

Edo, Anthony; Giesing, Yvonne; Öztunc, Jonathan; Poutvaara, Panu

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# Immigration and Electoral Support for the Far-Left and the Far-Right\*

Anthony Edo<sup>†</sup>

Yvonne Giesing<sup>‡</sup>

Jonathan Öztunc<sup>§</sup>

Panu Poutvaara<sup>¶</sup>

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## Abstract

Immigration has become one of the most divisive political issues in the United States, the United Kingdom, France and several other Western countries. We estimate the impact of immigration on voting for far-left and far-right candidates in France, using panel data on presidential elections from 1988 to 2017. To derive causal estimates, we instrument more recent immigration flows by past settlement patterns in 1968. We find that immigration increases support for far-right candidates and has no robust effect on far-left voting. The increased support for far-right candidates is driven by low educated immigrants from non-Western countries.

**Keywords:** Voting, Immigration, Political economy

**JEL Classification:** D72, F22, J15, P16

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<sup>†</sup>CEPII. E-mail: [Anthony.Edo@cepii.fr](mailto:Anthony.Edo@cepii.fr).

<sup>‡</sup>ifo Institute - Leibniz Institute for Economic Research at the University of Munich. E-mail: [giesing@ifo.de](mailto:giesing@ifo.de).

<sup>§</sup>Master's student at Barcelona Graduate School of Economics. E-mail: [jonathan.oztunc@barcelonagse.eu](mailto:jonathan.oztunc@barcelonagse.eu).

<sup>¶</sup>(corresponding author) ifo Institut - Leibniz Institute for Economic Research at the University of Munich and Ludwig-Maximilians-University Munich; CESifo, CReAM and IZA. Poschingerstrasse 5, 81679 Munich. E-mail: [poutvaara@ifo.de](mailto:poutvaara@ifo.de).

# 1 Introduction

In recent decades, immigration has become one of the most divisive issues in many Western countries. Opposing immigration has been a central pillar of the platforms of extremist parties in many Western countries, in the Leave campaign against British membership in the European Union, and in Donald Trump’s improbable election as American President. The anti-immigration and anti-globalization onslaught continued but ultimately failed in the French 2017 presidential election. Yet, Front National’s Marine Le Pen made it to the second round and won 34% of votes. This was almost twice the 18% vote share that her father Jean-Marie Le Pen won in 2002, the only earlier presidential election in which Front National made it to the second round. In this paper, we estimate the impact of immigration on voting for far-left and far-right candidates in French presidential elections from 1988 until 2017. Given the central role that France plays in the European Union, together with Germany, understanding French politics is important in its own right. Furthermore, French politics is an ideal setting to test the role of immigration and economic concerns in the rise of far-left and far-right voting more generally. Front National has run, and won more than 10% of votes, in all French presidential elections since 1988. Also far-left candidates have won more than 10% of votes in all presidential elections since 1988, apart from 2007. This allows panel data analysis on the role that immigration plays in explaining changes in far-left and far-right candidates’ electoral success. To the best of our knowledge, ours is the first paper that analyzes the effects of immigration separately on the political support of far-left and far-right.

Understanding the drivers of political support for far-left and far-right candidates is important for those who support liberal democratic values, and have been a majority in Western countries after the Second World War. The period between the world wars showed that democracy is not an absorbing end state, but that democratic regimes can collapse, especially in times of mass unemployment. The most notorious example is the takeover of Germany by Nazis, but democracy proved brittle between the world wars also in Italy, Spain, Portugal, Greece, Austria and most Eastern European countries. Although we do not wish to equate current far-left and far-right movements with those threatening democratic order between the world wars, there are worrying

similarities. Several parties that have openly Fascist tendencies, or at least prominent members who have openly admired past dictatorships have made significant gains after the 2008 financial crisis, and not just in countries that have suffered from mass unemployment. Opposing immigration especially from Muslim countries is a rallying cry to many of these parties. An additional urgency for identifying factors behind the support of far-left and far-right candidates is that their supporters provide a recruiting ground for extremist movements aiming to overthrow democracy. Although violence committed by far-right extremists has got most attention in recent years, many European countries suffered from extreme left terrorism in the 1970s and 1980s, including France, Germany and Italy.

A major challenge in estimating the effect of immigration on voting is that immigrants are not randomly allocated across electoral districts. Rather, one can expect that immigrants tend to choose prospering regions, which are also less likely to vote for far-left and far-right candidates. This would generate a spurious negative correlation between immigration and far-left and far-right candidates' vote shares, even if the immigration would be an important reason for far-left and far-right supporters to vote for them. To address this concern, we instrument more recent immigration flows by past settlement patterns. More precisely, we divide immigrants into different groups, the biggest groups being those coming from other Latin countries (Italy, Portugal and Spain) and those coming from the Maghreb (Algeria, Morocco and Tunisia), and use historical settlement patterns in the 1968 census to instrument how subsequent immigrants from these countries are distributed across different regions.

We use our instrumented immigrant inflows, together with a rich set of controls that capture economic and demographic trends, like changes in educational composition and unemployment, to explain changes in voting for far-left and far-right candidates in a panel regression analysis. We analyze support for far-left and far-right candidates separately. Furthermore, we present an analysis for Front National alone, given its prominence and exceptionally good comparability over time. Jean-Marie Le Pen ran in presidential elections in 1988, 1995, 2002 and 2007 and Marine Le Pen in 2012 and 2017, with consistently anti-immigration and anti-integration platforms. Having

just two candidates over three decades minimizes potential challenges of unobserved candidate-specific factors. Furthermore, analyzing presidential elections as opposed to parliamentary or municipal elections has the advantage that the same candidate is running in the whole country. Also, we test to what extent changes in unemployment, education and demographics drives voting for far-left and far-right candidates.

In addition to studying the average effects, our dataset enables us to decompose immigrants by nationality and both immigrants and natives by their level of educational attainment. This enables us to carry out a rich analysis on whether the effect of immigration on voting outcomes for the far-left and far-right depends on cultural and religious differences or economic concerns (labor market and fiscal impacts).

Immigration affects the economic welfare of natives through labor markets and public finances. Given skill complementarities and substitutability in the labor market ([Borjas \(2003\)](#); [Ottaviano and Peri \(2012\)](#); [Battisti et al. \(forthcoming\)](#)), we expect that far-right candidates' electoral support would react more strongly to the inflow of low educated immigrants. However, [Edo and Toubal \(2017\)](#) and [Mitaritonna et al. \(2017\)](#) find that recent immigrants to France have been more educated than the native population. From public finance perspective, immigrants benefit natives if they are net contributors to the welfare state, but impose a financial burden if they are net beneficiaries.

Testing how far-left and far-right candidates' vote share responds to the inflow of European versus non-European and low versus high educated immigrants, in turn, sheds light on the role of cultural or racial preferences. Several studies have investigated the role of cultural, ethnic and religious differences that are associated with an immigrant's nationality (e.g. [Adida et al. \(2010\)](#); [Hainmueller and Hangartner \(2013\)](#); [Edo et al. \(2017\)](#), and [Rydgren \(2008\)](#)). Our dataset enables us to distinguish between the effect of non-European (Algerian) and European (Spanish) immigrants. Moreover, we can study the role of cultural preferences, relative to labor market competition. If far-left and far-right candidates' vote share would react similarly to low educated European and non-European immigrants, this would suggest the primacy of labor market concerns.

If the effect of low educated non-European immigrants is stronger, then cultural or racial opposition to immigration plays an independent role.

Our main findings are as follows. Immigration increases support for far-right candidates and has no robust effect on support for far-left candidates, whether using OLS regressions or relying on IV estimates. Without exception, the effects on far-right support are stronger using an IV approach. This can be explained by endogenous migration decisions of immigrants, which were our main motivation to introduce IV estimates. If immigrants are less likely to migrate to regions in which support for far-right candidates is stronger, then OLS estimates would underestimate the effect of immigration on electoral support for far-right candidates. Our conjecture is that especially low educated voters are worried about labor market competition and compositional amenities related to immigration, which are two important reasons for negative attitudes towards immigration identified by [Card et al. \(2012\)](#). These low educated voters could then be more likely to vote for far-right candidates, as a result of higher immigration. This conjecture receives additional support when we analyze separately the effects of immigration according to immigrants' skill composition and ethnicity. Increased support for far-right candidates is driven by low-educated immigrants. In terms of ethnicity, the positive effect on far-right support is driven by non-European immigrants, suggesting the importance of compositional amenities. The link between far-right support and immigration is also confirmed when looking at instrumented immigration. Instrumented immigration from Maghreb increases far-right support in the whole country, as well as in Southern France and Northern France when studied separately. Instrumented immigration from Spain, Italy and Portugal increases far-right support in Southern France, but not in Northern France.

This paper contributes to the literature that analyzes the effects of the presence of immigrants on voting outcomes. The political science literature addressed this question first and generally concluded that regions with larger shares of immigrants recorded more far-right voting (see, e.g., [Coffé et al. \(2007\)](#) and [Golder \(2003\)](#)). However, these early studies were mostly descriptive and could not provide a causal interpretation of their estimates.

[Otto and Steinhardt \(2014\)](#) were the first in the economics literature to analyze immigrant

shares as a determinant for voting at the local level. Using data on city districts in one German city and fixed-effects estimations, they find that larger immigrant shares increase support for far-right parties. Several other papers followed and confirmed the increased vote share for far-right parties in response to immigration. [Barone et al. \(2016\)](#) use Italian municipality-level data and an IV strategy to causally estimate the effect of a larger immigrant share on center-right votes. They find positive and significant results that are motivated by competition in the labor market and for public services. [Dustmann et al. \(2016\)](#) study the political consequences of quasi-random assignment of refugees to municipalities in Denmark. They find that increased numbers of refugees increase support for anti-immigration and center-right parties outside the largest cities, while an increase in the number of refugees is associated with a decrease in the support for anti-immigration parties in the largest municipalities. [Mayda et al. \(2016\)](#) find that US natives are more likely to vote for Republicans in areas with very high shares of non-naturalized immigrants. [Halla et al. \(2017\)](#) study the case of Austria and its far-right party. Using historic settlement patterns as exogenous variation, they conclude that increasing immigrant shares lead to higher vote shares for the far-right party due to a perceived negative effect of immigration on public services such as childcare. [Harmon \(forthcoming\)](#) studies the impact of immigration on voting behavior in Danish municipalities and uses a novel IV strategy based on historic housing stock data. He reports an increase in votes for anti-immigrant nationalist parties due to increased ethnic diversity. [Brunner and Kuhn \(2018\)](#) find that especially culturally different immigrants increase support for anti-immigration parties in Switzerland.

