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# Skill of the Immigrants and Vote of the Natives: Immigration and Nationalism in European Elections 2007-2016 * 

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#### Abstract

We analyze the impact of local immigration on natives' preferences for "nationalism" as measured in parties' programs by the Manifesto Project Database in European election data between 2007 and 2016. Using a 2SLS strategy with a shift-share IV based on immigrant shares by origin in 2005 and inflows by education-origin groups, we estimate that larger inflows of highly-educated immigrants were associated with a decrease in the "nationalistic" vote of natives, while less-educated immigrants produced an opposite-direction shift towards nationalistic parties. The aggregate results derive from individual shifts toward nationalism in response to less-skilled immigration, and from greater participation of young voters and more pro-European attitudes in response to high-skilled immigration.


Keywords: Immigration, Nationalism, Elections, Europe
JEL codes: D72, I28, J61

[^0]
## 1 Introduction

Several recent elections in European countries (UK in 2016, France, Germany and Austria in 2017, Italy in 2018) and in the US (in 2016) have shown a common trend: nationalist candidates who use strong antiimmigrant rhetoric have gained votes and have often been elected to office. One narrative is that these parties have expressed the fear of their constituents in response to the increased number of immigrants in their communities. Those parties portray immigrants as outsiders who compete for jobs, drain public finances, and threaten national values.

Although the academic research shows that a large percentage of immigrants in Europe and the US are highly-educated and skilled (see Docquier et al., 2014) and that they contribute positively to the performance and growth of the receiving economy, ${ }^{1}$ many European voters tend to overlook and undervalue these positive contributions and focus on the costs of immigration (Alesina et al., 2018). But is increased exposure to immigrants really a factor that encouraged more nationalistic voting? And does the inflow of different types of immigrants produce different responses from natives?

In this paper, we analyze whether and how inflows of less-skilled and high-skilled immigrants pushed the votes of Europeans towards "parties with a nationalist agenda" and we look at what individual mechanisms may produce such aggregate shift and how these may vary across different citizens. This is our main innovation relative to the existing literature. In fact, there are several papers (which we will describe below) analyzing the impact of immigrants on aggregate voting patterns at the local (e.g. municipal) level in European countries and the US. Other papers analyze the impact of immigration on individual attitudes of natives towards immigration and related policies. This is the first paper, to the best of our knowledge, to bridge these two types of studies, by investigating the effect of exposure to immigration on natives' intensity of nationalist preferences expressed not in an opinion survey but by their electoral votes.

Related to the first contribution, the second innovation of the paper is to construct an index of "nationalism intensity" of parties by matching individual-level party votes in national elections with the content of each party's political manifesto. Specifically we match the party votes reported by respondents to the European Social Survey in 12 European Countries between 2007 and 2016 with the intensity of the party's nationalist preferences as measured by textual analysis of their political manifesto, available from the Manifesto Project Database. We construct a synthetic measure of nationalism which is decreasing with the party's support for the European Union and increasing with its emphasis on patriotism and pride in citizenship. While previous papers (as we will describe below) have looked at the impact on voting in specific countries and for specific parties, we provide a consistent way to analyze this question across countries for Europe as a whole. Moreover, by focusing on the nationalist content of voting behaviors, we abstract from other very different preferences' traits that may also affect individual voting decisions, e.g. preferences for redistribution. In a paper related to this one, (Moriconi et al., 2019), written after the first draft of this paper, we ask this

[^1]complementary question, and investigate the impact of immigration on individual and party preferences for welfare state or education expansions instead (see more on this below).

The third important contribution is that, by using individual level data on voting (rather than aggregate district-level voting totals as in all previous papers on voting) we gain important insights. While this implies self-reported voting, rather than actual voting outcomes, it allows us to to analyze longitudinal variation in individual preferences, and to correlate changes in voting behavior to changes in other revealed attitudes that are surveyed in the same dataset. The ability to look at individual changes in the vote (using the longitudinal dimension in some of the data) and at changes in the aggregate vote (using the repeated cross section dimension of it) is one major advantage of our data. This allows us to see if aggregate changes emerge due to changes in individual attitudes/opinion of each voter, or changes in the composition and turnout of voters. ${ }^{2}$

The fourth contribution, as we observe individual characteristics and the individual vote, is that we can do individual heterogeneity analysis. Specifically we can ask what characteristics of citizens are associated with larger or smaller revisions of their preferences for nationalism in response to immigration. Similarly, we can consider which characteristics of immigrants produce a positive or negative revision of such preferences.

The basis of our identification (empirical approach) is a 2SLS estimation using a shift-share instrument based on past settlement of immigrants and inflows by country-of-origin (Card, 2001). We use these to predict, separately, high-skilled and less-skilled immigration. As we estimate the separate effects of two groups of immigrants, we leverage the variation of initial shares interacted with the inflow of immigrants by country-of-origin and skill-intensities. We include a rich set of fixed effects and initial controls to reduce concerns about omitted variable bias. Most importantly, however, in Section 3.2 we engage with the literature that questions the validity of shift-shares and we perform a series of tests as suggested by Goldsmith-Pinkham et al. (2020), while we also address the issues raised by Jaeger et al. (2018) and Adao et al. (2019). Overall, our results are consistent with the validity of our IV strategy.

This study has three main findings. First, using 2SLS estimates, we find a significantly negative correlation between highly-educated immigrants (as a share of the population) and intensity of nationalist preferences of citizens. We also find an opposite, significantly positive correlation between less-educated immigrants and nationalist preferences. This is a result that was also found in Mayda et al. (2018), using aggregate US county data; thus this paper confirms for Europe what seems to be true in the United States. Second, we find that changes in preferences in response to high- and less-skilled immigrant shares are larger for lesseducated citizen voters. The effect is also stronger for younger voters than for older voters. This is consistent with the idea that people with less previous exposure to immigrants respond more to their presence, both in positive and negative terms. Third, there are several channels through which immigration affects nationalistic voting: One significant effect is the increased participation of young voters in response to greater high-skilled

[^2]immigrant shares. A second effect is a change in individual voting behavior, possibly due to a change in attitudes toward politics and immigrants. In particular, we show that an increase in high-skilled immigrants raises individuals' trust in legislative power both at the EU and the national level, while an increase in less-skilled immigrants increases natives' negative attitudes towards immigrants.

Finally, as an additional small novelty of our analysis, we use our estimated coefficients to simulate possible political scenarios which could result from immigration, and their impact on nationalism in Europe. These simulations suggest that, as nationalist voting is attenuated by an increase in the relative amount of high-skilled migration compared to less-skilled migration, if the inflow of high-skilled (HS) migrants is roughly equal to that of less-skilled migrants (LS), the net result would be a decline in the intensity of the nationalist vote.

As mentioned above, our paper establishes a direct link between two areas in the existing literature. One focuses on the attitudes and preferences of natives towards immigration and other policies, and the impact of immigrants on those. The other focuses on the link between immigration and voting outcomes at the local level.

The first strand of the literature spans economics and political science. Several papers have looked at whether theories of labor market competition (Mayda, 2006; Scheve and Slaughter, 2001; Hainmueller and Hiscox, 2007) or fiscal effects of immigrants (Facchini and Mayda, 2009; Hanson et al., 2007) can explain individual attitudes towards immigrants of different types. The labor market competition theory predicts stronger aversion in natives with skills similar to those of the majority of immigrants. The fiscal theory predicts stronger aversion for low-income immigrants by richer people who will pay the fiscal costs. One robust finding of these studies is that voters' schooling levels are strong predictors of their attitudes towards immigration. College education is associated with positive attitudes towards immigrants (of all types) and approval for more open immigration policies. Hainmueller and Hiscox (2010) tackle the question of what determines natives' attitudes towards high/less-skilled immigrants and how this depends on natives' education levels. While they find at best mixed support for labor market competition or fiscal explanations, they show that more-educated natives have more-positive attitudes toward both types of immigrants, relative to lesseducated natives. This is at odds with the idea that individuals are opposed to immigrants with similar labor market skills but welcome immigrants with different skills. Moreover, Hainmueller and Hiscox (2010) find that richer people are more in favor of immigrants than poorer people, and this is even stronger if they live in states with more redistribution. They argue that economic self-interest does not motivate these results; rather, a perception of what is good for society does. This would explain the more-favorable attitudes toward high-skilled immigrants who, arguably, have a larger positive effect on the overall economy and society. Those findings are also consistent with a "cultural" explanation, in which tolerance and preference for cultural diversity is associated with higher education levels. Card et al. (2012) show that the individual "cultural" assessment of immigrants drives overall opinion about immigration, while economic evaluations of immigrants' contributions are less-relevant. Poutvaara and Steinhardt (2018) show that the individual perception of not
having what one deserves in life is strongly associated with worries about immigration, particularly among the less-skilled.

The second strand of the literature, which has expanded significantly in the recent years, has directly tested the link between immigration and the electoral vote in individual countries. The common observation of higher immigration flows and growing electoral consensus for right-wing parties has driven scholars to inquire whether the first determines the second. The specific question asked in these papers is whether an increased inflow of immigrants affected the vote of natives in local elections, and in what direction. These studies suggest that a general increase in the immigrant population share in a municipality is associated with a shift in voting behavior toward right-wing nationalist parties e.g. in Germany, Italy, Denmark and Switzerland. ${ }^{3}$ Similarly, using historical data for the US Tabellini (2020) shows that, despite helping economic outcomes, European immigration to US cities during 1910-1930 increased the vote for anti-immigration conservative legislators. There are exceptions, as in the long run Giuliano and Tabellini (2020) show that immigrants and their descendants increased the propensity of liberal ideology across the US, and Steinmayr (2020) shows with Austrian data that refugees' transit (but not settlement) increased the vote for extreme right parties. Some studies are able to distinguish the effect of less-skilled and high-skilled migration. Halla et al. (2017) and Edo et al. (2019) document that less-skilled immigration leads to stronger support for the Freedom Party in Austria and the Front National in France, respectively, while high-skilled immigration tends to have the opposite effect. Similarly, Mayda et al. (2018) show that, in the US, high-skilled immigration has been strongly associated with a higher Democratic share of the vote and less-skilled immigration with a higher Republican share of the vote. In these papers (except for Harmon (2018)), identification is based on instrumental variable (IV) estimation, using historical location of immigrants and a shift-share IV approach. ${ }^{4}$ Most of these studies identify a reduced-form effect of exposure to immigration on voting outcomes, as they use aggregate electoral outcomes, usually at the municipality level, rather then individual survey data. ${ }^{5}$ Also differently from our study, those studies look at voting for specific right-wing (or left-wing) parties as their main outcome variable. Hence they capture, mainly, shifts in a party vote rather than an overall movement of the electorate relative to the topic of "nationalism". In this strand of the literature, Moriconi et al. (2019) analyze the impact of immigration on the vote for pro-welfare and pro-redistribution parties. That paper uses individual data, but analyzes only the aggregate impact of immigration (without using individual longitudinal data), and it assesses the impact on the shift in the regional vote across parties, as well as the impact of immigrants on national political platforms using national data. Results in that paper suggest that

[^3]larger inflows of highly-educated immigrants are associated with European citizens shifting their votes toward parties that favor expansion of the welfare state. ${ }^{6}$ On the other hand, inflows of less-educated immigrants induce European parties to endorse platforms less favourable to social welfare.

The rest of the paper is organized as follows. In Section 2 we discuss the data and, specifically, we document the intensity of nationalistic preferences in recent elections and the increase in migrants as shares of local resident populations. In Section 3 we first present the empirical strategy and then present our instrumental variable approach and its validity checks. In Section 4 we discuss the baseline results on immigration and nationalist voting. In Section 5 we present our results by exploiting individual level heterogeneity. In Section 6 we decompose the channels of nationalist voting behavior, focusing on individual opinion and turnout. In Section 7 , we present the simulations. Section 8 concludes the paper.

## 2 Data and Summary Statistics

In this paper, we combine three different datasets: The European Social Survey (ESS), the Manifesto Project Database (MPD) and the European Labor Force Survey (EULFS). The primary data source for our outcome variables are the 8 waves (one every two years) of the European Social Survey (ESS) covering 36 countries between 2002 and 2016. On average, each wave contains around 1,500 individuals 18 years or older for each country. The data include detailed information on personal and family characteristics such as age, gender, education, marital status, number of children in the family, place of birth, and labor market characteristics such as employment status, hours worked, and occupation. It also includes detailed information on parental background, such as parents' education, employment status, occupation when the respondent was 14 years old, and their own country of birth.

ESS data report also two specific questions on voting: (i) "Which party did you vote for in the last national election?", and (ii) "Which particular political party you feel closer to than all the other parties? ". Individuals respond by identifying party names, and we link these party names to information on their political agenda obtained from the Manifesto Project Database (MPD) (see Budge et al., 2001; Klingemann et al., 2006). The MPD describes the political manifesto of 1,093 parties over 715 parliamentary elections covering all the countries and the years we consider. ${ }^{7}$ Each party's political manifesto is analyzed through text analysis. The share of quasi-sentences mentioning each political topic as a fraction of all sentences in the manifesto is the measure of relevance of that topic in the party's political agenda. For each topic the share of favorable/positive and unfavorable/negative mentions are recorded. We construct a measure of preference for a topic, as the difference between shares of positive and negative mentions, and we use it in our analysis. This index ranges between -1 and $1^{8}$. Indicators contructed as described above are typically used in the

[^4]Political Sciences Literature (see, for instance, Budge et al., 2001; Klingemann et al., 2006).
The MPD covers several topics, ranging from protectionism to the role of traditional morality, to civic mindedness, to multiculturalism, and to other topics. In our analysis we focus on two: (i) The European Community/European Union and (ii) National way of life. The first topic includes mentions of the EU and of the desirability of expanding its influence, and competences. The second includes all mentions of nationalism, patriotism, pride of citizenship, and focus on the nation. For each party we construct such indices for the first year the party enters the dataset, for the last year in the dataset, and for the average over all years of presence in the data. These indicators will capture the initial, average, and final positions of the party on the issue. ${ }^{9}$ We consider the "preference" indicator for each of the two issues (EU and national way of life) and we combine them using a Principal Component Analysis (PCA), summarizing them in what we call the Intensity of "nationalism". This correlates negatively with "preference" for the EU and positively with "preference" for the "national way of life" variable. Results of the PCA are available in the on-line Appendix B. Finally, we link this index to the individual voter based on the party voted-for in the last election from the ESS. One advantage of constructing such index is that, while issues of nationalism are more salient for parties on the right-wing side of the political spectrum (Rodrik, 2018), our measure allows us to capture them in any political party so that we can track them more fully over time and across countries (Laver and Garry, 2000; Klemmensen et al., 2007).

ESS data includes information on the location of respondents at the regional (NUTS2) level for all EU countries with a few exceptions. For Austria, Germany, and the UK, the local units identified are larger (macro-regions called NUTS1). ${ }^{10}$ Regional variables are obtained aggregating individual data from the European Labor Force Survey (EULFS) which reports information on age, employment status and education, for the population 15 years and older, and is representative of the European population at the regional level. Beginning in 2005, EULFS includes foreign-born individuals and individually reports their place of birth, distinguishing fifteen different regions-of-origin. ${ }^{11}$ We use this variable to compute the share of immigrants in the total 2005 population at the regional level as follows:

$$
\begin{equation*}
m_{r, s, t}^{O}=\frac{M_{r, s, t}^{O}}{\operatorname{Pop}_{r, 2005}} \tag{1}
\end{equation*}
$$

where $m_{r, s, t}^{O}$ is the share of migrants and $M_{r, s, t}^{O}$ is the total stock of migrants in region $r$ born in the group of origin countries $O$ among $\{$ All, Non $E U 28, E U 28\}$, with skills $s \in\{A l l, H S, L S\}$ in year $t .{ }^{12}$

[^5]We combine the individual ESS samples with EULFS data aggregated at the regional level and MPD data on the political agenda of parties. Our data includes only countries for which at least two elections were held during the 2007-2016 period. We exclude non-EU countries, as well as New Member States of the EU, which leaves eleven EU-15 countries, ${ }^{13}$ plus Switzerland. The countries in our final sample are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Portugal, Spain, Switzerland, Sweden and the United Kingdom. For these countries, we construct the origin-skill-specific migrants shares of the total population in 2005, at the regional level. ${ }^{14}$ The sample covers 114 regions for which data from Eurostat and the OECD cover GDP per capita, unemployment rate, percentage of tertiary-educated individuals, value of social benefits other than social transfers in-kind, the ratio of the population aged 0-14 to that aged 15-65 years old, and a measure of total number of crimes. ${ }^{15}$

## [INSERT TABLE 1 HERE]

The main source of identifying variation in our empirical analysis is the within-region changes in voting behavior between different national elections. From the ESS data we construct information on the vote cast by each respondent in each election held during the 2007-2016 period. Thus in our empirical analysis we exploit the variation over time between electoral episodes within a region. Table 1 reports in columns (1) and (2) the number and years of elections covered by ESS for each country and the number and years of the ESS surveys in columns (3) and (4). In the case of France, for instance, the waves conducted in 2010, 2012, 2014, and 2016 (see column (4)) allow us to identify the individual's vote in the elections of 2007 and 2012 (see column (2) in Table 1). As the data record the vote in the most recent election, the 2010 and 2012 ESS waves have information relative to the individual's vote in the 2007 French election. Similarly, the individual vote recorded in the 2014 and 2016 ESS waves was relative to the 2012 election. ${ }^{16}$ In the main part of the analysis, we construct a panel in election years only $e$ (rather than survey years $t$ ) by imputing the individual vote to that years' election and measuring the stock of immigrants and other regional variables in that year. We pool the individual data in repeated representative cross sections for the election years listed in Column (2) of Table 1 and we include region fixed effects as controls.

In a robustness check we extend the analysis further by constructing a individual short panel with two

[^6]observations for each individual. To do so, we combine the information on the vote of the individual at the last national election with the party preferences at the time of the survey, revealed by the response to the question "What party do you feel close to?". For each individual, we consider those two observations: one, retrospective, relative to the year of election; and the other, current, relative to the year of the survey. Hence we have two observations over time for each individual, and we can use them to analyze the change in individual party preference in a longitudinal approach. The limitation of this approach is that the question about the current party preference has several missing values and the non-response rate may be non-random in terms of party affiliation. Moreover, the expression of current voting preferences does not correspond to an actual vote (as there are no elections at the time that preferences are expressed). Table A-II in the on-line Appendix provides descriptive statistics for the sample of individuals who reveal their current party preference. Table A-IV provides summary measures of changes in political preferences between the last national elections and the survey time. On average, $16 \%$ of sampled individuals changed party preference between the last national election and the survey. While more limited in size and coverage than the repeated cross sections, the longitudinal dataset allows a window into the evolution of individual political preferences over time.

