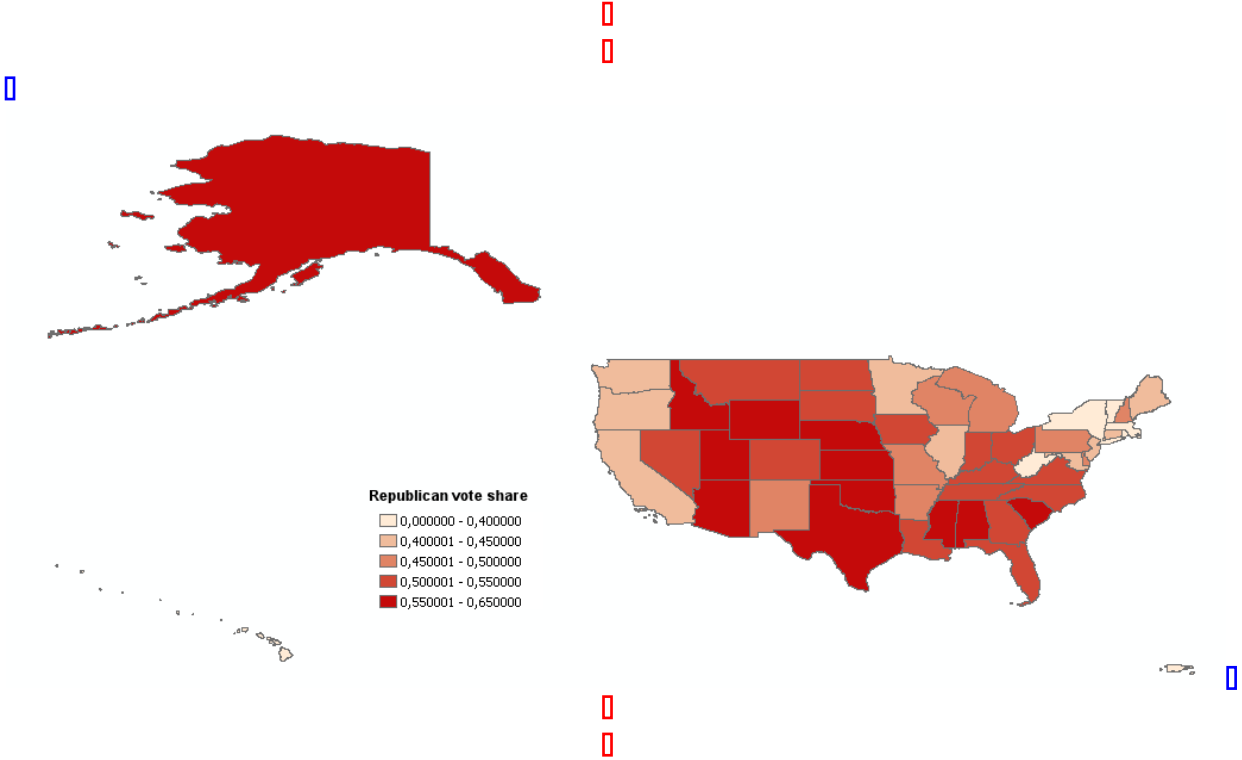
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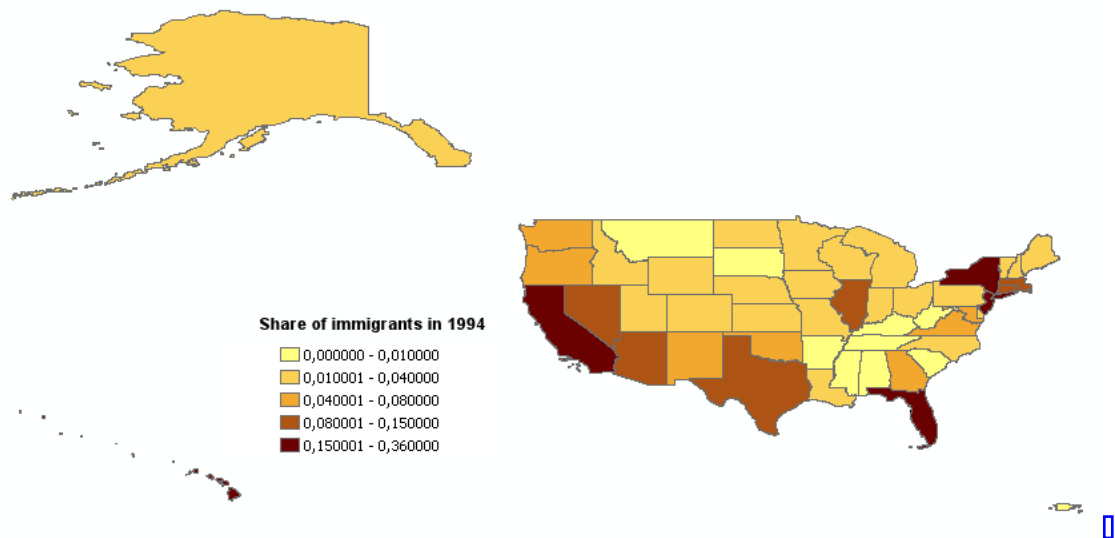
Figure 1: Average Republican vote share, pooling all elections  
Years 1994-2012.



