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Doctoral Dissertation

"Essays on Immigration and Political Economy"

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"Però vull pensar que tot va bé i
que no enyores aquells temps,
que fins i tot en recordar
no saps per què però estàs content."

ACKNOWLEDGEMENTS

Many obstacles mark a Ph.D. journey. Some of them are, of course, research related. Others, likely the most complex to deal with, are emotional. If a global pandemic occurs in the last half of the program, things become even more complicated. Since I have almost reached the end of this path (I still cannot believe it), I would like to use these pages to thank the people who have supported me, maybe without even realizing it.

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There are two other professors to whom I will be eternally indebted: Mari-

apia Mendola and Luigi Minale. If I dared to face this journey, I surely owe it to them. When I was her RA, Mariapia introduced me to the world of research and made me realize its relevance in investigating topics that have always been relevant to me. What's more, she was incredibly supportive during my market. Luigi is a mentor to me – for the topics he investigates and how he behaves. I still have imprinted in my mind some of his messages that stirred up powerful emotions.

Another person who helped me so much during my Ph.D. is Marta Golin. All of my works leveraged her availability and skills. Please take note of this name because she has all the potential to be one of the most influential scholars in the coming years. Undoubtedly, she is a great person who has been highly supportive of me.

Going back to Barcelona, I want to thank the UB economics department and especially Jordi Roca. Without his help, I probably wouldn't have even been able to start my Ph.D. (this is literally true, as he went to I don't know which remote post office in Barcelona to collect a document needed for my enrollment just a few hours before the deadline). Also, I want to express my gratitude to Elisabet, the director of our Ph.D. program. She is genuinely interested in us and always pushes us to do better and better. The program is flourishing and attracting more and more international and very qualified students, and this is undoubtedly due to her enormous efforts. I am sure that it will grow even more in the medium term, making me even more proud to have received my doctorate from this university.

The degree of happiness and stress one experiences during a Ph.D. is surely related to the surrounding people and environment. The IEB community has undoubtedly provided me huge support on this side. Beyond the financial support, being part of this group has made me feel like part of a family and deeply help me never to feel lost along my journey. The IEB faculty is made up of loud and fantastic people from whom I got a lot of support and advice. Plus, I genuinely appreciated how much they involve the younger members. I will miss the barbecues on Dirk's terrace, the football competition that marked the beginning of summer, and the lunches in the common room. Among all their members, I want to especially express my gratitude to my co-author Matteo, from whom I learned so much.

Plus, being part of the IEB has given me the chance to meet Ph.D. colleagues that I will always carry with me. In few departments, doctoral students are so united and supportive. I am delighted and proud to have been part of this group. Members of the older cohorts, including Francisco, Kinga, Mariona, and Tania, have helped me and inspired me profoundly. Certainly, younger people of this community will keep the spirit of this fantastic family intact. I wish them, especially to Ghizlen and Marianna, the best of luck – the future is yours!

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Moving (relatively) out of the university context, I can only start by thanking Filippo and Alexia. Filippo has been much more than an office mate and flatmate. He is one of the best people I have ever met. Alexia is a fantastic person with whom I have many character traits in common. I thank her for introducing me to the Catalan world and for her patience with my highly Italian-biased Spanish. Together, they represent the brother and sister I never had. From dinners during the quarantine to excursions in Catalonia, the moments we lived together were a source of extreme joy, which I will remember for a lifetime. If I felt at home in this place, I owe it mainly to them. I really love them, and I express my profound gratitude for significantly contributing to making my experience in Barcelona unforgettable. I also want to extend my appreciation to Ester and Mischa. Together with the two mentioned above, the five of us had fantastic experiences, from barbecues on the terraces to the road trip in Galicia. These moments have helped me so much to face the difficulties of the doctorate.

For the same reason, I want to thank all my beach volley mates with whom I have played over the years. The moments spent on the beach (perhaps too many) were crucial to disconnect from the stress of the Ph.D. What's more, I

met incredible people here, with whom I had a lot of fun.

Over the last years, I have met a lot of new people with backgrounds of all kinds. However, there are two friends who have known me since I was a kid that I want to express my profound gratitude to. Davide and Francesco represent those people with whom you feel as if time never passes. We don't see each other much, but the moments when we do get together give me a feeling of safety and true happiness. We are walking different paths (I am incredibly proud of theirs), but I'm sure we will never lose each other.

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Finally, a big thank you to all my family or those I consider as such. My parents have supported me unconditionally. With all their means, they have tried to remove every obstacle that prevented me from achieving my happiness. I will forever give them credit for this. Similar arguments can be extended to my grandmother and aunt. Like my parents, they have provided me with unconditional love since I was a little child. I also want to express my gratitude to Nicola, a person I admire so much, and all his family (of which I feel a bit part).

Special thanks to Ettore, my amazing golden retriever (I know that at this stage, the reader was expecting a dedication to my partner and lover: my apologies for disapproving). Our long walks together have been a source of extreme serenity, incredibly beneficial to my well-being.

To conclude, a special thanks to the city of Barcelona and to the whole Catalunya. Here I lived unforgettable experiences that I will always carry with me. Here I am leaving a piece of my heart.

Barcelona, April 26th, 2021.

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1. INTRODUCTION

The Western political landscape is becoming increasingly extreme and polarized. Scenes like those of Trump supporters besieging Capitol Hill, the quintessential symbol of contemporary democracy, will remain in our memory for a long time. On the European front, radical parties such as the *Alternative für Deutschland (Afd)* in Germany, the *Rassemblement National (RN)* in France, *Lega* in Italy and, ultimately, *Vox* in Spain have seen their support grow substantially over the last years. Many argue that the wave of extremist parties poses an existential threat to the liberal world order, democracy, open markets, protection of minorities, civil liberties, and constitutional checks and balances (Guriev & Papaioannou, 2021). What is observable is that the surge in support for radical parties has been matched with a dramatic fall in levels of trust in European Institutions (Algan et al., 2017) and a spike in hate crimes against immigrants and minorities (BBC, 2020; ECRI, 2020). The phenomenon is highly recent and, consequently, so is its related literature.

On the demand side, various are the possible reasons behind the upsurge of these radical political forces.[1] Some of them are related to economic factors (Guiso et al., 2017, 2020). Support for extreme parties is more widespread among the so-called "losers of globalization" and in areas of industrial decline (Barone & Kreuter, 2020; Colantone & Stanig, 2018; Dippel et al., 2021). Similar arguments have been raised for the role of the Great Recession and subsequent austerity policies (Dehdari, 2018; Gidron & Mijs, 2019).

Economic explanations such as cross-border trade, automation, crisis, and austerity cannot, however, fully explain the boost of radical parties (Margalit, 2019). Society is increasingly raising its voice to demand more women empowerment and greater protection for minorities. As a reaction, members of the current dominant group – white men – fear that their identity is under attack (Guriev & Papaioannou, 2021). Therefore, it is no wonder that people with traditional values support authoritarian political parties, who promise to fight the expansion of liberal values and political correctness (Fukuyama,

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[1]For a recent review, primarily focusing on populist parties, see Berman and Kundnani (2021), Guriev and Papaioannou (2021), and Noury and Roland (2020).

2018; Noury & Roland, 2020).

On the supply side, extremist leaders have proven incredibly good at exploiting and magnifying citizens' fears. From this perspective, it is no coincidence that a key topic on these parties' agendas is immigration. This does not come as a surprise since this subject embraces both economic and non-economic related concerns. Extreme parties' leaders have intensively used anti-immigrant rhetoric, either in an explicitly violent way or by recurring to the so-called "dog whistle effect" – i.e., using speeches with a hidden message that is only understood by a targeted subgroup and that activates threatening stereotypes (Grosjean et al., 2021; Haney-López, 2015).

According to the last estimates, the number of international migrants is around 272 million globally, which equates to 3.5 percent of the universal population (IOM, 2020). This figure has been almost stable in the last decades (in 1990 it was equal to 2.9%). However, an increase in the portion of people moving toward developed countries has been recorded in recent years. For example, from 1990 to 2015, the share of foreign-born in the EU increased from 6% to 11%. The growth of the immigrant population in developed countries reflects both "push" (supply) and "pull" (demand) factors (Guriev & Papaioannou, 2021).

Migration flows to Europe suffered a severe and unprecedented crisis in 2015-2016 when thousands of people, mainly Syrians fleeing war, attempted to reach European countries by sea and land. The number of refugees who managed to enter Europe is small, both in relation to the European population and the total number of people who escaped recent conflicts.[2] However, the so-called refugee crisis has extensively dominated the political debate at the European and national levels.

Europeans have proven that the immigration topic is a strong source of concern for them. In a large survey conducted in the spring of 2018 by the European Commission, nearly 40 percent of respondents said immigration

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[2]Among the 7 million Syrians who have been forced to flee abroad since the war began, 11.6% of the total Syrian refugee and asylum seeker population in the world is in Europe, while 87% is in the Middle East, North Africa, and Turkey. Besides, more than 6 million Syrians are internally displaced within their own country, accounting for about half of the Syrian refugees that the civil war has produced (Sources: Internal Displacement Monitoring center (2018), UNHCR. (2017, November)).

was the main issue facing the EU (Eurobarometer, 2018). In the same year, the EU27 countries received overall an inflow of immigrants equal to 0.54% of their population (Eurostat, 2018). Besides outliers such as Malta, Cyprus, and Luxembourg, other countries where the inflow of immigrants was above average were Ireland, Spain, and, to a lesser extent, Germany (2.01% 1.38% and 1.08%, respectively).[3] In Italy, the figure was 0.55% of its population. In terms of stock, the number of people residing in an EU Member State with citizenship of a non-member country was 23 million, representing 5.1% of the EU27 population. In addition to the outlier Luxembourg, a high proportion of foreign citizens (more than 10% of the resident population) was also observed in Malta, Cyprus, Austria, Estonia, Latvia, Ireland, Germany, Belgium, and Spain.

The level of concern that citizens attribute to immigration varies considerably among the EU 27 states and, as displayed in Figure 1.1, it is not correlated with the presence of foreigners in the country.

Figure 1.1: Immigration concern and immigrants' presence in the EU 27 countries
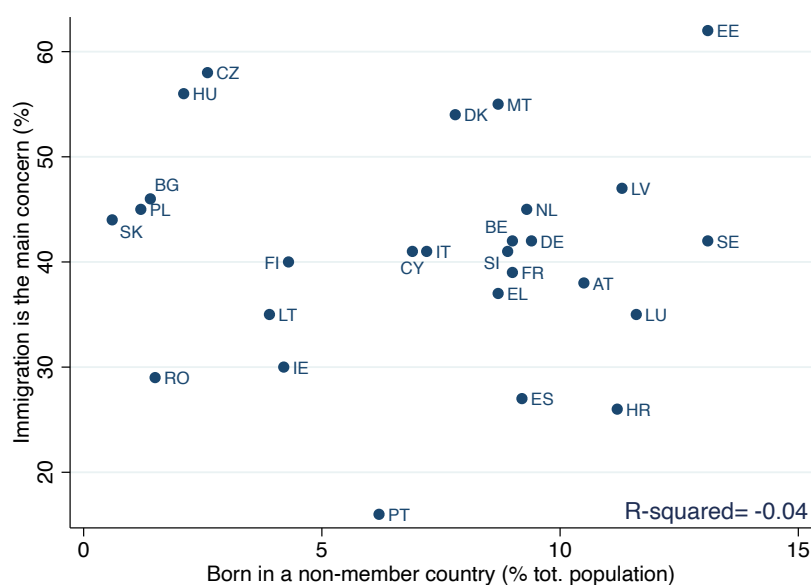
Sources: Eurostat (2018), Eurobarometer (2018)

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[3]Note that these shares refer to the inflows of migrants, not to the countries' net migration flows.

One reason why individuals place so much emphasis on immigration may be that they have misperceptions about the topic. Using large surveys in France, Germany, Italy, Sweden, the UK, and the US, Alesina et al. (2018) show that migrants' stocks are perceived to be two or three times as large as the actual levels. Similar results are found when IPSOS[4] data are used in other developed countries (Duffy, 2018). Natives overestimate the presence of immigrants and have distorted beliefs about their characteristics, such as gender, origin, and religion. Furthermore, they are likely to think that foreigners are economically weaker than they are – i.e., less educated, more unemployed, and more reliant on and favored by government transfers.

Although studies on the topic are growing, much is still unknown about the relationship between immigration and electoral support for the far-right. This dissertation aims to contribute to this recent but growing literature. What happens to natives' attitudes toward foreigners (and their electoral preferences) if they are more informed about immigration dynamics? What are the consequences of electing far-right leaders on the protection of foreigners? Does welcoming foreign refugees increase support for anti-immigration parties? Or, conversely, are there reception systems that, if well managed, can dismantle the rhetoric of extremist politicians? This dissertation sheds light on these questions by applying different empirical methodologies and leveraging detailed and unique datasets.

A common thread among the chapters of this dissertation is the focus on the role played by the Internet in the research questions outlined above. Indeed, the ability to go online has radically changed voters' habits and how they inform themselves. Concurrently, the Internet and social media have drastically reshaped the way politicians communicate with their potential voters.

There are several and divergent ways in which the Internet might impact the relationship between support for extremist parties and immigration. On the one hand, the Internet could be helpful in bridging the information gap on the migration dynamics pictured above. More informed individuals should, in turn, decrease their negative sentiment toward migrants, as proven by recent experiments (Facchini et al., 2016; Grigorieff et al., 2020). However, by its nature, the Internet has many potential drawbacks related to attitudes toward immigrants, and some features of the online environment can be very

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[4]A leading global survey and market research company.

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beneficial for extremist politicians (Zhuravskaya et al., 2020). The Internet increases the general salience of the immigration issue, which, in turn, generates more support for radical parties. This effect has been proven to be true even when individuals realize that what extremist politicians say about immigration is not true (Barrera et al., 2020). Another very sensitive issue is linked with fake news, which, when circulated online, can have remarkable impacts on election outcomes (Allcott & Gentzkow, 2017). The online behavior of extremist politicians can have significant offline repercussions, as evidenced by the relationship between Donald Trump's anti-Muslim tweets and hate crimes against Islamists (Müller & Schwarz, 2020). More generally, the Internet and social media can be an ideal arena for the generation of echo chambers of extremism that can turn into attacks against minorities in real life (Müller & Schwarz, 2020; Petrova et al., 2020).

Given what has been outlined above, the effect of being exposed to the Internet on the natives' attitudes toward immigrants and, consequently, on their electoral behavior is, *a priori*, ambiguous. The second chapter of my dissertation, *"Does the Internet change attitudes toward immigrants? Evidence from Spain"*, seeks to answer this question empirically. In this analysis, I use a confidential and unique dataset that allows me to link at the micro level both attitudes and broadband coverage. I thus investigate whether people living in areas with higher early Internet penetration are characterized by a different level of information on the migratory phenomenon and by distinct attitudes toward immigrants. In the second part, I analyze how voting decisions are affected by Internet availability.

The setting for the analysis is Spain, a particularly interesting country in conducting a study of this nature for several reasons. Indeed, in the early 2000s Spain experienced an exceptional inflow of migrants comparable, at least in quantitative terms, to the numbers recorded during the most recent European refugee crisis.

The paper exploits an exhaustive and representative multi cross-sectional survey (N=19,293) on attitudes toward migrants carried out by the "Center of Sociological Investigations" (*Centro Investigaciones Sociológicas* - CIS). From this dataset, it is possible to understand how informed Spaniards are on immigration, their opinion about foreigners, and the main concerns related to immigration, from different points of view. The restricted version of the

survey I could access allows me to identify the municipality of the respondent, which is very uncommon in the literature. Lastly, and crucially for the identification strategy, the data also enable me to compare natives' attitudes before and after the Internet's arrival.

To address the endogeneity of Internet availability, I look at pre-existing voice telecommunication characteristics at the very local level, and I use outcome variables before and after the Internet's arrival. Put differently, the paper combines a difference-in-differences (DID) with an instrumental variable (IV) approach. Specifically, I instrument the availability of the Internet with the number of traditional telephone landlines recorded in 1996 in each municipality. Since the number of landlines was not randomly distributed, similarly to Campante et al. (2018), the empirical strategy relies on interacting the instrument for Internet availability with the time variation between the two periods (pre- and post- Internet). The identification assumption is that the only factor that changed the relationship between the number of fixed telephone lines and some unobserved characteristic was the introduction of broadband technology.

Results show that Internet availability is associated with a better knowledge of the (national) migration dynamics and leads to an overall improvement in attitudes toward immigrants. Additionally, I find that access to the Internet generates a decrease in the political support for the traditional Spanish right-wing party. This decline is found both when using survey data and looking at actual election results.

Although the political success of far-right parties is growing in all Western countries, little is known about the consequences of having these radical forces in power. Anecdotal evidence suggests that support for these parties has been matched with a sharp surge in discrimination and violence against minorities. However, there is no empirical research that establishes a causal relationship between the appointment of far-right politicians and an increase in the episodes of hate crimes. Focusing on the role played by local politicians, in the third chapter of this dissertation, *"Do far-right mayors increase the probability of hate crimes? Evidence from Italy"*, I test this hypothesis empirically.

As (and perhaps even more significantly) in other European states, the po-

litical support for the far-right in Italy, especially for the League, has soared in recent years, both at the national and local levels. In this context, I can exploit a unique and detailed dataset on hate crimes against immigrants – an issue that suffers from a severe problem of lack of data in several countries. Besides, the high number of municipalities in Italy – and, therefore, local elections – is ideal for using a Regression Discontinuity (RD). This methodological approach allows me to assess a robust causal effect of the far-right mayors' victory on the likelihood of hate crimes. Empirically, I assemble a dataset of local elections in the period 2008-2018. I then compare the probability of hate crimes in municipalities in which far-right candidates won or lost with a narrow margin of votes.

Results show that in municipalities led by far-right mayors, the likelihood of a hate crime occurring is significantly higher. The effect of the far-right persists when considering the most severe acts, including physical assaults. Reassuringly for the credibility of my results, I do not find any effect in the lagged hate crimes, namely the episodes that happen in the same municipalities before the election of the far-right mayors. The effect resists to several robustness checks that the level of detail of the dataset allows me to perform.

I find two mechanisms that are particularly relevant to explain the effects that I document. First, I demonstrate that the election of extreme right mayors generates an erosion of social norms. This behavioral change does not occur only in the municipalities where the mayors are elected: using a staggered difference-in-differences approach, I find evidence of spillover effects on hate crimes in the surrounding municipalities, especially in areas where the far-right presence is recent. Second, I explore the Internet's role, and I show that municipalities with higher Internet penetration drive the results. This result is confirmed even when I instrument the broadband availability.

A further relevant question in this framework is what are the factors that lead voters to support far-right parties. A natural explanation is precisely the presence of immigrants and refugees. Recent political economy studies have investigated the role of immigration on voting behavior. Results, however, are contradictory, and further research is needed to understand the divergence of these findings better. Indeed, not all migration flows are equal; similarly, not all refugee reception policies are characterized as having as their ultimate goal the integration of asylum seekers.

The fourth chapter of this dissertation – *"Is this the real-life or just fantasy? Refugee reception, extreme right voting, and broadband internet"*[5] – attempts to contribute to this literature by studying the effect of a refugee reception program in Italy, "The Protection System for Asylum Seekers and Refugees" (SPRAR), on support for far-right parties.

This program is based on the opening of medium-small centers in which the refugees are offered language courses and training; in many cases, the guests are also engaged in public utility work. Put differently, the program aims to integrate asylum seekers into the community in which they are settled. Given these features, the contact generated by SPRAR centers seems to fulfill the conditions of the contact theory developed by Allport (1954), which can lead to a reduction in prejudice and anti-immigrant attitudes.

Indeed, the empirical analysis shows that opening a SPRAR center reduces support for far-right parties. This result is confirmed when we instrument the endogenous decision to open a center in the municipality with the presence of so-called group accommodations. These facilities, including homes for the disabled, the elderly, or drug addicts, were built before the refugee crisis. However, these constructions were particularly useful in hosting asylum seekers during the peak of the migration inflow of 2015-2016. In fact, the presence of these structures very well predicts the opening of a SPRAR center in the years of the analysis.

In addition to the main result on the support for the far-right, two others are the main takeaways of the chapter. The first is that the number of refugees brought into the community matters. Indeed, our analysis suggests that small centers drive the result: as the number of guests in the center grows, the effect fades (and support for far-right parties becomes positive when big centers are open). This could be because natives perceive the arrival of so many refugees as an invasion or, conversely, that the integration policies described above are inefficient with high numbers of asylum seekers.

The second is related, once again, to the role played by the Internet. We find that the reduction in voting for anti-immigration parties is more significant in communities with low Internet access. This result suggests that the macro-level impact of an increase in the salience of migration in the media

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[5]Joint with Matteo Gamalerio, Marco Luca and Max Viskanic.

can potentially reduce the micro-level impact that works through direct contact between natives and migrants.

Overall, this dissertation contributes to the recent literature studying the causes and consequences of the success of extremist parties (Berman & Kundnani, 2021; Guriev & Papaioannou, 2021; Noury & Roland, 2020), with a particular focus on the relationship between the far-right and immigration. It also speaks to the literature that analyzes the effects of media on social and political outcomes (DellaVigna & La Ferrara, 2015; Zhuravskaya et al., 2020). The last section provides a general conclusion highlighting the main takeaways of the dissertation and potential directions for future work.

2. DOES THE INTERNET CHANGE ATTITUDES TOWARD IMMIGRANTS? EVIDENCE FROM SPAIN

2.1. Introduction

International migration is a highly controversial issue both in political arenas and in the media. However, anecdotal and academic evidence suggests that individuals are often poorly informed about immigration's basic facts. A transnational survey carried out in 2014 by Ipsos MORI[6] revealed that public estimates of the level of immigration were more than twice actual levels.[7] Alesina et al. (2018) confirm this bias in natives' perceptions of both the number and the characteristics of immigrants: in all countries included in their analysis, respondents greatly overestimated the total number of immigrants; additionally, natives believe immigrants to be culturally and religiously more distant from them and to be economically weaker than they actually are.

Ensuring these figures are reported correctly is crucial because, if better informed, citizens are more likely to support more open immigration policies and higher levels of redistribution (Facchini et al., 2016; Grigorieff et al., 2020). Thus, the role the media play in informing citizens about immigration and shaping their beliefs and attitudes toward immigrants is critical (Benesch et al., 2019).

In this paper, I empirically assess the effect of early exposure to one of the main sources of information – the Internet – on attitudes toward immigrants. Specifically, taking advantage of a confidential dataset that allows me to link at the micro level both attitudes and broadband coverage, I investigate whether people in areas with higher rates of Internet penetration are characterized by a different level of information on the migratory phenomenon and by distinct attitudes toward immigrants. In the second part, I analyze how voting decisions are affected by Internet availability.

