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STOP INVASION! THE ELECTORAL TIPPING POINT IN ANTI-IMMIGRANT VOTING

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**STOP INVASION! THE ELECTORAL  
TIPPING POINT IN ANTI-IMMIGRANT VOTING \***

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**ABSTRACT:** Why do anti-immigrant political parties have more success in areas that host fewer immigrants? Using regression discontinuity design, structural breaks search methods and data from a sample of Italian municipalities, we show that the relationship between the vote shares of anti-immigrant parties and the share of immigrants follows a U-shaped curve, which exhibits a tipping-like behavior around a share of immigrants equal to 3.35 %. We estimate that the vote share of the main Italian anti-immigrant party (Lega Nord) is approximately 6 % points higher for municipalities below the threshold. Using data on local labor market characteristics and on the incomes of natives and immigrants, we provide evidence which points at the competition in the local labor market between natives and immigrants as the more plausible explanation for the electoral success of anti-immigrant parties in areas with low shares of immigrants. Alternative stories find less support in the data.

JEL Codes: D72, J61, R23

Keywords: Migration, extreme-right parties, anti-immigrant parties, populism, tipping point, regression discontinuity design

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# 1 Introduction

Why do anti-immigrant political parties have more success in areas that host fewer immigrants? Also, given that immigrants tend to live in big urban areas rather than in small towns, why do small towns are more likely to vote for anti-immigrant parties than big urban areas? Recent evidence from different countries around the world suggests that often anti-immigrant political parties receive the electoral support of areas that host low shares of immigrants, and that the vote shares of anti-immigrant parties seem to respond more to immigration inflows and stocks in small towns and rural areas in which few immigrants live. For example, during the 2017 French Presidential elections, Emmanuel Macron scored better in big urban areas, while Marine Le Pen, who promised to stop immigration, received more electoral support in rural areas, where usually fewer immigrants live. The same evidence applied to other countries (e.g. the success of Donald Trump, Matteo Salvini, Marine Le Pen, Vox, and the Brexit campaign in rural areas), and it has been underlined by the recent academic literature (e.g. the recent paper by [Dustmann et al. \(2019\)](#), on the electoral consequences of refugee reception in Denmark).

The goal of this paper is to provide new evidence which helps to explain this anti-immigrant voting puzzle. More specifically, using data from municipalities of the richest and most populated Italian Region (Lombardia), we provide evidence which suggests that in small towns and rural areas where fewer immigrants live, natives and immigrants compete for the same low skilled jobs in the local labor market. On the opposite, in larger urban areas where more immigrants live, natives work in high skilled jobs and immigrants in low skilled ones, and thus immigrants are a complement for natives in the labor market. This evidence is consistent with an occupational upgrade story already described by the literature ([Cattaneo, Fiorio, and Peri, 2015](#)), which suggests that, in labor markets where more immigrants enter, natives are more likely to move to occupations associated with higher skills and wages. As explained by [Cattaneo, Fiorio, and Peri \(2015\)](#), this occupational upgrade protects natives from the potential competition on the labor market. The evidence in our paper suggests that, where fewer migrants live, this occupational upgrade does not happen and natives and immigrants are in direct competition on the labor market, a fact that exacerbates natives' anti-immigrant attitudes.

More in detail, we use a regression discontinuity design ([Calonico, Cattaneo and Titiunik, 2014](#); [Calonico and Farrell, 2018](#)), combined with search methods applied in times series data to find structural breaks ([Hansen, 2000](#); [Card, Mas and Rothstein, 2008](#)), to show that the relationship between the vote shares of anti-immigrant parties and the share of immigrants

follows a U-shaped curve, which exhibits a tipping-like behavior when the share of immigrants passes a specific threshold that we estimate in the data. Figure 3, which plots the relationship between the vote shares taken by the main Italian anti-immigrant party (*Lega Nord*) during the 2013 national elections and the share of immigrants at municipal level, explains well our approach: the vote shares of *Lega Nord* are higher for extreme values of the share of immigrants and lower for intermediate values. Besides, we find a discontinuity around a share of immigrants equal to 3.35 %, such that the vote shares of *Lega Nord* are higher just below this threshold. Using a regression discontinuity design, we estimate that the vote shares of *Lega Nord* are approximately 6 % points higher for municipalities below the threshold. This result is consistent with the descriptive evidence in Figures 1 and 2, which show that *Lega Nord* is more successful in areas with lower shares of immigrants.

To investigate the mechanism behind this behavior, we collect municipal-level data on the labor market conditions of both natives and immigrants of all municipalities of Lombardia. The data comes from the ARCHIMEDE project run by the Italian Statistical Office (ISTAT), and it has been computed at the municipal level at Éupolis Lombardia. The dataset, despite being only a cross-section for the year 2012, is a very detailed municipal-level dataset, covering information for the approximately 10 million individuals and 4.4 million households living in Lombardia. More in detail, we observe municipal-level information on the income, the employment status, the level of education, the age, and the gender of approximately 10 million individuals, distinguishing between natives and immigrants. Besides, we collect data from ISTAT on the economic specialization of the local labor markets and the socio-economic characteristics of the municipalities in our sample.

Figure 4 provides the first evidence that supports the main claim of this paper. In this Figure, there are two graphs. The top graph replicates the result of Figure 3 using local data around the 3.35 %, as typically done in a regression discontinuity design (Calonico, Cattaneo and Titiunik, 2014; Calonico and Farrell, 2018). The graph shows a clear drop in the vote shares of *Lega Nord* once the share of immigrants moves above the estimated tipping point. The bottom graph replicates the same evidence using as dependent variable the residuals obtained regressing the vote shares of *Lega Nord* on local labor areas (LLA) fixed effects. As explained in more detail below, in Lombardia, there are 57 LLAs, which are geographical areas that include municipalities that share the same local labor market. Thus, the LLA fixed effects capture all the characteristics of the local labor markets, including the level of competition between natives and immigrants. Once we control for LLA fixed effects the tipping-like behavior in the vote shares of *Lega Nord* disappears.

Figure 4 suggests that the tipping-like behavior in the vote shares of *Lega Nord* is potentially due to the characteristics of the local labor markets. We implement two strategies to further analyze this potential mechanism and to rule out alternative explanations. First, we analyze which variables change discontinuously at the threshold around a share of immigrants equal to 3.35 %. This strategy enables us to understand the differences in socio-economic characteristics between municipalities just below and just above the threshold. Second, we rerun the regression discontinuity design used to estimate the magnitude of the tipping point controlling for the same variables. Controlling for these characteristics enables us to understand which factors are correlated with tipping-like behavior. It also enables us to provide a clearer interpretation and content to our treatment variable (i.e. a dummy variable equal to one for municipalities just above the threshold), which could be potentially constituted by a bundle of different socio-economic municipal characteristics which change across the 3.35 % threshold.

The results of these two analyses support the claim of our paper. First, we find that in municipalities just above the threshold the differences in average incomes between natives and immigrants are bigger, compared to those just below. We use this difference as our main proxy for labor market competition between natives and immigrants. The intuition of this measure is that a smaller difference in average incomes suggests that natives and immigrants are competing for similar jobs, while a bigger difference indicates that the two groups are complements in the local labor market. Hence, this result suggests that in municipalities just below the threshold natives and immigrants compete for the same jobs, while in municipalities just above the threshold natives work in high skilled jobs and immigrants in low skilled occupations.

Besides, consistent with a labor market competition story, we find that municipalities just above the threshold are characterized by a bigger difference between the employment rates of natives and immigrants, they are more likely to be part of an urban area specialized in the service sector, which normally employs more individuals in high skilled jobs, and they have a bigger population. These results suggest that, where the share of immigrants is sufficiently high, the local labor market is specialized in more sophisticated and heterogenous economic activities, a fact that enables natives and immigrants to work in different occupations and be complement on the labor market. As already mentioned above, these results are consistent with an occupational upgrade story (Cattaneo, Fiorio, and Peri, 2015). On the opposite, we do not find statistically significant differences across the threshold in the production of municipal public goods and compositional amenities (Hainmueller and Hiscox, 2010; Card,

Dustmann and Preston, 2012; Cavaille and Ferwerda, 2019), in the composition of the foreign population hosted (Edo et al., 2019), and in municipal characteristics such as gender, education, and age.

Second, using all these municipal characteristics as control variables in our regression discontinuity design, we show that the tipping point estimate becomes statistically indistinguishable from zero only when we control for our measure for labor market competition between natives and foreigners, i.e. the difference in municipal average incomes between natives and immigrants. This result confirms the intuition that the observed tipping-like behavior in the vote shares of *Lega Nord* is due to the competition between natives and immigrants in the local labor market. Other potential alternative mechanisms such as a differential production of municipal public goods and different compositional amenities (Hainmueller and Hiscox, 2010; Card, Dustmann and Preston, 2012; Cavaille and Ferwerda, 2019), different characteristics of the foreign population hosted (Edo et al., 2019), and different municipal features are not correlated with the tipping point behavior observed in the data.

In conclusion, the results of our paper suggest that policymakers should consider the tensions in the labor market between natives and immigrants when dealing with both immigration and labor market policies. A policy lesson of the results of our paper is that the development of recruitment agencies and formative courses that enable low skilled individuals to upgrade their skills and to deal with labor market competition may help mitigate the anti-immigrant attitudes in the native population. These policies should be studied by both policymakers and academic researchers, to evaluate their impact on both labor market outcomes and anti-immigrant attitudes in the native population, and they should become the subject of future research projects.

This paper contributes to the literature that studies the determinants of the attitudes of natives towards immigrants (Mayda, 2006; Barone et al., 2016; Dustmann et al., 2019). We contribute to this literature by showing that the relationship between the vote shares taken by anti-immigrant parties and the share of immigrants hosted can follow a U-shaped curve, with higher vote shares for anti-immigrant parties in areas with extreme values of the share of immigrants, and lower vote shares in areas with intermediate values of the share of immigrants. We also provide evidence of tipping-like behavior in the vote shares of anti-immigrant parties. As far as we know, we are the first to document this non-linear relationship between the vote shares of anti-immigrant parties and the share of immigrants hosted. Besides, we provide an explanation of this behavior based on the competition in the labor market between natives and immigrants. While other papers have already studied how labor market

competition can affect the attitudes of natives towards immigrants (Mayda, 2006; Barone et al., 2016; Edo et al., 2019), the existing literature has measured labour market competition using the level of education, which may also capture the fact that educated individuals are more tolerant and have stronger preferences for cultural diversity (Hainmueller and Hiscox, 2007, 2010; Barone et al., 2016). Differently from the literature, we use more direct measures of labor market characteristics and competition, which should be less correlated with other potential channels.

