



Academic year 2017-2018



**Master's Degree in Economics
of Globalisation
and European Integration**

**The electoral consequences of immigration:
Do anti-immigration politicians benefit from the presence
of immigrants?**

Master dissertation

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Submission date	September 2018

DECLARATION OF AUTHORSHIP

I, Zuzana Tvrdoňová, hereby declare that the dissertation thesis “The electoral consequences of immigration: Do anti-immigration politicians benefit from the presence of immigrants?” was written by myself, and that all presented results are my own, unless stated otherwise. The literature sources are listed in the list of references.

Prague, September 25th 2018

ACKNOWLEDGEMENT

I would like to express my sincerest gratitude to the supervisor of my thesis, Professor Hubert Jayet, for his professional guidance, endless patience and very valuable recommendations throughout the whole process of writing the thesis.

ABSTRACT

This paper examines the electoral consequences of immigration based on results of French presidential elections taking place in 2017. Using a hierarchical two-level model as well as an integrated model, the analysis is conducted combining two geographical levels – municipalities and departments/employment areas. The main focus is on the immigration rate in respective areas and its impact on the score of Marine Le Pen in the elections. However, other control variables on the composition of both immigrant and native populations are introduced in our models. The robustness of the results is ensured by accompanying the results of our OLS analysis with results from models with instrumental variable. We challenge findings of DellaPosta (2013) and Rojon (2013) who find that the impact of immigration differs with respect to the geographical level. Specifically, we try to prove that at the level of municipalities the electoral score of Marine Le Pen decreases with raising number of immigrants in the area; whereas at the level of departments, the support for Marine Le Pen is higher with increasing presence of immigrants in the respective area.

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INTRODUCTION

Europe has witnessed rise of populism and right-wing preferences in the recent years. Parliamentary elections showed striking results in many European countries including liberal states such as Austria, Germany, Italy or the Netherlands. Voices of populism and nationalism are strongly heard also from Central and Eastern European states led by Hungary and Poland. It is thought-provoking that this surge is simultaneous to the increase in the flows of immigrants, peaking in 2015. As right-wing parties usually promote nationalism and vastly oppose immigration, one can legitimately ask whether the increased presence of immigrants in Europe is one of the factors driving voters to reconsider their preferences and vote for these parties.

It is particularly interesting to examine the impact of immigration on votes casted to the right-wing party candidate in the French presidential election of 2017, in which Marine Le Pen, leader of the party, recorded a great success with 34% of the votes in the second round. It was the first time that the candidate of *Rassemblement National* (originally *Front National*) got into the second round since 2002, when her father, former leader and founder of the party, Jean-Marie Le Pen lost the second round with less than 18% of total votes. While *Rassemblement National* was originally founded as a radical nationalist party in 1970s by Jean-Marie Le Pen, it introduced populist elements later (Golder 2016). The party represents a strong identification with French culture and identity, which other parties and media fail to represent sufficiently (Béchron and Mitra 1992). The party's agenda cover mainly French nationalism, protectionism, Euroscepticism and anti-immigration policies.

French presidential elections also provide a nice overview of the electoral geography with regard to the distribution of immigrant population. The effect of immigration on the electoral results appears to be ambiguous (see Figures 5 and 6 in the appendix), the correlation between immigration rates and votes for Marine Le Pen being slightly negative. This may not be surprising when the long tradition of immigration in France is taken into account. Therefore, we cannot neglect other aspects of the party's agenda such as unemployment or security threats which also influence the natives' choice to vote for a particular candidate (Rojon 2013). However, Golder (2003) finds that whatever is the level of unemployment, populist parties always benefit from higher immigration rates.

The aim of this work is to provide an analysis of French presidential elections of 2017 with the focus on the impact of the presence of immigrant population at different geographical levels on the electoral outcomes. The paper is organized as follows: first, a literature review in

which we present a summary of relevant existing literature regarding the impact of immigration on native population and attitudes towards immigrants; then we introduce our hypotheses and research question followed up by a third section explaining the reasoning behind the model used in the analysis, and the sources from which we build our datasets; and finally, the results of our analysis are described and displayed in the last part.

LITERATURE REVIEW¹

The aim of this paper is to examine the electoral impact of immigrants on natives. Thus, first of all, we need to ask which factors may lead nationals to develop an anti-immigrant attitude. The starting point is that the attitude toward immigrants is related to their perceived impact. When immigration has a positive impact on a population, the population develops a pro-immigrant attitude. By contrast, when it has a negative impact on the natives, the population develops an anti-immigrant attitude, which may eventually result in higher vote shares for right-wing parties generally opposing immigration. Therefore, the second important question is to what extent the development of negative attitude leads natives to vote for anti-immigration parties. Moreover, natives' attitudes may also vary depending upon the type of immigration; it might be less negative when immigrants are skilled as their economic impact is less negative or may even be positive. The third question is then to which extent the anti-immigration attitude combined with other factors drives the vote for these parties as their anti-immigration attitude is not their only characteristic.

One of the reasons why natives might have a negative attitude towards immigrants is their impact on income distribution which takes place through two channels. First, the **labour market channel** suggests that the attitude of natives is likely to be negative for unskilled workers who face competition by immigrants in the labour market: either their wage decreases or immigrants, who are willing to work for less money, take their low-skill jobs. On the other hand, the **welfare state channel** is associated with the fiscal impact of incomers and their impact on social services. Low skilled natives may be, on one hand, fearing the competition by immigrants for access to social services, but on the other hand, immigrants may have an impact on taxes as well. This may negatively influence both high- or low-income natives depending on whether the changes are made by adjusting benefit (low-income individuals are worse off because of unskilled

¹ For overview of the literature by the topic see Table 10 in the appendix

immigration) or the level of taxes (high-income individuals are negatively influenced by unskilled immigration) (Facchini and Mayda 2009a).

The impact of the labour market channel depends upon the degree of substitutability or complementarity of incoming workers to nationals. Since the immigrants are predominantly unskilled, they are substitutes for unskilled natives on the labour market. This leads to a negative impact on unskilled natives who are then expected to develop rather hostile attitudes towards migrants (McLaren 2003). On the other hand, unskilled immigrants are complements to skilled natives who may be influenced positively. For example, the impact might be positive for employers and skilled workers who benefit from a more abundant labour force and consequently, their wages increase (Facchini and Mayda 2008; Mayda 2006; Ortega and Polavieja 2012). However, this is true only under the assumption that skilled and unskilled workers are complements, in which case the immigrants lower the relative supply of skilled to unskilled labour and make the wage of skilled workers rise (Mayda 2006; Facchini and Steinhardt 2011). Facchini and Mayda (2008) propose a framework with a median voter who represents the behaviour of the population. They suggest that depending on whether the median voter is skilled or unskilled, he favours immigrants who are, respectively, relatively unskilled or skilled compared to natives. In other words, if a country receives on average unskilled (skilled) migrants, the higher education the median voter has, the more (less) supportive to immigration he is and, as a consequence, the higher (lower) the migration inflow will be (Facchini and Mayda 2008; Facchini and Mayda 2009a). Ortega and Polavieja (2012) find that communication-intensive (manual-intensive) occupations are less (more) jeopardized by immigrants' competition as they have the advantage of perfect knowledge of the country's language. And therefore, natives working in these sectors more (less) easily develop pro-immigration attitudes.

Furthermore, the labour market channel examines the impact not only on wages but also on unemployment as immigration influences both, depending on the rigidity of wages. If wages are rigid, e.g. negotiated by unions or a minimum wage is set, the main impact of immigration through the labour market channel will be on unemployment. These effects are, however, unclear. Most authors do not find significant evidence of the impact of immigration on natives' wages (Hartoug and Zorls 2002) nor on unemployment of natives' (Hunt 1992). The impact on the wages seemingly depends also on the characteristics of the incomers and their origin. Some ethnic minorities coming from countries that are not members of the European Union can be considered as substitutes for lower-skilled native workers and complements with highly-skilled nationals (Hartoug and Zorlu 2002). With regard to the influence on unemployment, the results

are ambiguous. Jean and Jiménez (2011) find that the impact of immigration on unemployment becomes insignificant after three years, whereas Fromentin (2013) states that the relationship is negative as more job positions are actually created by incoming immigrants. On the other hand, Altonji and Card (1991) find a slightly positive correlation. Since most empirical works do not find evidence of an impact on the labour market of host countries, the impact of the labour market channel is not clear.

As for the **welfare state channel**, it investigates the fiscal impacts of incomers and their impacts on social services. Facchini and Mayda (2008 and 2009a) examine two possible scenarios. According to the *tax-adjustment model*, high-income individuals are more affected by unskilled immigration if taxes are raised in order to maintain transfers per capita unchanged. On the other hand, according to the *benefit-adjustment model*, in case of unskilled immigration, the individuals who are at the bottom of the income distribution are more affected by immigration as the tax rates stay constant, and consequently there is a reduction in the per capita transfers (Facchini and Mayda 2009a). Even though it appears that the labour-market channel has slightly higher impact on natives' attitudes than the welfare-state determinants, these two channels counterbalance each other as there is a positive relationship between skills and income of an individual (Facchini and Mayda 2009a).

Additionally, several authors aimed their focus on how the presence of immigrants and attitudes towards them influence policy formation and policy implementation in the host country (Facchini and Mayda 2008; Facchini and Mayda 2009b; Facchini, Mayda and Mishra 2011; Facchini and Steinhardt 2011; Hix and Noury 2007). For example, Facchini and Mayda (2008 and 2009b) find that most governments wish to keep or even lower the level of immigration which mirrors individual opinions of natives. Interestingly, while analysing migration policies in the European Union, Hix and Noury (2007) come to the conclusion that political interests are more important in shaping migration policies than economic factors.