[Poutvaara and Steinhardt \(2015\)](#) suggest that bitterness in life could be a common factor behind worries about immigration and voting for the far-right. They use data from the German Socioeconomic Panel (SOEP) to show that bitter people who feel they have not gotten what they deserve in life worry more about immigration, and also that more bitter people are more likely to support the far-right. This link holds when studying separately different skill categories, men and women, those living in former West and former East Germany, and young and old. Furthermore, the link cannot be explained by labor market competition alone as it holds when looking at civil

servants with permanent contracts and thus safe from labor market competition, pensioners and all respondents who are not working and are not pensioners.

Recent studies, however, have concluded that under certain circumstances, the presence of foreigners can also reduce far-right voting due to increased contact. This is in line with the contact hypothesis developed by [Allport \(1954\)](#), which claims that contact with foreigners reduces prejudices and can thus limit the scope of far-right voting. [Dustmann et al. \(2016\)](#) finds evidence for the contact hypothesis for the largest cities in Denmark, [Steinmayr \(2016\)](#) for Austria, [Schindler and Westcott \(2017\)](#) for the UK and [Vertier and Viskanic \(2017\)](#) for France.

Given these different results, it is essential to keep the specific context (e.g. country, type of immigrants, time span) in mind when reading the literature. In the case of France, there is so far no study on how the population share of immigrants affects voting. There are, however, several studies that focus on determinants of Front National votes. [Auberger and Dubois \(2005\)](#) build a model to explain legislative votes by economic and political factors such as the growth rate of GDP and the number of job seekers. They do not include immigration in their model. A more recent study by [Malgouyres \(2017\)](#) investigates the effects of trade shocks on the votes for the Front National. He uses exogenous variation in trade exposure and finds that voting for far-right candidates increases in affected French communities.

Our contribution to the literature is threefold. First and in contrast to previous literature, we can study the effects of immigration on far-left and far-right voting. Second, we are not only able to differentiate between high and low educated immigrants but also according to their nationality. While previous studies have been able to focus on certain aspects of immigrants' characteristics, we are able to observe all those characteristics and can differentiate their relative importance. Third, to the best of our knowledge, this is the only study for France that uses detailed long-term panel data with a large number of controls and exogenous settlement patterns of immigrants that allow for a causal interpretation of the results that explain the Front National vote share.

The paper is structured as follows. Section 2 describes the data and provides descriptive statistics. Section 3 outlines the empirical model and the identification strategy. Section 4 provides



the results from the OLS and the IV estimates as well as robustness tests. Section 5 analyzes different heterogeneous effects and section 6 concludes.

## 2 Data and Descriptive Statistics

### 2.1 Data

We use two sets of data. Data on votes are collected from different sources and made available as a database by the French government<sup>1</sup> and the data on the French population is sourced from the French National Institute for Statistics and Economic Studies (INSEE).<sup>2</sup>

#### 2.1.1 Data on votes

We investigate the determinants of voting outcomes for the first-round of the presidential elections that took place in 1988, 1995, 2002, 2007, 2012 and 2017. We also carry out an analysis for the second round of the presidential elections in 2002 and 2017 to investigate the role of the Front National in greater detail. We collect data on voting outcomes for the first-round of the presidential elections in 1988, 1995, 2002, 2007, 2012 and 2017 at the departmental and municipality levels (there exist 96 departments and around 36,000 municipalities in France). Each dataset records the number of registered voters, abstentions, cast votes, valid and invalid votes and the votes for each presidential candidate in each municipality. Registered voters refer to all people who are eligible to cast a vote at the ballot box. Registered voters can abstain or cast votes. Cast votes are split into invalid votes (*blank and erroneous votes on the ballot paper*) and valid votes (*votes that can be ascribed to a presidential candidate*). If votes for all different presidential candidates are aggregated, they yield the number of valid votes.

Since we are interested in the determinants of votes for far-left and far-right candidates, we identify presidential candidates who were classified as either far-left or far-right by the media in

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<sup>1</sup>All electoral data can be downloaded from the following website ( <https://www.data.gouv.fr/fr/posts/les-donnees-des-elections/>). Electoral data for 1988 come from the *Centre de données socio-politiques* also published at the same website.

<sup>2</sup>Institut National de la Statistique et des Etudes Economiques.

recent presidential elections. Jean Marie Le Pen, Marine Le Pen, Nicolas Dupont-Aignan, Philippe de Villiers and Bruno Mégret are included in the set of far-right presidential candidates. The set of far-left candidates consists of Jean-Luc Mélenchon, Nathalie Arthaud, Olivier Besancenot, Philippe Poutou, Marie-George Buffet, Robert Georges August Hue, Pierre Juquin, André François Lajoinie, Pierre Boussel, George Marchais and Arlette Laguiller. Finally, we aggregate the number of votes for all far-right (far-left) presidential candidates to obtain an aggregated number of votes for far-right (far-left) candidates in a presidential election. We calculate vote shares by dividing the number of aggregated votes by the number of valid votes.

Our smallest unit of analysis are cantons, but we also aggregate the data on votes to higher regional units in order to show that our results are not sensitive to the geographical unit of analysis. First, we start with the departmental level as our baseline geographical unit of analysis. Since we have additional data for the first-round of the presidential election in 1988 recorded at the departmental level, we examine the determinants of voting outcomes for presidential candidates from 1988 until 2012 at the departmental level. The analysis at the cantonal level as a more granular geographical unit becomes more difficult since municipalities have split and merged over time especially within departments.<sup>3</sup> We have created a dataset to tackle this issue. The dataset enables us to match municipalities over time so that we can analyze the determinants of voting outcomes at the canton and employment zone level as well (there are around 2000 cantons and 300 employment zones in France). We also include an analysis at the regional level, the largest geographical unit of analysis. This analysis allows us to include the 2017 election, for which some relevant data is not yet available at a lower level of aggregation. Using larger geographical areas allows us to show that our results are not contaminated by the fact that French citizens may respond to the arrival of immigrants in a given area by moving away.

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<sup>3</sup>Since 1988, the municipality code has changed for 2,600 municipalities.

### 2.1.2 Data on the French population

We use the French censuses from 1990, 2007 and 2012 to infer the number of immigrants for the presidential elections of 1988, 2007 and 2012. The 1990 census covers a random sample of 25% of the French population, while the 2007 and 2012 censuses cover a random sample of 14% of the French population. This high sampling rate allows us to infer with precision the number of narrow sub-populations of immigrants across areas. No census was implemented for the years 1995 and 2002. Instead, we use the pooled 1994-1995 labor force survey (LFS) and the pooled 2001-2002 LFS to ensure a high level of precision in estimating our variables for these two election years. From the censuses and LFS, we have a rich set of information on various individual characteristics, such as nationality, education, age, region of residence, employment status, occupation, etc. Adding demographic controls is important as these can be both drivers of voting and related to immigration. For example, [Nikolka and Poutvaara \(2016\)](#) show that the share of electorate with some tertiary education can alone explain 80% of variation in the leave vote share across 326 local authority districts in England in the Brexit referendum.

In order to investigate the impact of immigration on political outcomes, we define an immigrant as a person born abroad without the French citizenship. This definition allows us to exclude the migrants with the French nationality who can vote and avoid any composition effect due to their inclusion in the sample. We focus our attention on the working-age population (aged 18 to 64 years) because most migrants belong to this age group. According to the French censuses for 1988, 1999 and 2012, around 75% of the migrants were 18 to 64 years old for each of these years. In terms of inflows, 90% of the migrants who arrived in France between 1998 and 2013 were 18 to 64 years old ([d’Albis and Boubtane, 2015](#)). Moreover, our estimations and conclusions are fully robust to using immigrant shares among those aged 18 or more.

Our dataset has information about the individuals’ level of education. We can thus decompose individuals across education groups. We use three education groups:

- A low education group composed of people who do not have a French diploma giving access to high school (*i.e.*, “BEPC”).

- A medium education group composed of people who have a high school degree (such as “CAP” or “BEP”) or a French diploma giving access to high school (*i.e.*, “BEPC”).
- A high education group composed of people who have a college degree, some college or a French diploma giving access to the university (*i.e.*, “Baccalauréat”).

From our data, we can also decompose the immigrant population across five nationality groups: Latin nationalities (Italian, Portuguese and Spanish), other European nationalities (such as German, Polish, Romanian, Finnish, etc.), Maghreb nationalities (Algerian, Moroccan, Tunisian), other African nationalities and the rest of the world.

We also use the 1968 census extract (which covers 25% of the French population) to compute the past spatial distribution of immigrants. This information is used to build our instrument for current immigration across areas. The very large 1968 census extract allows us to infer with precision different sub-groups of migrants.

In order to make our sample representative of the French population, we systematically use an individual weight (computed by the INSEE). This weight indicates the number of individuals each observation represents in the total population.

## 2.2 Descriptive Statistics

In the following section, we present descriptive statistics to give an overview of our variables.

### 2.2.1 Vote shares for far-left and far-right candidates

Figure 1a displays the time variation in the vote share for far-left and far-right candidates over the latest presidential elections in France. Vote shares for both far-left and far-right candidates particularly increased in the last two presidential elections, after the Great Depression and the start of the refugee crisis. Figure 1b focuses on Front National vote shares, presenting also second-round vote shares. While in 2002, Front National’s second-round vote share was almost unchanged from its first-round vote share, Marine Le Pen won considerably more votes in the second round

than in the first-round. This testifies about a considerable increase in Front National’s electoral potential.

Figures 2a and 2b show how unemployment and the population share of immigrants have changed between 1988 and 2012 (2017 data is not yet available). Both unemployment and the population share of immigrants have increased steadily since 2002. Interestingly, an increase in unemployment and in the population share of immigrants between 1988 and 1995, 2002 and 2007, and 2007 and 2012 coincided with an increase in electoral support of far-left and far-right candidates, while the electoral support of far-left and far-right candidates remained essentially flat between 1995 and 2002, while unemployment declined. Remarkably, the vote share of far-left and far-right candidates declined between 2002 and 2007 while unemployment soared and the population share of immigrants increased. However, it should be noted that the center-right candidate, Nicolas Sarkozy, promised to restrict immigration and favored tough policies especially towards illegal immigrants. Therefore, the dip in far-right support in 2007 may reflect some of their voters switching to support Sarkozy in that election. Taken together, the national trends are suggestive of a link between immigration and far-right support, but correlation is not a proof of causality.

In order to get an understanding of the cross sectional variation in vote shares for far-left and far-right candidates, we build heat maps of French departments (Figures 5 until 8)<sup>4</sup>. Figures 3a and 4a display the initial vote share for far-left and far-right candidates in 1988. Far-right candidates were initially very strong in the southeast of France while far-left candidates were popular in the north, center and south of France.

