

DISCUSSION PAPER SERIES

IZA DP No. 14164

**Immigration and Voting Patterns in the
European Union: Evidence from Five Case
Studies and Cross-Country Analysis**

Ethan Grumstrup
Todd Sørensen
Jan Misiuna
Marta Pachoka

MARCH 2021

DISCUSSION PAPER SERIES

IZA DP No. 14164

Immigration and Voting Patterns in the European Union: Evidence from Five Case Studies and Cross-Country Analysis

Ethan Grumstrup

University of Nevada

Todd Sørensen

University of Nevada and IZA

Jan Misiuna

SGH Warsaw School of Economics

Marta Pachoka

SGH Warsaw School of Economics

MARCH 2021

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ISSN: 2365-9793

IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

Immigration and Voting Patterns in the European Union: Evidence from Five Case Studies and Cross-Country Analysis

Tempers flared in Europe in response to the 2015 European Refugee Crisis prompting some countries to totally close their borders to asylum seekers. This was seen to have fueled anti-immigrant sentiment, which grew in Europe along with the support for far-right political parties that had previously languished. This sparked a flurry of research into the relationship between immigration and far-right voting, which has found mixed and nuanced evidence of immigration increasing far-right support in some cases, while decreasing support in others. Studies by Mendez and Cutillas (2014); Mayda, Peri, and Steingress (2016); Vertier and Viskanic (2018); and Georgiadou, Lamprini, and Costas (2018) found that the presence of immigrants decreased votes for right parties, while others by Otto and Steinhardt (2014); Dustmann, Vasiljeva, and Damm (2016); Halla, Wagner, and Zweimuller (2017); Brunner and Kuhn (2018); and Edo et. al. (2019) found that immigration increased votes for right parties. To provide more evidence to this unsettled debate in the empirical literature, we use data from over 400 European parties to systematically select cases of individual countries. We augment this with a cross-country quantitative study. Our analysis finds little evidence that immigrant populations are related to changes in voting for the right. Our finding gives evidence that factors other than immigration are the true cause of rises in right voting.

JEL Classification: J15, F22, D27

Keywords: immigration, European Union, voting

Corresponding author:

Todd Sorensen
Department of Economics
University of Nevada, Reno
1664 N. Virginia Street
Reno, NV 89557
USA

E-mail: tsorensen@unr.edu

1 Introduction and Motivation

There is evidence that antipathy towards a wide variety of migrants has increased in many parts of the world. In the U.S., there has been vitriolic rhetoric against generally lower educated migrants from Mexico and Central America (Mayda, Peri, and Steingress, 2018). This has been evidenced by former U.S. President Donald Trump’s negative characterization of Mexican migrants¹, and with the broad stereotyping he engaged in by associating Central American Migrants with criminal gangs such as MS-13.² At the same time, xenophobic sentiments have extended to high-skilled individuals, perhaps most infamously illustrated by the travel ban on nationals from certain countries (aka “the Muslim ban”), which the Trump Administration attempted to enact very early on in its term, and was ultimately upheld by the U.S. Supreme Court.³ Rhetoric and other policy changes targeting the high-skilled H-1B Visa Program⁴, opposed by many large U.S. businesses⁵, further illustrates the breadth of xenophobic policy and rhetoric in the U.S.

In Europe, much attention has been focused on anti-immigrant sentiment towards the arrival of refugees from Syria to countries such as Germany and France where it is perceived that “xenophobic, islamophobic and anti-immigrant sentiment, manifest in attacks on Muslims, migrants, and those perceived as foreigners and support for populist anti-immigration parties.” (Human Rights Watch, 2017). In France, the far-right National Rally has been linked to xenophobic sentiments towards Muslims (Chrisafis, 2017), but publicly the party calls for policies that restrict all non-European migrants (Goodliffe, 2012). Anti- immigration sentiment in general, and particularly against Muslims, is thought to be at least partially responsible for citizens of the United Kingdom voting to leave the EU in 2016 (Abbas, 2019; Abrams and Travaglino, 2018).

It is this reported growing desire for broad immigration restrictions that motivates us to study the impacts of non-EU migrants on percentages of votes received by political parties. This view was reported by popular media such as The Guardian, Time and the Washington Post to have increased support for far-right parties across Europe as a response to the European refugee crisis in 2015

¹ <https://www.cnn.com/2016/08/31/politics/donald-trump-mexico-statements/index.html>

² (<https://www.usatoday.com/story/news/politics/2018/05/16/trump-immigrants-animals-mexico-democrats-sanctuary-cities/617252002/>)

³ Trump v. Hawaii, decided June 26, 2018, https://www.supremecourt.gov/opinions/17pdf/17-965_h315.pdf

⁴ <https://www.whitehouse.gov/presidential-actions/proclamation-suspending-entry-aliens-present-risk-u-s-labor-market-following-coronavirus-outbreak/>

⁵ <https://www.businessinsider.com/amazon-google-twitter-speak-out-against-trump-h1b-visa-freeze-2020-6>

(Tharoor, 2015; Baboulias, 2015; Bremmer, 2015). Other mechanisms for far-right voting could be linked to notions of national identity and pride (Lubbers and Coenders, 2017), who find that “national identification is particularly strong in Finland, Greece, Bulgaria, and Turkey.”

Researchers have sought to determine how immigration, and immigrant populations in a region, influence anti-immigrant beliefs of natives in that region. Theoretically, the effect of immigration on beliefs could be positive, or negative. In one case, described by the Contact Hypothesis of Allport (1954), larger immigrant populations could reduce prejudice against immigrants by making the native population more familiar with them. In the other case, Campbell’s (1965) Realistic Conflict Theory predicts that conflicting values between groups could lead larger immigrant populations to increased prejudice. In either case, changes in racial prejudice may be correlated with changes in voting behavior on issues pertaining to immigration, or candidates supporting pro or anti-immigration policies.

Most related to our work is Georgiadou, Rori and Roumanias (2018), which, like our study, does not attempt to show causation between immigration and voting. Rather, both studies only seek to measure the correlation between immigrant populations and voting behavior. We contribute to this literature by being one of very few studies on this topic using data from all European Union member countries, as well as European Parliament elections. A novel contribution of our work is our identification of party ideologies, which is consistent across countries. We also link political parties with their associated party group in the European Parliament, and their ideologies, to use as dependent variables in our regression analysis. EP group association is voluntary and thus can be considered a revealed preference of individual parties for certain ideologies.

Our results suggest very little evidence that the presence of different immigrant shares in the population is correlated with voting shares for any EP groups or party ideologies. This aggregate result, which includes both how native voters respond to immigration, as well as how immigrants may end up voting themselves⁶, could be driven by several factors. We believe this to be attributable to the relatively small sample size when using national level observations as well as the fact that immigrant population shares have relatively little variation over the study period, which would exacerbate any effect of measurement error.

⁶ The duration until immigrants can vote in a particular country, if ever, varies from country to country.

2 Literature

Theoretical Backdrop

As first mentioned above, there are two different theoretical models in the psychology literature regarding attitudes toward immigrants and how natives may vote either on issues related to immigration: Contact Hypothesis, and Realistic Conflict Theory. Each of these theories is widely cited in the empirical literature that examines the relationship between voting and immigration.⁷

The Contact Hypothesis states that contact between majority and minority groups can decrease prejudice, under certain conditions. This theory would predict a decrease in prejudice to cause native voters to shift away from the political right toward more immigration friendly parties or candidates due to contact with non-native groups. However, if the conditions of equal status, common goals, and support from an authority are not present then the contact may increase prejudice (Allport, 1954).

The opposite effect is described by Realistic Conflict Theory, which, formalized by Donald Campbell in 1965 (as cited in Dustmann, Vasiljeva and Damm (2016)), has been studied in relation to far-right voting (Arzheimer, 2009; Abrams and Travaglino, 2018). It suggests that contact between members of different groups could lead to increased prejudice if there is real or perceived competition between those groups for resources. If the contact between immigrants and natives increases prejudice, we expect that the native born in a country would react in xenophobic ways, including their voting decisions. Lubbers (2017) makes a connection between nationalism and anti-immigration sentiment. In addition, Dennison and Geddes (2019) links right-wing populism to anti-immigration sentiment as well as euroskepticism. Thus, given that right leaning parties generally are more likely to express xenophobic and anti-immigrant platforms, this increase in prejudice would thus lead voters to shift to the political right.

Estimation Issues

It is important to keep in mind that while the effects of these two theories have opposite signs, it is theoretically possible for both phenomena to be exerting some influence on voting behavior

⁷ Studies supporting Contact Hypothesis include Georgiadou et al., 2018; Mayda Peri, and Steingress, 2016; Mendez and Cutillas, 2014; Vertier and Viskanac, 2018. Those supporting Realistic conflict theory include Brunner and Kuhn, 2018; Dustmann et al., 2016; Edo et al., 2019; Halla et al., 2017; Otto and Steinhardt, 2014; Rydgren, 2008. Several have also produced mixed findings: Della Posta, 2013; Barone et al., 2016; Steinmayr, 2016; Harmon, 2017; Mayda et al., 2018; Moriconi et al., 2018.

simultaneously. People respond to immigration differently, as exemplified by the range of attitudes toward refugees across the political spectrum (van Prooijen, Krouwel and Emmer, 2018). Therefore, it is important to bear in mind that any positive or negative finding can be considered a net effect. An additional possible effect is that of aggregate voting patterns shifting because more naturalized immigrants are voting in favor of pro-immigrant parties and policies which would bias an Ordinary Least Squares (OLS) estimate of the effects of migration on natives' attitudes.

In addition, underlying sentiments may influence the attractiveness of a potential migration destination, causing omitted variables bias. For example, highly educated regions may both welcome and attract lower educated migrants who will complement native workers in the labor market, rather than compete with them (Mayda et al. 2018). Not controlling for such factors may imply that, as stated by Moriconi, Peri, and Turati (2019) “unobserved factors at the individual- and at the regional levels could remain in the error term and may be correlated with voters' preferences and immigrants' locations. In such cases, the estimated coefficients will be biased and will not reflect the causal effect of immigration on voting.”

In the literature, this endogeneity is addressed in several studies⁸ through use of a novel instrumental variables approach developed by Card (2001). This approach relies upon past local migration patterns to model quasi-random shocks to future migration patterns driven by higher geographic-level changes in migration. In other words, this approach allows authors to avoid the above-described bias in their results that would follow from migrants moving to certain labor markets by chiseling down the identifying variation in the study to that which can be explained by much earlier choices of migrants from the same home country to settle in specific locales. Here, we do not use this approach because we are only attempting to find correlation rather than causation.