Nonetheless, the manner in which immigration influences home population is also reflected in the political preferences of natives, no matter its cause. When nationals perceive the presence of immigrants negatively, they develop a hostile attitude towards them and naturally vote for politicians who oppose immigration. Therefore, a great variety of literature concentrates on electoral outcomes and non-economic factors influencing attitudes towards immigration such as cultural or security concerns. Most economists expect immigration to impact natives' attitudes on average more negatively and thus, to provoke more votes for right-wing parties (Barone, D'Ignazio, De Blasio and Naticchioni 2014; Halla, Wagner and Zweimüller 2012; Rotte and

Steininger 2008). However, immigration triggers different opinions in different groups of native population, but other factors driving the voters' preferences cannot be neglected either. For instance, farmers and manual workers tend to vote more for rightist parties than other groups (Lubbers and Scheepers 2002; Lubbers, Scheepers and Werts 2013; Rojon 2013, Bussi, Colange and Fourquet 2012). On the other hand, the impact of unemployment on election results is ambiguous. Some authors find a positive correlation between unemployment and the number of immigrants in the area that can be explained by the labour market channel. The increased competition of unskilled workers in the labour market threatens unskilled natives as they are seen as substitutes to each other (Rojon 2013; Lubbers, Scheepers and Werts 2013; Shvets 2004). Others find, however, no or an equivocal effect (Lubbers and Scheepers 2002; Rotte and Steininger 2008). Moreover, the voting decisions of natives depend also on the background and type of incomers which may be linked to not only economic but also cultural or security consequences. Gerdes and Wadensjö (2008) examine local and parliament elections in Denmark, where they find that anti-immigration parties are more supported in municipalities in which “non-Western” immigrants are present. Likewise, Mendez and Cutillas (2004) find that immigrants coming from Latin-America had a positive impact on natives' turnout and vote share for major leftist party in Spanish parliamentary election, whereas African immigrants raised natives' support for anti-immigration formations. Shvets (2004) also find that the presence of immigrants from Maghreb implies higher vote shares for *Front National* (now *Rassemblement National*) in France as some natives feel threatened by these incomers. Several published papers have been devoted to electoral outcomes influenced by refugees and not permanent immigrants. It seems that the presence of refugees in a community of natives lowers votes for rightist parties and creates optimism about their integration among natives (Stenmayr 2016). Vertier and Viskanic (2017) provide evidence for spill-over effects, i.e. areas close to refugees' camps also experienced a negative effect of the presence of refugees on votes for the National Front, although it was not with the same magnitude.

Some results suggest that the geographical level also matters. Barone, D'Ignazio, De Blasio and Naticchioni (2014) focus on parliamentary election in Italy and find that big cities behave differently: in these cities, immigration has no impact on electoral outcomes. Likewise, Della Posta (2013) examines the electoral success of *Front National* (now *Rassemblement National*) and finds interesting results. Departments with a high share of immigrants in the population tend to show higher right-wing votes which can be justified by **competitive threat theory or realistic group conflict theory**. The main mechanism at work here is the competition for scarce resources, such as jobs or public services. (Della Posta 2013, McLaren 2003). The

opposite is true at the communal level, where a larger immigrant population leads to lower vote shares of the *Rassemblement National*. The fact that natives would favour migration, and therefore no effects on electoral outcomes would occur, may be explained by the **intergroup contact framework**. This theory suggests that the more immigrants there are in the area, the more frequent the contact with natives and consequently, natives do not consider incomers as a threat, so they abandon their prejudices. This justification is more valid for communal rather than departmental level (Della Posta 2013). These results are confirmed by Rojon (2013) who analyses the 2012 presidential election in France, as well as by Bussi, Colange and Fourquet (2012) who discover that the foreigner population has a negative impact on the votes for Marine LePen at cantonal level. Moreover, they use the concept of urban gradient (representing a distance between voters' domiciles and the closest city with more than 200 000 inhabitants) which seems to affect the decision of voters. Its higher values imply higher support for *Rassemblement National* (Bussi, Colange and Fourquet 2013), which means that further and more isolated the immigrants live from natives, the more hostile attitude natives develop. Furthermore, Béchron and Mitra (1992) identify the main area of support for *Rassemblement National* to be somewhat resembling the former industrial and urbanized areas in France. These areas often include the highest shares of North African migrants as well as increased crime rates.

HYPOTHESES AND RESEARCH QUESTION

Regarding the focus and findings of previous literature, we would like to add our own analysis of the relationship between the presence of immigrants and the electoral outcomes by examining the impact of immigration on the outcomes of the French presidential election of 2017, which has not been done yet. Therefore, our research question is how the immigration rate in municipalities affected votes for Marine Le Pen (*Rassemblement National*) in the French presidential elections in 2017. We will also try to find out whether the type of immigration (skilled/unskilled, low educated or age composition) has an impact on the votes for right-wing party.

With reference to the findings of Della Posta (2013), we will combine two geographical levels, municipalities and departments (or employment areas) to see whether we can confirm his results. Thus, we expect **municipalities** with a large share of immigrant populations to have **lower** *Rassemblement National* vote shares (**H1**) and conversely, municipalities within **departments or employment areas** with a large share of immigrant populations to have **higher** *Rassemblement National* vote shares (**H2**). Moreover, as the impact of immigration may be

higher in areas where the population is hostile to migrants, as it can be justified by the competitive threat theory, we expect **more populated municipalities** to be **more sensitive** to immigration as a result of higher competition (**H3**). Another interesting element to consider is the skill and educational level of voters of *Rassemblement National*. According to Golder (2016) a typical far-right voter can be characterized by young age, low educational level, either unemployment, self-employment or manual intensive occupation and has a higher probability to be a man (Lubbers and Scheepers 2002; Lubbers, Scheepers and Werts 2013). Béchron and Mitra (1992) add that the presence of foreigners jeopardizes the desire for upward social mobility by the people having troubles to make ends meet. In low skilled areas or in areas with high unemployment rates, natives might view immigrants as competitors for jobs or public services (Facchini and Mayda 2008; Mayda 2006; Ortega and Polavieja 2012). Therefore, we expect a **higher impact of immigration** on Le Pen's scores in **low skilled municipalities** (**H4**). Additionally, according to Lafont (2011), there are three main factors which represents the reasoning of engagement in *Rassemblement National* among young people. Specifically, based on a qualitative questionnaire, he examines socialisation factors, feeling of exclusion from society, various aspects of the social context of the individual, and the role of family ties. We will try to confirm his finding suggesting that **strong support** for *Rassemblement National* can be spotted among **young people yet without families or vocational education only** (**H5**).

MODEL AND THE DATA

In order to examine the impact of immigration on the electoral outcomes in France, we will focus specifically on the 2017 presidential election, in which the main anti-immigration party was the *Rassemblement National*, represented by its leader Marine Le Pen. In France, elections are organized in two rounds. If no candidate wins the first round with more than 50% of the votes, a second round is organized, with, for the presidential elections, the two highest ranked candidates from the first round. Here, we focus on the first round.

We use data at the municipal level (more than 36,000 municipalities), provided by the French Ministry of Interior (Ministère de l'Intérieur), and available on the French Open Data Platform. Other data, notably data on immigration, come from the French census 2013 (latest version available) which are also available at the communal level.

Table 1 - **Descriptive statistics**²

Variables	Mean	SD
<i>Dependent</i>		
% of votes for Marine Le Pen	26,32%	9,13%
<i>independent (commune)</i>		
share of immigrant population	2,83%	3,67%
share of females in immigrant population	48,14%	21,72%
share of immigrant population aged between 15 to 24 years	4,83%	9,30%
share of immigrant population aged between 25 to 54 years	47,36%	25,75%
share of unemployed in immigrant population	16,94%	22,14%
share of unskilled in immigration population	53,86%	37,58%

Since from the previous analyses of electoral consequences of immigration it is clear that the relationship changes with the level of geographical area, we combine two levels. The first one is “communes”, that are the smallest administrative subdivisions in France. Their number is around 36 570 in mainland France as of 2010 (INSEE, consulted 12.08.2018). The three biggest cities, namely Paris, Lyon and Marseille, are divided into smaller administrative unites called “arrondissements”. These arrondissements provide a better proxy for observations in these big cities and then we include them in our sample resulting in 36 610 final observations. Because the influence of immigration on the support for far-right parties might be different overseas than in mainland France, the observations for overseas are not included in our sample.

For the higher level, we look at two possible choices. The first one is “departements”. In total, there are 101 departments in France, of which 5 are overseas, therefore they were dropped from our sample. The second one is “employment areas”. Following the definition of INSEE, the employment area is a geographic unit in which the majority of active population reside and work, and in which the labour required for offered jobs can be found (INSEE, consulted 12.08.2018). France is divided into 307 employment areas which, we believe, could present a better proxy of the environment of the municipality than departments.

In order to examine the impact of the presence of immigrants in communes on the score of Marine Le Pen at French presidential elections in 2017, we test several models. Our variable of interest is the score of Le Pen in the first round of the presidential elections in 2017. In the base model, voters face a binary choice: voting for Le Pen or for another candidate. We can analyse this binary choice using qualitative models estimated by Maximum Likelihood, like the

² All tables and figures in this paper are created by author herself based on her own calculations and processing of the data from French Ministry of Interior and French census of 2013

logit or the probit model. We can also use a linearized version of these models. More precisely, using the logit transformation, we have:

$$\ln \frac{\phi_i}{1-\phi_i} = \alpha_0 + \beta \ln IM_R_i + \alpha_1 \ln X_{i1} + \dots + \alpha_K \ln X_{iK} + e_i \quad (1)$$

where i is the index of the municipality and ϕ_i is the score of Le Pen in the first round of the 2017 presidential election. Our variable of interest is the immigration rate at the municipal level, IM_R_i . X_{i1}, \dots, X_{iK} are control variables describing the municipality i and its population, and e_i is a random term. All the independent variables are introduced in logged form.

The problem we may face with a linearized version is that we cannot use observations where the score of Le Pen was zero. However, less than 4% of the observations were concerned, and then the remaining sample is unlikely to be biased. The advantage is that the linearized model may be estimated by least squares and that it is much easier to deal with problems like endogeneity or correlation between observations.

As noted in the literature review, the impact of the immigration rate may depend upon the geographical level (Della Posta 2013; Rojon 2013). Then, we introduce a higher geographical level, say an area (we will use the employment area or the department) and we index municipalities by ij , where j is the area and i is the municipality within the area. The model is now:

$$\ln \frac{\phi_{ij}}{1-\phi_{ij}} = \alpha_0 + \beta_1 \ln IM_R_{ij} + \beta_2 \ln IM_R_j + \alpha_1 \ln X_{ij1} + \dots + \alpha_K \ln X_{ijK} + e_{ij} \quad (2)$$

where IM_R_j the immigration rate at the level of area j .

However, if there are unobservable independent variables at the level of the area, the estimator of β_2 is likely to be biased. In order to avoid this problem, we can use a multilevel model. In a first stage, we estimate the model introducing area dummies:

$$\ln \frac{\phi_{ij}}{1-\phi_{ij}} = \alpha_0 + \beta_1 \ln IM_R_{ij} + \alpha_1 \ln X_{ij1} + \dots + \alpha_K \ln X_{ijK} + \gamma_j D_j + e_{ij} \quad (3)$$

where, for every j , D_j is a dummy for area j . Then, the coefficient γ_j is an area effect (similar to a fixed effect in a panel data model) which includes the impacts of all the factors operating at the level of the area, including IM_R_j . Then, γ_j may be written as

$$\gamma_j = \beta_2 \ln IM_R_j + b_1 Z_{j1} + \dots + b_M Z_{jM} + u_j \quad (4)$$

where Z_{j1}, \dots, Z_{jM} are control variables operating at the area level.