## [INSERT TABLE 2 HERE]

The final sample used in the analysis includes 48,767 individuals born in the country of residence (hence "citizens") who voted during the last election and are between 18 and 90 years old. These individuals are spread over 261 regions and over two or three election years per country. See Table 1). Overall we have an average of 185 individuals per region per election year (ranging between a minimum of 2 to a maximum of 2,712 individuals per region and year). Table 2 shows summary statistics. The sample is balanced between males and females. Overall, the average turnout is around $79 \%$. Among respondents, $35 \%$ have some tertiary education, and $19 \%$ have a father with tertiary education (see Appendix A in the on-line Appendix for detailed information on the construction of the final sample). On average, the included parties were mildly pro-Europe (the difference in the positive minus negative Pro EU index is $1.6 \%$ ), as well as pro national way of life (the difference in positive mentions minus negative mentions of national way of life is $1.2 \%$ ). There is a very strong negative correlation between EU preferences and national way of life preferences, so the first principal component of these two variables captures a very large fraction of their common variance. We standardize the index (principal component) so that a one-unit change corresponds to one standard deviation. The lower part of Table 2 shows summary statistics of the variables measured at the regional (NUTS2) level. The average population share of extra-EU immigrants in the considered sample (2007-2016) was equal to $7.1 \%$ of the population and it was larger than the population share of EU immigrants ( $5.9 \%$ of the population). Less-skilled immigrants accounted for about three fourths of total migrant population (they equal $9.7 \%$ of the population while high-skilled immigrants are $3.3 \%$ of total population respectively).
[INSERT Figure 1 HERE]

An advantage of using individual voting data from the ESS is that we can analyze directly how they vary with individual correlates. A limitation, however, is that they represent only a survey. This may introduce measurement error in the measure of Nationalism at the regional level. To see how large this can be, and if any systematic mis-measurement is apparent, we compare the aggregate vote shares for the largest parties at the national level using our dataset, with the official vote figures reported in the elections. We use the European Election Database (EED), which is the most reliable source of information on vote shares, to measure the party vote shares at elections. Figure 1, panel (a) plots the total share of votes to the top five parties in each national election obtained using ESS data (vertical axis) against the same share obtained from the EED (horizontal axis). Panel (b) performs the same exercise, focusing on the share of votes received in each election-country by the top five most nationalistic parties (according to our constructed Nationalism Index). ${ }^{17}$ The chart allows us to visualize whether there is systematic under- or over-measurement of votes going to the top parties in the analyzed election, and how large is the difference between vote shares measured in our sample and in the election data. Figure 1 shows that country-election observations are close to the 45 degree line, which would imply the exact same measure from the two sources. The departures are relatively small (in the order of 3-4 percentage points) and they show no specific pattern, implying that the votes recorded in the ESS are representative of the official vote and that the measurement error is not too large.

## [INSERT Figure 2 HERE]

We then show in Figure 2 the range of variation of the nationalism index across parties. Panel (a) of Figure 2 shows the value of the nationalism index for the top and bottom ten parties. Parties with the most nationalist policy agendas are EU-skeptical, anti-immigrant, and occupy the right-wing of the political spectrum. The top one, the UK Independence Party, was one of the more aggressive supporters of Brexit in the campaign preceding the referendum in which the UK voted to leave the European Union. The second one, the Danish People's Party, has brought an extreme nationalistic view in a country usually considered rather tolerant. The fourth, the former National Front (now called National Rally) in France has a very strong anti-immigrant message. At the other end of the spectrum, parties with the less nationalist agendas support a more active role for European institutions and take a more positive view of immigrants and more liberal immigration policies. They are usually left-wing parties (e.g., Nouveau Centre, Parti Radical de Gauche, Les Verts), center-left parties as the Moderate Coalition Party (MSP) or regional minority parties strongly supporting a pro-European policy agenda that escape national centralism (e.g., "We Ourselves" in Northern Ireland; the Basque Nationalist Party in Spain). Panel (b) of Figure 2 shows the intensity of pro-nationalism

[^7]in bins grouping votes from the left-to-right of political spectrum. This implies that those self-identifying as "left-leaning" tend to vote for anti-nationalist policy agendas. To the contrary, "right-leaning" and especially very right leaning individuals vote for parties with more pro-nationalist agendas.

## [INSERT Figure 3 HERE]

Figure 3 shows the average value of the nationalism index when we aggregate parties into broad "political families" according to the Chapel Hill Expert Survey dataset. This classification aggregates parties into relatively coherent groups, based on their ideology and policies. ${ }^{18}$ This picture provides an idea of where the nationalism index vary among European political families. Unsurprisingly, the level of nationalism is particularly high among parties belonging to the Radical Right, while it is relatively low among Socialist and Liberal parties. The index seems to fully capture the nationalist preferences endorsed by right-wing political parties (Rodrik, 2018). It is interesting to notice that a certain extent of nationalism is present also in other political families whose nationalistic views are often disregarded (i.e. Agrarian/Center and Confessional parties). By using the index we have a more complete and nuances picture of the nationalistic content of individual voting behavior relative to only using the vote for extreme right-wing parties. Overall, one standard deviation in the Nationalism index is equal to the distance between the views of a party belonging the Socialist family (generally pro-EU and against nationalist appeals) and one belonging to the Agrarian/Center family (supporting national life values and state-level political competences).

## [INSERT Figure 4 HERE]

Figure 4 shows the range of variation in the average nationalism index across European regions. We only report the top and the bottom twenty European regions in terms of average nationalism. Regions where people voted for the least nationalist political agenda are in Spain, France, Belgium and, to a lesser extent, Sweden. More nationalist voting comes from regions in countries that are less-engaged by European economic and political integration, such as Switzerland, UK, and Denmark. This figure shows a cross-section in the average levels of the nationalism index. In our empirical analysis we consider, instead, changes in the index within regions over time as our variation of interest, and we try to explain it using changes in the immigrant share. ${ }^{19}$
[INSERT Figure 5 HERE]

In the statistics shown so far we have fixed the nationalism of a party to its average level over the period

[^8]and shown regional and national evolution due to change in vote shares. However with our data we can also track the changes in the nationalism index for a party over time. Are average changes in country attitudesin terms of nationalism - due to changes in votes or to changes of party platforms? In Figure 5 we show for each country the average change in the level of nationalism between electoral events, when this is measured keeping party position fixed and looking at the change in voting ( $y$-axis), and when we keep the voting share fixed and consider changes in party platforms (x-axis). Figure 5 mostly shows increases in the nationalism index both at the voting and party platform level: for 8 countries out of 13 , both changes are positive. The main focus of our analysis is the change in voting behavior of natives in response to immigrants, hence we will leverage mainly the variation shown in the vertical axis of Figure $5 .{ }^{20}$

## [INSERT Figure 6 HERE]

In order to provide an idea of the panel variation across regions, we show in Figure 6 four regions characterized by large decreases in the nationalism index between 2007 and 2016 in panel (a), and four regions with large increases in the nationalism index in panel (b), both represented by the blue bars. In the former group we find regions with large metropolitan areas such as Copenhagen, Zurich, Paris, and Stockholm. These are areas characterized by relatively large inflows of migrants, and in most cases the net inflow of highskilled (green bar) prevails over that of less-skilled (red bar). Conversely, the regions with large nationalism increases are less densely populated areas, where the inflow of immigrants is generally smaller and where the inflow of less-skilled migrants is larger than the inflow of high-skilled migrants. This picture is consistent with the idea that highly-educated immigrants move to dense urban areas, and that their inflow may contribute to reduce the level of nationalism. Conversely, having few-and mainly less-skilled-immigrants may contribute to steering less-populated areas towards nationalism. ${ }^{21}$

## 3 Identification Strategy and Tests of Validity

### 3.1 Empirical Specification and IV

In this section we present our basic empirical approach to investigate the impact of immigration on the nationalism of EU citizens, as revealed by their vote. As key explanatory variables we include, in the basic specification, the adult population share of highly- and less-educated immigrants. As our goal is to focus on how immigrants may change the vote of EU citizens, we only include natives in our sample. This eliminates a potential direct effect of naturalized immigrants on voting. We define Nation $_{i, r, e}$ as the normalized value

[^9]of the nationalism index (first principal component of favorable mentions toward the EU and national way of life) for the party voted for by native citizen $i$ in region $r$ (NUTS2) in election $e$. In our basic specification, the measure of nationalism of a party is taken as a fixed average over the electoral events. We also control for additional individual and regional characteristics which may affect individual preferences. The basic specification is as follows:
\[

$$
\begin{equation*}
\text { Nation }_{i, r, e}=\alpha+\beta_{H} m_{r, e}^{H}+\beta_{L} m_{r, e}^{L}+\zeta \mathbf{X}_{i, r, e}+\gamma \boldsymbol{\Gamma}_{r, e}+\theta_{e}+\eta_{r}+\epsilon_{i, r, e} \tag{2}
\end{equation*}
$$

\]

The two explanatory variables of interest are $m_{r, e}^{H}$ and $m_{r, e}^{L}$. They represent the number of migrants with tertiary $(H)$ schooling $^{22}$ and the number with secondary or less $(L)$ schooling, respectively, as shares of the total 2005 population in region $r$ at the time of election $e$. We standardize for total adult population in 2005, so that the variation of that ratio is only driven by changes in the immigrant population and not by nativepopulation changes. ${ }^{23}$ The vector $\mathbf{X}_{i, r, e}$ includes a set of individual controls capturing characteristics of voter $i$. They include age, gender and whether the individual is tertiary educated. The vector $\boldsymbol{\Gamma}_{r, e}$ contains a set of aggregate characteristics of region $r$ including the logarithm of the average GDP per capita, the unemployment rate, and the percentage of tertiary-educated individuals in the regional population. ${ }^{24}$ We control for time-invariant regional factors, such as institutions, local culture, and geographic location, with the inclusion of regional fixed effects $\eta_{r}$. Aggregate changes over time and between elections are captured by the election-year fixed effects $\theta_{e}$.

Estimating equation (2) using OLS produces a measure of the partial correlation between the high- and less-skilled immigrant shares and natives' voting preferences. The estimates of coefficients $\beta_{H}$ and $\beta_{L}$ capture such correlations. However, it is likely that unobserved regional characteristics correlated with the error term $\epsilon_{i, r, e}$ also affect immigrants' location decisions. For instance, a better economic outlook in a region or specific regional policies may attract immigrants and be associated with lower nationalism in the region. If this is the case, the OLS estimation will produce a biased estimate of the causal effect of immigration on votes. An additional source of bias is the fact that the population shares of both highly- and less-skilled immigrants may be measured with error as they are obtained from a survey (rather than a population count). Measurement error bias will attenuate any estimated impact of the explanatory variable. To mitigate these potential biases, we use an instrumental variable approach based on the shift-share methodology (see Card, 2001), which has been widely used to explore the relation between immigration and voting (see e.g. Otto and Steinhardt, 2014; Mendez and Cutillas, 2014; Brunner and Kuhn, 2018; Halla et al., 2017; Barone et al., 2016; Mayda et al., 2018). The intuition for it is to use past location of immigrants by country-of-origin across regions as a predictor of subsequent inflows of immigrants. The assumption is that past settlements of immigrants

[^10]from specific countries are uncorrelated (or less correlated) with current factors that may affect the political preferences of individuals. The net aggregate inflows of immigrants from each country-of-origin in the period 2007-2016 are then likely driven by aggregate push factors or by changes in immigration laws (such as the EU enlargement), and are thus allocated to EU regions according to the early distribution of immigrants from those countries.

As we want to capture skill-specific effects of immigration, we construct two different instrumental variables (IVs). Both IVs use the same initial distribution of immigrants, by origin, across regions, and interact it alternatively with high- and less-skilled immigrant flows by country-of-origin. ${ }^{25}$ We choose 2005 as a base year to compute the initial distribution of low and high skilled migration. Specifically, we define the number of immigrants from origin $c$ resident of region $r$ in year 2005 as the share of the total number of immigrants from that origin in 12 European countries in 2005 as follows:

$$
\begin{equation*}
s h_{c, r, 2005}=\frac{M_{c, r, 2005}}{\sum_{r \in E U_{12}} M_{c, r, 2005}} \tag{3}
\end{equation*}
$$

where $M_{c, r, 2005}$ is the stock of immigrants born in country $c$ and residing in region $r$ in year 2005, while the denominator is the total stock of immigrants born in country $c$ and residing in all countries of our sample as of 2005. The choice of 2005 as a base year allows to take into consideration the migrant networks developed after the last wave of European integration with accession of countries from Central and Eastern Europe (CEE) in 2004. The downside of this choice is that 2005 is very close to the first electoral event in the sample (2007). In Section 3.2 below we discuss the ensuing threats, and propose several empirical tests and corrections.

The EULFS, in its harmonized codification scheme, grouped the origin countries into 15 groups that we use as "countries" of origin. ${ }^{26}$ Then, we compute the total stocks of immigrants resident in the EU 12 countries, born in country-of-origin $c$ in each year $t \in\{2007,2008, \ldots, 2016\}$ separately for each skill level $s$ equal to college educated, $H$, or non-college educated, $L$. Namely we compute:

$$
\begin{equation*}
T M_{c, t}^{s}=\sum_{r \in E U_{12}} M_{c, r, t}^{s} \text { for } s=H, L \tag{4}
\end{equation*}
$$

We can then predict the total number (stock) of immigrants of skill $s$, origin $c$ in region $r$ and year $t$ as the interaction (product) of expression (3) and (4), as follows:

$$
\widehat{M}_{c, r, t}^{s}=s h_{c, r, 2005} * T M_{c, t}^{s} .
$$

[^11]We then sum across all countries-of-origin to obtain the total predicted number of immigrants of each education type, and standardize for the total adult population in region $r$ in year 2005, to obtain the predicted highly-skilled and less-skilled immigrant shares of the initial population in region $r$ and year $y$ as follows:

$$
\begin{equation*}
\widehat{m}_{r, t}^{s}=\frac{\sum_{c} \widehat{M}_{c, r, t}^{s}}{P_{o p}, 2005} \tag{5}
\end{equation*}
$$

These imputed shares are used as IVs for the actual immigrants of each skill level $H$ and $L$ as a share of the 2005 population. Such a shift-share or "enclave" instrument generates variation of regional migration over time due to the interaction between the previously established immigrants' settlement, and current aggregate national flows. Both of those components are likely to be less correlated with region-specific economic and political changes during the period, relative to actual migrant flows. The predictive power of this IV, for each skill group, will depend on the tendency of that group to locate where previous immigrants from the same origin did. Notice that the 2005 distribution of origins across regions is not skill-specific, as to avoid correlation with regional features that would select highly- or less-skilled workers. Clearly, if there is a very strong correlation between skill and origins' distribution across destination regions, this would generate a correlation between the initial immigrant distribution with local attributes and the evolution of nationalism. Hence the relative variation of the two instruments is generated by the differential aggregate flows of immigrants of each skill-level across countries-of-origin. Large differences in the education levels of immigrants across areas-of-origin, as well as large differences in the growth of each immigrant group, generate the variation needed to identify the two effects, of less- and more-educated migrants, separately.

While the shift-share instrument in equation (5) should reduce the severity of the omitted variable bias associated with OLS estimations of equation (2), a recent literature pointed out some potential flaws of the shift-share approach (Jaeger et al., 2018; Adao et al., 2019; Borusyak et al., 2020; Goldsmith-Pinkham et al., 2020). We now discuss how these potential threats to identification apply to the present setting, and perform a set of empirical tests for the exogeneity of our IV strategy.

### 3.2 Threats to Identification and IV Validity

The shift-share instrument in equation (5) combines variation from origin-by-destination immigrant shares in 2005 (i.e. $s h_{c, r, 2005}$ from equation (3)) with subsequent origin- and skill-specific shocks that determine the flows of less- and highly-skilled migrants in the destination (i.e. $T M_{c, t}^{s}$ from equation (4)). In this section we discuss the validity of this approach, in light of recent papers focused on the shift-share approach to IV. In particular, while consistent identification can be obtained relying on the exogeneity of the aggregate "shifts" as described by Borusyak et al. (2020), in our case identification more likely follows from the exogeneity of differential destinations' shares of immigrants, as argued by Goldsmith-Pinkham et al. (2020). This is because the cross-regional variation of the shares is much larger than that of the shocks. We then tackle
concerns arising from the correlation between the exogenous origin-specific shares across regions which could generate a potential correlation in the error term and biased standard errors (Adao et al., 2019). Finally, inspired by (Jaeger et al., 2018), we discuss the possible conflagration of short- and long-run effects driven by delayed adjustment of local votes via lagged mobility, an issue that may prevent a clean estimate of the effect of immigrants on native voting preferences.

Central to our identification is the differential exposure of destination regions $r \in \mathrm{EU} 12$ to common shocks, through the exogenous initial shares of immigrants (Goldsmith-Pinkham et al., 2020). In our IV approach, the common shocks are push migration factors, which determine the composition by origins and skills of net immigration flows in EU12 regions. While two important determinants of aggregate shocks affecting overall emigration in the 2007-2016 period were the accession of nine new countries to the $\mathrm{EU}^{27}$ and the great recession, ${ }^{28}$ likely independent from each other and not correlated with earlier drivers of migration, we do not rely on the exogeneity of those shocks. Instead, following Goldsmith-Pinkham et al. (2020) we show that the initial distribution of the regional immigrants shares was not correlated with persistent omitted factors which could also correlate with natives' vote.

We first calculate the Rotemberg weights for each share in the shift-share instrument. Table 3 shows the Rotemberg weights for the 5 origin countries with highest values and their sum. We do this considering the variation of the IV in the first (columns 1-5) and in the second (columns 6-10) electoral event. Most countries experience 2 elections in the period and we want to see whether the source of variation of new immigrants in either period was driven by a similar group of countries. These weights express the share of the identifying variance in the IV attributable to each group of origin, and hence how important that group is in the identification of the effect. Seven origin groups are the main source of variation in the shift-share approach: EU15, New European member states that joined EU in 2004, New European member states that joined EU in 2007/2013, Other Europe, Other Africa (i.e. except North Africa, which is coded as an autonomous origin), South and South East Asia, and Central America and the Caribbean. On average, the top 5 origin groups receive about 75 percent of the positive weights, suggesting that these groups are capturing the majority of the variation of the IV. ${ }^{29}$ We also note that the weights are skill-specific: shares from European origin countries explain the regional variation of less-skilled immigrants, while non-European origin countries are most relevant in explaining regional variation of high-skilled immigrants. This bodes well for the existence of separate exogenous variation in the two groups and the possibility of identifying a separate effect of each.
[INSERT Table 3 HERE]

[^12]Then, in Table 4 we show the correlation between the top origin-specific shares, and a set of regional characteristics as of the year 2005. As in the Goldsmith-Pinkham et al. (2020) analysis of Card (2009), the R -squared values suggest that regional characteristics explain a small amount of the cross-sectional variation of each of the shares. Only two of 35 correlations coefficients are significant at $5 \%$ level, and no regional variable shows significant correlation with more than one share. Moreover, columns (8) to (10) report the correlations between the skill-specific predicted variation of immigrant stocks (which corresponds to the variation of the IV) and regional characteristics as of 2005. In this case, we do not find any statistically significant correlation and the coefficients are very small.