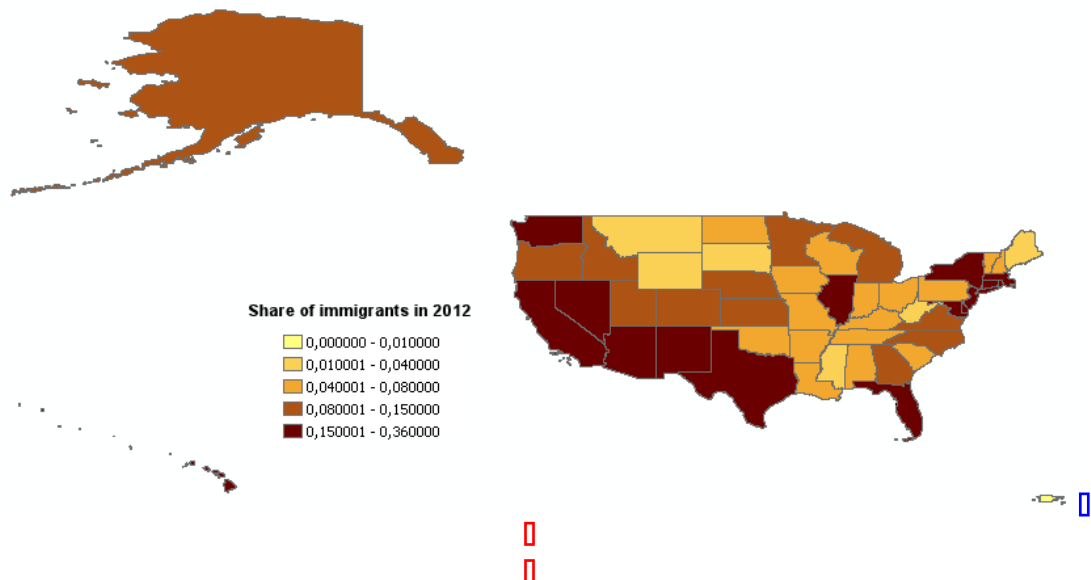
**Note:** The Map represents the average share of republican vote pooling all elections from 1994 to 2012, using a darker color for larger shares.