Control variables are crucial for having robust results and avoiding omitted variable problems. They are of two main types. First, there are general determinants of the vote for the *Rassemblement National*, not necessarily linked to immigration. People do not vote for far-right parties such as Marine Le Pen's just because of the immigration issue but also for other reasons such as lower taxes, abandonment of the European Union or nationalist feelings.

Following the literature (Golder 2016; Lubbers and Scheepers 2002; Lubbers, Scheepers and Werts 2013) a typical voter of *Rassemblement National* is a young male with a low level of education who is unemployed or working on a manual intensive job. Thus, we introduce variables describing the local population with respect to its age structure, its level of education, unemployment and the distribution across occupation and industries. Moreover, we expect workers with a lower skill level to cast a vote for a far-right party more often than highly skilled workers as they might be facing higher competition in the labour market, if we assume that incoming immigrants are on average unskilled (Mayda 2006). As for the local unemployment rate, unemployed persons may have an adverse attitude towards immigrants who "steal" their jobs. We find it interesting to scrutinize the behaviour of young individuals, 18 to 24 years old, with vocational education because they represent an intriguing category which might see immigrants as competitors in the labour market, but on the other hand, we would expect them to be more liberal and open minded in comparison with older generations.

We also control for total population and the level of urbanisation as the number of people living in the inspected area might have an influence on the votes for *Rassemblement National*. Voters living in large cities are usually more skilled and have higher income, and then we expect them to vote less for Marine Le Pen as on average they do not perceive less skilled incoming immigrants as competitors in the labour market, but they benefit from their presence (Mayda 2006). On the contrary, inhabitants of rural areas with lower population density might face more economic difficulties and are thus expected to cast a vote for *Rassemblement National* more easily. For this purpose, we introduce a dummy variable controlling for the type of urban area. This variable takes values from 0 for non-urban areas to 8 representing Paris urban area (for the whole list of values see appendix). Furthermore, since the relationship between the immigration rate and Le Pen votes or between total population and Le Pen votes can be also non-linear, we introduce squared terms of these variables to our models.

Additionally, the presence of some groups of foreign population might be perceived differently by natives than other groups. For example, natives may perceive active young foreign population or unskilled immigrants as a threat to the competition in labour market or security

threat, and thus favour more the narrative of rightist party. Whereas the presence of retired or skilled immigrants may be of less importance to them. Hence, we account for these factors in our analysis by introducing immigrant population characteristics such as the share of female population, share of unemployed and unskilled workers as well as share of young active population.

The higher presence of immigrant population in some areas rather than in others is not arbitrary. Hostility of nationals in some areas may discourage immigrants to come and settle in. Therefore, we might face an endogeneity problem leading to inconsistent estimates. To avoid this bias, we introduce an instrumental variable and use the two-stage-least-square method. This variable must be independent of the error term but correlated with the endogenous variable. We propose to use the immigration rate from 1982 (computed based on the census data 1982) as our instrumental variable, because the popularity of *Rassemblement National* (former *Front National*) was not as high as nowadays. The party had very low electoral scores: 0.18% at the parliamentary election in 1982 (the score of the whole far right parties being 0.29%). Then, in 1982 the location choice of immigrants was not likely to be influenced by the electoral score of the *Front National*. On the other hand, there is a strong correlation between the spatial distributions of immigrants in 1982 and 2013, usually attributed to the strong network effects and family ties among immigrants.

EMPIRICAL ANALYSIS AND RESULTS

In order to estimate various models at two geographical levels – municipalities and departments/employment areas, we used two types of estimation methods. A first series of results were obtained by direct OLS and IV estimations of equation (2) with both geographical levels included. For a second series of results, we used a hierarchical model, first estimating equation (3), and then using the estimated area effect from (3) to estimate model (4). In all the models estimated at the level of municipalities, either department or employment area dummies were introduced to account for fixed effects of particular areas. The total population of municipalities and departments/employment areas was controlled for, throughout the whole analysis.

When controlled for the composition of immigrant population, the models included variables on share of females among immigrants, share of unemployed, share of unskilled in immigrant population, share of immigrants between 15 and 24 years old (young population) and between 25 and 54 years old (active population). In models including the composition of the native population, we controlled for the share of workers with no or primary education, the share

of highly skilled workers, the unemployment rate, the share of population between 18 and 24 years old and, to account for the specific category of young workers with only vocational education we introduced an interactive term (share of population between 18 and 24 years old * share of workers with vocational education). As stated in the previous section, for dealing with endogeneity, we decided to use the immigration rate at the level of communes from 1982 as our instrumental variable. The instrument proved to be strong (test statistic of the weak instrument test > 10) in the large majority of estimated models.

We start presenting the results for our main variable of interest, the immigration variable. All our tables have the same structure. In a first panel (2A for Table 2), we provide the results of hierarchical estimation (equations (2) and (3)) and, in a second panel (2B for Table 2), we provide the results of the model directly including both geographical levels, without area dummies. Then, within each table, we provide results using OLS and IV estimation, and results obtained when the higher-level area is the department or the employment area. In almost all cases, our instrument is strong, which implies that IV estimation is reliable.

The results of the simplest model are displayed in Table 2. In almost all the cases, we find, that if we do not control for the composition of immigrant population, nor for the composition of the native population, the relationship between shares of votes for Marine Le Pen and the presence of immigrants at the level of municipalities is negative. The only exception is IV estimation with employment areas. Moreover, the results from IV estimation are systematically less negative than the results from OLS estimation. Calculating elasticities, these results suggest that if, in a municipality where the score of Le Pen is nearly average (25%) and the share of immigrant population increases by 10%, then the number of votes for Le Pen decreases by an amount between 0.3% and 0.4%.

For all the estimations, when it is significant, the estimated impact of the immigration rate at the higher geographical level is positive. It is stronger in magnitude when IV estimation is used. Hence, the higher is the share of immigrants at the level of departments or employment areas, the more natives vote for Marine Le Pen, which confirms our second hypothesis (H2). Using the result from IV second stage estimation at employment area level, we find that, in a municipality where the Le Pen's score is average (25%), the increase of one percentage point in immigrant population in the employment area raises the number of casted votes in favour of Marine Le Pen by 0,17%.

Table 2 - Estimated impact of immigration in a model without squared terms and without covariates

2.A: Hierarchical model

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1nd stage				
1. Immigration rate	-0,0588*** (0,0028)	-0,0414*** (0,0089)	-0,0582*** (0,0029)	-0,0532*** (0,0096)
2nd stage				
2. Immigration rate at DEP or EA level	-0,0820 (0,0895)	0,1710* (0,0877)	0,0007 (0,0326)	0,2318*** (0,0395)
Variables on composition of immigrants	no	no	no	no
Variables on local population characteristics	no	no	no	no
Department dummies	yes	yes	no	no
Employment area dummies	no	no	yes	yes
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

2.B: Model with both geographical levels

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Immigration rate	-0,1113*** (0,0034)	-0,0386*** (0,0105)	-0,0889*** (0,0032)	0,0360*** (0,0110)
2. Immigration rate at departmental level	0,1192*** (0,0070)	0,3071*** (0,0120)		
3. Immigration rate at level of employment area			0,0526*** (0,0056)	0,1607*** (0,0106)
Variables on composition of immigrants	no	no	no	no
Variables on local population characteristics	no	no	no	no
Department dummies	no	no	no	no
Employment area dummies	no	no	no	no
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

However, we might face a problem of model specification as the relationship between the presence of immigrants and votes for far-right parties may not be linear. Therefore, squared terms for the share of immigrants and total population were introduced in models presented in Table 3. Our results suggest that the relationship is indeed non-linear both at lower and higher geographical levels. When the coefficients associated to the immigration rate are of the same sign as the ones linked to the squared terms, the relation is not ambiguous. However, if the coefficients are of opposite signs, it is hard to see the exact effect as there might be a turning

point connected to the number of immigrants in the area (for graphs with turning points of our models see Figures 1, 2, 3 and 4 in the appendix).

Let us first look at the impact of the municipal immigration rate. Using OLS, from both the hierarchical and the integrated model combining both geographical levels, we find negative coefficients for both the linear and the squared terms. Then, again, immigration lowers the score of Marine Le Pen. However, IV tell us a different story. In both models, when the higher-level areas are departments, immigration has no significant impact. When the higher-level areas are employment areas, immigration has a significant and non-linear impact, but the two models diverge about the shape of the relation between the immigration rate and the scores of Marine Le Pen. According to the hierarchical model, this relation is convex: increasing the immigration decreases the Le Pen's score when the immigration rate is low, increases it when it is high (for graph see Figure 1 in the appendix). More precisely, calculating elasticities, if the share of immigration increases by 10% in a municipality in which the score of Marine Le Pen (25%) and the share of immigrants (2,8%) are nearly average, than the number of votes for Le Pen increases by 0,4%. The integrated model leads to a concave shape: increasing the immigration increases the Le Pen's score when the immigration rate is low, decreases it when it is high.

Let us now look at the impact of the immigration rate at the area level. OLS estimation leads to divergent results between employment areas and departments. When we are using departments, the shape of the relation between the area immigration rate is concave while, when using employment areas, it is convex. Using IV estimation, results are more consistent. In all cases, the shape is concave. In the second stage estimation, the instrument is weak, but the results are fairly similar to the results of the integrated model (for graph see Figure 2 in the appendix). Then, IV estimation leads to the conclusion that the positive impact of a higher immigration rate at the area level on the Le Pen's scores holds true when the immigration rate is not too high.