## [INSERT Table 4 HERE]

While lack of correlation with the level of pre-existing characteristics is consistent with mainly exogenous variation, a correlation in levels would not invalidate this identification. In Table 5 we show correlation between the pre-2005 trend growth of political and economic variables and the 2007-2014 predicted growth of skill-specific immigrants for the most important groups of origins (as shown using Rotemberg weights) as well as overall (which represents the IV variation). Specifically, the dependent variable is the imputed growth of immigrants over the period 2007-2014 for the whole immigrant population (column 1 ) and for the originspecific immigrant groups (columns 2 to 8 ). The analysis is performed by aggregating education groups in panel A, and then separately for highly-educated immigrants (in panel B), and for less-educated immigrants (in panel C). Each row analyzes a different explanatory variable. First is the growth rate of average nationalism at the regional level, weighted using vote shares of each party in the region in the last two pre-sample electoral events taking place in the country (Nationalism Growth). ${ }^{30}$ Then we consider the 2000-2007 growth of GDP per capita (GDP per capita growth), of the employment rate (Employment growth), and finally the share of the population which is tertiary educated (Tertiary Educ. growth).

## [INSERT Table 5 HERE]

The results from this pre-trend analysis show very small and usually non-significant correlations with pre-existing regional trends. Conditional correlations (on country fixed effects) are not significant at any reasonable confidence level in most cases. The predicted change in immigrants (high- or less-skilled) is not associated with pre-existing regional trends. Few exceptions relate to the GDP growth and some low-skilled groups when we cluster standard errors at the country level (round brackets). However, these correlations remain at most weakly significant once we cluster standard errors at the regional NUTS 1 [squared brackets] or NUTS2 \{curly brackets\} levels.

[^13]We have performed two additional tests, following Goldsmith-Pinkham et al. (2020). First, reported in Table A-1 of the Appendix, we show that the main empirical results do not change significantly when we use different estimators (OLS, TSLS and LIML) reducing concerns for significant endogeneity or omitted variable bias. Second, reported in Table A-2 of the Appendix, we show the estimates after removing (from the construction of the skill-specific instrumental variables) the predicted stocks from the main origin groups (identified in Table 3) one at the time. The estimates of our main specification are qualitatively and quantitatively unchanged.

Results from the above tests support the exogeneity of the initial shares measured in 2005, thus the consistency of our baseline estimates, which are presented in Table 6 (See Section 4 below for the related discussion). However, it may be argued that Goldsmith-Pinkham et al. (2020)'s tests do not assuage all omitted variable concerns, as the identifying assumption itself cannot be directly tested. As a complementary check, we use data from Alesina et al. (2021) on the distribution of immigrants across European regions to construct skill-specific IVs for the year 2000 instead of $2005 .{ }^{31}$ Measuring shares back in 2000 has the advantage of a lower exposure of the IV estimator to omitted factors that affect also individual voting decisions in 2007-2016. Empirical results using the 2000 shares (see Table A-3 in the Appendix) are very similar to baseline estimates that use 2005 shares. They only difference is the less precisely estimated effect of high skilled EU immigration, which indirectly confirms the importance of migration networks developed after the 2004 EU enlargement. It is widely acknowledged that the EU Accession generated unprecedented re-allocations of high skilled workers from CEE countries (European Commission, 2018). These movements seem only loosely correlated with pre-accession networks measured back in 2000.

An additional concern when using the shift-share approach, raised by Adao et al. (2019), arises from the potential correlations between the exogenous origin-specific shares across regions. Adao et al. (2019) shows that, if these correlations exist, then regions characterized by similar shares of origin-specific enclaves will experience similar shocks in the shift-share approach, generating a bias in the estimates of the error-terms. To account for this potential bias, Table A-4 in the Appendix presents the estimates after clustering the standard errors over the regional deciles computed based on the origin-specific initial shares. In this way, we account for potential correlations in the error terms between regions with similar distributions of specific origin-groups. After performing the estimates across the main seven origin-groups identified in Table 3, Table A-4 shows that this correction does not significantly affect the precision of our estimates.

A final concern, related to the critique by Jaeger et al. (2018), is that the estimated effects of immigration on political attitudes could confound a short-run effect on preferences and a lagged longer-run effect on selection. In particular Jaeger et al. (2018) identify an issue with the classical analysis of the impact of immigrants on local wages, in which there could be a negative short-run impact, offset by a long-run wage increase, as a model with sluggish capital adjustment would imply. If immigration flows, by country-oforigin, are persistent in a region, the shift-share instrument can conflate the impact of current and of past

[^14]immigration (hard to separate) obtaining an incorrect estimate of the short-run effect on wages. In this case we do not have wages as an outcome, but one may worry that a similar difference in short-run and long-run effects may arise if a pro-nationalist response in the short run drives people who are more nationalistic to leave the area with a lag. Shift-share IV could capture a mixture of a positive short run effect driven by change in attitudes, and a negative long run effect driven by selective migration of people with intense nationalist preferences. ${ }^{32}$ The operating of such a mechanism requires that voters in region $r$ may move between election year $e-1$ and $e$ in response to past immigration, in a selective way. While we cannot analyze internal selective migration (based on political preferences) we can at least analyze internal net-migration of natives. We test such a mechanism in Table A-5, which reports the correlation of the skill-specific variation of natives with the lagged share of immigrants at regional level (as done in Edo et al. (2019)). Results show no significant association between the skill-specific share of immigrants in region $r$ at election year $e-1$, and the change in less- and highly-skilled natives between years $e-1$ and $e$. These estimates show the lack of systematic lagged native mobility in responses to regional immigration, and imply that the working of the mechanism described above is unlikely.

## 4 Baseline Results

Table 6 presents our baseline results. We report the 2SLS coefficients ${ }^{33}$ on different measures of immigrants as a share of the initial population in a region. The dependent variable in the first columns is the nationalism index. The top panel in the table shows the estimates using all immigrants as the explanatory variable. The lower panel shows results when only considering migrants from non-EU origins. When considering the share of EU immigrants only, the instrument has very low power, hence we do not report those results. In column (1), the explanatory variable is the total share of immigrants relative to the initial (as of 2005) total population of residents. We keep the population in the denominator fixed to its 2005 value, so that it is not affected by potentially endogenous changes in native populations. In column (2) the explanatory variable is the high-skilled-immigrant as a share of the 2005 population, and in column (3) it is the less-skilled-immigrant share of the initial population. In columns (4) to (6) we include both highly-skilled and less-skilled in the same regression. All specifications include regional fixed effects, election fixed effects, plus the following regional and individual controls: age, gender and tertiary education dummy at individual level, the logarithm of GDP per capita, the percentage of tertiary-educated individuals, and the unemployment rate at the regional level. Standard errors are clustered at the regional level. ${ }^{34}$ As an alternative to including

[^15]time-variant regional controls, which could be affected by immigration and hence "bad controls", column (5) includes the regional controls (measured in year 2005) interacted with year dummies. This avoids potential simultaneous influence of regional characteristics on both the outcome and the explanatory variable. The estimates in column (4) and (5) are quite similar, revealing that the effect of simultaneous controls is not too relevant.

We also investigate, consistent with most of the existing literature, whether immigration translates in votes for radical right groups. Figure 3 shows that the Radical-Right party family is characterized by the highest level of nationalism, on average. In column (6) we estimate a linear probability model to analyze how migration affects voting shares for radical right parties.

## [INSERT Table 6 HERE]

The F-stat of the first stage (reported in the table for all IV estimates) shows that the shift-share instrument has significant power, even when the two shares (high- and less-skilled) are included simultaneously as endogenous regressors in the IV specification. ${ }^{35}$ Table A-6 in the Appendix reports additional first-stage evidence. First stage estimates in columns (1)-(6) show that the shift-share instrument has strong predictive power on the endogenous regressor. Columns (7) to (10) show that such predictive power is skill-specific as we include both skill-specific instruments: the IV for highly- (less-) educated migrants has predictive power for the share of highly- (less-) educated migrants but not for the share of less- (highly-) educated migrants. This confirms that the two instruments are able to identify the two endogenous variables separately, and minimizes concerns regarding a potential collinearity among the instruments in the specification with two endogenous regressors. Table A-6 reports also the conditional F-stat suggested by Sanderson and Windmeijer (2016) in a two-endogenous variables model. The high-values of this conditional F-stat further mitigates concerns over potential weakness of the instruments.

The baseline estimates in the top panel of Table 6 show that, on average, a higher share of immigrants does not have a significant impact on the intensity of nationalism in voters. ${ }^{36}$ However, when separating the effect of less- and high-skilled immigrants, we see a clear pattern and significant difference. An increase in the share of less-skilled immigrants in a region is associated with increase in nationalism. Conversely, an increase in the share of high-skilled immigrants is associated with a decrease in nationalism. ${ }^{37}$ In columns (2) and (3) we include each skill group separately while in columns (4) and (5) we include them together as explanatory variables of interest. Both when considering the nationalism index and the share of votes to radical right parties, highly-skilled immigrants have a negative coefficient while less-skilled immigrants have

[^16]a positive one..$^{38}$ Estimates relative to the share of non-EU immigrants, shown in the lower panel of Table 6, confirm these findings. The positive effect of less-skilled migrant shares on nationalist voting is even larger when considering only immigrants from extra-EU countries (see IV estimates in columns (3) and (4)). The anti-nationalist voting effect of skilled migration from non-EU migrants is also larger in size, but less precisely estimated (see columns (2) and (4))..$^{39}$

We can evaluate the economic magnitude of these effects by using the estimated marginal effect of migration shares, together with the corresponding standard deviations reported in Table 2. The IV estimates in column (4) in the top panel of Table 6 indicate that a one standard deviation increase in the share of less-skilled immigrants (equal to 6.1 percentage points) shifts voting of individuals toward a more nationalist agenda by $0.49(=6.1 * 0.08)$ standard deviations of the nationalism indicator. This is a sizable effect, almost equivalent to the distance in nationalism between the Radical Left family (0.05) and a Confessional (0.55) family, or half the distance between the Socialist family and the Agrarian/Center family (compare Figure 3). The magnitude of the negative effect of a one standard deviation increase in the share of high-skilled migrants on nationalist voting is equal to $-0.53(=3.1 *(-0.17))$ standard deviations. It is roughly equal and opposite to the effect estimated above for less-skilled migrants. While the coefficient for high-skilled immigrants is larger then for less-skilled immigrants, their variation across regions is smaller, hence a similar effect is produced in terms of magnitude.

These results are obtained when measuring the nationalism index of parties over 2006-2016 as fixed at the average value in the period. In Table A-8 in the Appendix, we report very similar findings when fixing party nationalism at the initial or final value observed in the sample. Table A-7 of the appendix shows also that the effect of immigration on the index of salience of nationalism (calculated simply as percent of manifesto devoted to the issue) is similar to the effect on the intensity of nationalism itself. A higher share of less-skilled migrants makes nationalism a more salient topic among voted parties. Conversely, a higher share of high-skilled migrants reduces the salience of nationalism among voted parties. Signs of the coefficients are stable across specifications. Effects are very similar when we concentrate on non-EU migrants.

In Table A-XII of the online Appendix we explore the robustness of the coefficients shown in Table 6, column (5), top panel. In column (1) of Table A-XII we drop from the specification the set of individual and regional controls and we keep only the regional and election fixed effects. The coefficients are estimated less precisely, but the signs are consistent with our baseline estimates. In column (2), we include a set of controls for individual characteristics (i.e. a dummy for female/male, a dummy for tertiary education, and

[^17]linear age). In column (3), we include the set of regional controls (i.e. per capita GDP (in logarithm terms), regional unemployment rate, and share of residents with tertiary education) without individual controls. Finally, in column (4) we include the complete set of individual and regional controls, so as to obtain our baseline specification. The main results remain reasonably stable across specifications. Among individual controls, being female and having tertiary education are associated with voting for parties with a significantly less-nationalistic agenda. Age does not have any significant correlation with the intensity of nationalist vote. Among regional controls, the positive significant coefficient on the share of residents with tertiary education is somewhat surprising and counter to the individual effect of education on nationalism intensity. Other regional controls do not seem to affect the nationalism intensity of the vote, nor to affect the coefficient on immigrant share. ${ }^{40}$

## [INSERT Table 7 HERE]

In Table 7 we run separate regressions for the two baseline dimensions of nationalism that we combine in the index. The Table shows that baseline results carry over to the individual components of our index: high-skilled migration makes individuals vote more for parties that have a net favorable position toward the European Union, and vote less for parties that appreciate the importance of a national way of life. The opposite is true for less-skilled migration.

## 5 Heterogeneity in Voting Responses

We now explore individual heterogeneity in these effects. Individuals may update their perceptions differently in response to the inflow of immigrants, depending on their perceptions and priors which vary with education, gender, age, and area of residence.

To allow for heterogeneous effects of migration across voters' individual characteristics, we run regressions on separate sub-samples of citizens by their education levels (separating tertiary- and non-tertiary-educated), by age (grouping 18-37, 38-57, and $58+$ together), by gender (male and female), and by place of residence (separating into rural areas, cities, and small towns). We estimate different coefficients of the impact of immigrants on nationalism associated with each group. We summarize these coefficients in figures rather than tables. Figure 7 plots the estimated effect of high-skilled migration (Mig HS, blue line), and less-skilled migration (Mig LS, green line) for each of these subgroups. Shaded areas denote the $95 \%$ confidence intervals around the estimated value.

[^18]
## [INSERT Figure 7 HERE]

Panel (a) reports results by education level and shows a remarkable difference in the response of more- and less-educated natives to high- and less-educated immigrants. Interestingly, less-educated citizens are pushed toward nationalism significantly more than more-educated citizens, in response to less-skilled immigration (top green line). At the same time, they are also pushed away from nationalism more intensely than highlyeducated citizens in response to high-skilled immigrants. A one standard deviation increase in the share of less-skilled migrants raises nationalist voting by citizens without tertiary education by $0.67(=6.1 * 0.11)$ standard deviations of the nationalism indicator. This is a significant effect, comparable to the distance in nationalism between a Liberal party ( -0.55 ) and a Confessional party (0.07). Symmetrically, less-educated natives are also rather responsive to high-skilled migration. A one standard deviation increase in highskilled migration reduces nationalist voting by $-0.59(=3.1 *(-0.19))$ standard deviations of the nationalism indicator. Overall, education of citizens seems to reduce the responsiveness of voting behavior to the migration phenomenon. This may be consistent with a Bayesian updating of beliefs: less-skilled individuals may know less about immigrants and have weaker priors about them. Local experience/contact shapes their preferences more significantly in either direction. Conversely, highly-educated people are likely to have been more-heavily exposed to different cultures and ethnicities (e.g. through travel, higher education, etc.), hence local contact with immigrants does not much change their views, which are, on average, positive toward immigration.

Age is also a relevant dimension in affecting citizens' responses to immigration (see panel b). Size and statistical significance of the marginal effect of less-skilled migration on nationalist voting increase somewhat with age, though the response to high-skilled immigration does not seem to change monotonically with age and is stronger and more statistically significant for the age groups 18-37 and 38-57. This probably reflects a higher frequency of migrant-native interactions in these age categories (e.g. for work or study reasons). Panel (c) displays results of the heterogeneity by gender. Immigration (both less- and high-skilled) affects nationalist voting mostly among males. The voting behavior of females is much less sensitive to immigration, being more similar to the voting behavior of highly-educated individuals. Moreover, females are less likely than males to vote for nationalistic agendas, on average. Finally, panel (d) reports results by voters' place of residence. The (positive) effect of less-skilled migration on nationalist voting seems concentrated among natives living in small and mid-size towns, while the (negative) effect of high-skill immigration is more precisely estimated among those living in cities. In rural areas, the native population is more likely to interact with less-educated immigrants (if with any at all), which enhances fears of immigration, in line with group threat theory (see e.g., Campbell, 1965). In cities, instead, contacts of highly-skilled natives with immigrant peers e.g. friends or colleagues are relatively more frequent. As predicted by contact theory (see e.g. Allport, 1954), such constructive interactions may improve general attitudes towards immigration. ${ }^{41}$

[^19]We also analyze whether effects of immigration vary depending on region specific characteristics. Perceptions of migrants' contributions to the local economy and society may be affected by some local features, such as the incidence of crime and generosity in the local provision of public services. Earlier studies have found that local provision of public goods (see Otto and Steinhardt, 2014, Becker and Fetzer, 2017), and children's education (see Halla et al., 2017) can be important channels influencing the attitudes of natives toward immigration. ${ }^{42}$

In Table A-XV of the online Appendix we analyze how the impact of immigrants on nationalist voting varies across a set of regional economic and social characteristics i.e. the value of per-capita social benefits (as a measure of welfare generosity); the ratio of children to adults at the regional level (as a proxy of the relevance of local public schools); and the total number of crimes per person in the region (as a proxy for public safety; see the online Appendix A for details on source and construction of these variables). We split regions according to each of the three indicators, and run the regression for each sub-sample. These exercises confirm that in general, the point estimates of high-skilled immigrant-share on nationalism remains negative and the effect of less-skilled immigrant-share stays positive for most sub-groups. While some heterogeneity emerges in the significance of the coefficients across subgroups, the very low F-stat suggests we may have a weak-instruments problem, which raises important caveats over the full reliability of these estimates. ${ }^{43}$

## 6 Effects on Turnout and on Longitudinal Individual Preferences

### 6.1 Decomposing the Effect: Turnout and Voting Preferences

The reduced form structure of equation (2), estimated on a repeated cross section, does not identify the mechanisms connecting migration with natives' voting behavior. One way to think about the mechanisms of such effects is to consider that local interactions with immigrants may produce a negative/positive revision of individual nationalism. In addition, the local presence of immigrants may contribute to make "immigration" a more salient issue in the voting decisions of some groups: people may decide to vote for a party because of its position on immigration. In this sense, immigrants' presence may affect the nationalistic view of a person and/or make it more likely that those views are central in their vote. This channel has been emphasized by studies that show that attitudes are not easy to change, but local events and information may change the willingness to act upon these attitudes with one's vote (see Barone et al., 2015).

We formalize this insight by considering two groups $a$ and $b$, with different average preferences for the intensity of "nationalism" of their elected officials. These groups can be thought of as the group of skilled and less-skilled citizens, or young and old, or urban and rural. At period $t=0$, the two groups have their

[^20]own level of preferences towards nationalism, and no particular assumption is made on the relation between the two (i.e. $n_{a}^{0} \gtreqless n_{b}^{0}$ ).

Next, we define a revision of average preferences for each group as a function of the local change in high- and less-skilled immigrants as shares of the population. This variable proxies the change in likelihood/frequency of interactions of the local population with immigrants and/or the change in intensity of local news related to them. Hence, the preferences of natives in period $t=1$ may change as a result of immigrant flows to a region. This is captured by the following relation:

$$
\begin{equation*}
n_{j}^{1}=n_{j}^{0}+f_{j}\left(\frac{\Delta s_{m}}{P o p}, \frac{\Delta u_{m}}{P o p}\right), \quad \text { for } \quad j=a, b \tag{6}
\end{equation*}
$$

In equation (6), the function $f_{j}(.,$.$) captures the revision of nationalism in group j$ as a consequence of being exposed to changes in more-skilled $\left(s_{m}\right)$ and less-skilled ( $u_{m}$ ) immigrants.