**Figure 2: The share of immigrants per U.S. state in the year 1994 and 2012.**

**Panel a: Year 1994**

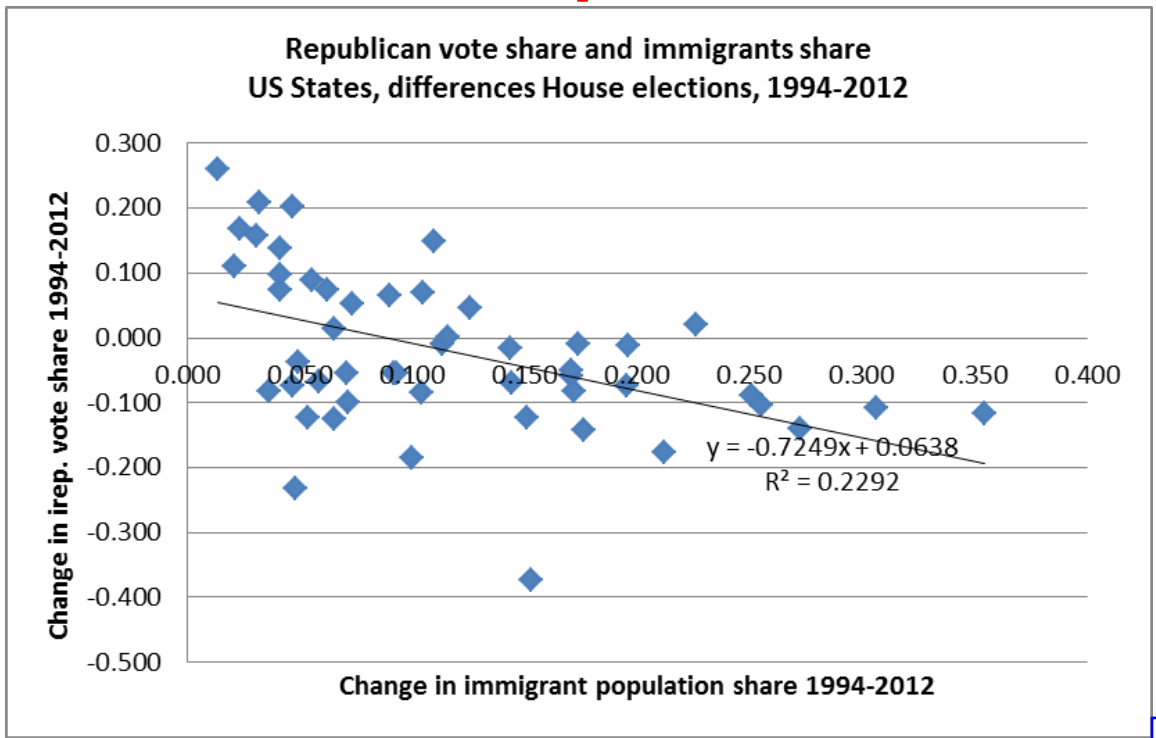


**Panel b: Year 2012**



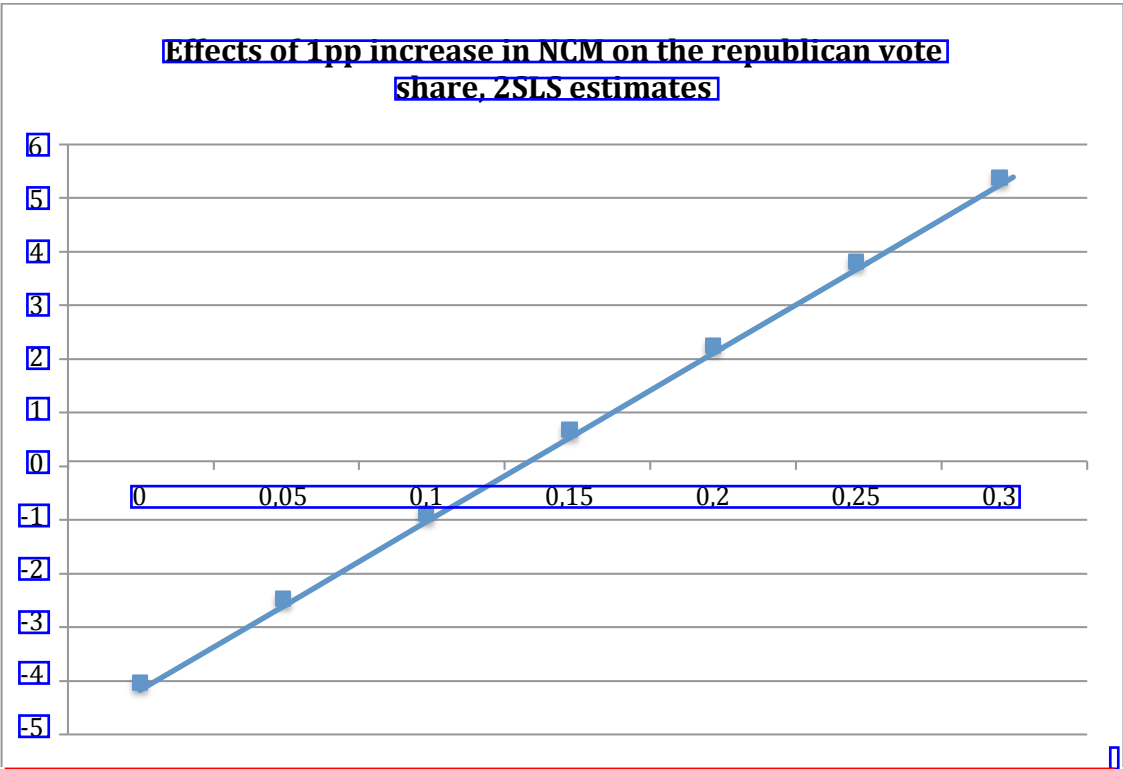
**Note:** The maps represent the share of foreign born in the state as of 1994 (panel A) and in 2012 (panel B). We use a darker color for larger shares of immigrants, dividing their values in bins capturing five quintiles of the distribution

