

*Finding the Warmth of other Suns?*  
Refugee Reception, Extreme Votes and Hate Crimes

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**Abstract**

Does refugee reception lead to more hate crimes against foreigners? What is the impact of refugee reception on extreme-right voting and which role does the media and specifically internet play in the transmission? Using data on Italian SPRAR refugee centres we show that the reception of refugees across Italian municipalities leads to a decrease in extreme-right voting and hate crimes against foreigners. Using an instrumental variables approach, we find that doubling the number of refugees hosted reduces the growth rate in the vote shares for the extreme-right parties by 9 per cent (about 1.6 p.p). We also find that increasing by 1 per cent the number of refugees hosted leads to a reduction of about 19 per cent in the change in hates crime over the period between 2013 and 2017. The effect on extreme voting is mainly driven by municipalities which have less internet access, hence have presumably more access to traditional vs. digital media.

**Keywords:** Political Economy; Migration; Italy; Migrants

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# 1 Introduction and Background

The refugee crisis has been at the centre of the global debate during the last years and will remain for future generations. Amongst many factors such as inequality and climate change, certain areas will become more attractive than others and some places will become inhabitable. Therefore an increased likelihood of migration is to be expected both across as well as within countries. Analysing how natives respond to interactions with migrants and how anti-immigrant sentiment is formed will become key in understanding welfare repercussions for current and future generations.

In Europe, the salience of the topic has been a consequence of the wide political rhetoric and the increasing number of asylum applications of asylum status in recent years (Figure 1). The debate about the relocation of refugees across and within European countries has proven a politically strenuous exercise. As a result, evidence about the electoral and social repercussions of the redistribution of refugees can inform policy making in this regard. If we accept hate crimes and extreme right votes as good proxies for anti-immigrant sentiment, then examining how those variables are affected by the interactions between natives and migrants will inform policy makers about a feasible redistribution mechanism of refugees.

In this paper we examine how the reception of municipalities of a relatively few refugees compared to natives over a short to medium time frame can influence hate crimes against immigrants as well as voting for extreme right parties. Furthermore we show what role the internet plays in the amplification of this effect and examine how local politicians react to those new political realities.

We implement the analysis using data from Italian municipalities and exploiting specific features of a program for the relocation of refugees called “The Protection System for Asylum Seekers and Refugees” (SPRAR). The Italian Home Office manages the SPRAR program, whose main goal is the relocation of refugees and asylum seekers in small reception centres across Italian municipalities.

The empirical analysis studies the effect of the number of refugees and asylum seekers hosted in a specific SPRAR centre on the change in the support for extreme-right parties between the 2013 and the 2018 national elections. It also studies the effect of the number of refugees and asylum seekers hosted on the change in hate crimes against foreigners between 2013 and 2017. The results are obtained both through ordinary least squares (OLS) and instrumental variables (IV) estimates. The IV analysis is developed to deal with the endogeneity of the number of refugees and asylum seekers hosted in a specific SPRAR centre, given that municipal governments can decide whether to open or not refugee centres on the their territory. As explained in more detail in sections 2 and 4,

the IV approach exploits a specific feature of the SPRAR program: while municipalities decide how many refugees to host in the SPRAR centre that they open, the Home Office establishes the maximum number which depends on specific population thresholds. Thus, as described below, we use this institutional feature and we instrument the number of refugees and asylum seekers hosted with this theoretical maximum number imposed by the Home Office, which is heterogeneous across Italian municipalities depending on the size of the municipal population.

The main results of the empirical analysis show that hosting refugees has a negative effect on both voting for extreme-right parties and hate crimes against foreigners. More specifically, IV estimates indicate that doubling the number of refugees hosted reduces the growth rate in the vote shares for extreme-right parties by 9 per cent (about 1.6 p.p). IV estimates also show that increasing by 1 per cent the number of refugees hosted leads to a reduction of about 19 per cent in the change in hates crime over the period between 2013 and 2017. The heterogeneity analysis indicates that the effect on extreme-right voting is driven by municipalities, which have less access to the internet, which is instrumented using the closest distance to an ADSL tower as in [Campante et al. \(2018\)](#). The results are robust controlling for municipal population, municipal socio-economic characteristics, local politicians' characteristics and pre-trends in voting during the national elections run before 2013.

This paper aims to contribute to this recent literature in three ways. The first strand of the literature is the one related to the impact of immigration or refugees on extreme right voting. Most of the literature has focused on the exposure to large immigration inflows over a long amount of time. Important papers in this literature ([Halla et al. \(forthcoming\)](#), [Harmon \(forthcoming\)](#), [Otto and Steinhardt \(2014\)](#), [Mendez and Cutillas \(2014\)](#), [Brunner and Kuhn \(2014\)](#), [Viskanic \(2017\)](#)) have found that large immigration inflows spur the far-right vote, and this is true also for the context of Italian municipalities ([Barone et al. \(2016\)](#)). Most of these papers also rely on a variant of an instrument pioneered by [Card \(2001\)](#). The main intuition being that some new migrants will allocate where their ancestors did and if those moved in an area for reasons exogenous to the dependent variable in question, the issue of spatial selection is arguably resolved.

A more recent strand of the literature has been analysing the repercussion of the refugee crisis. [Hangartner et al. \(2017a\)](#) and [Hangartner et al. \(2017b\)](#) find that exposure, but not necessarily contact, between inhabitants of the Greek islands and refugees arriving as sea arrivals can increase anti-immigrant sentiment and voting for the extreme right. On the other hand [Steinmayr \(2018\)](#) finds that actual contact between refugees and natives matters. Considering the region of Upper Austria, he shows that the Extreme Right party of Austria (FPO) lost out considerably in places, where more refugees were hosted.

Closely related to this [Vertier and Viskanic \(2018\)](#) find that contact with refugees from the "Calais Jungle" has decreased voting for the Front National (extreme right wing party in France), but only if the number redistributed was small enough. In addition to this [Dustmann et al. \(2016\)](#) show that the electoral repercussions of migrant relocation depend crucially on the characteristics of the municipalities. The more rural a place, the more stronger the impact in favour of extreme-right parties. These studies imply that both municipal characteristics as well as size of exposure must be taken into account when analysing the electoral repercussions of the exposure to refugees.

In this case we add to literature by adding as another variable to measure anti-immigrant sentiment hate crimes against migrants. This variable gives additional evidence of the benefit of contact between refugees and migrants and shows that natives do not only "privately" react to the contact with migrants (voting booth), but also "publicly" (hate crimes). All aforementioned studies also struggle with finding direct evidence of indirect contact. There is a possibility of a reversal of opinion by natives, when friends/family talk about positive experiences with immigrants or when traditional or digital media outlets report about it. In the first case, it is very hard to measure this empirically. In our paper we show how conceitedness to the internet affects those spillovers effects, which is an element lacking in the aforementioned papers.

Another part of the literature studies the potential determinants of hate crimes and the relationship between immigration and hate crimes. A first contribution to this literature is the paper by [Glaeser \(2005\)](#), who theoretically studies under which circumstances politicians have incentives to supply hate-creating stories to discredit opponents whose policies benefit minorities. The main prediction of the theoretical model is that hatred declines when voters have incentives to learn the truth and that interactions with minority groups may provide those incentives. Our paper can be seen as an empirical test of the theory developed by [Glaeser \(2005\)](#).

While both in the past and in recent years the literature has produced extensive empirical evidence about the relationship between immigration and crime (e.g. [Bell et al. \(2013\)](#); [Pinotti \(2017\)](#); [Amuedo-Dorantes et al. \(2018\)](#)), the empirical evidence on the potential determinants of hate crimes against foreigners is more recent. Among the potential determinants of hate crimes and negative attitudes against migrants we find terrorist attacks ([Hanes and Machin \(2014\)](#)), social media and internet ([Chan et al. \(2016\)](#); [Mueller and Schwarz \(2018a\)](#) and [Mueller and Schwarz \(2018b\)](#)), exposure to religious minorities ([Colussi et al. \(2017\)](#)) and large inflows of refugees and asylum seekers ([Hangartner et al. \(2017b\)](#); [Sola \(2018\)](#)). The evidence produced by this literature indicates that on average all the factors studied have a positive effect on hate crimes and negative attitude toward migrants. We contribute to this literature by showing that the exposure to a small

amount of refugees has a negative effect on hate crimes against foreigners. Our results suggest that the contact between the native population and small inflows of refugees and asylum seekers can generate positive reactions by the local population and that some of it is also driven by the exposure of hate crimes against immigrants and media coverage in general.