Contact theory predicts that people have less fear of what they know (see e.g. McLaren, 2003). Highlyskilled immigrants are likely to be experienced as contributing citizens; they are likely to work and unlikely to be involved in "negative local news stories". When this obtains, the derivative of the function with respect to an increase in skilled immigration would be negative $\left(f_{j, s_{m}}^{\prime}<0\right)$. On the other hand, stereotyping may induce natives to attribute economic or social problems to the presence of less-skilled immigrants, who may be perceived as less likely to work and to be net users of local welfare. They may also be more likely to be in local news stories, even if it is only a very small percentage of them. In these cases, a larger inflow of less-skilled migrants may produce a revision in favor of nationalistic views $\left(f_{j, u_{m}}^{\prime}>0\right)$. A recent paper by Alesina et al. (2018) shows that people in many countries overestimate both the share of immigrants and the share of non-educated migrants in the population. They also show that for some groups of citizens, such as less-educated ones in lower-skilled occupations, this distortion in perception is even stronger.

The extent of the revisions may vary from group to group depending on several features. If the reason for the revision is a Bayesian updating of the contributions of immigrants, then groups who are initially less informed would have larger revisions. Existing literature (e.g. Della Vigna and Gentzkow, 2010) suggests that this can be the case for less-educated natives. These individuals might respond to local immigration more than do educated citizens. Alternatively, if the revision is driven by confirmation bias (so that signals confirming our beliefs have stronger effects), groups who are more nationalistic to begin with will respond to immigrant inflows-especially of less-skilled migrants-increasing their nationalism. These groups will use the new pieces of information to confirm their political priors (e.g. Nyhan and Reifler, 2010). Thus they will not reduce their nationalism much in response to high-skilled immigration.

The other crucial factor in affecting electoral outcomes is the probability of actually voting. This can be affected by the presence of more- or less-skilled immigrants, by influencing the salience of the immigration topic in deciding whether to vote. Defining the function $\delta_{j}\left(\frac{\Delta s_{m}}{P o p}, \frac{\Delta u_{m}}{P o p}\right)$ for $j=a, b$ as the probability of voting of individuals of group $j$, we can analyze the impact of immigration.

The index of political nationalism for the population is produced by aggregating the voting behavior and
turnout of the two groups of individuals, weighted by their relative population. We standardize the index to one and denote by $A$ and $1-A$ the relative sizes of groups $a$ and $b$, respectively:

$$
\begin{align*}
\overline{n^{1}}= & A \delta_{a}\left(\frac{\Delta s_{m}}{P o p}, \frac{\Delta u_{m}}{P o p}\right)\left[n_{a}^{0}+f_{a}\left(\frac{\Delta s_{m}}{P o p}, \frac{\Delta u_{m}}{P o p}\right)\right]+ \\
& (1-A) \delta_{b}\left(\frac{\Delta s_{m}}{P o p}, \frac{\Delta u_{m}}{P o p}\right)\left[n_{b}^{0}+f_{b}\left(\frac{\Delta s_{m}}{P o p}, \frac{\Delta u_{m}}{P o p}\right)\right] . \tag{7}
\end{align*}
$$

Immigration affects the index through the turnout channel and through the individual preference channel, and each channel can be specific to a group. Using our data we will be able to investigate these channels by estimating separately how the turnout of each individual group $j=a, b$ is affected by immigration, and how individual preferences are affected.

In terms of turnout (probability of voting) we estimate the following:

$$
\begin{equation*}
\text { Turnout }_{i, r, e}=\alpha+\beta_{H} m_{r, e}^{H}+\beta_{L} m_{r, e}^{L}+\zeta \mathbf{X}_{i, r, e}+\gamma \boldsymbol{\Gamma}_{r, e}+\theta_{e}+\eta_{r}+\epsilon_{i, r, e} \tag{8}
\end{equation*}
$$

The main regressors in equation (8) are analogous to equation (2) above. These are the shares of skilled $(s)$ and less-skilled $(u)$ migrants relative to the population in 2005 in region $r$. The outcome of interest is the probability that individual $i$, resident in region $r$, votes in national election $e$. The explanatory variable of interest is the change of $m_{r, e}^{s}$ instrumented by shift-share-driven changes in $\frac{\Delta s_{m}}{P o p}$ and $\frac{\Delta u_{m}}{P o p}$. The coefficients of interest are $\hat{\beta}_{s}$ for $s=H, L$.

The second channel shown in equation (7) is the change in individual preferences. The information available from the ESS provides insight into this channel by looking at longitudinal changes in individual political preferences between the last national elections and the current interview date. ${ }^{44}$ Defining Nation $\pi_{i, r, t}^{c}$ as the normalized level of nationalism of party $\pi^{c}$ preferred by voter $i$ in region $r$ in year $t$ and Nation ${ }_{i, r, t-1}^{\pi}$ as the normalized level of nationalism of party $\pi$ voted-for in election year $t-1$, we can then compute:

$$
\begin{equation*}
\Delta \text { ation }_{i, r, t}=\text { Nation }_{i, r, t}^{\pi^{c}}-\text { Nation }_{i, r, t-1}^{\pi} \tag{9}
\end{equation*}
$$

This is the variation in nationalism for individual $i$ capturing a change in expressed preferences, conditional on having voted at $t-1$. Using expression (9) as our dependent variable, we can estimate an individual difference analysis as follows:

$$
\begin{equation*}
\Delta \text { Nation }_{i, r, t}=\alpha+\beta_{H} \Delta m_{r, t}^{H}+\beta_{L} \Delta m_{r, t}^{L}+\theta_{t}+\Delta \epsilon_{i, r, t} \tag{10}
\end{equation*}
$$

where $\Delta m_{r, t}^{s}$ is the change in the (more- or less-skilled) migrant share of the population in region $r$ between the year $t$ and the year of the last election $t-1$. This corresponds to a linearization of function $f_{j}$

[^21]in equation (7). We emphasize that the individual panel analysis fully controls for individual characteristics and time-invariant regional factors. It also abstracts from issues of selection into vote participation (which is analyzed in the "turnout" equation) as it includes all people who voted in the early election independently of their later participation. Poutvaara and Steinhardt (2018) is the only paper that we know of which exploits variation in individual preferences over time. However, that study looks at the effect of "bitterness" on attitudes towards migration in Germany, while we analyze the effect of local migration on individual voting across Europe.

### 6.2 Decomposing the Effects: Estimates

Table 8 presents the estimated coefficients on the share of high- and less-skilled immigrants on voter turnout, defined as the probability of voting among individuals aged 18 or higher. The specification is similar to the one for nationalism, except that a dummy for "voted in last election" is used as the outcome instead of the nationalism index.
[INSERT Table 8 HERE]

In aggregate, neither less-skilled nor high-skilled migration seem to be correlated with the propensity to vote in elections. However, the average effect hides heterogeneous reactions of specific groups of voters. When we consider separate sub-samples by education (tertiary and non-tertiary) in columns (2) and (3) and age (18-37, 38-57, over 58+) in columns (4) to (6), we find that high-skilled immigration is associated with a significant increase in turnout among young voters (age group 18-37). Taken at face value, the estimated coefficient suggests that a one standard deviation increase in high-skilled immigration increases the probability of voting among youths by $15 \% .^{45}$ This result shows that the negative impact of high-skilled migration on nationalist voting is partly driven by an increase in participation among young voters, whose preferences tend to be less nationalist than average. ${ }^{46}$

## [INSERT TABLE 9 HERE]

We then move to investigate the effects of migration on the change in individual preferences by exploiting a longitudinal component of the data. These estimates are reported in Table 9 . We see a positive and significant effect of changes in less-skilled migrant share on individual preferences for nationalism (see column (1)). This effect is more precisely estimated for less-educated voters (column (2)) compared to tertiary-educated

[^22]ones (column (3)). High-skilled immigration does not seem to affect individual preferences significantly. The point estimates for individuals are not far from the aggregate ones shown in Table $6 .{ }^{47}$ Caution is needed when interpreting the individual results. In general, a statement of current party preference in a survey may be an imprecise indicator of party voting. More importantly, individuals tend to be better informed about party platforms when national elections are close than at any time between them. This may generate a larger measurement error of preferences in the current period, which could result in an attenuation of the effects. The subsample we use for estimates in Table 9 is also smaller than our baseline sample, as only the $60 \%$ of individuals who voted in national elections also responded to the question about party closeness. ${ }^{48}$ Finally, the F-stats levels are somewhat low, which does not allow us to exclude the possibility of some bias in the estimated coefficients. ${ }^{49}$ With these caveats in mind, we can say that results in Tables 8 and 9 are consistent with the following explanation of aggregate results. First, the negative effect of high-skilled migration on nationalist voting may be mainly associated with increased political participation of young voters. Second, the positive effect of less-skilled migration on nationalist voting is mainly due to individual preference shifts, especially for less-educated voters.

## [INSERT Figure 8 HERE]

Can part of the anti-nationalist impact of high-skilled immigrants be due to peer effects? Figure 8 displays the attitudes toward political institutions of natives and immigrants. In particular it represents indicators of trust towards the European parliament, the national parliament, and willingness to pursue EU unification for natives, by age group (panel a) and skill level (panel b), compared with the corresponding attitudes of less- and high-skilled immigrants. The Figure suggests that immigrants, especially highly-educated ones, are characterized by the highest level of trust toward the EU and local political institutions. This level is higher than for all group of natives, including the high skilled ones. Next, Figure 9 presents some evidence on frequency and intensity of exposure of natives to immigrants. It shows the average shares of natives reporting any exposure (i.e. "any" immigrant friends or colleagues), and a high exposure ("several" immigrant friends or colleagues). Averages are taken by age group, and skill level in the case of young individuals. The figure confirms that young high-skilled natives are the category having the higher exposure to immigrants presence: almost $80 \%$ of young high-skilled natives have at least a few immigrant friends or colleagues, and almost $30 \%$ of them have a large network of many immigrant friends or colleagues. These figures are much larger than those of older individuals. Age and education play a role in the intensity of interaction with high-skilled

[^23]immigrants.

## [INSERT FIGURE 9 HERE]

While purely descriptive, this evidence corroborates the idea that frequent interactions with their migrant peers may foster political participation and increase trust toward political institutions among nativesparticularly young, highly-educated ones. In Table 10 we analyze in a more rigorous way the relationship between immigration and natives' trust of institutions on the one hand, and migration attitudes on the other. In columns (1)-(3), we look at political attitudes, and report the effect of immigrants on natives' level of trust towards the EU parliament preferences for further EU unification and trust towards their country's parliament. In columns (4)-(6), we look at migration attitudes, and analyze the effect of immigrants on natives' beliefs that migration is good for the economy, the culture, and makes the destination country a better place to live. We report only IV estimates using the usual shift-share approach. However, we estimate regressions with one endogenous regressor and one instrument only, and report separate results for high-skilled migrants (panel A) and less-skilled migrants (panel B), which avoids the problems of weak instruments.

## [INSERT Table 10 HERE]

Results on political attitudes suggest that high-skilled migration increases native trust towards the parliamentary process, both at the EU and the national level, while less-skilled immigrants do not significantly affect them (columns (1) and (3)). Results on migration attitudes instead indicate that less-skilled migration worsens natives' views regarding migrants' effect on general living conditions in the destination society (column (6)), while no significant effect is estimated for high-skilled migrants. Overall, these results may suggest different mechanisms at work for the estimated effects of high- and low-killed immigrants on individual nationalist voting. High-skilled immigrants may improve natives' attitudes towards Europe and make natives more similar to the high-skilled immigrants themselves. Low-skilled immigrants may instead feed natives fears of competition and of differences. (Card et al., 2012). ${ }^{50}$

## 7 Nationalist Voting Scenarios

Our results provide a new understanding of how local inflows of less- and highly-skilled immigrants interact with characteristics of local residents and affect their voting behavior. In particular the education levels of European citizens and of immigrants turns out to be a very important factor in determining the voting

[^24]response to immigration. This implies that both immigration and education policies will affect the politics of regions vis-a-vis immigration (see e.g. Braga et al., 2013).

In this section, we perform some simulation exercises of alternative migration and education policy scenarios based on our baseline estimates. These simulations have a descriptive purpose. Our reduced-form estimates do not encompass all of the general equilibrium effects of the policy proposals on nationalism levels. ${ }^{51}$ Nevertheless, these are interesting as they represent a simple way of demonstrating the implications of our estimates under alternative hypotheses about potential inflows of immigrants and the potential education levels of local populations in destination regions.

As a benchmark, we use the coefficients on the skill-specific migration shares estimated separately by education category (as in Figure 7, panel a). We first feed into this prediction the observed net changes in less-skilled and high-skilled migrants from the last ten years analyzed (i.e. over the period 2007-2016). In practice, we obtain the corresponding regional variation of nationalism using the following equation:

$$
\begin{align*}
\Delta \overline{\text { Nation }_{r}}= & \hat{\beta}_{N T}^{H S}\left(1-\text { Tert }_{r, 16}\right) \frac{\Delta M_{r, 16-07}^{H S}}{\operatorname{Pop}_{r, 05}}+\hat{\beta}_{T}^{H S}\left(\text { Tert }_{r, 16}\right) \frac{\Delta M_{r, 16-07}^{H S}}{\text { Pop }_{r, 05}}+ \\
& \hat{\beta}_{N T}^{L S}\left(1-\text { Tert }_{r, 16}\right) \frac{\Delta M_{r, 16-07}^{L S}}{\text { Pop }_{r, 05}}+\hat{\beta}_{T}^{L S}\left(\text { Tert }_{r, 16}\right) \frac{\Delta M_{r, 16-07}^{L S}}{\text { Pop }_{r, 05}} . \tag{11}
\end{align*}
$$

In equation (11), $\hat{\beta}_{E}^{s}$ is the estimated coefficient of the effect of a share of migrants with skill $s=H S, L S$ (high-skilled, less-skilled) on nationalism of natives with education $E=T, N T$ (tertiary, non-tertiary). Each coefficient is weighted by the corresponding share of natives with and without tertiary education ( Tert $_{r, 16}$ ) and multiplied by the observed change in the stock of migrants in the corresponding skill group, (normalized by population size in 2005 . i.e. $\left.\frac{\Delta M_{r, 16-07}^{s}}{P o p_{r, 05}}\right) .{ }^{52}$

## [INSERT Table 11 HERE]

In Table 11, we report results from this simulation at the country level. Results in column (3) show that, on average, immigration over the last ten years is associated with lower nationalism levels in the EU.

However there is a lot of cross-country heterogeneity. Column (2) shows country-specific average predicted correlations, using the regional population as weights. The model shows an increase in nationalism in countries characterized by relatively low shares of people with tertiary education (e.g. Italy) and/or a prevalence of less-skilled migration (as in Belgium, Denmark, Italy). On the contrary, we observe a de-

[^25]crease of nationalism in countries such as Austria, Sweden, and Switzerland, characterized by high shares of tertiary-educated individuals (more than 30\%) and more balanced inflows of less- and high-skilled immigrants in the considered period. The share of tertiary-educated people in the country is reported in column (4), while the 2007-2016 inflow of high-skilled and less-skilled migrants as a percent of the group is reported in columns (5) and (6) of Table 11. Notice that changes in nationalism in each country derived from equation (11) have quite different magnitudes and sometimes opposite signs compared to the actual changes presented in column (1) of Table 11. Several other factors have affected the rise of nationalism, besides the inflow of immigrants (e.g. economic conditions, increased inequality, globalization, frustration with EU bureaucracy and so on. See Algan et al., 2017 and Rodrik, 2018). These are not captured by the reduced-form model (11).

## [INSERT Figure 10 HERE]

Figure 10 displays the changes of nationalism derived from equation 11 at the NUTS2 regional level for all countries of Western and Northern Europe. In several regions, e.g. Madrid (-0.123) in Spain, or Thuringia (-0.075) in Germany, we observe a decrease in nationalism (areas in light and dark blue). These regions are characterized by low levels of less-skilled immigration and large net flows of highly-educated immigrants, combined with a significant share of tertiary-educated natives. Nationalism decreases even more in regions such as Provence-Alpes-Côte d'Azur (-0.399) in France, Zurich (-1.113) in Switzerland, and Greater London $(-0.789)$ in the UK, where the share of high-skilled migrants was very large. ${ }^{53}$ This type of migration may have produced positive interactions between immigrants and natives as described by contact theory (Allport, 1954). On the opposite side of the spectrum, we find areas that attracted many less-skilled migrants. The growth of less-skilled immigration compared to high-skilled immigration may have worsened attitudes towards immigrants, and increased the level of nationalism in regions such as Basilicata (0.234) in Italy, West Midlands (0.329) in the UK, and Syddanmark (0.285) in Denmark. In these regions the rise of less-skilled immigration was more than 10 times higher than the rise of high-skilled immigration.

## [INSERT Figure 11 HERE]

Figure 11 shows the results of our estimated model under four alternative scenarios regarding migration and education in the destination country. The first scenario hypothesizes a skill-selective migration, obtained by setting $\Delta M^{L S}=0$ (no less-skilled) in equation (11) while leaving $\Delta M^{H S}$ as it was in 2007-2016. Countryspecific results for this scenario are presented in column (7) of Table 11, and a regional map representation is depicted in panel (a) of Figure 11. Compared to the benchmark in Figure 10, this selective policy would produce a decline of nationalism almost everywhere in Europe. Such a fall is significant and shows a different effect relative to the benchmark in regions of Italy, the north of France, and the UK. However, this scenario

[^26]is discriminatory, and explicitly violates Schengen rules of free circulation of European citizens as we also equated within-EU movement of less-educated people to zero. Next, we consider a skill-balanced migration policy obtained by setting $\Delta M^{L S}=\Delta M^{H S}$ in equation (11) so that immigration would not alter the skill ratio of a region. ${ }^{54}$ Country-specific results for this scenario are presented in column (8) of Table 11, while region-specific results are depicted in panel (b) of Figure 11. Interestingly enough, this policy is consistent with a decline in nationalist voting which is quite sizable, although not as large as the first policy (panel a).

In the next two panels we present scenarios based on changing the education achievements in EU regions. Both consider a higher share of tertiary-educated native individuals on nationalism. In practice, we add the term $\hat{\beta}_{T}$ Tert $r_{r, 16}$ to the predictive equation (11). The coefficient $\hat{\beta}_{T}$ measures the contribution of a higher share of tertiary educated citizens in the region on nationalism, as we estimated in individual regressions. In addition to that, panel (c) hypothesizes a European education policy that raises the share of tertiary-educated individuals by $20 \%$ in all regions, and we keep immigration flows as they were in 2007-2016. Country-specific results are available in column (9) of Table 11. This policy reduces voting for nationalistic parties in the northern regions of Spain and the Continental and Northern European regions. It is much less effective in the UK and Southern European regions (e.g. in Italy, Spain and Greece), where nationalistic views are mostly driven by the presence of less-skilled migration. Finally, in panel (d) we present a similar education policy that increases everywhere the share of tertiary-educated individuals up to $57 \%$, which is the highest regional share in our sample (that we observe in Greater London). Results are available in column (10) of Table 11. This policy moderates nationalistic voting in some Italian regions and produces a significant reduction of nationalism in response to immigration in almost any place in Europe. However, nationalism still increases in this scenario in some Italian regions such as Lombardy, Latium, Umbria and Emilia Romagna. ${ }^{55}$ Overall, nationalist voting seems lower in countries/regions characterized by balanced immigration. Policies promoting and encouraging high-skilled immigration in Europe would muster political support to also allow for a certain amount of less-skilled migration. ${ }^{56}$

## 8 Conclusions

In this paper we investigated the effects of different types of immigration on European voters' political preferences for nationalism. We first estimate an average effect, and then we analyze heterogeneous effects, potential channels, and the impact on electoral participation and individual sentiment.