Figure 3b illustrates the change in the vote share for far-right candidates across departments from 1988 until 2012. In contrast to the initial vote share, the increase in the vote share for far-right candidates was concentrated in northeastern departments, departments in the center and to some extent in the southwest of France as well as Corsica. In these departments, the vote

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<sup>4</sup>The heatmaps are made available from <https://www.data.gouv.fr/fr/datasets/contours-des-departements-francais-issus-d-openstreetmap/#> and come from the contributors of OpenStreetMap. The data is available under the Open Database License, and the cartography is licensed as CC BY-SA. The copyright of the maps lies with OpenStreetMap (<http://www.openstreetmap.org/copyright/en>).

share for far-right candidates increased between 7 and 16 percentage points. Most departments in the southeast of France as well as the Paris region witnessed a decrease in the far-right vote share since 1988. Figure 4b presents the change in the vote share from 1988 until 2012 for far-left candidates. The increase in the vote share for these candidates was particularly concentrated in the northwestern and eastern French region (between about 3 and 5 percentage points). There is a negative correlation between the initial vote shares and the change in the vote shares for both far-left (correlation -0.8) and far-right (correlation -0.4). However, this should not be a problem as we instrument subsequent changes in immigration by 1968 census data.

### **2.2.2 Education and nationality of immigrants**

Figure 5a reports the educational structure of immigrants (without the French citizenship, aged 18-64 years) for 1968 and the election years 1988, 1995, 2002, 2007 and 2012. The figure shows that the share of high educated immigrants increased from 16.7% in 1988 to 40.6% in 2012. This rise is stronger than for French citizens for which the share of high educated went from 27.3% in 1988 to 51.1% in 2012 (Figure 5b). However, the share of those with low education is still considerably higher among immigrants, being 16.5% among French citizens and 43.9% among immigrants.

Because the impact of immigrants on votes for far-left and far-right candidates may be masking important country-of-origin distinctions, Figure 5c reports the distribution of immigrants across five nationality groups. Although the shares of Latin and Maghreb immigrants declined between 1988 and 2012, these two groups are still the largest among immigrants without French citizenship. In 2012, almost 50% of the migrants belonged to one of these groups. The shares of immigrants with other European nationalities and from the rest of the world has slightly increased over time.

## 3 Empirical Strategy

### 3.1 The Empirical Model

In order to investigate the impact of immigration on extreme voting, we estimate the following equation:

$$\Delta Votes_{it} = \gamma_1 \cdot \Delta m_{it} + \gamma_2 \cdot \Delta Unemp_{it} + \gamma_3 \cdot \Delta Demog_{it} + \delta_t + \Delta \epsilon_{it} \quad (1)$$

The dependent variable is the difference in the vote share for far-left and far-right candidates between two presidential elections at the departmental level, *i.e.*  $\Delta votes_{it} = (votes/valid\ votes)_{it} - (votes/valid\ votes)_{it-1}$ . We measure the change in immigrant share at the local level by  $\Delta m_{it} = m_{it} - m_{it-1}$ , where  $m_{it} = imm_{it}/Population_{it}$ .  $\Delta m_{it}$  is therefore the change in the population share of immigrants (without the French citizenship) living in the locality  $i$ . We compute immigrant shares among individuals aged 18-64 years because most migrants belong to this age group. Our empirical results are fully robust to using immigrant shares among individuals aged 18 years or more.

Our model includes a large set of employment and demographic variables computed among French citizens to control for factors that may simultaneously affect immigration and votes for far-left and far-right candidates. We first include the change in the number of unemployed people relative to the working-age population in each area between  $t$  and  $t - 1$ . We also add a vector of demographic controls which contains:

- The change in the number of inactive individuals relative to the working-age population (aged 18-64 years).
- The change in the number of young individuals (aged 18-30 years) relative to the whole population aged 18 or more.
- The change in the number of high educated individuals relative to the working-age population

not enrolled in school.

- The change in the number of manual workers (skilled or unskilled workers) relative to employment.
- The change in the number of entrepreneurs and self-employed relative to employment.

In our baseline specification, we include a vector of year fixed effects  $\delta_t$  to control for common factors specific to each year (such as business cycle). Our empirical strategy therefore accounts for a number of important unobserved differences across areas, such as economic and demographic trends.  $\Delta\epsilon_{it}$  is the error term.

We weight observations in regressions by  $(n_{it}n_{it-1}) / (n_{it} + n_{it-1})$ , where  $n_{it}$  and  $n_{it-1}$  are the number of French citizens in each department at time  $t$  and  $t - 1$ .<sup>5</sup> The standard errors from the estimated parameters of Equation 1 need to be adjusted for clustering at the departmental level to adjust for possible serial correlation.

The parameter  $\gamma_1$  identifies the effect of the change in the share of immigrants across departments on the change in votes for far-left and far-right candidates. Thus, it gives the percentage point change in the vote share for a given department in response to one percentage point increase in the share of immigrants.

### 3.2 Identification Issues

Estimating Equation 1 using OLS should not provide the “true” impact of immigration on votes due to the endogenous distribution of immigrants across areas. Immigrants may choose their region of residence based on unobserved local characteristics that are correlated with votes for far-left and far-right candidates. They may also be attracted to places where the share of votes for far-right candidates is low. The endogeneity of immigrants’ location choice should create a spurious negative relationship between immigration and votes for far-right candidates. To address this issue, we follow the existing literature in using an instrumental variable approach. We use an instrument

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<sup>5</sup>Weighting the regressions allows (i) to achieve more precise estimates by correcting for heteroskedasticity and (ii) to provide an average voting effect that accounts for local population sizes (Solon et al., 2015).



based on past immigration patterns. This approach has been pioneered by [Altonji and Card \(1991\)](#) and then used in several other studies such as [Card \(2001\)](#); [Peri \(2012\)](#); [Borjas \(2014\)](#); [Clemens and Hunt \(2017\)](#); [Edo and Rapoport \(2017\)](#). Indeed, the settlement decision of new immigrants is partly determined by the presence of earlier immigrants, mainly through network externalities ([Gross and Schmitt, 2003](#)) – past immigrants may, e.g., provide new immigrants with information on labor and housing markets. The network effect should be particularly strong between immigrants with the same cultural, linguistic and educational background ([Dustmann et al., 2005](#)).

In order to build our instrument, we thus use the 1968 spatial distribution of immigrants from a given nationality for a given education group to instrument the allocation of the new waves of immigrants from that education-origin group across departments. More specifically, we use  $n = 5$  nationality groups (Latin nationalities, other European nationalities, Maghreb nationalities, other African nationalities, rest of the world) and  $e = 3$  education groups (low, medium and high education). We also distinguish the French individuals according to whether they are French-born (FB) or born with a foreign nationality (NFB). Our instrument is thus computed as follows:

$$\Delta \hat{m}_{it} = \left( \hat{imm}_{it} / Population_{it} \right) - \left( \hat{imm}_{it-1} / Population_{it-1} \right), \quad (2)$$

where  $\hat{imm}_{it}$  and  $Population_{it}$  are the predicted number of immigrants and individuals in a given department at time  $t$ . We predict the number of immigrants  $\hat{imm}_{it}$  for each department-time cell by multiplying in each year the 1968 spatial distribution of immigrants of each education-origin group by the total number of immigrants from the same education-origin group, as follows:

$$\hat{imm}_{it} = \sum_n \sum_e \frac{imm_i^{ne}(1968)}{imm^{ne}(1968)} \times imm^{ne}(t). \quad (3)$$

In Equation 2, we also predict population sizes across departments because it may be endogenous to far-right voting. The population in a given department is composed of immigrants

(without the French citizenship), French-born citizens ( $FB$ ) and naturalized individuals ( $NFB$ ). We instrument population sizes across departments at time  $t$  as follows:

$$\hat{Population}_{it} = \hat{imm}_{it} + \sum_e \frac{FB_i^e(1968)}{FB^e(1968)} \times FB^e(t) + \sum_e \frac{NFB_i^e(1968)}{NFB^e(1968)} \times NFB^e(t) . \quad (4)$$

Based on Equations 3 and 4, we can compute our instrument, defined in Equation 2. This instrument should predict different levels of immigration in a given department at different points in time for reasons unrelated to votes for far-left and far-right candidates. It would be invalid if, for instance, the initial distribution of immigrants is correlated with persistent local factors that influence future votes for far-right candidates. As indicated in [Dustmann et al. \(2005\)](#) and in [Basso and Peri \(2015\)](#), a way to minimize the correlation between past immigration and current outcomes is to use a sufficient time lag to predict the actual number of immigrants. In this regard, the use of the 1968 census allows us to predict current inflows based on immigration patterns that took place at least 20 years earlier. Moreover, Front National which is the first post-1945 far-right party was founded in 1972 and participated in presidential election for the first time in 1988. As a result, the spatial distribution of immigrants in 1968 was not caused by far-right voting and is very likely to guarantee the exclusion restriction of our instrument.

Another identification issue is related to the migration response of French citizens to the influx of migrants in a particular area ([Borjas, 2006](#); [Peri and Sparber, 2011](#)). In particular, French citizens that tend to vote for far-right candidates may tend to move into regions that are not affected by the immigrant influx. These internal flows should therefore create a spurious negative correlation between votes for far-right candidates and immigrants, inducing a downward bias in the estimates of  $\gamma_1$ . In order to mitigate this potential bias, we use the 96 French departments (which are large geographical areas) as our baseline geographical unit of analysis. It is therefore very unlikely that our estimates are biased by the internal migration response of French individuals to immigration. We also show that our results are robust to using alternative units of analysis, such as French cantons (1,989), employment zones (305) and regions (22).

## 4 Main Empirical Results

This section investigates the impact of immigration on support for far-left and far-right candidates by exploiting (i) the first-round voting in presidential elections since 1988 and (ii) the second-round voting in 2002 and 2017 for the Front National.

### 4.1 Immigration and First-round Voting

Table 1 reports the estimates for our main coefficient of interest  $\gamma_1$  for various specifications. We use two dependent variables: the change in votes for far-left and far-right candidates during the first-round of the presidential elections that took place between 1988 and 2012. We progressively add controls to isolate the impact of immigration on votes for far-left and far-right candidates. Each specification is weighted by the French local population and standard errors are clustered at the departmental level.

In Table 1, the OLS estimates indicate that immigration is positively correlated with votes for far-right candidates. Although the magnitude of the coefficients changes across specifications, they are always significant. In the full specification (column 4), our OLS estimate implies that a 1 percentage point increase in the immigrant share increases the share of votes for far-right candidates by 0.4 percentage points. In columns 2-4, our estimates also indicate that employment conditions do not seem to be correlated with votes for far-right candidates. The estimated coefficient on unemployment rate in column 4 is even significantly negative. This potential negative correlation between unemployment rate and far-right voting is also found by [Lubbers et al. \(2002\)](#) in their study for Western countries.<sup>6</sup> In column 4, the votes for far-right candidates tend to be negatively correlated with the share of young French individuals and the share of entrepreneurs and the self-employed. Columns 5-7 of Table 1 show that immigration is not associated with far-left voting, while column 8 indicates that immigration and support for far-left candidates are negatively correlated once year fixed effects are added.

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<sup>6</sup>It is important to notice that the unemployment variable is very likely to be endogenous, such that the estimated coefficients on unemployment rate cannot be interpreted as causal.