**Figure 3: Correlation between the change in the Republican vote share and the change in the immigrant population share**



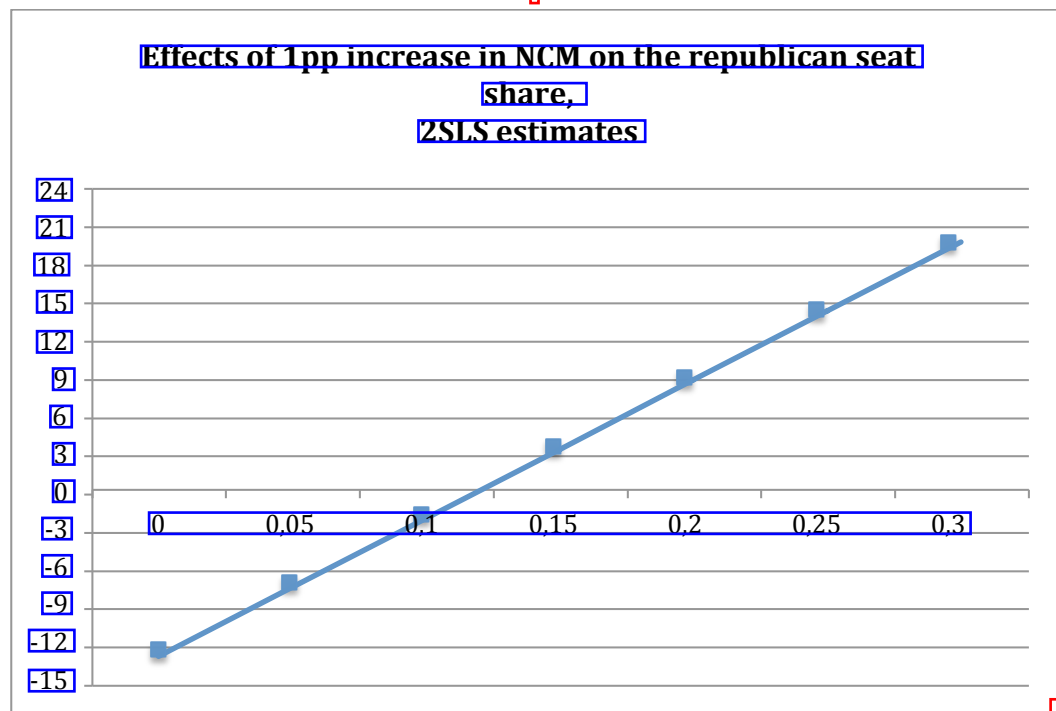
**Note:** Each point represents a US state. The vertical axis shows the change in the share of republican vote in the house elections, and the horizontal axis shows the change in immigrants share in the adult population.