[^27]We addressed these questions using a sample of elections in 12 European Countries over the period 20072016, and measuring the change in high- and less-skilled immigrants as shares of the adult population in regions within those countries. In order to establish the connection between party-vote and nationalism, we classified each party on a common scale in terms of the intensity of their "nationalism", based on their political manifesto. We linked this information to the political preferences (in terms of party) and the party voted-for in the last election, for a large sample of citizens in 12 EU countries. A skill-specific shift share based on the location of immigrants by country-of-origin in 2005 provides the instrumental variable to proxy push-driven changes in immigrant populations across European regions. The significant differentiation in country-of-origin and skill intensities of groups of immigrants allowed us to estimate two separate effects for more-skilled and less-skilled immigrants on residents' voting preferences.

We found a robust negative effect of high-skilled immigration on the intensity of nationalist preferences of citizens. We also found an opposite, positive association of approximately the same magnitude between less-skilled immigration and citizens' nationalist preferences. The change in preferences driven by immigrants is stronger for less-educated citizen voters than for the highly-educated. Our evidence is consistent with the view that these opposite effects of less- and high-skilled migration on nationalism may be driven by different channels: the pro-nationalist effect of less-skilled immigration arises as natives-especially less-skilled onesreinforce a negative view about immigrants and become more pro-nationalism. The anti-nationalist effect of high-skilled immigration may be driven instead by the fact that high-skilled immigrants are themselves proopenness and interaction with them may increase anti-nationalism of natives and induce them - especially the young cohorts-to vote in greater numbers.

Simulations of scenarios with different migrant inflows and different levels of native education, based on reduced-form estimation parameters, provide three broad indications. First, migratory inflows with a balanced composition between less- and more-educated individuals would shift political preferences away from nationalist voting. Second, closing borders to less-skilled migrants would also be associated, in most cases, with lower nationalist voting. However, these would be discriminatory measures, explicitly against the Schengen rules. Finally, policies increasing the share of tertiary-educated natives may reduce nationalist voting in some countries, particularly Northern European countries. This is because college-educated people tend to cast fewer votes for nationalistic parties, and their voting behavior responds less to changes in immigration.

Table 1: Elections and ESS Rounds by Country and Year

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :--- | :---: | :---: | :---: | :---: |
| Country | \# Elections | Election Years | \# Survey Rounds | Survey Years |
| Austria | 2 | 2008,2013 | 3 | $2010,2014,2016$ |
| Belgium | 2 | 2010,2014 | 4 | $2010,2012,2014,2016$ |
| Denmark | 2 | 2007,2011 | 3 | $2010,2012,2014$ |
| Finland | 3 | $2007,2011,2015$ | 4 | $2010,2012,2014,2016$ |
| France | 2 | 2007,2012 | 4 | $2010,2012,2014,2016$ |
| Germany | 2 | 2009,2013 | 4 | $2010,2012,2014,2016$ |
| Ireland | 2 | 2011,2016 | 4 | $2010,2012,2014,2016$ |
| Portugal | 3 | $2009,2011,2015$ | 4 | $2010,2012,2014,2016$ |
| Spain | 3 | $2008,2011,2016$ | 4 | $2010,2012,2014,2016$ |
| Sweden | 2 | 2010,2014 | 4 | $2010,2012,2014,2016$ |
| Switzerland | 3 | $2007,2011,2015$ | 4 | $2010,2012,2014,2016$ |
| United Kingdom | 2 | 2010,2015 | 4 | $2010,2012,2014,2016$ |

Note: Column (1) shows the number of elections available from ESS and column (2) the year of each elections. Column (3) shows the number of ESS rounds after 2010 by country and column (4) the year of each round. Source: ESS.

Table 2: Summary Statistics

| Voting Data |  | Obs. | Mean | Std. Dev. | Min | Max |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| Individual Characteristics | Age | 48767 | 52.264 | 16.899 | 18 | 90 |
|  | Female | 48767 | 0.502 | 0.500 | 0 | 1 |
|  | Tertiary | 48767 | 0.356 | 0.478 | 0 | 1 |
|  | Tertiary (father) | 40916 | 0.194 | 0.395 | 0 | 1 |
|  | Voting | 78814 | 0.796 | 0.403 | 0 | 1 |
|  | Preferences Pro EU | 48319 | 0.016 | 0.028 | -0.242 | 0.080 |
|  | Preferences Pro National Way | 48319 | 0.012 | 0.018 | -0.061 | 0.116 |
|  | Nationalism (PCA, std) | 48319 | 0 | 1 | -1.607 | 8.113 |
| Regional Characteristics |  |  |  |  |  |  |
|  | GDP per capita | 261 | 31.644 | 11.749 | 13.267 | 69.901 |
|  | Unemployment rate (\%) | 261 | 9.632 | 5.491 | 0 | 30.1 |
|  | Tertiary rate (\%) | 261 | 30.69 | 8.038 | 11.2 | 55.1 |
|  | Share of Mig (\%) | 261 | 13.08 | 8.75 | 1.24 | 48.9 |
|  | Share of Mig (HS) (\%) | 261 | 3.31 | 3.1 | 0 | 19.1 |
|  | Share of Mig (LS) (\%) | 261 | 9.68 | 6.13 | 0.9 | 33.9 |
|  | Share of Mig (not EU) (\%) | 261 | 7.11 | 5.02 | 0.2 | 30.6 |
|  | Share of Mig (not EU, HS) (\%) | 261 | 1.69 | 1.62 | 0 | 13.4 |
|  | Share of Mig (not EU, LS) (\%) | 261 | 5.42 | 3.79 | 0 | 22.6 |
|  | Share of Mig (EU) (\%) | 261 | 5.88 | 5.52 | 0 | 34.4 |
|  | Share of Mig (EU, HS) (\%) | 261 | 1.62 | 1.86 | 0 | 11.7 |
|  | Share of Mig (EU, LS) (\%) | 261 | 4.26 | 3.88 | 0 | 24.5 |

[^28]Figure 1: ESS vs. Actual Data on Voting


Note: authors' calculation on ESS and European Election Database (EED). The figure plots the share of votes of top 5 parties in terms of votes (panel (a)) and in terms of Nationalism Index (panel (b)) in each election available computed with the EED (x-axis) and ESS (y-axis).

Figure 2: Nationalism across Parties and Individuals


Note: authors' calculations on Manifesto Project Database. The figure plots parties with the highest and lowest level of nationalism index (panel (a)) and the average level of nationalism index associated with each individual self-declared political position on the axis Left-to-Right political spectrum (panel (b)).

Figure 3: Nationalism by Party Family


Note: authors' calculation on Manifesto Project Database and Chapel Hill Expert Survey Database. The figure plots the average level of nationalism index by parties' political families. Political families are identified by the Chapel Hill Expert Survey Database, using parties self-identification and belonging in the Europeans parties group.

Figure 4: Average Nationalism across Regions - Top/Bottom 20


Note: authors' calculations on ESS and Manifesto Project Database. The figure plots the highest and lowest average level of nationalism index at regional level in our sample.

Figure 5: Nationalism: Voters or Parties?


Note: authors' calculations on ESS and Manifesto Project Database. The figure decomposes the country-specific variation in Nationalist voting between electoral events in variation due to individual voting behavior (given parties political platforms) and variation due to parties political agendas (given individual votes). The x-axis shows the variation driven by changes in parties political agenda, while y-axis shows the variation driven by a variation of individuals voting behavior.

Figure 6: Variation of Nationalism and Skill-Specific Immigration


Note: authors' calculations on ESS, Manifesto Project Database and EULFS. The figure plots the variation of NUTS2 average level of Nationalism through voting and the skill-specific variation of the share of immigrants for regions in the sample experiencing the largest decrease in Nationalism during 2007-2016 (panel a) and regions experiencing the largest increase in Nationalism (panel b).

Table 3: Rotemberg Weights

| Election 1 |  |  |  |  | Election 2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Migrants | Origin | $\hat{\alpha_{k}}$ | $\sum \hat{\alpha_{k}}$ | Ratio | Migrants | Origin | $\hat{\alpha_{k}}$ | $\sum \hat{\alpha_{k}}$ | Ratio |
| Share All | NMS10 | 0.083 | 1.000 | 0.714 | Share All | NMS3 | 0.076 | 1.000 | 0.736 |
| Share All | Other Africa | 0.096 | 1.000 | 0.714 | Share All | NMS10 | 0.100 | 1.000 | 0.736 |
| Share All | S. and SE Asia | 0.120 | 1.000 | 0.714 | Share All | S. and SE Asia | 0.102 | 1.000 | 0.736 |
| Share All | EU15 | 0.204 | 1.000 | 0.714 | Share All | EU15 | 0.211 | 1.000 | 0.736 |
| Share All | Other Europe | 0.210 | 1.000 | 0.714 | Share All | Other Europe | 0.247 | 1.000 | 0.736 |
| Share HS | NMS10 | 0.082 | 1.106 | 0.791 | Share HS | EU15 | 0.072 | 1.190 | 0.724 |
| Share HS | EU15 | 0.096 | 1.106 | 0.791 | Share HS | Central America | 0.100 | 1.190 | 0.724 |
| Share HS | Central America | 0.109 | 1.106 | 0.791 | Share HS | NMS10 | 0.136 | 1.190 | 0.724 |
| Share HS | Other Africa | 0.273 | 1.106 | 0.791 | Share HS | Other Africa | 0.217 | 1.190 | 0.724 |
| Share HS | S. and SE Asia | 0.314 | 1.106 | 0.791 | Share HS | S. and SE Asia | 0.337 | 1.190 | 0.724 |
| Share LS | S. and SE Asia | 0.076 | 1.000 | 0.725 | Share LS | S. and SE Asia | 0.061 | 1.000 | 0.747 |
| Share LS | NMS3 | 0.077 | 1.000 | 0.725 | Share LS | NMS10 | 0.088 | 1.000 | 0.747 |
| Share LS | NMS10 | 0.078 | 1.000 | 0.725 | Share LS | NMS3 | 0.089 | 1.000 | 0.747 |
| Share LS | EU15 | 0.210 | 1.000 | 0.725 | Share LS | EU15 | 0.214 | 1.000 | 0.747 |
| Share LS | Other Europe | 0.284 | 1.000 | 0.725 | Share LS | Other Europe | 0.296 | 1.000 | 0.747 |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. The table shows the top- 5 Rotemberg weights ( $\hat{\alpha}$ ) by origin, skill and electoral event, following Goldsmith-Pinkham et al. (2020) methodology. Columns (4) and (9) report the sum of the positive Rotemberg weights, while columns (5) and (10) report the ratio between the sum of the top- 5 Rotemberg weights by origin, skill and election and the total positive weights.

Table 4: Origin country shares and regional characteristics

| Time | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 |
|  | Origin Shares |  |  |  |  |  |  | Predicted Stocks |  |  |
|  | EU15 | NMS10 | NMS3 | Other EU | Other Africa | South Asia | Central America | All | HS | $L S$ |
| Unemp Rate | 0.045 | 0.063 | 0.038 | $0.109^{* * *}$ | -0.062 | -0.069 | -0.102 | 0.001 | 0.004 | 0.001 |
|  | (0.03) | (0.05) | (0.03) | (0.02) | (0.10) | (0.13) | (0.10) | (0.00) | (0.00) | (0.00) |
| $G D P$ Capita | $0.048^{* * *}$ | 0.047 | 0.012 | 0.058* | 0.017 | 0.026 | -0.009 | 0.000 | 0.002 | -0.000 |
|  | (0.01) | (0.03) | (0.03) | (0.03) | (0.04) | (0.04) | (0.02) | (0.00) | (0.00) | (0.00) |
| Tertiary Edu | -0.021 | -0.032 | 0.001 | -0.070 | 0.025 | 0.020 | 0.064* | 0.000 | -0.001 | 0.001 |
|  | (0.02) | (0.03) | (0.05) | (0.05) | (0.03) | (0.03) | (0.03) | (0.00) | (0.00) | (0.00) |
| Age Median | -0.032 | 0.040 | 0.007 | 0.143 | -0.087 | -0.011 | -0.092 | 0.001 | -0.001 | 0.001 |
|  | (0.05) | (0.08) | (0.09) | (0.11) | (0.11) | (0.08) | (0.05) | (0.00) | (0.00) | (0.00) |
| Pop Density | -0.002 | 0.022 | -0.001 | 0.005 | 0.076 | 0.073 | 0.082 | 0.000 | -0.000 | 0.001 |
|  | (0.02) | (0.04) | (0.02) | (0.02) | (0.08) | (0.08) | (0.10) | (0.00) | (0.00) | (0.00) |
| Observations | 117 | 117 | 117 | 117 | 117 | 117 | 117 | 117 | 117 | 117 |
| R-Square | 0.09 | 0.09 | 0.01 | 0.07 | 0.20 | 0.20 | 0.20 | 0.03 | 0.10 | 0.05 |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at country level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,^{* * *} \mathrm{p}<0.01$. Columns (1) to (7) report results of a single regression of a 2005 origin-specific share on 2005 regional characteristics. Columns (8) to (10) report the estimates on the predicted growth of the skill-specific shares using our IV approach between the first and second electoral event.

Table 5: Correlation between Pre-trend Nationalism and 2000-2007 Growth of Economic Indicators and Post-2006 Predicted Migrants Growth - Skill-Specific Share of Immigrants

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Predicted Mig growth | All | EU15 | NMS10 | NMS3 | Other EU | Other Africa | S and SE Asia | Central America |
| Panel A - Share All |  |  |  |  |  |  |  |  |
| Nationalism growth | -0.006 | 0.000 | -0.000 | -0.025 | 0.000 | -0.003 | 0.025 | -0.001 |
|  | (0.031) | (0.000) | (0.000) | (0.038) | (0.001) | (0.004) | (0.034) | (0.002) |
|  | [0.024] | [0.000] | [0.020] | [0.045] | [0.001] | [0.003] | [0.029] | [0.002] |
|  | \{0.023) | \{0.000\} | \{0.022\} | \{0.042\} | \{0.001\} | \{0.003\} | \{0.025\} | \{0.002\} |
| Employment growth | -0.000 | -0.000 | 0.378 | 0.302 | -0.021 | 0.032 | 0.100 | 0.024 |
|  | (0.067) | (0.000) | (0.257) | (0.663) | (0.028) | (0.034) | (0.137) | (0.036) |
|  | [0.092] | [0.000] | [0.630] | [0.558] | [0.030] | [0.024] | [0.292] | [0.038] |
|  | \{0.086\} | \{0.000\} | \{0.561\} | \{0.491\} | \{0.026\} | \{0.023\} | \{0.255\} | \{0.034\} |
| GDP per capita growth | 0.051 | -0.000 | 0.308 | 0.191 | -0.015 | 0.011 | -0.085 | 0.014 |
|  | (0.035) | (0.000) | $(0.113)^{* *}$ | (0.265) | (0.008)* | (0.025) | (0.057) | (0.014) |
|  | [0.083] | [0.000] | [0.433] | [0.311] | [0.016] | [0.021] | [0.245] | [0.020] |
|  | \{0.075\} | \{0.000\} | \{0.369\} | \{0.241\} | \{0.012\} | \{0.023\} | \{0.172\} | \{0.015\} |
| Tertiary Educ. growth | -0.027 | 0.000 | 0.329 | 0.194 | -0.012 | 0.003 | 0.083 | 0.017 |
|  | (0.025) | (0.000)* | (0.212) | (0.269) | (0.015) | (0.019) | (0.068) | (0.018) |
|  | [0.039] | [0.000] | [0.210] | [0.238] | [0.013] | [0.016] | [0.118] | [0.016] |
|  | \{0.037\} | \{0.000\} | $\{0.176\}^{*}$ | \{0.184\} | \{0.010\} | \{0.016\} | \{0.098\} | \{0.013\} |
| Panel B - Share HS |  |  |  |  |  |  |  |  |
| Nationalism growth | 0.006 | 0.000 | -0.000 | -0.035 | -0.003 | -0.004 | 0.029 | 0.008 |
|  | (0.043) | (0.000) | (0.001) | (0.053) | (0.008) | (0.006) | (0.040) | (0.016) |
|  | [0.029] | [0.000] | [0.028] | [0.062] | [0.008] | [0.005] | [0.034] | [0.020] |
|  | \{0.028\} | \{0.000\} | \{0.032 $\}$ | \{0.058\} | \{0.007\} | \{0.005\} | \{0.029\} | \{0.019\} |
| Employment growth | -0.141 | 0.000 | 0.539 | 0.415 | 0.172 | 0.051 | 0.117 | -0.206 |
|  | (0.166) | (0.000) | (0.366) | (0.911) | (0.225) | (0.053) | (0.161) | (0.302) |
|  | [0.158] | [0.000] | [0.897] | [0.767] | [0.242] | [0.037] | [0.343] | [0.323] |
|  | \{0.139\} | \{0.000\} | \{0.800 $\}$ | \{0.675\} | \{0.213\} | \{0.036\} | \{0.300\} | \{0.288\} |
| GDP per capita growth | -0.074 | -0.000 | 0.438 | 0.263 | 0.125 | 0.017 | -0.100 | -0.119 |
|  | (0.117) | (0.000) | $(0.161)^{* *}$ | (0.365) | (0.067)* | (0.040) | (0.068) | (0.122) |
|  | [0.153] | [0.000] | [0.616] | [0.427] | [0.130] | [0.033] | [0.288] | [0.173] |
|  | \{0.122\} | \{0.000\} | \{0.526\} | \{0.332 \} | \{0.095\} | \{0.036\} | \{0.202\} | \{0.129\} |
| Tertiary Educ. growth | -0.077 | -0.000 | 0.469 | 0.266 | 0.098 | 0.005 | 0.097 | -0.140 |
|  | (0.060) | (0.000) | (0.302) | (0.370) | (0.122) | (0.030) | (0.080) | (0.151) |
|  | [0.064] | [0.000] | [0.300] | [0.328] | [0.108] | [0.026] | [0.139] | [0.137] |
|  | \{0.051\} | \{0.000\} | $\{0.250\}^{*}$ | \{0.253\} | \{0.085\} | \{0.026\} | \{0.115\} | \{0.112\} |
| Panel C - Share LS |  |  |  |  |  |  |  |  |
| Nationalism growth | -0.009 | 0.000 | -0.000 | -0.023 | 0.001 | -0.002 | 0.023 | -0.006 |
|  | (0.030) | (0.000) | (0.000) | (0.035) | (0.003) | (0.003) | (0.032) | (0.013) |
|  | [0.025) | [0.000] | [0.017] | [0.041] | [0.003] | [0.002] | [0.027] | [0.016] |
|  | \{0.022\} | \{0.000 $\}$ | \{0.019\} | \{0.038\} | \{0.002\} | \{0.002\} | \{0.023\} | \{0.015\} |
| Employment growth |  |  |  |  | -0.055 |  |  |  |
|  | $(0.084)$ | $(0.000)$ | $(0.223)$ | $(0.604)$ | (0.073) | $(0.026)$ | (0.127) | $(0.236)$ |
|  | $[0.089]$ | [0.000] | [0.547] | [0.509] | [0.078] | [0.018] | [0.270] | [0.252] |
|  | \{0.091\} | \{0.000\} | \{0.487\} | \{0.447\} | \{0.069\} | \{0.018\} | \{0.236\} | \{0.225\} |
| GDP per capita growth | 0.074 | 0.000 | 0.267 | 0.174 | -0.040 | 0.008 | -0.079 | 0.093 |
|  | (0.024)** | (0.000) | (0.098)** | (0.242) | (0.022)* | (0.020) | (0.053) | (0.095) |
|  | [0.071] | [0.000]* ${ }^{*}$ | [0.375] | [0.283] | [0.042] | [0.016] | [0.227] | [0.135] |
|  | \{0.075\} | $\{0.000\}^{*}$ | \{0.321\} | \{0.220\} | \{0.031\} | \{0.018\} | \{0.160\} | \{0.101\} |
| Tertiary Educ. growth | -0.024 | 0.000 | 0.286 | 0.177 | -0.032 | 0.002 | 0.077 | 0.109 |
|  | (0.027) | (0.000) | (0.184) | (0.246) | (0.039) | (0.015) | (0.063) | (0.118) |
|  | [0.037] | [0.000] | [0.183] | [0.217] | [0.035] | [0.013] | [0.110] | [0.107] |
|  | \{0.037\} | \{0.000\} | $\{0.153\}^{*}$ | \{0.168\} | \{0.027\} | \{0.013\} | \{0.090\} | \{0.087\} |
| Country fixed-effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at country level (), NUTS 1 level [] and regional level $\left\} .{ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01\right.$. The table shows the predicted coefficients regressing the growth rate of regional macro indicators between 2000 and 2007 and the variation of the two previous electoral events before our first election available for each country of the inverse hyperbolic sine transformation of the regional average level of Nationalism (computed as weighted average of parties Nationalism using the share of votes at regional level as weights) on the regional predicted skill-specific migration growth with our shift-share strategy over the period 2007 and 2014 . The number of observations for each regression is 101 (out of our 114 regions used in our main analysis) since pre-trend data for Switzerland and Denmark are not available at regional level. |  |  |  |  |  |  |  |  |