Finally, two papers are connected to our work. First, our analysis is based on the empirical strategy developed by Card, Mas and Rothstein (2008), who find evidence that white population flows exhibit tipping-like behavior in U.S. cities. Differently from them, we show that, in a context where natives are not very mobile like the European one, it is possible to find a tipping-like behavior in electoral outcomes rather than in native population outflows. We show that our main result is not explained by native population outflows, as we do not find any discontinuity around the estimated tipping point in the yearly percentage change in the share of natives.

Second, Barone et al. (2016) have already studied the relationship between the vote shares of *Lega Nord* and the share of immigrants using Italian municipalities data. They use an instrumental variable approach to estimate a positive linear causal effect of the share of immigrants on the vote shares of *Lega Nord*. Besides, they also show that this effect is driven by municipalities in the middle of the population size distribution. Our analysis differs in that we show that the relationship between the votes shares of anti-immigrant parties and the shares of immigrants can follow a U-shaped curve, which suggests that the anti-immigrant vote can take high values also in small municipalities where fewer immigrants live. We also provide novel evidence on the tipping-like behavior that the vote shares of anti-immigrant parties can follow when the share of immigrants moves beyond a specific threshold accompanied by a change in the characteristics of the labor market.

## 2 Institutional background

We use data from Italy to study the relationship between voting for anti-immigrant parties and the share of immigrants living in the country. Given that the data on the labor market are measured in 2012, and given that in Italy the national government manages immigration and labor market policies, we focus on the 2013 national elections, which were held for the renewal of the Italian Parliament after the end of the experience of Mario Monti's government. The

Italian parliament is divided into two chambers, the House and the Senate. The House is the lower chamber, and all Italian citizens with at least 18 years old can run as a candidate for becoming a member of the House. The Senate is the upper chamber, and only Italian citizens with a minimum of 40 years old can be elected as senators. The electoral rule used during the 2013 elections was the so-called “Porcellum” (law 270/2005), which was a proportional electoral rule with a majority premium of 55 % of the seats assigned to the coalition with the highest votes share. The members of both the House and the Senate are elected for a term of 5 years, which can be interrupted in the case the incumbent government loses its majority and no new majority emerges, such that new elections must be called.

The focus of the analysis is on the vote share of the main Italian anti-immigrant party, *Lega Nord* (i.e. Italian for Northern League), which was created in 1989 and it participated to a national election for the first time in 1992. *Lega Nord* is currently the oldest party with representatives elected both at the national and local levels, and it was created as a federation of 6 autonomist movements from Regions in the North of Italy. The party was created to defend the interests of the north of Italy, and, in practice, it has taken anti-immigrant positions since the beginning. These anti-immigrant positions have become stronger in recent years with the election of Matteo Salvini as the main leader of the party. Finally, the name of the party has recently been changed to *Lega*, a transformation which signals the intention of the party to become the main Italian party on the right side of the political spectrum, and not only the party that defends the interests of the north of Italy.

Given that the electoral success of *Lega Nord* is mainly concentrated in the north of Italy and given some limitations in the data described below in section 4, the analysis is implemented using information from the richest and most populated Italian region, Lombardia. The region is located in the north-west of Italy and it shares the border with Switzerland. In Lombardia, there are 1543 municipalities, which are grouped in 12 provinces and 57 local labor areas (LLA), which are geographical areas that include municipalities with similar local labor market characteristics. Lombardia has a population of more than 10 million inhabitants and immigrants represent approximately 12 % of the total regional population, a share that has remained constant in recent years. As shown in Figure 1, Immigrants are unevenly spread across the region, given that some municipalities have no immigrants and other municipalities host a share of migrants around 30 % of the municipal population. Finally, *Lega Nord* is today one of the main parties in Lombardia, with a vote share of approximately 17 % taken during the 2013 national elections and a vote share of approximately 32 % taken at the last national elections in 2018. Figure 2 gives an idea of the votes share taken by *Lega*

*Nord* at the municipal level during the 2013 elections.

### 3 Identification strategy

This paper studies the relationship between the vote shares taken at municipal level during national elections by the main Italian anti-immigrant party, *Lega Nord*, and the share of immigrants who live in a specific municipality. More specifically, we try to understand why anti-immigrant parties are successful in areas with low shares of immigrants. For this purpose, we hypothesized that the relationship between the vote shares of anti-immigrant parties and the share of immigrants could have a U-shape, with bigger *Lega Nord*'s votes shares in correspondence of extreme values of the share of immigrants. Besides, following the evidence in the literature on the positive effect of an increase in the share of immigrants on the probability of an occupational upgrade by part of natives (Cattaneo, Fiorio, and Peri, 2015), we look for potential discontinuities in this U-shaped relationship at a tipping point  $s^*$ .

We implement the analysis following Card, Mas and Rothstein (2008). More in detail, we run the following regression discontinuity design (RDD) model:

$$V_i = \beta_0 + \beta_1 r_i + \beta_2 1[r_i > 0] + \beta_3 r_i * 1[r_i > 0] + \beta_i X_i + \eta_i, \quad (1)$$

where  $V_i$  is the vote share taken by *Lega Nord* during the 2013 national election in municipality  $i$ . The running variable  $r_i$  is equal to the difference between the share of immigrants at municipal level  $s_i$  and  $s^*$ , and it is meant to measure the distance of a specific municipality from the tipping point. The variable of interest is the dummy  $1[r_i > 0]$ , which is equal to 1 for municipalities above the tipping point. Finally, the interaction term  $r_i * 1[r_i > 0]$  allows for different functional forms on the two sides of the tipping point. The parameter of interest  $\beta_2$  is estimated by local linear regression on the subsample in the interval  $r_i \in [-h, +h]$  around the tipping point, where the interval is calculated using the Calonico, Cattaneo and Titiunik (2014) and Calonico and Farrell (2018) optimal bandwidth selector.

The main challenge in estimating model 1 is how to identify the tipping point  $s^*$ , which must be estimated from the data. To get this estimate, we follow Card, Mas and Rothstein (2008) and we use the search technique normally applied in times series data to find structural breaks. Specifically, we run the following regression:

$$V_i = \alpha_0 + \alpha_1 1[s_i > s^*] + \xi_i. \quad (2)$$

We run separated regressions for every potential candidate over the entire distribution of the share of immigrants  $s_i$  and we select the value  $s^*$  which maximizes the  $R^2$ . Hansen (2000) shows that if model 2 is estimated correctly, this procedure produces a consistent estimate of the structural break. As already anticipated in section 1, we estimate a candidate tipping point around a share of migrants equal to 3.35 % of the municipal population.

We use this candidate tipping point as a threshold for model 1, which we exploit in three ways. First, we use model 1 to get a baseline estimate of the parameter of interest  $\beta_2$ , which gives us a sense of the magnitude of the discontinuous change in the vote shares of *Leγα Nord* through the estimated threshold. Second, we rerun model 1 using as dependent variables all the municipal characteristics observed in our dataset. This analysis enables us to understand which variables change across the threshold. Third, we use the same variables as covariates in the model used to estimate the magnitude of the tipping point. Using these variables as covariates enables us to understand which factors are correlated with tipping-like behavior. Besides, this strategy enables us to provide a clearer interpretation of the variable of interest  $1[r_i > 0]$ , which could potentially capture a bundle of different socio-economic municipal characteristics that change across the threshold. Analyzing which factors correlates with the tipping-like behavior, and which do not, allows understanding what we are estimating with the parameter of interest  $\beta_2$ . As it will become clearer in the description of the empirical analysis below, the results seem to point at the competition between natives and immigrants in the local labor market as the main factor behind the tipping-like behavior, while alternative stories find less support in the data.

Finally, the main advantage of comparing municipalities just below and just above the candidate threshold  $s^*$  through RDD is that it allows comparing two groups of municipalities which essentially have the same share of immigrants. This fact enables us to analyze the role of other factors that change through the threshold while keeping the share of immigrants fixed. This fact also enables us to provide an explanation of why areas with low shares of immigrants are more likely to vote for anti-immigrant parties while excluding the alternative reverse story, i.e. that municipalities more likely to vote for anti-immigrant parties receive fewer immigrants as a consequence of their voting behavior.

## 4 Data

We collect data on the labor market conditions of both natives and immigrants of the municipalities of Lombardia. The data covers the information for the year 2012 and it has been

computed at the municipal level at Éupolis Lombardia during a consultancy project based on the ARCHIMEDE database.<sup>1</sup> This dataset, despite being only a cross-section for 2012, is a very detailed dataset, containing information for approximately 10 million individuals and 4.4 million households. The information comes from different sources such as social security archives, fiscal archives, chambers of commerce, insurance archives and the Ministry of Education. In the dataset, we observe the income, the employment status, the level of education, the age and the gender of approximately 10 million individuals, distinguishing between natives and immigrants. From Éupolis Lombardia, we also obtained data on the number of firms at the municipal level. We use all this information to build the key municipal variables for our analysis of the role of labor market competition.

Given that we obtain the relevant variables to study the role of labor market conditions only for Lombardia and only for 2012, we focus our analysis on Lombardia's municipalities and on the first national elections immediately after 2012. More in detail, we collect information on the vote shares taken by *Lega Nord* at municipal level during the 2013 national elections. The data on electoral results comes from the Italian Home Office, and it reports the vote shares of *Lega Nord* for both chambers of the Italian Parliament, the House, and the Senate. To implement our analysis on the electoral tipping point, we also collect data on the share of immigrants who live in all the municipalities of Lombardia. The data comes from the Italian Statistical Office (ISTAT), which collects the information from municipal archives. The data reports the share of immigrants who are legal residents in the municipality and it also indicates the country of origin. In this data, the immigrants who got Italian citizenship are counted as natives.<sup>2</sup>

We also collect information on a series of municipalities' characteristics that we use as control variables in our analysis. More specifically, we collect information on the municipal population, the share of women, the share children, the share of the elderly, the share of graduated individuals and the altitude of the municipalities. The information comes from the 2011 Census and it is provided by the Italian Statistical Office (ISTAT). In addition, we collect information about the economic specialization of the 57 local labor areas (LLA) of Lombardia, which are geographical areas that include municipalities with similar local labor market characteristics. More in detail, we distinguish between 4 different types of LLAs, based on the main economic activity developed in the area: i) highly specialized urban areas,

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<sup>1</sup>We are grateful to Éupolis Lombardia, the regional statistical office, for which we worked as consultants over the last three years, for granting us the access to this database.