In Table 2, we use the same specifications as in Table 1 and provide the IV estimates of  $\gamma_1$ . In order to address the endogenous location choices of immigrants, we instrument the changes in immigrant share by using past immigrant settlement patterns. The first-stage regressions provide F-tests which are larger than the lower bound of 10 suggested by the literature on weak instruments (Stock et al., 2002). This indicates that our IV estimates are unlikely to suffer from a weak instrument problem.

The IV estimates reported in Table 2 reinforce our previous findings concerning far-right voting. First, a positive change in the immigrant share has a positive impact on votes for far-right candidates. In particular, correcting for endogeneity provides a stronger positive impact on votes for far-right candidates. Our IV estimate implies that a 1 percentage point increase in the immigrant share increases the share of votes for far-right candidates by 2.1 percentage points. Finding a higher effect when using instrumented immigration than when using actual immigration is consistent with the fact that immigrants are more likely to migrate to regions where the votes for far-right candidates are low or to regions with thriving economies which may be less inclined to support far-right candidates. Second, IV estimates with respect to far-left candidates are inconclusive: the estimated effect is positive without year dummies, but becomes insignificant and close to zero once year dummies are added. This suggests that once we account for common trends in the share of migrants and far-left-voting, there is no relationship between these two variables.

We illustrate the link between immigration and changes in far-right support at the departmental level in figures 6a and 6b. Figure 6a shows how changes in immigrant share are related to changes in far-right vote share between 1988 and 2012, suggesting that a one percentage point increase in the population share of immigrants is associated with a half percentage point increase in the support for far-right candidates. In order to account for endogenous migration responses, figure 6b presents a corresponding relationship between instrumented changes in immigrants' population share and in the change in the support for far-right candidates. The responses to instrumented migration are ten times larger: an instrumented one percentage point increase on the population share of immigrants is associated with a 5.7 percentage point increase in the far-right vote share. Although

this number should be taken with caution, the main finding is clear: endogenous immigration responses considerably dampen the link between immigration and far-right voting. Importantly, the link remains and is highly statistically significant even when using actual and not instrumented immigration.

## 4.2 Immigration and First-round Voting: Robustness Tests

**Alternative geographical unit of analysis** Our previous regressions use variations across French departments to identify the impact of immigration on votes for far-left and far-right candidates in the first-round of the presidential elections. We now test the robustness of our previous results by using three alternative geographical units of analysis.

Tables 3 and 4 respectively focus their attention on the impact of immigration on far-right and far-left voting. For each table, specifications 1 and 2 respectively use the canton and employment zones levels to run the regressions. These geographical units allow us to analyze the impact of immigration on extreme voting at finer levels of aggregation. In order to use these geographical units, we rely on the French censuses from 1999, 2007 and 2012 and only focus on the presidential elections that occurred in 2002, 2007 and 2012. Specification 3 reports our baseline estimations for the 1988-2012 period. Specification 4 presents the results for regions and specification 5 extends the period of analysis to account for the 2017 presidential elections, and therefore, uses variation at the regional level between 1988 and 2017.<sup>7</sup> For each specification, we report the OLS and IV estimated effects of immigration on votes and use the same instrument as before: past immigrant settlement patterns (as defined in Section 3.2).<sup>8</sup> We also test the robustness of our results to the inclusion of year dummies and always include the full set of employment and demographic controls discussed in Section 3.1. We also use local population size as weight and cluster the standard

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<sup>7</sup>In order to compute the explanatory variables, we use the most recent labor force survey which was implemented in 2015. This labor force survey does not contain any information at the departmental level.

<sup>8</sup>In order to get an instrument that is not too weak at the employment zone level (specification 2), we predict the number of immigrants for each area-time cell by multiplying in each year the 1968 spatial distribution of immigrants of each origin group by the total number of immigrants from the same origin group. We also predict the number of French citizens for each area-time cell based on their 1968 spatial distribution. The predicted number of immigrants and French citizens are finally used to build the instrument.

errors by areas to account for potential correlation of the residuals over time.

In these two tables, each cell reports the estimated coefficient on the immigration variable (or the estimate of  $\gamma_1$ ). Table 3 shows that the OLS estimated effects of immigration on far-right voting are positive regardless of the geographical variations used. This effect does not also depend on the inclusion of year dummies as additional controls. These estimated results indicate that the positive effect of immigration on votes for far-right candidates is strongly robust. With year dummies, the estimated coefficients are between 0.4 at the departmental level and 1.2 at the employment zone level, implying that a 1 percentage point increase in the immigrant share increases the share of votes for far-right candidates by 0.4 to 1.2 percentage points. At the regional level, the inclusion of the first-round results of the 2017 presidential election does not affect the magnitude of the relationship between immigration and far-right voting. Moreover, the IV estimated effects are not sensitive to whether the analysis takes place at the cantonal, employment zone, departmental or regional level. The IV estimated coefficient is 3.1 at the cantonal level, jumps to 4.8 at the employment zone level, decreases to 2.1 at the departmental level and to 2.0 at the regional level.

As shown in Table 4, the impact of the immigrant share on votes for far-left candidates is more ambiguous, and depends on whether year dummies are included. In some specifications, the estimated effect is positive and statistically significant, and in some others, negative and statistically significant. Table 4 thus reinforces our previous findings: there is no robust evidence that immigration affects support for far-left candidates.

**Additional tests** Tables 5 and 6 test the robustness of our results to alternative specifications at the departmental level only by implementing both OLS and IV strategies. As in the two previous tables, we perform regressions with and without year dummies. For each specification, we always include the full set of employment and demographic controls discussed in Section 3.1. We also use local population size as weight and cluster the standard errors by areas to account for potential correlation of the residuals over time.

In Tables 5 and 6, the first specification excludes the election year 1988 to focus on more recent episodes of migration and votes. Specification 2 excludes the year 2012 to avoid any bias that

may be due to the economic crisis that started in 2008. Specification 3 excludes Paris which is the capital as well as the wealthiest region in France. In order to avoid any composition effects due to the inclusion of immigrants with French citizenship, our baseline specification focuses on non-naturalized immigrants. Because the share of naturalized immigrants is likely to be correlated with the share of immigrants without the French citizenship and votes for far-left and far-right candidates, specification 4 thus includes the change in the population share of naturalized migrants (aged 18-64 years) as an additional control. Our main regressor of interest (*i.e.*, the change in immigrant share) is computed among individuals aged 18-64 years because most migrants belong to this age group. In specification 5, we compute immigrant shares among individuals aged 18 or more to show that our results are not sensitive to our sample restriction. More generally, notice that all the results presented in that paper are fully robust to using this alternative explanatory variable.

In specifications 6 and 7, we respectively use the total number of votes for far-right and far-left candidates as share of all votes (valid and invalid votes) and as share of registered voters. The last specification uses an alternative regression model, by taking variables in levels and including area fixed effects to control for local time-invariant characteristics. This specification has naturally more observations than our baseline specification which is based on a first difference model.

All our OLS and IV estimates reinforce our previous conclusions.<sup>9</sup> First, the results from Table 5 show that an increase in the share of immigrants tends to increase votes for far-right candidates. Second, the results from Table 5 indicate no robust impact of immigration on votes for far-left candidates.

### 4.3 Immigration and Second-round Voting

Based on the first-round of the presidential elections, our previous findings indicate a robust positive effect of immigration on the electoral support for far-right candidates. This section goes

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<sup>9</sup>Except for specifications 2 and 8 of Tables 3 and 4, the F-test of excluded instrument from the first-stage IV regressions is between 15 and 32 which ensures that our instrument is a relevant predictor of the endogenous variable.

beyond these results by documenting the role played by immigration in shaping the change in votes for Front National between the second-rounds of the 2002 and 2017 presidential elections.

Table 7 reports the estimated impact of the change in the immigrant share on the change in second-round votes for Front National between 2002 and 2017. While columns 1-6 implement a set of regressions at the cantonal level, columns 7 and 8 respectively use variations at the department and regional levels.<sup>10</sup> Since there is no census data for 2017, we compute the change in immigrant share for each canton on the basis of the 1999 and 2012 censuses. To compute the change in immigrant share at the department and regional levels, we respectively use the 2001-2002 LFS and 2012 census *and* the 2001-2002 LFS and 2015 LFS. To compute the change in immigrant share for each department, we use the 1999 and 2012 censuses, as no data are available in 2002 and 2017. All regressions are weighted by the size of the local French population and we report the Student T-statistics based on heteroskedasticity-robust standard errors.

The OLS estimates from columns 1-3 indicate no correlation between immigration and second-round voting for Front National between 2002 and 2017. As already discussed, these estimates are likely to be downward biased due to the fact that immigrants are not randomly distributed across French localities. In particular, they could prefer to settle in places with a low propensity to vote for far-right candidates. In order to account for this potential bias, columns 4-6 exploit an IV estimation technique and use the predicted number of immigrants based on the 1968 spatial distribution of immigrants with similar origin as an instrument. The IV estimated coefficients turn out to be positive and significant. This result is consistent with the theoretical direction of the bias, and therefore, supports the validity of our instrument. More specifically, our full specification (column 6) indicates that a 1 percentage point increase in the immigrant share increases the share of votes for Front National by 1.8 percentage points.

The two last columns report the OLS estimated effects of immigration on votes for Front National at the departmental and regional levels. Although we do not report the corresponding IV estimated effects (since the F-tests of excluded instruments are very small), the results confirm

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<sup>10</sup>We provide a larger set of OLS and IV estimates at the cantonal level since our instrument is more powerful than at the department and regional levels.



that immigration has been an important factor explaining the electoral success of Front National between 2002 and 2017.

## 5 Heterogeneous Effects of Immigration across Regions, Education and Nationality Groups

Table 8, Table 9 and Table 10 go beyond the average impact of immigration. These three additional tables present our analyses on heterogeneous effects of immigrants on first-round voting outcomes depending on their nationality, educational level and location. In Table 8, we first decompose the effect across regions and educational attainment and distinguish between European and non-European immigrants. In Table 9, we use settlement patterns of repatriates from Algeria to focus more explicitly on the heterogeneous effects of two distinct immigrant groups, namely Algerian and Spanish immigrants. In Table 10, we combine the educational and country of origin decomposition to examine whether the effect of immigrants depends on their nationality holding the educational level constant.

**Decomposition across regions** The upper-part of Table 8 implements sub-sample regressions for northern and southern French departments.<sup>11</sup> This distinction is based on the fact that votes for far-right candidates mostly increased in northern departments, while votes for far-left candidates mostly increased in southern departments (see Figures 3b and 4b). Moreover, it has already been reported in the French media that far-right voters in the North were more concerned about economic conditions than far-right voters in the South.<sup>12</sup> The latter would be more concerned by cultural considerations (e.g., core preferences for how a society should look like). We use two dependent variables: the change in votes for far-right candidates and for Front National only. In

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<sup>11</sup>We literally divide France in two geographical parts defining southern departments as being in the following regions: Aquitaine, Auvergne, Corse, Languedoc, Limousin, Midi-Pyrénées, Poitou-Charente, Provence-Alpes-Côte and Rhône-Alpes.