⁸ See for example Barone et al., 2016; Edo et al., 2019; Halla et al., 2017; Mayda et al., 2018; Mendez and Cutillas, 2014; Moriconi et al., 2018; Otto and Steinhardt, 2014

Evidence of Contact Hypothesis

There is evidence that the Contact Hypothesis has a greater effect on voting behavior than the Realistic Conflict Theory. Mendez and Cutillas (2014) find evidence that an increase in immigrants from Latin America increases the votes for socialist candidates in Spanish presidential elections. Mayda et al., (2016) find that greater population shares of immigrants in the U.S. are associated with lower shares of the vote for Republican candidates in Presidential, Congressional, and gubernatorial elections. Vertier and Viskanic (2018) find that the presence of temporary migrant centers in French municipalities decreased the vote share of the right-wing party National Rally in presidential elections. Georgiadou, et al. (2018) use data from 28 European countries and conclude that greater shares of immigrants increase far-right votes.

Evidence of Realistic Conflict Theory

Other literature supports the hypothesis that Realistic Conflict Theory has a greater influence than the Contact Hypothesis. Otto and Steinhardt (2014) find that an increase in the share of immigrants in Hamburg, Germany increases the vote share of extreme right-wing parties. Dustmann, Vasiljeva, and Damm (2016) analyze municipalities in Denmark with populations below the 95th percentile and find that increases in the share of refugees led to an increase in the vote share for anti-immigration parties in parliamentary and municipal elections. Halla, Wagner, and Zweimuller (2017) find that an increase in the share of immigrants in Austrian municipalities increases the vote share for the right-wing Freedom Party of Austria. Brunner and Kuhn (2018) look at Swiss national voting and find that an increase in the share of culturally dissimilar immigrants in a municipality increase the vote share for anti-immigration policies. Edo, Giesing, Oztunc, and Poutvaara (2019) find that immigration increases vote shares for far-right candidates in French presidential elections, primarily driven by low-educated, non-European immigrants.

There is also cross-country evidence that support for the far right is mitigated by generous unemployment benefits in countries with high proportions of immigrants (Arzheimer, 2009). Other evidence from a UK case-study indicates that immigration is more of a focal point when distrust of politicians is high (Abrams and Travaglino, 2018), but there are no clear findings on “protest voting” being an explanation for this (Van der Brug and Fennema, 2007). Another cross-country study finds the explanation is not actually immigrants in a region that cause shifts to far-right voting, but rather sudden economic changes that create economic insecurity (Georgiadou et al., 2018). Clearly immigration is not an isolated issue, but rather perceptions of its merits are related to other economic and political conditions.

Rydgren (2008), questioned the findings supporting the Realistic Conflict Theory. Specifically, Rydgren (2008) argues that individual level data, rather than the country level data used in many studies, is more appropriate to capture attitudes that might be affected by personal relations with ethnically dissimilar migrants. In this context, the study finds only weak evidence that voters in ethnically heterogeneous areas are more likely to vote for far-right parties, and only in two of six countries, which leads the author to question past findings in support of realistic conflict theory. Nevertheless, the latter group of studies described in the last paragraph do provide empirical evidence in support of the Realistic Conflict Theory.

Mixed Evidence

Still other studies in the literature have found mixed, or more nuanced effects that do not necessarily support either theory holding more influence over voting. These studies have employed a variety of strategies, including cross-country approaches, examining cross-region variation within a country, or case-study based approaches. The study by Moriconi et al. (2018) uses a cross-country approach to study 12 countries and a total of 28 elections using individual data from the European Social Survey. The authors created an index of “nationalistic preference” to measure each political party’s ideology by text mining each party’s manifesto. While the authors’ method of identifying party ideology is novel and useful, we instead rely upon categorization done previously by political scientists.

Overall, there does not appear to be a dominant conclusion in favor of either the Contact Hypothesis or Realistic Conflict Theory, thus the question warrants further exploration. However, one conclusion supported by several of the previously discussed studies is that low-skill or low-education immigrants tend to increase far-right voting, while high-skill or high-education immigrants have the opposite effect or none at all.

Our Study in the Context of the Literature

As discussed above, there have recently been a number of studies examining immigration and voting patterns in various European countries and the U.S. However, with the exception of Georgiadou et al. (2018), no other study that we are aware of has examined the issue over as long a time period or with such a comprehensive set of countries as exist in the data that we have collected. In fact, most recent studies consider elections in only one country, but tend to use finer geographic units such as municipalities or provinces. Our study uses the share of immigrants in the national population for elections from 2005 through 2018. Therefore, our sample covers the crucial period since 2014, during which many events occurred that are thought of as the cause or emblematic of the rise of the right in Europe, including the European refugee crisis and exit of the UK from the European Union (“Brexit”).

Our research contributes to this literature on immigration and voting behavior by taking a wider perspective over more elections, and by including EU parliamentary elections, which has only been done by a handful of previous studies. In addition, our general cross-nation approach motivates the need for a consistent coding of ideology. Using Nordsieck (2018), we are able to do so.

To our knowledge, our data set is the first that uses a comprehensive comparable information source which links vote share for political parties to their ideologies and associated EP groups in the European Union. Other studies have obtained party vote shares from the European Election Database which curates election results from across Europe down to the NUTS 3 level. While this source is extensive and detailed, it has not been updated to include elections after 2014 limiting its utility for future research.

3 Data and Methodology

Here, we briefly describe our data, before moving on to our case-based approach and cross-country study. Our analysis uses annual data for over 400 parties from the 28 European Union Member States over the period 2005 to 2018. We collected data on these countries' national elections, and their European Parliamentary (EP) elections from Nordsieck (2018).⁹ This source provides vote shares (percentage share of popular vote received) for each political party in every European election since 1945 and consistently categorizes party ideologies across countries. The vote share and seats won for every individual party with 1% or more of the vote during each election were recorded into a spreadsheet, and each party's ideology was recorded.

Nordsieck (2018) also links parties to their associated political group in the European Parliament. We use this information in our cross country-analysis.¹⁰ For elections in which parties ran collectively as a coalition, the primary party name was recorded, and the orientations and EP groups of each other party in the coalition were added to its own. For parties that were renamed, the name, ideologies, and EP group affiliation as of 2018 were used, and vote shares were traced back to any previous names and recorded under the current name. We include national parliamentary elections for Croatia (joined EU in 2013), and Romania and Bulgaria (both joined in 2007), for the entire period.

To measure the political climate of each member state, for each election we use the total share of votes won by parties associated with selected political ideologies, and EP groups. Our cross-country analysis, explanatory variables and control variables were obtained from the Eurostat database.¹¹ The

⁹ Some data presented in this source is also available at <http://www.parties-and-elections.eu>.

¹⁰ From left to right, the EP Party Groups are European United Left/Nordic Green Left (GUE/NGL), The Greens/European Free Alliance (Greens/EFA), Progressive Alliance of Socialists and Democrats (S&D), Alliance of Liberals and Democrats for Europe (ALDE), European People's Party (EPP), European Conservatives and Reformists (ECR), Europe of Freedom and Direct Democracy (EFDD), and Europe of Nations and Freedom (ENF). We continue to use those EP group affiliations for the sake of continuity, despite the fact that some EP groups have changed names or are no longer officially recognized groups. i.e., EFDD is no longer officially recognized; ALDE is succeeded by Renew Europe (RE); ENF is succeeded by Identity and Democracy (ID). EP elections take place every five years, and during the observed period there were two elections, in 2009 and 2014. We include 2019 EP and national elections in descriptive statistics but exclude them from our analysis because immigrant population shares, and demographics were not yet published for 2019 while we collected data. Thus, for the EP elections, our analysis contains 55 country-election observations. Each country is observed in both EP elections, except for Croatia which is only observed in the 2014 EP election.

¹¹ ec.europa.eu/eurostat

explanatory variable of interest is share of the population born in any non-EU member country (non-EU-born share).¹²

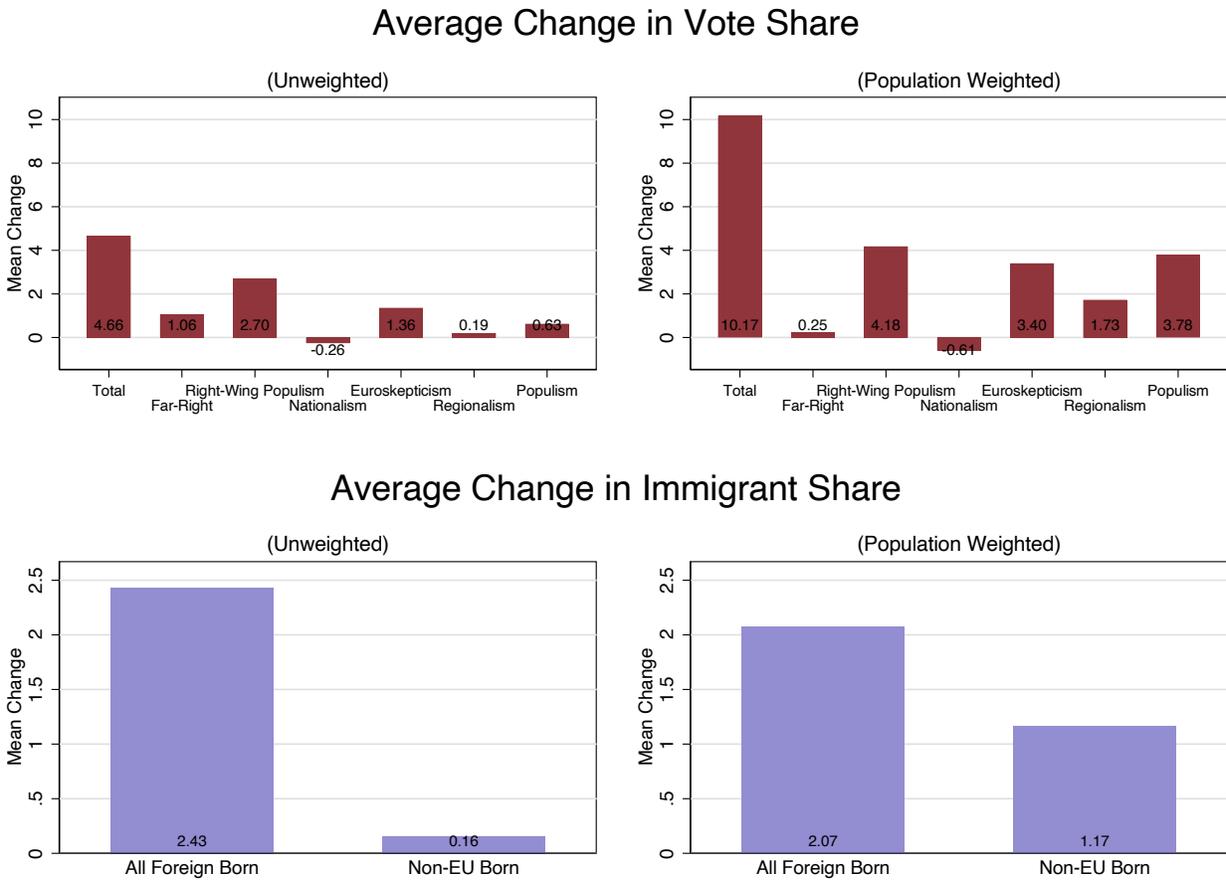
National elections are held at different intervals across the included countries, so the number of observed national elections per country is non-uniform. In the case of Greece, we observe seven national elections which is the most of any country and includes two elections during 2012, and two during 2015. All other countries have held three to five elections. The years of each election during our study period are shown in Appendix Table A1. Due to immigrant and demographic variables not being available at the time of study, 2019 and 2020 elections are not included in the analysis. From Nordsieck (2018), we have recorded a total of 45 unique ideologies including communism, conservatism, and libertarianism. Others are more granular such as ‘United Ireland’, which obviously is unique to Ireland and Northern Ireland, and various minority interest ideologies that each represent a specific ethnic minority. We link the vote-shares for each party with each of their listed ideologies and their associated EP group. Since many parties have overlapping ideologies, and EP groups are associated with many parties, we use the cumulative vote-share of an ideology/EP Group in each election as our dependent variable. We are particularly interested in ideologies associated with politically right-leaning parties. Thus, we focus on vote-shares for parties with far-right, right-wing populism, nationalism, euroskepticism, regionalism, and populism ideologies, and collectively refer to them as “right” ideologies. Descriptive statistics are presented in Appendix Table A2.