<sup>2</sup>The results are unchanged if we consider immigrants even those who got Italian citizenship. Results can be made available upon request.

which are LLAs with municipalities specialized in the service sector in which high skills workers are employed: ii) touristic areas, whose economy is mainly based on tourism: iii) small industry and agriculture; iv) big industry. All this information comes from ISTAT and it makes reference to 2012. Finally, using data on municipal income for the years 2007-2012, we build a dummy variable equal to 1 for municipalities not hit by the crisis. Specifically, the dummy variable is equal to 1 for municipalities with an average income growth above the median during the period 2007-2012. Data on income at municipal level comes from the Italian Ministry of Economy and Finance.

The final dataset includes 1500 Lombardia’s municipalities. In fact, starting from the original sample of 1543 municipalities, we exclude 26 municipalities with no available information on the share of immigrants living in the municipality. In addition, we drop 16 municipalities with a reported average annual income per capita below the first percentile of the distribution (i.e. 9412 euros per capita). These are municipalities that share the border with Switzerland and that have a high share of citizens working in Switzerland. Given this higher share of people working abroad, the reported income of these municipalities is not reliable as it does not accurately represent the level of wealth of the natives in the municipalities. Finally, we drop the municipality of Campione d’Italia, given its special status of Italian exclave in Swiss territory, which makes it very different from all the other municipalities in Lombardia.

## 5 Results

### 5.1 Baseline results

This section illustrates the baseline results of the paper. As already described in section 1, using a search technique normally applied in times series data to find structural breaks (Hansen (2000); Card, Mas and Rothstein (2008)) and applying models 1 and 2, we find a tipping-like behaviour in the vote shares of the main Italian anti-immigrant party, *Lega Nord*. This tipping-like behavior is illustrated in Figure 3: once the share of immigrants living in Lombardia’s municipalities moves below the candidate tipping point of 3.35 % of the municipal population, there is an important jump in the vote shares taken by *Lega Nord* for the election of the members of the House during the 2013 national elections.<sup>3</sup> Figure 3 provides also evidence of a U-shaped relationship between the vote shares of anti-immigration

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<sup>3</sup>Figure A1 shows that we get the same result if we use the vote shares obtained by *Lega Nord* for the election of the members of the Senate during the 2013 national elections.

parties and the share of immigrants. This U-shaped relationship suggests that the vote shares of *Lega Nord* are high for extreme values of the share of immigrants and low for intermediate values and is consistent with the descriptive evidence in Figures 1 and 2, which show how *Lega Nord* is successful in areas with lower shares of immigrants.

The evidence in Figure 3 is formally tested in Table 1, in which we report the results obtained running model 1. Table 1 has 4 columns, in which we use different specifications. In columns 1 and 2, we run local linear specifications using both a linear and a quadratic polynomial in the running variable  $r_i$ . The optimal bandwidths used in columns 1 and 2 are calculated applying the Calonico, Cattaneo and Titiunik (2014) and Calonico and Farrell (2018) optimal bandwidth selector. In columns 3 and 4, we keep all the municipalities and run a global specification, using both a linear and quadratic polynomial in the running variable. The 4 columns of Table 1 show that the estimated coefficients are stable and robust to the use of different specifications. The results of Table 1 indicate that moving above the estimated tipping point leads to a decrease in the vote shares of *Lega Nord* which is approximately between 5 and 6 % points, depending on the specification considered. This drop is equal to approximately a 26 % decrease in the vote shares compared to the average baseline value of the dependent variable.

The evidence in this section illustrates the potential non-linear nature of the relationship between the vote shares taken by anti-immigrant parties and the share of immigrants living in certain areas. Specifically, the evidence in this section illustrates a tipping-like behavior in the vote shares of *Lega Nord*, such that moving below a specific threshold of the share of immigrants leads to a non-linear jump in the votes obtained by *Lega Nord*. In section 5.2, we investigate the potential mechanisms behind this behavior.

## 5.2 The role of local labor market competition

Section 5.1 illustrates the baseline result of the paper, which is the discovery of a tipping-like behavior in the vote shares of *Lega Nord*. Also, section 5.1 illustrates that anti-immigrant parties can be successful in areas with lower immigrant shares. In this section, we investigate the mechanisms behind this result. As already described in section 1, this paper claims that this behavior can be explained by the potential competition in local labor markets between natives and immigrants. More in detail, the paper claims that jurisdictions with lower shares of immigrants are normally rural areas specialized in economic activities that employ individuals in low skilled jobs. Thus, in a Country that attracts mainly low skilled immigrants like Italy, foreigners are in direct competition for jobs with natives. On the

opposite, areas with high shares of immigrants are usually urban areas specialized in the service sector, which normally employs individuals in high skilled jobs. These jobs are more likely to be taken by natives, while immigrants are employed in low skilled jobs. Hence, in areas with higher shares of immigrants, natives and foreigners are not in direct competition and immigrants are a complement for natives in the labor market, a claim which is consistent with an occupational upgrade story already described by the literature (Cattaneo, Fiorio, and Peri, 2015). This different relationship in the labor market can potentially explain the different electoral behavior.

As described in section 1, the claim of this paper is well illustrated by Figure 4. In this Figure, there are two graphs. The top graph illustrates the baseline result reported in column 1 of Table 1, where we report the estimate of the tipping-like behavior obtained using RDD with a local linear regression. This graph shows a clear drop in the vote shares of *Lega Nord* once the share of immigrants moves above the estimated tipping point. In the bottom graph of Figure 4, we plot the relationship between the residuals obtained regressing the vote shares of *Lega Nord* on local labor areas (LLA) fixed effects and the share of immigrants at municipal level. As already said above, the 57 LLAs of Lombardia are geographical areas that include municipalities with similar local labor market characteristics. Thus, the LLA fixed effects capture all the characteristics of the local labor markets, including the level of competition between natives and immigrants. As we can see from the bottom graph of Figure 4, once we control for LLA fixed effects the tipping-like behavior in the vote shares of *Lega Nord* disappears.

The evidence in Figure 4 suggests that the tipping-like behavior in the vote shares of *Lega Nord* is potentially due to the characteristics of the local labor markets. We implement two strategies to further analyze this potential explanation. First, we run model 1 using as dependent variables all the municipal characteristics that we observe in our dataset. Second, we run model 1 using these observable municipal characteristics as control variables. In this section, we use these two strategies to confirm the intuition illustrated in Figure 4, and to provide more formal evidence on the role of labor market competition in explaining the tipping-like behavior observed in the data. In section 5.3, we use the same two strategies to check the potential role of other factors and to rule out potential alternative explanations for the tipping-like behavior in the vote shares of *Lega Nord*.

The results of the first strategy are illustrated by Figures 5-8, while the estimated coefficients are reported in Tables 2-5. The coefficients are estimated running model 1 by local linear regression and using the same optimal bandwidth employed for the vote shares of *Lega*

*Nord*. Both types of evidence indicate that municipalities just below and just above the candidate tipping point differ on some municipal characteristics, while other characteristics do not change across the threshold. Consistent with the main claim of the paper, we find that municipalities just above the candidate tipping point are characterized by a bigger difference between the average income of natives and the average income of immigrants (Column 1 of Table 2). As already explained in section 1, we use this difference as our main measure of labor market competition. The intuition of this measure is that a lower distance in average incomes between natives and immigrants suggests that the two groups are competing for similar jobs. On the opposite, in places where the average incomes of natives are higher, immigrants represent a complement for natives in the labor market. Besides, consistent with a labor market competition story, we find that municipalities just above the threshold are characterized by a bigger difference between the employment rates of natives and immigrants (column 3 of Table 2), they are more likely to be part of an urban area specialized in the service sector (Column 4 of Table 2), and they have a bigger population (Column 1 of Table 5).

The evidence produced using the second strategy is reported in Tables 6-9. In these Tables, we run model 1 adding the control variables once at the time in the different columns. The results from Tables 6 support the claim of our paper: once we control for the difference between the average income of natives and the average income of immigrants, the parameter  $\beta_2$ , which estimates the extent of the tipping point, is highly reduced in magnitude, and it is not anymore statistically different from zero. As described in more detail in section 5.3 and shown in Tables 6-9, the difference between the average income of natives and the average income of immigrants is the only control variable that makes the tipping point estimate statistically indistinguishable from zero. Besides, the coefficient for the difference in municipal average incomes between natives and immigrants takes the expected sign, given that it has a negative correlation with the vote shares of *Lega Nord*.

The results of this section suggest that the observed tipping-like behavior in the vote shares of *Lega Nord* is due to the competition between natives and immigrants in the local labor market. Municipalities below the candidate tipping point are located in LLAs less specialized in the service sector and in which natives and immigrants seem to compete for the same types of low skilled jobs. On the opposite, above the tipping point, we find municipalities with a bigger population, located in larger urban areas specialized in service sector jobs, and in which natives and immigrants seem to be complement in the labor market. These non-linear discontinuities in local labor market characteristics seem to explain the non-linear relationship

between the anti-immigrant vote and the share of immigrants at the local level, and they support the main claim of our paper. In section 5.3, we deal with potential alternative explanations and we test the robustness of the labor market channel.

### 5.3 Alternative stories and robustness checks

In this section, we rule out alternative explanations for the tipping-like behavior in the vote shares of *Lega Nord* (Tables 5-9 and Figures 5-8), and we test the robustness of the labour market channel (Table 10). Using the same two strategies applied in section 5.2, we deal with various alternative explanations.

First, we show that municipalities just below and just above the threshold are not characterized by a different production of municipal public goods or by different compositional amenities, factors indicated by the literature among the main determinants of anti-immigrant attitudes by part of the native population (Hainmueller and Hiscox, 2010; Card, Dustmann and Preston, 2012; Cavaille and Ferwerda, 2019). The results in Table 3 and Figure 6 show that municipalities across the threshold do not spend differently in education, welfare and police, do not tax their citizens differently, and do not receive a different amount of fiscal grants from the central government. Besides, schools in municipalities just below and just above the threshold are not characterized by a different number of students per class or by a different share of foreign students. Consistent with these results, Table 7 shows that none of the variables measuring public goods production or compositional amenities make the tipping point estimate statistically insignificant when added to model 1 as control variables.

Second, the tipping-like behavior cannot be explained by a different composition of the foreign population hosted (Edo et al., 2019). Table 4 and Figure 7 show that the foreign populations hosted just below and just above the threshold do not differ in terms of education, age, and geographical origin. Besides, Table 8 show that controlling for the composition of the foreign population does not make the tipping point estimate indistinguishable from zero. Third, Table 5 and Figure 8 demonstrate that municipalities just below and just above the candidate tipping point do not differ along various municipal characteristics such as gender, education, age, and altitude. Table 9 shows that if we use these characteristics as control variables in model 1, the coefficient of the dummy variable for municipalities above the threshold does not become statistically insignificant.