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[6]https://www.ipsos.com/ipsos-mori/en-uk/perceptions-are-not-reality-things-world-gets-wrong

[7]On average, people estimated 24% of the population to be made up of non-natives, when in reality it was only 11% (Duffy, 2018).

It is well documented that, over the last decade, the Internet has become one of the main sources of news for Western citizens.[8] However, its effect on attitudes toward immigrants is by no means a foregone conclusion. On the one hand, providing people with the possibility of going online is potentially an opportunity for making them better informed: indeed, Internet users can consume and produce information without restriction and at a reasonable cost. However, having access to more sources of information is not necessarily synonymous with greater transparency. This is particularly true in the context of the Internet, in which the almost unlimited possibilities of supplying information generate the risk of information overflow. As a reaction, people may concentrate their attention on a limited number of topics and areas that they want to hear and read about, which may foster a degree of segregation and ideological polarisation (Mullainathan & Shleifer, 2005). A second and related concern associated with the diffusion of the Internet is that this technology may crowd out traditional (and potentially more informative) news sources, the experience suffered by newspapers following the introduction of television (Gentzkow, 2006).[9]

The setting for my analysis is Spain, a country that is particularly interesting for conducting a study of this nature. First and foremost, the case of Spanish immigration is unique due to both its magnitude and timing (Vázquez-Grenno, 2018). During the first decade of the twenty-first century, Spain experienced one of the largest migration waves in European history and saw its share of immigrant population increase from 1% at the beginning of the 1990s to around 12% in 2008. Second, among European countries, Spain is the one in which the correlation between press coverage and the salience of immigration is highest (Hatton, 2017). This means that the degree of importance that Spanish people attribute to immigration as a policy issue is highly related to the attention that the media dedicate to the topic. Finally, particularly appealing data are available for analyzing this issue empirically.

On the one hand, I am able to track the diffusion of broadband Internet in the country at a very high level of geographical detail. On the other, this paper exploits an exhaustive and representative multi cross-sectional study

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[8]For instance, in 2013, 30% of European citizens reported that their first source of news on political matters was the Internet (Eurobarometer, 2013).

[9]In this regard, both Gavazza et al. (2019) and Falck et al. (2014) find that Internet availability reduced the use of traditional media, especially (local) newspapers.

on attitudes toward immigrants carried out by the "Center of Sociological Investigations" (*Centro Investigaciones Sociológicas* - CIS). The access to a restricted version of this survey allows me to geolocalize the respondents and investigate in detail how well informed Spanish people are about the level of immigration in their country and how they perceive the immigrants present in their territory. Pivotal to the identification strategy, the data also enable me to compare natives' attitudes toward immigrants before and after the Internet's arrival.

Identifying a causal effect of Internet exposure, however, is far from straightforward. Indeed, there may well be unobserved factors correlated with both changes in Internet diffusion and attitudes toward immigrants. In such a scenario, a simple OLS regression with Internet coverage as the main explanatory variable would suffer from endogeneity problems. I tackle this issue in two ways. The inclusion in the analysis of local fixed effects, with observations drawn from both pre- and post-Internet periods, allows me to address estimation biases due to unobserved time-persistent factors. In a similar way to Campante et al. (2018) and Falck et al. (2014), I address the endogeneity of Internet availability resulting from time-varying factors by looking at pre-existing voice telecommunication characteristics. More specifically, I instrument the availability of the Internet with the number of traditional telephone landlines recorded in 1996 in each municipality.

The Internet's diffusion is strictly correlated with the pre-existing level of development of landlines, given that ADSL technology relies on data transmission over the user's copper telephone line. In this sense, a higher number of fixed-lines is associated with lower costs in providing Internet availability. At the same time, the wide diffusion of landline telephones in 1996 and the fact that the national provider (*Telefonica*) at that time was public – which meant the ultimate objective was to offer telephone lines to as many citizens as possible – allow me to address any selection bias in households provided with fixed-line telephones. Clearly, the number of landlines was not randomly distributed: following Campante et al. (2018), the identification strategy relies on interacting the instrument for Internet availability with the time variation between the two periods (pre- and post- Internet). The assumption is that the only factor that changed the relationship between the number of fixed telephone lines and some unobserved characteristic was the introduction of

broadband technology. In other words, my identification strategy depends on the change in the impact of the number of landlines on the outcome variables, assuming that whatever correlation existed between these elements did not change when the Internet was introduced.

The results show that, between 2008 and 2012, Internet availability generated distinct and quantitatively important effects on immigration-related issues. First, it changed the perception of Spanish people about the number of immigrants present in the territory (*level of information*). Interestingly, the effect of broadband exposure on natives' estimates differs remarkably between national and local patterns. On the one hand, Spaniards living in areas with higher Internet coverage are more likely to estimate the percentage of foreigners present in the country correctly. Specifically, they are less prone to overestimate immigrants' presence at the *national* level. On the other hand, the Internet is associated with a misperception of *local* migration dynamics and, if anything, with an upward-biased estimation (although not significant) of non-natives living in the respondents' municipalities.

When asked their *attitudes* toward immigration, an increase in the number of natives claiming that "immigration is good for the country" is observed in areas with high Internet coverage, despite the absence of any difference in the pre-Internet era (1995-1996). This result is stable when relevant personal and municipal controls – including the share and origin of the immigrant population in the respondent's municipality – are introduced and holds to several robustness checks. Interestingly, this effect is found to be more strong among young respondents, i.e., those individuals that are more likely to obtain information online. Other measures of attitude – related to concerns about the job market and public goods competition and worries about cultural distance – are in line with this result. Overall, these results suggest that the possibility of going online is responsible for an increase in positive attitudes toward immigrants.

This effect is not without political consequences. Indeed, the CIS questionnaires report which party the respondent voted for in the last election. In this regard, in the second part of the paper, I show that the Internet reduces the number of individuals that report having voted for Spain's traditional right-wing party, *Partido Popular* (PP). This effect is confirmed when real electoral outcomes are analyzed.

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This paper can be associated primarily with three strands in the economics literature. A large body of studies has analyzed the main channels via which natives' perceptions of immigrants are shaped (see Hainmueller and Hopkins (2014) for a review). The pioneer works looked at the impact of immigrants on the labor market and public transfers (see, among others, Dustmann et al. (2005), Facchini and Mayda (2009), and Preston (2014)) as well as at the racial factor (Dustmann & Preston, 2007; Mayda, 2006). A more recent development in the literature has identified another important factor that might impact support for immigration: the role of information. By conducting online experiments, Grigorieff et al. (2020) show that individuals provided with figures about immigrants (the proportion of legal and illegal immigrants in the U.S., the unemployment rate of immigrants, their incarceration rate, and the proportion of immigrants who cannot speak English) update their beliefs and develop a more positive attitude toward immigration and look more favorably on an increase in the number of legal immigrants. Similarly, in the Japanese context, Facchini et al. (2016) find that providing individuals with information about the potential social and economic benefits of immigration led to a substantial increase in support for a more open immigration policy. Lastly, Alesina et al. (2018) show that specific treatments of respondents' perceptions of the number, origin, and "hard-working" nature of immigrants make them more favorable to redistribution. Using a representative survey database that covers different periods in time, in this paper, I seek to generalize the external validity of the experimental results. Moreover, the high level of detail of the CIS study allows me to identify the channels via which attitudes are impacted by new information.

Some studies have sought to determine whether the media can shape attitudes toward immigrants and, if so, how. For instance, using data from the European Social Survey, Héricourt and Spielvogel (2014) find that individuals who spend more time informing themselves about social and political matters by reading the press or listening to the radio have a better opinion of the economic impact of immigration. By contrast, in a recent paper exploring the link between mass media coverage and immigration worries, Benesch et al. (2019) show that the number of media reports dedicated to migration issues is positively associated with concerns about immigration among the German population. In the Italian context, Mastrorocco and Minale (2018)

find no effect of the development of digital television on attitudes toward immigrants (but a reduction in support for Silvio Berlusconi's right-wing party). The studies reviewed above investigates the role of the traditional media. Differently, my paper focuses on digital media and, more specifically, on the Internet, which has established itself as a source of news for an increasing number of citizens. Besides, most of the studies conducted to date are only able to detect a correlation between the variables; here, I attempt to address the endogeneity associated with the demand side of media using a more rigorous econometric approach. Moreover, the relationship between attitudes toward immigrants and media coverage I can analyze is much more precisely defined in geographical terms.

Finally, in terms of methodology (and, in part, of outcome variables), this paper is similar to recent studies that evaluate the impact of the Internet on political outcomes.[10] In analyses of respectively German and Italian political elections, Falck et al. (2014) and Campante et al. (2018) report a negative effect of Internet availability on voter turnout in parliamentary elections. A decrease in political participation is also found by Gavazza et al. (2019) in a study of UK local elections. In terms of party preferences, an increase in the vote share for a new, web-friendly party (*Five-Stars Movement*) is observed in areas with higher Internet diffusion in Italy (Campante et al., 2018); by contrast, no evidence that the Internet systematically benefits single parties was reported in Germany (Falck et al., 2014). However, despite the obvious importance of the influence of digital media, still little is known about other politically relevant outcomes that the Internet might impact. Indeed, attitudes toward immigrants can be especially malleable, and they constitute a highly controversial issue in recent political debates: rigorous and detailed studies of how they are formed and how they can be changed are therefore necessary.

The rest of the paper proceeds as follows. Section 2.2 describes the Spanish context, examining the development of the Internet and analyzing the country's migration dynamics and political situation; Section 2.3 reports the data used, focusing above all on the novel, confidential dataset provided by CIS; Section 2.4 and 2.5 outlines the empirical strategies used and analyses the effects of Internet availability respectively on the level of information

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[10]For a detailed literature review of the impact of the Internet and Social Media on political outcomes, see Zhuravskaya et al. (2020).

about migration patterns and different attitudes toward immigrants; Section 2.6 studies the impact of the Internet on political outcomes; and, Section 2.7 concludes.

2.2. Spanish context: Internet, migration and political background

2.2.1. Internet in Spain

Compared to other European countries, the diffusion of broadband Internet in Spain has lagged behind. The first Internet connections officially arrived in Spanish homes in 2000, while in 2004, the first ADSL subscriptions (1 Kbps upstream rate) were offered. However, according to Eurostat[11], in 2012, broadband Internet was available in just 67% of Spain's households, far fewer, that is, than in many other European countries, including France (77%), the UK (80%) and Germany (82%) and even below the EU27 average (72%). Moreover, according to a 2013 report by the European Commission[12], broadband access costs in Spain were the second most expensive in Europe.

Nonetheless, during the period that concerns the analysis, the share of households supplied by broadband (ADSL) technology rose dramatically at the national level. Figure 2.1 reports the evolution of the Internet coverage in Spain between 2006 and 2015: as shown, in this period, the share of households supplied by broadband Internet increased from less than 30% to almost 80%. Importantly for my identification strategy, this variation is apparent not only across time but also spatially: the differences in the coverage of ADSL technology between Spain's provinces is displayed in Figure 2.2.

Internet applications may be multiple, ranging from gaming to providing access to online services and platforms. The literature examining the effect of the Internet on electoral participation posits that one of the main reasons why the Internet makes citizens less likely to vote is that, by having access to the Internet, individuals consume more entertainment at the expense of acquiring political information (Campante et al., 2018; Gavazza et al., 2019).

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[11]http://ec.europa.eu/eurostat/documents/3433488/5585460/KS-SF-12-050-EN.PDF/39000dab-e2b7-49b2-bc4b-6aad0bf01279, consulted on June 2018.

[12]https://ec.europa.eu/digital-single-market/en/news/study-retail-broadband-access-prices-2013-smart-20100038

Thus, it is critical to analyze how broadband technology is used when considering whether it might change attitudes toward immigrants. In this regard, the annual "Survey on Equipment and Use of Information and Communication Technologies in Households", whose principal aim is to investigate the online habits of Spanish people, provides an interesting picture: as Figure 2.3 shows, the percentage of Spaniards using the Internet to read online newspapers surged in the period considered, rising from 42% in 2008 to 64% in 2012. This time spent by Spaniards to obtain online news might potentially change the level of information they had about politics and immigration.

2.2.2. Migration in Spain

As indicated above, the case of Spanish immigration is unique in both its magnitude and timing (Vázquez-Grenno, 2018). Compared to Greece and Italy, Spain was much less involved in the 2015 refugee crisis: of the one million sea arrivals registered in Europe in 2015, only a few thousand reached Spanish shores. This can be attributed mainly to its geography, that is, located considerably further than Greece and Italy from the hotspots of Syria and the Middle East, from where the refugees were fleeing. Despite this, immigration has been very much an issue in the country in recent years.

During the first decade of the twenty-first century, Spain experienced one of the largest migration waves, relative to its population, in European history. Between 2002 and 2014, Spain received an accumulated immigration inflow of 7.3 million and a net flow of 4.1 million, making it the second-largest recipient of immigrants in absolute terms among OECD countries, after the United States (Brugel, 2015[13]). This demographic surge is clearly evident in Figure 2.4, which shows the total stock of foreign people living in the country over time.

Most immigrants came to Spain to work, attracted by the vigorous economic growth that characterized those years, while a small percentage was composed of asylum seekers (Jofre-Monseny et al., 2016). In terms of their country of origin, the immigration wave was highly heterogeneous, with the most significant inflows originating from Ecuador, Morocco, Romania, and Colombia. According to the National Statistics Office, in 2017, the

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[13]http://bruegel.org/2015/12/the-remarkable-case-of-spanish-immigration/

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largest share of non-Spanish people were Moroccans (16.4%) and Romanians (15%), followed by the English (5.3%), Italians, and Chinese (both 4.6%).

Table 2.A1 shows the change in the make-up of Spain's foreign population over the last twenty years. The average immigrant arriving in this period was relatively high-skilled: according to the 2011 census, 55% (20%) were reported to have at least a secondary (tertiary) education, a figure not that distant from the figure for the native population – 64% (31%). Moreover, this relatively skilled supply of immigrants has been shown not to have damaged the native labor market, in terms of the employment rate or wages (Carrasco et al., 2008), and to have increased both native women's labor supply (Farré et al., 2011) and the per capita income of provinces with high immigration flows (Conde-Ruiz et al., 2008). Furthermore, with respect to other European countries with a smaller share of immigrants, Spain recorded lower growth in criminal activity in this period (Alonso-Borrego et al., 2012).

2.2.3. Spanish political context

Traditionally, in Spain, the votes cast at the general elections were distributed among a very small number of political parties. Until 2011, the two main parties, the right-wing conservative *Popular Party* (PP) and the leftish Spanish Socialist Workers' Party (PSOE) split more than 70% of the vote.

Although it can hardly be described as xenophobic, the PP implemented anti-immigrant policies in response to the exceptional waves of immigration described above. The neatest example is the introduction in 2021 of the controversial *Real Decreto-Ley 16/2012*. This law, approved by a PP government, deprived access to healthcare to undocumented immigrants. This anti-immigrant stance is further confirmed by quantitative content analyses of the party's manifestos, which highlight a relatively high proportion of references to the enforcement or the encouragement of cultural integration (Volkens et al., 2012).

2.3. Data

2.3.1. CIS Survey

Despite the subject's importance, detailed national-level data describing attitudes toward immigrants are not common. Where they do exist, they are usually recent and not representative of a whole country but just of its main cities. Additionally, questions regarding attitudes toward immigrants are often part of broader (often multi-country) surveys, typically about citizens' main concerns or problems, with no specific focus on the immigration topic.

In this regard, Spain is an exception; here, a long, (almost) annual cross-sectional study has been entirely dedicated to the attitudes toward migrants. In the survey, carried out by the Sociological Research Center - CIS (*Centro Investigaciones Sociológicas*)[14], Spanish respondents are asked several questions related to their opinion about the country's immigrant population, their relationship with immigrants and their fears in relation to immigration. From this survey, it is also possible to estimate the level of information – at both the national and local level – about the immigration phenomenon by looking at the respondents' perceptions of the share of foreign people present in the country and in the municipality where (s)he lives. Finally, political preferences are also detectable, as participants must indicate whether they voted in the last elections and, if so, for which party they cast their vote.

Importantly, this paper leverages a restricted version of the survey, from which it is possible to discern the respondent's municipality. This allows me to identify the relationship between Internet access and attitudes toward immigrants with a level of geographical detail that is very rare in the literature.

In my analysis, I use five waves of the survey from 2008 to 2012, the same span of years for which data on Internet penetration are available. Additionally, and pivotal to my identification strategy, I use the (only) two waves carried out before the arrival of the Internet, namely in 1995 and 1996. These two waves are largely comparable to the more recent ones – both in terms of geographical representation and in terms of questions asked – and they allow me to measure how Spaniards viewed immigrants before the development of broadband technology.

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[14]http://www.cis.es/cis/opencm/ES/2_bancodatos/estudios/listaTematico.jsp?tema=82

Once I combine the seven waves, the dataset comprises 19,293 observations, of which 13,110 belong to the post-Internet period (from 2008 onwards). Each wave includes at least 2,500 observations and, overall, 866 different municipalities are represented. Apart from the outcome variables of the analysis, I am also able to identify the (self-reported) personal and social characteristics of the respondents, including gender, age, profession, social class, employment status, and level of education. Table 2.1 provides the main statistics of the survey by year. Table 2.A2 reports the personal characteristics of the sample, while Table 2.A3 reports those of the municipalities in which the respondents live. All interviews were carried out in person in the respondent's house.

2.3.2. Internet availability

Data on Internet availability are drawn from the *"Anuario Economico de España - La Caixa"* (Economic Yearbook of Spain), in which records of the number of broadband lines are provided for 2007, 2008, 2009, and 2012 at the municipal level for around 3250 municipalities.[15] To address the lack of data on broadband lines for 2010 and 2011, I interpolate them using the recent *ipolate* Stata command (see Cox (2015) for a comprehensive guide and Cobham and Jansk (2019) for a recent application).[16] Dividing the number of broadband lines by the total population in the municipality, I obtain the share of Internet penetration. The same database also reports the number of landlines in 1996 at the municipal level: as explained in more detail below, this information is used as an instrumental variable for Internet availability.

An additional source related with Internet data is the aforementioned "Survey on Equipment and Use of Information and Communication Technologies in Households". This source, however, has the drawback of being limited to the provincial level. However, since it well captures the online behaviour of Spaniards, it is useful for undertaking a descriptive analysis of these habits.

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[15] They provide data for all the municipalities with more than 1,000 inhabitants, accounting for 96.8% of the population.

[16] However, results are consistent both in terms of magnitude and significance if I exclude from the analysis the years for which I use this command.

2.3.3. Electoral and demographic data

Data on the results of national elections at the municipal level for the years 1996, 2000, 2008, and 2011 are public and downloadable from the Spanish Ministry of the Interior.

Data for municipal controls (time-invariant and variant), including population size and density, population composition by age bracket, unemployment level, the share of people with a high level of education, number of household members, area, and altitude of the location, come from the INE (National Statistics Office) and from the 2001 and 2011 Spanish Censuses. Other relevant controls at the municipal level, including the number of cars, banks, and commercial activities, as well as the number of offices and cultural venues per capita, are provided by *"Anuario Economico de España - La Caixa"*. Finally, data about the immigrant population, in particular the share and origin of immigrants, come from *Padrón Continuo*, the main official Spanish register of foreign people living in the country.

2.4. Empirical Analysis: Information on Migration Patterns

2.4.1. Perceived number of immigrants

Overall, people tend not to be well informed about the migration patterns in the territory where they live. They show a lack of knowledge about more advanced facts, such as immigrants' characteristics and composition, and more basic statistics, such as the number of foreigners present in their territory. Having citizens well informed on this issue is critical. Indeed, as experiments show, individuals change their opinion about migration policies once they are provided with these data (Facchini et al., 2016; Grigorieff et al., 2020).

Thus, a first important analysis concerns how informed Spanish citizens are about the migration dynamics in their country. To test their level of information, I exploit the fact that, between 2008 and 2012, respondents were asked to report the perception of the proportion of non-Spanish people living in the country.[17] Figure 2.5 shows the average share of non-natives that Spaniards thought were present compared with the actual percentage. The

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[17]"Out of 100 people living in Spain, how many do you think were born outside Spain?".

graph stresses that Spain is no exception to other European countries, as respondents widely overestimated the proportion of immigrants.

If respondents answered "I don't know" to the open question about the perceived share of foreign-born living in Spain, they were offered a battery of ranges from which they were asked to pick the one they thought to be the most likely: 0%; from 1% to 5%; 6-10%, 11-15%; 16-20%; 21-25%; 26-30%; above 30%. To maximize the number of answers for the analysis, I transform the open question into a categorical one – following the ranges above – and I then add the perceptions of the respondents that answered the categorical question.[18]

In addition to the share of immigrants at the national level, the respondents were also asked to report the perceived percentage of immigrants present in their municipality. The geographical distribution of immigrants varies deeply in Spain, as displayed by the map in Figure 2.6. This question on the perceived presence of immigrants at the local level was asked in the same way as the question on the fraction of non-Spaniards at the national level – i.e., first, the respondent was asked an open question to the perceived percentage of immigrants present in the municipality and then to those that answered "I don't know", the ranges above were proposed.

Taken together, these two questions allow me to identify respondents who: i) Have *correct information* on the share of immigrants at the *national* level; ii) *Overestimate* the share of immigrants at the *national* level; iii) Have *correct information* on the share of immigrants at the *local* level; iv) *Overestimate* the share of immigrants at the *local* level.

As far as national dynamics are concerned, Table 2.2 reports the distribution of the answer by year (both in level and in share of respondents). Throughout the timespan considered, the real percentage of immigrants in Spain fluctuated around 13% (see the columns in red of Figure 2.5). As is evident from the last two rows of the table, this implies that, when all the years are considered, just 1,469 out of the 13,110 respondents (which represents 11.21% of the sample) were able to report the share of immigrants in Spain correctly.

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[18]Approximately 20% of respondents did not answer the open-ended question about estimated immigrant share. Once the variable is transformed from continuous into categorical, 13.87% of the responses were blank (See Table 2.2).

Table 2.3 analyzes the personal characteristics of the respondents that have a correct perception of the migration patterns and those who instead overestimate immigrants' presence – both at the national and the local level. Men have a more accurate picture of migration dynamics and are less likely to overestimate the presence of non-natives. Another element linked to a less biased view of the migration phenomenon is the level of education; on the contrary, people who are unemployed and have a (self-reported) bad economic situation are more likely to report higher percentages than the actual presence of foreigners. Similarly, people who declare their political ideology to be right-wing are more likely to believe that the number of immigrants is higher than the actual figure.