<sup>12</sup>See, e.g., the articles in *Le Monde* ("Sudiste" et "nordiste", les deux électorats du FN – August, 8, 2013) and *Marianne* (FN du Nord contre FN du Sud : Marine Le Pen évitera-t-elle les turbulences à l'Assemblée ? – June, 19, 2017).

Table 8, the effect of all immigrants is significant both for Northern and Southern regions for the far-right. The effect is only significant in Southern regions when considering Front National alone.

**Decomposition across regions and education groups** The middle part of Table 8 breaks down the immigrant population across education groups (low, medium and high education). This decomposition shows that the positive impact of immigration on votes for far-right candidates is mostly driven by low educated immigrants. The estimated coefficients on the shares of medium and high educated immigrants are negative and sometimes significant, indicating that an increase in the relative size of immigrants with a high education level tends to reduce far-right voting. This asymmetric impact across education groups is robust to implementing regressions for the South and the North of France. The positive impact of low educated immigrants on votes for far-right candidates is therefore strongly robust. These results are in line with the fact that low educated migrants tend to increase the labor market competition, worsening the labor market outcomes of natives ([Borjas \(2003\)](#), [Ottaviano and Peri \(2012\)](#) and [Battisti et al. \(forthcoming\)](#)). Low educated immigrants are also more likely to contribute negatively to public finance as compared to high educated immigrants ([Rowthorn, 2008](#)). The results from Table 8 thus indicate that economic concerns are important to understand the positive relationship between immigration and the increase in the vote share for far-right candidates.

**Decomposition across regions and nationality groups** The bottom part disaggregates the immigrant population according to whether they have a European or a non-European nationality. In addition to examining whether the effects depend on the level of education, we look at whether the effects vary with ethnic differences. Since, we lack more precise information on religious or ethnic identities among immigrants, we broadly distinguish between European and non-European immigrants. The intuition is that voters have a different attitude towards immigrants from non-European countries as the cultural and ethnic differences are potentially larger (see e.g. for the case of France [Adida et al. \(2010\)](#) and [Edo et al. \(2017\)](#)). Hence, immigrants from non-European countries should have a different effect on voting behavior than immigrants from European coun-

tries. Our estimates show that the positive impact of immigration on votes for far-right candidates is driven by non-European immigrants. Our geographical decomposition shows that the share of European immigrants has a negative impact on far-right voting in the North and a positive one in the South. The results suggests that culture plays an additional role in explaining the effect of immigration on voting for the far-right.

In order to dig more deeply into the relationship between European and non-European immigrants and extreme voting, we use the groups of Latin and Maghreb immigrants and instrument them by the past settlement patterns of the repatriates from Algeria after independence in 1962. As shown in Figure 5c, the non-European group of migrants is historically dominated by Maghreb nationalities, while the EU group is dominated by the Latin nationalities. Table 9 focuses on these two nationality groups to investigate the causal impact of Latin and Maghrebian immigration on extreme voting.

As an instrument, we exploit the past spatial distribution of repatriates from Algeria who came in 1962 after its independence. This spatial distribution was to a large extent determined by the port of arrival and climate, and therefore independent of current local economic conditions ([Friedberg and Hunt, 1995](#), p. 37).<sup>13</sup> Among the Algerian-born repatriates without the French citizenship, 64% are Spanish and 20% are Algerian. We thus instrument the allocation of Italian, Portuguese and Spanish immigrants by the past allocation of Spanish repatriates and the allocation of subsequent immigrants from the Maghreb by the distribution of Algerian repatriates. We define a Spanish repatriate as someone who declared to have a Spanish nationality in the 1968 census and who came from Algeria into France between March and December 1962. Algerian repatriates are defined as those having an Algerian nationality in 1968 and coming to France between March and December 1962. The idea is that settlement patterns of Algerian and Spanish repatriates across French departments had an impact on subsequent flows, while uncorrelated with current votes for far-left and far-right candidates. We instrument the change in the number of Latin immigrants by the following instrument:

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<sup>13</sup>See also [Edo \(2017\)](#) for a detailed description of this event.

$$\Delta \hat{m}_{it}^{LAT} = \left( \hat{LAT}_{it} / \hat{Population}_{it} \right) - \left( \hat{LAT}_{it-1} / \hat{Population}_{it-1} \right) , \quad (5)$$

where we impute the number of Latin immigrants across departments based on the spatial distribution of Spanish repatriates from the 1968 census as follows:

$$\hat{LAT} = \frac{\text{Spanish repatriates}_i(1962)}{\text{Spanish repatriates}(1962)} \times LAT(t) . \quad (6)$$

Similarly, we instrument the change in the number of Maghreb immigrants by the following instrument:

$$\Delta \hat{m}_{it}^{MAG} = \left( \hat{MAG}_{it} / \hat{Population}_{it} \right) - \left( \hat{MAG}_{it-1} / \hat{Population}_{it-1} \right) , \quad (7)$$

where we impute the number of Maghreb immigrants across departments based on their spatial distribution of Algerian repatriates from the 1968 census as follows:

$$\hat{MAG} = \frac{\text{Algerian repatriates}_i(1962)}{\text{Algerian repatriates}(1962)} \times MAG(t) . \quad (8)$$

The OLS estimates from Table 9 indicate that Latin immigrants do not affect the votes for far-right candidates in France, while Maghreb immigrants increase their electoral success. The imputed change of immigrants with a Latin or Maghreb nationality have significant power in predicting immigration. The F-tests from the first-stage IV regression are higher than 10 when used jointly. Moreover, the IV estimated coefficients on the change in the population share of Latin and Maghreb immigrants report a stronger positive impact of votes for far-right candidates. The estimated effect even becomes significant for the migrants coming from Latin countries. This

confirms the idea that some reverse causality may bias the OLS estimates downward.

For Northern regions, however, our estimated coefficients show that the effect of immigrants on far-right voting is asymmetric according to whether they are coming from Maghreb or Latin countries. For these regions, the effect of Maghreb immigrants is significantly positive, while the effect of Latin immigrants is not significantly different from zero. In contrast, the estimates for Southern regions indicate that both Latin and Maghreb immigrants have a positive impact on far-right voting.

In all specifications, the point estimate of Maghreb immigrants is stronger than the estimate of Latin immigrants. This indicates that French citizens are more responsive to Maghreb immigrants than Latin immigrants in their voting behavior for far-right candidates.

**Decomposing the average effects across region-education-nationality groups** In order to better understand the relative relevance of cultural versus economic concerns, Table 10 decomposes the immigrant population across education-nationality groups. Since the educational composition can differ across the nationality groups of immigrants, it is important to look at the heterogeneous effects of immigrants from different nationalities within *each* educational group. Therefore, we compute the change in the share of non-European and European immigrants for each educational group.

This table provides two main findings. First, we show that the previous positive correlation between low educated immigrants and far-right voting is strongly heterogeneous according to their nationality group. In particular, the positive impact of low educated immigration on far-right voting is only driven by the migrants who have a non-European nationality. Second, the positive impact of non-European immigrants on far-right voting is also driven only by those who have a low education level. We do not find a strong positive effect of non-European immigrants compared to European immigrants at higher educational levels. On the contrary, the effect of high educated non-European immigrants seems to be negative, however, this result is less robust and only significant in the Southern regions of France.

The intersection between education and origin thus matters in determining the impact of im-

migration on voting behavior for far-right candidates. Furthermore, this gives an indication of the relative importance of cultural versus economic concerns. The results seem to suggest that the origin of the immigrants does not play an unconditional role on voting behavior for the far-right. It is rather a more complex relationship between educational attainment, cultural differences and voting for the far-right. We find that the results are encouraging from a policy perspective. As extreme voting responds primarily to low educated immigration, policies promoting high educated immigration are less likely to suffer from a political backlash, even if immigrants would come from non-Western countries of origin.

## 6 Conclusion

We estimate the causal effect of immigration on political support for far-left and far-right candidates in France, using panel data on presidential elections since 1988. To account for immigrants' endogenous choices on where to live we use past settlement patterns as an instrument for the allocation of recent immigrants. Our instrument relies on the spatial distribution of immigrants in 1968. While there are a few papers that have established that immigration increases support for far-right candidates (see [Otto and Steinhardt \(2014\)](#) for Germany, [Halla et al. \(2017\)](#) for Austria and [Harmon \(forthcoming\)](#) for Denmark), our paper also analyzes the effects of immigration on electoral support for both far-left and far-right candidates. France is uniquely suited for this analysis, as every presidential election since 1988 has had at least one far-left and at least one far-right candidate. Both OLS and IV estimates suggest that immigration increases support for far-right candidates, but does not have any robust impact on far-left candidates. The results hold when controlling for unemployment and various demographic factors.

Looking at different immigrant groups shows that the increase in the electoral support for the far-right is driven by low educated immigrants from non-Western countries. The effect of low-educated European immigrants is, however, sometimes statistically significant.

Why immigration is so strongly related to electoral support for the far-right? [Card et al.](#)

(2012) highlight the role of compositional amenities and conclude that concerns related to these are more important than economic concerns in explaining negative attitudes towards immigration. Halla et al. (2017) find support for the hypothesis that negative attitudes towards immigration are to an important extent driven by compositional amenities in Austria. Our result that far-right voting is driven by non-Western immigrants (especially those with low education) highlights the importance of immigrants' cultural background. The joint effect of the Eurozone economic crisis and the refugee crisis especially has been to shore up far-left and far-right voting. Front National more than doubled its first-round vote share from 10.4% in 2007 to 21.3% in 2017, and Marine Le Pen won 33.9% of the second round votes in 2017, compared with 17.8% for Jean-Marie Le Pen in 2002, the only previous election in which the Front National candidate proceeded to the run-off. Taken together, far-left and far-right candidates took 46.5% of the 2017 first-round votes. Although the balance of power in the next presidential elections most likely hangs on the economy, our results suggest that far-left and far-right candidates' electoral success is also going to depend on the size and composition of immigration in coming years.