Fourth, to understand the role of natives and immigrants migration movements, we calculate the yearly change in the shares of natives and immigrants at the municipal level in 2012. Columns 9 and 10 of Table 5 show that migration movements by part of natives

and immigrants do not change discontinuously at the threshold, while Table 6 shows that controlling for these migration flows does not make the tipping point estimate insignificant. These results rule out the possibility that the tipping-like behavior was due to a differential ability of the municipalities to attract immigrants or by native population outflows (Card, Mas and Rothstein, 2008). Fifth, to investigate the role of the great recession, we use data on municipal income to build a dummy variable equal to 1 for municipalities with an average income growth above the median during the period 2007-2012. We use this dummy variable in model 1 as both a dependent and an independent variable. The results seem to rule out a role for the great recession in explaining the tipping-like behavior: while column 8 of Table 5 demonstrates that municipalities just above the threshold were hit less severely by the 2007-2012 great recession, Table 6 shows that this factor does not seem to explain the tipping-like behavior.<sup>4</sup>

Finally, in Table 10, we test the robustness of the labor market competition story. We implement this robustness test in three ways. First, in column 3, we show that the negative coefficient in front of our measure for labor market competition remains statistically different from zero even when controlling for all the other covariates, while the coefficient capturing the magnitude of the tipping point is still indistinguishable from zero. Second, column 4 shows that our results are robust to the inclusion of the average municipal income of natives as a separated control, i.e. in addition to the difference between the average municipal incomes of natives and immigrants. The drop in the vote shares of *Lega Nord* above the candidate tipping point may be simply because natives are richer and thus potentially more educated and more open to migration, compared to municipalities below. Adding the average municipal income of natives as a separated control does not change our results: the tipping point disappears only when we control for the difference between the average incomes of natives and immigrants, and the coefficient of our measure for the competition in the labor market remains statistically significant, while the coefficient of the average municipal income of natives is not different from zero. Third, the coefficient in front of our proxy for labor market competition becomes statistically insignificant only when we control for LLAs fixed effects (column 5), a result that is because our proxy for labor market competition varies only within LLA and not across

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<sup>4</sup>In Figures A2-A3, we show that the RDD results of this paper are not due to random chances. To rule out this possibility, we implement a placebo test at alternative thresholds around the candidate tipping point. More specifically, we run 500 RDD regressions at 500 alternative thresholds on the left of the candidate tipping point, and 500 RDD regressions at 500 alternative thresholds on the right. Figures A2-A3 report the c.d.f. of the t-statistics associated to the coefficients estimated through these 1000 regressions. As we can see, the distribution of the two c.d.f. indicates that it is not possible to find statistically significant coefficients at these 1000 alternative thresholds.

LLAs. Once we add LLAs fixed effects to model 1, the coefficient capturing the magnitude of the tipping point becomes even smaller, while remaining indistinguishable from zero. This final result further reinforces the idea that the observed tipping point is due to reasons linked to the local labor market characteristics and the local labor market competition between natives and immigrants.

## 6 Conclusions

In this paper, using data from municipalities of the richest and most populated Italian Region (Lombardia), we provide evidence that explains why anti-immigrant parties receive the electoral support of jurisdictions that host low shares of migrants. More specifically, using regression discontinuity (Calonico, Cattaneo and Titiunik, 2014; Calonico and Farrell, 2018) and structural breaks search methods applied in times series data (Hansen, 2000; Card, Mas and Rothstein, 2008), we show that the relationship between the vote shares of anti-immigrant parties and the share of immigrants follows a U-shaped curve, which exhibits a tipping-like behavior around a share of immigrants equal to 3.35 %. More in detail, we estimate that the vote shares of *Lega Nord* are approximately 6 % points higher for municipalities below the threshold.

Then, using data on the socio-economic characteristics of the municipalities in our sample, we study which factors change at the 3.35 % threshold. We also study which factors can potentially explain the tipping-like behavior in electoral outcomes. The results point at the competition in the labor market between natives and immigrants as the more plausible explanation for the behavior observed. Alternative explanations find less support in the data.

As already explained in the introduction, we think that the results of this paper could have some policy implications for immigration and labor market policies. More specifically, the development of recruitment agencies and formative courses that enable low skilled individuals to upgrade their skills and to deal with the competition in the labor market may help moderate the recent rise of anti-immigrant attitudes in the native population. These policies should be analyzed by policymakers and academic researches, to evaluate their impact on both labor market outcomes and anti-immigrant attitudes in the native population. In conclusion, these topics should be studied more in future research projects.

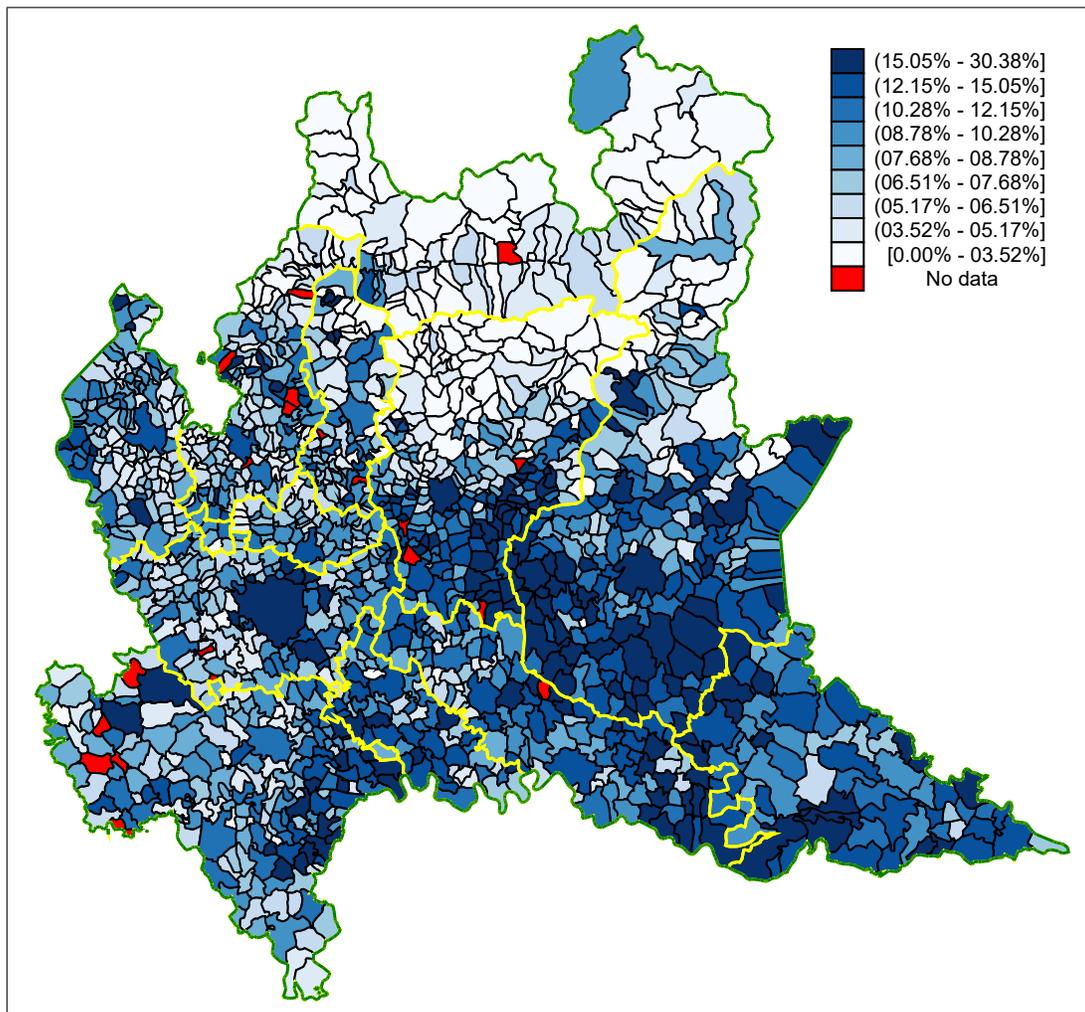
## References

- Barone, G., D'Ignazio, A., De Blasio, G., Naticchioni, P., "Mr. Rossi, Mr. Hu and politics. The role of immigration in shaping natives' voting behavior," *Journal of Public Economics* 136 (2016), 1–13.
- Card, D., Mas A., Rothstein, J., "Tipping and the dynamics of segregation," *Quarterly Journal of Economics*, 123 (2008), 177–218.
- Card, D., Mas A., Rothstein, J., "Tipping and the dynamics of segregation," *Quarterly Journal of Economics*, 123 (2008), 177–218.
- Card, D., Dustmann, C., and Preston, I., "Immigration, wages, and composition amenities." *Journal of European Economic Associations*, Volume 10 (2012), Issue 1.
- Calonico, S., Cattaneo M., and Titiunik R., "Robust Nonparametric Bias Corrected Inference in the Regression Discontinuity Design," *Econometrica*. 82 (2014), 2295-2326.
- Calonico S., Cattaneo M. and Farrell M. H., "On the effect of bias estimation on coverage accuracy in non parametric inference," *Journal of the American Statistical Association*, 113 (2018), 767-779.
- Cattaneo, C., Fiorio C. V., and Peri G., "What Happens to the Careers of European Workers When Immigrants "Take Their Jobs"?" *Journal of Human Resources*, (2015) vol. 50 no. 3 655-693.
- Cavaille, C. and Ferwerda, J. (2019), "How Distributional Conflict over In-Kind Benefits Generates Support for Anti-Immigrant Parties." R&R at the American Journal of Political Science, 2019.
- Dustmann, C., Vasiljeva, K., Damm, A.P., "Refugee migration and electoral outcomes," *Review of Economic Studies*, 2019, forthcoming.
- Edo, A., Giesing, Y., Öztunc, J., and Poutvaara, P., "Immigration and electoral support for the far-left and the far-right," *European Economic Review*, 115 (2019), 99–143.
- Hainmueller, J., and Hiscox, M. J., "Educated Preferences: Explaining Attitudes toward Immigration in Europe," *International Organization*, 61 (2007), 399–442.
- Hainmueller, J., and Hiscox, M. J., "Attitudes toward Highly Skilled and Low-skilled Immigration: Evidence from a Survey Experiment," *American Political Science Review*, 104 (2010), 61-84.
- Hansen, Bruce E., "Sample Splitting and Threshold Estimation," *Econometrica*, 68 (2000), 575–603.