**Figure 4: Marginal effect of non-citizen immigrants on the republican vote share**



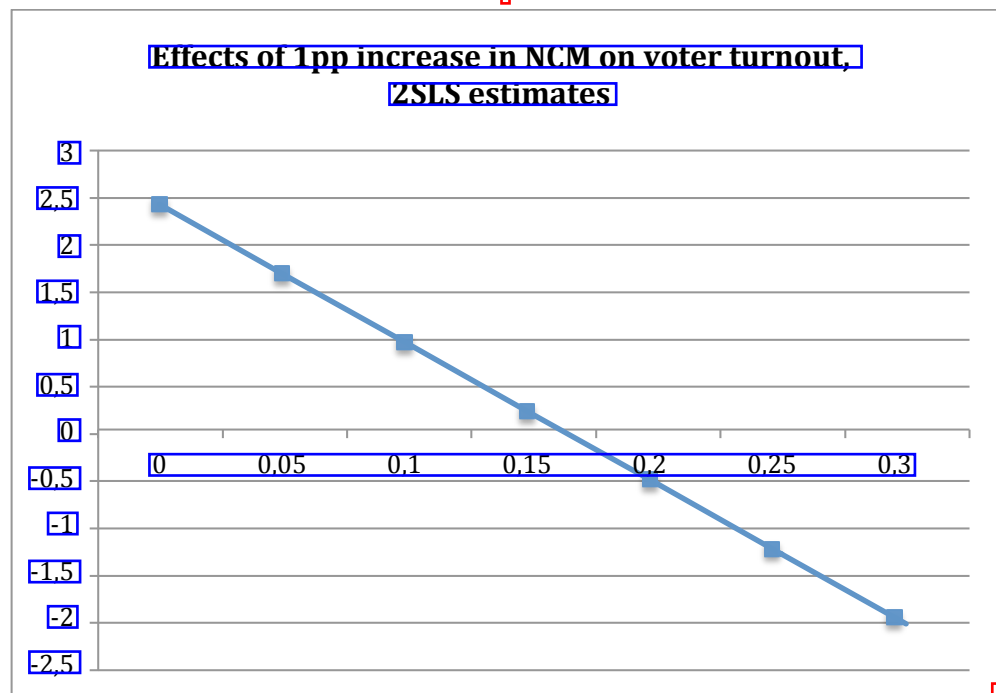
**Note:** The graph shows the schedule of the marginal effect due to an increase of non-citizen immigrants on the republican vote share at different values of the non-citizen immigrant share. The graph is obtained using the estimated coefficients of Table 5.

**Figure 5: Marginal effect of non-citizen immigrants on the republican share of seats**



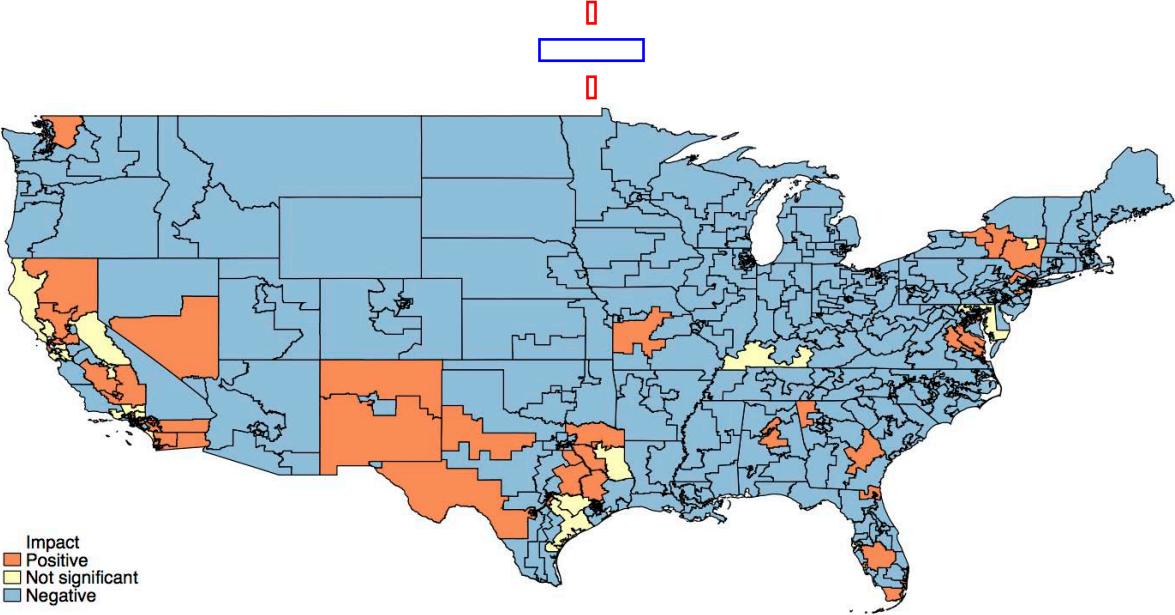
**Note:** The graph shows the schedule of the marginal effect due to an increase of non-citizen immigrants on the republican vote share at different values of the non-citizen immigrant share. The graph is obtained using the estimated coefficients of Table 5.