Table 3 - **Estimated impact of immigration in a model with squared terms and without covariates**

3.A: Hierarchical model

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1nd stage				
1. Immigration rate	-0,0100*** (0,0032)	0,0007 (0,0254)	-0,0117*** (0,0032)	-0,0263 (0,0267)
2. Squared Immigration rate	-0,0293*** (0,0012)	0,0216 (0,0151)	-0,0145*** (0,0018)	0,0329** (0,0157)
2nd stage				
3. Immigration rate at DEP or EZ level	0,6489** (0,2671)	1,9885*** (0,6063)	-0,0721 (0,0879)	1,1010*** (0,3156)
4. Squared Immigration rate at DEP or EZ level	-0,2181** (0,0905)	-0,6391*** (0,2144)	0,0428 (0,0321)	-0,3558*** (0,1173)
Variables on composition of immigrants	no	no	no	no
Variables on local population characteristics	no	no	no	no
Department dummies	yes	yes	no	no
Employment area dummies	no	no	yes	yes
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

**weak
instrument in
the 2nd stage**

**weak
instrument in
the 2nd stage**

3.B: Model with both geographical levels

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Immigration rate	-0,0722*** (0,0045)	0,0491 (0,0419)	-0,0538*** (0,0041)	0,3433*** (0,0431)
2. Squared Immigration rate	-0,0102*** (0,0025)	-0,0124 (0,0247)	-0,0148*** (0,0023)	-0,1610*** (0,0250)
3. Immigration rate at departmental level	0,1430*** (0,0272)	2,1544*** (0,1006)		
4. Squared immigration rate at departmental level	-0,0080 (0,0100)	-0,6954*** (0,0364)		
5. Immigration rate at level of employment area			-0,1980*** (0,0146)	0,6421*** (0,0617)
6. Squared immigration rate at level of employment area			0,0995*** (0,0057)	-0,2169*** (0,0222)
Variables on composition of immigrants	no	no	no	no
Variables on local population characteristics	no	no	no	no
Department dummies	no	no	no	no
Employment area dummies	no	no	no	no
Type of urban unit dummies	no	no	yes	yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

So far, our models examined the relationship between the immigration rate and votes for Marine Le Pen without taking into account other effects. Now we present the results of models with control variables on the composition of immigrant and native populations, both separately and jointly.

First, let us look at the behaviour of our independent variable when variables on the composition of immigrant population are introduced (Table 4). These variables include the shares of females, unemployed, unskilled, immigrants aged between 18 and 24 years and finally, immigrants aged between 25 and 54 years. Looking at the level of municipalities, the immigration has again a significantly negative impact on the Marine Le Pen's score using OLS estimate, regardless of the model used. IV estimate results also show a negative impact of immigration rate in the hierarchical model; however, the effect becomes positive when the integrated model with both geographical levels is used. Nonetheless, it does not have a significant impact when the higher geographical area is department.

For both the hierarchical and the integrated models, the effect at the higher geographical level is positive. The only exception is OLS estimation of the second stage regression at departmental level in hierarchical model, where the impact is positive but insignificant. The magnitude is considerably stronger when IV estimation is used. In comparison with our first simple model presented in Table 2, the magnitude at the higher level of analysis is stronger when we control for composition of immigrants. Therefore, the higher is the number of immigrants in department or employment area, the more likely natives are to vote for Marine Le Pen.

Table 4 – Estimated impact of immigration without square terms and with immigrants' covariates

4.A: Hierarchical model

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1st stage				
1. Immigration rate	-0,0728*** (0,0059)	-0,0353** (0,0149)	-0,0769*** (0,0060)	-0,0564*** (0,0163)
2nd stage				
2. Immigration rate at DEP or EA level	0,0993 (0,0825)	0,3297*** (0,0789)	0,0902** (0,0365)	0,3359*** (-0,0554)
Variables on composition of immigrants	yes	yes	yes	yes
Variables on local population characteristics	no	no	no	no
Department dummies	yes	yes	no	no
Employment area dummies	no	no	yes	yes
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

4.B.: Model with both geographical levels

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Immigration rate	-0,0706*** (0,0075)	0,0018 (0,0179)	-0,0443*** (0,0073)	0,0556*** (0,0195)
2. Immigration rate at departmental level	0,3623*** (0,0145)	0,4310*** (0,0210)		
3. Immigration rate at level of employment area			0,2247*** (0,0112)	0,3297*** (0,0197)
Variables on composition of immigrants	yes	yes	yes	yes
Variables on local population characteristics	no	no	no	no
Department dummies	no	no	no	no
Employment area dummies	no	no	no	no
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In this context, it is interesting to have a look at the estimated impact of our control variables as well. Table 5 displays the coefficients of the control variables on the composition of immigrants only from the first stage of our hierarchical model, as we are more interested in the level of municipalities. All of our variables have a highly significant impact on natives' electoral decisions. Even though the age of immigrants influences Marine Le Pen's score negatively, it is weaker in magnitude than the presence of females. This suggests that the more women and more people in active age among immigrants, the less natives vote for Marine Le Pen.

Table 5 - Estimated impact of immigrant population's characteristics

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Share of females in immigrant population	-0,1454*** (0,0221)	-0,1759*** (0,0230)	-0,1443*** (0,0210)	-0,1649*** (0,0223)
2. Unemployment rate in immigrant population	0,0429*** (0,0071)	0,0527*** (0,0073)	0,0291*** (0,0067)	0,0365*** (0,0068)
3. Share of unskilled in immigrant population	0,1676*** (0,0099)	0,1740*** (0,0103)	0,1506*** (0,0094)	0,1579*** (0,0098)
4. Share of immigrants aged between 15 and 24 years	-0,0706*** (0,0062)	-0,0698*** (0,0065)	-0,0612*** (0,0060)	-0,0620*** (0,0063)
5. Share of immigrants aged between 25 to 54 years	-0,0798*** (0,0159)	-0,0539*** (0,0191)	-0,0634*** (0,0155)	-0,0453** (0,01890)
Variables on composition of immigrants	yes	yes	Yes	Yes
Variables on local population characteristics	no	no	No	No
Department dummies	yes	yes	No	No
Employment area dummies	no	no	Yes	Yes
Type of urban unit dummies	no	no	No	No

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

On the other hand, the unemployment rate among immigrants and their skill level seem to have the opposite impact. Thus, the higher the unemployment rate of immigrants and the less skilled immigrants are, the more likely natives are to cast their vote for Marine Le Pen.

Second, we analyse the impact of immigration on Le Pen's score when only covariates on the composition of native population are controlled for (Table 6). We include the following characteristics of the population: the share of workers with no or primary education, the share of highly skilled workers, unemployment rate, the share of population aged between 18 and 24 years and the share of population aged between 18 to 24 years with just vocational education (interaction term). Let us first examine the impact of immigration at the municipal level. Using OLS, in both the hierarchical and integrated model containing both geographical levels, the impact of immigration appears to be negative. However, IV estimates do not prove to be consistent and highly significant except from the hierarchical model estimation when employment area is considered higher level. Thus, the score of Le Pen decreases with an increasing number of immigrants.

Table 6 - Estimated impact of immigration with squared terms and with natives' covariates

6.A: Hierarchical model

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1nd stage				
1. Immigration rate	-0,0472*** (0,00265946)	-0,0131 (0,00893535)	-0,0420*** (0,0031)	-0,0280*** (0,0101)
2nd stage				
2. Immigration rate at DEP or EA level	0,1585* (0,0944)	0,4653*** (0,0810)	0,1171*** (0,0241)	0,2826*** (0,0353)
Variables on composition of immigrants	no	no	no	No
Variables on local population characteristics	yes	yes	yes	Yes
Department dummies	yes	yes	no	No
Employment area dummies	no	no	yes	Yes
Type of urban unit dummies	no	no	no	No

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

6.B: Models with both geographical levels

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Immigration rate	-0,0661*** (0,0032)	-0,0106 (0,0109227)	-0,0493*** (0,0031)	0,0006 (0,0127)
2. Immigration rate at departmental level	0,1715*** (0,0077)	0,3490*** (0,0603)		
3. Immigration rate at level of employment area			0,1110*** (0,0053)	0,2311*** (0,0145)
Variables on composition of immigrants	no	no	no	no
Variables on local population characteristics	yes	yes	yes	yes
Department dummies	no	no	no	no
Employment area dummies	no	no	no	no
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Let us now look at the impact of the immigration rate at the higher geographical level. Both hierarchical and integrated models suggest that the immigration in the higher geographical level than municipality influences Marine Le Pen's score positively, IV estimates being stronger in magnitude. However, when using OLS estimation in our second stage of the hierarchical model at the level of departments, the coefficient becomes less significant. Nevertheless, according to our results, the higher is the number of immigrants at the higher geographical level, the more votes natives cast for Marine Le Pen.

Let us now look at the impact of the control variables on the composition of native population in the first stage of our hierarchical model (Table 7). Most of the estimates are consistent and highly significant. We find that the share of workers with no or primary education influences voting for the rightist party positively. Thus, the more workers with no or primary education, the more natives vote for Le Pen. The same is true for the unemployment rate, even though the coefficient becomes insignificant when using IV estimates and considering employment area as the higher level. Therefore, the more unemployed people in the municipality, the more votes natives cast for Le Pen. Similarly, the higher the number of young natives aged between 18 to 24 years with only vocational education, the higher the scores of Le Pen in the municipality. This finding confirms our fifth hypothesis (H5) stating that support for *Rassemblement National* is higher among young people with vocational education only. However, when the share of native population aged between 18 to 24 years is not interacted with educational level, the impact is negative. This means that the higher the number of young natives in the municipality, the less people vote for Marine Le Pen. Equally, the more highly skilled workers there are at the municipal level, the less likely natives are to cast their vote for Marine

Le Pen. The total number of natives in municipality has a negative impact on Le Pen's votes as well, suggesting that the more populated municipalities are less likely to support Le Pen in the elections. All these results conform to the literature.

Table 7 - Estimated impact of native population's characteristics

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Total population	-0,0324*** (0,0023)	-0,0372*** (0,0026)	-0,0358*** (0,0023)	-0,0395*** (0,0026)
2. Share of workers with no or primary education	0,4562*** (0,0105)	0,4355*** (0,0120)	0,4508*** (0,0105)	0,4422*** (0,0120)
3. Share of highly skilled workers	-0,0745*** (0,0041)	-0,0718*** (0,0047)	-0,0763*** (0,0040)	-0,0751*** (0,0046)
4. Unemployment rate	0,0430*** (0,0070)	0,0207** (0,0090)	0,0173** (0,0069)	0,0017 (0,0092)
5. Share of population aged between 18 to 24 years	-0,8346*** (0,0184)	-0,9337*** (0,0209)	-0,7990*** (0,01859)	-0,8806*** (0,0214)
6. Share of population aged between 18 to 24 years with only vocational education	0,8855*** (0,0164)	0,9908*** (0,0189)	0,8478*** (0,0166)	0,9325*** (0,0194)
Variables on composition of immigrants	no	no	no	no
Variables on local population characteristics	yes	yes	yes	yes
Department dummies	yes	yes	no	no
Employment area dummies	no	no	yes	yes
Type of urban unit dummies	no	no	no	No

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Lastly, we introduce the characteristics of both the immigrants and the natives (Table 8). The overall relationship between the municipal immigration rate and the support for Le Pen is concave in both models (for graph see Figure 3 in the appendix). The coefficients of the immigration rate variable are positive, even though less significant in the hierarchical model, whereas the coefficients of the squared term have a negative sign. Hence, a higher immigration rate increases the number of votes for Marine Le Pen in municipalities where the immigration rate is low but decreases it in municipalities where the immigration rate is sufficiently high. The IV estimation leads to stronger effects in magnitude as well as the integrated model in comparison to the hierarchical one, except for OLS estimation using employment areas.