Mayda, A. M., "Who Is against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants," *The Review of Economics and Statistics*, 88 (2006), 510-530.

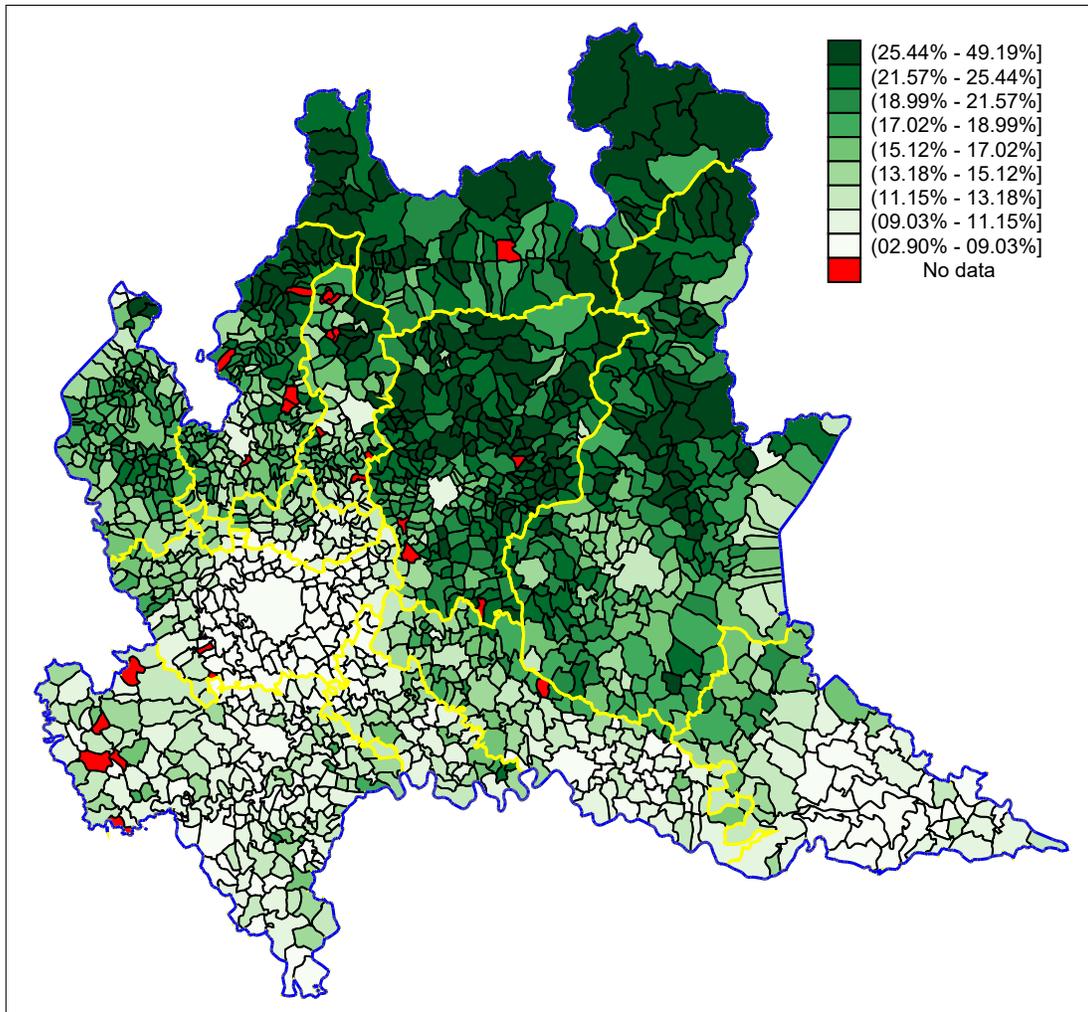
# Tables and Figures

Figure 1: Share of immigrants by municipality



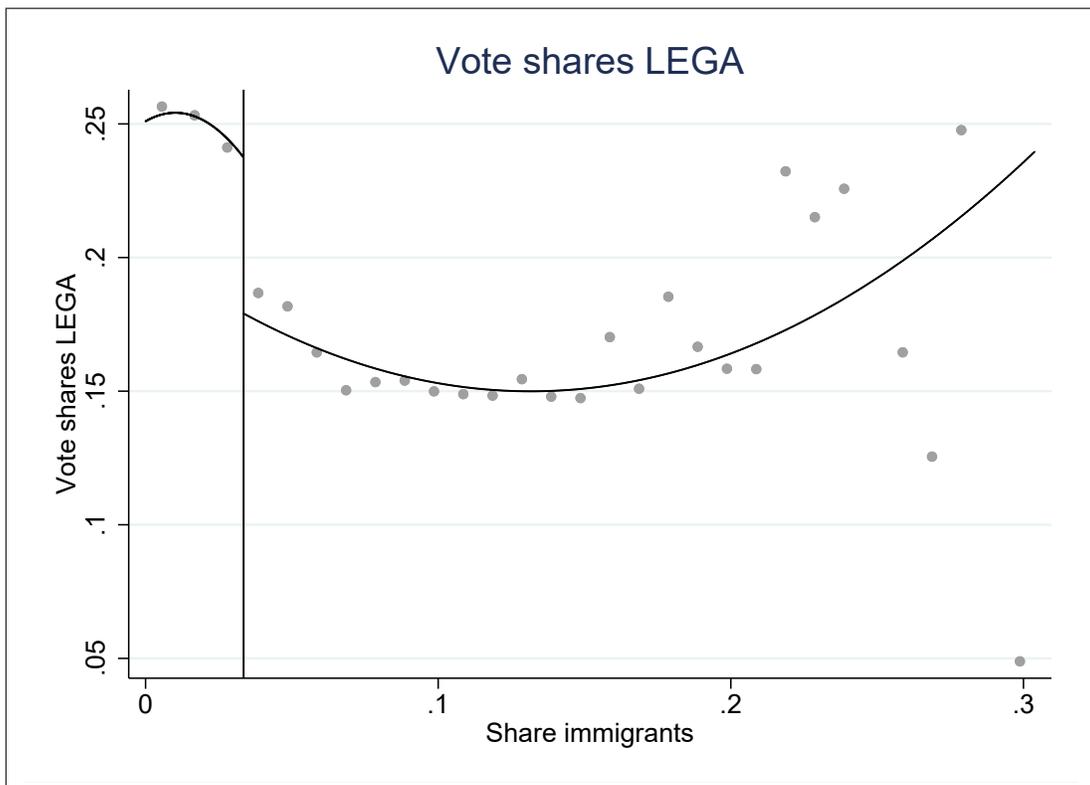
Notes. Source: Italian Statistical Office (ISTAT).

Figure 2: Votes share LEGA NORD at 2013 national elections



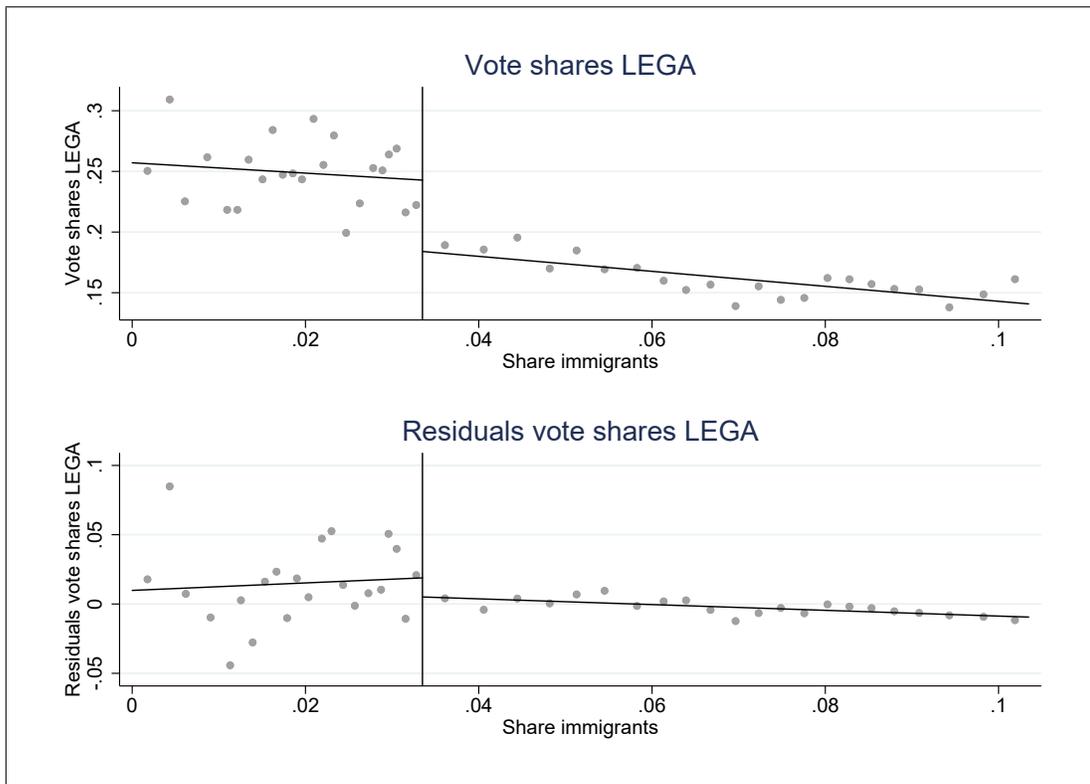
Notes. Source: Italian Home Office.