**Figure 6: Marginal effect of non-citizen immigrants on voter turnout.**

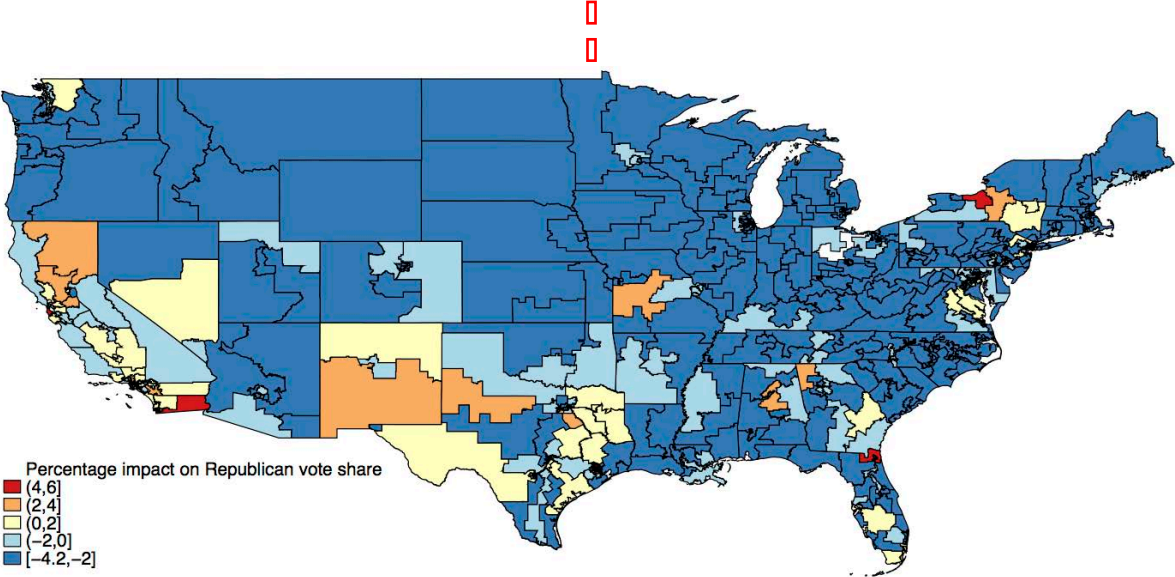


**Note:** The graph shows the schedule of the marginal effect due to an increase of non-citizen immigrants on the voter turnout at different values of the non-citizen immigrant share. The graph is obtained using the estimated coefficients of column 3 in Table 7.

**Figure 7: Marginal effect of an increase in non-citizen immigrants on the republican vote share across congressional districts, 2012**



**(a): Significant impact of non-citizen immigrants on the republican vote share with 95% confidence**



**(b): Continuous impact of non-citizen immigrants on the republican vote share at point estimate**