Table 8 – Estimated impact of immigration with squared terms and with all the covariates

8.A: Hierarchical model

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1nd stage				
1. Immigration rate	0,1041* (0,0600)	0,1732* (0,0969)	0,1770*** (0,0629)	0,2174* (0,1224)
2. Squared Immigration rate	−0,0144*** (0,0041)	−0,0581*** (0,0154)	−0,0168*** (0,0043)	−0,0432** (0,0177)
2nd stage				
7. Immigration rate at DEP or EA level	5,7045*** (1,4619)	10,3559*** (3,2481)	2,8831*** (0,9522)	2,4809* (1,4533)
8. Squared Immigration rate at DEP or EA level	−0,1517** (0,0686)	−0,0314 (0,1708)	−0,0157 (0,0310)	−0,0513 (0,07193)
Variables on composition of immigrants	yes	yes	yes	yes
Variables on local population characteristics	yes	yes	yes	yes
Department dummies	yes	yes	no	no
Employment area dummies	no	no	yes	yes
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

weak
instrument
in the 2nd
stage

8.B.: Model with both geographical levels

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Immigration rate	0,2401*** (0,0790)	0,8132*** (0,2196)	0,1584** (0,0774)	0,7345*** (0,1721)
2. Squared Immigration rate	−0,0058 (0,0048)	−0,0598** (0,0239)	−0,0177*** (0,0048)	−0,0841*** (0,0199)
3. Immigration rate at departmental level	4,4438*** (0,2537)	2,6112*** (0,4411)		
4. Squared immigration rate at departmental level	−0,1087*** (0,0126)	0,08393** (0,0326)		
5. Immigration rate at level of employment area			2,4226*** (0,1666)	2,5511*** (0,3240)
6. Squared immigration rate at level of employment area			−0,0717*** (0,0097)	−0,0881*** (0,0270)
Variables on composition of immigrants	yes	yes	yes	yes
Variables on local population characteristics	yes	yes	yes	yes
Department dummies	no	no	no	no
Employment area dummies	no	no	no	no
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

At the higher geographical level, the relationship appears to be in most cases concave as well, however the coefficients associated with squared terms are less significant in the hierarchical model. The only exception is the IV estimation using departments in which the effect

of immigration is strictly positive. Even though the instrument did not prove strong in IV estimation of the hierarchical model when employment areas are considered as the higher level (but results are confirmed by the integrated model including both geographical levels), we consider the IV hierarchical model estimations to be the most reliable. With regard to the complexity of this model, we can conclude that the relationship between the immigration rate and the support for *Rassemblement National* is concave at both levels of our analysis (for graphs see Figures 3 and 4 in the appendix). Thus, the more immigrants there are in a municipality or at the higher geographical level, the more people vote for Marine Le Pen when the immigration rate is small enough. And vice versa, when the number of immigrants is high enough and there is an increase in immigration rate, people are less likely to vote for Marine Le Pen.

In order to examine the impact of immigration on electoral outcomes in more populated (H3) and low skilled municipalities (H4), we used interaction terms between the immigration rate and total population or share of workers with no or primary education. These variables are introduced in the most complex models including variables on both natives' and immigrants' composition (Table 9).

Let us firstly look at the sensitivity to immigration in more populated areas. When using OLS estimates, the coefficients are negative, except for the estimate of the integrated model with both geographical levels taking employment areas as the higher level. In this case the coefficient has positive sign. All of these coefficients are, however, insignificant. On the other hand, using IV estimates, the interaction between immigration and municipal population is significant and positive in the hierarchical model. In the integrated model, IV estimates become negative, and even insignificant when departments are considered as the higher level. For all the models, the relationship is negative at the higher geographical level, if significant. Nonetheless, in most cases immigration does not seem to have any particular effect in more populated municipalities at neither departmental nor employment area level. These negative coefficients imply that, in more populated municipalities, the presence of immigrants increases less or decreases more the electoral score of Marine Le Pen.

Examining the sensitivity to immigration in less educated municipalities, we see that results are more straightforward. At the level of municipalities, using either OLS or IV estimates, the coefficient of the interaction between immigration and the share of workers with no or primary education is negative. The only exception, with an insignificant effect, but still negative, is the case when employment area is taken as the higher level in integrated model. Hence, the results suggest that the effect of immigration is lower in the municipalities that have a higher

share of workers with no or primary education. The effect is also lower at the higher level of our analysis.

Table 9 – Estimated impact of immigration interaction variables with covariates

9.A: Hierarchical model

Variable interacting with the immigration rate	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1st stage				
1. Population	−0,0010 (0,0040)	0,0344*** (0,0074)	−0,0046 (0,0040)	0,0355*** (0,0108)
2. Share of workers with no or primary education	−0,0306** (0,0155)	−0,0911*** (0,0243)	−0,0415** (0,0170)	−0,1214*** (0,0281)
2nd stage				
3. Population at DEP or EA level	−0,0711 (0,0731)	−0,3245** (0,1417)	−0,0596* (0,0323)	−0,00370 (0,0470)
4. Share of workers with no or primary education at DEP or EA level	−1,1921*** (0,2427)	−1,4895*** (0,5164)	−0,5739*** (0,1894)	−0,5513* (0,2922)
Variables on composition of immigrants	yes	yes	yes	yes
Variables on local population characteristics	yes	yes	yes	yes
Department dummies	yes	yes	no	no
Employment area dummies	no	no	yes	yes
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

weak
instrument in
the 2nd stage

9.B: Model with both geographical levels

Variable interacting with the immigration rate	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Municipal population	−0,0092 (0,0056)	−0,0206 (0,0182)	0,000751 (0,0054)	−0,0327** (0,0157)
2. Share of workers with no or primary education	−0,0523*** (0,0191)	−0,1287** (0,0538)	−0,0393** (0,0189)	−0,0530 (0,0382)
3. Population (departments)	−0,0385*** (0,0081)	−0,0255 (0,0160)		
4. Population (employment areas)			−0,0551*** (0,0067)	0,0057 (0,0128)
5. Share of workers with no or primary education (departments)	−1,0201*** (0,0703)	−0,5915*** (0,1186)		
6. Share of workers with no or primary education (employment areas)			−0,4821*** (0,0429)	−0,5516*** (0,0768)
Variables on composition of immigrants	yes	yes	yes	yes
Variables on local population characteristics	yes	yes	yes	yes
Department dummies	no	no	no	no
Employment area dummies	no	no	no	no
Type of urban unit dummies	no	no	no	no

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Both OLS and IV estimates suggest that the relationship is negative and significant, except the second stage result in our hierarchical model at the level of employment area. The instrument did not prove strong again, but negative result was confirmed by a similar coefficient from the integrated model including both geographical levels. Thus, the support for far-right party increases more slowly when the number of immigrants increases at both geographical levels in municipalities where natives are on average less educated. This finding does not confirm our hypothesis (H4) as we expected it to have the opposite effect.

CONCLUSION

This paper focused on the electoral consequences of immigration and contributes to the current literature about this topic with a comprehensive analysis of the French presidential elections of 2017. With regard to the scope restrictions of the paper, we focused mainly on the impact of immigrants' presence and their characteristics on the Marine Le Pen's vote share. Even though these were our main variables of interest, we also controlled for other variables on the composition of native population to avoid misspecification problems in our models.

Because the findings in the literature suggested effects of opposite of the immigration rate at the level of municipalities and departments (DellaPosta 2013; Rojon 2013), we combined two geographical levels. Using a hierarchical model and an integrated model including both geographical levels, we carried out an analysis at the municipality level using also, as a higher level, either the department or the employment area. To ensure that our results are robust and unbiased, we used an instrumental variable which proved to be strong in most cases. For this purpose, we used the share of immigrants in municipalities from 1982 as our instrumental variable, which enabled us to cope with the endogeneity bias in the OLS results.

With regard to the robustness of our results, we consider IV estimates of the hierarchical model to provide most reliable results. We find that the average tendency appears to differ at the two levels. The municipal immigration rate tends to have a negative impact, implying that the more immigrants there are in a municipality, the less natives vote for Le Pen. On the other hand, the immigration rate at the higher geographical level has a positive effect, which means that the higher is the presence of immigrants in the department or the employment area, the more likely natives are to vote for Le Pen. These results **confirm** our first two hypothesis (**H1** and **H2**).

However, in order to avoid misspecification problems with our model, we introduced squared terms of immigration rate. The results prove that the relationship between immigration

rate and the scores of Marine Le Pen is indeed concave at both levels; thus, the elasticity changes when moving from a municipality with low immigration rate to a municipality with high immigration rate. Hence, with an increasing number of immigrants, natives tend to vote for far-right party more often if the immigration rate in the area is sufficiently low. On the other hand, when the immigration rate in the area is sufficiently high, the support for far-right party decreases with an increasing number of immigrants. The overall relationship thus largely depends on position of the turning point.

Further, we examined the sensitivity to immigration in less educated municipalities, since according to Lubbers and Scheepers (2002) and Lubbers, Scheepers and Werts (2013) the typical voter of rightist party is less educated and low skilled individual (**H4**). This hypothesis is **not supported** by our results, and thus, the higher is the share of workers with no or only primary education in the municipality, the slower is the increase in votes for Marine Le Pen with an increasing number of immigrants in the area. On the other hand, the sensitivity to immigration linked to the number of inhabitants in the area seems to have rather **insignificant** and **ambiguous** impact (**H3**).

Lastly, we studied whether the *Rassemblement National* favours the support of young individuals with vocational education (**H5**) as suggested by Lafont (2011). This hypothesis is **supported** by our estimations in both models at the level of municipality, suggesting that young natives with only vocational education are indeed more likely to cast their vote for Marine Le Pen.

In comparison with previous papers examining the impact of immigrants on the electoral outcomes, our work presents several original elements. First, the data for the whole country have been used with the focus on two different geographical levels. Second, to estimate the behaviour of our variable of interest we used both hierarchical and integrated models. Finally, in order to avoid problems with endogeneity in our analysis, we introduced an instrumental variable. With regard to the comprehensiveness of this topic, it would have been also useful to examine the impact of different immigrants' nationalities on the electoral decisions of natives. However, since the data about nationalities of immigrants in France are not publicly available, it was not possible for us to include them in our research. Nevertheless, we encourage others to extend the scope of the research of electoral consequences of immigration as it still remains an issue with gradually increasing importance.