Table 6: Nationalism Intensity and Immigrant Share

|  | (1) | (2) | (3) | (4) | (5) | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | IV | IV | IV | IV | IV | IV |
| Time | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 |
| Dep var: | Nationalism |  |  |  |  | Radical Right |
| All Migrants |  |  |  |  |  |  |
| Share | $\begin{gathered} 0.01 \\ (0.05) \end{gathered}$ |  |  |  |  |  |
| Share HS |  | $\begin{aligned} & -0.14^{*} \\ & (0.07) \end{aligned}$ |  | $\begin{gathered} -0.17^{* *} \\ (0.07) \end{gathered}$ | $\begin{gathered} -0.22^{* * *} \\ (0.07) \end{gathered}$ | $\begin{gathered} -0.03^{* * *} \\ (0.01) \end{gathered}$ |
| Share LS |  |  | $\begin{gathered} 0.05 \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.08^{* *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.15^{* * *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.01^{* * *} \\ (0.01) \end{gathered}$ |
| Observations | 48303 | 48303 | 48303 | 48303 | 48303 | 45302 |
| K-P rk Wald F-stat | 45.42 | 32.24 | 38.72 | 14.96 | 15.70 | 11.39 |
| Adj. R-Square | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.10 |
| Not EU Migrants |  |  |  |  |  |  |
| Share NoEU | $\begin{gathered} 0.04 \\ (0.05) \end{gathered}$ |  |  |  |  |  |
| Share NoEU HS |  | $\begin{gathered} -0.26 \\ (0.20) \end{gathered}$ |  | $\begin{gathered} -0.43^{*} \\ (0.22) \end{gathered}$ | $\begin{gathered} -0.45^{* *} \\ (0.22) \end{gathered}$ | $\begin{gathered} -0.07 * * \\ (0.03) \end{gathered}$ |
| Share NoEU LS |  |  | $\begin{gathered} 0.07 \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.14^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.25^{* * *} \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.03^{* * *} \\ (0.01) \end{gathered}$ |
| Observations | 48303 | 48303 | 48303 | 48303 | 48303 | 45302 |
| K-P rk Wald F-stat | 40.48 | 39.42 | 44.70 | 17.00 | 8.71 | 16.82 |
| Adj. R-Square | 0.13 | 0.13 | 0.13 | 0.13 | 0.12 | 0.10 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  | $\checkmark$ |
| NUTS205\#Year Controls |  |  |  |  | $\checkmark$ |  |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. * $\mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. As individual controls age, gender and education dummy are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. Column (5) includes the same set of NUTS2 controls fixed at the year 2005 and interacted with year dummies. The dependent variable is: our measure of nationalism, standardized to have zero mean and unity standard deviation (col. (1)-(5)) and a dummy that takes value of 1 if voter for a party that belongs to the Radical Right political family (col. (6)), following the definition of the political family of parties determined by the Chapel Hill Expert Survey dataset.

Table 7: Robustness - Component of Nationalism


Table 8: Voting Turnout and Immigrant Share

|  | (1) | (2) | (3) | (4) | (5) | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | IV | IV | IV | IV | IV | IV |
| Time | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 |
| Natives |  | Education |  | Age Groups |  |  |
| Subsample | All | Not Tertiary | Tertiary | 18-37 | 38-57 | $58+$ |
| Share HS | 0.01 | 0.01 | 0.02 | 0.05** | -0.00 | -0.01 |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) | (0.01) |
| Share LS | 0.00 | 0.00 | 0.01 | 0.01 | -0.01 | 0.00 |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Observations | 78814 | 53675 | 25139 | 20730 | 28605 | 29479 |
| K-P rk Wald F-stat | 20.35 | 13.99 | 23.21 | 22.85 | 14.21 | 19.25 |
| Adj. R-Square | 0.10 | 0.09 | 0.07 | 0.13 | 0.06 | 0.03 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. As individual controls age, gender, education dummy are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. The dependent variable is a dummy that take values of 1 if the individual voted during the last national elections, zero otherwise. From column (2) to column (6) we perform our analysis on subsample by education (col. (2) and (3)) and age groups (col. (4),(5) and (6)).

Figure 7: Nationalism Response to Immigrant Share and Natives' Individual Characteristics


Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. The graphs plots the coefficients of the share of migrants HS and LS estimated on different subsamples by individual characteristics: education (a), age (b), gender (c) and domicile (d). All the coefficients are estimated with IV estimations. The shadowed area represent the $95 \%$ interval of confidence. All the regressions includes individual and regional controls, NUTS2 and year fixed effects. The dependent variable is our standardized measure of nationalism. The full results are available in Table A-10

Table 9: Nationalism and Immigrant Share - Individual Panel Analysis

|  | $(1)$ | $(2)$ | $(3)$ |
| :--- | :---: | :---: | :---: |
|  | IV | IV | IV |
| Time | $2007-2016$ | $2007-2016$ | $2007-2016$ |
|  |  |  |  |
| Natives | All | Not Tertiary | Tertiary |
|  |  |  |  |
| Share $H S(\Delta)$ | 0.02 | 0.01 | 0.04 |
|  | $(0.02)$ | $(0.02)$ | $(0.03)$ |
| Share $L S(\Delta)$ | $0.05^{* * *}$ | $0.06^{* * *}$ | 0.03 |
|  | $(0.02)$ | $(0.02)$ | $(0.03)$ |
|  |  |  |  |
| Individuals | 29238 | 18229 | 11009 |
| K-P rk Wald F-stat | 6.05 | 5.58 | 6.13 |
|  |  |  |  |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. * $\mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,^{* * *} \mathrm{p}<0.01$. The dependent variable is the difference between our standardized measures of nationalism of the party that they feel close to and the party for which they voted for in the last national election. The analysis is performed over the whole immigrants shares population. The analysis is performed on different samples of natives voters based on their level of education and party voted for during the last election: all individuals (col (1)), not tertiary educated (col (2)) and tertiary educated (col (3)). The estimation is performed trough IV estimation procedure.

Figure 8: Political Attitudes of Natives and Immigrants


Note: authors' calculations on ESS. The figures plots the average position by groups of the population, splitting them by natives' age and education groups and migrants education groups. Figures (a) and (b) show the average trust on the EU parliament, trust on the country parliament and the will of a stronger EU unification by age and education groups. Each variable is standardized with mean zero and standard deviation equal to one.

Figure 9: Exposure of natives to immigrants


Note: authors' calculations on ESS 2002 data. The figure plots the percentages of the native population by age (and education in the case of the age group 18-37) reporting having any immigrant friends/colleagues, and several friends and colleagues, respectively.

Table 10: Immigration and Attitudes towards Politics and Immigration

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | IV | IV | IV | IV | IV | IV |
|  | $2010-2016$ | $2010-2016$ | $2010-2016$ | $2010-2016$ | $2010-2016$ | $2010-2016$ |


|  | Political Attitudes |  |  | Migration Attitudes |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dep. Var. | Trust EU Parl. | More EU | Trust Country Parl. | Good Economy | Enrich Culture | Better Place to Live |


| Panel A - HS Migrants |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Share HS | $\begin{gathered} 0.06^{* *} \\ (0.03) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.07^{*} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.03) \end{gathered}$ | $\begin{aligned} & -0.00 \\ & (0.03) \end{aligned}$ | $\begin{aligned} & -0.05 \\ & (0.03) \end{aligned}$ |
| Observations | 73935 | 56363 | 78058 | 77674 | 77717 | 77862 |
| K-P rk Wald F-stat | 35.54 | 20.77 | 35.77 | 35.84 | 35.81 | 35.77 |
| Adj. R-Square | 0.08 | 0.10 | 0.10 | 0.12 | 0.13 | 0.11 |
| $\underline{\text { Panel B - LS Migrants }}$ |  |  |  |  |  |  |
| Share LS | $\begin{gathered} 0.04 \\ (0.03) \end{gathered}$ | $\begin{aligned} & -0.01 \\ & (0.02) \end{aligned}$ | $\begin{gathered} 0.04 \\ (0.04) \end{gathered}$ | $\begin{aligned} & -0.00 \\ & (0.02) \end{aligned}$ | $\begin{aligned} & -0.01 \\ & (0.02) \end{aligned}$ | $\begin{gathered} -0.05^{* *} \\ (0.02) \end{gathered}$ |
| Observations | 73935 | 56363 | 78058 | 77674 | 77717 | 77862 |
| K-P rk Wald F-stat | 44.50 | 28.00 | 45.07 | 45.63 | 44.82 | 45.24 |
| Adj. R-Square | 0.08 | 0.10 | 0.10 | 0.12 | 0.13 | 0.11 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

[^29]As individual controls age, gender and education dummies are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. Each column use as dependent variables a different standardized measure of trust, attitudes towards politics and attitudes towards immigrants: trust in the EU parliament (1), EU unification should go further (2), trust in the national parliament (3), migrants are good for the economy (4), migrants enrich country cultural life (5) and migrants make the country a better place to live.

Table 11: Simulated Effect of Immigration/Education Changes on Nationalism: Country-level and EU averages

| Country | $\Delta$ Nation $_{\text {c }}$ | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Standard Sim. |  | Country Characteristics |  |  | Mig. Policies |  | Educ. Policies |  |
|  |  | $\Delta \widehat{\text { Nation }}_{\text {c }}$ | $\Delta \widehat{\text { ation }}_{\text {EU }}$ | $\overline{\operatorname{Tert}_{c}^{16}}$ | $\overline{\Delta M i g_{c}^{H S}}$ | $\overline{\Delta M i g_{c}^{L S}}$ | No LS | Balanced | +20\% Tert. | Max Tert. |
| Austria | 0.04 | -0.299 | -0.032 | 0.314 | 2.641 | 1.597 | -0.442 | -0.16 | -0.36 | -0.364 |
| Belgium | -0.018 | 0.042 | -0.032 | 0.375 | 2.131 | 4.183 | -0.304 | -0.221 | -0.053 | -0.079 |
| Denmark | -0.092 | 0.171 | -0.032 | 0.377 | 0.47 | 2.898 | -0.1 | -0.143 | 0.068 | 0.052 |
| Finland | 0.222 | 0.002 | -0.032 | 0.428 | 1.254 | 2.185 | -0.119 | -0.083 | -0.1 | -0.099 |
| France | 0.255 | -0.102 | -0.032 | 0.349 | 0.676 | 0.445 | -0.166 | -0.066 | -0.177 | -0.19 |
| Germany | 0.141 | -0.051 | -0.032 | 0.282 | 1.086 | 1.499 | -0.209 | -0.112 | -0.117 | -0.128 |
| Greece |  | -0.046 | -0.032 | 0.3 | 0.081 | 0.399 | -0.021 | 0.007 | -0.111 | -0.122 |
| Ireland | 0.28 | 0.085 | -0.032 | 0.43 | 0.477 | 2.081 | -0.079 | -0.091 | -0.024 | -0.005 |
| Italy |  | 0.259 | -0.032 | 0.177 | 0.473 | 3.357 | -0.086 | -0.154 | 0.209 | 0.204 |
| Portugal | 0.043 | -0.116 | -0.032 | 0.239 | 0.728 | 0.107 | -0.105 | -0.019 | -0.167 | -0.175 |
| Spain | 0.045 | -0.036 | -0.032 | 0.357 | 0.339 | 0.178 | -0.041 | -0.011 | -0.116 | -0.13 |
| Sweden | 0.103 | -0.268 | -0.032 | 0.409 | 3.018 | 3.319 | -0.517 | -0.231 | -0.349 | -0.362 |
| Switzerland | 0.494 | -0.508 | -0.032 | 0.411 | 5.621 | 3.347 | -0.794 | -0.312 | -0.574 | -0.589 |
| United Kingdom | 0.55 | -0.1 | -0.032 | 0.421 | 1.779 | 2.739 | -0.315 | -0.171 | -0.192 | -0.223 |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Column (1) the country averages of the regional differences in nationalism between the last and the first election available. Columns (2) and (3) show country averages and EU average, respectively, of the simulated standardized nationalism from the standard simulation using as regional weights the total population. Column (4) shows the country regional average of tertiary individuals. Columns (5) and (6) show the country average variation of migration share of HS and LS immigrants respectively over the 2007-2016 period. Column (7) shows the result of the simulation when we remove the variation of low educated immigrants. Column (8) shows the result of the simulation when we assume skill-balanced immigration. Column (9) shows the result of the simulation when we increase by $20 \%$ the share of tertiary educated natives by region. Column (10) shows the result of the simulation when each region has the same share of tertiary educated natives as the highest educated one in the same country.

Figure 10: Baseline Simulation Analysis


Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. The figure plots the results of equation (11) at NUTS2 level, which simulate the average level of nationalism over 2007-2016 due to the variation of immigrants by education and the level of natives education. For Germany, United Kingdom and Austria the results are plotted at NUTS1 level. Azores islands, Madeira islands and Canary islands are not plotted for visual reasons.

Figure 11: Simulation for Different Migration and Education Scenarios

(a) No LS Migration
\square[..235,.47]
\square[..235,.47]

(c) $+20 \%$ in the share of Tertiary
(b) Balanced Migration (LS=HS)


(d) Tertiary Share=Highest in EU (Great London)

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. The figure plots the simulated average level of nationalism after different migration policy and education policy scenarios, due to the variation of immigrants by education and level of education of natives over the 2007-2016. The figure plots the results of equation (11) at NUTS2 level when: LS immigrants are excluded (panel (a)), LS and HS immigrants are exactly balanced in each region (panel (b)), regional level of tertiary educated natives is increased by $20 \%$ (panel (c)) and each region has the same level of tertiary educated natives as the highest region in the EU (Greater London, panel (d)).

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## Appendix A Additional Tables

Table A-1: Nationalism Intensity and Immigrant Share - Alternative Estimators

| Time | $(1)$ OLS $2007-2016$ | $(2)$ IV-2SLS $2007-2016$ | $(3)$ IV-LIML 2007-2016 | $(4)$ OLS $2007-2016$ | $(5)$ IV-2SLS $2007-2016$ | $(6)$ IV-LIML $2007-2016$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dep var: | Nationalism |  |  | Radical Right |  |  |
| Share HS | $-0.07 * *$ | $-0.17 * *$ | $-0.17{ }^{* *}$ | $-0.02^{* * *}$ | $-0.03^{* * *}$ | $-0.03^{* * *}$ |
|  | (0.03) | (0.07) | (0.07) | (0.00) | (0.01) | (0.01) |
| Share LS | 0.03* | 0.08** | 0.08** | $0.01^{* * *}$ | $0.01 * * *$ | $0.01 * * *$ |
|  | $(0.02)$ | $(0.04)$ | $(0.04)$ | $(0.00)$ | $(0.01)$ | (0.01) |
| Observations | 48303 | 48303 | 48303 | 45761 | 45761 | 45761 |
| K-P rk Wald F-stat |  | 14.96 | 14.96 |  | 6.90 | 6.90 |
| Adj. R-Square | 0.13 | 0.02 | 0.02 | 0.10 | 0.02 | 0.02 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. As individual controls age, gender and education dummy are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. The dependent variable is: our measure of nationalism, standardized to have zero mean and unity standard deviation (col. (1)-(3)) and a dummy that takes value of 1 if voter for a party that belongs to the Radical Right political family (col. (4)-(6)), following the definition of the political family of parties determined by the Chapel Hill Expert Survey dataset. The table shows the estimates using the following estimators: OLS (col. (1) and (4)), TSLS (col. (2) and (5)) and Limited Information Maximum Likelihood (col. (3) and (6)).

Table A-2: Nationalism Intensity and Immigrant Share - Dropping relevant origin groups from the IV

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Removed origin-group | EU15 | NMS10 | NMS3 | Other Europe | Oth. Africa | S and SE Asia | Central America |
|  |  |  |  |  |  |  |  |
| Share $H S$ | $-0.22^{* * *}$ | $-0.17^{* * *}$ | $-0.17^{* *}$ | $-0.19^{* *}$ | $-0.17^{* *}$ | $-0.18^{* * *}$ | $-0.18^{* *}$ |
|  | $(0.08)$ | $(0.07)$ | $(0.08)$ | $(0.08)$ | $(0.07)$ | $(0.07)$ | $(0.07)$ |
| Share $L S$ | $0.08^{* *}$ | $0.08^{* *}$ | $0.07^{* *}$ | $0.09^{* *}$ | $0.08^{* *}$ | $0.07^{* *}$ | $0.08^{* *}$ |
|  | $(0.03)$ | $(0.03)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.03)$ | $(0.03)$ |
|  |  |  |  |  |  |  |  |
| Observations | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 |
| K-P rk Wald F-stat | 8.84 | 25.51 | 10.48 | 15.17 | 10.05 | 9.56 | 13.77 |
| Adj. R-Square | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Each column reports the IV estimates associated to the skill-specific migration, after removing from the instrumental variables the stocks from specific origin-country groups. The origin groups are most important in terms of Rotemberg weights, as computed in Table 3. The removed groups in the construction of both skill-specific instrumental variables are: EU15 (col. 1), New EU Member states entered in 2004 (col. 2), New EU Member states entered in 2007/2013 (col. 3), other European countries (col. 4), other African countries (col. 5), South and South East Asia (col. 6) and Central American and Caribbeans (col. 7).