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# Figures

Figure 1a: Vote share in percent for far-left and far-right candidates in France

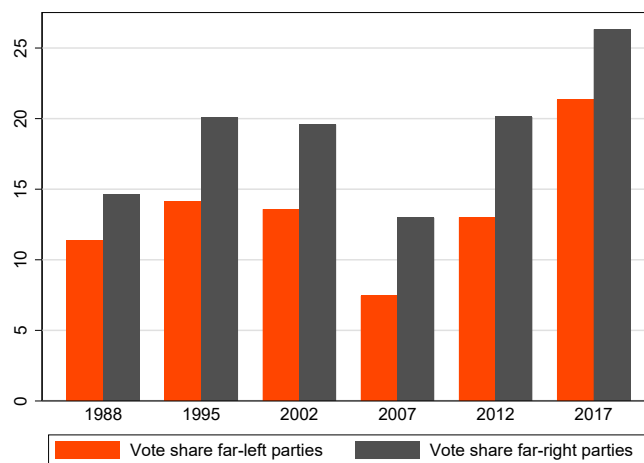


Figure 1b: Vote share in percent for the Front National in France - first and second round

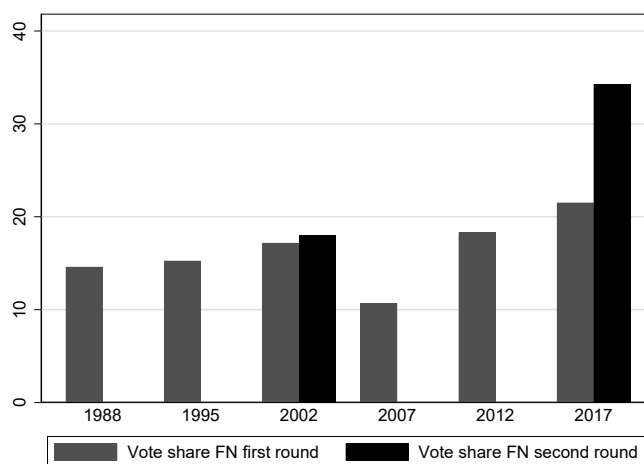


Figure 2a: Development of the unemployment rate over time

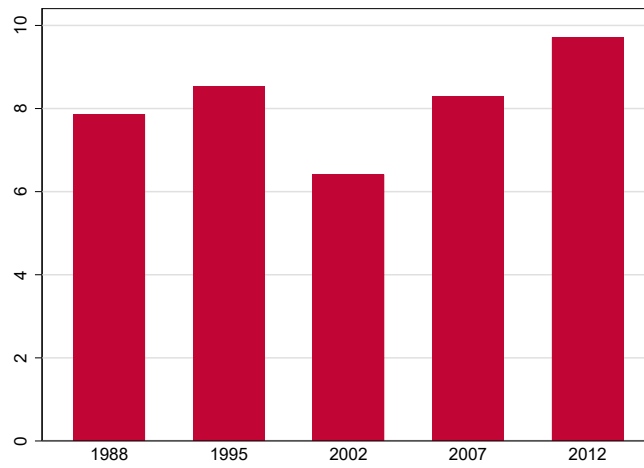


Figure 2b: Development of the immigration share over time

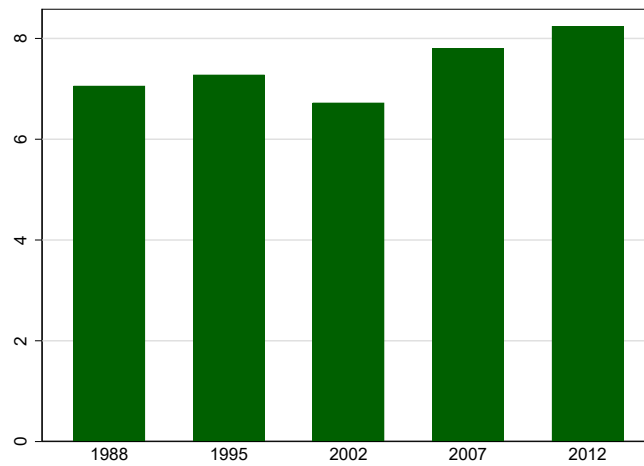
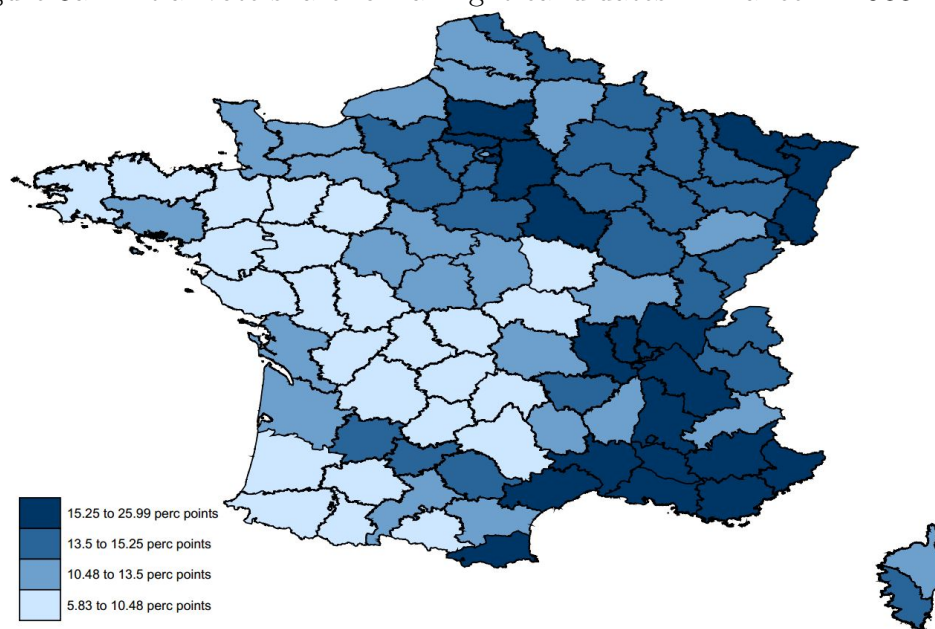
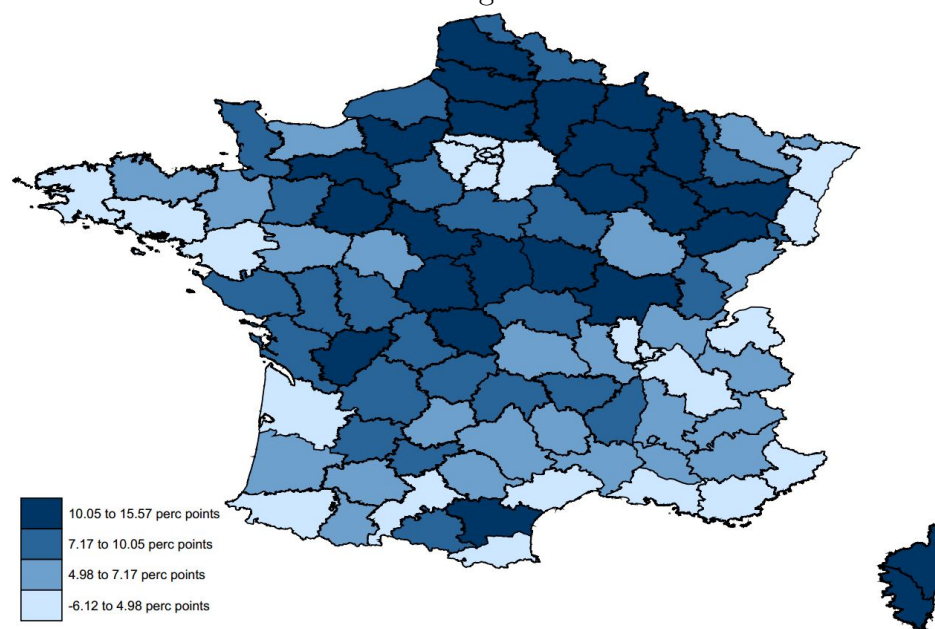


Figure 3a: Initial vote share for far-right candidates in France in 1988



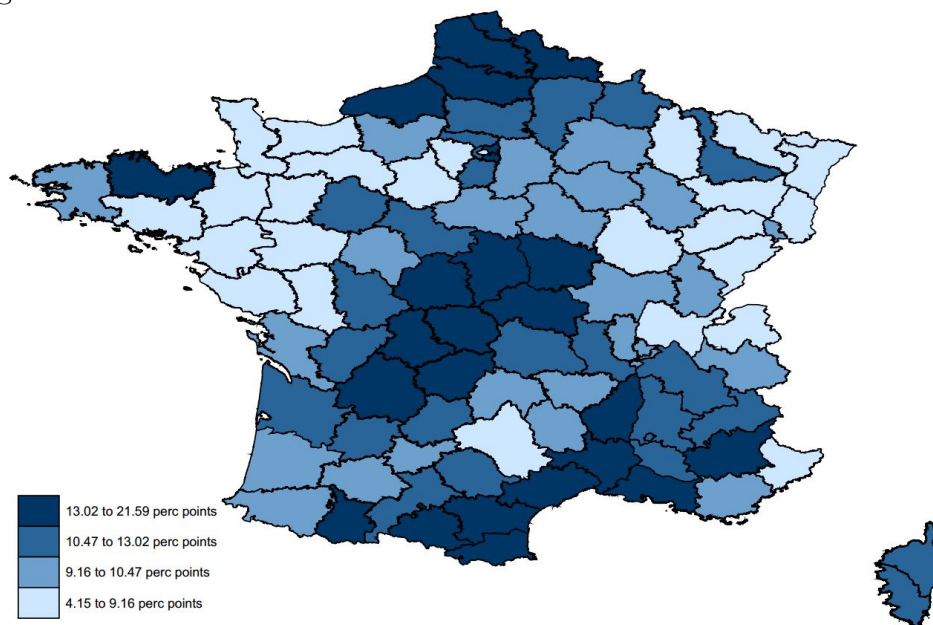
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Figure 3b: Increase in vote share for far-right candidates from 1988 until 2012



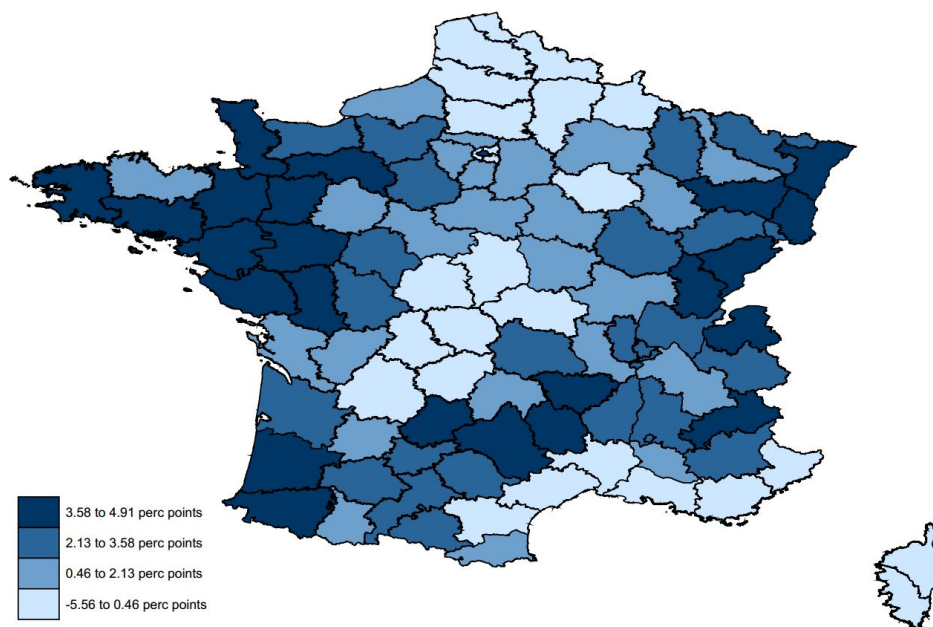
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Figure 4a: Initial vote share for far-left candidates in France in 1988