In Figure 1, we compare the first and last election in the sample for each country to detect overall changes in vote-shares for the right and immigrant population shares. This is a simplification which ignores any intervening variation, but it does provide an initial impression of general trends. Figure 1 shows there has been a 2.43 percentage point increase in foreign born population shares, which almost entirely consists of immigrants from other EU countries. There is also an average change in vote share for “right” parties of 4.66 percentage points. However, when taking an average weighted by country population, change in right-oriented vote-share increases to about 10.17 percentage points, and the

¹² For the earliest years in our sample, the immigrant population data was not available for many countries, we thus impute these values. In the appendix we include results using the population share of any foreign-born immigrant as the regressor of interest.

average change in foreign born population share drops slightly, to about 2.07 percentage points with about half of that coming from outside the EU.¹³

Figure 1: Changes in Vote/Immigrant Share from First to Last Election



¹³ This statistic in the European context stands partially in contrast to work published in this journal by Norlander and Sorensen (2018) that finds a dramatic slowdown in migration in the United States, supported by further work by Castañeda Hernández and Sørensen (2019).

4 Case Based Approach

The coinciding increase across the E.U. in both right-voting and immigration presented in Figure 1 is consistent with the literature that we had discussed in the previous section and motivates our further examination of the correlation between these two variables. Here, we present the information from Figure 1 in a way that better illustrates how the experiences of immigration and voting have differed between countries. This will lead us to a systematic selection of five countries to examine as case studies. In the following section, we support this analysis with an augmenting cross-country quantitative analysis.

Case Selection

Figure 2 presents disaggregated information from Figure 1 in a scatter plot. The horizontal axis shows the change in the share of non-EU migrants between the first and last election for each EU country, while the vertical axis shows the associated change in overall right voting. The data for each country is plotted on this axis, with the size of the dot representing the population of the country.

The overall population weighted mean for the change in right voting is displayed with a vertical dashed line, with two dotted lines marking the mean plus or minus one standard deviation. Corresponding vertical lines display the same for changes in the migration rate. These two vertical and two horizontal lines cut the graph into nine sectors, representing the changes in both variables in a given country, relative to the means and standard deviations.

For example, the first sector, the “northwest” part of the graph, corresponds to a decrease in immigration that was a standard deviation or more below average (“low”), along with an increase in right-voting that was more than a standard deviation above average (“high”). The second, “north”, sector also represents a high change in right voting, but accompanied by a “medium” change in immigration, that was not more than one standard deviation above or below the average change in immigration. These sectors of Figure 2 can be summarized as follows in terms of immigration changes and right voting changes starting with the upper-left and moving left to right: 1) low-high (0 countries), 2) medium-high (2 countries), 3) high-high (0 countries), 4) low-medium (5 countries), 5) medium-medium (13 countries), 6) high-medium (4 countries), 7) low-low (2 countries), 8) medium-low (2 countries) and 9) low-high (0 countries). Details of where each country falls are available in Appendix A Table 3.

Before proceeding to our case selection, we provide some general intuition and initial results from a cross-country framework. First, we note that because our scatter plot examines changes on changes, we can implicitly control for institutional differences for each country that did not vary over time. Second, we note that if there were a significant positive effect of immigration on right voting, we would expect that countries that had relatively small (or negative) changes in immigration would also have relatively small (or negative) changes in right voting, and conversely that countries with relatively large changes in immigration would have relatively large changes in right voting. In other words, we would expect to see many observations in Sectors 3 and 7. Many countries in the opposite corners (1) and (9), would suggest a negative relationship between these two variables.

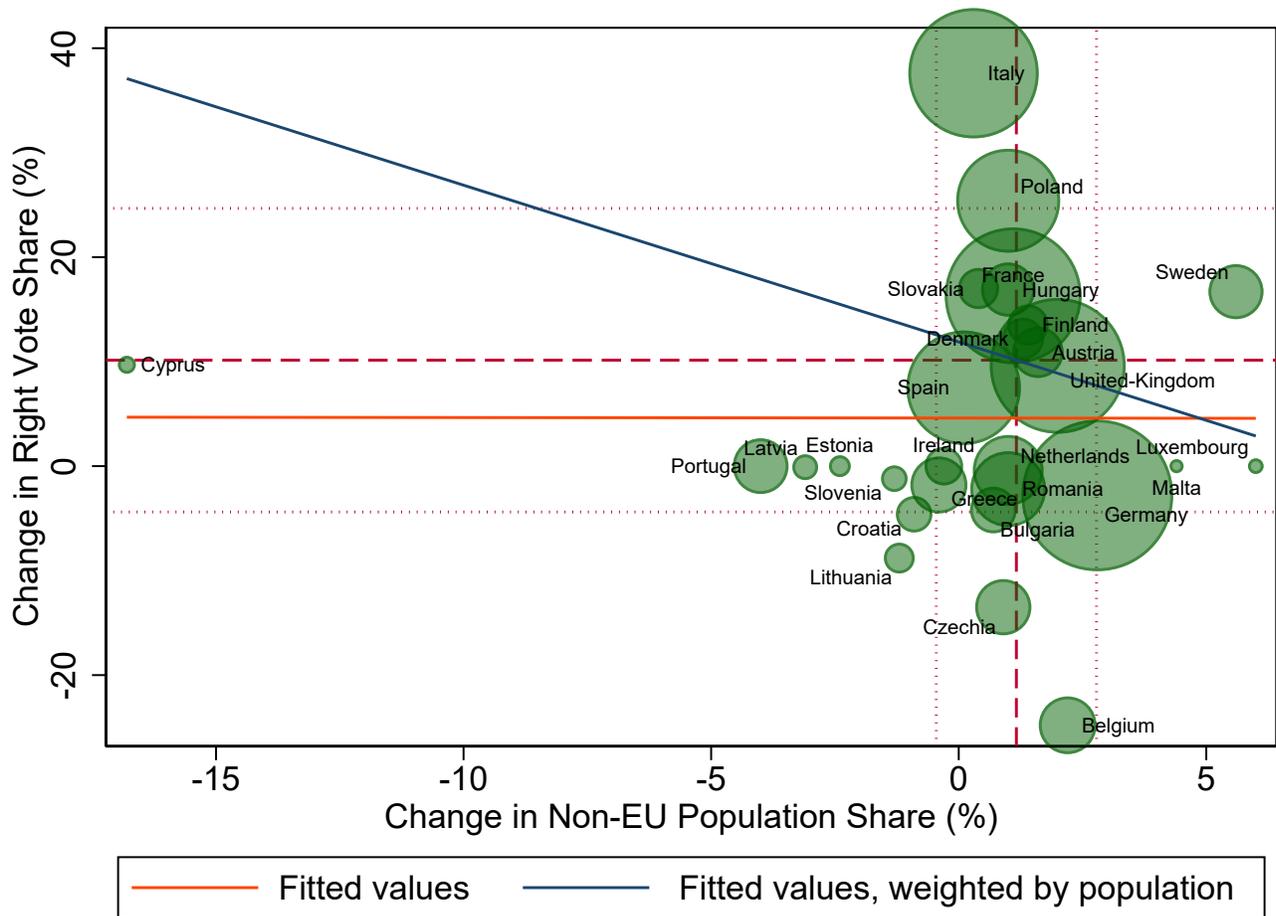
We observe only two countries in Sector 7, and no other countries in the other three “corner” sectors, suggesting no strong relationship between immigration and voting at the cross-country level. In addition, the figure displays two fitted regression lines, one that gives each country presented in the scatter plot equal weight (the relatively flat line), and one that weights each country based upon its population (the negatively sloped line).

While no evidence so far suggests a positive relationship between immigration and right voting, it is important to understand that the individual cultures and institutions of different countries may lead to idiosyncratic responses to immigration, which is a form of heterogeneity that our approach is unable to control for. We thus now proceed to select some representative cases to explore whether there is any evidence of such responses.

Of our 28 countries, nearly half (13) fall into the “central” medium-medium Sector 5, in which the country experienced neither an unusual change in immigration nor in right-voting. The remaining 15 countries populate five of the eight additional sectors, while three of these sectors are empty. We thus choose one country from each of these five sectors and then proceed to examine its case in more detail below.

For Sector 2, we choose Poland given that it is an Eastern European country and some of the authors familiarity with the institutions of the country. Sector 4 is represented by Portugal which is by far the largest of the countries in the sector. For Sector 6 we choose Sweden as a country which saw a larger increase than average in both of our variables of interest. For Sector 7 we select Croatia to have one Mediterranean country in the sample. And from Sector 8 we choose Belgium to have a Western European country.

Figure 2: Scatter of Changes in Percentage of Non-EU Immigrants and Right Voting

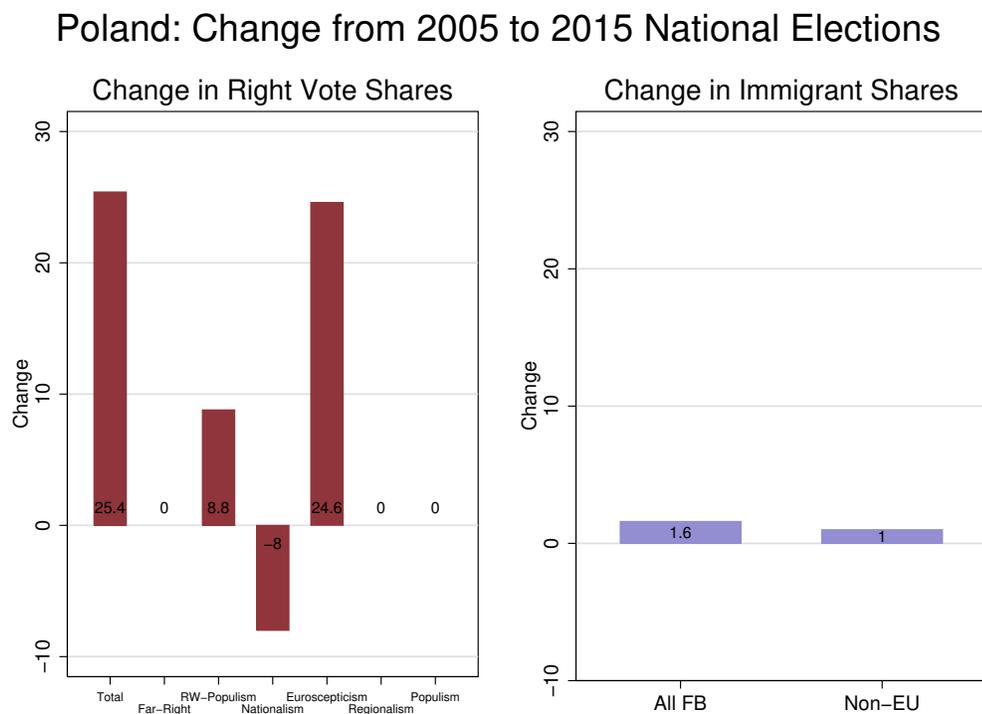


Poland

Poland is one of two countries falling into Sector two of Figure 2, demonstrating that countries can experience a more than standard deviation above average increase in right-voting, absent a notable change in immigration. Specifically, we see in Figure 3 that between Poland's 2005 and 2015 elections, the Non-EU foreign born share increase by only one percentage point, explaining just over 60% of the total increase in immigration.