2.4.2. Role of the Internet on the perceived number of immigrants

To determine whether the Internet is associated with a different awareness of immigration patterns, I run the following equation:

$$MigrationInfo_{i,m,t} = \beta_1 InternetShare_{m,t} + \beta_2 X_{i,t} + \beta_3 W_{m,t} + \tau_t + \psi_p + \epsilon_{m,t} \quad (2.1)$$

where the dependent variable is a dummy equal to one if the individual i, living in municipality m, has a correct level of information on the immigration phenomenon at time t. As explain above, I specifically attribute a value equal to one to the dependent variable if individual i, among the ranges offered, – 0%; from 1% to 5%; 6-10%, 11-15%; 16-20%; 21-25%; 26-30%; above 30% – thinks that the percentage of immigrants is between 11 and 15%. I also run the same equation where the dependent variable is equal to one if the respondent reports that the share of immigrants is above 15% – i.e., if (s)he overestimate the immigrants' presence.

The main explanatory variable, *Internet Share*, is the share of Internet coverage at the municipal level in year t. X is a vector of individual controls of the respondent's self-reported characteristics, including gender, age, social class, working status, economic condition, level of education, and political preferences. At the same time, W controls for the characteristics of the location in which the individual lives, including the population, the surface area, the population density, and the altitude of each municipality. These features

are relevant, as they capture the level of urbanization and any infrastructural difficulties in installing the Internet. Importantly, W also includes the share of immigrants present in the municipality as well as their origin. Indeed, the cultural and ethnic composition of the immigrant population is a critical element when natives are surveyed about non-natives (Lind, 2007; Luttmer, 2001). To address this issue, I also introduce in vector W the share (over the total population of foreign-born) of EU15, (Non-EU15) European and Sub-Saharan immigrants.

τ_t and ψ_p represent, respectively, time and area fixed effects. Specifically, I add to the equation year and province fixed effects.[19] The choice to introduce fixed effects at the provincial rather than municipal level is related to the empirical strategy developed in the section on attitudes toward immigrants.[20] Finally, ϵ represents a robust error term clustered at the municipal level. Throughout the analysis, I weight the observations for the level of representatives in the survey of each municipality per year.[21]

Table 2.4 reports the results. Specifically, the first two columns refer to a correct perception of the national immigration dynamics, while columns 3 and 4 examine the effect of Internet availability on the probability of overestimating the number of immigrants. The coefficients show that greater Internet availability is associated with a higher probability of answering the question correctly. In other words, having access to the Internet is reported as being associated with a better knowledge of immigration patterns in Spain. Simultaneously, the last two columns display that, between 2008 and 2012, respondents living in areas with higher Internet penetration are less likely to overestimate the share of non-natives in the country. Both results are stable when municipal and personal controls are introduced.[22] Table 2.5 confirms the results when a logistic regression is run.

As mentioned, from the survey, it is also possible to assess whether the Internet is associated with a different level of information when the local pat-

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[19]Spain is made up of 50 provinces, with populations ranging from 95,258 to 6,458,684.

[20]See Section 2.5 and in particular Subsection 2.5.2 for a discussion regarding this choice.

[21]In the robustness checks, I provide results for the unweighted regressions and when alternative weights are used, i.e., the (log of the) population of the municipality.

[22]Results are stable when controlling for municipality or respondent characteristics only. Besides, results on overestimation are consistent when a higher threshold (20%, instead of 15%) is used.

terns are analyzed. Indeed, one of the potential effects of Internet diffusion is that it may have accelerated the decline of newspaper distribution, most notably of the local press. These patterns have been found in Germany and the UK, respectively by Falck et al. (2014) and Gavazza et al. (2019). Newspapers are the most important source of information on local issues and local politics (Bruns & Himmler, 2011). Thus, it may be the case that the Internet generates different effects on the level of information about national vs. local immigration dynamics.

This idea is confirmed by Table 2.6 (and by Table 2.7 when a logit model is used). The tables show the results for Equation 2.1, where the dependent variable is a dummy equal to one if the respondent perceives the share of immigrants living in their municipality correctly or if (s)he overestimates their presence.[23] As evident, a completely different picture emerges when local immigration patterns are investigated. Spaniards living in areas with high Internet penetration are less likely to correctly estimate the share of immigrants living in their municipality, as observable from columns 1 and 2; although, as reported in columns 3 and 4, the Internet does not seem to be associated with a higher probability of overestimating this share.

Together, Tables 2.4 and 2.6 provide evidence that the Internet might have a differential impact on the level of users information. On the one hand, it makes people better aware of global/national issues; yet, on the other, they suffer a loss of information regarding local dynamics.

2.5. Empirical Analysis: Attitudes Toward Immigrants

2.5.1. Variables of interest

In this section, I analyze the effect of the Internet on different attitudes toward immigrants. Individuals' perception over the migration topic can be shaped by different sources, among which, the media represent one of the most important (Vliegenthart et al., 2008). Doubtless, the media constitute a major channel of information and, as such, a key determinant of beliefs. However, a priori, it is not clear in which direction access to news content

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[23]The dependent variable is constructed following the same ranges used for the national-level analysis.

might impact citizens' views on immigrants, especially if we consider the highly self-segregated news platform provided by the Internet.

As mentioned, the CIS questionnaires are entirely focused on Spaniards' attitudes toward immigrants. From them, the respondents' generic attitudes toward immigration as well as specific concerns on this subject can be captured. The most general question from which is it possible to evaluate the overall attitudes is formulated as follows: *"Overall, do you think that immigration is bad, good, or neither bad nor good for the country?"*. Figure 2.7 displays the distribution of the answers of the whole sample. In the empirical analysis, I focus on respondents who report immigration to be good for the country. Another question helpful for catching the general attitudes is *"Do you think there are too many immigrants in the country?"*.

Besides, in the questionnaires, participants were required to express the level of agreement with a series of migration-related statements.[24] For example, respondents were asked whether they agreed with the assertions "Immigrants steal jobs from natives" and "Immigrants force natives' salaries down." Similarly, interviewees were demanded if "Immigrants should not receive unemployment subsidy", "Immigrants should not be able to vote", "Immigrants should not be able to obtain Spanish nationality", and whether "Immigrants should renounce their own culture."

From these more specific questions, is it possible to discern if respondents' potential concerns about the immigration topic stem from competition in the labor market, the quality and availability of public goods, or whether they are more related to a cultural and identitarian issue. In the empirical analysis, I use as dependent variables a dummy equal to one if the respondent (strongly or somewhat) agrees with the statements mentioned above. Table 2.8 reports the summary statistics of the variables of interest.

2.5.2. Empirical strategy

In Section 2.4 a simple association between the Internet and the level of information about the migration phenomenon is described. Importantly, in this part of the analysis, I move from a correlation analysis to a causality anal-

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[24]Possible answers: 1) Strongly Agree; 2) Somewhat agree; 3) Somewhat disagree; 4) Strongly disagree.

ysis. In fact, unlike the questions on the natives' level of information on migration patterns, that were absent, the above-mentioned questions about attitudes were also asked in two waves carried out in 1995 and 1996 – i.e., before the arrival of the Internet. These two earlier waves are comparable to those conducted between 2008 and 2012, both in terms of geographical representation and issues covered.

By leveraging the fact that I have information on attitudes before and after the arrival of the Internet, I can implement the following difference-in-differences analysis:

$$AttitudeImmigrants_{i,t} = \beta_1 InternetShare_{m,t} + \beta_2 LandlinesShare1996_m$$
$$+ \beta_3 X_{i,t} + \beta_4 W_{m,t} + \tau_t + \psi_p + \epsilon_{m,t}$$

$$(2.2)$$

where the dependent variable is a dummy equal to one if the respondent agrees with the different statements related to attitudes toward immigrants described in Section 2.5.1. As in Equation 2.1, the main explanatory variable, *Internet Share*, is measured as the ratio between the number of broadband lines and the population living in a municipality and is equal to 0 in the pre-Internet period.[25] *X* and *W* are vectors of relevant personal and municipal characteristics (see Subsection 2.4.2).

τ_t and ψ_p represent, respectively, time and area fixed effects. Specifically, I include a set of fixed effects catching the year of the interview and the province in which the respondent lives. Note that fixed effects at the municipal level cannot be included since they would be too demanding. Call "Sample A" the set of municipalities observed *before* the introduction of ADSL technology and "Sample B" the set of municipalities observed *after* the introduction of ADSL technology: the introduction of fixed effects at the municipal level would imply focusing exclusively on individuals living in municipalities present in *both* samples. Since the overlap of these samples is

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[25]In this regard, it should be pointed out that broadband access is a slightly better measure than penetration because the latter is obviously the result of endogenous individual decisions (Campante et al., 2018). Additionally, in a robustness check, I run the same regressions using the total number of households in the municipality as the denominator rather than the population.

small,[26] municipality fixed effects are not feasible in this analysis.

Broadband diffusion is, of course, far from being random. Internet suppliers are more likely to invest in places where demand is potentially higher, given the characteristics of the location and its inhabitants. These unobservable characteristics might potentially be correlated with local perceptions of immigrants, and the results derived from OLS regressions might suffer from problems of endogeneity.

In line with the recent literature examining the impact of broadband technology on political outcomes, I address this issue in two ways. The introduction of local fixed effects, with observations from both before and after the introduction of Internet technology, allows me to overcome the estimation bias attributable to unobserved time-persistent factors. However, there may still be some unobservable time-varying factors that affect both attitudes toward immigrants and Internet availability. To address this issue, I instrument for Internet availability as follows:

$$
\begin{aligned}
InternetShare_{m,t} = & \gamma_1(LandlinesShare1996_m * PostInternet) + \\
& \gamma_2 LandlinesShare1996_m + \gamma_3 X_{i,t} + \gamma_4 W_{m,t} + \theta_t + \zeta_p + \eta_{m,t}
\end{aligned}
$$

$$(2.3)$$

where *LandlinesShare1996* is the time-invariant share of fixed-telephone lines (over the total population) in municipality *m* recorded in 1996.

Especially in the early phase of its expansion, the diffusion of the Internet was strictly correlated with the pre-existing level of development of landlines, given that ADSL technology relies on data transmission over the user's copper telephone line. In this sense, a higher number of fixed-lines is associated both with a smaller cost in providing Internet services and greater proximity to the local telephone exchange (or Main Distribution Frame - MDF).[27] Figure 2.8 confirms the high correlation between the share of landlines in 1996

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[26]This is related to the fact that, in order to be nationally representative, survey respondents were typically selected in different cities each year.

[27]One of the most commonly used instruments for Internet availability in the literature is the location of MDFs - which connect the central office switches to lines that go into people's homes (Campante et al., 2018; Falck et al., 2014). However, data on their position in Spain are not available. Other instruments include the location of backbones (Miner, 2015) and rainfalls (Gavazza et al., 2019).

and Internet penetration, while the spatial correlation is demonstrated by the maps in Figure 2.9.

Simultaneously, another relevant point related to this identification strategy should be highlighted. In 1996, the use of the home telephone was largely widespread. In this sense, low telephone network coverage should be associated with difficulties in bringing the telephone service into the municipality and not with the individuals' choice of not having a telephone in their home. Moreover, the national company responsible for the telephone service – *Telefónica* – was public at the time, which clearly suggests that the ultimate goal was to provide a telephone service for the largest number of citizens, even in areas where it was not economically viable to invest. This fact reinforces the idea that low telephone network coverage should be associated with technical difficulties (due, for instance, to the nature of the terrain or the presence of mountains) in providing the service and not with selection bias in households provided with fixed-line telephones.

The demand for fixed telephones in 1996 preceded the development of the Internet. However, it is, of course, also related to certain municipal characteristics, which, in turn, might be associated with the municipality's view of immigrants. To mitigate this concern, I introduce in all regressions the time-invariant *LandlinesShare1996* baseline. Additionally, similarly to Campante et al. (2018), to "net out" the correlation between our outcomes of interest and these municipality characteristics, the instrument used in Equation 2.3 is constructed by interacting the share of landlines with a dummy equal to one for the post-Internet observations.

In essence, I implement a differences-in-differences approach, "turning the instrument on" when the observations come from the post-Internet era. The identification assumption is that any change in the impact of the number of fixed telephone lines on the dependent variable occurs only through Internet availability. In other words, I am "netting out" the change in the effect of the number of landlines of the variables of interest, under the assumption that any change in that effect occurs exclusively through the new technology.

2.5.3. Main results

To investigate whether the Internet has an impact on attitudes toward immigrants, I begin my analysis by looking at responses to the generic question: *"Overall, do you think that immigration is bad, good, or neither bad nor good for the country?"*, focusing on individuals with positive views.

Figure 2.10 displays the share of respondents that claim that immigration is good, over internet penetration and by Internet era. The figure highlights two interesting patterns. First, the left-hand side of the figure, which reports Spanish attitudes toward immigrants before the arrival of the Internet, reveals no differences in the rates of positive views between the municipalities with (future) high and low Internet coverage. In 1995-1996, 41.3% of respondents living in areas with future low Internet penetration in 2008-2012 reported having positive attitudes toward immigrants: a very similar percentage to that recorded in areas with future high broadband diffusion (41.2%). This provides suggestive evidence that the parallel trend hypothesis holds and, reassuringly for the identification strategy, that the results are not picking up some underlying trend in attitudes that just happened to be correlated with the diffusion of broadband. Second, as displayed on the right-hand side of the figure, in municipalities with a higher level of Internet share, the percentage of respondents reporting that immigration is good for the country increased, while a dramatic drop is observable in the "low-Internet" areas.

This pattern is confirmed by Table 2.9, which shows the econometric results. The OLS coefficients, both with and without municipal and personal controls, are positive and significant, showing that access to the Internet is associated with a higher probability of having a positive view of immigration. Columns (3) to (5) present the results when Internet availability is instrumented as described in Equation 2.3. First, it should be noted the relatively high values of the F-Statistics and the strong significance of the first stage, whose coefficient has the expected positive sign. The IV coefficients are positive, and the introduction of personal and municipal controls does not alter the result. In the most complete specification – i.e., when controlling for both personal and local features as well as for year and province fixed effects – the result is positive and significant; additionally, the IV coefficient is higher, highlighting a downward bias of the OLS coefficient. In terms of magnitude,

the difference between OLS and IV coefficients is similar to that found in studies that use similar identification strategies (Campante et al., 2018; Falck et al., 2014; Gavazza et al., 2019). Table 2.A4 reproduces the full OLS and IV specifications (i.e., those displayed in columns 2 and 5), also reporting the effect on the dependent variable of the controls (municipal and personal characteristics).

Another potentially interesting outcome variable to explore is the responses to the question: *"Do you think there are too many immigrants in the country?"*. Here, too, the question was asked both before and after the arrival of the Internet, and, thus, the same identification strategy can be applied. Table 2.10 reports the results (as before, the dependent variable is a dummy equal to one if the respondent answered the question in the affirmative). Although not as robust statistically, the results are qualitatively similar to those in Table 2.9, indicating a negative impact of the Internet on the probability of considering there to be too many immigrants in the country.

The results found so far point to a number of interesting patterns. Internet penetration is associated with a better knowledge of immigration dynamics, although this is limited to the national context; by contrast, if anything, a negative relationship between broadband technology and awareness of immigration dynamics at the local level is found. When analyzing feelings toward immigration, I find that the Internet is responsible for a change for the better. Indeed, the Internet increases the probability that respondents believe immigration to be good for the country, while it decreases the share of respondents claiming that there are too many immigrants in the country. In the following subsections, I check the robustness of these last findings, and I explore potential channels behind this main result.

2.5.4. Reduced form and robustness checks

Reduced form analysis. Table 2.11 presents the results of the reduced form. Specifically, the first three columns display the results when the equation is run for the post-Internet era, while columns (4) and (5) show the results for the pre-Internet era. When the municipal share of landlines in 1996 is used as explanatory variable, a positive and significant effect on attitudes toward immigrants is still generated in the 2008-2012 period. While the coefficient

values are smaller, they remain comparable to the OLS in Table 2.9. Reassuringly, no effect is found when the same equation is run in the 1995-1996 period: indeed, the coefficients in columns (4) and (5) are not significant, and they are close to zero.

Additionally, Figure 2.11 reports the coefficients of the reduced form equation estimated separately for each year, including the complete set of controls. As is evident, in the two years before the arrival of the Internet, the coefficients are close to zero and relatively similar to each other. By contrast, a significant increase in the coefficients can be observed from 2008 onwards. Together, Table 2.9 and Figure 2.11 assert that the instrument started to correlate with the dependent variables only during the years in which the Internet was started to be developed. Put differently, these findings confirm the validity of the IV exclusion restriction.

Robustness Checks. Tables 2.12 to Table 2.16 provide robustness checks on the results presented in Table 2.9. First, given the dichotomous nature of the dependent variable, Table 2.12 presents the results using a Probit and an IV Probit approach. As is evident, the coefficients are comparable in terms of direction and level of significance. However, in my analysis, I prefer to implement an OLS / IV approach because the results can be interpreted more readily.

Furthermore, Table 2.13 shows the coefficients when the weights are not used. Taking advantage of the local representativeness of the inquiry, I weight the observation by the number of respondents for each municipality in each year throughout the analysis. However, it is essential to check that the results are not driven by the weights, as confirmed by Table 2.13. Similarly, Table 2.14 presents the results when using an alternative weight, namely the (log of) population of the municipality. Indeed, when it comes to survey data, weighting the population observations is helpful so as to increase the level of national representativeness (Johnson, 2008). In this case too, the results are confirmed.

The main explanatory variable gives rise to a potential concern since it might suffer from a measurement error. In fact, the variable *Internet Share* is calculated by dividing the number of broadband lines by the total population of the municipality. A potential more accurate measure should take

as a denominator the number of households. The housing censuses of 2001 and 2011 are partially helpful for addressing this issue since they provide this information; the drawback to these sources is that the number of households is only provided for these two years. Table 2.15 reports the results when the Internet penetration is calculated by dividing the number of broadband lines by the number of households in 2011. In the same line, in this analysis, the instrument is calculated as the share of the number of telephone lines in 1996 over the total number of households in 2001. As is evident, results are almost unchanged when this Internet measure is used, despite a clear reduction in the magnitude of the coefficient. On the one hand, this approach has the advantage of providing a measure closer to the actual Internet penetration rate. By contrast, it suffers from a measurement error linked with the fact that it does not capture the change in the population. Given that the relevance of this measurement error is unknown, throughout my analysis, I prefer to calculate the Internet penetration rate by looking at the time-varying population.

Finally, another source of concern might be that my instrumented explanatory variable, *Internet Share*, is calculated at the municipal level, while the dependent variable and the personal controls are at the individual level; this mismatch may weaken my identification strategy. However, when collapsing the analysis at the municipal level – i.e., using as a dependent variable the share of individuals with a positive view over the total number of respondents in the municipality, the results remain stable (Table 2.16).

2.5.5. Channels

This section explores potential mechanisms that might drive the results found in Table 2.9. A large body of literature has studied the main channels via which natives' perceptions of immigrants are shaped. Overall, natives seem to be concerned about immigration as they fear competition in the labor market (Mayda, 2006) and reduced access to public goods (Facchini & Mayda, 2009). Cultural and ethnic differences in the immigrant population are an additional source of worry (Dustmann & Preston, 2007). The CIS survey is particularly suitable for studying the mechanisms that shape respondents' attitudes, given that questions related to the above concerns are asked. These three sources of worry – related to the labor market, public goods, and cul-

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tural distance – are likely to correlate with the general attitudes expressed and studied up to this point.

This intuition is confirmed by Table 2.17. In this analysis, I regress the probability of having a generally positive view of immigration over the probability that the respondent agrees with other (negative) feelings linked with the fears mentioned above. Put it differently, I attribute to the dependent variable a value equal to one if the respondent reports believing that immigration is good for the country, while I use as main explicatory variables different potential attitude-related mechanisms. Columns (1) to (5) show the results. Specifically, columns (1) and (2) investigate job market competition concerns, assigning a value equal to one if the respondent agrees, respectively, with the statements: "Immigrants steal jobs from natives" and "Immigrants force natives' salaries down"; column (3) examines concerns related to competition for public goods, by attributing a dummy equal to one if the respondent believes that "immigrants should not obtain unemployment subsidies"; finally, in columns (4) and (5), cultural distance is examined, by determining whether the individual agrees, respectively, with the following statements: "Immigrants should renounce their own culture" and "Immigrants should not be able to obtain Spanish nationality". As is evident, all the coefficients are negative and strongly significant, stressing a strong correlation between a generally positive attitude toward immigrants and the negative concerns mentioned above. The results do not change if all the dummies are introduced simultaneously (column (6)).

To understand the Internet's impact on these channels, I run the model proposed in equation 2.2, using as dependent variables dummies equal to one if the respondent agrees with the above-mentioned statements. Since these questions were asked both before and after the arrival of the Internet, also in this part if the analysis I can instrument internet availability by looking at the presence of landlines in 1996, following equation 2.3. Tables 2.18 - 2.21 report the results, following a similar structure to that employed in Table 2.9 – i.e., reporting the OLS and the IV coefficients with year and province fixed effects, with and without controls, and controlling for the *LandlinesShare1996* baseline.

When concerns related to competition in the labor market are analyzed, the Internet reduces the percentage number of Spaniards believing that immi-

grants steal jobs from natives and that their presence drives natives' salaries down (Tables 2.18 and 2.19 respectively). Moreover, the Internet plays a role in relation to concerns about increased competition for public goods: broadband technology generates a reduction in the probability of respondents claiming that immigrants should not obtain unemployment subsidies, as reported in Table 2.20. Finally, although the coefficients related to this channel are statistically weaker, the Internet alleviates natives' fears attributable to cultural distance: indeed, a decrease in the number of people claiming that immigrants should renounce their own culture once they settle in Spain as well as of those believing that immigrants should not be able to obtain Spanish nationality is observable, as is evident from Tables 2.21 and 2.22, respectively.

Taken together, these additional results are significant and consistent with those presented in Tables 2.9 and 2.10, confirming that Internet availability is responsible for an improvement in attitudes toward immigrants.

2.5.6. Heterogeneity analysis

Finally, it is interesting to determine whether the Internet may have a different impact on attitudes toward immigrants depending on the respondents' characteristics. Specifically, an important element that is worth investigating is the age of the interviewee. Indeed, anecdotal evidence suggests that Internet usage is more frequent among the younger generations. In this regard, I expect to find some heterogeneity in my results when comparing young vs. old respondents.