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APPENDIX

Table 10 - Literature review by topic

	AUTHOR	YEAR	TOPIC	MAIN RESULTS
1	ALTONJI, J., ET D. CARD	1989	LABOUR MARKET	EMPLOYMENT IS DECREASING AT LOWER PACE IN CITIES WITH HIGH IMMIGRANT POPULATION IMPLYING THAT SOME LOW-WAGE INDUSTRIES WERE PRESERVED ONLY THANKS TO THE LABOUR CAPACITY PROVIDED BY IMMIGRANTS
2	BARONE, G., A. D'IGNAZIO, G. DE BLASIO, P. NATICCHIONI	2014	ELECTORAL OUTCOMES	+ RELATIONSHIP; BIG CITIES BEHAVE DIFFERENTLY
3	BRECHON, P., ET S.K. MITRA	1992	EMERGENCE OF NF	STRONG AREA OF SUPPORT FOR <i>FN</i> = FORMER INDUSTRIAL AND URBANIZED AREAS SUFFERING FROM HIGH CRIME RATES AND WITH LARGEST SHARE OF NORTH AFRICAN IMMIGRANTS
4	BUSSI, M., COLANGE, C. ET J. FOURQUET	2012	ELECTORAL OUTCOMES	NEGATIVE EFFECT OF IMMIGRANTS ON THE VOTES FOR LE PEN AT CANTONAL LEVEL
5	DELLA POSTA, D.J.	2013	ELECTORAL OUTCOMES	INTERGROUP CONTACT THEORY AT COMMUNAL LEVEL; COMPETITIVE THREAT THEORY AT DEPARTMENTAL LEVEL
6	FACCHINI, G., ET A.M. MAYDA	2008	WABOUR MARKET/ WELFARE STATE/ POLICY OUTCOMES	MEDIAN VOTER FRAMEWORK; SMALL MINORITY OF VOTERS FAVOUR MORE OPEN MIGRATION POLICIES REGARDLESS OF INCOME LEVEL OF THE COUNTRY
7	FACCHINI, G. ET A.M. MAYDA	2009A	WELFARE STATE	LABOUR MARKET DETERMINANTS ARE MORE IMPORTANT THAN WELFARE-STATE EFFECTS; THE RICHER THE DESTINATION COUNTRY THE MORE POSITIVE THE IMPACT OF INDIVIDUAL SKILL ON PRO-IMMIGRATION ATTITUDES AND THE MORE NEGATIVE THE IMPACT ON INDIVIDUAL IMPACT
8	FACCHINI, G. ET A.M. MAYDA	2009B	POLICY OUTCOMES	GOVERNMENT POLICIES CONSISTENT WITH MEDIAN VOTER FRAMEWORK; AIM IS MOSTLY TO KEEP THE SAME OR LOWER THE LEVEL OF IMMIGRATION
9	FACCHINI, G. ET M.F. STEINHARDT	2011	POLICY OUTCOMES	+ RELATIONSHIP BETWEEN UNEMPLOYMENT RATE IN DISTRICT AND VOTING FOR LIBERALIZATION OF LOW-SKILLED IMMIGRATION
10	FACCHINI, G., MAYDA, A.M., ET MISHRA, P.	2011	POLICY OUTCOMES	IN SECTORS IN WHICH BUSINESS LOBBIES ARE MORE ACTIVE THE BARRIERS TO MIGRATION ARE LOWER THAN IN SECTORS IN WHICH LABOUR UNIONS DOMINATE
11	FROMENTION, V.	2013	LABOUR MARKET	NEGATIVE CORRELATION BETWEEN INFLOW OF IMMIGRANTS AND UNEMPLOYMENT RATES
12	GARCÍA, A.S.	2006	ELECTORAL OUTCOMES	FOCUS ON SECURITY CONCERN IN HOST COUNTRY – THE HIGHER THE NUMBER OF POTENTIAL ILLEGAL IMMIGRANTS, THE HIGHER IS THE PROBABILITY THAT THE RIGHT-WING PARTY WINS THE ELECTION
13	GERDES C. ET E. WADENSJÖ	2008	ELECTORAL OUTCOMES	ANTI-IMMIGRATION PARTIES ARE MORE SUPPORTED IN MUNICIPALITIES WITH “NON-WESTERN” IMMIGRANTS
14	GOLDER, M.	2003	ELECTORAL OUTCOMES	LEVEL OF UNEMPLOYMENT AND IMMIGRATION MATTERS FOR POPULIST PARTIES BUT NOT FOR NEO-FASCIST PARTIES
15	GOLDER, M.	2016	ELECTORAL OUTCOMES	INCOMERS ARRIVING FOR NONECONOMIC REASONS REPRESENT BIGGER THREAT TO LOCAL ECONOMIES
16	HALLA, M., A.F. WAGNER, J. ZWEIMÜLLER	2012	ELECTORAL OUTCOMES	HISTORICAL SETTLEMENT PATTERN IS IMPORTANT; PRESENCE OF LOW OR MEDIUM EDUCATED IMMIGRANTS IS + CORRELATED TO HIGHER VOTE SHARE FOR RIGHTIST PARTY

17	HARTOUG, J. ET A. ZORLU	2002	LABOUR MARKET	OVERALL VERY SMALL EFFECT ON NATIVES' WAGES, BUT HIGHER IMPACT ON IMMIGRANTS' WAGES
18	HIX, S. ET A. NOURY	2007	POLICY OUTCOMES	POLITICAL INTERESTS ARE MORE IMPORTANT WHEN SHAPING MIGRATION POLICY; WOMEN AND MINORITY MEP'S ARE MORE PRO-IMMIGRATION
19	HUNT, J.	1992	LABOUR MARKET	REPATRIATES HAD SMALL IMPACT ON THE UNEMPLOYMENT OF NATIVES, BUT THEY ENCOUNTERED HIGH UNEMPLOYMENT RATES THEMSELVES
20	JEAN, S. ET M. JIMENEZ	2011	LABOUR MARKET	NO PERMANENT EFFECT ON LABOUR MARKET CAUSED BY IMMIGRANTS
21	LAFONT, V.	2001	MILITANTS OF NF	LARGE NUMBER OF MILITANTS ENGAGED AMONG YOUNG AND RETIRED PEOPLE
22	LUBBERS, M., ET SCHEEPERS, P.	2002	ELECTORAL OUTCOMES	LOW INCOME AND DEPRIVATION IN PRESENT SITUATION SUPPORT HIGHER VOTING FOR NATIONAL FRONT
23	LUBBERS, M., SCHEEPERS, P. ET WERTS, H	2013	ELECTORAL OUTCOMES	THE HIGHER THE IMMIGRATION AND THE HIGHER THE NUMBER OF ASYLUM SEEKERS THE HIGHER THE CHANCE OF FAR-RIGHT VOTES
24	MAYDA, A. M.	2006	LABOUR MARKET COMPETITION	BOTH ECONOMIC AND NON-ECONOMIC FACTORS ARE IMPORTANT
25	McLAREN, M.L.	2003	ANTI-IMMIGRANT PREJUDICE	STRONG EVIDENCE IN SUPPORT OF CONTACT HYPOTHESIS
26	MENDEZ, I., ET I. CUTILLAS	2014	ELECTORAL OUTCOMES	LATIN-AMERICAN IMMIGRATION INCREASES TURNOUT AND NUMBER OF VOTES FOR LEFTIST PARTY; AFRICAN IMMIGRATION INCREASES SUPPORT FOR ANTI-IMMIGRATION PARTIES
27	ORTEGA, F. ET J. POLAVIEJA	2012	LABOUR MARKET COMPETITION	MANUAL INTENSITY OF THE OCCUPATION PLAYS THE MOST IMPORTANT ROLE IN EXPLAINING ATTITUDES TOWARD IMMIGRANTS (- RELATIONSHIP)
28	OTTO, A.H. ET M.F. STEINHARDT	2014	ELECTORAL OUTCOMES	+ RELATIONSHIP; NON-ECONOMIC CHANNEL AT WORK
29	ROJON S.	2013	ELECTORAL OUTCOMES	COMMUNAL LEVEL – NEGATIVE EFFECT; DEPARTMENTAL LEVEL – POSITIVE EFFECT; + RELATIONSHIP BETWEEN UNEMPLOYMENT AND VOTING FOR NATIONAL FRONT
30	ROTTE R., M. STEININGER	2008	ELECTORAL OUTCOMES	+ RELATIONSHIP; UNEMPLOYMENT HAS AMBIGUOUS EFFECT
31	SHVETS, Y.	2004	ELECTORAL OUTCOMES	+ RELATIONSHIP BETWEEN UNEMPLOYMENT AND NATIONAL FRONT VOTING; MAGHREB IMMIGRATION INCREASE VOTING FOR NATIONAL FRONT
32	STENMAYR, A.	2016	ELECTORAL OUTCOMES	REFUGEES REDUCE VOTING FOR RIGHTIST PARTY AND INCREASE OPTIMISM FOR INTEGRATION
33	VERTIER, P. ET VISKANIC, M.	2017	ELECTORAL OUTCOMES	SPILL OVER EFFECT; CONTACT HYPOTHESIS AFFIRMED (LOWER VOTING FOR NATIONAL FRONT IN PLACES WITH HIGHER SHARE OF IMMIGRANTS)

Table 11 - **Type of urban area values**

Values of type of urban area variable	
0	Non-Urban Area
1	Less than 5,000 inhabitants
2	5,000 to 9,999 inhabitants
3	10,000 to 19,999 inhabitants
4	20,000 to 49,999 inhabitants
5	50,000 to 99,999 inhabitants
6	100,000 to 199,999 inhabitants
7	200,000 to 2,999,999 inhabitants
8	Paris Urban Area