Second, we analyse the role of media in amplifying the effect of refugee reception on voters' behaviour and attitudes, which is a channel understudied in the literature given scarce data availability. The literature on the role of media in politics highlights the strong role of mass communication in influencing people's opinions. Mass media are found effective to spread political propaganda (Enikolopov et al. (2011), Durante and Knight (2012) and DellaVigna and Kaplan (2007)) as well as inflame xenophobic sentiment (Adena et al. (2015), DellaVigna et al. (2014) and Yanagizawa-Drott (2014)). The increased access to internet together with the deep change of the media landscape that it provoked has oriented the research towards a deeper analysis of social media. Access to broadband internet can increase anti-establishment (Campante et al. (2017)) and populist (Schaub and Morisi (2019)) movements, increase affective polarization (Lelkes et al. (2017)), impact political participation (Falck et al. (2014) and Czernich (2012)), spread fake-news (Allcott and Gentzkow (2017)) as well as contribute to polarization through an echo chamber effect (Barberá (2015) and Barberá et al. (2015)). However, little is known on how online media changes how people react to immigration, which is undoubtedly among the most relevant topics in the political debate. Müller and Schwarz (2018) find that the online presence of the German far-right movement AfD on social media can spread anti-migration sentiment and increase hate crimes offline. The link between hate speech online and hate crimes is also highlighted in Williams et al. (2019) who find a positive correlation between racist content on Twitter and racially motivated crimes in the United Kingdom. Our paper integrates the role of internet with the contact theory, showing that direct contact with migrants has a pro-migrant effect and that higher consumption of internet can decrease this. Importantly, we are able to analyse differing effects of traditional vs. digital media in the transmission mechanism of interaction with migrants. Additionally, given that our main measure of internet access is considered to be exogenous, our interpretation of the heterogeneous effect is arguably causal rather than just of correlation nature. Especially (Steinmayr (2018) and Vertier and Viskanic (2018)) stress the importance of contact with migrants as an important variable in determining anti-immigrant sentiment by natives, but lack data to measure the impact of "superficial contact" between refugees and natives through media.

The third way how we contribute is to analyse not only the way how refugees influence the demand side of politics, but also how the supply side reacts. Specifically, in the second

part of the empirical analysis, we use a regression discontinuity design (RDD) based on mixed electoral competitions to show that extreme-right mayors are less likely to open SPRAR refugee centres. This evidence shows that extreme-right politicians do manipulate local migration policies to foster their own political benefits, which in turn might not be aligned with the welfare of the municipality’s inhabitants (Gamalerio (2019)). This result contributes to a recent literature which studies the political determinants of immigration policies (Folke (2014), Facchini and Steinhard (2011), Casarico et al. (2018), Morelli and Negri (2019) and Mayda and Facchini (2008)).

More in detail, Folke (2014) shows that increasing the seat share of anti-immigration parties in municipal councils in Sweden significantly reduces the number of refugees hosted by the municipality. Our result on Northern League mayors is consistent with the result by Folke (2014), even though in the Italian context the role of municipal governments seems to be more relevant in setting up the refugee policy compared to Swedish municipalities, where small parties elected through a proportional system enjoy a greater degree of power. Facchini and Steinhard (2011) and Casarico et al. (2018) study the determinant of the voting behaviour of the U.S. Congress in relation to the legalization of undocumented migrants. Differently from these papers, our analysis is focused on the behaviour of municipal governments and on the reception of refugees rather than on the legalization of undocumented migrants. Morelli and Negri (2019) theoretically study which electoral systems lead to more open immigration policies. The analysis in the second part of our paper analyses a similar topic from a more empirical point of view. Mayda and Facchini (2008), using survey data, show that in countries where the median voter is more opposed to migrations tend to implement more restrictive immigration policies. Our analysis shows that also the identity of politicians and the preferences of political parties matter for migration policies, and not only the identity of the median voter.

Finally, three papers study the reception of refugees in Italy. Genovese et al. (2017) use survey data from Italian Regions to study how public attitudes about non-EU immigration are influenced by the central government’s distribution of refugees across different regions. Our paper differs in that they study the effect of the reception of refugees on attitudes using survey data, while we use data on hate crimes and on voting behaviour measured at municipal level. Bratti et al. (2017), using data on Italian municipalities and on the 2016 Italian Constitutional Referendum, show that the geographical proximity to refugee reception centres leads to an increase in turnout and in the share of anti-government votes measured by the votes share of “no” to the Constitutional Reform. Our paper differs from theirs in that we focus on the opening of a refugee centre within a municipality, rather than on the opening of refugee centres in neighboring municipalities. This different focus enables us to study the effect of direct contact between the local population and the

refugees hosted, rather than the indirect contact studied by [Bratti et al. \(2017\)](#). [Bracco et al. \(2018\)](#) show that migrants inflows at municipal level are lower towards municipalities with Northern League mayors. Our paper differs for two reasons: first, we study how voters react to the reception of refugees, while [Bracco et al. \(2018\)](#) focus on how migrants react to the election of extreme-right mayors; second, we study how extreme-right mayors manipulate immigration policies to gain votes, while [Bracco et al. \(2018\)](#) analyse how extreme-right mayors adjust fiscal policies to make their municipality less appealing for migrants.

The structure of the paper is the following. Section 2 describes the institutional background, while section 3 the data used. Section 4 explains the identification strategy, section 5 describes the results and section 6 concludes.

## 2 Institutional Setting

In the following sections we will first outline the way how devolution is organised in Italy, i.e. what are the differing spending and public policy realms of municipalities. Then we will outline the government policy of how the allocation of refugees works across Italian municipalities. Lastly we will briefly outline the functioning of Italian National elections. Most of the information reported in this section comes from [Gamalerio \(2019\)](#).

### 2.1 Italian municipalities

In Italy, there are around 8000 municipalities, which represent the lower level of government.<sup>1</sup> Municipalities have an important role in the Italian institutional setting, given that they manage important public services like municipal police, transport, welfare, public utilities (e.g. water, waste collection) and environmental services (e.g. parks).

Before the 2008 financial crisis and the 2011 public debt crisis, municipal services were funded through a mix of local taxes and grants from higher levels of government. However, following the financial and public debt crisis, the central government has reduced many municipal grants. The main sources of municipal revenues today are fees on public services and taxes like the property tax and a surcharge on the national personal income tax (“Addizionale Irpef”).<sup>2</sup> Municipal expenditures represent approximately 10 per cent of total public expenditures.

Starting from 1993<sup>3</sup>, Italian mayors are directly elected by the voters. Municipali-

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<sup>1</sup>The highest level of government in Italy is the national parliament, regions and provinces represent the second and third levels. The European parliament and European Commission represent the supranational level of government.

<sup>2</sup>Today, the property tax is called “IMU”, while in the past was known as “ICI”. The surcharge on the national personal income tax is called “Addizionale Irpef”.

<sup>3</sup>See Law 81 in 1993

ties with more than 15,000 inhabitants use a dual ballot system, while those below the threshold use a plurality system. The coalition of the winning candidate receives 60 % of the seats of the municipal council in municipalities above 15,000 and 66.66 % below the threshold. The electoral term lasts five years, and second-term mayors cannot be immediately re-elected. Finally, Italian municipalities are governed by three possible types of coalitions: 1) centre-left; 2) centre-right; 3) “Civic Lists”.<sup>4</sup>

## 2.2 The allocation system for refugees

This paper studies how the opening of refugee reception centres affect voting for extreme-right parties and hate crimes. We focus on a type of reception centres called “The Protection System for Asylum Seekers and Refugees” (SPRAR). SPRAR centres constitutes the second level of reception, which is meant to host refugees and asylum seekers coming from the first level of reception.<sup>5</sup> The goal of SPRAR centres is to teach the Italian language to refugees and asylum seekers, to help them to find a job and to integrate in the society.

When the Home Office wants to open new SPRAR centres, it issues a call for competition. The Home Office decides the timing of these calls, and this normally depends on the need to allocate refugees from the first to the second level of reception. While the timing of the calls is established by the Home Office, the decision of opening a refugee centre is taken by the municipal governments. Municipalities can open three types of centres: first, ordinary centres, for refugee without specific issues. Second, centres for unaccompanied minors. Third, refugee centres for disable refugees and asylum seekers. Municipalities can open only one type of centre, however, for some calls gave the opportunity to open one centre for minors or one centre for disable refugees in addition to one ordinary centre.

The Home Office establishes the maximum number of places for refugees that centres can provide. This number is established through the rules determined by the call for competition and it depends on population. Table 2 reports the minimum and the maximum number of places that a centre can provide by tender. As we can see, with the exception of the last two tenders studied, the maximum number depends on population. As described in more details in section 4, in the empirical analysis we exploit this institutional set up to build our instrumental variables approach.

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<sup>4</sup>“Civic Lists” are local parties independent from national political parties.

<sup>5</sup>In Italy, the first level of reception is represented by the following types of centres: first, the “Centri di primo soccorso e accoglienza”, i.e. First aid and hospitality centres (CPSA). CPSA host migrants just arrived in Italy. Second, we have the “Centri di accoglienza”, i.e. Hospitality centres (CDA). CDA check the regularity of the presence of migrants in Italy. Third, we have the CARA (“Centri di accoglienza per richiedenti asilo”, i.e. Reception centres for asylum seekers) centres, which receive migrants from CPSA who applied for asylum. Finally, we have the “Centri di accoglienza straordinaria”, i.e. Centres for extraordinary reception (CAS), which have been introduced in 2014 to deal with the emergency created by the refugee crisis. See Gamalerio (2019) for more information.