Table A-3: Nationalism Intensity and Immigrant Share - IV based on 2000 shares

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Time | IV | IV | IV | IV | IV |
|  | $2007-2016$ | $2007-2016$ | $2007-2016$ | $2007-2016$ | $2007-2016$ |
|  |  |  |  |  |  |
|  |  |  | Nationalism | Radical Right |  |

## All Migrants

| Share | 0.01 |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | $(0.03)$ |  |  | -0.07 | -0.02 |
| Share HS |  | -0.03 |  | $(0.09)$ | $(0.01)$ |
|  |  | $(0.09)$ |  | 0.03 | $0.04^{*}$ |
| Share LS |  |  | $(0.04)$ | $(0.02)$ | $\left(0.01^{* *}\right.$ |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Observations | 47720 | 47720 | 47720 | 47720 | 44775 |
| K-P rk Wald F-stat | 73.22 | 25.53 | 62.06 | 10.77 | 8.33 |
| Adj. R-Square | 0.15 | 0.15 | 0.15 | 0.15 | 0.10 |

## Not EU Migrants

Share NoEU -0.00

| Share NoEU HS |  | $\begin{gathered} -0.41^{* *} \\ (0.20) \end{gathered}$ |  | $\begin{gather*} -0.52^{* *}  \tag{0.05}\\ (0.21) \end{gather*}$ | $\begin{gathered} -0.08^{* *} \\ (0.03) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Share NoEU LS |  |  | 0.03 | 0.09** | 0.02*** |
|  |  |  | (0.05) | (0.04) | (0.01) |
| Observations | 47720 | 47720 | 47720 | 47720 | 44775 |
| K-P rk Wald F-stat | 34.85 | 30.59 | 38.74 | 12.96 | 13.18 |
| Adj. R-Square | 0.15 | 0.15 | 0.15 | 0.15 | 0.10 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database, Eurostat data and Alesina et al. (2021) data (AMR). Standard errors are clustered at NUTS2 level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *}$ $\mathbf{p}<0.01$. As individual controls age, gender and education dummy are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. The dependent variable is: our measure of nationalism, standardized to have zero mean and unity standard deviation (col. (1)-(4)) and a dummy that takes value of 1 if voter for a party that belongs to the Radical Right political family (col. (5)), following the definition of the political family of parties determined by the Chapel Hill Expert Survey dataset. Since AMR data does not have information on Scotland and Northern Ireland, all the regressions exclude these two regions.

Table A-4: Nationalism Intensity and Immigrant Share - Initial shares corrections

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | EU15 | NMS10 | NMS3 | Other Europe | Oth. Africa | S and SE Asia | Central America |
|  |  |  |  |  |  |  |  |
| Share $H S$ | $-0.17^{* *}$ | $-0.17^{*}$ | $-0.17^{*}$ | $-0.17^{* *}$ | $-0.17^{*}$ | $-0.17^{*}$ | $-0.17^{*}$ |
|  | $(0.069)$ | $(0.091)$ | $(0.097)$ | $(0.076)$ | $(0.090)$ | $(0.090)$ | $(0.097)$ |
| Share $L S$ | $0.08^{* * *}$ | $0.08^{* * *}$ | $0.08^{* * *}$ | $0.08^{* * *}$ | $0.08^{* *}$ | 0.08 | $0.08^{* * *}$ |
|  | $(0.028)$ | $(0.028)$ | $(0.022)$ | $(0.019)$ | $(0.033)$ | $(0.046)$ | $(0.021)$ |
|  |  |  |  |  |  |  |  |
| Observations | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 |
| K-P rk Wald F-stat | 17.43 | 14.26 | 7.28 | 13.26 | 18.30 | 5.97 | 20.33 |
| Adj. R-Square | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Each column reports the IV estimates associated to the skill-specific migration, with different clustering of the standard errors. Each columns cluster the standard errors at regional level after grouping regions by deciles of shares of immigrants by origin. The origin groups are most important in terms of Rotemberg weights, as computed in Table 3. The groups are presented as follow: EU15 (col. 1), New EU Member states entered in 2004 (col. 2), New EU Member states entered in 2007/2013 (col. 3), other European countries (col. 4), other African countries (col. 5), South and South East Asia (col. 6) and Central American and Caribbeans (col. 7).

Table A-5: Vote with your feet - Natives variation vs. Migrants lag

|  | $\begin{gathered} \hline(1) \\ \text { OLS } \end{gathered}$ | $\begin{gathered} \hline(2) \\ \text { OLS } \end{gathered}$ | $\begin{gathered} \hline(3) \\ \text { OLS } \end{gathered}$ | $\begin{gathered} \hline(4) \\ \text { IV } \end{gathered}$ | $\begin{aligned} & (5) \\ & \text { IV } \end{aligned}$ | $\begin{aligned} & \hline(6) \\ & \text { IV } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dep var: | Skill-Specific variation of Natives |  |  |  |  |  |
| Panel A - All Natives |  |  |  |  |  |  |
| Share $_{e-1}$ | $\begin{gathered} 0.08 \\ (0.07) \end{gathered}$ |  |  | $\begin{gathered} -0.01 \\ (0.11) \end{gathered}$ |  |  |
| Share $H S_{e-1}$ |  | $\begin{aligned} & 0.21^{*} \\ & (0.10) \end{aligned}$ |  |  | $\begin{gathered} 0.07 \\ (0.26) \end{gathered}$ |  |
| Share $L S_{e-1}$ |  |  | $\begin{gathered} 0.10 \\ (0.11) \end{gathered}$ |  |  | $\begin{aligned} & -0.02 \\ & (0.17) \end{aligned}$ |
| Observations | 155 | 155 | 155 | 155 | 155 | 155 |
| K-P rk Wald F-stat |  |  |  | 424.95 | 60.86 | 490.02 |
| Adj. R-Square | 0.03 | 0.02 | 0.03 | 0.03 | 0.04 | 0.02 |
| Panel B - HS Natives |  |  |  |  |  |  |
| Share $_{e-1}$ | $\begin{gathered} 0.05 \\ (0.04) \end{gathered}$ |  |  | $\begin{gathered} 0.01 \\ (0.05) \end{gathered}$ |  |  |
| Share $H S_{e-1}$ |  | $\begin{gathered} 0.07 \\ (0.15) \end{gathered}$ |  |  | $\begin{gathered} 0.09 \\ (0.16) \end{gathered}$ |  |
| Share $L S_{e-1}$ |  |  | $\begin{gathered} 0.07 \\ (0.06) \end{gathered}$ |  |  | $\begin{gathered} 0.02 \\ (0.06) \end{gathered}$ |
| Observations | 155 | 155 | 155 | 155 | 155 | 155 |
| K-P rk Wald F-stat |  |  |  | 424.95 | 60.86 | 490.02 |
| Adj. R-Square | 0.72 | 0.71 | 0.72 | 0.72 | 0.72 | 0.72 |
| Panel C-LS Natives |  |  |  |  |  |  |
| Share $_{e-1}$ | $\begin{gathered} 0.04 \\ (0.06) \end{gathered}$ |  |  | $\begin{gathered} -0.02 \\ (0.09) \end{gathered}$ |  |  |
| Share $H S_{e-1}$ |  | $\begin{gathered} 0.14 \\ (0.18) \end{gathered}$ |  |  | $\begin{aligned} & -0.02 \\ & (0.24) \end{aligned}$ |  |
| Share $L S_{e-1}$ |  |  | $\begin{gathered} 0.04 \\ (0.09) \end{gathered}$ |  |  | $\begin{gathered} -0.04 \\ (0.14) \end{gathered}$ |
| Observations | 155 | 155 | 155 | 155 | 155 | 155 |
| K-P rk Wald F-stat |  |  |  | 424.95 | 60.86 | 490.02 |
| Adj. R-Square | 0.58 | 0.58 | 0.58 | 0.59 | 0.59 | 0.59 |
| Country f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

[^30]Table A-6: First-Stage Estimates of Table 6

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Measure | One Endogenous Variable |  |  |  |  |  | Two Endogenous Variables |  |  |  |
| Dep Variale | Share | Share HS | Share LS | Share NoEU | Share NoEU HS | Share NoEU LS | Share HS | Share LS | Share NoEU HS | Share NoEU LS |
| Shift Share | $\begin{gathered} 0.99^{* * *} \\ (0.15) \end{gathered}$ |  |  |  |  |  |  |  |  |  |
| Shift Share HS |  | $\begin{gathered} 1.08^{* * *} \\ (0.19) \end{gathered}$ |  |  |  |  | $\begin{gathered} 1.08^{* * *} \\ (0.18) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.37) \end{gathered}$ |  |  |
| Shift Share LS |  |  | $\begin{gathered} 0.97^{* * *} \\ (0.16) \end{gathered}$ |  |  |  | $\begin{gathered} -0.00 \\ (0.07) \end{gathered}$ | $\begin{gathered} 0.98^{* * *} \\ (0.18) \end{gathered}$ |  |  |
| Shift Share NoEU |  |  |  | $\begin{gathered} 0.96^{* * *} \\ (0.15) \end{gathered}$ |  |  |  |  |  |  |
| Shift Share NoEU HS |  |  |  |  | $\begin{gathered} 0.72^{* * *} \\ (0.11) \end{gathered}$ |  |  |  | $\begin{gathered} 0.63^{* * *} \\ (0.12) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.37) \end{gathered}$ |
| Shift Share NoEU LS |  |  |  |  |  | $\begin{gathered} 0.94^{* * *} \\ (0.14) \end{gathered}$ |  |  | $\begin{aligned} & 0.08^{* *} \\ & (0.04) \end{aligned}$ | $\begin{gathered} 0.94^{* * *} \\ (0.14) \end{gathered}$ |
| Female (ind) | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.01) \end{gathered}$ |
| Age (ind) | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ |
| Tertiary (ind) | $\begin{gathered} 0.01 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.01) \end{gathered}$ |
| $\ln (G D P \operatorname{cap})(N U T S 2)$ | $\begin{gathered} 1.47 \\ (1.85) \end{gathered}$ | $\begin{gathered} -0.88 \\ (0.90) \end{gathered}$ | $\begin{aligned} & 2.44^{*} \\ & (1.33) \end{aligned}$ | $\begin{gathered} -1.94 \\ (1.31) \end{gathered}$ | $\begin{gathered} -0.08 \\ (0.54) \end{gathered}$ | $\begin{aligned} & -1.82^{*} \\ & (1.06) \end{aligned}$ | $\begin{gathered} -0.87 \\ (0.91) \end{gathered}$ | $\begin{aligned} & 2.38^{*} \\ & (1.35) \end{aligned}$ | $\begin{aligned} & -0.29 \\ & (0.53) \end{aligned}$ | $\begin{aligned} & -1.83^{*} \\ & (1.05) \end{aligned}$ |
| Tertiary (NUTS2) | $\begin{gathered} 0.02 \\ (0.07) \end{gathered}$ | $\begin{gathered} 0.16^{* * *} \\ (0.03) \end{gathered}$ | $\begin{gathered} -0.14^{* * *} \\ (0.05) \end{gathered}$ | $\begin{gathered} -0.07 \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.07^{* * *} \\ (0.02) \end{gathered}$ | $\begin{gathered} -0.13^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.16^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} -0.14^{* * *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.06^{* * *} \\ (0.02) \end{gathered}$ | $\begin{gathered} -0.13^{* * *} \\ (0.04) \end{gathered}$ |
| Unemp. rate (NUTS2) | $\begin{gathered} 0.06 \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.02) \end{gathered}$ | $\begin{aligned} & 0.06^{*} \\ & (0.03) \end{aligned}$ | $\begin{gathered} -0.07^{* *} \\ (0.03) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} -0.07^{* * *} \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.06 \\ (0.04) \end{gathered}$ | $\begin{aligned} & -0.00 \\ & (0.01) \end{aligned}$ | $\begin{gathered} -0.07^{* * *} \\ (0.02) \end{gathered}$ |
| Observations | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 | 48303 |
| Regions | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 |
| $\mathrm{S} \& \mathrm{~W} F_{H S \mid L S}$ <br> S\&W $F_{L S \mid H S}$ |  |  |  |  |  |  | 16220 | 14197 | 4768 | 7797 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. * $\mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. The Table reports the estimates associated to the first-stage of the IV estimates presented in Table 6 . Column (1) to (6) shows estimates with just one endogenous variable, corresponding to the estimates presented in columns (1), (2) and (3) of Table 6, while column (7) to (10) presents the estimates when two endogenous regressors are instrumented simultaneously. S\&W $F_{x \mid k}$ report the conditional first-stage F-test of the endogenous variable $x$ conditional to the endogenous variable $k$, proposed by Sanderson and Windmeijer (2016).

Table A-7: Salience of Nationalism and Immigrant Share

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :---: | :---: | :---: | :---: | :---: |
|  | IV | IV | IV | IV |
| Time | $2007-2016$ | $2007-2016$ | $2007-2016$ | $2007-2016$ |

## All Migrants

| Share | -0.000 |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $(0.001)$ |  |  | $-0.004^{* * *}$ |
| Share HS |  | $-0.004^{* * *}$ |  | $(0.001)$ |
|  |  | $(0.001)$ |  | 0.001 |
| Share LS |  |  | $(0.001)$ | $(0.001)$ |
|  |  |  |  |  |
| Observations | 48319 | 48319 | 48319 | 48319 |
| K-P rk Wald F-stat | 45.42 | 32.24 | 38.71 | 14.96 |
| Adj. R-Square | 0.12 | 0.12 | 0.12 | 0.12 |

Not EU Migrants

| Share No EU | 0.001 <br> $(0.001)$ |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Share No EU HS |  | $-0.007^{* *}$ |  | $-0.011^{* * *}$ |
|  |  | $(0.003)$ |  | $(0.004)$ |
| Share No EU LS |  |  | 0.001 | $0.003^{* * *}$ |
|  |  |  | $(0.001)$ | $(0.001)$ |
| Observations | 48319 | 48319 | 48319 | 48319 |
| K-P rk Wald F-stat | 40.48 | 39.42 | 44.70 | 17.00 |
| Adj. R-Square | 0.12 | 0.12 | 0.12 | 0.11 |
|  |  |  |  |  |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. * p $<0.1$, ${ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. As individual controls age, gender and education dummy are included. As NUTS2 controls we include log of GDP per capita, unemployment rate and share of tertiary educated individuals. The dependent variable is our measure of salience of nationalism.

Table A-8: Nationalism Intensity and Immigrant Share, Initial and Final Party Positions

| Time | (1) IV $2007-2016$ | $(2)$ IV $2007-2016$ | $(3)$ IV $2007-2016$ | $(4)$ IV $2007-2016$ | $\begin{gathered} (5) \\ \text { IV } \\ 2007-2016 \end{gathered}$ | $\begin{gathered} \hline(6) \\ \text { IV } \\ 2007-2016 \end{gathered}$ | $\begin{gathered} \text { (7) } \\ \text { IV } \\ 2007-2016 \end{gathered}$ | $(8)$ IV $2007-2016$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Party Preference | Initial Position |  |  |  | Final Position |  |  |  |
| Share | $\begin{gathered} -0.00 \\ (0.04) \end{gathered}$ |  |  |  | $\begin{gathered} 0.00 \\ (0.04) \end{gathered}$ |  |  |  |
| Share HS |  | $\begin{gathered} -0.13^{* *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} -0.16^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} -0.12^{*} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} -0.15^{* *} \\ (0.06) \end{gathered}$ |
| Share LS |  |  | $\begin{gathered} 0.03 \\ (0.04) \end{gathered}$ | $\begin{aligned} & 0.05^{*} \\ & (0.03) \end{aligned}$ |  |  | $\begin{gathered} 0.04 \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.06^{* *} \\ (0.03) \end{gathered}$ |
| Observations | 48219 | 48219 | 48219 | 48219 | 48225 | 48225 | 48225 | 48225 |
| K-P rk Wald F-stat | 45.24 | 31.38 | 38.54 | 14.67 | 45.25 | 31.54 | 38.53 | 14.74 |
| Adj. R-Square | 0.13 | 0.13 | 0.13 | 0.13 | 0.09 | 0.09 | 0.09 | 0.09 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at . NUTS2 level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,^{* * *} \mathrm{p}<0.01$. As individual controls age, gender and education dummy are included. As NUTS2 controls we include log GDP per capita, unemployment rate and the share of tertiary educated individuals. The dependent variable is our standardized measure of nationalism measured in different moment: as the first observation before the beginning of the sample period (col. (1)-(4)) and the last observation available by party (col. (5)-(8)). These compare with the average over the sample period, which is used as a dependent variable in baseline estimates in Table 6

Table A-9: Nationalism Intensity and Immigrant Share - Removing Peripheral Economies

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | IV | IV | IV | IV | IV |
| Time | $2007-2016$ | $2007-2016$ | $2007-2016$ | $2007-2016$ | $2007-2016$ |
|  |  |  |  |  |  |
| Sample | Full Sample | No ES | No PT | No IE | No ES-PT-IE |
|  |  |  |  |  |  |
| Share HS | $-0.18^{* *}$ | $-0.18^{* * *}$ | $-0.21^{* * *}$ | $-0.19^{* *}$ | $-0.22^{* * *}$ |
|  | $(0.07)$ | $(0.06)$ | $(0.07)$ | $(0.08)$ | $(0.06)$ |
| Share LS | $0.08^{* *}$ | $0.09^{*}$ | $0.07^{* *}$ | $0.08^{* *}$ | $0.09^{*}$ |
|  | $(0.04)$ | $(0.05)$ | $(0.04)$ | $(0.04)$ | $(0.05)$ |
| Observations | 48303 | 44964 | 45815 | 43359 | 37532 |
| K-P rk Wald F-stat | 14.96 | 10.05 | 17.75 | 15.31 | 9.17 |
| Adj. R-Square | 0.14 | 0.13 | 0.14 | 0.14 | 0.13 |
|  |  |  |  |  |  |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. As individual controls age, gender and education dummy are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. Each column show the estimates related to the following sample of countries: full sample (col. 1), excluding Spain (col. 2), excluding Portugal (col. 3), excluding Ireland (col. 4) and excluding Spain, Portugal and Ireland simultaneously from the full sample (col. 5).