Figure 1 – **Hierarchical model with squared terms without covariates**

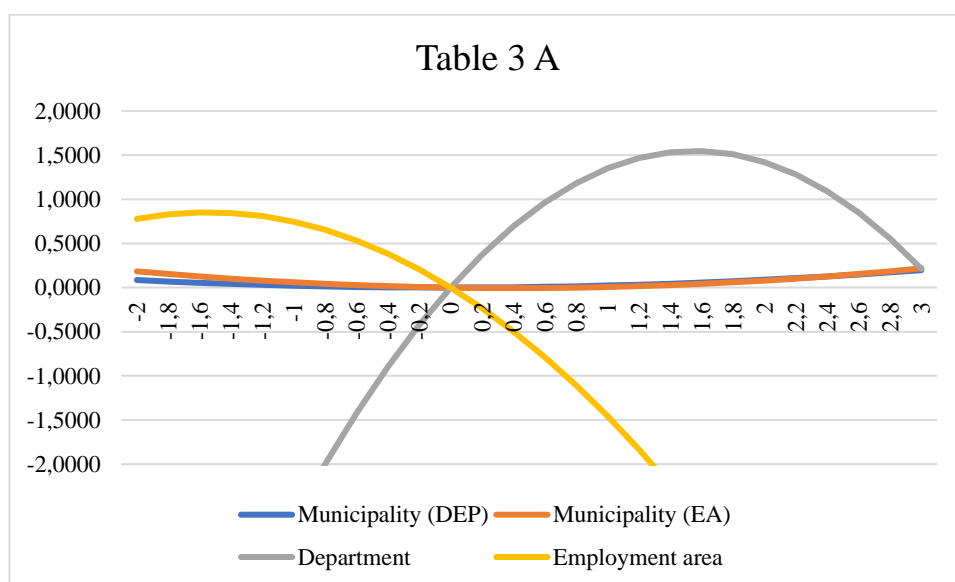


Figure 2 - **Integrated model with squared terms without covariates**

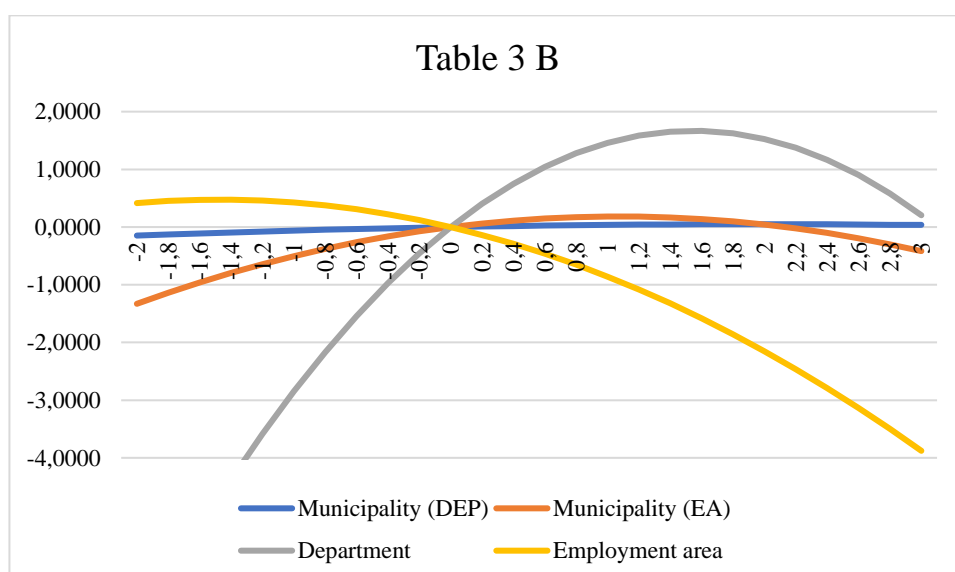


Figure 3 - Models with squared terms and all covariates (municipality level)

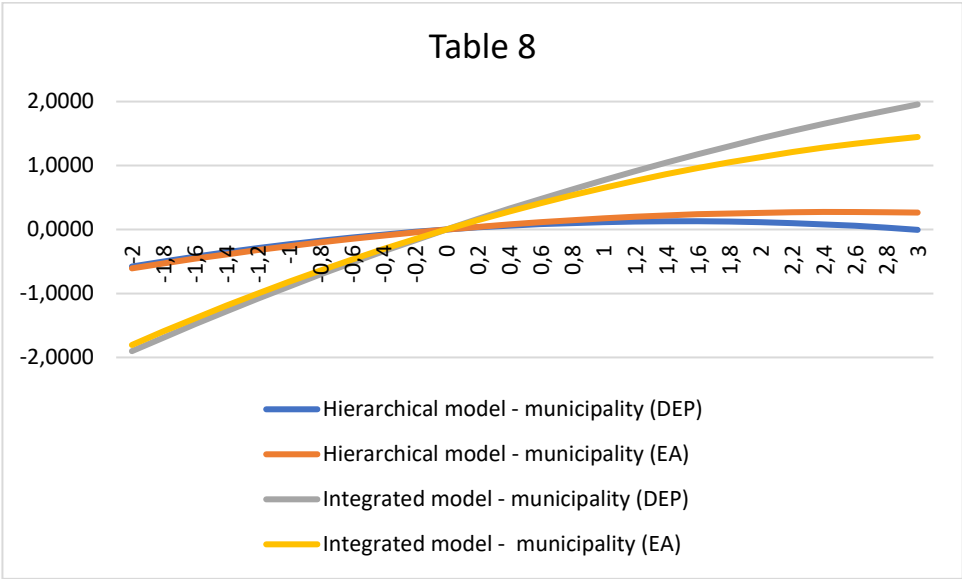


Figure 4 - Models with squared terms and all covariates (higher geographical level)

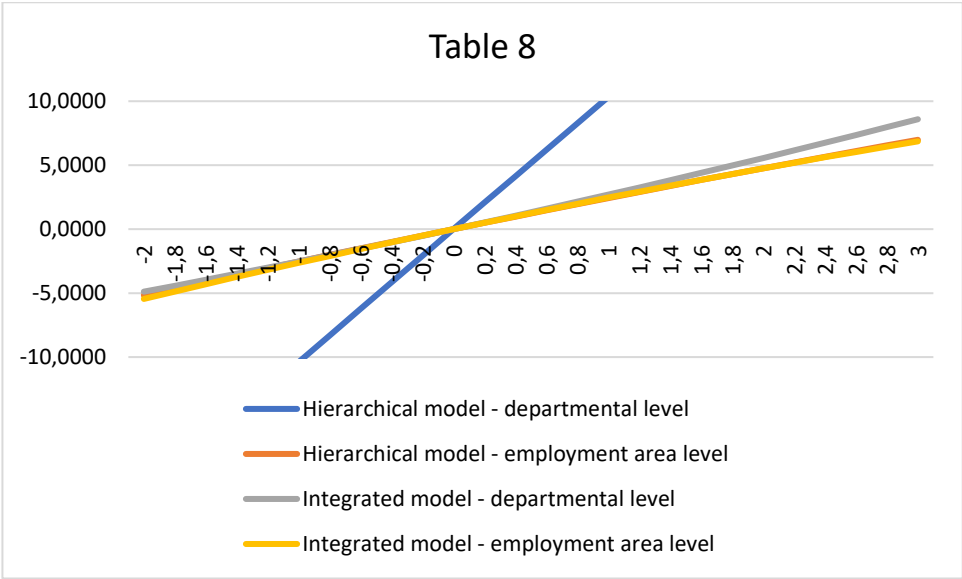


Table 12 - Detailed results of the full hierarchical models with squared terms and covariates

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1nd stage				
1. Immigration rate	0,1041*	0,1711	0,1770***	0,2174*
	(0,0600)	(0,1129)	(0,0629)	(0,1224)
2. Total population	0,0790***	0,0416	0,0570**	0,0080
	(0,0276)	(0,0437)	(0,0268)	(0,0440)
3. Share of workers with no or primary education	0,4840***	0,5446***	0,4982***	0,5836***
	(0,0233)	(0,0355)	(0,0237)	(0,0359)
4. Share of highly skilled workers	-0,0730***	-0,0730***	-0,0801***	-0,0775***
	(0,0081)	(0,0092)	(0,0080)	(0,0091)
5. Unemployment rate	-0,0024	-0,0039	-0,0354**	-0,0300
	(0,0165)	(0,0197)	(0,0167)	(0,0208)
6. Immigration rate squared	-0,0144***	-0,0577***	-0,0168***	-0,0432**
	(0,0041)	(0,0165)	(0,0043)	(0,0177)
7. Total population squared	-0,0077***	-0,0090***	-0,0061***	-0,0072***
	(0,0017)	(0,0022)	(0,0017)	(0,0022)
8. Share of females in immigrant population	-0,0541***	-0,0776***	-0,0533***	-0,0698***
	(0,0171)	(0,0183)	(0,0158)	(0,0175)
9. Unemployment rate in immigrant population	0,0001	-0,0038	-0,0034	-0,0082
	(0,0058)	(0,0088)	(0,0056)	(0,0084)
10. Share of unskilled in immigrant population	0,0148**	0,0095	0,0142**	0,0092
	(0,0074)	(0,0082)	(0,0070)	(0,0076)
11. Share of 15 to 24 years in immigrant population	-0,0101**	-0,0145**	-0,0083*	-0,0179***
	(0,0051)	(0,0064)	(0,0049)	(0,0060)
12. Share of 25 to 54 years in immigrant population	0,0032	0,0338**	0,0076	0,0252
	(0,0130)	(0,0158)	(0,0126)	(0,0156)
13. Sensitivity to immigration in more populated municipalities	-0,0010	0,0345***	-0,0046	0,0355***
	(0,0040)	(0,0104)	(0,0040)	(0,0108)
14- Sensitivity to immigration in less educated municipalities	-0,0306**	-0,0911***	-0,0415**	-0,1214***
	(0,0155)	(0,0257)	(0,0170)	(0,0281)
15. Share of population 18 to 24 years	-1,0417***	-1,0445***	-1,0007***	-0,9856***
	(0,0293)	(0,0376)	(0,0300)	(0,0410)
16. Young natives with vocational education	1,0728***	1,0676***	1,0332***	1,0211***
	(0,0255)	(0,0338)	(0,0257)	(0,0370)
2nd stage				
17. Immigration rate at higher level	5,7045***	10,3559***	2,8831***	2,4809*
	(1,4619)	(3,2481)	(0,9522)	(1,4533)
18. Total population at higher level	-0,7296	-1,7698	0,8271***	1,3360***
	(0,9893)	(1,2243)	(0,2861)	(0,3377)
19. Share of workers with no or primary education at higher level	2,4673***	2,4626***	1,4337***	1,3885***
	(0,5749)	(0,8546)	(0,3572)	(0,4612)
20. Share of highly skilled workers at higher level	0,1202	-0,8540*	0,2360*	0,0079
	(0,2480)	(0,4874)	(0,1414)	(0,1530)
21. Unemployment rate at higher level	0,9591***	0,1407	0,8023***	0,7047***
	(0,1828)	(0,4002)	(0,0981)	(0,1110)
22. Immigration rate squared at higher level	-0,1517**	-0,0314	-0,0157	-0,0513
	(0,0686)	(0,1708)	(0,0310)	(0,0719)
23. Total population squared at higher level	0,0341	0,0918*	-0,0315**	-0,0571***
	(0,0386)	(0,0497)	(0,0129)	(0,0154)
	-0,8927	-1,1146	-0,2371	-0,6623