The central government transfers grants to the municipalities that open a SPRAR centre. These grants are meant to cover the costs of the centre and to pay firms and cooperatives that work with the centre, with potential benefits for the local economy in terms of employment. For example, the cooperative “In Migrazione” has estimated that approximately 8 professionals are hired every 20 refugees hosted.<sup>6</sup> In addition, Gamalerio (2019) shows that opening a SPRAR centres has fiscal benefits in terms of increased expenditures funded with grants coming from higher levels of government.

We focus our main analysis on the SPRAR centres opened in the period 2014-2017, which are the years during which the refugee crisis became more intense, as shown by the increasing number of asylum seekers who arrived to EU countries (Figure 1). In these years, also participation to the SPRAR program grew more. In fact, as shown by Table 3 and Figures 2 and 3, both the number of municipalities that entered the SPRAR program and the number of places made available and refugees hosted increased intensively starting from 2014.

### 3 Data

The main source for the data used is the paper by Gamalerio (2019), from which we extract data on all Italian municipalities for the years 2014-2017. The data comes from different sources. First, the data contains information about the SPRAR calls for competition issued in the period 2013-2017 (Table 1). The main sources are: 1) the Home Office;<sup>7</sup> 2) The SPRAR webpage;<sup>8</sup> 3) the “Briguglio archive”,<sup>9</sup> which reports different documents about migration.

Second, data on hate crimes are provided by *Lunaria*, which is a non-profit association that promotes peace, social justice, equality and integration for minorities.<sup>10</sup> Since January 2007, *Lunaria* has been building a database (“Cronache di ordinario razzismo”, see: [Cronachediordinariorazzismo.org](http://Cronachediordinariorazzismo.org)) on hate crimes against immigrants that occur in Italian municipalities. The database has been constructed collecting information about hate crimes from local and national newspapers. For every hate crime it is possible to know the exact date and the municipality. In addition, *Lunaria* provides a summary of the text of the newspapers’ articles used to identify attacks against immigrants. *Lunaria* divides hate crimes in categories, and specifically it is possible to identify hate crimes

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<sup>6</sup>See the document “Accoglienza rifugiati: unordinaria emergenza” ([immigrazione.it](http://immigrazione.it))

<sup>7</sup>The Home Office publishes on its webpage detailed information about all the calls for competition. See the link: <http://www.interno.gov.it/it/amministrazione-trasparente/bandi-gara-e-contratti>.

<sup>8</sup>SPRAR reports are published every year by the Home Office and the Association of Italian Municipalities (ANCI), and can be downloaded from <http://sprar.it/>.

<sup>9</sup><http://briguglio.asgi.it/immigrazione-e-asilo/index.html>.

<sup>10</sup>See webpage: <https://www.lunaria.org>

committed on social media, by newspapers and local media, by single individuals, by organised groups, and by politicians, political parties and institutional actors.

Third, the data reports also information about municipalities' characteristics. The main sources are the Home Office and the Italian Statistical Office (ISTAT). The Home Office publishes electoral data from elections contested both at local and national level, and for this paper we collected data about Italian national elections contested in 2018, 2013 and 2008, 2006, and 2001 for the election to the chamber of Deputies only.<sup>11</sup> ISTAT provides data<sup>12</sup> on the total municipal population, the foreign population legally resident in Italy by municipality and year<sup>13</sup>, the educational level of the municipal population, the percentage of children and elderly, and socio-economic variables like unemployment rate, number of firms and income. Finally, the Home Office publishes data on the characteristics of municipal politicians<sup>14</sup> like age, gender, past occupation, educational level and political experience.

Data on the proxy for internet usage at municipal level comes from the paper by Durante, Campante and Sobbrío (2018).<sup>15</sup>

As explained below, the final sample contains information about 7094 Italian municipalities for which we observe all the five SPRAR tenders issued starting from 2013.

## 4 Identification strategy

This section describes the two identification strategies employed in the paper. In the first part of the empirical analysis, we use an instrumental variable (IV) approach to estimate the effect of the number of refugees hosted on voting for extreme-right political parties and on hate crimes against foreigners. In the second part, we use a regression discontinuity design (RDD) based on close mixed electoral competitions to analyse the effect of electing extreme-right mayors on the probability of hosting refugees and asylum seekers.

### 4.1 Instrumental variable approach

The first goal of this paper is to study the effect of hosting refugees and asylum seekers on voting for extreme-right political parties and on hate crimes against foreigners. The analysis is implemented focusing on SPRAR refugee centres opened in the years 2014-2017, which is the period in which the European refugee crisis escalated, with the arrival of more than one million refugees and asylum seekers in 2015 alone. In fact, as we can

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<sup>11</sup>This is due to the fact that there is a minimum age for voters to elect the Senate and thus votes for the Chamber of Deputies are a preferred measurement of citizens' political preferences.

<sup>12</sup>Link: <http://dati.istat.it/>

<sup>13</sup>Link: <http://demo.istat.it/>.

<sup>14</sup>Link: <http://amministratori.interno.it/>.

<sup>15</sup>We are grateful to Durante, Campante and Sobbrío (2018) for sharing this information.

see from Table 3, this is the period in which the majority of SPRAR centres has been opened, to deal with the increasing number of refugees and asylum seekers who arrived to Italy. Focusing on these years enables us to study how voters' attitudes changed with the arrival of new asylum seekers in a period in which migration became a salient topic in politics and in the media.

The first baseline estimation that we run in this paper is the following, which is run by OLS:

$$Y_i = \alpha_0 + \alpha_1 \text{asinh}(\#RefugeesHosted_i) + \alpha_2 \text{asinh}(Pop_i) + \alpha_k X_{k,i} + \epsilon_i \quad (1)$$

where  $Y_i$  captures two different dependent variables. The first dependent variable is equal to  $\Delta_{Right} \equiv \log(\text{extreme-right}_{2018}) - \log(\text{extreme-right}_{2013})$ , which is the change of log voting shares for extreme-right parties between the 2018 and the 2013 national elections.<sup>16</sup> The second dependent variable is  $\Delta_{Hate - Crime} \equiv (\text{Hate} - \text{crimes}_{2017}) - (\text{Hate} - \text{crimes}_{2013})$ , which is the change in the number of hate crimes during the same period.<sup>17</sup> The vector  $X_{k,i}$  contains municipal and mayoral characteristics that can be potentially correlated with both the dependent and the treatment variables and is outlined in the data description.

The main treatment is  $\text{asinh}(\#RefugeesHosted_i)$ , which is the inverse hyperbolic sine of our measure for the number of refugees and asylum seekers hosted in the SPRAR centres opened during the years 2014-2017. Our measure for the number of refugees and asylum seekers hosted is the number of places made available by every SPRAR centre during the period of interest. In fact, the data collected on SPRAR centres does not contain the number of individuals effectively hosted in every single SPRAR centre. However, the Home Office gives information about the number of places made available in every SPRAR centre. Given that, as shown by Figure 2, the aggregate number of individuals and the number of places made available in SPRAR centres are highly positively correlated, we think that the number of places made available by every SPRAR centre represents a good proxy for the number of refugees hosted.<sup>18</sup> More specifically, under the assumption that individuals hosted in a SPRAR centre remain approximately one year, we calculate the total number of places made available per refugee centre over the entire period of opening, and then we calculate the average of the number obtained across the four years studied

<sup>16</sup>We consider the following extreme-right political parties: Lega Nord, Fratelli d'Italia, Casa Pound, La Destra, Forza Nuova, Fiamma Tricolore, Rinfondazione Missina.

<sup>17</sup>We decided to use hate crimes until 2017, because 2017 is the last year for which hate crimes have been collected for the entire year.

<sup>18</sup>The yearly average ratio between number of individuals hosted and number of places made available is 1.80 for the years starting from 2006, and 1.26 for the years from 2014. The number of individuals hosted is bigger than the number of places because refugees may stay in a SPRAR centre for less than one year.

in our data (see Table 1).<sup>19</sup>

Given that the decision of opening a SPRAR centre with a specific number of places is decided by the mayor, to deal with the potential biases in the OLS analysis we turn to an instrumental variables (IV) approach. More specifically, we exploit an institutional feature of the SPRAR program, which is that the minimum and the maximum number of places that can be made available in a single SPRAR centre are decided by the Home Office through the rules established for every specific call for competition. More in detail, as indicated in Table 2, the minimum and maximum number of places imposed by the Home Office are different across the 5 tenders studied. Interestingly, for 3 of the 5 tenders studied, the maximum number of places depends on different population thresholds. This institutional arrangement creates an interesting variation across municipalities in the theoretical maximum number of places that the municipalities have been able to create.