Table 2.23 reports the most complete specification of Table 2.9 by age quintile (i.e., instrumental variable approach with personal and municipal controls). As expected, the magnitude and statistical significance of the coefficients are, overall, higher for younger respondents. Indeed, the effect is particularly strong for individuals aged between 31-40 and 41-52, namely those who are more likely to use the web for consuming information. By contrast, the coefficient becomes non-significant for individuals over 53 years old and nearly equal to 0 for even older respondents (over 66 years old).

2.6. Impact on Political Preferences

In this section, I evaluate the impact of the Internet on political outcomes. Indeed, if voters consume online news according to their political preferences, this should not alter support for the parties Campante et al. (2018). At the same time, if the diffusion of the Internet affected voter opinions on politically relevant issues – as demonstrated in the previous section with attitudes toward immigrants – this might also lead to a change in political behaviour.

To evaluate this issue empirically, I use a twofold approach. First, I continue to look at the responses from the CIS questionnaires. Second, I generalize the results of the survey by looking at actual election results.

2.6.1. CIS survey

As mentioned, in the CIS questionnaires, including those conducted in the pre-internet era, respondents were asked which party they voted for in the last election. Thus, I am able to analyze: i) the relationship between voting behavior and attitudes toward immigrants, and ii) whether the arrival of the Internet has generated a change in voting behavior. I focus this analysis on the Spanish right-wing conservative party, the *Partido Popular* (PP).

First, Table 2.24 produces evidence that the attitudes of PP voters toward immigrants are different. Controlling for personal and municipal characteristics, individuals who report having voted for this right-wing party are less likely to say that immigration is good for the country (Column (1)). Similarly, the other measures of attitude analyzed above strongly correlate with political behavior. PP voters are more likely to be concerned about immigrants due to fears concerning the job market and competition for public goods (Columns (2) and (3), respectively). Furthermore, they are more likely to believe that immigrants should not be allowed to obtain Spanish nationality (Column (4)). Overall, these results are in line with those reported by Barone et al. (2016) in the Italian context; however, my sample is more extensive and, arguably, more representative.

So far I have established a relationship between conservative party voters and attitudes toward immigrants and a relationship between the Internet and these attitudes. An additional question I seek to address is whether and

how the Internet has impacted voting behavior. To do so, I implement an identification strategy similar to the one employed so far – i.e., combining a difference-in-differences with an instrumental variable approach.

Specifically, I run the instrumented version of Equation 2.2, where the dependent variable is a dummy equal to one if the respondent reported having voted for the PP in the last election (excluding those respondents who reported not having turned out). Table 2.25 displays the results. Among the individuals that took part in the CIS survey, the Internet seems to have a negative effect – which proves to be significant when the IV approach is used – on the probability of voting for the PP.

This result is certainly interesting. However, questions about political identity obtained from surveys are often considered sensitive (this explains the high rate of non-respondents to this question), and the related results should be interpreted with caution. For this reason, it is worth widening the scope of this research question by looking at actual election data.

2.6.2. Electoral data

To generalize the result found in Table 2.25, in this section, I make use of the actual electoral data downloadable from the Spanish Interior minister. In particular, I look at the electoral performance of *Partido Popular* (PP) in a battery of elections before and after the arrival of the Internet: the congressional elections in 1996 and 2000 (pre) and 2008 and 2011 (post).[28]

The main equation I estimate is the following:

$$PPVoteShare_{m,t} = \beta_1 InternetShare_{m,t} + \beta_2 X_{m,t} + \tau_t + \psi_m + \epsilon_{m,t} \qquad (2.4)$$

where the dependent variable is the share of votes – in municipality *m* in the election year *t* – obtained by PP.

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[28]Given the lack of precise data about Internet diffusion in 2004, I do not consider the election round that took place in that year. An additional source of concern that led me not to consider in my analysis the 2004 elections is the terrorist attack that took place few days before the vote.

As usual, *Internet Share* is measured as the ratio between the number of broadband lines and the population living in a municipality and is equal to 0 in the pre-Internet period.

Since, of course, I cannot control for personal characteristics, in this part of the analysis, the controls related to the municipalities of the voters, captured by the vector X, are expanded. The time-variant local controls I use for this part of the analysis are the (logarithm of the) population, the number of banks, of commercial activities and cars present in the municipality. X also includes some topographic features, such as the extension and altitude of the municipality. Additionally, I consider other relevant municipality characteristics coming from the 2001 Census, like the share of people below 25, the share of people aged 65 or above, the percentage of people with a higher level of education, the number of offices and cultural venues per capita and the average number of child per family. Moreover, I also control for indexes present in the Census, which capture the municipality's development of tourism, economic activities, education, and the third sector. All those relevant, time-invariant demographic features are interacted with a year dummy variable to allow for any effect to varying across election years. Last but not least, I control for regional dummies[29] interacted with election-year dummies, which allows me to tackle any effect of unobservable regional factors over time.[30] This allows me to take into account the possibility of pre-existing or underlying trends that could confound the causal interpretation of my estimated coefficients.

τ_t is a set of year fixed effects. In this part of the analysis, since I have no problem with the representativeness of the municipalities, I can also introduce the more stringent fixed effects at the municipality level (instead of at the provincial level) – represented by ψ_m.

The introduction of municipalities fixed effects, with observation coming before and after the introduction of the Internet technology, allows to overcome estimation bias that comes from unobserved time-persistent factors. To alleviate bias linked with unobservable time-varying factors that affect both political outcomes and access to the Internet, broadband availability is instru-

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[29]In Spain there are 17 *Comunidad Autonomas* or CC.AA. characterized by a very hetero-geneous level of development.

[30]The same results hold if I introduce the interaction with the 50 Spanish provinces.

mented in the following way:

$$InternetShare_{m,t} = \gamma_1(Landlines1996_m * PostInternet) + \gamma_2 X_{m,t} + \alpha_t + \zeta_m + \eta_{m,t}$$
(2.5)

where, as usual, *Landlines1996* is the time-invariant number of fixed telephone lines (over the total population) present in municipal *m* in 1996. α_t and ζ_m are year and municipality fixed effects. As in the main analysis, the underlying identification assumption is that whatever correlation existed between the number of landlines and relevant municipality characteristics, this did not change at the time of introduction of the broadband technology.

Table 2.26 present the OLS and IV results. The table has the following structure: column (1) shows the OLS results, column (2) moves to the IV identification strategy, adding municipal controls and region (x year) fixed effects in column (3). Finally, column (4) presents a falsification test: following Campante et al. (2018) and Falck et al. (2014), I run the same IV regression of column (4) just for the pre-Internet elections (namely 1996 and 2000), assuming the Internet pattern in 2000 to be equal to the 2008 one.

In line with the results found in Table 2.25, Table 2.26 confirms that Internet diffusion leads to a decrease in the vote share for the right-wing party PP. Indeed, both the OLS and the IV coefficients (with and without controls) are negative and strongly significant. In the most complete specification, the Internet effect on voting behavior is quite relevant: given an average vote share for PP in 1996 and 2000 of 39.5%, going from zero to full broadband access would correspond to a decline in its political success of about 33 percentage points. Also in this case, a downward bias of the OLS coefficient is observable, while the big reduction of the magnitude of coefficient between Columns (2) and (3) suggests that the introduction of controls is very relevant.

It is important to highlight that the placebo test works well: the coefficient in column (4) is insignificant and almost equal to zero. Results are confirmed also if I run the equation having as a dependent variable the share of vote calculated over the total number of eligible voters, as opposed to the number of voters who actually turned out. This would address some estimation bias due to a change in voting turnout, given that the literature has identified a negative Internet effect on electoral participation.

2.7. Conclusion

Since 2014, 1.8 million refugees have arrived in Europe, more than 1 million in 2015 alone. This immigration crisis has been associated with far-reaching changes in the political scenario in many countries of the European Union: the surge in the number of immigrants has been matched by a dramatic fall in the level of trust in European Institutions and a hike in voter support for right-wing, populist parties (Barone et al., 2016; Dustmann et al., 2019; Halla et al., 2017). The media, and especially the Internet, have played a role in shaping these reactions: indeed, the last few years have been characterized by a peak in the diffusion, primarily via social platforms, of fake news, which has impacted political outcomes and people's beliefs about immigration (Allcott & Gentzkow, 2017; Pennycook & Rand, 2018).

This paper has examined the role played by the early Internet exposure on political and migration-related outcomes. More specifically, the paper focused its attention on those days when social media were less prevalent and fake news were not an issue. Focusing on the Spanish context and exploiting a unique and confidential database, I have explored whether access to the Internet made citizens more conscious of the patterns of immigration and whether, at the same time, it changed the way they perceive immigrants. The results found were, in part, unexpected.

First, higher Internet exposure is associated with a better knowledge of immigration patterns at the national level. Citizens living in areas with higher broadband Internet coverage were more likely to be aware of the actual share of non-natives living in Spain and were less prone to overestimate this percentage. However, the opposite path is observed when it comes to the dynamics of local immigration, as respondents in municipalities with higher Internet penetration seem to have greater misperceptions of the non-natives living in their community.

Second, despite the absence of any differences in the pre-Internet era, respondents with greater Internet availability were more likely to hold a positive view of the immigration phenomenon in the post-Internet period. This generally more positive attitude is more prevalent among younger generations. Besides, it is further confirmed when different specific outcomes are investigated, including the fear of competition in the job market, the redistribution

of public goods, and ethnic diversities – the main factors influencing natives' perceptions of immigrants.

These results are not without their consequences. Indeed, attitudes to immigration can be considered a significant driver of voting behavior, and this is made evident in the second part of the paper. Here, I showed that respondents that report casting their vote for the *Partido Popular* – Spain's traditional right-wing party – are characterized by different (i.e., worse) attitudes toward immigrants, while the results of this conservative party have been worse since the diffusion of the Internet.

Appendix A: List of Figures

Figure 2.1: Share of households covered by ADSL, national level (2006-2015)
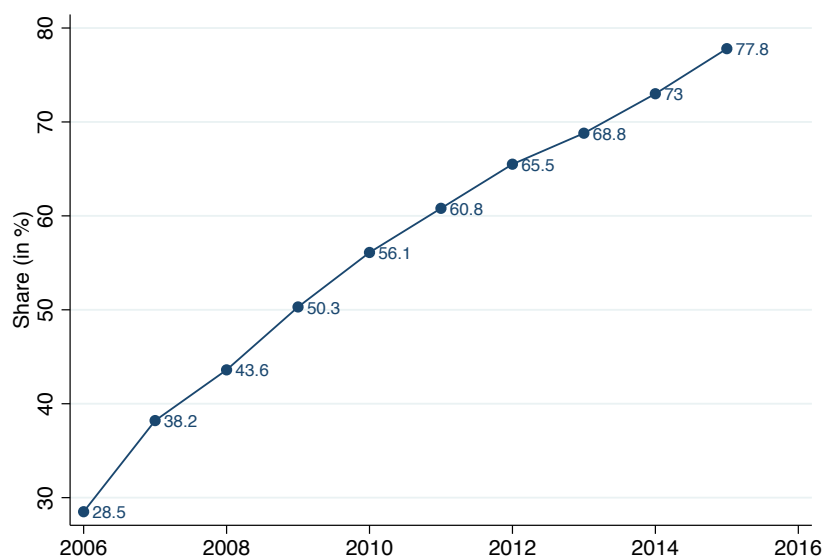
Source: Spanish Statistical Office (INE)

Figure 2.2: Share of households covered by ADSL, provincial level (2006-2012)
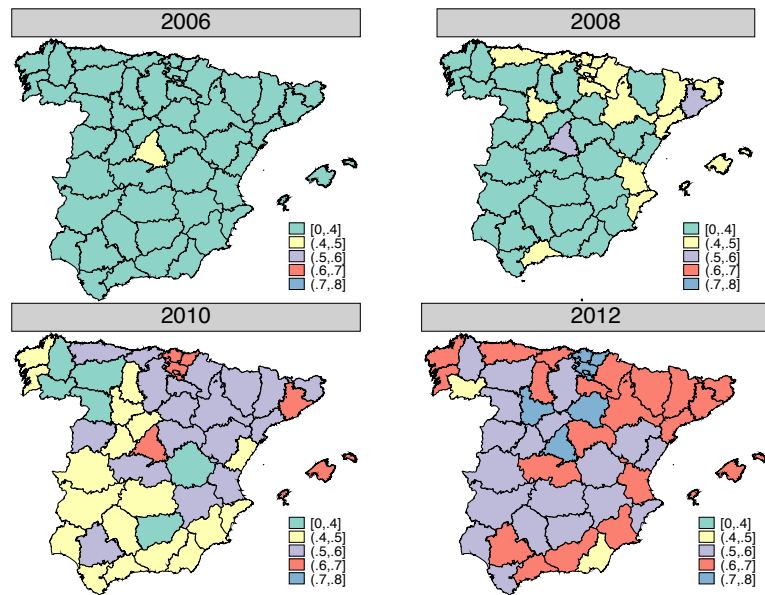
Source: Spanish Statistical Office (INE)

Figure 2.3: Share of households reading news online
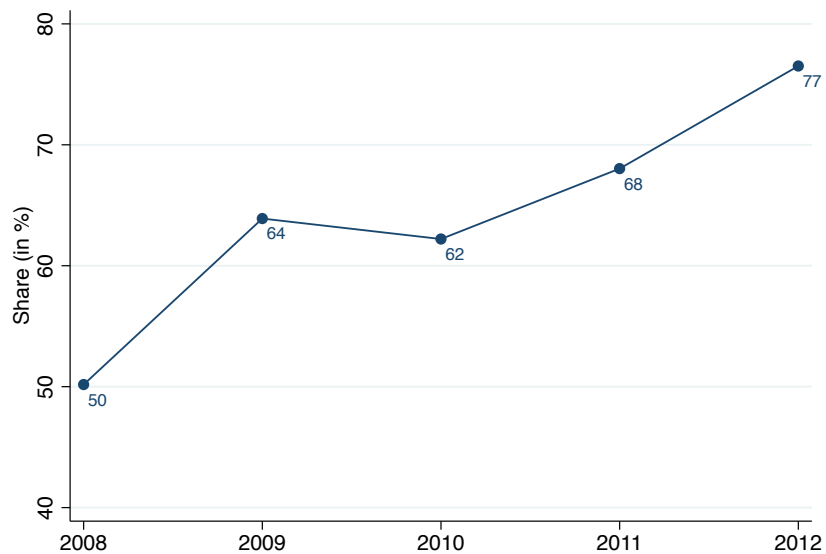
Source: Survey on Equipment and Use of Information and Communication Technologies in
Households - Spanish Statistical Office (INE)

Figure 2.4: Total inflow of foreign people in Spain (1996-2017)
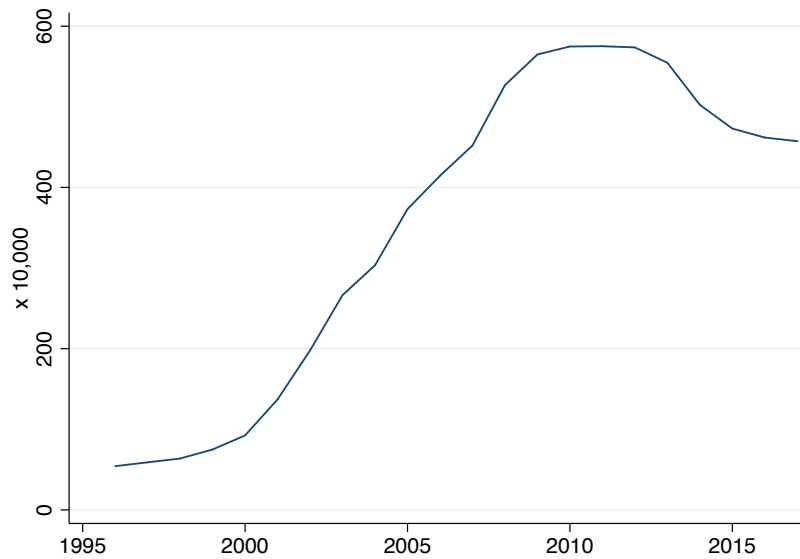
Source: *Padrón Continuo* - Spanish Statistical Office (INE)

Figure 2.5: Real and perceived share of immigrants, by year (2008-2012)
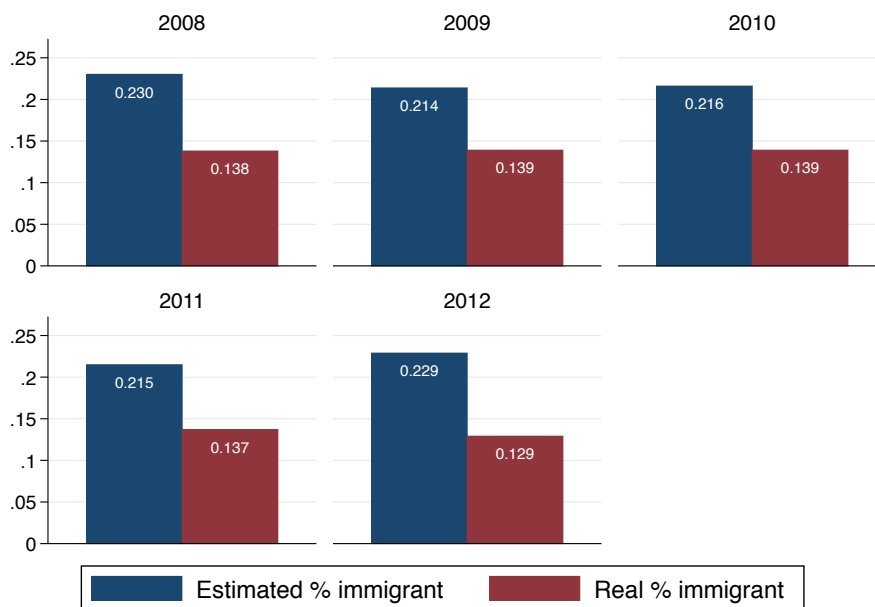
Graphs by year

The graph presents the average estimated share of foreign born by CIS respondents. Red columns display the real share of foreign-born in Spain by year.

Figure 2.6: Share of immigrants at the municipal level (2012)
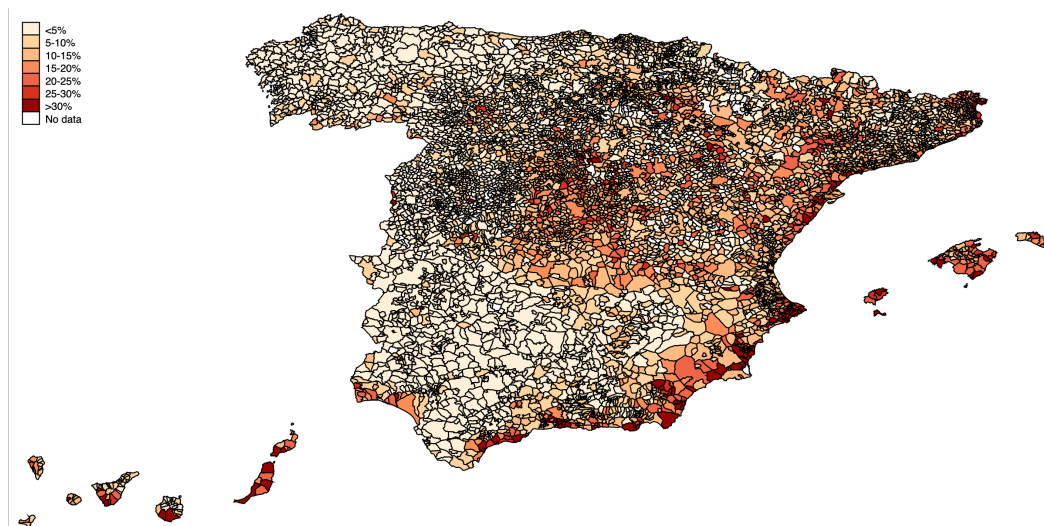
Source: *Padrón Continuo* - Spanish Statistical Office (INE)

Figure 2.7: General attitudes toward immigrants - Whole sample
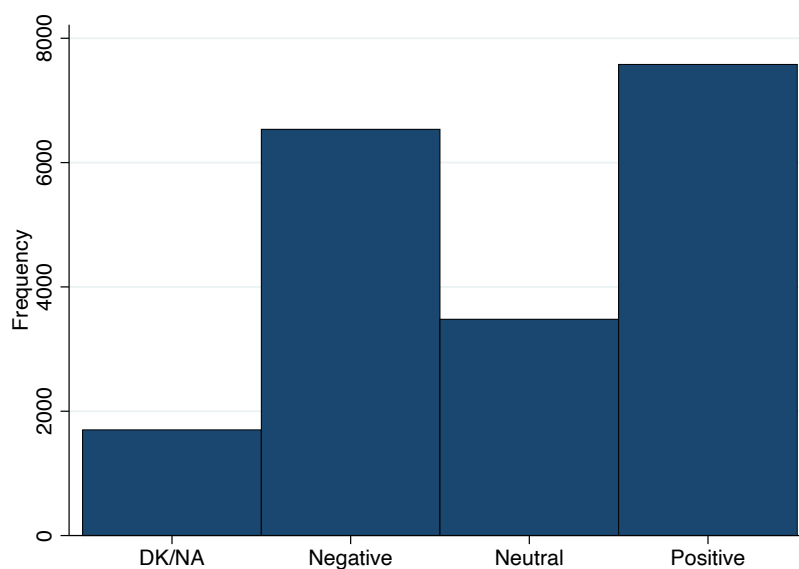
Source: CIS questionnaires. The graph shows the distribution of responses to the question: *"Overall, do you think that immigration is bad, good, or neither bad nor good for the country?"*. Years 1995, 1996; 2008-2012

Figure 2.8: Correlation between the share of landlines and of broadband lines
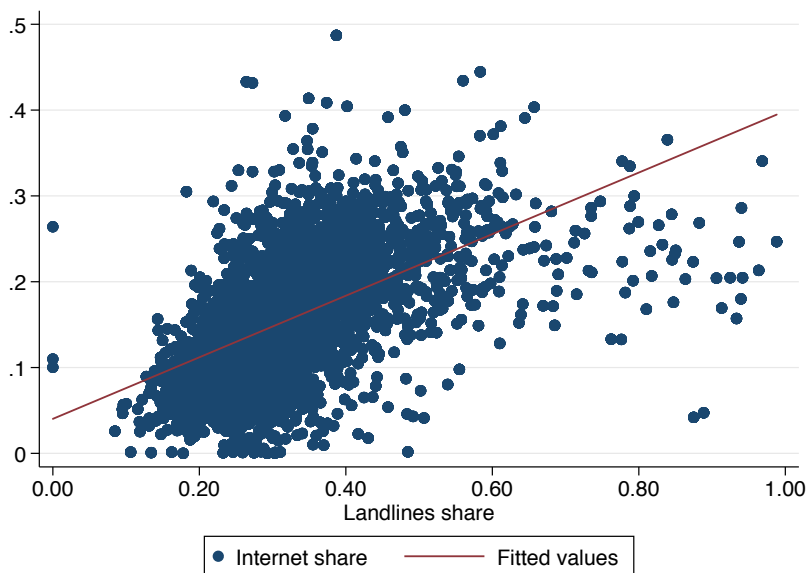
The graph shows the correlation between the share of landlines in 1996 and share of broadband lines at municipal level (2008-2012). Source: *"Anuario Economico de España - La Caixa"* (Economic Yearbook of Spain)