Figure 3: Tipping point: votes share for LEGA and share of immigrants



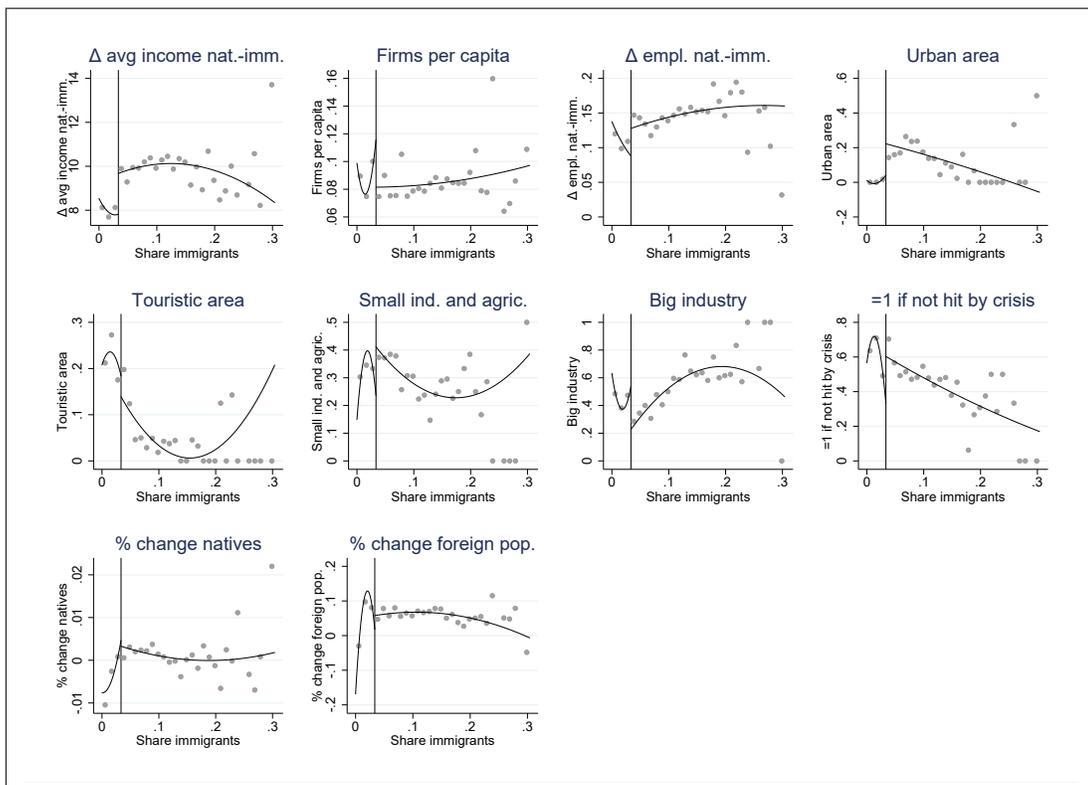
Notes. The dependent variable is equal to votes share of Lega Nord at the 2013 national elections. The central line is a spline 2th-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Figure 4: Tipping point: votes share for LEGA and share of immigrants  
Controlling for local labour areas FE



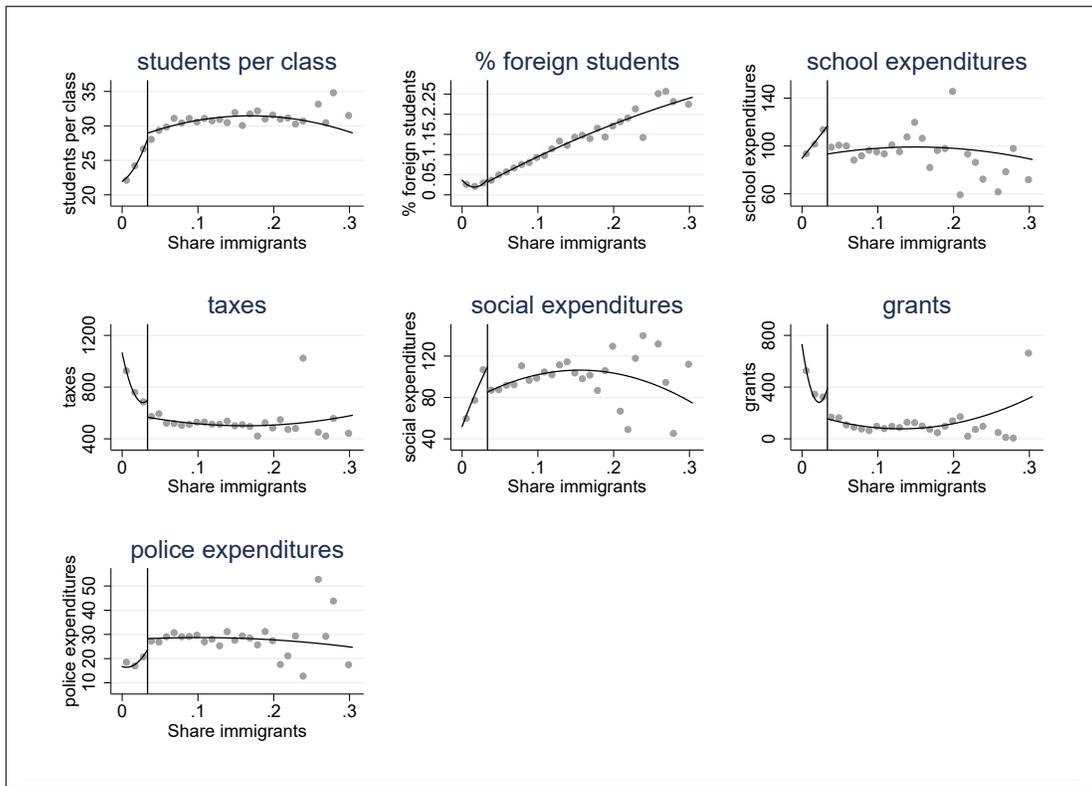
Notes. The dependent variable is equal to the vote shares of Lega Nord at the 2013 national elections in the top graph, and the residuals obtained after regressing the vote shares of Lega Nord on local labour area fixed effects in the bottom graph. The central line in the two graphs is a spline 1st-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Figure 5: Tipping point: economic measures



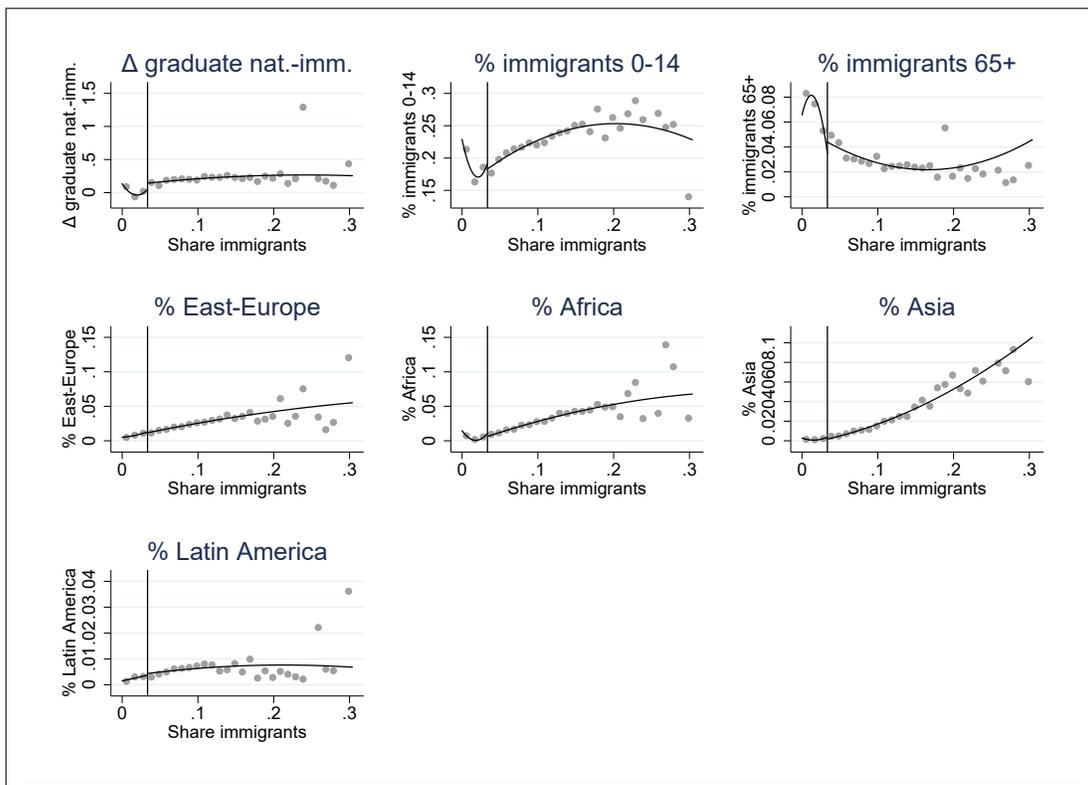
Notes. The dependent variables are different economic measures at municipal level. The central line is a spline 2th-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Figure 6: Tipping point: public goods



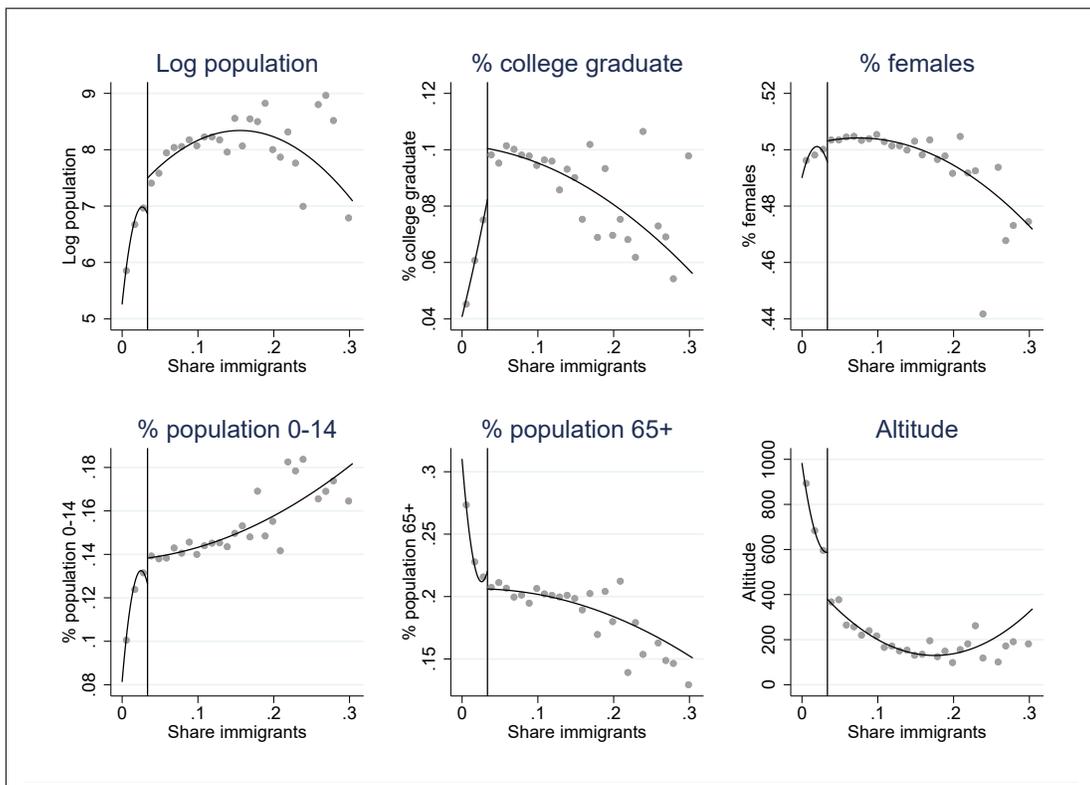
Notes. The dependent variables are measures for public goods at municipal level. The central line is a spline 2th-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Figure 7: Tipping point: composition foreign population