During this period, Poland experienced the second largest increase in right-voting in our sample (after Italy), a 25.4 percentage point increase. This was driven primarily by an increase in eurosceptic voting, with an increase in right-wing populist votes essentially offsetting a decrease in nationalist voting. This increase was brought about by the inclusion of the eurosceptic Solidary Poland (SP) and Poland Together – United Right (PRZP) parties into an electoral coalition with the Law and Justice (PiS) party, which yields a classification of the coalition as eurosceptic, rather than by any increase in the overall vote share of the three parties in question.

Figure 3: First to Last Election in Poland

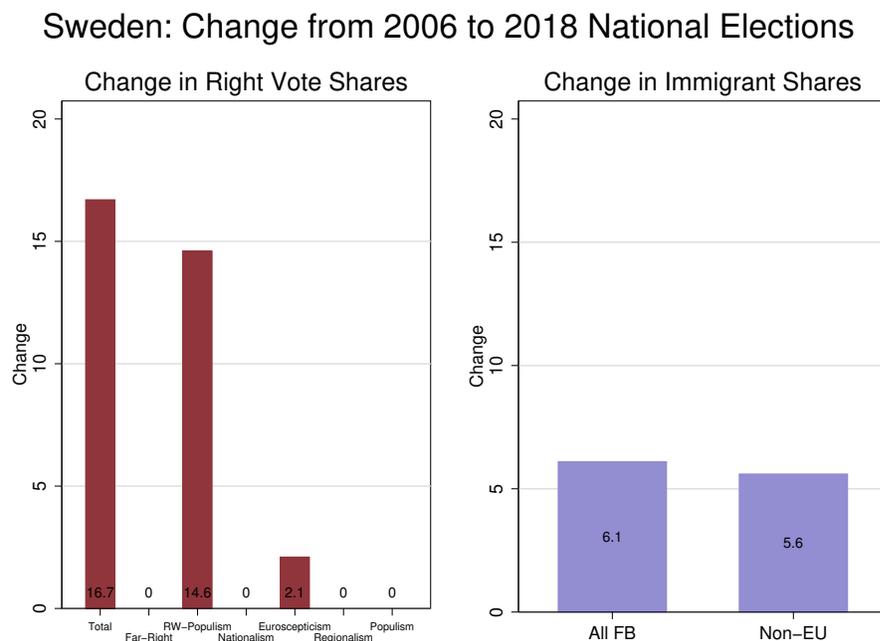


Sweden

None of the 28 countries that we examine experienced a standard deviation above average increase in both right-voting and immigration. However, of the four countries that did experience more than a standard deviation increase in immigration during this period, Sweden was the only one that also saw an above average (less than one standard deviation above average) increase in right-voting, landing it in Sector 6 of Figure 2. Of all the EU countries that we examine, the experience of Sweden between its first 2006 and last 2018 election arguably best fits into the narrative of an increase in immigration leading to an increase in right-voting. This could be on account of Sweden being particularly responsive to immigration as compared to other countries, or it could be on account of Sweden's experience being a statistical outlier.

From the right panel of Figure 5 we see that the foreign-born share in Sweden increased by 6.1 percentage points. Of this, immigration from Non-EU countries, our key measure in Figure 2, accounted for over 90% of the increase. Only Luxembourg saw a greater increase in the share of these migrants. The left panel reveals an overall increase in right-voting of 16.7 percentage points, explained by a 14.6 percent increase in right-wing populism, driven solely by the increased share of votes received by Sweden Democrats (SD) during this period, and a 2.1 percentage point increase in euroskepticism driven by the otherwise left leaning Left Party.

Figure 4: First to Last Election in Sweden



Croatia

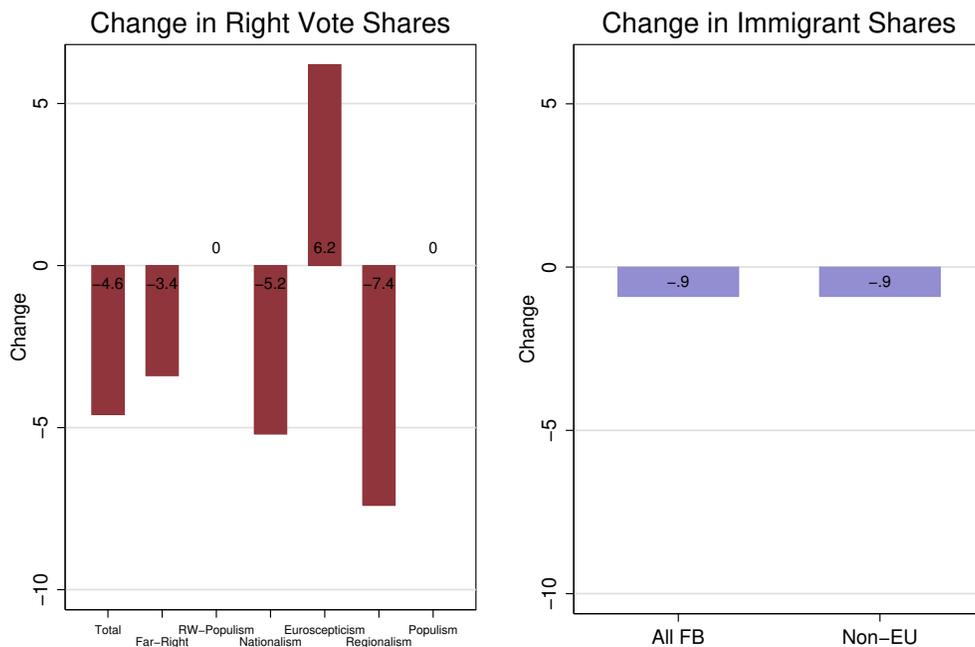
Between its 2007 and 2016 national elections, Croatia experienced a relatively large decrease in both immigration and right-voting. This individual outcome is indeed a case consistent with a positive impact of immigration on right-voting.

Figure 6 shows the change in voting and immigration. In the left panel, we see the 4.6% total decline in right voting that was represented in Figure 2. In the right panel of the table, we see modest declines in the foreign-born population during this period, accounted for entirely by a decline in the Non-EU foreign-born share.

The left panel also indicates that right-voting decreased for four of our five ideological measures. Three right parties dropped off the political map between 2007 and 2016: the nationalist and regionalist Croatian Democratic Alliance of Slavonia and Baranja (HDSSB), the regionalist and otherwise not right-categorized Croatian Peasant Party (HSS), and the nationalist and far-right Croatian Party of Rights (HSP). The exception to these decreases was an increase in votes received by parties categorized as having a euroskeptic ideology. This increase was solely driven by the emergence of the new Living Wall (ZZ) party.

Figure 5: First to Last Election in Croatia

Croatia: Change from 2007 to 2016 National Elections

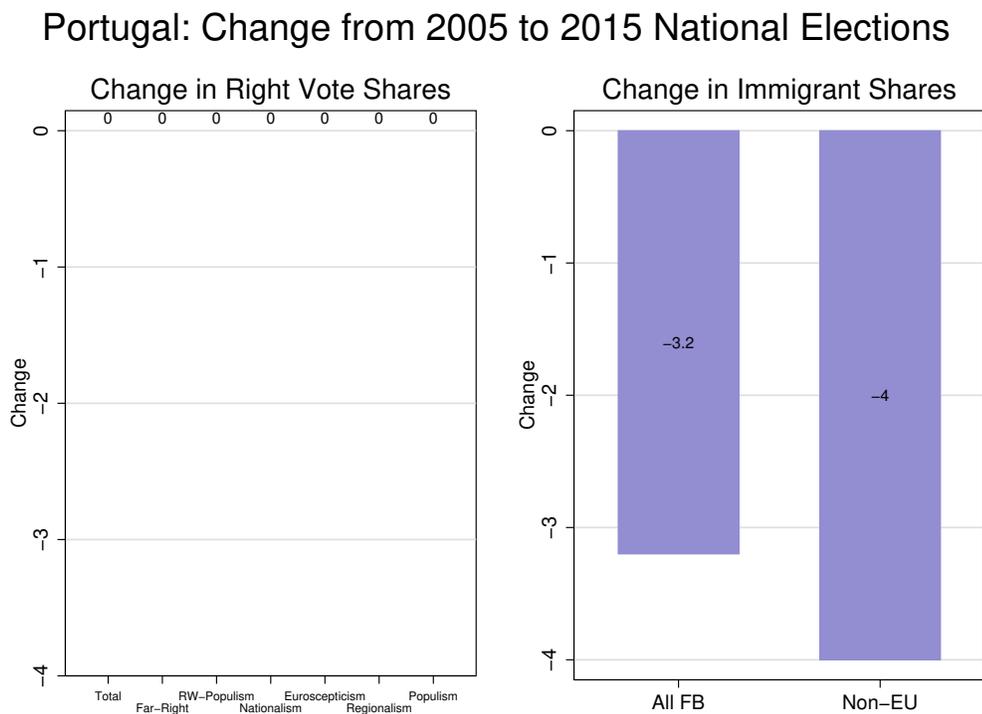


Portugal

In Figure 2, we saw that Portugal was one of the countries that experienced a larger than average decline in immigration, along with no change in right-voting. Looking to the specifics of the changes between Portugal's first and last elections in our data (2005 and 2015) in Figure 4, the precise zeros in changes in each right-ideology point to the fact that no right parties received measured vote shares in either of Portugal's elections. During this same period, we see that Portugal experienced a significant decline in its' foreign-born share. In fact, the four-percentage point decline in the non-EU share of immigrants is the second largest decline that we observe, after Cyprus.