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Figure 4b: Increase in vote share for far-left candidates from 1988 until 2012



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Figure 5a: Distribution of non-citizen immigrants across education groups over time

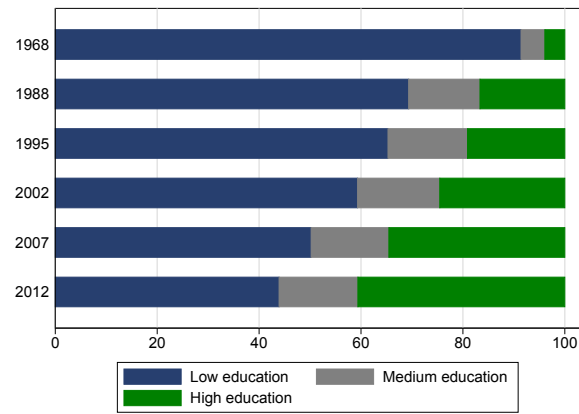


Figure 5b: Distribution of French citizens across education groups over time

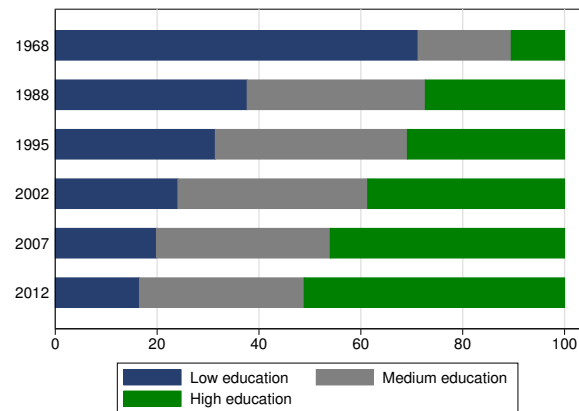


Figure 5c: Distribution of non-citizen immigrants across nationality groups over time

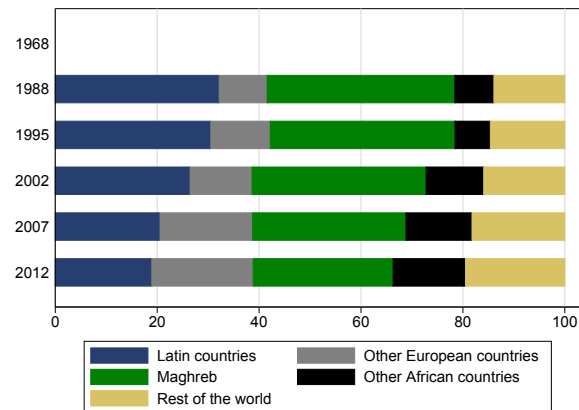


Figure 6a: Scatter plot of changes in immigrants' population share and the far-right vote share between 1988 and 2012

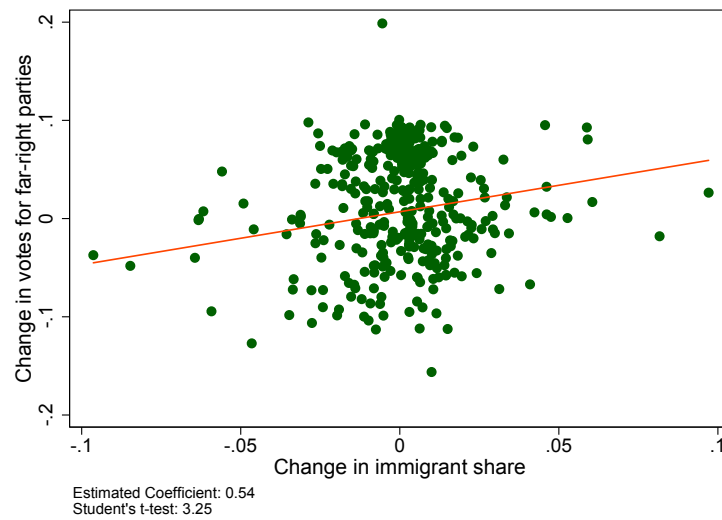
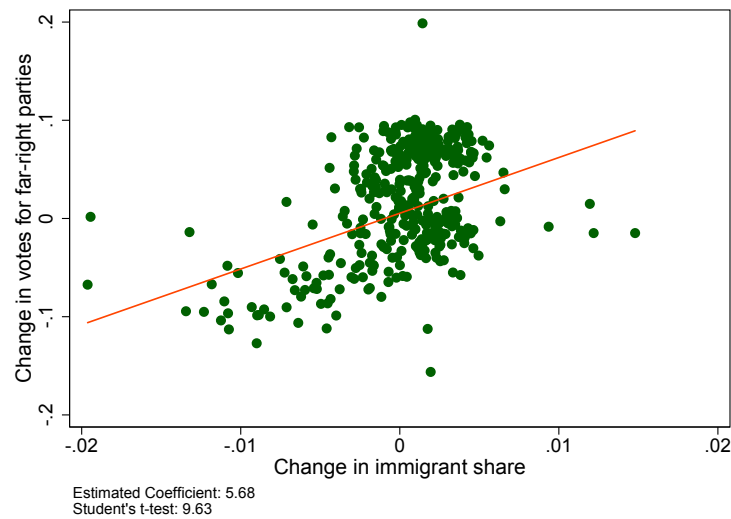


Figure 6b: Scatter plot of instrumented changes in immigrants' population share and the far-right vote share between 1988 and 2012



# Tables

Table 1: OLS impact of immigration on votes for far-left and far-right parties

	Far-right parties				Far-left parties			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta$ Share of immigrants	0.56*** (3.23)	0.39** (2.38)	0.31* (1.90)	0.38*** (3.54)	0.12 (0.99)	0.01 (0.06)	-0.08 (-0.71)	-0.10*** (-2.75)
$\Delta$ Unemployment rate	-	0.09 (0.73)	-0.16 (-1.03)	-0.30* (-1.79)	-	0.00 (0.01)	-0.20* (-1.74)	0.00 (0.04)
$\Delta$ Share of inactive pop.	-	1.03*** (7.47)	0.80*** (6.34)	-0.06 (-0.92)	-	0.67*** (7.54)	0.51*** (5.45)	-0.13*** (-3.21)
$\Delta$ Share of young	-	-	0.07 (0.44)	-0.28** (-2.59)	-	-	0.18* (1.94)	-0.05 (-0.94)
$\Delta$ Share of high educated	-	-	-0.46*** (-4.46)	0.01 (0.19)	-	-	-0.26*** (-3.63)	0.04 (0.94)
$\Delta$ Share of manual workers	-	-	0.06 (0.53)	-0.01 (-0.07)	-	-	0.18** (2.55)	0.05 (1.64)
$\Delta$ Share of entrepreneurs	-	-	0.18 (0.99)	-0.20* (-1.67)	-	-	0.43*** (2.85)	0.10* (1.70)
Year dummies	No	No	No	Yes	No	No	No	Yes
Adjusted $R^2$	0.024	0.182	0.251	0.792	0.001	0.123	0.211	0.900
Cluster	96	96	96	96	96	96	96	96
$N$	384	384	384	384	384	384	384	384

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the departmental level.

Table 2: IV impact of immigration on votes for far-left and far-right parties

	Far-right parties				Far-left parties			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta$ Share of immigrants	5.99*** (3.48)	5.45*** (4.13)	5.64*** (4.02)	2.12*** (3.30)	4.12*** (3.24)	3.73*** (3.78)	3.76*** (3.54)	-0.21 (-1.06)
$\Delta$ Unemployment rate	-	0.15 (0.40)	-0.14 (-0.28)	-0.63** (-2.37)	-	0.05 (0.15)	-0.19 (-0.51)	0.02 (0.26)
$\Delta$ Share of inactive pop.	-	0.60* (1.73)	0.43 (1.03)	-0.28* (-1.89)	-	0.36 (1.45)	0.25 (0.85)	-0.11** (-2.49)
$\Delta$ Share of young	-	-	-0.36 (-0.89)	-0.49** (-2.55)	-	-	-0.13 (-0.46)	-0.04 (-0.74)
$\Delta$ Share of high educated	-	-	-0.39 (-1.51)	0.14 (1.45)	-	-	-0.21 (-1.12)	0.03 (0.84)
$\Delta$ Share of manual workers	-	-	-0.24 (-0.81)	-0.03 (-0.20)	-	-	-0.04 (-0.21)	0.05* (1.71)
$\Delta$ Share of entrepreneurs	-	-	0.43 (0.89)	-0.10 (-0.48)	-	-	0.61* (1.74)	0.09 (1.56)
Year dummies	No	No	No	Yes	No	No	No	Yes
F-test of exclusion	14.19	25.37	19.56	15.47	14.19	25.37	19.56	15.47
Cluster	96	96	96	96	96	96	96	96
$N$	384	384	384	384	384	384	384	384

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the departmental level.

Table 3: Impact of immigration on far-right voting using alternative geographical units of analysis

	No year dummies		With year dummies		Time span	Cluster	<i>N</i>
	OLS	IV	OLS	IV			
1. Canton	0.75*** (8.66)	5.82*** (6.46)	0.47*** (8.41)	3.10*** (3.73)	2002-2012	1,989	3,895
F-test of excluded instruments	-	34.17	-	21.91			
2. Employment zone	1.59*** (6.60)	5.01*** (3.37)	1.20*** (5.25)	4.81*** (2.77)	2002-2012	305	610
F-test of excluded instruments	-	15.88	-	12.12			
3. Department	0.31* (1.90)	5.64*** (4.02)	0.38*** (3.54)	2.12*** (3.30)	1988-2012	96	384
F-test of excluded instruments	-	19.56	-	15.47			
4. Region	1.72** (2.40)	2.37 (1.58)	0.95** (2.15)	2.34* (2.19)	1988-2012	22	88
F-test of excluded instruments	-	11.27	-	12.26			
5. Region, including 2017	1.58** (2.42)	2.31 (1.57)	1.01** (2.58)	2.03* (1.83)	1988-2017	22	110
F-test of excluded instruments	-	11.56	-	16.28			

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate.  
Notes. Each regression is weighted by the local population size. Standard errors are clustered at the local level.