Figure 2.9: Geographical distribution of landlines and broadband lines
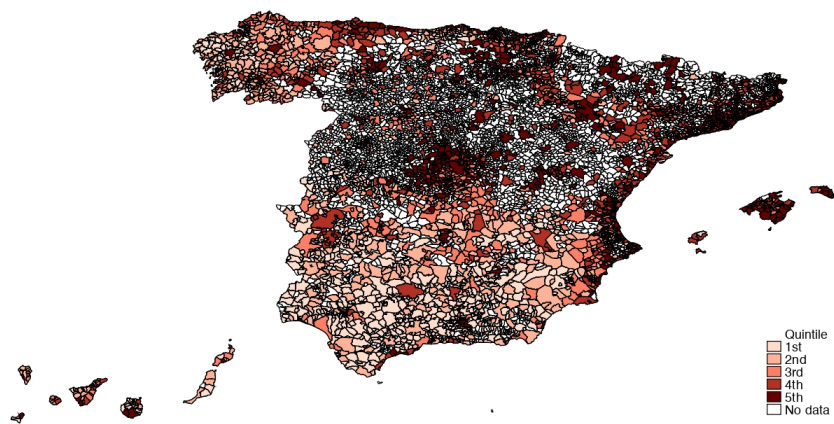
(a) Landlines per 1,000 population (1996)
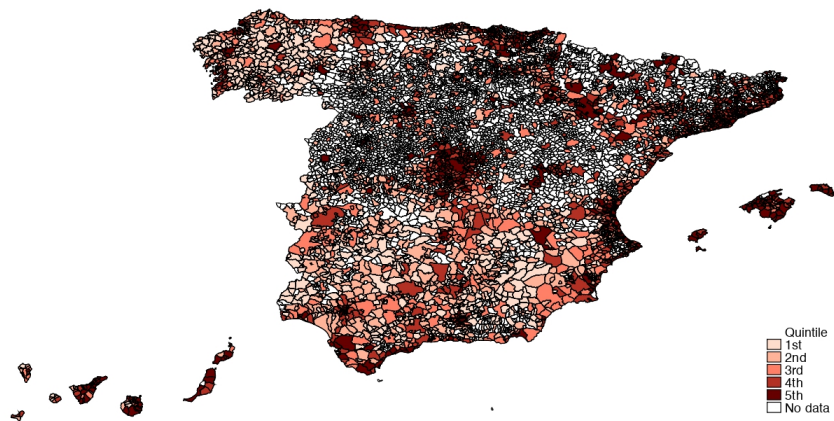
(b) Broadband lines per 1,000 population (2009)

Source:*"Anuario Economico de España - La Caixa"* (Economic Yearbook of Spain)

Figure 2.10: Share of respondents with a positive view of immigrants, over Internet penetration

Graphs by internet_era
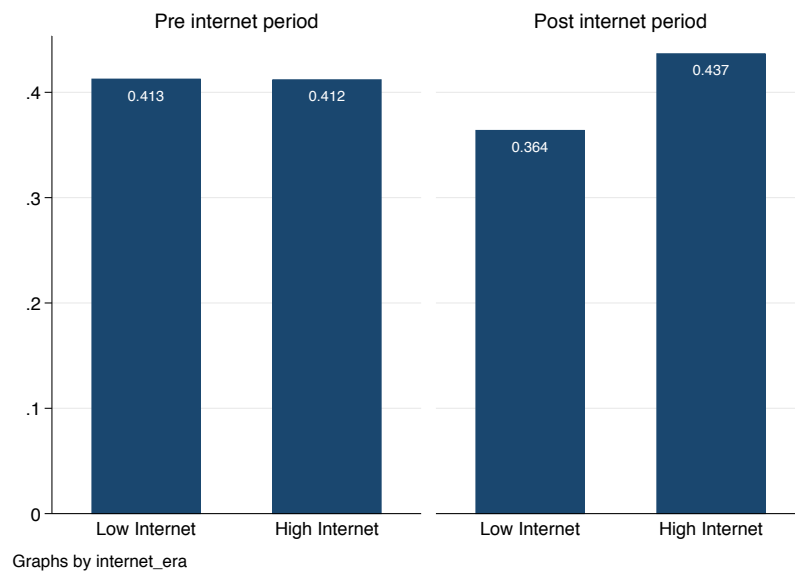
Source: CIS questionnaires. The graph shows the share of respondents agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded), by Internet penetration and Internet period. "Pre-Internet period" refers to 1995-1996. "Post-Internet period" refers to 2008-2012. "Low Internet" and "High Internet" refers to municipality in which the (future) Internet penetration is respectively below and above the median.

Figure 2.11: Coefficients from the reduced-form regressions.
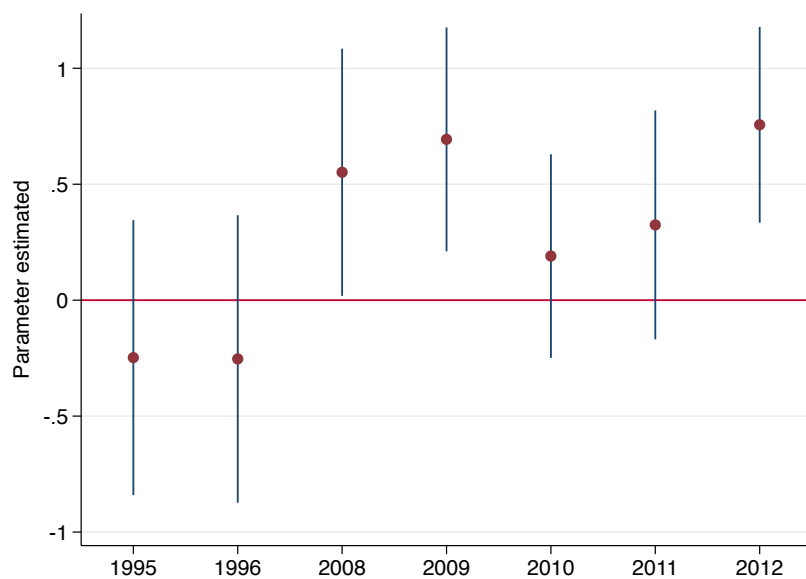
Each point represents the estimated coefficient of the reduced form, with 95% c. i. shown. Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995-1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Explanatory Variable: share of landlines in 1996. Regressions included (self-reported) personal controls and municipal controls. Robust standard errors clustered at the municipal level in parentheses.

Appendix B: List of Tables

Table 2.1: CIS Summary Statistics, by year

Year	Observations	Provinces	Municipalities	Average respondent (per municip.)
1995	3,809	48	213	10.21
1996	2,374	44	161	10.59
2008	2,674	47	222	10.61
2009	2,733	45	275	10.86
2010	2,696	49	281	12.73
2011	2,748	50	273	16.04
2012	2,259	46	239	19.63

Table 2.2: Estimated share of migrants, by year

	0%	1-5%	6-10%	11-15%	16-20%	21-25%	26-30%	>30%	N.A.
2008	1	207	449	197	385	111	217	419	688
	0.04	7.74	16.79	7.37	14.40	4.15	8.12	15.67	25.73
2009	0	257	503	329	502	190	310	410	232
	0.00	9.40	18.40	12.04	18.37	6.95	11.34	15.00	8.49
2010	2	236	468	357	473	202	282	454	222
	0.07	8.75	17.36	13.24	17.54	7.49	10.46	16.84	8.23
2011	1	261	477	350	527	216	295	417	204
	0.04	9.50	17.36	12.74	19.18	7.86	10.74	15.17	7.42
2012	0	167	343	236	361	131	210	338	473
	0.00	7.39	15.18	10.45	15.98	5.80	9.30	14.96	20.94
Total	4	1128	2240	1469	2248	850	1314	2038	1819
	0.03	8.60	17.09	11.21	17.15	6.48	10.02	15.55	13.87

Table 2.3: Level of information and personal characteristics

	Correct (national)	Overest. (national)	Correct (local)	Overest. (local)
	(1)	(2)	(3)	(4)
Gender and Age				
Male	0.198***	-0.404***	0.122***	-0.283***
	(0.030)	(0.024)	(0.025)	(0.023)
Age	0.000	-0.004***	0.001	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Social class ("High" excluded)				
Upper Middle	0.052	-0.171	0.272	-0.024
	(0.283)	(0.243)	(0.266)	(0.237)
Middle	-0.199	0.053	0.216	0.135
	(0.278)	(0.238)	(0.261)	(0.232)
Lower Middle	-0.219	0.145	0.213	0.240
	(0.279)	(0.238)	(0.262)	(0.233)
Working	-0.459	0.437*	0.052	0.486**
	(0.286)	(0.242)	(0.266)	(0.236)
Other/dk	-0.462	0.167	0.319	0.178
	(0.310)	(0.257)	(0.278)	(0.249)
Economic Situation ("Very good" excluded)				
Good	0.064	-0.118***	0.028	-0.106***
	(0.043)	(0.035)	(0.037)	(0.035)
Average	-0.021	0.069**	-0.017	0.040
	(0.043)	(0.034)	(0.036)	(0.034)
Bad	-0.118**	0.239***	-0.098**	0.178***
	(0.050)	(0.039)	(0.041)	(0.038)
Very bad	-0.272***	0.463***	-0.349***	0.463***
	(0.085)	(0.064)	(0.069)	(0.060)
Other/dk	0.005	-0.028	-0.269	0.309**
	(0.186)	(0.148)	(0.166)	(0.145)
N:	11291	11291	11573	11573

Standard errors in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Level of information and personal characteristics (Cont.)

	Correct (national)	Overest. (national)	Correct (local)	Overest. (local)
	(1)	(2)	(3)	(4)
Political Ideology ("Center" excluded)				
Left	0.011	-0.102***	-0.045	-0.026
	(0.044)	(0.035)	(0.038)	(0.035)
Right	-0.120*	0.125**	-0.148***	0.108**
	(0.065)	(0.050)	(0.054)	(0.049)
Other/dk	-0.283***	0.295***	-0.096***	0.300***
	(0.042)	(0.032)	(0.033)	(0.030)
Education ("No education" excluded)				
Primary	0.029	-0.024	-0.084	-0.063
	(0.067)	(0.051)	(0.052)	(0.049)
Secondary	0.213***	-0.241***	-0.028	-0.188***
	(0.074)	(0.058)	(0.059)	(0.056)
Professional	0.096	-0.108*	-0.009	-0.148***
	(0.074)	(0.056)	(0.057)	(0.054)
University	0.224***	-0.297***	-0.039	-0.256***
	(0.079)	(0.061)	(0.063)	(0.060)
Other/dk	0.400***	-0.626***	-0.057	-0.435***
	(0.074)	(0.059)	(0.061)	(0.057)
Occupational Status ("Employed" excluded)				
Retire	-0.020	-0.005	-0.011	0.070**
	(0.037)	(0.030)	(0.031)	(0.029)
Unemployed	-0.161***	0.244***	-0.117***	0.241***
	(0.042)	(0.032)	(0.034)	(0.031)
Student	0.091	0.109*	-0.045	0.123**
	(0.070)	(0.058)	(0.062)	(0.058)
Other/dk	-0.488*	-0.012	-0.304	0.120
	(0.280)	(0.173)	(0.198)	(0.170)
N:	11291	11291	11573	11573

Standard errors in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.4: Information on immigration – National dynamics

	Correct estimation		Overestimation	
	(1)	(2)	(3)	(4)
Internet share	0.219***	0.212***	-0.460***	-0.257**
	(0.0811)	(0.0743)	(0.110)	(0.113)
Municipal Controls:	No	Yes	No	Yes
Personal Controls:	No	Yes	No	Yes
N:	11141	11141	11163	11163
Adj. R^2	0.008	0.023	0.030	0.099

Dependent Variables: Dummy equal to one if the respondent reports a correct estimated range of immigrants living in the country (column (1) and (2)); Dummy equal to one if the respondent reports an over-estimated range of immigrants (>15%) living in the country (column (3) and (4)). Real share of immigrants: between 12.8% (2012) 13.9% (2009). Years: 2008-2012. All regressions include year and province fixed effects and are weighted for the number of respondents per municipality-year. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, % of non-EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrants population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.5: Information on immigration – National dynamics (Logit model)

	Correct estimation		Overestimation	
	(1)	(2)	(3)	(4)
Internet share	2.084***	1.939***	-2.004***	-1.232**
	(0.773)	(0.680)	(0.482)	(0.518)
Municipal Controls:	No	Yes	No	Yes
Personal Controls:	No	Yes	No	Yes
N: Observations:	11141	11141	11163	11163

Logit model. Dependent Variables: Dummy equal to one if the respondent reports a correct estimated range of immigrants living in the country (column (1) and (2)); Dummy equal to one if the respondent reports an over-estimated range of immigrants ($>15\%$) living in the country (column (3) and (4)). Real share of immigrants: between 12.8% (2012) 13.9% (2009). Years: 2008-2012. All regressions include year and province fixed effects and are weighted for the number of respondents per municipality-year. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, % of non-EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrants population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.6: Information on immigration – Local dynamics

	Correct estimation		Overestimation	
	(1)	(2)	(3)	(4)
Internet share	-0.452**	-0.479***	0.123	0.082
	(0.195)	(0.148)	(0.229)	(0.150)
Municipal Controls:	No	Yes	No	Yes
Personal Controls:	No	Yes	No	Yes
N:	10803	10803	10803	10803
Adj. R^2:	0.031	0.044	0.025	0.103

Dependent Variables: Dummy equal to one if the respondent reports a correct estimated range of immigrants living in the municipality (column (1) and (2)); Dummy equal to one if the respondent reports an over-estimated range of immigrants living in the municipality (column (3) and (4)). Years: 2008-2012. All regressions include year and province fixed effects and are weighted for the number of respondents per municipality-year. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, % of non-EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrants population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.7: Information on immigration – Local dynamics (Logit model)

	Correct estimation		Overestimation	
	(1)	(2)	(3)	(4)
Internet share	-2.458**	-2.204**	0.521	0.260
	(1.023)	(0.893)	(0.963)	(0.721)
Municipal Controls:	No	Yes	No	Yes
Personal Controls:	No	Yes	No	Yes
N:	10803	10803	10803	10803

Logit model. Dependent Variables: Dummy equal to one if the respondent reports a correct estimated range of immigrants living in the municipality (column (1) and (2)); Dummy equal to one if the respondent reports an over-estimated range of immigrants living in the municipality (column (3) and (4)). Years: 2008-2012. All regressions include year and province fixed effects and are weighted for the number of respondents per municipality-year. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, % of non-EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrants population. Standard errors clustered at the municipal level in parenthesesSignificance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.8: Summary statistics – Outcome variables

	Obs.	Mean	St. Dev.
Information			
Estimated immigrant share (national)	9711	0.221	0.149
Estimated immigrant share (local)	9972	0.199	0.173
Attitudes			
Immigration is good for the country	17593	0.431	0.495
There are too many immigrants	17810	0.429	0.495
Immigrants:			
Steal natives jobs	18163	0.621	0.485
Force natives' salaries down	17922	0.733	0.443
Should not receive unemployment subsidy	18183	0.088	0.283
Should not be allowed to vote	17094	0.361	0.480
Should not be allowed to gain Spanish nationality	17137	0.183	0.386
Should renounce their culture	18549	0.112	0.316
Political views			
Voted for PP in the last election	19293	0.147	0.354

Table 2.9: Positive view (OLS and IV regressions)

	(1)	(2)	(3)	(4)	(5)
Internet share	1.358***	0.834***	3.761***	3.038***	2.841**
	(0.190)	(0.165)	(0.760)	(0.813)	(1.136)
Model:	OLS	OLS	IV	IV	IV
First Stage	-	-	0.177***	0.175***	0.168***
F Test:	-	-	88.39	82.04	69.03
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17036	17036	17036	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: $^{*}\ p < 0.1$, $^{**}\ p < 0.05$, $^{***}\ p < 0.01$.

Table 2.10: Too many (OLS and IV regressions)

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.693***	-0.223	-2.192**	-1.191	-0.444
	(0.219)	(0.168)	(0.983)	(0.983)	(1.279)
Model:	OLS	OLS	IV	IV	IV
First Stage	-	-	0.177***	0.175***	0.168***
F Test:	-	-	89.76	82.90	70.29
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17267	17267	17267	17267	17267

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "There are too many immigrants in the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.11: Positive view (OLS regressions) – Reduced form

| | Post-Internet era | | | Pre-Internet era | |
	(1)	(2)	(3)	(4)	(5)
Telephone 96 share	0.533***	0.362***	0.408***	0.047	-0.068
	(0.075)	(0.079)	(0.105)	(0.182)	(0.211)
Mun. Controls:	No	No	Yes	No	Yes
Pers. Controls:	No	Yes	Yes	No	Yes
N:	17036	17036	17036	4691	4691

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 2008-2012 (Columns 1-3); 1995-1996 (Columns 4-5). All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Explanatory Variable: share of landlines in 1996. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.12: Positive view (PROBIT and IVPROBIT)

	(1)	(2)	(3)	(4)	(5)
Internet share	3.560***	2.376***	9.589***	8.350***	7.815**
	(0.504)	(0.469)	(1.873)	(2.214)	(3.058)
Model:	OLS	OLS	IV	IV	IV
First Stage	-	-	0.142***	0.139***	0.0715***
F Test:	-	-	34.52	32.10	27.57
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17036	17036	17036	17036	17036

Probit and IV Probit model. Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 2008-2012 (Columns 1-3); 1995-1996 (Columns 4-5). All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.13: Positive view (OLS and IV regressions) – Not weighted

	(1)	(2)	(3)	(4)	(5)
Internet share	0.825***	0.545***	3.743***	2.639***	2.871***
	(0.130)	(0.117)	(0.769)	(0.736)	(0.835)
Model:	OLS	OLS	IV	IV	IV
First Stage	-	-	0.136***	0.128***	0.062***
F Test:	-	-	26.86	23.82	18.73
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17036	17036	17036	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 2008-2012 (Columns 1-3); 1995-1996 (Columns 4-5). All regressions include year and province fixed effects and the baseline share of landlines in 1996. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.14: Positive view (OLS and IV regressions) – Alternative weight

	(1)	(2)	(3)	(4)	(5)
Internet share	0.909***	0.588***	3.839***	2.775***	3.038***
	(0.137)	(0.121)	(0.732)	(0.719)	(0.809)
Model:	OLS	OLS	IV	IV	IV
First Stage	-	-	0.142***	0.135***	0.0809**
F Test:	-	-	33.62	29.79	24.81
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17036	17036	17036	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 2008-2012 (Columns 1-3); 1995-1996 (Columns 4-5). All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the (log of) population of the municipality. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.15: Positive view (OLS and IV regressions) – Alternative Internet

	(1)	(2)	(3)	(4)	(5)
Internet share	0.444***	0.305***	2.435***	2.059***	1.620***
(Total hh)	(0.0704)	(0.0587)	(0.461)	(0.470)	(0.371)
Model:	OLS	OLS	IV	IV	IV
First stage	-	-	0.157***	0.154***	0.200***
F Test:	-	-	30.76	28.59	42.00
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17036	17036	17036	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Internet share is calculated as the ratio between the number of broadband lines in the municipality over the total households of municipality registered in 2011. Instrumental Variable: share of landlines in 1996 (over the total households of municipality registered in 2001) * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants, and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.16: Positive view – Municipal level collapsed

	(1)	(2)	(3)	(4)	(5)
Internet share	0.637***	0.352***	3.608***	2.500*	2.995*
	(0.118)	(0.114)	(1.090)	(1.351)	(1.734)
Model:	OLS	OLS	IV	IV	IV
First Stage	-	-	0.099***	0.066**	0.059*
F Test:	-	-	12.25	6.357	4.771
Mun. Controls:	No	Yes	No	Yes	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	1540	1498	1540	1540	1498

Dependent Variable: Share of individuals (over the total number of respondents in the municipality) that agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: (municipal average of) gender, age, squared-age, social class, occupational status, economic status, political preferences and education level. Municipal controls: population, surface in km², population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.17: Relationship between positive views and other migration concerns

| | Immigration is overall good for the country | | | | | |
	(1)	(2)	(3)	(4)	(5)	(6)
Steal jobs	-0.355***					-0.288***
	(0.014)					(0.023)
Reduce salaries		-0.177***				-0.031
		(0.019)				(0.023)
Unempl. benefit			-0.273***			-0.107***
			(0.009)			(0.013)
Deny culture				-0.223***		-0.104***
				(0.021)		(0.031)
No nationality					-0.302***	-0.165***
					(0.009)	(0.008)
Controls:	Yes	Yes	Yes	Yes	Yes	Yes
N:	16238	16088	16266	16547	15336	13631

OLS regressions. Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Explanatory variables: Dummy equal to one if the respondent agrees with the following statements: "Immigrants steal jobs from natives"; "Immigrants force natives' salaries down"; "Immigrants should not obtain unemployment subsidies"; "Immigrants should renounce their own culture"; "Immigrants should not be able to obtain Spanish nationality". Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.18: Immigrants steal jobs from natives

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.896***	-0.232	-3.124***	-2.064***	-1.479**
	(0.160)	(0.150)	(0.444)	(0.474)	(0.584)
Model:	OLS	OLS	IV	IV	IV
F Test:	-	-	18.13	17.17	15.88
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17573	17573	17573	17573	17573

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigrants steal jobs from natives" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.19: Immigrants force natives' salaries down

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.866***	-0.438***	-2.208***	-1.476***	-0.194
	(0.121)	(0.115)	(0.376)	(0.448)	(0.659)
Model:	OLS	OLS	IV	IV	IV
F Test:	-	-	18.55	17.58	13.37
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17348	17348	17348	17348	17348

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigrants force natives' salaries down" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.20: Immigrants should not obtain unemployment subsidies

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.255***	-0.139*	-0.797**	-0.656**	-0.597*
	(0.084)	(0.081)	(0.317)	(0.329)	(0.360)
Model:	OLS	OLS	IV	IV	IV
F Test:	-	-	18.34	17.41	14.51
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17598	17598	17598	17598	17598