If we were to start with the assumption that increased immigration is linked to increase right-voting, it should be of no surprise that there was no increase in right-voting after the substantial decrease in Portugal's non-EU-born population. What does run counter to this assumption is the fact that Portugal had no right-parties receiving substantial votes, even when there were significantly more immigrants in 2005. Rather, in both elections the center-left and left parties received a majority of votes, followed by center to center-right liberal and Christian democratic parties.

Figure 6: First to Last Election in Portugal



Belgium

Belgium falls into Sector 8 in Figure 2, demonstrating a case where there is a decline in right-voting, even without a substantial decrease in immigration. In fact, Belgium even experienced an increase in immigration between the 2007 and 2014 elections, though not an above average change compared to our cross-EU sample during this period. Overall, we see that the foreign-born population of Belgium increased by 3.1 percentage points and that 2.2 percentage points of this increase (or around 80%) was driven by an increase among migrants from outside the European Union.

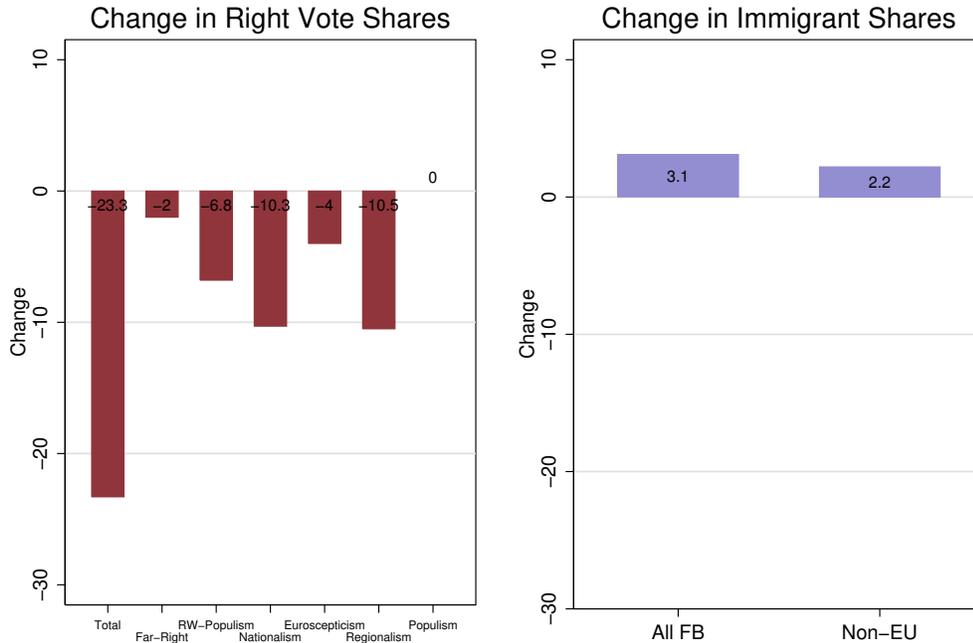
The dramatic decline in right-voting in Belgium is illustrated in the left panel of Figure 7, in which we see an overall decline across all right-ideologies of over 23%. This massive decrease is driven by declines in our five specific measures of right ideology. It is also important to note that Belgium had many parties receiving more than 1% of votes in each election: 11 in 2007 and 13 in 2014.

Of note in explaining decreased right-voting in Belgium is the decline in the vote share of nationalist parties. Specifically, Flemish Interest (VB) dropped from 12 to around 4 percentage points, while National Front (FN) dropped from 2 percentage points to below our data-collecting threshold. Together, the decline in the vote shares of these two parties yielded over a 10-percentage point decline in votes cast for parties espousing a nationalist ideology. When looking at Figure 2, it is clear that the decrease driven by these two parties alone would produce one of the largest declines in right-voting that we observe in our data.

In addition, euroskeptic, far-right, and right-wing populist parties saw their respective vote shares decline by around 4, 2 and 7 percentage points, respectively. Also, the decline in regionalism accounts for the single largest amount of the total decline in right-voting, at 10.5 percentage points. This is driven by the exit from Francophone Democratic Federalists (FDF) from the Reformist Movement (MR) coalition and our identification procedure associating a coalition with the ideologies of each member party. The Reformist Movement (MR) party, together with the Francophone Democratic Federalists (FDF) party saw a decrease in their combined vote share of only around one percentage point.

Figure 7: First to Last Election in Belgium

Belgium: Change from 2007 to 2014 National Elections



5 Summary of Auxiliary Quantitative Analysis

In this section we briefly summarize an extensive quantitative analysis, the details of which are presented in Appendices. Our first analysis broadens the scope of the scatter plot presented in Figure 2 to account for different treatments of the data. With that data, we run 52 linear regressions of changes in ideological vote-share on changes in the foreign-born population shares. Appendix Figure A2 illustrates that the regressions, taken as a whole, suggest no specific relationship between these two variables.

The appendix presents further analysis examining the relationship between voting in all elections observed, rather than just the first and last election in our sample, and immigration. In this analysis, we also examine not just assigned ideologies, but self-selected EP party groups with which individual political parties associate. Again, our analysis finds no systematic evidence of a correlation between immigration and right-voting. What little evidence of a relationship that is produced comes from regressions in which we do not control for country fixed effects. In other words, where we do not base our analysis on changes in voting and immigration, as in the analysis in the previous section.

Using analysis based on changes essentially differences out anything about a country's culture or institutions that has remained fixed over the short time horizon of our study. In other words, there is some evidence that immigrants' desire to move to countries in which there is an absence of xenophobic attitudes driving right-voting. However, there is much less evidence that immigration *drives* a xenophobic response by native voters.

6 Conclusions

The results from this study do not provide support for the hypothesis that changes in immigrant populations are related to changes in voting for parties on the right. While our extensive quantitative analysis does on occasion find significant results, they are sporadic and inconsistent between regressions, suggesting that such results may be nothing more than statistical outliers. Furthermore, this means there is no clear evidence that either the Contact Hypothesis, or Realistic Conflict Theory have had a net effect on voting behavior, at least in the aggregate. This does not rule out the possibility that the two are having equal effects of opposite sign that cancel each other out in our estimates.

It is also possible that a relationship of this nature simply cannot be observed at the national level. If in fact there is not a relationship between changes in immigrant populations and changes in voting behavior, then future research should try exploring other mechanisms for shifts in anti-immigration attitudes.

References

- Abbas, M. S. (2019). Conflating the Muslim refugee and the terror suspect: responses to the Syrian refugee “crisis” in Brexit Britain. *Ethnic and Racial Studies*, 42(14), 2450–2469.
- Abrams, D. and Travaglino, G. A. (2018). Immigration, political trust, and Brexit—testing an aversion amplification hypothesis. *British Journal of Social Psychology*, 57(2):310–326.
- Albon, R. P. and Valentine, T. J. (1977). The sectoral demand for bank loans in Australia. *Economic Record*, 53(2):167–181.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.
- Arzheimer, K. (2009). Contextual factors and the extreme right vote in Western Europe, 1980–2002. *American Journal of Political Science*, 53(2):259–275.
- Baboulias, Y. (2015, September 21). The EU’s woeful response to the refugee crisis has revived golden dawn. *The Guardian*. Retrieved from <https://www.theguardian.com/commentisfree/2015/sep/21/eu-refugee-crisis-golden-dawn-greek-neo-nazi-europe>.
- Barone, G., D’Ignazio, A., de Blasio, G., and Naticchioni, P. (2016). Mr. Rossi, Mr. Hu and politics. The role of immigration in shaping natives’ voting behavior. *Journal of Public Economics*, 136:1–13.
- Bremmer, I. (2015, October 15). These 5 facts explain the worrying rise of Europe's far-right. *Time*. Retrieved from <http://time.com/4075396/far-right-politics-rise-europe/>.
- Breusch, T. S. and Pagan, A. R. (1980). The LaGrange multiplier test and its applications to model specification in econometrics. *The review of economic studies*, 47(1):239–253.
- Brunner, B. and Kuhn, A. (2018). Immigration, cultural distance and natives’ attitudes towards immigrants: evidence from Swiss voting results. *Kyklos*, 71(1):28–58.
- Cameron, A. C. and Trivedi, P. K. (2005). *Microeconometrics: methods and applications*. Cambridge university press.
- Card, D. (2001). Immigrant inflows, native outflows, and the local labor market impacts of higher immigration. *Journal of Labor Economics*, 19(1), 22–64.
- Card, D., Dustmann, C., and Preston, I. (2012). Immigration, wages, and compositional amenities. *Journal of the European Economic Association*, 10(1):78–119.
- Chrisafis, A. (2017, May 5). ‘We don’t want you here’: Muslims fearful as France prepares to vote. *The Guardian*. Retrieved from <https://www.theguardian.com/world/2017/may/05/france-muslims-fear-frustration-runoff-vote-marine-le-pen>.

- Della Posta, D. J. (2013). Competitive threat, intergroup contact, or both? Immigration and the dynamics of front national voting in France. *Social forces*, 92(1):249–273.
- Dennison, J., & Geddes, A. (2019). A rising tide? The salience of immigration and the rise of anti-immigration political parties in Western Europe. *The political quarterly*, 90(1), 107-116.
- Dustmann, C. and Preston, I. P. (2007). Racial and economic factors in attitudes to immigration. *The BE Journal of Economic Analysis & Policy*, 7(1).
- Dustmann, C., Vasiljeva, K., and Damm, A. P. (2016). Refugee migration and electoral outcomes. *CReAM DP*, 19:16.
- Edo, A., Giesing, Y., Öztunc, J., and Poutvaara, P. (2019). Immigration and electoral support for the far-left and the far-right. *European Economic Review*, 115:99–143.
- European Parliament (2019). The political groups of the European parliament. Retrieved from <https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation/political-groups>.
- Georgiadou, V., Rori, L., and Roumanias, C. (2018). Mapping the European far right in the 21st century: A meso-level analysis. *Electoral Studies*, 54:103 – 115.
- Goodliffe, G. (2012). Back from the brink: The front national and the 2012 elections in France. Available at SSRN 2133330.
- Halla, M., Wagner, A. F., and Zweimüller, J. (2017). Immigration and voting for the far right. *Journal of the European Economic Association*, 15(6):1341–1385.
- Harmon, N. A. (2018). Immigration, ethnic diversity, and political outcomes: Evidence from Denmark. *The Scandinavian Journal of Economics*, 120(4):1043–1074.
- Castañeda Hernández, A & Sørensen, T. A. (2019). Changing sex-ratios among immigrant communities in the USA. *Journal of Economics, Race, and Policy*, 2(1), 20-42.
- Human Rights Watch (2017). *World Report 2017: The Events of 2016*. Human Rights Watch. <https://www.hrw.org/world-report/2017>.
- Lubbers, M. and Coenders, M. (2017). Nationalistic attitudes and voting for the radical right in Europe. *European Union Politics*, 18(1):98–118.
- Malone, J. J. (2014). Examining the rise of right wing populist parties in Western Europe. Honors thesis, Saint John's University.
- Mayda, A. M., Peri, G., and Steingress, W. (2016). Immigration to the US: A problem for the Republicans or the Democrats? (No. w21941). *National Bureau of Economic Research*.
- Mayda, A. M., Peri, G., and Steingress, W. (2018). The political impact of immigration: Evidence from the United States (No. w24510). *National Bureau of Economic Research*.