Notes. The dependent variables are measures for the composition of the foreign population at municipal level. The central line is a spline 2th-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Figure 8: Tipping point: other municipal characteristics



Notes. The dependent variables are measures for various municipal characteristics. The central line is a spline 2th-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Table 1: Tipping point: votes share for LEGA

	(1)	(2)	(3)	(4)
Dependent variable	Vote share of Lega Nord			
Above tipping point	-0.060*** (0.023)	-0.050* (0.029)	-0.079*** (0.011)	-0.058*** (0.016)
Observations	140	150	1,500	1,500
Mean	0.237	0.240	0.249	0.249
R-squared	0.120	0.135	0.160	0.174
Bandwidth	0.009	0.010	Global	Global
Polynomial	Linear	Quadratic	Linear	Quadratic

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. In column 3 and 4, the entire sample is used. Outcome variable: vote share of Lega Nord. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 2: Tipping point: economic measures

Dependent Variables	(1) Difference income Natives Immigrants	(2) Number Firms per capita	(3) Difference employment Natives Immigrants	(4) Urban Specialized Area	(5) Touristic Area and Agriculture	(6) Small Industry	(7) Big Industry	(8) =1 Not hit by crisis	(9) % change natives	(10) % change immigrants
Above tipping point	3.703** (1.431)	-0.022 (0.036)	0.129*** (0.049)	0.218** (0.105)	-0.123 (0.147)	-0.007 (0.157)	-0.088 (0.175)	0.339** (0.170)	-0.006 (0.006)	-0.044 (0.065)
Observations	140	140	140	140	140	140	140	140	140	140
Mean	8.070	0.102	0.095	0.020	0.200	0.320	0.460	0.480	0.001	0.087
R-squared	0.088	0.022	0.066	0.083	0.020	0.035	0.038	0.072	0.008	0.013
Bandwidth	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calónico et al., 2017) around the threshold. Outcome variables: different socio-economic municipal characteristics. The dependent variable in column 1 is measured in thousand of euros. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 3: Tipping point: public goods

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variables	Number students per class	% foreign students	Municipal school expenditures	Municipal taxes	Municipal Social expenditures	Grants from central government	Municipal police expenditures
Above tipping point	1.888 (1.985)	-0.006 (0.007)	5.411 (25.003)	-148.882 (117.190)	16.235 (32.485)	-152.520 (118.517)	10.295 (8.274)
Observations	140	140	140	140	140	140	140
Mean	26.97	0.0286	120	676.1	106.8	321.5	21.36
R-squared	0.009	0.065	0.043	0.036	0.020	0.054	0.018
Bandwidth	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: public goods at municipal level. Robust standard errors in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table 4: Tipping point: composition foreign population

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variables	Difference share graudate natives-migrants	% migrants 0-14 years old	% migrants 65+ years old	% migrants East Europe	% migrants Africa	% migrants Asia	% migrants Latin America
Above tipping point	0.118 (0.114)	0.006 (0.021)	-0.006 (0.015)	-0.001 (0.002)	0.003 (0.002)	0.001 (0.001)	-0.001 (0.001)
Observations	140	140	140	140	140	140	140
Mean	0.017	0.183	0.052	0.011	0.005	0.002	0.003
R-squared	0.043	0.005	0.005	0.010	0.091	0.080	0.008
Bandwidth	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: composition foreign population at municipal level. Robust standard errors in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table 5: Tipping point: other municipal characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variables	Log municipal population	% graduate	% female	% 0-14 years old	% 65+ years old	Altitude
Above tipping point	0.786** (0.326)	0.009 (0.011)	0.006 (0.005)	0.009 (0.010)	-0.002 (0.016)	-173.126 (113.462)
Observations	140	140	140	140	140	140
Mean	7.050	0.076	0.499	0.132	0.213	596
R-squared	0.051	0.068	0.021	0.021	0.005	0.138
Bandwidth	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: other municipal characteristics. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 6: Tipping point: votes share for LEGA  
Controlling for economic measures

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Vote share of Lega Nord										
Above tipping point	-0.060*** (0.023)	-0.029 (0.023)	-0.059** (0.023)	-0.066*** (0.024)	-0.037* (0.020)	-0.051** (0.021)	-0.059*** (0.023)	-0.061*** (0.023)	-0.052** (0.022)	-0.063*** (0.022)	-0.058** (0.023)
Difference income natives-immigrants		-0.008*** (0.002)									
Number firms per capita			0.024 (0.050)								
Difference employment natives-immigrants				0.048 (0.041)							
Urban specialized area					-0.102*** (0.012)						
Touristic area						0.070*** (0.014)					
Small industry							0.008 (0.011)				
Big industry								-0.020* (0.011)			
=1 no hit crisis									-0.023* (0.012)		
% change natives										-0.623** (0.290)	0.024 (0.049)
% change foreigners											
Observations	140	140	140	140	140	140	140	140	140	140	140
Mean	0.237	0.237	0.237	0.237	0.237	0.237	0.237	0.237	0.237	0.237	0.237
R-squared	0.120	0.262	0.121	0.128	0.294	0.276	0.123	0.138	0.143	0.143	0.124
Bandwidth	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: vote share of Lega Nord. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 7: Tipping point: votes share for LEGA  
Controlling for public goods

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Vote share of Lega Nord						
Above tipping point	-0.060*** (0.023)	-0.052** (0.020)	-0.061*** (0.023)	-0.059*** (0.023)	-0.049** (0.023)	-0.058** (0.022)	-0.052** (0.024)	-0.058** (0.023)
Number students per class		-0.004*** (0.001)						
% foreign students			-0.197 (0.259)					
School expenditures				-0.000 (0.000)				
Municipal taxes					0.000** (0.000)			
Social expenditures						-0.000 (0.000)		
Transfers from central government							0.000** (0.000)	
Police expenditures								-0.000 (0.000)
Observations	140	140	140	140	140	140	140	140
Mean	0.237	0.237	0.237	0.237	0.237	0.237	0.237	0.237
R-squared	0.120	0.226	0.124	0.121	0.187	0.130	0.174	0.123
Bandwidth	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: vote share of Lega Nord. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 8: Tipping point: votes share for LEGA  
 Controlling for composition foreign population

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Above tipping point	-0.060*** (0.023)	-0.057** (0.023)	-0.061*** (0.022)	-0.057** (0.023)	-0.061*** (0.023)	-0.061*** (0.023)	-0.058** (0.023)	-0.062*** (0.023)
Difference share graduate nat-imm		-0.021 (0.016)						
% migrants 0-14 years old			0.178** (0.087)					
% migrants 65+ years old				0.445*** (0.094)				
% migrants East Europe					-1.237 (1.168)	0.706 (0.926)		
% migrants Africa								
% migrants Asia							-1.258 (1.557)	
% migrants Latin America								-2.242 (2.054)

Observations 140  
 Mean 0.237  
 R-squared 0.120  
 Bandwidth 0.009  
 Polynomial Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: vote share of Lega Nord. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 9: Tipping point: votes share for LEGA  
Controlling for other municipal characteristics

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Vote share of Lega Nord						
Above tipping point	-0.060*** (0.023)	-0.051** (0.024)	-0.054** (0.021)	-0.056** (0.022)	-0.059** (0.024)	-0.059** (0.023)	-0.038* (0.021)
Log population		-0.010 (0.008)					
% graduate			-0.652*** (0.129)				
% female				-0.658 (0.490)			
% 0-14 years old					-0.021 (0.286)		
% 65+ years old						0.226 (0.155)	
Altitude							0.000*** (0.000)
Observations	140	140	140	140	140	140	140
Mean	0.237	0.237	0.237	0.237	0.237	0.237	0.237
R-squared	0.120	0.141	0.270	0.147	0.120	0.139	0.372
BW Loc. Poly. (h)	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: vote share of Lega Nord. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

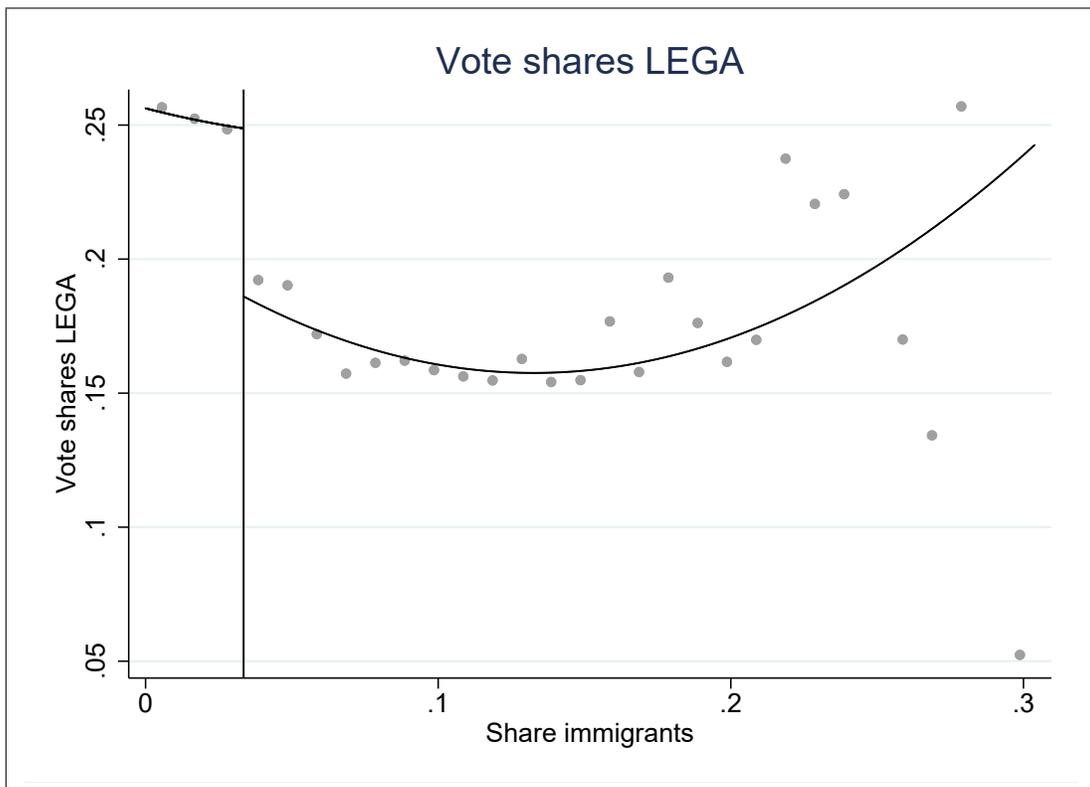
Table 10: Tipping point: votes share for LEGA  
Adding all control variables