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigrants should not obtain unemployment subsidies" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.21: Immigrants should renounce their own culture

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.347***	-0.187**	-0.763***	-0.542**	-0.420
	(0.080)	(0.084)	(0.252)	(0.250)	(0.369)
Model:	OLS	OLS	IV	IV	IV
F Test:	-	-	18.01	17.15	15.68
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	17946	17946	17946	17946	17946

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigrants should renounce their own culture" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.22: Immigrants should not be able to obtain Spanish nationality

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.622***	-0.362**	-1.566***	-1.190**	-0.678
	(0.147)	(0.144)	(0.527)	(0.487)	(0.676)
Model:	OLS	OLS	IV	IV	IV
F Test:	-	-	18.33	17.29	15.65
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	16555	16555	16555	16555	16555

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigrants should not be able to obtain Spanish nationality" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences, and education level. Municipal controls: population, surface in km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.23: Heterogeneity Analysis – By age

Age:	18-30	31-40	41-52	53-65	>66
	(1)	(2)	(3)	(4)	(5)
Internet share	3.588**	4.135***	4.739***	2.003	0.361
	(1.563)	(1.176)	(1.361)	(1.734)	(1.481)
F Test:	15.93	12.99	14.96	16.38	15.47
Mun. Controls:	Yes	Yes	Yes	Yes	Yes
Pers. Controls:	Yes	Yes	Yes	Yes	Yes
N:	3706	3351	3566	3378	3035

IV Regressions. Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landline in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, political preferences and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.24: Factors accounting for the relationship between immigration and voting for the right

	Voting for PP			
	(1)	(2)	(3)	(4)
Immigration is good	-0.105***			
	(0.015)			
Steal Job		0.102***		
		(0.020)		
No Subsidy			0.0649***	
			(0.011)	
No Nationality				0.121***
				(0.018)
Mun. Controls:	Yes	Yes	Yes	Yes
Pers. Controls:	Yes	Yes	Yes	Yes
N:	13835	14308	14298	13464

OLS Regressions. Dependent Variable: Dummy equal to one if the respondent reports having voted for the PP in the last elections (Blank and Don't know answers excluded; respondents reporting not having voted in the last elections excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and are weighted for the number of respondents per municipality-year. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.25: Internet impact on PP votes

	(1)	(2)	(3)	(4)	(5)
Internet share	-0.079	-0.187	-0.871*	-0.925*	-1.645**
	(0.141)	(0.140)	(0.495)	(0.524)	(0.722)
Model:	OLS	OLS	IV	IV	IV
F Test:			17.46	16.36	15.96
Mun. Controls:	No	Yes	No	No	Yes
Pers. Controls:	No	Yes	No	Yes	Yes
N:	15153	15153	15153	15153	15153

Dependent Variable: Dummy equal to one if the respondent reports having voted for the PP in the last elections (Blank and Don't know answers excluded; respondents reporting not having voted in the last elections excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. (Self-reported) Personal controls: gender, age, squared-age, social class, occupational status, economic status, and education level. Municipal controls: population, surface in Km^2, population density, altitude, % immigrants over total population, % of EU15 Immigrants and % of Sub-Saharan African Immigrants over immigrant population. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.26: Internet impact on PP votes (OLS and IV regression) – Electoral data

	(1)	(2)	(3)	(4)
Internet share	-0.115***	-0.972***	-0.131**	
	(0.014)	(0.050)	(0.055)	
Internet Share Fake				-0.040
				(0.046)
Mean % PP vote		0.395		
Model:	OLS	IV	IV	IV
First Stage:	-	0.232***	0.187***	-
F Test:	-	32.09	21.13	-
Controls:	No	No	Yes	Yes
Observations:	12895	12895	12690	6282

Years: 1996, 2000, 2008 and 2011. All regressions include year and municipality fixed effects. Instrumental Variable: number of landlines in 1996 * Post Internet dummy. Column (4) is a falsification test. time variant demographic controls: (Log) population, unemployment rate, cars, banks and commercial activities per capita. Time invariant demographic controls (from 2001 census, interacted with year dummies): extension and altitude of the municipality, % people under 25, % people over 65, % people with not-compulsory education, average number of children; offices, and cultural venues per capita. Region fixed effects are interacted with a year dummy in Columns 3, 4 and 5. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix C: Additional Tables

Table 2.A1: Immigration in Spain – By country of origin

	2017		2008		1998	
	Total	Share	Total	Share	Total	Share
Total Foreign	4,572,807		5,268,762		637,085	
EU (15)	861,852	0.188	1,090,122	0.207	277,844	0.436
UK	240,785	0.053	352,957	0.067	75,600	0.119
Bulgaria	127,669	0.028	153,973	0.029	1,453	0.002
Romania	687,733	0.150	731,806	0.139	2,258	0.004
Ukraine	103,072	0.023	79,096	0.015	462	0.001
Morocco	749,670	0.164	652,695	0.124	111,043	0.174
Argentina	70,221	0.015	147,382	0.028	19,315	0.030
Colombia	145,358	0.032	284,581	0.054	9,997	0.016
Ecuador	141,810	0.031	427,718	0.081	3,972	0.006
China	208,075	0.046	125,914	0.024	11,611	0.018

Source: Spanish Statistical Office (INE)

Table 2.A2: Summary statistics – Respondents' characteristics

	Obs.	Mean	St. Dev.
Age	19293	47.22	17.972
Gender:			
Female	19293	0.517	0.500
Male	19293	0.483	0.500
Social class:			
High	19293	0.002	0.048
Upper Middle	19293	0.057	0.232
Middle	19293	0.531	0.499
Lower Middle	19293	0.248	0.432
Working	19293	0.136	0.343
Occupational Status:			
Employed	19285	0.545	0.498
Retired	19285	0.231	0.422
Unemployed	19285	0.164	0.370
Student	19285	0.054	0.227
Political Ideology:			
Center	19268	0.586	0.493
Left	19268	0.113	0.317
Right	19268	0.061	0.240
Economic Situation:			
Very good	19293	0.131	0.338
Good	19293	0.261	0.439
Average	19293	0.388	0.487
Bad	19293	0.166	0.372
Very bad	19293	0.046	0.209
Education level:			
No education	19293	0.107	0.309
Primary	19293	0.391	0.488
Secondary	19293	0.191	0.393
Professional	19293	0.135	0.341
University	19293	0.079	0.269

Residual category to sum 100%: "Don't know / Refuse to answer".

Table 2.A3: Summary statistics – Municipalities' characteristics

	Obs.	Mean	St. Dev.
Broadband Lines	19293	62423.350	173511.801
Fixed-phone Lines	19293	182823.227	402981.193
Population	19293	399860.549	829186.532
Area (km^2)	19293	209.772	280.838
Altitude	19019	301.591	298.430
Population density	19293	2596.574	3993.772
Real share of immigrant pop. (local)	19155	0.081	0.084
EU Share of immigrants (%)[1]	19057	0.377	0.194
Non EU Share of immigrants (%) [1]	13110	0.034	0.030
Sub-Saharan Share of immigrants (%)[1]	13110	0.040	0.043

[1] Over the immigrant population;

Table 2.A4: Positive view (OLS and IV regressions) – Extended Table

	(1)	(2)
Internet share	0.834***	2.841**
	(0.165)	(1.136)
Year (1995 excluded):		
1996	0.015	0.015
	(0.038)	(0.037)
2008	-0.014	-0.394*
	(0.039)	(0.206)
2009	-0.120	-0.538**
	(0.078)	(0.217)
2010	-0.071	-0.521**
	(0.049)	(0.244)
2011	-0.114***	-0.597**
	(0.042)	(0.266)
2012	-0.145***	-0.665**
	(0.047)	(0.286)
Population	0.000	0.000
	(0.000)	(0.000)
Extension (km2)	0.000	0.000
	(0.000)	(0.000)
Altitude	0.000	0.000*
	(0.000)	(0.000)
Population Density	0.000	0.000
	(0.000)	(0.000)
Model:	OLS	IV
F Test:		69.030
Municipal and Personal Controls:	Yes	Yes
Observations:	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Positive view (OLS and IV regressions) – Extended Table (Cont.)

	(1)	(2)
Internet share	0.834***	2.841**
	(0.165)	(1.136)
Share of immigrants (local)	0.159	0.022
	(0.127)	(0.141)
EU Share of immigrants (local)	0.082*	0.119**
	(0.042)	(0.054)
Sub-Saharan Share of immigrants (local)	0.287***	0.212***
	(0.073)	(0.075)
Male	0.045***	0.045***
	(0.005)	(0.005)
Age	0.003***	0.003***
	(0.001)	(0.001)
Age squared	-0.000***	-0.000***
	(0.000)	(0.000)
Social class (High excluded):		
Upper Middle	-0.002	-0.007
	(0.046)	(0.044)
Middle	0.015	0.012
	(0.065)	(0.064)
Lower Middle	-0.006	-0.005
	(0.062)	(0.060)
Working	0.037	0.034
	(0.054)	(0.054)
Other/dk	-0.077	-0.081
	(0.090)	(0.089)
Model:	OLS	IV
F Test:		69.030
Municipal and Personal Controls:	Yes	Yes
Observations:	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Positive view (OLS and IV regressions) – Extended Table (Cont.)

	(1)	(2)
Internet share	0.834***	2.841**
	(0.165)	(1.136)
Occupational Status (Working excluded):		
Retire	-0.021***	-0.021***
	(0.007)	(0.007)
Unemployed	-0.009	-0.008
	(0.007)	(0.007)
Student	-0.035	-0.036
	(0.042)	(0.042)
Other/dk	-0.057	-0.056
	(0.084)	(0.083)
Political Ideology (Center excluded):		
Left	0.124***	0.121***
	(0.019)	(0.018)
Right	-0.178***	-0.179***
	(0.017)	(0.017)
Other/dk	-0.022	-0.022
	(0.031)	(0.031)
Model:	OLS	IV
F Test:		69.030
Municipal and Personal Controls:	Yes	Yes
Observations:	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Positive view (OLS and IV regressions) – Extended Table (Cont.)

	(1)	(2)
Internet share	0.834***	2.841**
	(0.165)	(1.136)
Economic Situation (Very good excluded):		
Good	0.000	0.001
	(0.037)	(0.036)
Average	-0.057	-0.057
	(0.044)	(0.044)
Bad	-0.111***	-0.110***
	(0.026)	(0.026)
Very bad	-0.118***	-0.117***
	(0.037)	(0.037)
Other/dk	-0.124**	-0.124**
	(0.049)	(0.049)
Education level (No education excluded):		
Primary	-0.034	-0.032
	(0.023)	(0.023)
Secondary	0.074***	0.068***
	(0.022)	(0.022)
Professional	0.013	0.009
	(0.019)	(0.018)
University	0.162***	0.158***
	(0.031)	(0.032)
Other/dk	0.174***	0.167***
	(0.022)	(0.023)
Model:	OLS	IV
F Test:		69.030
Municipal and Personal Controls:	Yes	Yes
Observations:	17036	17036

Dependent Variable: Dummy equal to one if the respondent agrees with the statement: "Immigration is good for the country" (Blank and Don't know answers excluded). Years 1995, 1996; 2008-2012. All regressions include year and province fixed effects and the baseline share of landlines in 1996. Regressions are weighted for the number of respondents per municipality-year. Instrumental Variable: share of landlines in 1996 * Post Internet dummy. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

3. DO FAR-RIGHT MAYORS INCREASE THE PROBABILITY OF HATE CRIMES? EVIDENCE FROM ITALY

3.1. Introduction

Extreme right parties have seen their support soar in all western countries. This poses an existential threat to democratic systems, civil liberties, and constitutional checks and balances (Guriev & Papaioannou, 2021). The growth in support for the radical right has often been matched with an increase in the episodes of discrimination and violence against minorities.[31] However, there is no empirical research that establishes a *causal* relationship between the election of extreme right politicians and hate crimes. In this paper, I aim to address this significant gap in the literature by shedding light on the following question: does the appointment of far-right mayors affect the probability of hate crimes against immigrants?

To answer this question, I focus on local Italian politicians. Italy is a particularly interesting context for conducting a study of this nature for several reasons. The country has experienced a notable increase in support for far-right parties, especially following the 2015 refugee crisis that affected the country to a great extent. In the 2019 European elections, the two most important far-right political forces, *Lega* ("League") and *Fratelli d'Italia* ("Brothers of Italy") jointly received more than 40% of the vote share after a campaign that focused almost exclusively on the immigration topic and used strong anti-immigrant rhetoric.

This support is not limited to the national level but has also emerged at the local level, especially in northern areas where the League has a long-established presence. Local politicians belonging to these parties often use tough language against immigrants and have introduced highly discriminatory municipal regulations. Moreover, Italy suffers from a discrepancy between central and local governments when it comes to implementing policies

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[31]See, for instance, the article by Annalisa Camilli *"C'è un aumento degli attacchi razzisti in Italia?"* on the Italian magazine Internazionale (February 2019).

aimed at preventing the spread of hate crimes.[32] This attrition makes the potential effect of mayors on hate crimes even more notable.

Focusing on local elections also allows me to use a methodological approach that provides to my estimates solid causal evidence. In fact, the high number of municipalities (and, therefore, of local elections) in Italy is ideally suited for using a Regression Discontinuity (RD) approach (Imbens & Lemieux, 2008; Lee, 2008). Thus, to assess the effect of the victory of far-right mayors on the likelihood that hate crimes occur, I construct a dataset of local elections from 2008 to 2018. I then compare the probability of hate crimes in municipalities in which far-right candidates won or lost with a tiny margin of votes.

In general, data on hate crimes are in short supply (OSCE, 2014). In this paper, I use an original dataset that I constructed starting from the episodes reported by *Lunaria*, a Non-Governmental Organization that has recorded episodes of hate crimes against immigrants since 2007. This unique dataset contains detailed information, including the precise date and location of the crimes and a short description of each episode. The detailed data level allows me to categorize the crimes by type of act and offender, thereby making it possible to perform various analyses and test the potential mechanisms underlying the results. Lunaria compiles these data on hate crimes primarily from national and local newspapers; additionally, some cases are reported directly to Lunaria by victims, witnesses, and other NGOs.

The results show that in municipalities led by far-right mayors, the likelihood of hate crimes is significantly higher. The effect of far-right mayors is sizeable; using an RD with optimal bandwidths (Calonico et al., 2014), I estimate that the probability that a hate crime occurs in municipalities led by far-right mayors is about five percentage points higher on an annual basis. However, this value likely represents a lower bound effect. Indeed, Bracco et al. (2018) show that League mayors reduce the presence of migrants (and, thus, the number of potential victims) in municipalities.

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[32]"A difficult situation in the sense of protecting the rights of minorities has developed in Italy. If, at the national level, the law protects their rights, at the regional level, these rights are at the local authorities' discretion. [...] This situation has led to various problems among Muslims, as the Italian authorities (both local and regional) associate Muslim communities with terrorism and radicalism." (OSCE, 2016).

The effect of the far-right mayors is particularly strong in the first half of the five-year political term. Simultaneously, I find no impact on the lagged hate crimes – i.e., those that occurred in the year(s) before the election. This result rules out the possibility of selection in municipalities and confirms that what I capture is the effect of the far-right mayors. Besides, I demonstrate that the results persist even when focusing on the most severe hate crimes, including those that involve physical violence against immigrants. In terms of mechanisms, I examine two elements that the recent literature has shown to affect hate crimes: the change in social norms and the role of the Internet.

The first channel that I explore is the "erosion of social norms". Focusing on Donald Trump's case, Bursztyn et al. (2020) have recently demonstrated that the unexpected election of a politician can make citizens feel entitled to behave in a way that was previously considered unacceptable. I prove the relevance of this mechanism in my context in two ways. First, I focus on the municipalities that elected an extreme right mayor for the first time only recently – i.e., those that are not familiar with the far-right. Comparing these municipalities with those with long-established extreme right tendencies, I find the effect on hate crimes driven by the former. Second, I investigate whether the election of a far-right mayor generates behavioral changes in the surrounding communities. To do so, I focus on Italy's 611 Labor Market Areas (LMAs), small and homogeneous territorial units. Using a staggered difference-in-differences approach, I provide evidence of spillover effects; indeed, *after* the appointment of the first far-right mayor in an LMA, an increase in hate crimes is also recorded in the adjacent municipalities. This result is corroborated by an event study that excludes pre-trends in these areas.

The second channel I analyze is the role played by the Internet. The recent literature provides evidence that the Internet and social media are responsible for an increase in hate crimes (Müller & Schwarz, 2018, 2020; Petrova et al., 2020). In line with these findings, I prove the effect of far-right mayors on hate crimes to be concentrated in locations with greater Internet availability. This result is stable both when I use real Internet data and when I implement an instrumental variable approach to mitigate the endogeneity related to Internet demand (Campante et al., 2018). One factor that might explain the effect of the Internet on hate crimes is that the possibility of connecting to the Internet reduces the cost of coordination between potential perpetrators

(Petrova et al., 2020). To test whether this is the case in my context, I focus on episodes in which offenders act in groups. Similar to what found by Müller and Schwarz (2020) in the US, my results do not fully support this coordination mechanism.

The fact that the hate crimes episodes recorded by Lunaria come from newspapers or are reported by citizens and NGOs gives rise to potential concerns. Although Lunaria reports that the veracity of each episode is verified with multiple sources, the results could be biased if the media or individuals are more vigilant and more likely *to report* episodes of hate crimes *as a result* of the election of a far-right mayor. To mitigate this potential concern, I perform several robustness tests.

First, I focus on crimes involving physical violence and damages to immigrants' properties. Using the same RD approach, I demonstrate that far-right mayors' effect persists when these specific episodes are investigated. This analysis proves that the appointment of far-right mayors also affects the most severe hate crimes. Simultaneously, in line with Daniele and Dipoppa (2017), this exercise provides a robustness check. Indeed, given their salient nature, physical assaults and damages are extremely likely to be reported in the media and, consequently, to be included in Lunaria's dataset, regardless of the mayor's political ideology. Besides, focusing on violent crimes addresses the potential concern related to the definition of "hate crimes" since these episodes are less open to interpretation.

Second, to mitigate the concern of bias in reporting, I exploit the fact that Lunaria provides the source of each crime present in the dataset. I first show that the distribution of hate crime sources is similar when comparing municipalities led by far-right mayors and those not. This exercise provides initial evidence that there is no bias in reporting depending on the mayors' political affiliation. Additionally, I demonstrate that the effect of far-right mayors persists when I exclude episodes directly communicated by citizens and NGOs to Lunaria – i.e., the sources that are more likely to report hate crimes *following* the election of a far-right mayor. Lastly, to address the potential problem of bias in media, I consider different subsamples of news sources, focusing on those characterized by a lower possibility of distortion related to the far-right mayors' appointment. I first look just at cases reported by printed newspapers; I then focus on episodes present in newspapers dealing

with national stories; I also go further, excluding the hate crimes reported by the most important left-wing newspapers. Whatever the subsample of news sources considered, the effect of far-right mayors remains.

The paper contributes to several strands of literature. First, it relates to recent work on political support for populism and the extreme right and the consequences of these parties reaching power (Guriev & Papaioannou, 2021). A growing number of papers analyze how the presence of non-natives might affect the political dynamics, at both the national (Barone et al., 2016; Dustmann et al., 2019; Halla et al., 2017) and the local level (Harmon, 2018; Otto & Steinhardt, 2014). Overall, these studies found a positive association between the presence of immigrants and the political success of the far-right parties, although there is no shortage of in which the opposite relationship has been identified (Gamalerio et al., 2020b; Steinmayr, 2020; Vertier & Viskanic, 2019). However, little is known about how the electoral success of anti-immigrant parties influences the behavior of citizens and their relationship with foreigners. I contribute to this literature by examining how victories of radical parties impact an outcome related to migration, namely hate crimes.

To the best of my knowledge, my paper is the first providing *causal* evidence that the election of far-right politicians generates an increase in hate crimes. In a related work, Bracco et al. (2018) show that the presence of a *Lega* mayor led to a reduction in the presence of immigrants in a municipality. Indeed, my paper proposes a possible explanation for this result, namely an increase in hate crimes in the municipality. Another work similar to mine is by Bove et al. (2019) who shows, in the same Italian context, that immigration leads local governments to allocate more public resources to local police.

This paper also relates to recent works on the determinants of hate crimes. One of the first contributions is by Glaeser (2005), who presents a theoretical model on the circumstances that incentivize politicians to supply hate-creating stories. Recent contributions provide empirical evidence on the potential causes of hate crimes against minorities. The determinants of hate crimes investigated so far are the unemployment rate (Falk et al., 2011), exposure to religious minorities (Colussi et al., 2021), terrorist attacks (Hanes & Machin, 2014; Ivandic et al., 2019), and large inflows of refugees and asy-

lum seekers (Dinas et al., 2019; Sola, 2018). All these factors are found to be responsible for an increase in the episodes of hate crime. I contribute to this literature by investigating the role of politicians and, in particular, of mayors. Additionally, I support this literature by providing a new and detailed dataset of hate crimes, an issue that suffers from a general and severe problem of lack of data.

My results are especially related to a recent work by Müller and Schwarz (2020), who demonstrate how Trump's tweets about Islam-related topics predict an increase in hate crimes over the following days. My study differs from and complements Müller and Schwarz (2020) in several aspects. First, it generalizes the result by examining the appointment of far-right politicians instead of their online behavior. Additionally, it extends and strengthens the result by looking at numerous extreme politicians and using an RD approach to produce solid causal evidence. Lastly, my analysis differs in that it analyzes the role played by *local* politicians, who can be highly influential for the community's behavior, especially in a context characterized by the presence of many small municipalities such as Italy.

My paper also has strong parallels with that of Bursztyn et al. (2020), who focus on Donald Trump's victory in the 2016 US Presidential Elections to show how unexpected electoral outcomes can quickly erode social norms and increase individuals' willingness to express xenophobic views publicly. My paper confirms the relevance of this mechanism by means of many elections and actual electoral data instead of online experiments. Additionally, it goes further by showing that the erosion of social norms is not limited to areas where extreme politicians are appointed but also affects the surrounding localities.

Lastly, this work also relates to the literature that explores the impact of the Internet on social and political outcomes. Zhuravskaya et al. (2020) provide an excellent literature review relating to this topic. More specifically, recent literature has shown that the Internet and social media are responsible for an increase in hate crimes (Chan et al., 2016; Müller & Schwarz, 2018, 2020; Petrova et al., 2020). For instance, Müller and Schwarz (2018) investigates the role of Facebook in the propagation of hate crimes in Germany. I confirm the relevance of this mechanism by showing that the results are more pronounced in municipalities with greater Internet availability.