- Mendez, I. and Cutillas, I. M. (2014). Has immigration affected Spanish presidential elections results? *Journal of Population Economics*, 27(1):135–171.
- Moriconi, S., Peri, G., and Turati, R. (2018). Skill of the immigrants and vote of the natives: Immigration and nationalism in European elections 2007-2016 (No. w25077). *National Bureau of Economic Research*.
- Nordsieck, W. (2018). *Parties and Elections in Europe: Parliamentary Elections and Governments since 1945, European Parliament Elections, Political Orientation and History of Parties*. Books on Demand, Norderstedt.
- Otto, A. H. and Steinhardt, M. F. (2014). Immigration and election outcomes: evidence from city districts in Hamburg. *Regional Science and Urban Economics*, 45:67–79.
- Rydgren, J. (2008). Immigration sceptics, xenophobes or racists? Radical right-wing voting in six west European countries. *European Journal of Political Research*, 47(6):737 – 765.
- Steinmayr, A. (2016). Exposure to refugees and voting for the far-right: (unexpected) results from Austria. IZA discussion papers 9790. *Institute for the Study of Labor (IZA)*. URL <https://ideas.repec.org/p/iza/izadps/dp9790.html>.
- Tharoor, I. (2015, October 13). Europe’s refugee crisis strengthens far-right parties. *Washington Post*. Retrieved from https://www.washingtonpost.com/news/worldviews/wp/2015/10/13/europes-refugee-crisis-strengthens-far-right-parties/?utm_term=.5ba80c63d5bc.
- Van der Brug, W. and Fennema, M. (2007). Causes of voting for the radical right. *International Journal of Public Opinion Research*, 19(4):474–487.
- van Prooijen, J.-W., Krouwel, A. P., and Emmer, J. (2018). Ideological responses to the EU refugee crisis: The left, the right, and the extremes. *Social psychological and personality science*, 9(2):143–150.
- Vertier, P. and Viskanic, M. (2018). Dismantling the 'jungle': Migrant relocation and extreme voting in France. *CESifo Working Paper Series No. 6927*.

Appendix A

Table A1: Elections by Country

Country	EU Elections	National Elections
Austria	2009, 2014, 2019	2006, 2008, 2013, 2017
Belgium	2009, 2014, 2019	2007, 2010, 2014, 2019
Bulgaria	2009, 2014, 2019	2005, 2009, 2013, 2014, 2017
Croatia	2014, 2019	2007, 2011, 2015, 2016
Cyprus	2009, 2014, 2019	2006, 2011, 2016
Czechia	2009, 2014, 2019	2006, 2010, 2013, 2017
Denmark	2009, 2014, 2019	2005, 2007, 2011, 2015, 2019
Estonia	2009, 2014, 2019	2007, 2011, 2015, 2019
Finland	2009, 2014, 2019	2007, 2011, 2015, 2019
France	2009, 2014, 2019	2007, 2012, 2017
Germany	2009, 2014, 2019	2005, 2009, 2013, 2017
Greece	2009, 2014, 2019	2007, 2009, 2012.5, 2012.6, 2015.1, 2015.9, 2019
Hungary	2009, 2014, 2019	2006, 2010, 2014, 2018
Ireland	2009, 2014, 2019	2007, 2011, 2016
Italy	2009, 2014, 2019	2006, 2008, 2013, 2018
Latvia	2009, 2014, 2019	2006, 2010, 2011, 2014, 2018
Lithuania	2009, 2014, 2019	2008, 2012, 2016
Luxembourg	2009, 2014, 2019	2009, 2013, 2018
Malta	2009, 2014, 2019	2008, 2013, 2017
Netherlands	2009, 2014, 2019	2006, 2010, 2012, 2017
Poland	2009, 2014, 2019	2005, 2007, 2011, 2015
Portugal	2009, 2014, 2019	2005, 2009, 2011, 2015
Romania	2009, 2014, 2019	2008, 2012, 2016
Slovakia	2009, 2014, 2019	2006, 2010, 2012, 2016
Slovenia	2009, 2014, 2019	2008, 2011, 2014, 2018
Spain	2009, 2014, 2019	2008, 2011, 2015, 2016, 2019
Sweden	2009, 2014, 2019	2006, 2010, 2014, 2018
United Kingdom	2009, 2014, 2019	2005, 2010, 2015, 2017

Note: Years represent the year of each observed election for every country and each type. Croatia joined the EU on 1 July 2013. In the case of Greece, decimal values indicate the number of the month of any election that occurred in a year when multiple elections were held.

Table A2: Descriptive Statistics

	Mean	SD	Min	Max	Count
GUE/NGL vote-share	6.92	9.52	0.00	41.80	161
Greens/EFA vote-share	4.68	6.07	0.00	26.60	161
SD vote-share	24.15	11.02	5.30	58.60	161
ALDE vote-share	14.05	13.68	0.00	58.60	161
EPP vote-share	29.27	12.97	0.00	70.10	161
ECR vote-share	5.03	8.71	0.00	42.40	161
EFDD vote-share	2.42	6.00	0.00	32.70	161
ENF vote-share	2.00	5.17	0.00	26.00	161
NI vote-share	10.24	13.15	0.00	92.30	161
Right vote-share	15.04	14.86	0.00	71.30	161
Far-Right vote-share	1.81	5.41	0.00	41.40	161
Nationalism vote-share	4.09	6.67	0.00	41.40	161
Right-wing Populism vote-share	4.39	7.05	0.00	28.20	161
Euroskepticism vote-share	5.05	10.53	0.00	51.40	161
Regionalism vote-share	2.79	9.37	0.00	55.70	161
Populism vote-share	0.30	2.83	0.00	32.70	161
Foreign-Born Population Share	10.73	7.40	0.00	46.54	161
Non-EU-Born Population Share	6.72	4.17	0.00	24.18	161
Population in Millions	18.27	22.89	0.41	82.52	161
GDP per capita (2010\$)	24231.70	15405.03	4184.70	81743.18	161
Gini Coefficient	30.14	4.01	22.70	40.20	157
Unemployment Rate	9.45	4.85	2.90	26.50	161
Share of population 65 and over	17.14	2.39	10.80	22.60	161

Note: EP groups are mutually exclusive. Ideologies are not mutually exclusive.

Table A3: Summary of Sectors Described in Figure 2

		Change in Immigration		
		<u>Low</u>	<u>Medium</u>	<u>High</u>
Change in Right Voting	<u>High</u>	(1) (None)	(2) Italy, Poland	(3) (None)
	<u>Medium</u>	(4) Cyprus, Estonia, Latvia, Portugal , Slovenia	(5) Austria, Bulgaria, Denmark, Finland, France, Greece, Hungary, Ireland, Netherlands, Romania, Slovakia, Spain, United Kingdom	(6) Germany, Luxembourg, Malta, Sweden
	<u>Low</u>	(7) Croatia , Lithuania	(8) Belgium , Czechia	(9) (None)

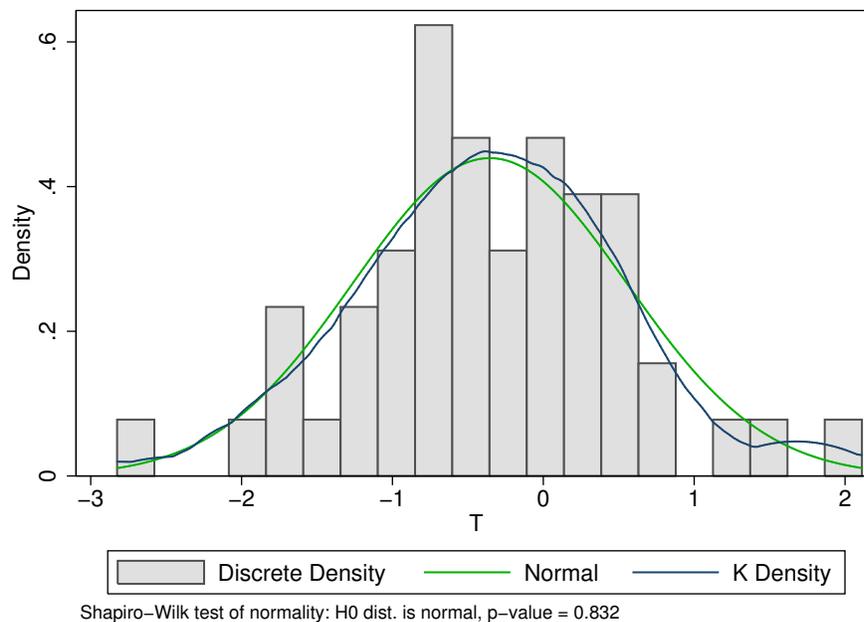
Appendix A.1: Further Summary of Quantitative Analysis

Initial Regressions: Changes from First to Last Elections

Our initial regressions of vote share on immigration consisted of the six ideological categories described in the body of the paper, along with the catch-all right category, 2 immigrant types (all foreign born, and non-EU foreign born share), 2 weighting schemes (unweighted versus population weighted), election types (national vs European). These yields $(7*2*2*2)$ 56 potential regressions. As vote shares for populism are 0 in the EP elections, this reduces the number of regressions by four (two treatments of immigrant measure and two treatments of weighting, as described above). Thus, we are able to recover estimates of the correlation between the change in immigration and the change in right-ideological voting from 52 ordinary least squares regressions.

Figure A1 summarizes the results of these regressions, showing evidence that the T-statistics in the regressions are approximately normally distributed and centered at zero, strongly suggesting that any individual significant estimates are due to nothing more than random chance. Thus, our preliminary results show no aggregate evidence of a relationship between immigrant populations and voting behavior. More detailed presentations of these regressions are included in an Appendix available upon request from the authors.