Dependent variable	(1)	(2)	(3)	(4)	(5)
	Vote share of Lega Nord				
Above tipping point	-0.060*** (0.023)	-0.029 (0.023)	-0.028 (0.018)	-0.027 (0.018)	-0.019 (0.021)
Difference income natives immigrants		-0.008*** (0.002)	-0.004** (0.002)	-0.004** (0.002)	-0.000 (0.002)
Average income natives				0.000 (0.002)	
Observations	140	140	140	140	140
Mean	0.237	0.237	0.237	0.237	0.237
R-squared	0.120	0.262	0.678	0.678	0.845
Bandwidth	0.009	0.009	0.009	0.009	0.009
Polynomial	Linear	Linear	Linear	Linear	Linear
Controls	No	No	Yes	Yes	Yes
LLA FE	No	No	No	No	Yes

Notes. The estimated coefficients capture the effect of being above a share of migrants equal to 0.0335. Estimates reported: RDD estimates. The sample includes all municipalities from Lombardia in 2013 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the threshold. Outcome variables: vote share of Lega Nord. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

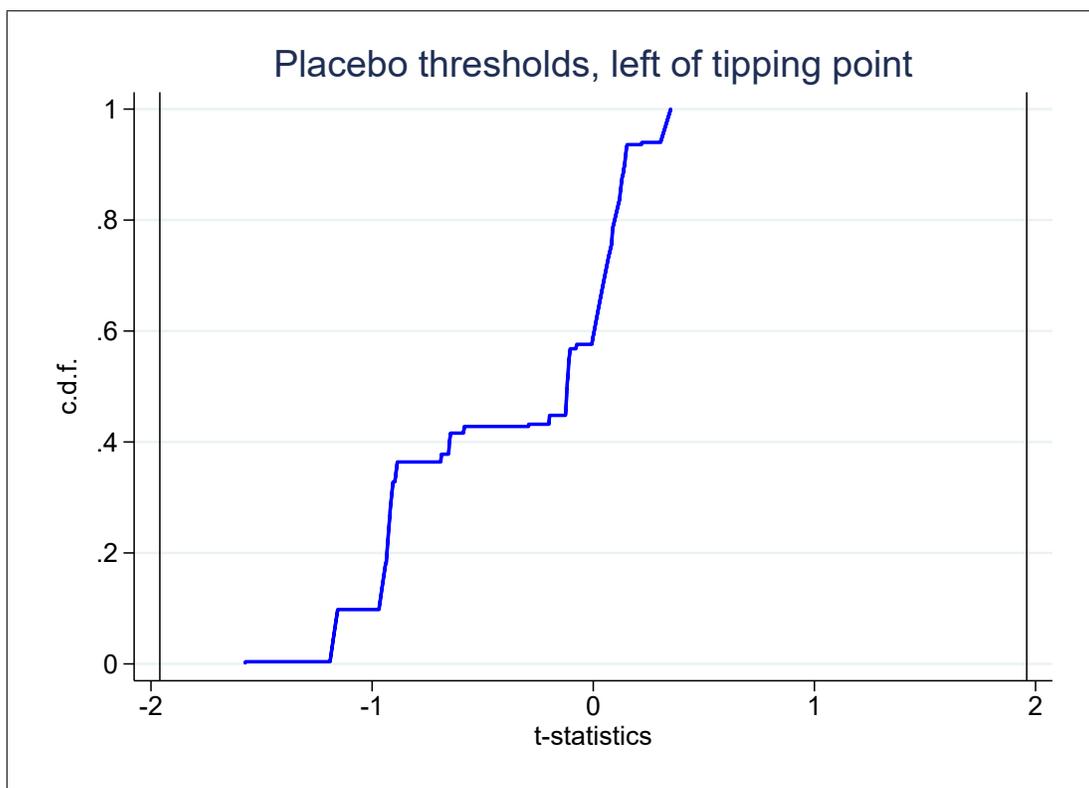
# A1 Appendix [For Online Publication]

Figure A1: Tipping point: votes share for LEGA and share of immigrants Senate



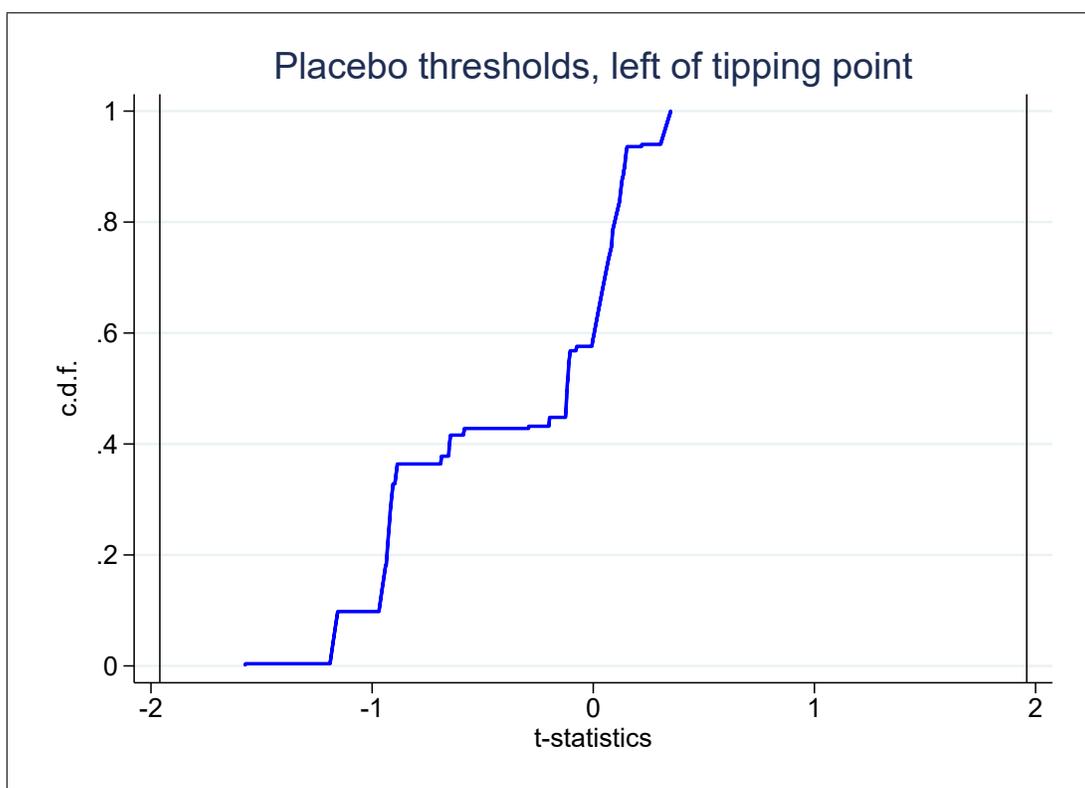
Notes. The dependent variable is equal to votes share of Lega Nord at the 2013 national elections. The central line is a spline 2th-order polynomial in the share of immigrants. The threshold corresponds to a share of immigrants equal to 0.0335.

Figure A2: Placebo thresholds on the left of the tipping point



Notes. The figure reports the cdf of the t-statistics obtained running 500 regressions using 500 fake thresholds on the left of the threshold that corresponds to a share of immigrants equal to 0.0335.

Figure A3: Placebo thresholds on the right of the tipping point



Notes. The figure reports the cdf of the t-statistics obtained running 500 regressions using 500 fake thresholds on the right of the threshold that corresponds to a share of immigrants equal to 0.0335.

2013

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**2014**

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**2016**

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**2018**

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- 2018/6, **Agrawal, D. R.; Foremny, D.:** “Relocation of the rich: migration in response to top tax rate changes from spanish reforms”
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- 2018/9, **Curci, F.; Masera, F.:** “Flight from urban blight: lead poisoning, crime and suburbanization”
- 2018/10, **Grossi, L.; Nan, F.:** “The influence of renewables on electricity price forecasting: a robust approach”
- 2018/11, **Fleckinger, P.; Glachant, M.; Tamokoué Kanga, P.-H.:** “Energy performance certificates and investments in building energy efficiency: a theoretical analysis”
- 2018/12, **van den Bergh, J. C.J.M.; Angelsen, A.; Baranzini, A.; Botzen, W.J. W.; Carattini, S.; Drews, S.; Dunlop, T.; Galbraith, E.; Gsoftbauer, E.; Howarth, R. B.; Padilla, E.; Roca, J.; Schmidt, R.:** “Parallel tracks towards a global treaty on carbon pricing”
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- 2018/23, **Ramos, R.; Sanromá, E.; Simón, H.:** “Wage differentials by bargaining regime in Spain (2002-2014). An analysis using matched employer-employee data”

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- 2019/1, **Mediavilla, M.; Mancebón, M. J.; Gómez-Sancho, J. M.; Pires Jiménez, L.:** “Bilingual education and school choice: a case study of public secondary schools in the Spanish region of Madrid”
- 2019/2, **Brutti, Z.; Montolio, D.:** “Preventing criminal minds: early education access and adult offending behavior”
- 2019/3, **Montalvo, J. G.; Piolatto, A.; Raya, J.:** “Transaction-tax evasion in the housing market”
- 2019/4, **Durán-Cabré, J.M.; Esteller-Moré, A.; Mas-Montserrat, M.:** “Behavioural responses to the re)introduction of wealth taxes. Evidence from Spain”
- 2019/5, **García-López, M.A.; Jofre-Monseny, J.; Martínez Mazza, R.; Segú, M.:** “Do short-term rental platforms affect housing markets? Evidence from Airbnb in Barcelona”
- 2019/6, **Domínguez, M.; Montolio, D.:** “Bolstering community ties as a means of reducing crime”
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- 2019/8, **Gómez-Fernández, N.; Mediavilla, M.:** “What are the factors that influence the use of ICT in the classroom by teachers? Evidence from a census survey in Madrid”
- 2019/9, **Arribas-Bel, D.; García-López, M.A.; Viladecans-Marsal, E.:** “The long-run redistributive power of the net wealth tax”
- 2019/10, **Arribas-Bel, D.; García-López, M.A.; Viladecans-Marsal, E.:** “Building(s and) cities: delineating urban areas with a machine learning algorithm”



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