24. Share of females in immigrant population at higher level	(1,1097)	(1,5280)	(0,3831)	(0,4431)
25. Unemployment rate in immigrant population at higher level	-0,3090 (0,2008)	0,5621 (0,4325)	-0,1460 (0,0988)	0,0798 (0,1139)
26. Share of unskilled in immigrant population at higher level	0,7134** (0,2884)	-0,4068 (0,5852)	0,2536 (0,1579)	-0,3495 (0,2493)
27. Share of 15 to 24 years in immigrant population at higher level	-0,0180 (0,1762)	0,1045 (0,2392)	-0,1732*** (0,0643)	-0,0492 (0,0808)
28. Share of 25 to 54 years in immigrant population at higher level	0,0570 (0,3691)	0,6434 (0,6026)	0,3741* (0,2143)	0,7855** (0,3360)
29. Sensitivity to immigration in more populated municipalities at higher level	-0,0711 (0,0731)	-0,3245** (0,1417)	-0,0596* (0,0323)	-0,0037 (0,0470)
30. Sensitivity to immigration in less educated municipalities at higher level	-1,1921*** (0,2427)	-1,4895*** (0,5164)	-0,5739*** (0,1894)	-0,5513* (0,2922)
31. Share of population 18 to 24 years at higher level	0,1690 (0,4037)	-0,0749 (0,6942)	0,5454** (0,2475)	0,3969 (0,2680)
32. Young natives with vocational education at higher level	-0,0397 (0,2173)	0,0592 0,4738	-0,1798 0,1676	-0,0341 (0,2027)
Type of urban dummies	no	no	no	no
Department dummies	yes	yes	no	no
EA dummies	no	no	yes	yes
Robust standard errors	yes	yes	yes	yes
1nd stage				
Standard error of regression	0,2371	0,2365	0,2218	0,2196
Adjusted R ²	0,7545	0,7570	0,7852	0,7902
weak instrument (if < 10)		77,201		131,33
2nd stage				
Standard error of regression	0,1773	0,2477	0,2266	0,2621
Adjusted R ²	0,6548	0,3852	0,5524	0,4411
weak instrument (if < 10)		11,22		0,04

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 13 - Detailed results of the full models with both geographical levels, squared terms and covariates

Independent variable	DEPARTMENT		EMPLOYMENT AREA	
	OLS	IV	OLS	IV
1. Immigration rate	0,2401*** (0,0790)	0,8132*** (0,2196)	0,1584** (0,0774)	0,7345*** (0,1721)
2. Total population	0,2269*** (0,0403)	0,4361*** (0,0747)	0,2619*** (0,0355)	0,4227*** (0,0541)
3. Share of workers with no or primary education	0,4989*** (0,0290)	0,5419*** (0,0582)	0,4705*** (0,0292)	0,4646*** (0,0529)
4. Share of highly skilled workers	-0,0672*** (0,0100)	-0,0785*** (0,0132)	-0,0571*** (0,00927302)	-0,0582*** (0,0115)
5. Unemployment rate	-0,0123 (0,0193)	-0,01818 (0,0265)	-0,0141 (0,0192)	-0,0293 (0,0260)
6. Immigration rate squared	-0,0058 (0,0048)	-0,0598** (0,0239)	-0,0177*** (0,0048)	-0,0841*** (0,0199)
7. Total population squared	-0,0128*** (0,0024)	-0,0263*** (0,0041)	-0,0147*** (0,0022)	-0,0265*** (0,0030)
8. Share of females in immigrant population	-0,0284 (0,0209)	-0,0732*** (0,0263)	-0,0511*** (0,0193)	-0,1020*** (0,0239)
9. Unemployment rate in immigrant population	0,0024 (0,0074)	0,0283** (0,0132)	0,0050 (0,0072)	0,0342*** (0,0110)
10. Share of unskilled in immigrant population	0,0047 (0,0097)	0,0274** (0,0122)	0,0028 (0,0091)	0,0295*** (0,0111)
11. Share of 15 to 24 years in immigrant population	-0,0158** (0,0063)	0,0018 (0,0090)	-0,0249*** (0,0063)	-0,0005 (0,0087)
12. Share of 25 to 54 years in immigrant population	-0,0038 (0,0162)	0,0599*** (0,0213)	0,0036 (0,0163)	0,0594*** (0,0229)
13. Sensitivity to immigration in more populated municipalities	-0,0092 (0,0056)	-0,0206 (0,0182)	0,0007 (0,0054)	-0,0327** (0,0157)
14- Sensitivity to immigration in less educated municipalities	-0,0523*** (0,0191)	-0,1287** (0,0538)	-0,0393** (0,0189)	-0,0530 (0,0382)
15. Share of population 18 to 24 years	-1,0667*** (0,0368)	-1,0933*** (0,0523)	-0,9717*** (0,0350)	-1,0070*** (0,0511)
16. Young natives with vocational education	1,1345*** (0,0317)	1,1183*** (0,0465)	1,0706*** (0,0302)	1,0610*** (0,0457)
17. Immigration rate at higher level	4,4438*** (0,2537)	2,6112*** (0,4411)	2,4226*** (0,1666)	2,5511*** (0,3240)
18. Share of workers with no or primary education at higher level	2,1813*** (0,1338)	0,8905*** (0,2123)	1,2922*** (0,0905)	1,3021*** (0,1523)
19. Share of highly skilled workers at higher level	0,1222** (0,0603)	-0,3835*** (0,0871)	0,1521*** (0,0337)	-0,1999*** (0,0445)
20. Unemployment rate at higher level	0,8872*** (0,0488)	0,4159*** (0,0648)	0,8507*** (0,0370)	0,3243*** (0,0496)
21. Immigration rate squared at higher level	-0,1087*** (0,0126)	0,0839** (0,0326)	-0,0717*** (0,0097)	-0,0881*** (0,0270)
22. Share of females in immigrant population at higher level	-2,7263*** (0,2002)	-5,0873*** (0,2760)	-0,5963*** (0,1275)	-1,7385*** (0,1646)
23. Unemployment rate in immigrant population at higher level	0,1485*** (0,0570)	1,0834*** (0,0857)	-0,2006*** (0,0371)	0,5689*** (0,0547)
24. Share of unskilled in immigrant population at higher level	-0,3214*** (0,0821)	-1,5683*** (0,1364)	0,1510*** (0,0475)	-0,8492*** (0,0825)

25. Share of 15 to 24 years in immigrant population at higher level	−0,2103*** (0,0429)	−0,3940*** (0,0584)	−0,2991*** (0,0243)	−0,3161*** (0,0323)
26. Share of 25 to 54 years in immigrant population at higher level	0,6889*** (0,0798)	1,0542*** (0,1169)	0,4167*** (0,0529)	1,002*** (0,0922)
27. Sensitivity to immigration in more populated municipalities at higher level	−0,0386*** (0,0081)	−0,0255 (0,0160)	−0,0551*** (0,0067)	0,0057 (0,0128)
28. Sensitivity to immigration in less educated municipalities at higher level	−1,0200*** (0,0703)	−0,5915*** (0,1186)	−0,4821*** (0,0429)	−0,5516*** (0,0768)
29. Share of population 18 to 24 years at higher level	0,5394*** (0,1007)	0,3530** (0,1401)	0,6748*** (0,0657)	0,4268*** (0,0851)
30. Young natives with vocational education at higher level	−0,3868*** (0,0682)	−0,0171 (0,0912)	−0,3535*** (0,0525)	−0,1250* (0,0700)
Type of urban dummies	no	No	no	no
Department dummies	no	no	no	no
EA dummies	no	no	no	no
Robust standard errors	yes	yes	yes	yes
Standard error of regression	0,2788	0,2968	0,2995	0,3349
Adjusted R ²	0,6452	0,6129	0,6083	0,5310
weak instrument (if < 10)		120,56		126,56

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 5 - The spatial distribution of immigrants by census 2013

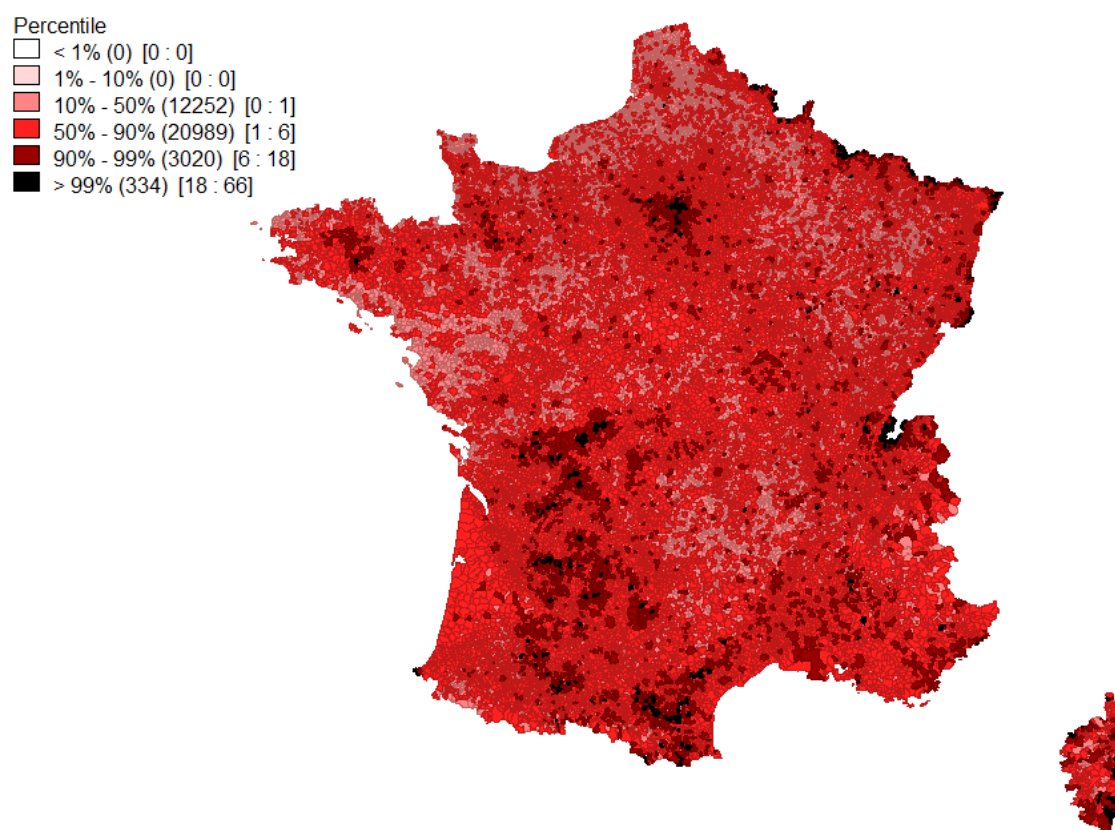


Figure 6 - The vote shares for Marine Le Pen in the first round of the presidential election 2017