Figure A1: Density of T-statistics



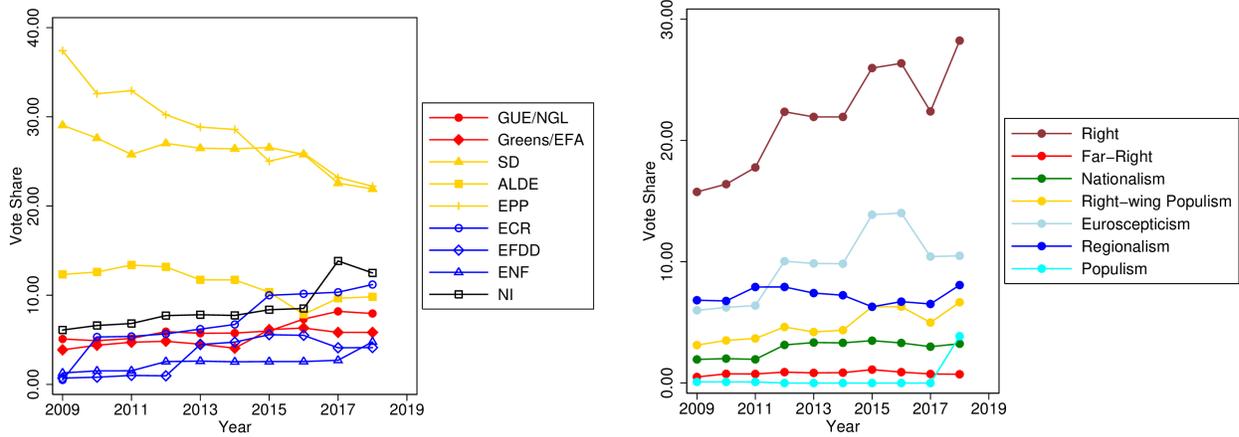
Further Regressions: Using All Elections, Considering EP Group

The above non-finding may be explained in part by the fact that we see very little within-country change of immigrant population shares from the first to last elections. Most countries in the study had only a slight increase in total immigrant population shares, but Luxembourg had by far the largest with an increase of 13.3 percentage points from 2009 to 2017. Excluding Luxembourg, the largest increase was 7.48 percentage points, and the average change of all countries that had an increase was 2.71 percentage points. There were only six countries that experienced a decrease in immigrant population share, and all decreases were very small with the greatest being -2.48 percentage points, and the average decrease was -1.09 percentage points. Non-EU foreign-born population shares follow a similar pattern, but with a narrower range.

On the other hand, within-country vote-shares of EP groups and, to a lesser extent, political orientations have changed much more than immigrant population shares. In some countries, the EP group vote-shares changed by 20 to 30 percentage points, but on average there appears to have been a shift from left groups to center-right groups. The 1.4 percentage point average change in vote-share for right parties provides further evidence of this shift. The largest ideological shift is attributed to euroskeptic parties which gained an average of 2.44 percentage points. Detailed presentations are in a further appendix available upon request from the authors.

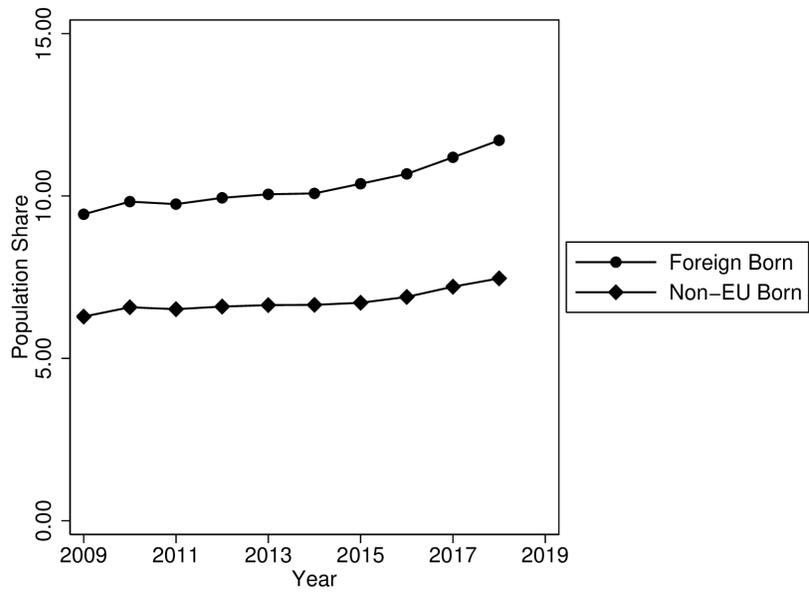
Using all observations in Figure A2, we can see the trend of vote-shares for EP party groups individually in the left panel. These figures show a steady trend of a decline in vote-share for center groups and a small increase in vote-share for the right and left. Figure A2's right panel shows a similar time series for each right ideology individually and in the aggregate. We see here an increase in vote-share for all right ideologies, which when taken individually appears to be mostly driven by an increase in vote-share for euroskeptic and right-wing populist parties. However, in Figure A3, we see only small increases in the population share of either all foreign born or non-EU born immigrants.

Figure A2: Vote-shares for EP Groups (Left) and Ideologies (Right), 2009-2018



Note: Vote-shares weighted by population of each country. Left figure colors denote left (red), center (yellow), and right (blue) EP Groups.

Figure A3: Immigrant Population Shares, 2009-2018



Note: Shares weighted by population of each country

Rather than focusing only on the first and last elections, our next analysis uses nearly all elections in the data. For our analysis, we will use a Seemingly Unrelated Regression (SUR) framework with either the total vote-share for parties associated with each of the nine EP groups, or the total vote-share for parties with right-leaning ideologies as the dependent variables, and non-EU-born share as the primary explanatory variable. SUR is described by Cameron and Trivedi (2005) where there are G dependent variables, K regressors, and N observations as the following system of regression equations:

$$y_g = X_g \beta_g + u_g, \quad g = 1, \dots, G$$

where y_g and u_g are $N \times 1$ vectors, X_g is a $N \times K$ matrix, and β_g is a $K \times 1$ vector of parameters.

The analysis is performed separately on national elections, and EU parliamentary elections. Additionally, seven specifications of increasing controls are used. Our base specification includes only the non-EU born population share. The second specification adds a time trend control. Next (third, fourth, and fifth, respectively), we separately include year fixed effects, country fixed effects, and then both fixed effects together. The final specification adds economic and demographic control variables along with the year and country fixed effects. For each specification, we test the hypothesis that the estimated coefficients of the primary explanatory variable across the regression equations are jointly equal to zero.

SUR is known to collapse to OLS when the same regressors are used in each equation (Cameron and Trivedi, 2005), however there can still be efficiency gains to using SUR if the residuals are correlated across equations (Albon and Valentine, 1977). We perform a test of this condition for each set of regressions and the null hypothesis of uncorrelated errors is consistently strongly rejected justifying the use of SUR (Breusch and Pagan, 1980). Additional control variables include total population in millions, real gross domestic product per capita (2010\$), unemployment rate, Gini coefficient, and share of the population 65 and older.

We now describe a set of regressions that we have run to test for a systematic relationship between immigration patterns and voting patterns. We will proceed to first discuss results in national elections and following that we will examine results in European Parliament elections. For each type of election, we will analyze regressions with either EP group vote-share or ideology vote-share as the dependent variable.

It is possible that voters may react differently to migrants who come from more culturally distant origin countries. We assume that EU member states are not averse to immigrants from other EU member states given that open borders are a condition of being part of the EU economic block. Card, Dustmann, and Preston (2012) look at 21 European countries with data from the European Social Survey and find that cultural differences are more important than wages or taxes in determining

natives' attitudes toward immigrants. A similar conclusion has been found by single country case studies of Switzerland (Brunner and Kuhn, 2018), the United Kingdom (Dustmann and Preston, 2007), and Spain (Mendez and Cutillas, 2014). We are not able to control for this effect because detailed regions/countries of origin are not reported by Eurostat for many EU countries, including Ireland, France, and Germany. However, it is because of this evidence that we choose non-EU immigrant population share as our regressor of interest. In addition, we do explore the relationship between voting and *all* immigration, including that from EU countries, in an additional appendix available upon request from the authors. Overall, the results could be described as revealing an even more muted effect than the results that we present below. Similar regressions to those discussed here are performed with weighting by population, votes cast, and voter turnout percentage. We also performed the same analysis using one and two-year lagged immigrant shares. The results are similarly insignificant and are presented in the additional appendix.

Analysis of National Elections

We first focus upon results in national elections. Later, we will turn our attention to the results from EU elections. Here, we will examine how immigration affects the votes received by parties of selected ideologies; later we will turn our attention to votes received by different party groups. Each row of Table A4 displays the estimated coefficient on the immigrant share variable in a regression of a measure of right voting based on parties' described ideology. The first measure that we report is the share (from 0 to 100) voting for *any* of our measures of right orientation (including populism). In the rows below, we present results for the specific right orientation measures: *euroskepticism*, *regionalism*, *far-right*, *nationalism* and *right-wing populism*. As we do not observe parties labelled as populist for the EU elections, for consistency we omit these results from our tables of national election results here. We completely describe the structure of the regression tables in the following subsection, but since all of the results are laid out in the same way, we will only focus on the most detailed specification from each in our next subsection.

We present our first set of regression results in Table A4. Here, our independent variable is a measure of the share of non-EU born individuals in the country in question in the year of the election. In the first column, we present results from a regression with no controls using 106 national elections that occur during our period of study. We find no evidence of a positive correlation between immigrant share and right voting. In fact, three of the six estimated coefficients are negative, and only one (*far-right*) is significant (and negative). To measure the overall fit of the model, at the bottom of the table we also present the results of an F-test on the joint significance of the immigrant share on all of the

right voting measures. For this specification, we find that the p-value is around 0.17, suggesting that we cannot reject a null that immigration has no overall explanatory power.

It is possible that immigration and right voting have both been changing over time, leading to a spurious correlation between the two variables. To examine how this may be affecting our results, we report results from a specification including a time trend in our second column, and from a specification using annual indicator variables in the third column. Overall, the magnitudes of our coefficients do not change substantially, and accounting for changes over time provides a slightly better fit for the model. Again, our analysis reveals no evidence of a positive relationship between right voting and immigrant population shares.

In the fourth and fifth columns, we control for another potential confounding factor: unobserved time invariant heterogeneity across countries. We would expect that countries that were generally more xenophobic during our period of study would be less attractive for immigrants. In addition, it would be reasonable to expect that, apart from whatever effect immigration might have, these countries would be more likely to vote for right-oriented parties. Failing to control for such a xenophobic undercurrent would tend to lead to a downward bias in our estimated coefficients.

Constructing a set of controls that would fully measure the degree of xenophobia in a country would be a very challenging exercise. A fixed effects strategy provides a straightforward and feasible alternative. Our results now thus estimate the relationship between *changes* in immigration and *changes* in right voting, rather than examining the relationship between these two variables from a levels-on-levels approach. In column 4, we present results from the set of regressions which include indicator variables for each EU country, without any control for time trends. Column 5 presents results from regressions which include both country and year indicators.

In column four, only the coefficient on *right-wing populism* is positive and significant, and remains that way in column five, once we control for time effects. Overall, the model has very little predictive power, with p-values less than 0.1, but the significance of the estimate associated with *right-wing populism* appears to gain significance.

Finally, we examine the robustness of our results to the inclusion of several detailed controls (population in millions, GDP per capita (2010 \$), unemployment rate, Gini coefficient, and percentage of the population 65 years of age and older). As there are a small number of missing values for these control variables (the Gini coefficient was unavailable for several countries in some years) we first present the results that we obtain from re-running the specification in column five on the subsample of observations for which we have complete details on our control variables. In column seven, we report results from regressions which include these controls. When looking at the apples-to-apples

comparison between columns six and seven, we see that the inclusion of the detailed controls leads to lower magnitude coefficients in four of the six regressions. Now, we find no positive and significant results in this estimation, and the F-test on the joint significance of the immigrant share shows just as little evidence of predictive power as we have seen in previous specifications.