Table A-10: Nationalism and Individual Characteristics

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | IV | IV | IV | IV | IV | IV | IV | IV | IV | IV |
| Time | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 | 2007-2016 |
| Subsample | Education |  | Age Group |  |  | Gender |  | Domicile |  |  |
| Natives | Not Tertiary | Tertiary | 18-37 | 38-57 | 58+ | Male | Female | Rural | Town | City |
| Share HS | -0.19** | -0.08 | -0.22** | -0.21*** | -0.12 | $-0.24 * * *$ | -0.10 | -0.07 | -0.12 | -0.10 |
|  | (0.09) | (0.07) | (0.11) | (0.07) | (0.09) | (0.09) | (0.07) | (0.09) | (0.12) | (0.07) |
| Share LS | 0.11 *** | 0.03 | 0.02 | 0.09** | 0.10** | 0.10** | 0.05 | 0.12*** | 0.13** | 0.01 |
|  | (0.04) | (0.04) | (0.05) | (0.03) | (0.05) | (0.05) | (0.03) | (0.05) | (0.06) | (0.03) |
| Observations | 31104 | 17215 | 10849 | 17787 | 19683 | 24054 | 24265 | 18939 | 15088 | 14292 |
| K-P rk Wald F-stat | 11.04 | 21.04 | 13.75 | 13.13 | 15.21 | 14.55 | 14.83 | 4.42 | 8.88 | 13.62 |
| Adj. R-Square | 0.14 | 0.16 | 0.14 | 0.12 | 0.17 | 0.14 | 0.13 | 0.14 | 0.14 | 0.13 |
| NUTS2 f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year f.e. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| NUTS2 Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Note: authors' calculations on ESS, EULFS, Manifesto Project Database and Eurostat data. Standard errors are clustered at NUTS2 level. ${ }^{*}$ p $<0.1$, ${ }^{* *}$ p $<0.05$, ${ }^{* * *} \mathrm{p}<0.01$. As individual controls age, gender and education dummies are included. As NUTS2 controls we include log GDP per capita, unemployment rate and share of tertiary educated individuals. The dependent variable is our standardized measure of nationalism. Analysis by subsamples based on individual education groups (col. (1) and (2)), on age groups (col. (3)-(5)), on gender (col. (6) and (7)) and place of residence (col. (8)-(10)). |  |  |  |  |  |  |  |  |  |  |


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[^1]:    ${ }^{1}$ Studies show that they enhance technological and scientific innovation (Kerr and Lincoln, 2010), boost productivity (Peri, 2012) and produce, on average, a fiscal surplus (Orrenius, 2017).

[^2]:    ${ }^{2}$ As suggested by the literature on "political persuasion" (e.g. Della Vigna and Gentzkow, 2010), some groups may revise their views of immigrants as they acquire "new information" from meeting or interacting with immigrants, or from being exposed to news related to immigrants in their local community. On the other hand immigrants may affect the propensity of some people to vote at all.

[^3]:    ${ }^{3}$ Among them, Otto and Steinhardt (2014) analyze the effect of immigration on the vote for the German People's Union in Hamburg. Barone et al. (2016) look at immigration and the vote for the center-right/Northern League coalition at the municipality level on national elections in Italy. Harmon (2018) look at immigrants and the vote for the Danish People's Party in Denmark, using an alternative IV related to the past stock of housing available. Brunner and Kuhn (2018) analyze the vote for the Swiss People's Party in Switzerland.
    ${ }^{4}$ Another recent paper Dustmann et al. (2019) exploits variation coming from quasi-random refugee-allocation schemes across Danish municipalities. As previous presence of immigrants is explicitly considered in the dispersal, though, even this approach follows indirectly the enclave idea. That paper finds a strong positive impact of refugees, who have relatively low skill levels, on the vote for right-leaning parties. They also find that this tendency is particularly strong outside urban areas.
    ${ }^{5}$ As a relevant exception, Edo et al. (2019) complements the regional-level analysis, with an individual-level analysis using post-electoral survey data for all presidential elections from 1988 to 2012.

[^4]:    ${ }^{6}$ Alesina et al. (2021) also find evidence of immigration bringing more demand for redistribution in Europe.
    ${ }^{7}$ The MPD includes all parties that participated in national elections and obtained at least one seat in their country's parliament over the 1945-2017 period, covering all democratic countries in the OECD and Eastern Europe.
    ${ }^{8} \mathrm{We}$ also construct a measure of salience of the topic, equal to the sum of shares of positive and negative mentions whose values are between 0 and +1 . Results obtained using the "salience indicator" are usually similar and are shown in the Appendix (results available in Table A-7).

[^5]:    ${ }^{9}$ The MPD tracks changes in parties' names, as well as parties' fusions and splits. The list of the parties included in the analysis is available in Table A-X in the on-line Appendix C.
    ${ }^{10}$ The "Nomenclature for Territorial Units for Statistics", "NUTS" system, partitions EU countries into Macro-Regions, Regions and Provinces which are called NUTS1, NUTS2 and NUTS3 level(s), respectively. As mentioned, we use the intermediate level, NUTS2, commonly indicated as "region" in our analysis.
    ${ }^{11}$ These are the residence country, a foreign EU15 country, a foreign EU member state entered in the EU on 2004 , a foreign EU Accession country in 2007/2013, EFTA, Other Europe, North Africa, Other Africa, Near and Middle East, East Asia, South and South East Asia, North America, Central America and Caribbean, South America and Australia and Oceania.
    ${ }^{12}$ Table A-XXVIII reports the skill-specific number of migrants available in the EULFS at regional level. For each country we kept only election years. There are a few regions with small numbers of HS migrants. In Table A-XXVII we verify that our results are not driven by the inclusion of these regions, and we show that our benchmark estimates do not change when we retain only the regions where we can observe more than 50 migrants (either HS or LS) from the EULFS.

[^6]:    ${ }^{13}$ There are several reason for excluding non-EU countries, as well as New Member States of the EU, to have a more homogeneous group in terms of institutions, history and economic development. First, non-EU countries did not have access to full mobility within the Schengen area; even NMS who entered in the EU in 2004 had access to full mobility only after some years, due to the presence of bilateral Transitional Arrangements (Goldner Lang, 2007). Second, these countries have a shorter history of immigration. Third, these countries are younger democracies, compared to core EU15 countries (Vanhanen, 2003). Finally, we had to exclude Italy and Greece from the analysis, as the ESS data during 2007-2016 period covered only one election in each of these countries (2013 in Italy, and 2009 in Greece) and the Netherlands and Norway due to lack of information at the regional level (see the on-line Appendix for details).
    ${ }^{14}$ We considered using data from Census 2000, as reference year, but only a handful of countries allows to construct the immigrants stock by region from Census data. Germany only includes data on nationality, but not on birthplace of foreigners. We use the nationality of immigrants to approximate their birthplace.
    ${ }^{15}$ An extended data section describing these variables in greater detail is available in the on-line Appendix A and Table A-I.
    ${ }^{16}$ When the survey and election years correspond (e.g. in France in 2012, or Sweden in 2010 and 2014), we use the exact dates of the interviews (i.e. including months and days if needed), which are available in the ESS, to determine the most recent national election in which the subject participated.

[^7]:    ${ }^{17}$ Table A-V in the on-line Appendix shows the results in terms of differences between ESS and EED for each election for the top 5 parties. Considering the whole set of elections, the average difference between the two datasets is small (about $0.63 \%$ on average). Moreover, Figure A-I plots the total share of votes going to the top three parties in terms of votes and nationalism index: the ESS matches the votes for the largest three parties fairly closely.

[^8]:    ${ }^{18}$ The Chapel Hill Expert Survey asked two hundred political experts to classify parties using the Hix and Lord (1997) classification. They also use information about affiliation of national parties to international party associations to identify such political families. They identify eleven political families: Radical Right, Conservatives, Liberal, Christian-Democrats, Socialist, Radical Left, Green, Regionalist, Confessional, Agrarian and a residual "No family" group.
    ${ }^{19}$ In doing so, we carry out extensive robustness to verify that our main results are not driven by outlier regions characterized by overly-high or -low intensity of nationalist voting (see Table A-XIX in the on-line Appendix for details).

[^9]:    ${ }^{20}$ In our baseline specification, we consider the political platform of the voted-for parties as fixed at its average level. We then perform sensitivity analyses considering the platform at its initial or final position (see Table A-8 in the Appendix). We also analyze the change in the political platforms of parties in response to migration, showing that this is qualitatively similar to the change in voters' responses. These results are available upon request.
    ${ }^{21}$ Figure A-II shows a clear upward trend in average nationalism over time during the ten years considered. Figure A-III shows a positive upward trend of migrants during the sample year. Comparing Figure A-II and Figure A-III, we can point out a common upward trend for migration and nationalism.

[^10]:    ${ }^{22}$ Specifically, we define highly-educated immigrants as those who have completed at least one year of tertiary education which corresponds to level 5 or above of the ISCED classification.
    ${ }^{23}$ In the empirical analysis we will also consider separately the number of immigrants originating from other EU28 countries, and those originating from outside of EU28.
    ${ }^{24}$ Alternatively, to minimize the concerns related to the inclusion of controls which can simultaneously influence both the outcome variable and the main variable of interest (i.e. "bad controls") we include the set of regional characteristics at year 2005 and interacted with year dummies.

[^11]:    ${ }^{25}$ This is also done in Mayda et al., 2018.
    ${ }^{26}$ The fifteen birthplace regions identified by the EULFS data are the following: Natives, EU15, New European member state that joined EU in 2004, New European member state that joined EU in 2007/2013, EFTA countries, Other Europe, North Africa, Other Africa, Near and Middle East, East Asia, South and South East Asia, North America, Central America and Caribbean, South America and Australia-Oceania. Additional information on data and more details on the construction of the IV is available in Appendix A.

[^12]:    ${ }^{27}$ Between 2004 and 2006 the implementation of the Schengen Agreement allowed free mobility of people from Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia, to other EU countries. This produced an increased inflow of immigrants from these new EU countries to the countries of Western Europe.
    ${ }^{28}$ The economic and financial crisis of 2007-2009 increased emigration, especially of highly-skilled individuals, from the countries of Southern and Eastern Europe
    ${ }^{29}$ These results are in line both with the results presented by Goldsmith-Pinkham et al. (2020) on Card (2009) and with the fact that our set of origin-specific shares is aggregate and contains just 15 broad groups of origin.

[^13]:    ${ }^{30}$ These data are collected by the European Election Database (EED). More precisely the electoral events by country are: Austria (2002, 2006), Belgium (2003, 2007), Finland (1999, 2003), France (1997, 2002), Germany (2002, 2005), Spain (2000, 2004), Sweden (2002, 2006), Switzerland (1999, 2003) and United Kingdom (2001, 2005). Due to a lack of data at the regional level from EED, we had to drop Denmark, Ireland, and Portugal from this exercise.

[^14]:    ${ }^{31}$ As the EULFS does not provide consistent information on the country of origin of immigrants before 2005.

[^15]:    ${ }^{32}$ Other papers analyzing the impact of immigration on the vote using a shift-share method, such as Otto and Steinhardt, 2014; Mendez and Cutillas, 2014; Brunner and Kuhn, 2018; Halla et al., 2017; Barone et al., 2016; Edo et al., 2019; and Mayda et al., 2018 would be subject to the same issue.
    ${ }^{33}$ Table A-XI in the online Appendix shows the corresponding estimates using OLS.
    ${ }^{34}$ This clustering strategy seems the most reasonable option as the relevant explanatory variables vary at the regional level. In the online Appendix we show that standard errors remain reasonably small when we perform corrections in the spirit of Adao et al. (2019). This approach accounts for the concern that region-level clustering may lead to excessively small standard errors, if the distribution of initial shares is similar across regions (see Table A-4 and corresponding discussion in the online Appendix for details). Those results show that the correction is not important for our estimates.

[^16]:    ${ }^{35}$ A partial exception is the estimate for all migrants where the outcome are radical right countries in Column (5), probably due to a reduction of the number of observations, since Chapell Hill Expert Survey does not cover Switzerland.
    ${ }^{36}$ Our population of voters includes individuals that were born in the country-of-destination; i.e., also second- and higher-order generations of migrants.
    ${ }^{37}$ This result is consistent with the main finding of Mayda et al. (2018) relative to the US elections. They find that an increase in skilled immigrants in the US reduces the percentage of votes to Republicans, while an increase in less-skilled immigrants increases it.

[^17]:    ${ }^{38}$ The size of the coefficients is larger using IV than using OLS estimations. This suggests IV may correct for omitted factors or measurement error that produces an attenuation bias in OLS estimates. For instance, less-skilled immigrants may decide not to go to European regions characterized by a high intensity of nationalist voting. Similarly, omitted economic or social factors at the regional level may determine both low immigration rates and pro-nationalist voting. We discuss the role of local regional conditions more in detail in Table A-XV below. Also, an error in the measurement of the population share of immigrants would induce an attenuation bias of OLS estimates.
    ${ }^{39}$ One potentially important issue is the measurement of education among non-EU immigrants. The quality and transferability of education depends on the level of development of the country of origin. A high-skilled worker from a (non-EU) low income country may be perceived differently from a high-skill worker from a ( EU and non-EU) high income country. To address this concern, in Table A-XIII we show that our results are similar when we distinguish between immigrants coming from developed non-EU countries (including the European continent, the North America, Australia and Oceania) vs. non-developed countries.

[^18]:    ${ }^{40}$ Table A-9 in the Appendix shows, additionally, that the benchmark estimates are confirmed after removing from the sample EU peripheral countries, severely hit by the 2008 recession and by the European Sovereign Debt crisis, namely Ireland, Spain and Portugal. This reduces the worries that confounding factors related to the "great recession" drive our results

[^19]:    ${ }^{41}$ Our results are consistent with previous findings by Barone et al. (2016), who shows the effect of immigration on voting shares for right-wing parties in Italy is mainly driven by middle sized municipalities. This is also in line with findings by Dustmann et al. (2019) on refugees in Denmark whose dispersal is more likely to encourage voting for right-wing, anti-immigration parties in rural areas compared to urban neighbourhoods. Table A-10 in the Appendix reports the full set of our results.

[^20]:    ${ }^{42}$ Halla et al. (2017) show that the presence of immigrants could affect the quality of local schools and that could influence voting preferences of parents who are worried about the education of their children. No specific effect is found for exposure to crime (Mendez and Cutillas, 2014).
    ${ }^{43}$ In Table A-XV the only significant effects of less-skilled immigrant-share is estimated in regions with high-crime levels, suggesting a stronger concern about less-skilled migrants in regions with high level of criminality. For high-skilled immigrants, their negative effect on nationalism is stronger in regions where social transfers are low and where crime is high. In Tables A-XVI and A-XVII, we carry out a similar heterogeneity exercise for regional unemployment conditions.

[^21]:    ${ }^{44}$ The question in the ESS is defined as follows: "Which party do you feel closer to?". As it is shown in Table A-IV in the on-line Appendix, the percentage of "don't know" answers is significant (on average 34\%).

[^22]:    ${ }^{45}$ We also implemented the Romano-Wolf (RW) (see Romano and Wolf (2005) and Clarke et al. (2019)) correction for multiple hypothesis testing on the estimates by sub-samples reported in Tables 8, 9, and 10 in the main text below (see the corresponding Tables A-XXIV, A-XXV, A-XXVI in the online Appendix). Those results show that our estimates are not concerned by multiple hypothesis-testing bias.
    ${ }^{46}$ Additional results are available in the online Appendix I, where we explore the effects by political affiliation of voters (Table A-XXI). On average, we do not find any significant results.

[^23]:    ${ }^{47}$ The coefficient for less-skilled migrant-share in column (2) indicates that a one standard deviation increase in less-skilled migration (0.97) increases the variation of individual nationalism by $0.058(=0.97 * 0.06)$, that is, by roughly $9 \%$ of a standard deviation of the variation of nationalism indicator (0.628).
    ${ }^{48}$ In Figure A-V in the online Appendix we show that the nationalism distribution of individuals in the subsample responding to this question is the same as in the main sample. Moreover, estimating equation (2) using the subsample of people that express the party voted-for during the last national election and the party they actually feel close to, we obtain the same results as in Table 6. This reassures us that the results in Table 9 are not driven by selective attrition into non-response in the current period.
    ${ }^{49}$ The F-stat are below 10, but higher than 4.58 , which is the value reported by Stock and Yogo (2005) as a threshold to have significance level of $5 \%$ for the case $K=2, n=2$, and a maximum TSLS bias $=20 \%$.

[^24]:    ${ }^{50}$ This interpretation is reinforced by results reported in Table A-XXII in the on-line Appendix. In this table, we gradually remove from the stock of immigrants, those who arrived in the host country at earlier ages. These results show that the anti-nationalism effect of highly educated immigrants persists regardless of immigrants' age of arrival. This is not true for the pro-nationalist effect associated with low educated immigrants, which is concentrated among less-educated immigrants that arrived early in the country of destination.

[^25]:    ${ }^{51}$ The precise argument can be cast in terms of the Lucas' critique (Lucas, 1976) as the impossibility to predict the effects of education, and migration on nationalist voting entirely based on reduced-form relationships. Incorporating individual voting behavior shaped by a complex combination of mechanisms, which are themselves object of studies in political sciences, cultural and political economics, a structural model could be better suited to reflect causal effects. Nevertheless, such a model would also depend on assumptions about parameters and rationality.
    ${ }^{52}$ Even though we could not include Italy and Greece in our estimations due to a lack of voting data, we include them in our simulations as they are important immigration-receiving countries in the EU context. By so doing, we assume that the behavior of their citizens is similar to that in other EU countries, so it is well approximated by our estimated coefficients.

[^26]:    ${ }^{53}$ In some cases the variation of less-skilled immigrants is negative, like in Provence-Alpes-Côte d'Azur.

[^27]:    ${ }^{54}$ For each region we do not change the size of the immigrant population, but we split between high- and less-skilled migrants so as to mirror native ratios.
    ${ }^{55}$ Country-specific results not available in Table 11 are then available in Table A-XXIX in the online Appendix. Moreover, in the online Appendix N we perform other simulations and robustness checks. First, using only the statistically significant coefficients from our estimations, (i.e. keeping in equation (11) only non-tertiary-educated natives) we plot the results in Figure A-VII panel (a). Second, in Figure A-VII panel (b) we plot the results using origin-specific coefficients and origin-educationspecific migrant variation. Results are similar to our baseline. Finally, in Table A-XXX and Figure A-VIII we show the level of nationalism after our predicted variation. Interestingly, several regions that experienced a strong variation towards nationalism were originally less nationalistic.
    ${ }^{56}$ Figure A-VI in the online Appendix presents additional migration and education policy scenarios, which denote similar nationalist outcomes.

[^28]:    Note: authors' calculations on ESS and ELFS data.

[^29]:    Note: authors' calculations on ESS, EULFS and Eurostat data. Standard errors are clustered at NUTS2 level. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$.

[^30]:    Note: authors' calculations on EULFS Database. Standard errors are clustered at country level. * $\mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,^{* * *} \mathrm{p}<0.01$. The table shows the correlation between the skill specific regional variations of natives across elections and the skill specific share of immigrants in the previous electoral event. The dependent variable is the regional variation across electoral events of skill-specific share of natives over the total population: all natives (panel A), high-skill natives (panel B) and low-skill natives (panel C).