As suggested by Figure 4, this theoretical maximum number of places imposed by the Home Office is highly correlated with the actual number of places made available by the municipalities, and it can thus be used as an instrument for our treatment variable in the following first stage regression:<sup>20</sup>

$$\text{asinh}(\#RefugeesHosted_i) = \gamma_0 + \gamma_1 \text{asinh}(\#PredictRefugees_i) + \gamma_2 \text{asinh}(Pop_i) + \gamma_k X_{k,i} + u_i \quad (2)$$

where  $\text{asinh}(\#PredictRefugees_i)$  is the inverse hyperbolic sine of the average number of theoretical maximum places that a municipality can made available across the 5 tenders.<sup>21</sup> To control for the fact that  $\text{asinh}(\#PredictRefugees_i)$  is determined by population thresholds, we control for the inverse hyperbolic sine of the municipal population (i.e.  $\text{asinh}(Pop_i)$ ). In this way, we can exclude that the effect of  $\text{asinh}(\#PredictRefugees_i)$  on  $\text{asinh}(\#RefugeesHosted_i)$  is driven by the size of the municipal population.

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<sup>19</sup>For example, SPRAR centres opened during tender 1 remained active for 3 years (2014-2016). Thus, in our calculations, for a centre with 10 places available every year we considered a total of 30 places and an average of 7.5 (i.e. 30 divided by 4 years) places for the entire period of opening. Calculating the average number of places in this way should enable us to better approximate the number of refugees hosted by the SPRAR centre.

<sup>20</sup>Some dots in Figure 4 are above the 45 degrees red line, suggesting that some municipalities made available a number of places bigger than the maximum allowed. This behaviour can be explained by the fact that, under some exceptional circumstances, the Home Office asked to some specific municipalities to concede extra-places to be used in case of emergency (i.e. in the case of big number of individuals to allocate).

<sup>21</sup>As done for the treatment  $\text{asinh}(\#RefugeesHosted_i)$ , we first calculate the total number of theoretical maximum places that can be made available per refugee centre over the entire period of opening, and then we calculate the average of the number obtained across the four years studied. So, for example, for a municipality with less than 5000 inhabitants that is considering to apply for a SPRAR centre during tender 1, the maximum number of places that can be made available over the 3 years of opening is 45 (i.e. 15 multiplied by 3). Implementing this calculation should enable us to better approximate that maximum number of individuals that the municipality can potentially host during the opening period of the centre.

The decision of implementing the IV approach using the inverse hyperbolic sine transformation derives from the suggestion made by [Clemens and Hunt \(2019\)](#), who have shown how, in contexts similar to our, using the ratio of refugees and asylum seekers over total population can lead to spurious relationships and to the "blunt instruments" problem [Bazzi and Clemens \(2013\)](#) in first stage regressions. The use of the inverse hyperbolic sine transformation allows to circumvent this issue while still controlling for the size of the municipal population. In addition, regression coefficients obtained on variables transformed with the inverse hyperbolic sine can be interpreted identically to those obtained using the logarithmic transformation, but with the advantage that observations which take value zero can be retained.

Then, under the exclusion restriction assumption that  $asinh(\#PredictRefugees_i)$  can affect voting and hate crimes only through  $asinh(\#RefugeesHosted_i)$ , we run the following second stage regression:

$$Y_i = \beta_0 + \beta_1 asinh(\widehat{\#RefugeesHosted}_i) + \beta_k X_{k,i} + \eta_i \quad (3)$$

where  $asinh(\widehat{\#RefugeesHosted}_i)$  is the predicted value of  $asinh(\#RefugeesHosted_i)$  obtained from equation 2. The exclusion restriction seems validated in this context for three main reasons. First, the maximum number of places that a municipality can make available in a SPRAR centre is decided by the Home Office through the rules established by the calls for competition, and the mayors have no possibility to manipulate this number. Additionally, as can be seen in [Figure 4](#), there is no particular group of municipalities that seems to be taking refugees through the SPRAR system more than others. At every threshold there are municipalities applying for refugees and hence results do not seem to be driven by certain subgroups of municipalities of a certain size. Most importantly, it is important to keep in mind that although municipalities across thresholds might differ on average in terms of observable and non-observable characteristics, they are on parallel trends in terms of extreme right voting (as shown in future sections). In order to identify the effect of hosting refugees on extreme right voting it is not necessary that voting levels should be the same, but that there is no differential evolution of those voting shares over time. A similar point can be made about differing legislative thresholds. Although at many population thresholds in Italy different laws apply (such as for example electoral laws for local elections), those laws are constant over time. The only way our identification would be endangered in this case is if one of those laws over the time period considered, would change and apply to different thresholds. To the best of our knowledge this is not the case. Therefore, also given the extensive controls used in our regressions, we are confident that  $\beta_1$  can estimate the causal effect of an additional refugee hosted on voting for extreme-right parties and on hate crimes against migrants.

## 4.2 Regression discontinuity design based on mixed electoral competitions

The second goal of the paper is to study the effect of extreme-right mayors on the probability of hosting refugees and asylum seekers, which we estimate using regression discontinuity design (RDD). In fact, given that municipalities that elect extreme-right mayors are probably different from municipalities that elect mayors with a different ideological position, estimates by OLS are likely to be biased.

To avoid the endogeneity bias of OLS estimates, we implement a RDD strategy based on close mixed electoral competitions, in which extreme-right mayoral candidates run against non-extreme-right mayoral candidates. In fact, under certain assumptions, it is plausible to assume that in mixed electoral competitions decided by a narrow margin the ideological position of the elected mayor is as good as randomly assigned. More in detail, we estimate the following model:

$$D_{i,t} = \beta_0 + \beta_1 \textit{ExtremeRight}_{i,t} + \beta_2 MV_{i,t} + \beta_3 MV_{i,t} * \textit{ExtremeRight}_{i,t} + \epsilon_{i,t} \quad (4)$$

where the dependent variable  $D_{i,t}$  is equal to 1 if the mayor from municipality  $i$  opens a refugee centre at time  $t$ , and 0 otherwise. The treatment variable is  $\textit{ExtremeRight}_{i,t}$ , which is equal to 1 for extreme-right mayors, and 0 otherwise.

The assignment to treatment is determined only by the margin of victory  $MV_{i,t}$ , which is the difference between the vote share of the extreme-right mayoral candidate and the vote share of the non-extreme-right mayoral candidate. At the zero threshold  $MV_{i,t} = 0$  the ideological position of the elected mayor sharply changes from 0 to 1.

Model 4 is estimated by local linear regression, using only the subsample of municipalities in the bandwidth  $MV_{i,t} \in [-h, +h]$ , which is calculated using the [Calonico et al. \(2017\)](#) optimal bandwidth selector. The main parameter of interest  $\beta_1$  captures the average treatment effect (ATE) of an extreme-right mayor at the threshold.

There are two main assumptions that need to be tested to verify the validity of the RDD approach. First, there must be no manipulation of the running variable  $MV_{i,t}$  at the zero threshold. This is tested in [Figure 5](#), which shows that there is not any discontinuity in the density of the running variable  $MV_{i,t}$  at the zero threshold. This evidence seems to exclude any possible manipulation of the running variable at the threshold.

Second, pre-treatment covariates must be balanced at the threshold. This is tested in [Table 9](#), which shows that pre-determined municipal characteristics are balanced across the zero threshold.

## 5 Main Results

In this section we discuss our main results. In the first part, we present various regressions showing the impact of hosting refugees on the vote shares of extreme-right parties. Then, we look at the impact of the reception of refugees on the vote shares of centre-left political parties<sup>22</sup> and hate crimes. In addition, we implement a heterogeneity analysis, which enables us to study which factors drive the effect of the reception of refugees on voting for extreme-right political parties. Finally, in the last subsection, we present the results of the RDD analysis, which is implemented to study how extreme-right mayors affect the probability of hosting refugees and asylum seekers.

### 5.1 Refugees and Voting for the Extreme Right

In this section we discuss our main empirical results. As we can see in Table 4 the number of predicted refugees by the government is highly correlated with the number of actual refugees both with and without controls (column 1 and column 2). In addition, looking at the reduced form regression, we can see how the number of predicted refugees has a negative effect on the change in the vote shares of extreme-right political parties (column 4).

Looking at the effect of the actual number of refugees hosted, a clear pattern emerges: both the OLS coefficient (column 3) and the IV one (column 6) suggest that increasing the number of refugees and asylum seekers hosted reduces the growth rate of the vote shares of extreme-right parties. Given that mayors can apply to receive refugees and they are few, we would expect the effect of introducing refugees against the extreme right vote to be biased downwards. This is due to the fact that introducing few migrants into a community that already has a high degree of acceptance towards migrants should not correct anti-immigrant sentiment down.

In terms of magnitude, the coefficient of the IV exercise in column 6 suggests that a 100 per cent increase in the number of refugees would reduce the growth rate (i.e. the difference between the 2018 and 2013 votes shares divided by the 2013 vote share) in the vote shares for extreme-right parties by  $\hat{\beta}_1 * \log[(100 + 100)/100] = (-0.23) * (0.69) = -0.15$ . This calculation indicates that doubling the number of refugees hosted would reduce the growth rate of the vote shares of extreme-right parties by approximately 15 percentage points. Considering that the average growth rate of the vote shares of extreme-right parties has been 161 per cent over the period consider, doubling the number of refugees hosted would reduce it by approximately 9 per cent.