Table 4: Impact of immigration on far-left voting using alternative geographical units of analysis

	No year dummies		With year dummies		Time span	Cluster	N
	OLS	IV	OLS	IV			
1. Canton	0.22*** (4.60)	2.34*** (5.08)	0.01 (0.26)	-0.26 (-0.66)	2002-2012	1,989	3,895
F-test of excluded instruments	-	34.17	-	21.91			
2. Employment zone	0.39*** (2.92)	-0.99* (-1.75)	-0.01 (-0.08)	-2.01** (-2.54)	2002-2012	305	610
F-test of excluded instruments	-	15.88	-	12.12			
3. Department	-0.08 (-0.71)	3.76*** (3.54)	-0.10*** (-2.75)	-0.21 (-1.06)	1988-2012	96	384
F-test of excluded instruments	-	19.56	-	15.47			
4. Region	0.25 (0.74)	0.61 (0.77)	-0.40* (2.07)	-0.48** (1.83)	1988-2012	22	88
F-test of excluded instruments	-	11.27	-	12.26			
5. Region, including 2017	0.21 (0.75)	0.35 (0.45)	-0.35* (-1.76)	-0.52*** (-2.75)	1988-2017	22	110
F-test of excluded instruments	-	11.56	-	16.28			

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the local level.

Table 5: Immigration and far-right voting using alternative specifications at the departmental level

	No year dummies		With year dummies		Cluster	N
	OLS	IV	OLS	IV		
1. Excluding the 1988 election	0.45** (2.23)	6.83** (2.41)	0.39*** (3.68)	1.29** (2.03)	96	288
F test of excluded instruments	-	5.93	-	7.32		
2. Excluding the 2012 election	0.17 (1.06)	2.89*** (3.31)	0.38*** (3.72)	2.60*** (3.95)	96	288
F test of excluded instruments	-	21.52	-	22.34		
3. Excluding Paris	0.30* (1.79)	5.68*** (4.02)	0.32*** (3.42)	2.33*** (3.47)	95	380
F test of excluded instruments	-	32.13	-	30.15		
4. Add $\Delta$ naturalized immigrants	0.33* (1.82)	5.18*** (4.18)	0.37*** (3.22)	2.13*** (3.29)	96	384
F test of excluded instruments	-	24.58	-	15.58		
5. Population aged 18 or more	0.15 (1.26)	2.52*** (3.95)	0.30*** (2.84)	1.74*** (3.16)	96	384
F test of excluded instruments	-	34.45	-	18.27		
6. Vote share of all votes	0.31* (1.98)	5.43*** (4.02)	0.37*** (3.65)	2.11*** (3.35)	96	384
F test of excluded instruments	-	19.56	-	15.47		
7. Vote share of registered voters	0.16 (1.58)	3.33*** (3.66)	0.26*** (2.81)	1.56*** (3.21)	96	384
F test of excluded instruments	-	19.56	-	15.47		
8. Regression model in levels	0.26* (1.71)	3.13*** (3.52)	0.33*** (3.26)	2.15*** (2.62)	96	480
F test of excluded instruments	-	16.50	-	8.44		

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the local level.

Table 6: Immigration and far-left voting using alternative specifications at the departmental level

	No year dummies		With year dummies		Cluster	N
	OLS	IV	OLS	IV		
1. Excluding the 1988 election	-0.07 (-0.46)	4.81** (2.19)	-0.15*** (-2.88)	-0.36** (-1.97)	96	288
F test of excluded instruments	-	5.93	-	7.32		
2. Excluding the 2012 election	-0.22 (-1.57)	0.70 (1.50)	-0.12*** (-2.96)	-0.37** (-2.13)	96	288
F test of excluded instruments	-	21.52	-	22.34		
3. Excluding Paris	-0.06 (-0.51)	3.35*** (3.87)	-0.11*** (-3.21)	-0.34** (-2.22)	95	380
F test of excluded instruments	-	32.13	-	30.15		
4. Add $\Delta$ naturalized immigrants	-0.07 (-0.76)	3.44*** (3.95)	-0.10** (-2.58)	-0.21 (-1.01)	96	384
F test of excluded instruments	-	24.58	-	15.58		
5. Population aged 18 or more	-0.14* (-1.80)	1.72*** (3.70)	-0.10** (-2.41)	-0.19 (-1.01)	96	384
F test of excluded instruments	-	34.45	-	18.27		
6. Vote share of all votes	-0.08 (-0.68)	3.65*** (3.54)	-0.09*** (-2.66)	-0.15 (-0.75)	96	384
F test of excluded instruments	-	19.56	-	15.47		
7. Vote share of registered voters	-0.10 (-1.53)	2.35*** (3.18)	-0.09** (-2.55)	-0.10 (-0.46)	96	384
F test of excluded instruments	-	19.56	-	15.47		
8. Regression model in levels	-0.14 (-1.38)	1.91** (2.56)	-0.14*** (-3.13)	0.42 (0.80)	96	480
F test of excluded instruments	-	16.50	-	8.44		

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the local level.



Table 7: Impact of immigration on second-round votes for Front National between 2002 and 2017

	Canton						Department	Region
	OLS Estimates			IV Estimates			OLS	OLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta$ Share of immigrants	-0.02 (-0.07)	0.06 (0.31)	-0.15 (-1.55)	3.87*** (3.71)	4.92*** (5.54)	1.76*** (4.45)	0.81** (2.20)	2.75** (2.75)
$\Delta$ Unemployment rate	-	0.02 (0.11)	0.06 (0.60)	-	-0.00 (-0.01)	0.08 (0.58)	0.39 (0.58)	0.34 (0.23)
$\Delta$ Share of inactive pop.	-	-1.03*** (-9.02)	-0.74*** (-12.60)	-	-1.34*** (-10.13)	-0.96*** (-12.28)	-0.48* (-1.78)	0.22 (0.35)
$\Delta$ Share of young	-	-	-0.83*** (-7.80)	-	-	-0.96*** (-7.85)	-1.32*** (-3.01)	-0.39 (-0.31)
$\Delta$ Share of high educated	-	-	0.64*** (9.18)	-	-	0.72*** (10.02)	0.78** (2.39)	-1.20* (-1.82)
$\Delta$ Share of manual workers	-	-	0.82*** (13.33)	-	-	0.84*** (11.40)	0.36 (1.14)	-1.13 (-1.62)
$\Delta$ Share of entrepreneurs	-	-	0.38*** (3.08)	-	-	0.46*** (3.21)	0.22 (0.50)	0.12 (0.09)
Adjusted $R^2$	0.000	0.186	0.457	-	-	-	0.193	0.226
F-test of exclusion	-	-	-	91.58	92.44	90.66	-	-
$N$	1,975	1,975	1,964	1,975	1,975	1,964	96	22

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. T-statistics in parentheses are derived from heteroscedastic-consistent estimates of the standard errors

Table 8: Decomposing the average effect across regions, education and nationality groups

	Far-right			Front National only		
	All regions	Northern regions	Southern regions	All regions	Northern regions	Southern regions
$\Delta$ All immigrants	0.38*** (3.54)	0.20** (2.05)	0.59*** (4.51)	0.25*** (3.03)	0.10 (1.16)	0.47*** (4.13)
$\Delta$ Low educated immigrants	0.72*** (4.94)	0.66** (2.57)	0.76*** (4.97)	0.57*** (4.71)	0.42** (2.02)	0.66*** (4.65)
$\Delta$ Medium educated immigrants	-0.59 (-1.27)	-1.34* (-1.74)	-0.04 (-0.07)	-0.42 (-1.15)	-0.40 (-0.63)	-0.25 (-0.45)
$\Delta$ High educated immigrants	-0.44 (-1.38)	-0.22 (-0.35)	-0.04 (-0.08)	-0.84*** (-3.59)	-1.04*** (-3.57)	-0.17 (-0.35)
$\Delta$ Non-European immigrants	0.48*** (2.99)	0.47** (2.27)	0.64*** (3.02)	0.27* (1.94)	0.13 (0.87)	0.51*** (2.87)
$\Delta$ European immigrants	0.17 (0.88)	-0.56 (-1.20)	0.51*** (2.96)	0.21 (1.50)	0.00 (0.02)	0.41** (2.65)
Cluster	96	51	45	96	51	45
$N$	384	204	180	384	204	180

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the departmental level.

Table 9: Impact of Latin and North-African Immigrants on votes for far-right parties

	All regions		Northern regions		Southern regions	
	OLS	IV	OLS	IV	OLS	IV
A. Far-right						
$\Delta$ North-African immigrants	0.73*** (3.58)	1.28*** (2.85)	0.76** (2.53)	1.02** (2.34)	0.67*** (2.94)	1.20*** (2.84)
F-test of excluded instruments	-	60.69	-	78.75	-	93.79
$\Delta$ Latin immigrants	0.20 (1.06)	0.75** (2.46)	-0.25 (-0.54)	0.08 (0.15)	0.37* (1.87)	0.97*** (2.74)
F-test of excluded instruments	-	19.54	-	96.63	-	34.71
B. Front National only						
$\Delta$ North-African immigrants	0.48*** (3.27)	0.81*** (4.28)	0.32 (1.53)	0.64* (1.73)	0.57*** (3.28)	0.80*** (4.57)
F-test of excluded instruments	-	60.69	-	78.75	-	93.79
$\Delta$ Latin immigrants	0.17 (1.19)	0.67*** (2.72)	0.10 (0.43)	0.49 (1.34)	0.33* (1.93)	0.76*** (3.29)
F-test of excluded instruments	-	19.54	-	96.63	-	34.71

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate. Notes. Each regression is weighted by the local population size. Standard errors are clustered at the departmental level.

Table 10: Decomposing the average effect across education-nationality groups

		Far-right			Front National only		
		All regions	Northern regions	Southern regions	All regions	Northern regions	Southern regions
△Low education	Non-Eur.	1.11*** (5.09)	1.15*** (3.51)	1.00*** (5.45)	0.77*** (4.13)	0.59** (2.01)	0.86*** (5.03)
—	European	0.15 (0.82)	-0.38 (-0.79)	0.32 (1.32)	0.30** (2.14)	0.17 (0.75)	0.30 (1.38)
△Medium educ.	Non-Eur.	-1.29** (-1.99)	-2.34** (-2.17)	-0.11 (-0.14)	-0.79 (-1.38)	-1.51 (-1.47)	-0.23 (-0.36)
—	European	0.30 (0.42)	-0.28 (-0.19)	0.47 (0.61)	0.10 (0.20)	0.65 (0.78)	0.12 (0.19)
△High education	Non-Eur.	-0.80* (-1.93)	0.05 (0.11)	-2.24** (-2.50)	-1.16*** (-3.30)	-0.64 (-1.48)	-2.14*** (-2.82)
—	European	-0.02 (-0.03)	-1.66 (-1.30)	1.05 (1.56)	-0.42 (-0.84)	-2.05** (-2.27)	0.81 (1.33)
Cluster		96	51	45	96	51	45
<i>N</i>		384	204	180	384	204	180

Key. \*\*\*, \*\*, \* different from 0 at the 1%, 5%, 10% significance level. T-statistics are indicated in parentheses below the point estimate.  
Notes. Each regression is weighted by the local population size. Standard errors are clustered at the departmental level.