The rest of the paper proceeds as follows. Section 3.2 describes the Italian political context, with a focus on the extreme right parties considered in the analysis; Section 3.3 illustrates in details the dataset of the hate crimes constructed by Lunaria; Section 3.4 presents the empirical analysis, reports the main results, and provides several robustness checks; Section 3.5 discusses the relationship between political mandates and hate crimes; Section 3.6 proposes the potential mechanisms underlying the results; and, finally, Section 3.7 concludes.

3.2. Political background and data

Italy has over 8,000 municipalities, which represent the lowest level of government. Municipal governments play an essential role in the Italian institutional framework. They manage key public services such as local police, traffic enforcement, nursery schools, public housing, local roads, garbage collection, and public transport. Indeed, voters care deeply about their performance, as proven by very high voter turnout (for instance, the average turnout in the 2018 municipal elections was 71%).

The mayor (*Sindaco*) is head of an executive board and exercises executive power; by contrast, the municipal council represents the municipality's legislative body. Since 1993, Italian mayors have been directly elected by voters. Large municipalities (i.e., those with more than 15,000 inhabitants, which represent 9% of the municipalities) use a dual ballot system and allow a candidate to be supported by different parties; by contrast, municipalities below the threshold use a plurality system where just one party or civic list is associated with each candidate. The party (or coalition) of the winning candidate receives 66.66% of the municipal council seats (60% in municipalities above the 15,000-inhabitant threshold). Once elected, the mayor's electoral mandate lasts five years, and there is a two-mandate limit. The timing of electoral cycles varies such that each year a large but different subset of municipalities has elections that typically occur in spring.

One of the main actors in the current Italian political context is *Lega*. Founded in 1991 under the name *Lega Nord* ("Northern League"), the party's ideology used to combine political and fiscal federalism with the defense of northern Italian traditions. The party's ultimate goal was the secession of

Padania, an alternative name for the Po Valley, a plain in Northern Italy, from the rest of the country. From 1994 onwards, *Lega Nord* took part in several coalition governments at the national level, allied with center-right parties, and obtained a vote share of approximately 8-10%. After Matteo Salvini was elected as Federal Secretary in 2013, the party abandoned its distinctly "pro-north" focus, as was evident from the party's rebranding as *Lega*, dropping the word "Nord," and turned its political attention toward national issues.

After the appointment of Salvini as secretary, the theme of immigration has undoubtedly become much more salient in the party's manifesto. However, from the outset, the League members have always stood out for their strong anti-immigrant rhetoric. Like other extreme right-wing parties, its political consensus has increased recently, and in 2019 it obtained 34% of the vote share in the European elections. By its very nature, the party lends itself well to success at the local level, especially in northern regions, for which it has historically claimed to fight.

Lega is by far the most popular extreme right-wing party in Italy. There are, however, in the country other parties characterized by a similar political ideology. Relevant examples include *Fratelli d'Italia* ("Brothers of Italy"), inspired by the nostalgic post-fascist Italian Social Movement, *La Destra* ("The Right"), and the more combative *CasaPound* and *Fiamma Tricolore* ("Tricolor Flame"). Unlike *Lega*, their political success is especially widespread in central (particularly in Lazio) and southern Italy. As proof of this, a member of Fratelli d'Italia became president of a region (Abruzzo) for the first time in February 2019, with 48.0% of the vote share.

All these parties share a clear anti-immigration stance, which is evident for both national and local representatives. For instance, in Bologna, the *Lega* leader in the regional council has decorated his garden with a family of ceramic pigs (instead of the usual gnomes), claiming that they were "to keep the Muslims away."[33] Following an arson attack on a car, the *Lega* mayor of Gallarate (VA), convinced that the perpetrator was Tunisian, wrote a Facebook post in which he called for the man to be "kicked back to his home country." In fact, the Tunisian was the owner of the car, which had been set

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[33] As reported on the *Repubblica* website on April 26, 2013 in the local section of Bologna (https://bologna.repubblica.it).

on fire by an Italian man with a mental disorder.[34] The mayor of Domodossola (VB), supported by *Lega* and *Fratelli d'Italia*, asked that Italian children be separated from migrants during the administration of vaccines to avoid the risk of infection.[35]

To assess whether a far-right mayor impacts the likelihood of hate crimes occurring, I compile the results of municipal elections during the 2008-2018 period from the Italian Minister of the Interior. For each local election, data are available on each candidate's vote share, the parties/lists supporting each one, and the date of the ballot. Additionally, I obtain personal information on the mayors, including gender, age, and education level. Given their status as "special regions," which implies that the municipal council has different powers, the dataset does not include elections in Sicily, Sardinia, Valle d'Aosta, Friuli-Venezia Giulia or Trentino-Alto Adige/Südtirol.

I focus on political mandates (five years) in which a candidate supported by a far-right party – in most cases *Lega* and the others mentioned above (See Table 3.A1 in the Appendix for the complete list) – run for election. This result in 2,563 municipality-mandate observations, from 1,852 different municipalities. Table 3.1 provides descriptive statistics of the far-right candidates' performances.

Among all local elections during the 2008-2018 period, a candidate belonging to, or supported by, a far-right party has run in approximately 16% of cases and became mayor in 4.1%. In the elections included in the analysis (namely those in which a candidate supported by the extreme right actually run), a far-right mayor is appointed in 26% of cases. The average margin of victory is -20%, where a positive value indicates that the far-right candidate won the election. Although most municipalities in which a candidate supported by the extreme right ran for election are located in the north of the country (mainly due to the effect of *Lega*), there are also examples of municipalities located in central and southern regions, particularly Tuscany, Lazio, and Campania. The geographical distribution of municipalities with a far-right candidate and mayor is shown in Figure 3.1.

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[34] As reported on the *Corriere* website on August 19, 2018 in the local section of Milan (https://milano.corriere.it/notizie/cronaca).

[35] As reported on the *La Stampa* website on June 28, 2018 in the local section of Verbano-Cusio-Ossola (https://www.lastampa.it/verbano-cusio-ossola/).

Table 3.2 highlights the differences between municipalities with and without an extreme right-wing candidate. As illustrated, cities with a far-right candidate are usually more populous, have a higher-performing economy since they are more prosperous and productive, and are characterized by a higher presence of immigrants; by contrast, they are not significantly different when considering the level of education. Finally, municipalities with far-right candidates have a lower number of pensioners and students. These characteristics (rich, productive cities with a significant foreign population) are typical of northern Italy's municipalities, where *Lega* is highly likely to have an electoral presence.

3.3. Hate crimes

3.3.1. Definition and legislative context

A hate crime (also known as a bias crime) is a prejudice-motivated crime that occurs when a perpetrator targets a victim because of their membership of a specific social group or race. As a general rule, hate crimes result from high levels of xenophobia, the activity of radical organizations, and the ineffectiveness of state law enforcement functions. Phenomena such as terrorist attacks, the 2015 refugee crisis, and the residual effects of the economic and financial crisis have been mentioned as root causes of hatred in European countries (EMORE, 2018). The literature has identified that hate crimes are responsible for high social and economic costs, thereby discouraging long-term integration and acting as a barrier to population movement (Manning & Roy, 2007; Shields & Price, 2002). Additionally, they produce severe impacts on victims (Nielsen, 2002).

A comparative analysis of hate crime is always a difficult task, given that the criteria for identifying and classifying such crimes vary among countries. However, there is evidence that this severe phenomenon is becoming increasingly widespread. In Sweden, xenophobic hate crimes grew by 17%, and Islamophobic crimes doubled between 2011 and 2015. During the same period, right-wing extremist violence rose by over a third in Germany. Despite the seriousness of the matter, there is a general lack of data relating to the problem. With a few exceptions, official statistics are not kept or classified

in several European countries, including Greece, the Netherlands, Hungary, Austria, and Ireland (FRA, 2018)[36].

The main legislative instrument of the Italian legal system for the repression of hate crimes is Law 205/1993 (also known as *Legge Mancino*). This law, introduced in 1993, criminalizes acts of violence and incitement to violence, discrimination on racial, ethnic, national, or religious grounds, and the promotion of ideas based on racial superiority or ethnic or racist hatred. However, Italy is still among the countries that do not record official statistics on hate crime systematically.[37]

3.3.2. Lunaria database

The primary source of hate crimes in my paper is Lunaria. Since 2007, this non-profit association has been building a database, *"Cronache Di Ordinario Razzismo,"* which reports episodes of hate crimes against immigrants in Italian municipalities (see: http://www.cronachediordinariorazzismo.org).[38] Although this source is not institutional, it is acknowledged as Italy's most comprehensive and reliable source. This is borne out by the fact that many European and international agencies, including the Organization for Security and Co-operation in Europe (OSCE) and the European Union Agency for Fundamental Rights (FRA), have used this dataset to write reports on the topic.

The database is constructed primarily by compiling information on hate crimes reported by local and national newspapers, both paper and online ver-

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[36]EU Agency for Fundamental Rights.

[37]Two bodies deal with hate crimes linked to the Italian Ministry of the Interior: the National Office for Racial Discrimination (UNAR) and the Observatory for Security Against Discriminatory Acts (OSCAD). However, these agencies "provide valuable support to people who are victims of discriminatory crimes". Putting it differently, people who are victims of hate crimes might, voluntarily, contact these organizations and ask for help. Besides not being public at any level, these data would not solve the potential problems of reporting bias. A further activity of UNAR and OSCAD is "maintains relations with associations and institutions, public and private, that deal with the fight against discrimination". Among these associations, as explicitly reported on their website, the most important is Lunaria.

[38]It is critical to stress that this source reports episodes of hate crimes where the victims belong to ethnic minorities; this implies that attacks on other minorities (e.g., members of the LGBT community) are not included in this analysis.

sions. Additional episodes in the database are sourced from general websites or blogs, reports by NGOs, and reports sent directly to Lunaria by citizens who have been witnesses or victims of racial abuse. The information collected is verified, where possible, through the consultation of multiple sources. For every episode, the dataset reports the precise date, the municipality in which it occurred, and the exact source; additionally, a short description of the crime is provided, usually based on newspaper articles relating to the event.

Followin a classification system proposed by Lunaria[39], I categorize each hate crime according to two criteria. First, each episode is categorized by the *nature* of the criminal act; these labels are damage to buildings or property, discrimination, verbal violence, and physical assault. This categorization by the type of act is quite standard among international bodies and academic papers. For instance, in the German context, Falk et al. (2011) divide right-wing extremist crimes into violent and non-violent acts.

Second, each crime is classified by the domain – i.e., the *area* – of the perpetrator. More precisely, I split the hate crimes into "political" and "non-political" acts. The first category includes all hate crimes committed by local politicians, city council members, provincial/regional governments, and political groups. Examples include statements by politicians that are particularly offensive to immigrants and the display of banners or party statements containing racist phrases. The second category includes hate crimes committed by members of society and non-political institutions such as doctors, teachers, and police officers. Examples of acts committed by this group are

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[39]Lunaria identifies four main domains in which the seeds of racism are sown: institutions, the media, politics, and society. However, the proposed categorization did not align well with the context of my analysis for several reasons. For instance, the first domain (institutions) includes all hate crimes carried out by institutional representatives, at both the political level (e.g., local councilors) and the non-political level (e.g., police officers). However, making a distinction between political and non-political institutions is relevant in my context. Similarly, the category "media" was problematic for my analysis, especially when it came to assigning the location of these episodes correctly. In fact, it included newspaper articles with a racist connotation that appeared to have occurred in a specific location. In reality, these were articles with discriminatory content that described an episode that occurred in that location. For this reason, I decided to eliminate these crimes. More broadly, Lunaria's categorization was inconsistent and subject to interpretation, and refinements were necessary.

physical assaults, racist insults during sporting events, and refusing to rent a home to a foreigner.

My analysis includes all episodes that took place in 2008-2018, a time frame in which 4,718 hate crimes were reported. Figure 3.2 shows the municipalities where at least one episode is recorded; Figure 3.3 and Figure 3.4 illustrate the yearly number of hate crimes, by nature and area, respectively. Table 3.A2 also provides the yearly crimes cases, considering all the four above-mentioned nature categories. Furthermore, Table 3.3 shows descriptive statistics regarding the number of hate crimes in light of electoral mandates and the presence or absence of a far-right candidate. Overall, the probability of a hate crime occurring during the electoral term in which a far-right candidate participated in the election is 15%, while this percentage drops to 5% when the extreme right supports no candidates. The figures are similar if the total number of hate crimes is examined. This gap also persists when considering both political and non-political hate crimes.

3.4. Empirical Analysis

3.4.1. RD approach: methodology and main results

One of the methodological challenges of identifying the effect of far-right mayors on hate crimes is that their election is not random. Indeed, the mayor or municipality might have unobserved characteristics that could affect both the electoral performance of parties and the likelihood of hate crimes occurring. Moreover, observed and unobserved local factors may simultaneously affect voter preferences and hate crime probability. These factors make causality in the relationships between far-right mayors and hate crime occurrence challenging to infer.

To address this problem, I use a regression discontinuity (RD) approach (Imbens & Lemieux, 2008; Lee, 2008).[40] RD is a fundamentally sound and widely applicable approach to learn about the effect of election results on various outcomes (Eggers et al., 2015). The intuitive appeal of RD in the analysis of elections derives from the idea that candidates who win and lose close

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[40]The main results found in this Section and in Section 3.5 are confirmed when a fixed effects approach is used (See Appendix D).

elections should, on average, be comparable. This comparability depends on the assumption that parties do not have complete control over the vote share they receive, and thus their victory can be considered almost random.

The internal validity of the RD approach holds if specific conditions are fulfilled. These include the inability to manipulate the assignment variable strategically and the continuity of the distribution of observed covariates around the threshold (Lee & Lemieux, 2010). In Subsection 3.4.2, I present formal tests to demonstrate that these conditions are indeed satisfied.

Thus, in my analysis, I focus on elections where a far-right candidate won or lost with a narrow margin of votes, using the following specification:

$$HateCrime_{m,t} = \beta FarRight_{m,T} + \gamma f(MarginOfVictory_{m,T}) + $$
$$\gamma f(MarginOfVictory_{m,T}) * FarRight_{m,T} + \zeta Z_{i,T-1} + \theta X_{m,T-1} + $$
$$\mu ElectionDistance_{i,t} + \tau_t + \psi_p + \epsilon_{m,t}$$

$$(3.1)$$

where the dependent variable *HateCrime* is a dummy equal to one if (at least) one hate crime is reported in municipality *m* in year *t*. In the analysis, I focus mostly on the extensive margin (i.e., whether a hate crime occurred or not), instead of the intensive margin (i.e., the total number of hate crimes), given that the frequency of hate crimes at the municipal-yearly level is relatively low. However, results for the intensive margin, which are in line in terms of significance and direction, are also provided. Table 3.4 provides descriptive statistics of hate crimes at the municipal-yearly level – i.e., of the main dependent variables considered in the analysis –, by nature and area, both at the extensive and intensive margin.

FarRight is a binary indicator that takes value one in municipalities where, in the most recent election year (T), a mayor who is a member of or is supported by a far-right party was elected. The parameter of interest is β and provides the treatment effect of the election of a far-right mayor on hate crimes. A far-right mayor's presence lasts for a five-year term, while the data on hate crimes occurrence are at the municipal-yearly level. Hence, β provides the average annual effect of electing a far-right mayor on hate crimes across the electoral cycle.

f(MarginOfVictory) is a flexible polynomial function of the margin of vic-

tory, and the interaction term allows for different functional forms on the two sides of the cut-off.

Z is a set of characteristics related to the mayor (age, gender, and education level) while X is a vector of municipality controls that includes (the log of) the population and surface area. X also considers relevant economic and demographic indicators such as the average disposable income, the employment rate, the share of highly educated people, the share of immigrants, students, and pensioners, and the number of no-profit associations per capita. These controls are held constant at pre-mandate values to avoid issues of reverse causality. The main data sources are the 2001 Italian census, the Italian National Institute of Statistics (ISTAT), and the Italian Minister of Finance. Table 3.5 provides the descriptive statistics of these municipality characteristics and reference years. Finally, Equation 3.1 also includes year (τ_t) and region (ψ_p) fixed effects;[41] ϵ is a robust error term, clustered at the municipal level.

Table 3.6 presents the results for Equation 3.1 – i.e., controlling for the margin of victory of the far-right candidate. In particular, the coefficients represent the results of an RD in which I estimate a first-order local polynomial regression, using an optimal bandwidth selected according to the methodology proposed by Calonico et al. (2014) and a triangular kernel.

In all the specifications, the coefficients are positive and significant, providing evidence that the election of a far-right mayor leads to an increase in the probability of hate crimes. Results are stable regardless of the RD estimates used; additionally, coefficients do not change after the introduction of local and time fixed effects (Column 2), nor when controlling for municipal (Column 3) and mayor (Column 4) characteristics. In the most complete specification (Column 5), coefficients indicate that, around the threshold, the election of an extreme right mayor is responsible for an increase in the annual probability of a hate crime equal to 4.1 percentage points. Notably, the results displayed in Table 3.6 very likely provide a lower-bound estimation: indeed, as reported by Bracco et al. (2018), the election of a *Lega* mayor causes a reduction in the number of immigrants present in the municipality, which, in turn, is associated with a decrease in the potential number of victims.

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[41]Results are not affected if province fixed effects are use.

This "jump" in the probability of hate crimes in municipalities led by far-right mayors is evident in Figure 3.5. Lastly, Table 3.7 provides the results using a second-order local polynomial regression. As evident, the results, both in terms of magnitude and significance, remain very similar.

In short, the RD approach provides evidence that the probability of hate crimes increases following the election of a far-right mayor. In the following subsections, I discuss the general internal validity of the RD design (see Lee and Lemieux (2010)), and I perform several robustness exercises to address concerns related to the nature of my dataset.

3.4.2. Internal validity of the RD design

The RD design provides unbiased estimates of the treatment if specific conditions are fulfilled. First, an RD approach can be invalid if individuals can precisely manipulate the assignment variable. In this specific framework, discontinuities at the cutoff might raise the suspicion that the candidates can manipulate the margin of victory. To check the validity of this hypothesis, I run a McCrary test (McCrary, 2008), the results of which are presented in Figure 3.6. Given that the margin of victory is constant throughout the five-year electoral cycle, the level of observation in this test is the mandate (i.e., each point represents the electoral distance, but they are shown just once per mandate). Reassuringly, the test suggests that the margin of far-right candidates in the set of elections considered is not significantly discontinuous around zero.

To further discard the hypothesis of non-random sorting of units into control and treatment status, I implement a data-driven manipulation test based on a local polynomial density estimation technique recently proposed by Cattaneo et al. (2016). This novel manipulation test avoids pre-binning of the data, thereby improving size properties; besides, it allows restrictions on other features of the model, improving power properties. As displayed in Figure 3.7, also this test rejects the hypothesis of jumps around the threshold. Lastly, Figure 3.8 plots a histogram of the margin of victory in 50 bins, making this null effect graphically clear.

Another key hypothesis of RD is that, around the threshold, the treatment allocation (i.e., having a far-right mayor or not) should be as good as random.

Put differently, no significant discontinuity around the threshold for other covariates should be observed. Using a first- and second-order polynomial, respectively, Table 3.8 and Table 3.9 confirm this hypothesis.

A further essential exercise is to examine the sensitivity of the results to the bandwidth choice. Table 3.6 displays the coefficients using a one common coverage error rate (CER)-optimal bandwidth, as proposed by Calonico et al. (2014). The size of this bandwidth (0.132) is comparable to that used by Bracco et al. (2018) (0.141). To further check the sensitivity of the results, I test the estimates using alternative bandwidths. As shown in Table 3.10, the results are stable if a mean square error (MSE)-optimal bandwidth is applied (column 2). Finally, the results are significant when more stringent bandwidths are manually imposed, such as 0.066 (the CER-optimal bandwidth divided by two) and 0.05, as reported respectively in columns 3 and 4).

An additional threat to an RD design might stem from discontinuities at other values of the assignment variable. To check whether this was the case, I run Equation 3.1 using a different cutoff for variable *f(MarginOfVictory)*. Table 3.11, which reports the coefficients when a (positive and negative) cutoff of 0.1, 0.2 and 0.4 is used, rules out this possibility.

3.4.3. Robustness checks: municipalities' selection

The exercises proposed in Subsection 3.4.2 confirm the general internal validity of the RD approach. However, additional concerns for the analysis might arise, related primarily to the nature of the dataset.

An initial concern is linked to the potential selection of the municipalities treated; in fact, one might think that the inhabitants of the municipalities that elected an extreme right-wing mayor were already inclined to commit hate crimes before the election.

I tackle this concern by looking at the lagged dependent variables. Indeed, since $Y_{i,t}$ can be highly correlated with $Y_{i,t-1}$, finding a discontinuity in $Y_{i,t}$ but not in $Y_{i,t-1}$ would provide strong evidence to support the validity of the RD design (Lee & Lemieux, 2010). In this particular setting, I first focused on hate crimes that occurred in the municipality at time t-5, since a mayor's mandate lasts five years. Reassuringly, Table 3.12 shows that no effect is

found when the lagged period is analyzed. Similarly, Table 3.13 focuses on the year just before the appointment of the far-right mayor; i.e., it looks at the effect of mayors on the hate crimes reported the year before the election. Here again, zero impact is observed.

Moreover, this latter analysis sheds light on the role of another politically related potential determinant of hate crime: the election campaign. In fact, one might suspect that the campaign period, which is usually tense because of rallies, may affect hate crimes. The non-results presented in Table 3.13 seem to rule out this possibility and suggest that the effect of extreme right-wing politicians arises only once the candidate has won the election.

3.4.4. Robustness checks: bias in reporting

A second concern is related to how the dataset is constructed. As already described, the primary source of hate crimes included in Lunaria's dataset is articles reported in national and local newspapers, both online and printed. Additionally, it includes episodes that have been compiled from blogs, NGO reports, and cases reported directly by citizens.

Although Lunaria states that the veracity of each episode is checked with multiple sources, this compilation process could generate *reporting bias* in the analysis. In fact, it is possible that some members of civil society, especially those involved in the fight against racial intolerance, are more vigilant and more likely to report hate crimes as a reaction to the election of a far-right mayor. Furthermore, there might be an increase in hate crimes as the media discuss attacks against immigrants in places where this issue is more salient, i.e., in municipalities led by far-right mayors. Similarly, one might fear that the media are politically biased and report more episodes of hate crimes following the election of a far-right mayor, as with members of civil society.