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<sup>22</sup>In this setting, the centre-left coalition will include votes from the Partito Democratico, Piu Europa and Centro Democratico.

In addition, columns 5 and 7 confirm that this effect is not due to differential pre-treatment trends. First, the actual number of refugees hosted is not correlated with the change in the vote shares of extreme-right parties between 2013 and 2008 national election (column 5). Second, controlling for the lag of the dependent variables does not change the main results (column 7).

Finally, Table 5 indicates that the results are similar if we repeat the exercise excluding the municipalities that do not host refugees (i.e. if we look at the intensive margin only).

[Table 4 about here]

[Table 5 about here]

## 5.2 Refugees and hate crimes

In this section we examine the impact of refugee reception on Hate Crimes.

Our results are obtained by using the change in hate crimes over the period 2017-2013 as a dependent variable and can be consulted in Table 7. Running an OLS regression of the number of refugees on the change in hate crimes gives no significant point estimate (Column 1). Once we directly introduce the predicted number of refugees (our estimate for the reduced form), we find a slight negative effect on Hate crimes against immigrants. Once we carry out our two-stage-least-squares regression we find that there is a significant and negative effect. Again the bias goes into the same direction as expected in the case for extreme right voting.

In terms of magnitude, the coefficient of the IV exercise in column 3 suggests that a 1 per cent increase in the number of refugees would reduce the average change in hate crimes between 2017 and 2013 by  $\hat{\beta}_1 * \log[(100+1)/100] = (-0.18) * (0.00995) = -0.00179$ . Compared to the average change in hate crimes over the period considered (i.e. -0.0093), this calculation suggests that increasing the number of refugees hosted by 1 per cent would reduce the average change in hate crimes by approximately 19 per cent.



[Table 7 about here]

### 5.3 Heterogeneous effects of Refugee Reception on Voting for the Extreme Right

Our main result on heterogeneous effects of hosting refugees on Extreme Right votes are exposed in Table 8. In this case we interact the variable of interest with the number of refugees hosted and instrument this with said variable interacted with the predicted number of refugees. Thus the variable is interacted with the treatment and instrumented with its interaction with the instrument. Also, we maintain the number of refugees instrumented with the predicted number of refugees and include it in all regressions (line 1). Obviously all the interacted variables are in our baseline controls. In this case every regression has two instruments and two variables to be instrumented and thus the treatment and the interaction of the treatment with the covariate are exactly identified.

More in detail, we interact our treatment variable with the following variables: the pre-treatment share of the municipal foreign population, the log of the municipal population, the number of non-profit association per capita (times 1000), the number of hate crimes reported by local media, and our proxy for the use of internet at municipal level. We introduce every single interaction term one at the time, and then, as a robustness check, we add all of them together in the last column of Table 8. As we can see, the only mechanism that comes out to be significant is the proxy for the use of internet at municipal level, with the coefficient in front of the interaction term that indicates how a more intense use of internet at municipal level reduces the negative effect of the reception of refugees on the vote shares of extreme-right political parties. The variable used here is actually the instrument used in [Campante et al. \(2018\)](#) for internet use.<sup>23</sup> Therefore we arguably have a causal interpretation of this interaction term. Our interpretation of this finding is the following: If the interaction between refugees and natives decreases anti-immigrant sentiment then this can occur either *directly* or *indirectly*. Directly is through the contact with refugees and indirectly can be spillover effects through peers and/or the media. In this setting the inter-personal spillover effect is impossible to measure. Though, compared to [Steinmayr \(2018\)](#) and [Vertier and Viskanic \(2018\)](#), we can show that the effect is dampened in places that have a higher connectivity to internet.<sup>24</sup> In this case, there is a higher use of digital media, rather than traditional media such as newspapers for

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<sup>23</sup>The internet connection at the local level is not available due to a disclosure agreement signed by [Campante et al. \(2018\)](#).

<sup>24</sup>We have result testing directly for news readership of several newspapers in Italy, but those results are omitted as not significant.

example. News on the internet are usually more polarised and biased than in traditional news (reference needed) and more importantly rather represent national rather than local news. At the national level the Extreme Right gains considerably, mostly by exploiting populist rhetoric on the refugee crisis, which might contradict local realities of refugee integration. Those interpretations are to take with a pinch of salt, though it remains the case that arguably the interpretation of the interaction term is causal.

[Table 8 about here]

## 5.4 Refugees and voting for left wing parties

In this section, we replace our outcome variable with the vote shares in favour of the Centre Left Coalition. Since Italy did not have any major Extreme Left wing party at the election we focus on the votes of the centre left, which groups together progressive social democratic parties as well as some centrist civic lists and liberal parties. The results of this exercise are reported in Table 6. In this case we see that there is no effect running a standard OLS regression (Column 1). Once we introduce the number of predicted refugees directly into our main regression, we find a significant and positive effect, but especially running our two-stage-least squares estimation we find a significant and positive effect on the change in the vote shares of centre-left parties.

[Table 6 about here]

## 5.5 RDD analysis: the effect of extreme-right mayors on the reception of refugees

In this subsection, we report the results of the RDD analysis, implemented to study the effect of extreme-right mayors on the probability of receiving refugees and asylum seekers. The results of this analysis are reported in Table 10 and Figure 6.

As we can see from both Table 10 and Figure 6, electing an extreme-right mayors has a negative and significant effect on the probability of opening a refugee centre. More specifically, extreme-right mayors have a probability of opening a refugee centre which is

approximately 3 percentage points lower compared to mayors with a different ideological orientation (column 1). The estimated coefficient is virtually unchanged if we add control variables to the RDD analysis (column 2).

[Table 10 about here]

[Figure 6 about here]

## 6 Concluding Remarks

In this paper we have shown three main results that contribute both to understanding the formation of anti-immigrant sentiment by natives as well as how contact with refugees shapes both the supply side and demand side of politics and what role the media plays in this. Concretely, we have shown that the introduction of few refugees over a short time span causally decreases voting for the extreme right as well as hate crimes against immigrants. Those effects are dampened in places that have, according to our interpretation, more access to digital vs. traditional media. In the last part of the paper we show that extreme right wing local politicians realize their electoral losses and react rationally by closing refugee centres that their predecessors opened. Therefore forgoing important financial resources for their municipalities for their personal electoral gains.

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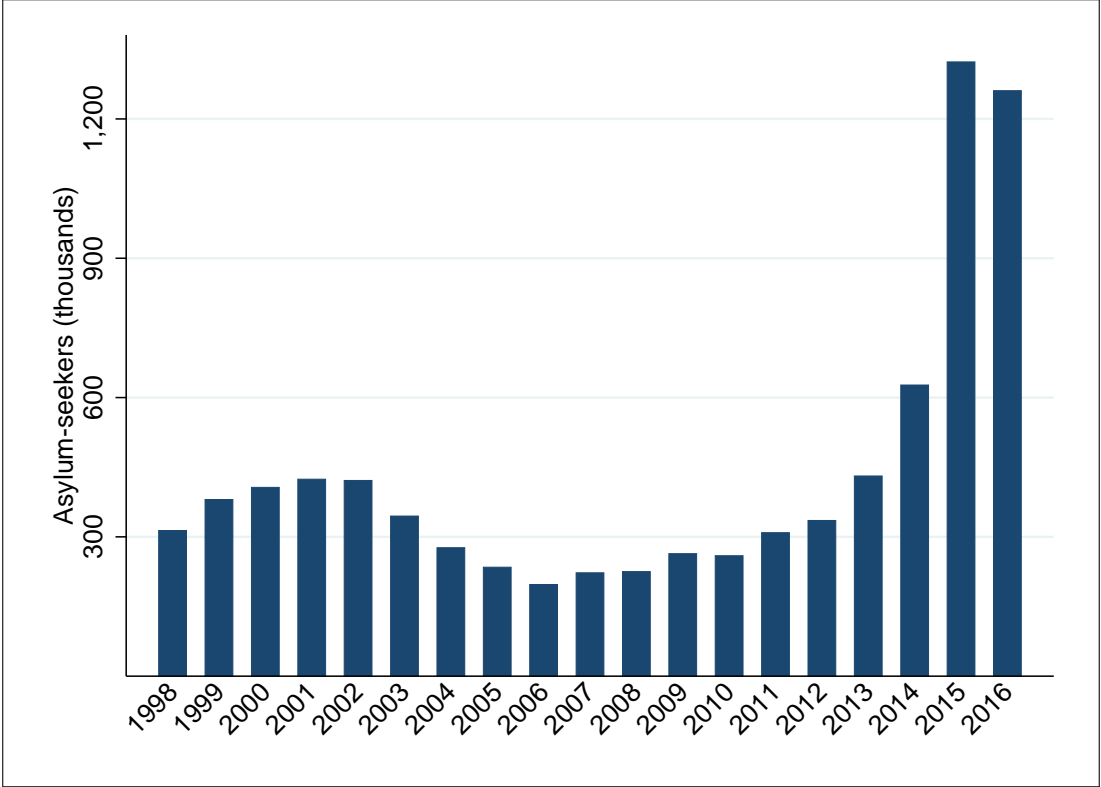
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# Figures and Tables