Political parties in the EU member countries self-organize into political groups in the European Parliament (European Parliament, 2019). This fact is beneficial to our study because it dramatically reduces the opportunity to miss-categorize one of the groups. Additionally, the groups are arranged in the parliament seating chart from left to right both politically and physically which makes identification of the left, center, and right rather straight forward.¹⁴ We use these groups in our analysis to attempt to estimate shifts to or from any particular position on the political spectrum. To our knowledge, this is a unique contribution of our study.

Looking at the association between EP group vote-shares and the share of non-EU immigrants, we see entirely insignificant estimates in the final column of Table A5. Only the estimate for S&D is negative and marginally significant in the most detailed specification. Again, our tests of joint significance suggest little evidence of any relationship between immigration and voting at the cross-country level.

¹⁴ <https://www.europarl.europa.eu/hemicycle/>

Table A4: Regression of Orientations Vote Share on share of population born in a Non-EU country (National Elections)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Right vote-share							
Current Non-EU Share	0.146	0.112	0.0552	0.0858	0.127	0.244	0.0723
	(0.343)	(0.340)	(0.356)	(0.641)	(0.683)	(0.650)	(0.699)
Euroskepticism vote-share							
Current Non-EU Share	-0.183	-0.193	-0.167	-0.129	-0.0122	0.00425	-0.0542
	(0.241)	(0.242)	(0.241)	(0.404)	(0.440)	(0.458)	(0.490)
Regionalism vote-share							
Current Non-EU Share	0.387	0.381	0.378	-0.0316	-0.0662	-0.0330	-0.132
	(0.247)	(0.248)	(0.262)	(0.284)	(0.323)	(0.324)	(0.347)
Far-Right vote-share							
Current Non-EU Share	-0.181*	-0.192*	-0.199*	-0.129	-0.0809	-0.0661	0.0470
	(0.109)	(0.108)	(0.115)	(0.236)	(0.264)	(0.269)	(0.285)
Nationalism vote-share							
Current Non-EU Share	-0.117	-0.124	-0.148	-0.148	-0.183	-0.173	-0.164
	(0.141)	(0.142)	(0.150)	(0.264)	(0.308)	(0.314)	(0.344)
Right-wing Populism vote-share							
Current Non-EU Share	0.169	0.161	0.126	0.389*	0.491**	0.515**	0.358
	(0.152)	(0.153)	(0.162)	(0.221)	(0.234)	(0.232)	(0.228)
Time Trend	No	Yes	No	No	No	No	No
Year FEs	No	No	Yes	No	Yes	Yes	Yes
Country FEs	No	No	No	Yes	Yes	Yes	Yes
Detailed Controls	No	No	No	No	No	No	Yes
Observations	106	106	106	106	106	102	102
F	1.53	1.61	1.57	0.66	1.13	1.33	1.12
p-value	0.167	0.142	0.155	0.680	0.346	0.244	0.349

* $p < .10$, ** $p < .05$, *** $p < .01$; Standard errors in parentheses; F values and p-values from test of joint significance of the independent variable of interest across all regressions.

Table A5: Regression of EP Group Vote Share on share of population born in a Non-EU country
(National Elections)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GUE/NGL vote-share							
Current Non-EU Share	0.876***	0.868***	0.887***	0.182	0.228	0.223	0.644
	(0.208)	(0.209)	(0.213)	(0.369)	(0.406)	(0.419)	(0.395)
Greens/EFA vote-share							
Current Non-EU Share	0.149	0.142	0.170	0.0571	0.169	0.0825	0.0531
	(0.131)	(0.131)	(0.141)	(0.233)	(0.254)	(0.254)	(0.272)
SD vote-share							
Current Non-EU Share	-0.306	-0.277	-0.165	-0.582	-0.399	-0.451	-0.930*
	(0.255)	(0.251)	(0.266)	(0.493)	(0.534)	(0.551)	(0.549)
ALDE vote-share							
Current Non-EU Share	0.664**	0.671**	0.692**	0.512	0.200	0.211	0.340
	(0.315)	(0.316)	(0.338)	(0.503)	(0.554)	(0.504)	(0.531)
EPP vote-share							
Current Non-EU Share	-0.560*	-0.532*	-0.580**	-0.695	-0.501	-0.415	-0.162
	(0.287)	(0.285)	(0.293)	(0.567)	(0.589)	(0.562)	(0.567)
ECR vote-share							
Current Non-EU Share	-0.0456	-0.0822	-0.0968	0.732	0.873*	0.904**	0.698
	(0.200)	(0.191)	(0.199)	(0.454)	(0.448)	(0.458)	(0.466)
EFDD vote-share							
Current Non-EU Share	-0.0598	-0.0662	-0.0973	-0.0988	-0.161	-0.178	-0.207
	(0.126)	(0.126)	(0.133)	(0.316)	(0.349)	(0.321)	(0.342)
ENF vote-share							
Current Non-EU Share	0.195*	0.189*	0.203*	0.0231	-0.0344	-0.0253	-0.0360
	(0.113)	(0.113)	(0.117)	(0.166)	(0.180)	(0.141)	(0.147)
NI vote-share							
Current Non-EU Share	-0.345	-0.376	-0.306	-0.716	-0.663	-0.628	-0.563
	(0.331)	(0.328)	(0.339)	(0.726)	(0.801)	(0.773)	(0.846)
Time Trend	No	Yes	No	No	No	No	No
Year FEs	No	No	Yes	No	Yes	Yes	Yes
Country FEs	No	No	No	Yes	Yes	Yes	Yes
Detailed Controls	No	No	No	No	No	No	Yes
Observations	106	106	106	106	106	102	102
F	4.65	4.56	5.04	0.87	0.83	0.79	1.23
p-value	0.000	0.000	0.000	0.550	0.587	0.625	0.274

* $p < .10$, ** $p < .05$, *** $p < .01$; Standard errors in parentheses; F values and p-values from test of joint significance of the independent variable of interest across all regressions.

European Parliament Elections

Next, we examine the same combinations of variables in the two European Parliament elections. We consider the regressions using political ideologies first. In Table A6, we see no evidence of a relationship between non-EU immigrant shares and vote-shares for any of the right political ideologies in EP elections; our results also point to joint insignificance.

Finally, we look at regression results using EP party group vote-shares in EP elections. The regressions using non-EU immigrant shares are shown in Table A7. Non-EU immigrant shares appear to have no relationship with EP group vote-shares after the inclusion of detailed control variables.

Table A6: Regression of Orientations Vote Share on share of population born in a Non-EU country
(EP Elections)

	(1)	(2)	(3)	(4)	(5)	(6)
Right vote-share						
Current Non-EU Share	0.345	0.325	0.325	-0.603	-0.681	-0.941
	(0.500)	(0.499)	(0.499)	(1.067)	(1.041)	(1.431)
Euroskepticism vote-share						
Current Non-EU Share	-0.0715	-0.0754	-0.0754	-0.502	-0.535	-0.701
	(0.366)	(0.369)	(0.369)	(0.793)	(0.799)	(1.078)
Regionalism vote-share						
Current Non-EU Share	0.256	0.250	0.250	-0.0392	-0.0489	0.179
	(0.170)	(0.171)	(0.171)	(0.331)	(0.336)	(0.524)
Far-Right vote-share						
Current Non-EU Share	-0.00457	-0.0103	-0.0103	-0.129	-0.125	0.0577
	(0.224)	(0.225)	(0.225)	(0.324)	(0.330)	(0.465)
Nationalism vote-share						
Current Non-EU Share	0.0164	0.00826	0.00826	-0.337	-0.353	-0.721
	(0.262)	(0.263)	(0.263)	(0.536)	(0.543)	(0.817)
Right-wing Populism vote-share						
Current Non-EU Share	0.320	0.315	0.315	0.397	0.360	-0.406
	(0.265)	(0.267)	(0.267)	(0.624)	(0.619)	(0.774)
Time Trend	No	Yes	No	No	No	No
Year FEs	No	No	Yes	No	Yes	Yes
Country FEs	No	No	No	Yes	Yes	Yes
Detailed Controls	No	No	No	No	No	Yes
Observations	55	55	55	55	55	55
F	1.02	0.99	0.99	0.37	0.35	0.37
p-value	0.411	0.431	0.431	0.898	0.907	0.897

* $p < .10$, ** $p < .05$, *** $p < .01$; Standard errors in parentheses; F values and p-values from test of joint significance of the independent variable of interest across all regressions.

Table A7: Regression of EP Group Vote Share on share of population born in a Non-EU country
(EP Elections)

	(1)	(2)	(3)	(4)	(5)	(6)
GUE/NGL vote-share						
Current Non-EU Share	0.562*	0.563*	0.563*	0.793	0.788	1.192
	(0.298)	(0.301)	(0.301)	(0.676)	(0.689)	(0.798)
Greens/EFA vote-share						
Current Non-EU Share	0.531**	0.531**	0.531**	-0.902*	-0.902*	-0.952
	(0.212)	(0.214)	(0.214)	(0.482)	(0.493)	(0.756)
SD vote-share						
Current Non-EU Share	-0.351	-0.345	-0.345	0.290	0.342	0.688
	(0.357)	(0.360)	(0.360)	(0.976)	(0.973)	(1.231)
ALDE vote-share						
Current Non-EU Share	0.317	0.323	0.323	-0.484	-0.433	1.076
	(0.450)	(0.454)	(0.454)	(1.144)	(1.149)	(1.404)
EPP vote-share						
Current Non-EU Share	-0.769*	-0.762*	-0.762*	-0.678	-0.612	-0.635
	(0.455)	(0.459)	(0.459)	(1.405)	(1.409)	(1.931)
ECR vote-share						
Current Non-EU Share	-0.158	-0.178	-0.178	-2.199*	-2.343**	-2.277
	(0.301)	(0.294)	(0.294)	(1.189)	(1.062)	(1.627)
EFDD vote-share						
Current Non-EU Share	-0.00322	-0.00674	-0.00674	0.0953	0.0677	-0.466
	(0.238)	(0.240)	(0.240)	(0.713)	(0.719)	(0.966)
ENF vote-share						
Current Non-EU Share	0.197	0.193	0.193	-0.00195	-0.0347	-0.597
	(0.189)	(0.190)	(0.190)	(0.530)	(0.524)	(0.734)
NI vote-share						
Current Non-EU Share	0.0678	0.0577	0.0577	0.0226	-0.00640	-0.162
	(0.329)	(0.330)	(0.330)	(1.163)	(1.181)	(1.694)
Time Trend	No	Yes	No	No	No	No
Year FEs	No	No	Yes	No	Yes	Yes
Country FEs	No	No	No	Yes	Yes	Yes
Detailed Controls	No	No	No	No	No	Yes
Observations	55	55	55	55	55	55
F	2.13	2.08	2.08	1.65	2.21	1.51
p-value	0.026	0.030	0.030	0.103	0.022	0.146

* $p < .10$, ** $p < .05$, *** $p < .01$; Standard errors in parentheses; F values and p-values from test of joint significance of the independent variable of interest across all regressions.