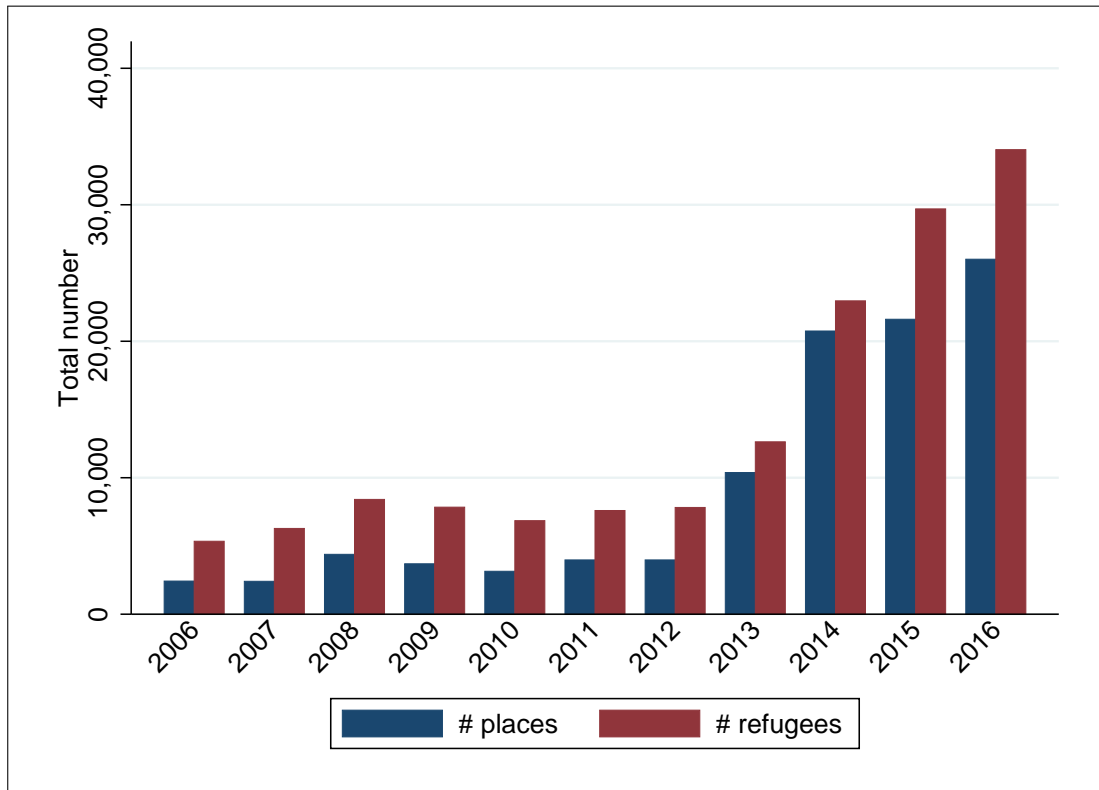
Figure 1: Number asylum seekers in EU Countries



Notes. Asylum-seekers in EU Countries (thousands). Source: Gamalerio (2019) and Eurostat.

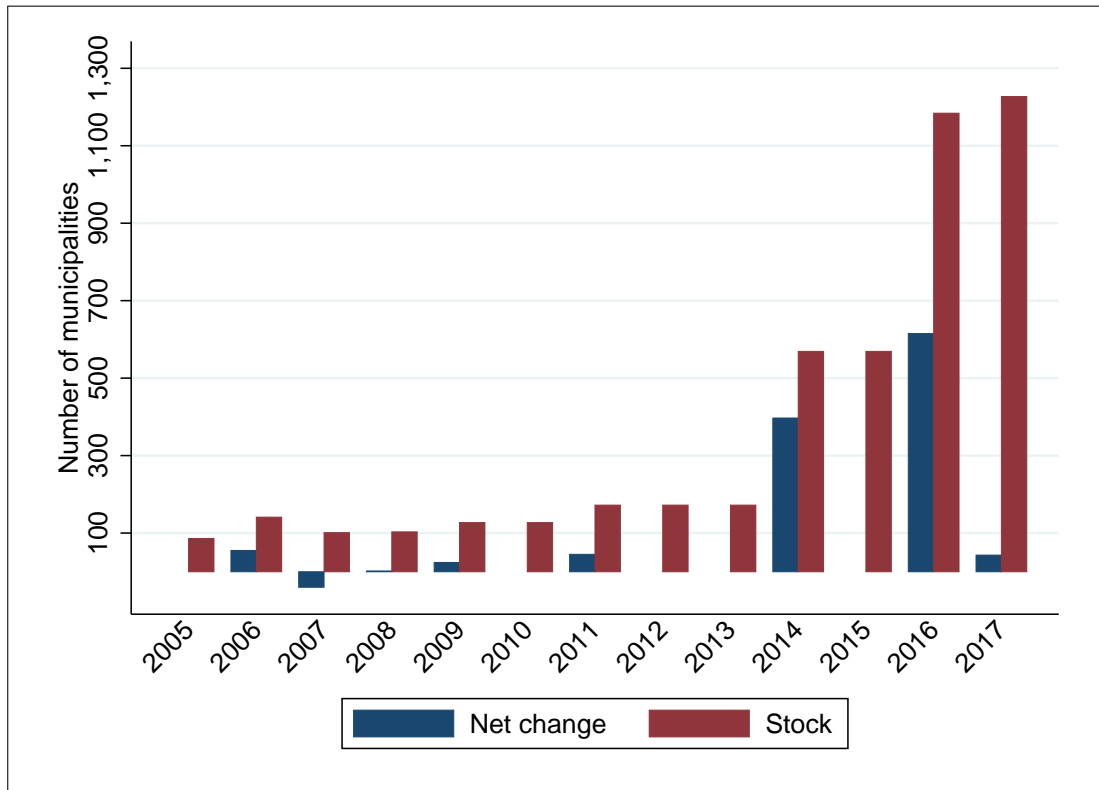


Figure 2: Number of places and refugees in SPRAR centres



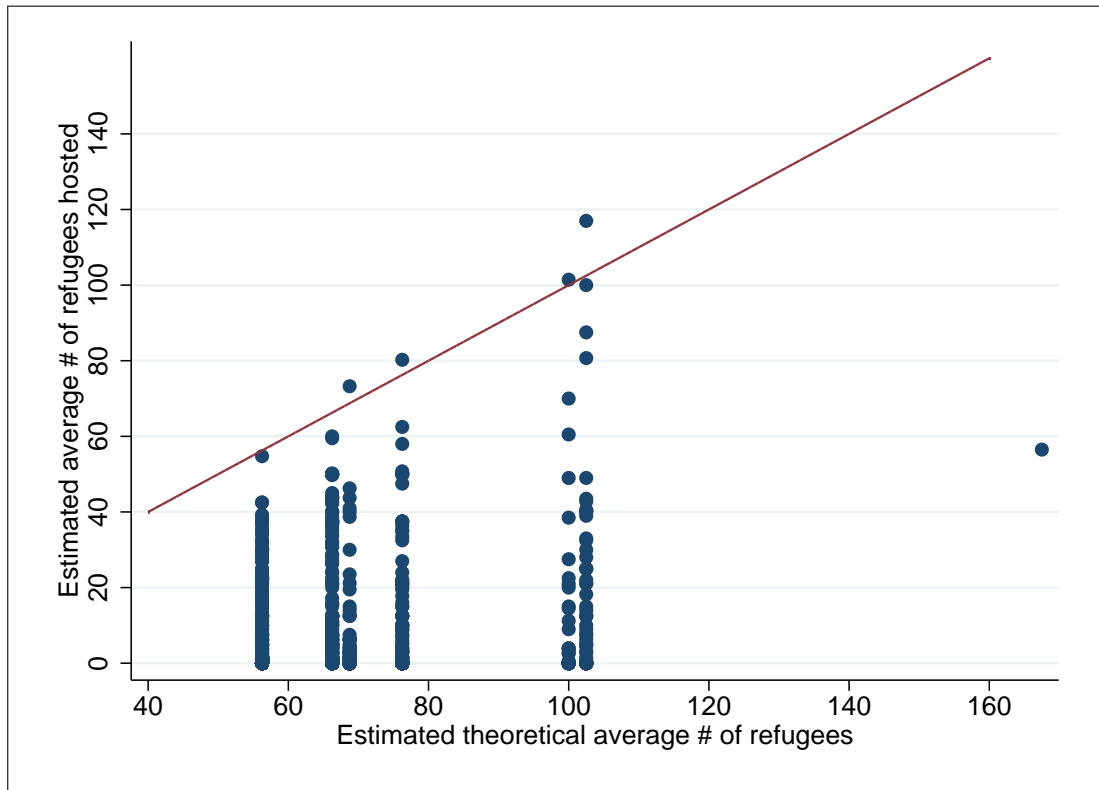
Notes. Sources: Gamalerio (2019) and SPRAR report "Atlante Sprar", published on the SPRAR webpage sprar.it. The graph reports the number of places made available and the number of refugees and asylum seekers hosted every year from 2006 up to 2016.

Figure 3: Number of SPRAR municipalities



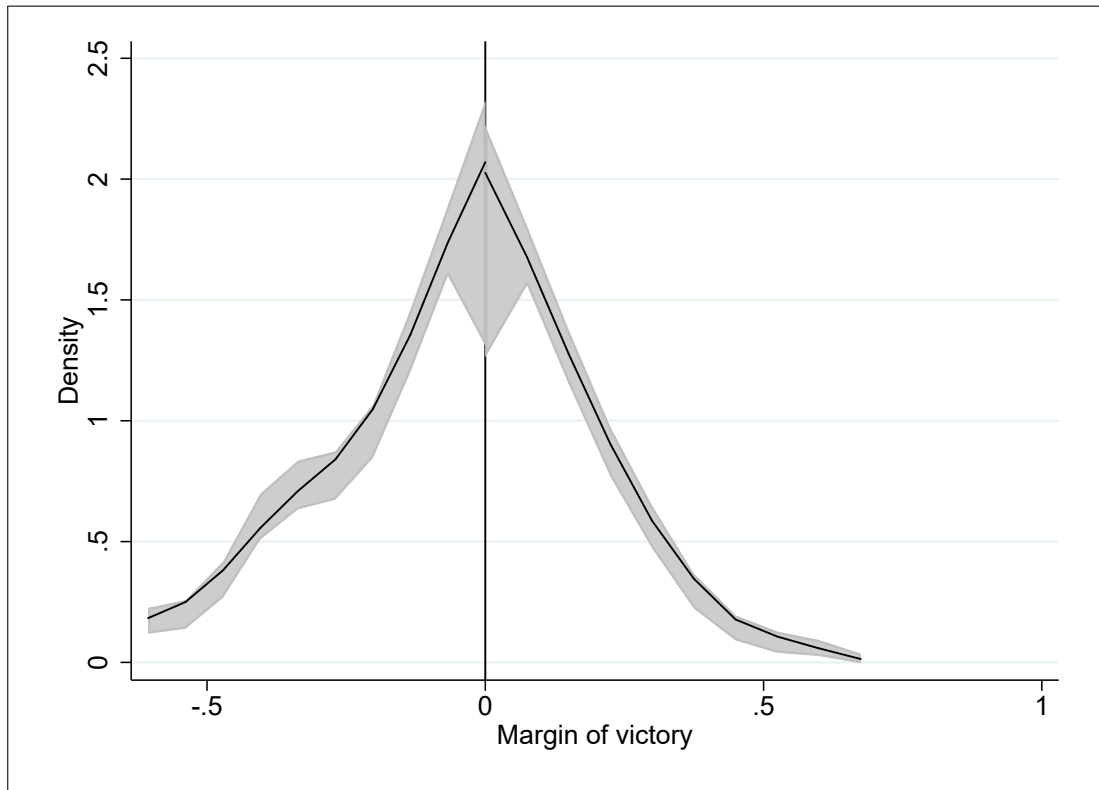
Notes. Sources: Gamalerio (2019) and Home Office and SPRAR. Net change is equal to the net inflow of municipalities that enter the SPRAR program in a specific year (i.e. net change = entry - exit). Stock indicates the total number of municipalities that in a specific year have an active refugees' centre in their territory. See also Table 3.

Figure 4: First stage: number refugees vs theoretical maximum number of refugees



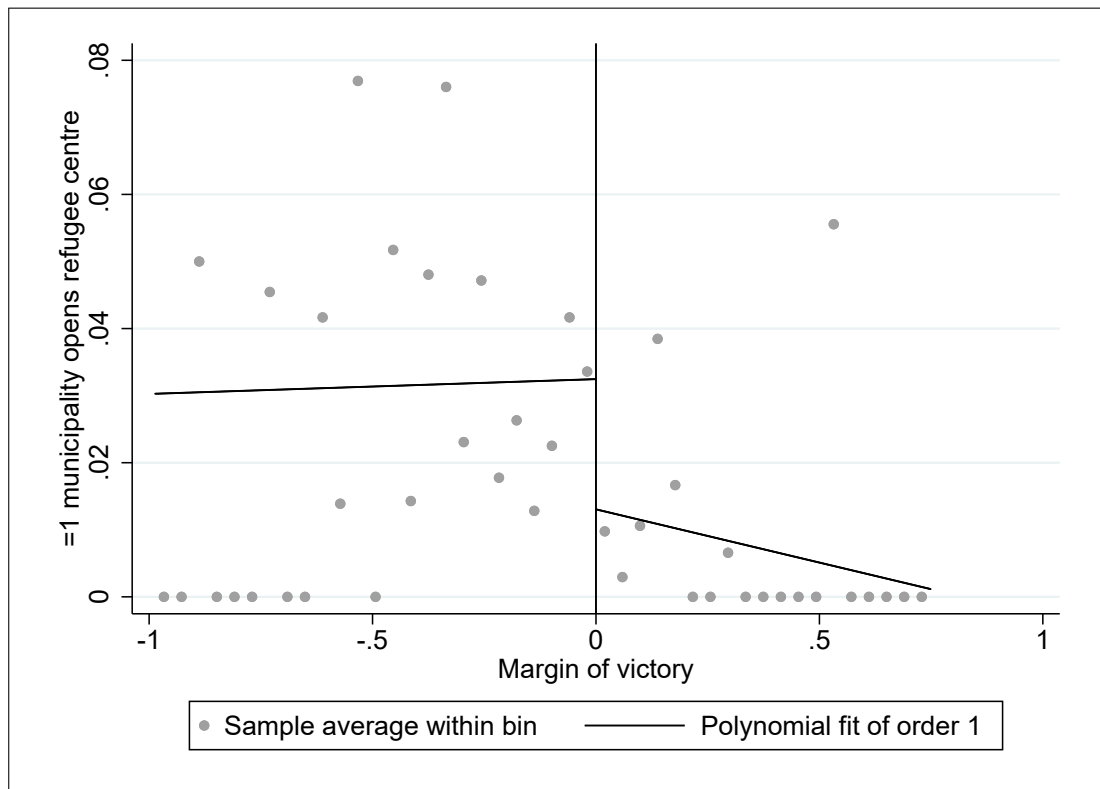
Notes. Sources: Home Office and SPRAR. The red line is 45 degree line.

Figure 5: RDD: density running variable



Notes. Electoral mandates between 2004 and 2017, density of municipal elections. The running variable  $MV_{it} > 0$  when the winning candidate is from a extreme-right party,  $MV_{it} < 0$  otherwise. Discontinuity p-value: the p-value for the null hypothesis of discontinuity of the density of the running variable at the zero threshold is 0.84.

Figure 6: RDD: Effect of extreme-right mayors on the reception of refugees



Notes. Electoral mandates between 2004 and 2017. The running variable  $MV_{it} > 0$  when the winning candidate is from an extreme-right party,  $MV_{it} < 0$  otherwise. The dependent variable is equal to 1 for municipality  $i$  that opens a refugee centre at time  $t$ , and 0 otherwise.

Table 1: The timing of SPRAR tenders

(1)	(2)	(3)	(4)	(5)	(6)
Tender	Year	Date starts	Date ends	Date opens	Years active
1	2013	04/09/2013	19/10/2013	29/01/2014	2014-2016
2	2015	23/05/2015	22/07/2015	04/12/2015	2016
3	2015-2016	14/10/2015	14/02/2016	31/05/2016	2016-2017
4	2016	27/08/2016	30/10/2016	19/01/2017	2017-2019
5	2016-2017	31/10/2016	31/03/2017	01/07/2017	2017-2020

Notes. Sources: Gamalerio (2019), Home Office and SPRAR. Description columns: 1) In column 1, Tender is the number of the tender assigned for this paper; 2) In column 2, Year is the year in which the tender is issued by the Home Office; 3) The starting date of the tender is indicated in column 3 (Date starts); 4) The deadline for application to the tender is indicated in column 4 (Date ends); 5) The date of opening of the refugee centre is indicated in column 5 (Date opens); 6) If municipality  $i$  participates to the tender, then the refugee centre remains active for the years indicated in column 5 (Years active).

Table 2: Number of places in refugee centres by tender

(1)	(2)	(3)
Tender	Minimum number of places	Maximum number of places
1	15 for all municipalities	15 places until 5000 inhabitants 25 between 5001 and 40,000 50 between 40,001 and 200,000 100 between 200,001 and 1,000,000 150 between 1,000,001 and 2,000,000 250 from 2,000,001
2	6 for all municipalities	10 places until 5000 inhabitants 20 between 5001 and 15,000 30 between 15,001 and 50,000 40 between 50,001 and 200,000 50 between 200,001 and 500,000 70 from 500,001
3	10 for all municipalities	25 places until 20,000 inhabitants 40 between 20,001 and 40,000 50 between 40,001 and 200,000 100 between 200,001 and 1,000,000 150 between 1,000,001 and 2,000,000 250 from 2,000,001
4	10 for all municipalities	60 for all municipalities
5	10 for all municipalities	60 for all municipalities

Notes. Sources: Home Office and SPRAR. Description columns: 1) Tender is the number of the tender assigned for this paper; 2) Minimum number of places: minimum number of places for refugees and asylum seekers that needs to be guaranteed in the SPRAR centre; 3) Maximum number of places=maximum number of places for refugees and asylum seekers that can be provided in the refugee centre.

Table 3: Number of SPRAR municipalities

(1)	(2)	(3)	(4)	(5)
Year	Stock	Net change	Entry	Exit
2005	86	0	0	0
2006	141	55	60	5
2007	101	-40	8	48
2008	103	2	8	6
2009	127	24	33	9
2010	127	0	0	0
2011	172	45	51	6
2012	172	0	0	0
2013	172	0	0	0
2014	569	397	412	15
2015	569	0	0	0
2016	1184	615	615	0
2017	1227	43	154	111

Notes. Sources: Gamalerio (2019), Home Office and SPRAR. Year=calendar year. Stock (column 2) indicates the total number of municipalities that in a specific year have an active refugees' centre in their territory. Net change (column 3) is equal to the net inflow of municipalities that enter the SPRAR program in a specific year (i.e. net change=entry-exit). Entry (column 4) is the number of municipalities that enter the SPRAR program in a specific year (i.e. municipalities that open a refugees' centre), while exit (column 5) indicates the number of municipalities that leave the SPRAR program in a specific year (i.e. municipalities that close refugees' centre). See also Figures 3.

Table 4: Refugee reception and voting for extreme-right parties

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>#NumberofRefugees</i>	<i>#NumberofRefugees</i>	$\Delta$ <i>ExtremeRight</i>	$\Delta$ <i>ExtremeRight</i>	$\Delta$ <i>ExtremeRight</i> <sub>t-1</sub>	$\Delta$ <i>ExtremeRight</i>	$\Delta$ <i>ExtremeRight</i>
<i>#PredictedRefugees</i>	1.971*** (0.230)	1.887*** (0.255)		-0.446*** (0.127)			
<i>#NumberofRefugees</i>			-0.030*** (0.010)		0.002 (0.049)	-0.236*** (0.072)	-0.235*** (0.061)
$\Delta$ <i>ExtremeRight</i> <sub>t-1</sub>							-0.758*** (0.023)
Regression	OLS	OLS	OLS	RF	2SLS	2SLS	2SLS
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7093	7093	7093	7093	7093	7093	7093
Adjusted $R^2$	0.217	0.283	0.447	0.447	0.161	0.396	0.625

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

In the first two columns we run the first stage OLS regression first without then with controls with a dependent variable the number of refugees hosted. Columns 3 to 7 are our second stage specification. The outcome here are votes for all Extreme Right wing parties most prominently the Lega Nord. All regressions include all the main controls outlined in the Data description (except for Column 1. Standard errors in parentheses are clustered at the local labour market level.



Table 5: Refugee reception at the intensive margin

	(1)	(2)	(3)	(4)
	$\Delta ExtremeVotes$	$\Delta ExtremeVotes$	$\Delta ExtremeVotes$	$\Delta ExtremeVotes$
$\#Refugees$	0.024 (0.023)		-0.496** (0.220)	-0.398** (0.181)
$\#PredictedRefugees$		-0.687*** (0.211)		
$\Delta ExtremeVotes_{t-1}$				-0.691*** (0.056)
Observations	1144	1144	1144	1144
Adjusted $R^2$	0.393	0.395	0.180	0.571

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

Regressions run excluding municipalities that do not host refugees and asylum seekers. The outcome here are votes for all Extreme Right wing parties most prominently the Lega Nord. All regressions include all the main controls outlined in the Data description. Standard errors in parentheses are clustered at the local labour market level.

Table 6: Refugee reception and voting for the Left

	(1)	(2)	(3)
	$\Delta\textit{Centre} - \textit{Left}$	$\Delta\textit{Centre} - \textit{Left}$	$\Delta\textit{Centre} - \textit{Left}$
<i>#Refugees</i>	0.003 (0.004)		0.059** (0.025)
<i>#PredictedRefugees</i>		0.111** (0.045)	
Regression	OLS	RF	2SLS
Controls	Yes	Yes	Yes
Observations	7093	7093	7093
Adjusted $R^2$	0.298	0.298	0.270

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

The outcome here are votes for all centre-left parties. All regressions include all the main controls outlined in the Data description. Standard errors in parentheses are clustered at the local labour market level.

Table 7: The impact of refugee reception on hate crimes

	(1)	(2)	(3)
	$\Delta HateCrimes$	$\Delta HateCrimes$	$\Delta HateCrimes$
<i>#Refugees</i>	-0.014 (0.009)		-0.179** (0.083)
<i>#PredictedRefugees</i>		-0.337** (0.150)	
Regression	OLS	RF	2SLS
Controls	Yes	Yes	Yes
Observations	7093	7093	7093

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

The outcome variable is the change in hate crimes between 2017 and 2013. All regressions include all the main controls outlined in the Data description. Standard errors in parentheses are clustered at the local labour market level.

Table 8: The heterogeneous impact of refugee reception

	(1)	(2)	(3)	(4)	(5)	(6)
	$\Delta ExtremeRight$	$\Delta ExtremeRight$	$\Delta ExtremeRight$	$\Delta ExtremeRight$	$\Delta ExtremeRight$	$\Delta ExtremeRight$
#Refugees	-0.232*** (0.070)	0.674** (0.338)	-0.271*** (0.089)	-0.234*** (0.075)	-0.301*** (0.091)	1.019 (0.696)
#Refugees $\times$ Foreign born $\frac{\text{TotalPopulation}}$	-0.411 (0.330)					2.114 (1.409)
#Refugees $\times$ log(Population)		-0.201** (0.090)				-0.314 (0.195)
#Refugees $\times$ $\frac{NonProfitAss.\times 1000}{Population}$			-0.022* (0.012)			0.057 (0.043)
#Refugees $\times$ HateCrimeMedia <sub>2013</sub>				0.039 (0.030)		-0.036 (0.067)
#Refugees $\times$ $\Delta toADSLtower$					-0.005*** (0.002)	-0.020* (0.011)
Observations	7093	7093	7093	7093	7093	7093
Adjusted $R^2$	0.399	0.023	0.383	0.397	0.362	.

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

All regressions are instrumental variables regressions instrumenting the number of refugees hosted by the number of predicted refugees. For the interaction variables listed from lines 2 onwards we instrument the interaction of refugees hosted and the variable with the interaction of predicted refugees and said variable. All regressions include all the main controls outlined in the Data description. Standard errors in parentheses are clustered at the local labour market level. Standard errors clustered at the local labour market level.

Table 9: RDD: balance tests

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Log population	Share graduate	Share<18	Share>65	Share Unemployed	Area	Past sprar
Conventional	-0.033 (0.120)	-0.002 (0.003)	-0.006 (0.004)	0.008 (0.007)	-0.007 (0.005)	0.689 (6.736)	-0.004 (0.014)
Bias-corrected	-0.047 (0.120)	-0.002 (0.003)	-0.006* (0.004)	0.009 (0.007)	-0.005 (0.005)	0.242 (6.736)	-0.002 (0.014)
Robust	-0.047 (0.137)	-0.002 (0.003)	-0.006 (0.004)	0.009 (0.008)	-0.005 (0.006)	0.242 (7.919)	-0.002 (0.017)
Observations	1,771	1,771	1,771	1,771	1,771	1,771	1,392
BW Loc. Poly. (h)	0.195	0.193	0.239	0.195	0.152	0.166	0.145
Effective Observations	1055	1045	1190	1053	881	944	711

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

Notes. The estimated coefficients capture the effect of a extreme-right mayor. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes close mixed electoral competitions over the period 2004-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the zero threshold. Standard errors clustered at local labour area level in parentheses.

Table 10: RDD: Effect of extreme-right mayors on the reception of refugees

Dependent variable Covariates	= if open refugee centre	
	No	Yes
Conventional	-0.028** (0.014)	-0.031** (0.013)
Bias-corrected	-0.029** (0.014)	-0.033** (0.013)
Robust	-0.029* (0.016)	-0.033** (0.015)
Observations	1,771	1,771
BW Loc. Poly. (h)	0.179	0.173
Effective Observations	997	974

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes. The estimated coefficients capture the effect of a extreme-right mayor. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes close mixed electoral competitions over the period 2004-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the zero threshold. Standard errors clustered at local labour area level in parentheses.