In short, the results presented in Table 3.6 could be biased if they were driven by the fact that media or individuals are more likely *to report* episodes of racism following the election of a mayor of the extreme right. To address these concerns, I present in this section several robustness checks.

Focus on visible hate crimes. First, I focus on the nature of hate crimes.

In particular, I repeat the analysis of equation 3.1, focus solely on specific kinds of episodes, namely those categorized as *visible* (damage and physical attacks) and *violent* (physical attacks only). The results are shown in Table 3.14. As evident, the effect of far-right mayors persists when only this subsample of episodes is considered. Certainly, this result is interesting in itself because it suggests that the appointment of a far-right mayor leads to an increase in the most severe hate crimes.

Following a similar approach to that taken by Daniele and Dipoppa (2017), this exercise addresses the potential bias in the Lunaria database. Indeed, these types of crime represent the most severe and extreme cases since they involve physical assaults against immigrants or damage to facilities or property (in most cases, immigrant centers and shops or cars belonging to foreigners). Not surprisingly, these are the least frequent in the Lunaria dataset, as shown in Table 3.A2. For their severity and visibility, these episodes are the most salient, i.e., those most likely to be covered by the media, regardless of the mayor's political views or affiliation. In other words, their serious nature implies that such episodes are less likely to be distorted when reported.

Simultaneously, focusing on these episodes mitigates the concern about sensitivity to the various definitions of hate crime. As mentioned above, a single, comprehensive definition of hate crime is not provided by the different legal systems. Thus, the fact that the results are confirmed is reassuring since, for these episodes, there is much less room for interpretation. Finally, this result addresses concerns related to the higher media visibility of mayors (or politicians in the ruling coalition) compared to opposition politicians. Indeed, by their very nature, these acts are generally carried out by members of civil society and not politicians.

Sources selection. I seek to further address the problem of selection in reporting by exploiting the fact that Lunaria provides its source for each hate crime. Figure 3.9 shows the frequencies of hate crimes broken down by source. The figure confirms that the most common sources of hate crime reports in Lunaria's dataset are local or national newspapers, both printed and online.[42]

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[42]Note that when it comes to printed newspapers, I was not able to identify whether the episodes were reported in the printed version, the newspaper's website, or both; in this categorization, what defines whether the source is printed or online is that, for the former,

The category "National newspapers" includes the major national newspapers, i.e., those with circulations of more than 50,000 copies according to the sector's leading certification company.[43] The category "Local newspapers" includes the main Italian newspapers with regional, interregional and provincial coverage, with circulations ranging from 5,000 to 74,000 copies. Newspapers that fall into the category "National online newspapers" are websites that report national news; examples include the websites of Italian public television (rainews.it) and the main private and satellite television channels (e.g., tgcom24.mediaset.it and tg24.sky.it). Other websites included in this category are general information websites such as linkiesta.it, leggo.it and notizie.yahoo.com. Lastly, websites that report news related to the territory fall into the category "Local online newspapers." The ultimate purpose of these websites is to provide a brief, uncritical description of the events taking place in the community.[44]

An initial reassuring result is provided in Figure 3.10, in which I plot the distributions of the sources depending on the mayors' political ideology. As is evident, it does not seem that, in municipalities led by far-right mayors, hate crime episodes are (over)reported by a specific media source. This provides indirect proof of the absence of bias in media reporting.

The categorization of the sources shown in Figure 3.9 allows me to perform some additional robustness exercises. More specifically, based on the sources of the hate crimes, I create three subsamples for the analysis. Figure 3.11 graphically summarizes this selection of samples.

First, in a subsample named "Source A", I remove the hate crimes reported

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a paper version of the newspaper actually exists.

[43]http://www.adsnotizie.it/

[44]Typically, these newspapers do not deal with political issues and, if they do, they report only on certain objective events (for example, the result of local government votes). A format typical of this category is *today.it*. This news platform has more than 50 local versions (for instance, *milanotoday*, *romatoday*, *savonatoday*) and offers, in free format, news intended to be viewed mainly through apps (according to the website, more than 80% of users connect via a smartphone or tablet). Given i) the very uncritical style of the news reported on these sites, and ii) the large, general audience they seek to reach, there is no reason to assume that they are politically biased. More specifically, there is no reasonable suspicion that these sources have an interest in reporting hate crimes in some municipalities and not in others or that they change their level of reporting following the election of a mayor with a particular political ideology.

by the sources most likely to be more vigilant after the election of a far-right mayor. These include episodes reported by citizens (victims or witnesses of crimes) and cases directly compiled by Lunaria. In addition, I exclude the following from this subsample: crimes reported in blogs (in particular those with a highly anti-racist tendency and that cover social and political issues), by NGOs, and by websites that deal with immigration, minorities, and racism. Finally, I remove the few episodes whose source was not mentioned from this restricted version of the dataset.

The second and third subsamples ("Source B" and "Source C") focus on an even narrower sample of sources based on the characteristics of newspapers. In particular, "Source B" includes only episodes reported in national and local printed newspapers. By contrast, the sources in "Source C" are both online and printed newspapers that deal with national events. In both cases, I also consider episodes reported by newswires.

Printed newspapers ("Source B") have a better reputation and are therefore more reliable when it comes to reporting news; this addresses the concern relating to the general reliability of Lunaria's dataset. On the one hand, by selecting hate crimes reported in newspapers that cover national issues ("Source C"), I seek to address the potential bias due to newspaper ideology. This issue would create problems for the identification strategy only if newspapers are more likely to report crimes against immigrants in municipalities led by far-right mayors, not if they cover episodes of hate crimes more in absolute terms. Since most of the municipalities in the dataset are small and the mayors are not very well known (and, thus, carry no political weight in national political dynamics), this is unlikely, in my opinion. Put differently, if a newspaper with ideological bias wants to raise awareness of violence against immigrants at the national level, it would not "miss the opportunity" to report an episode of hate crime, regardless of whether it happened in a municipality led by a mayor belonging to a left-wing party, a right-wing party or a civic list.

The results of these robustness exercises are reported in Table 3.15. As can be observed, the results are confirmed even when this subsample of sources is considered. This is true both when all the hate crimes are considered in the analysis and when focusing on the salient ones – i.e., damages and physical assaults.

Table 3.16 goes even further and provides the results for an additional robustness check based on newspaper ideology. Apart from direct reports, NGOs and missing sources, Table 3.16 displays the results not considering the cases that appear in the *left-wing* Italian newspapers.[45] They include the national and the local versions of *Repubblica* – by far, the leading Italian center-left journal – as well as the magazines associated with the same editorial group (*Huffington Post* and *Espresso*)[46]; additionally, I drop in this part of the analysis the cases reported by the even more extreme left-oriented journals such as *L'unità* and *Il Manifesto*.[47] Reassuringly, the results are also confirmed when these sources are excluded. This is the case both when looking at all the hate crimes and focusing just on the visible ones.

Lastly, Table 3.17 shows the results when the intensive margin (i.e. the number of hate crimes per 10,000 inhabitants) are examined. As discussed, in the analysis, I focus more on extensive margin, given the relatively low number of episodes at the municipal-year level. However, it is reassuring that the results are similar when the analysis is performed on the intensive margin. This result is true both when considering all sources and looking at the sub-samples of sources (Table 3.18).

3.5. The political economy of hate crimes

In this part of the analysis, I explore the difference between political and non-political hate crimes in greater depth, following the definition provided in Section 3.3. Besides, I analyze whether there are other differences related to mayors' political mandate beyond political affiliation.

First and foremost, I examine whether the results are different depending on whether the hate crime is committed by a politician or a member of society. To do so, I replicate Equation 3.1, using political and non-political episodes as two different dependent variables. Table 3.19 presents the results of this

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[45]Following the media slant proposed by the international platform worldpress.org. See: https://www.worldpress.org/newspapers/EUROPE/Italy.cfm for an overview of the Italian newspapers' political position.

[46]In March 2016, other newspapers (*La Stampa* and *Il Secolo XIX*) were acquired by the same group. When I repeat the analysis, also excluding the hate crimes reported in these newspapers from 2016 onwards, results are confirmed.

[47]Note that less than 30 cases come from these two sources.

exercise. In this part of the analysis, statistical precision is lost to some extent, and the coefficients are partially significant only for political hate crimes.

The coefficients displayed so far, in both Table 3.6 and Table 3.19, provide the average annual effect of electing a far-right mayor on hate crimes across the electoral cycle. A natural question is whether this effect differs over time across the mayor's five-year political term of office. Figure 3.12 presents a visual response to this question. As is evident, the effect of far-right mayors on hate crimes seems to be concentrated in the first half of the mandate (up to the second year), while it disappears in the second part of the term. This result is consistent with the literature in the Italian context. Indeed, Bracco et al. (2018) provide evidence that, on the one hand, the appointment of a *Lega* mayor leads to lower net inflows of immigrants in the municipality and, on the other, this effect is stronger immediately after the election, while it tends to attenuate with time.

A related question is whether there is a difference depending on whether a mayor can be re-elected or not. As mentioned, mayors in Italy can remain in office for a maximum of two terms. I thus performed the RD analysis described in Equation 3.1 in two different subgroups: the municipalities in which the mayor is eligible for a second mandate and those in which (s)he is not. To implement this analysis, I follow the methodology proposed by Carril et al. (2017). This technique balances the covariates around the threshold and weighs the observations in each subgroup by the (inverse of their) conditional probabilities of belonging to that subgroup. This approach helps isolate the difference due to the subgroup characteristic of interest from other observable dimensions.

Table 3.20 presents the results. The table has the following structure: each column refers to a different dependent variable, while *FRM Re-eligible* and *FRM Term Limit* refer, respectively, to the effect of the far-right mayor in municipalities where the mayor is eligible for a second mandate and those in which (s)he is not. The panel at the bottom shows the difference between these two coefficients and their p-value. As is evident, the effect of far-right mayors differs depending on whether one can be re-elected. In particular, the coefficients relating to the term-limit mayors are statistically higher than those for re-electable ones.

The results are even more interesting when the two analyses, based on the time and re-electability, are combined. In particular, this part of the analysis focuses on political hate crimes. Table 3.21 reveals an interesting pattern. In municipalities in which the mayor is eligible for a second term, the effect of far-right mayors is present only in the first half of the mandate (column 1). By contrast, when the election is approaching, there is no difference in the likelihood of political hate crimes occurring depending on the mayor's political ideology (as reported in column 2, the far-right mayor coefficient is actually negative, although very close to zero). A completely different picture emerges for mayors in their second term of office; here, the effect of far-right mayors on political hate crimes is concentrated in the second half of their term (as shown in column 4).

Given the difference observed between re-electable and term-limit mayors, a final analysis concerns whether and how the occurrence of hate crimes affects a mayor's chances of being re-elected. In other words, do voters tend to reward or punish a mayor if there have been political hate crimes during his term of office? To answer this question, I collapsed the variables at the mandate level and explored the probability of a (re-electable) mayor being re-elected. Specifically, I used the following framework:

$$
\begin{aligned}
ReElected_{m,T+1} = & \beta_1 HateCrime_{m,T} + \beta_2 FarRight_{m,T} + \\
& \beta_3(HateCrime_{m,T} \times \text{FarRight}_{m,T}) + \gamma MarginOfVictory_{m,T} + \\
& \theta X_{i,t} + \tau_t + \psi_p + \epsilon_m
\end{aligned}
$$

(3.2)

where *ReElected* is a dummy equal to one if the mayor is re-elected in the mandate *T+1*. $HateCrime_{m,T}$ is a binary indicator that takes a value of one if a hate crime is reported in municipality *m* in political mandate *T* ; $FarRight_{m,T}$ is equal to one if municipality *m* is led by a far-right major in political mandate *T*. $MarginOfVictory_{m,T}$ controls for the mayor's electoral margin of victory in political mandate *T*. *X* is a vector of municipal and mayor characteristics. τ and ψ are, respectively, year and region fixed effects, and ϵ is a robust error term. The coefficient of interest is β_3; this interaction term provides the probability of a far-right mayor being confirmed as mayor in mandate *T* + 1 if a hate crime occurs in mandate *T*.

The results are shown in Table 3.22. Although not statistically significant (p-value equal to 0.16), the coefficient of the interaction term is negative and increases in magnitude for political hate crimes. This result could suggest that voters tend to punish far-right mayors more if they commit a hate crime during their political mandate. This, in turn, might potentially explain the difference in behavior between mayors who can and cannot be re-elected, as pictured in Table 3.20 and 3.21.

3.6. Channels

This part of the analysis investigates potential mechanisms underlying the results reported so far. Specifically, it focuses on two elements that the recent literature has shown to affect the likelihood of hate crimes being committed: the erosion of social norms and the role of the Internet.

3.6.1. Change in social norms

A potential channel that might explain the results found so far is the erosion of social norms. Indeed, new public information, such as the election of a particular politician, can quickly change social norms. This effect might be even more pronounced if the election result was not predicted. People may become more inclined to react by expressing views or taking actions that were previously stigmatized. In this regard, Bursztyn et al. (2020) provide a neat example; they use online experiments to show how Donald Trump's rise in popularity and eventual victory increased the willingness of individuals to express xenophobic views publicly.

To check the relevance of social norms in my context, I use a twofold approach. First, I focus on the municipalities in which a far-right mayor is elected for the first time. Second, I look at the spillover effects in neighboring municipalities.

The Italian context is particularly suitable for these analyses, given the history of *Lega*, the main far-right party in the country. As mentioned, *Lega* was initially a federalist party that claimed to protect the citizens of the wealthy northern regions (especially Piedmont, Lombardy, and Veneto) from the national government's inefficiency and corruption. Things changed since when

Matteo Salvini was appointed as party secretary in 2013. From that moment, the party has taken on a strong nationalist tone, and its political manifesto has increasingly focused on national issues, such as immigration and crime, overlooking topics like federalism and secessionism. This has meant that in recent years, *Lega* has achieved good election results in central and southern Italy, where it was virtually nonexistent until a few years ago.

Figure 3.13 provides a good illustration of what has just been discussed: as reflected in the red bars, the success of the far-right in the three northern regions mentioned above has been considerable and constant over time. By contrast, the blue bars show that, although smaller in quantitative terms, there has been a significant increase in support for the far-right in the other regions in recent years, mainly due to an increase in Lega's vote share.[48]

The first exercise I use to test the relevance of social norms is to replicate the RD analysis, splitting the municipalities depending on the historical presence of the far right. Specifically, I identify municipalities in which a far-right mayor was appointed for the first time in the 2008-2018 period. I then check whether the impact on hate crimes differ with respect to municipalities that had already appointed a far-right mayor in the past (i.e., those more familiar with the far-right). Indeed, if social norms are relevant to the results, the "shock" experienced in municipalities where a far-right mayor was elected for the first time should be more significant, so the impact on hate crimes should be greater.

The results are shown in Table 3.23 and Table 3.24, respectively for all and visible hate crimes. These tables suggest that the results are driven by far-right mayors elected for the first time, at both the extensive and the intensive margin. Specifically, Panel A shows that the effect on hate crimes is strong when looking at the election in which the right-wing candidate won by a tiny margin, and it is the first time that the far-right came to power in the municipality. By contrast, the same analysis shows no effect on hate crimes (indeed, it shows negative effects for violent crimes) if voters live in a city already familiar with far-right mayors (Panel B). This result offers the first evidence of the importance of the erosion of social norms. In fact, it shows that the main effect of the analysis is not driven by places with a historical

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[48]For example, the success rate of *Lega* candidates in non-northern regions was 23% as opposed to 25% when far-right candidates in a broader sense were considered.

far-right presence; on the contrary, it seems to be driven by municipalities that have recently been exposed to the far-right.

A similar, social-norm-related mechanism worth exploring is linked to spillovers. Indeed, a potential effect of the election of a far-right mayor may be an increase in hate crimes, not only, as already demonstrated, in the municipality where he or she is in office but also in surrounding municipalities. The idea behind this mechanism is as follows: in a given area, the population is already "endowed" with racist ideologies that are not openly expressed because they are considered socially unacceptable. However, the appointment of an extreme right-wing mayor in a neighboring municipality could alleviate this social stigma, as it could be interpreted as an indication that there are people with similar radical ideas in the surrounding areas.

I test this potential spillover effect by focusing on Italy's 611 Labor Market Area (LMAs).[49] These territorial units are well suited to this analysis because they capture relatively small, homogeneous zones (in my dataset, the average number of municipalities in an LMA is equal to 29.18). The map in Figure 3.14 shows these areas, depending on the political success of far-right parties in local elections. In particular, the blue areas are LMAs in which, already in 2008, at least one far-right mayor was in power. Given the historical presence of the extreme right in these locations, "information shock" concerning these areas cannot be evaluated: for this reason, I exclude them from this part of the analysis. Green areas are those where the extreme right has recently emerged, i.e., LMAs where there is at least one municipality that elected a radical right mayor in the 2009-2018 period and where there were no far-right mayors in 2008. Finally, the yellow areas are those in which no extreme right-wing mayors were elected in any municipality for the whole 2008-2018 period.

To test the spillover effects, I use the following (staggered) difference-in-

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[49]Labor Market Areas (LMAs) are 611 subregional geographical areas where the bulk of the labor force lives and works and where companies can find most of the labor force necessary to occupy jobs.

differences approach:

$$HateCrime_{m,t} = \beta_1 FarRight_{L,m,t} + \beta_2 PostFarRight_{L,m,t} +$$
$$\beta_3(FarRight_{L,m,t} \times \text{PostFarRight}_{L,m,t}) + \gamma\#FarRight_{L,t} +$$
$$\theta X_{i,t} + \tau_t + \psi_m + \epsilon_m$$

(3.3)

where, as usual, *HateCrime* is a dummy equal to one if at least one hate crime is reported in municipality *m* during the year *t*. $FarRight_{L,m,T}$ is a binary indicator that takes a value of one if the municipality *m* belongs to an LMA *L* where a far-right mayor has been elected in the year *t*; $PostFarRight_{L,m,t}$ takes a value of one in the years after the election of the first far-right mayor in the LMA *L*. I refer to this approach as staggered difference-in-differences, given that the post-treatment period differs for every LMA treated. $\#FarRight_{L,t}$ controls for the number of far-right mayors present in the LMA in the year t. *X* is a vector of municipal and mayor characteristics. τ and ψ are, respectively, year and municipality fixed effects, and ϵ is an error term, clustered at the LMA level. The staggered DiD estimator of the effect is given by β_3.

A related analysis is carried out to check if the potential spillover effect is heterogeneous over time. For this reason, I also use the following approach:

$$HateCrime_{m,t} = \beta_1 FarRight_{L,m,t} + \beta_2 YearPostFarRight_{L,m,t} +$$
$$\beta_3(FarRight_{L,m,t} \times \text{YearPostFarRight}_{L,m,t}) + \gamma\#FarRight_{L,t} +$$
$$\theta X_{i,t} + \tau_t + \psi_m + \epsilon_m$$

(3.4)

where the generic dummy variable for the post-treatment period is replaced with the exact number of years elapsed since the first far-right mayor was elected in the LMA. Finally, it is important to stress that, in this part of the analysis, I exclude municipalities where a far-right mayor was actually appointed (apart from areas with a historical far-right presence, i.e., those in blue on the map). Put differently, to capture the spillover effects, I focus on municipalities not led by far-right mayors, but located in areas where a far-right mayor is in power.

Table 3.25 provides the results. Columns 1 and 2 focus on the generic hate

crime dummy, while columns 3 and 4 show visible episodes. As evident from columns 1 and 3, the DiD estimators described in Equation 3.3 are positive and statistically significant. In other words, an increase in the probability of (visible) hate crimes is observed *after* the election of a far-right mayor in a nearby location. This result is stable when both all hate crimes and the most serious crimes are considered. Columns 2 and 4 show the timing of these spillovers in more detail, i.e., when Equation 3.4 is used. Indeed, it seems that this effect is particularly strong when two and especially three and four years have passed since the appointment of the first far-right mayor in the LMA, while it fades over time.

This analysis might be biased if there is a selection in the LMAs that elected a far-right mayor. In other words, a potential concern is that the hypothesis of the parallel trends required by a DiD setting is violated. I exploit the staggered nature of local elections to conduct an event study and test whether treated municipalities display a differential trend before the appointment of the far-right mayor. Figure 3.15 presents the results of this exercise. The two groups – i.e., municipalities in which a far-right mayor was elected in their LMA and those without any far-right mayors – do not appear to follow differential trends in the years before the far-right presence in the LMA. The statistical insignificance of the coefficients in the years leading up to the appointment of the far-right mayor serves as proof of the parallel trend assumption.

Overall, the results in Tables 3.23 - 3.25 confirm the relevance of the mechanism related to the erosion of social norms, suggesting that, (only) after the election of a radical politician in a nearby location, people in the surrounding areas feel entitled to exhibit behaviors initially considered socially unacceptable.

3.6.2. The effect of the Internet

The recent literature has recognized how the Internet can affect voting behavior, the support for extreme parties, and the attitudes of natives toward immigrants (see Zhuravskaya et al. (2020) for a detailed review). Additionally, the Internet and social media have been identified as responsible for producing increases in hate crimes (Albornoz et al., 2020; Müller & Schwarz,

2018, 2020; Petrova et al., 2020). In this part of the analysis, I thus examine whether the results found so far differ depending on the municipalities' internet exposure.

To evaluate the role of broadband internet, I use 2018 data from AGCOM (Authority for Communications Guarantees, i.e., the regulator and competition authority for the communication industries in Italy). Specifically, I split the municipalities according to whether the average broadband internet speed (Mbps) was slow or fast (i.e., below or above the median).[50] I then perform two different RD analyses in the two subgroups, following Carril et al. (2017). As already described, this methodology allows conducting binary subgroup analysis in RD settings based on inverse propensity score weights (IPSW).

Table 3.26 shows the results of this exercise. The table follows a structure similar to Table 3.20 – i.e., each column looks at a different dependent variable, while each line shows the effect of far-right mayors on hate crimes in municipalities with diverse Internet exposure. Panel A presents the results when the municipalities are divided according to the real average Internet speed (Mbps). As is evident, the effect of extreme right mayors on hate crimes is concentrated in municipalities where Internet speed is high, especially when the intensive margin is considered (column 2). Here, the difference between the two coefficients – the far-right mayor's effect on hate crimes in slow Internet municipalities and the far-right mayor's effect on hate crimes in fast Internet municipalities – is significant, with a p-value of 0.059.

To address the endogeneity concerns related to the Internet connection, I then perform the same exercise using an instrumental variable approach. Specifically, I instrument Internet penetration by looking at the distance from the closest UGS (Urban Group Stage), as proposed by Campante et al. (2018) in the same Italian context. Panel B confirms that the municipalities closest to a UGS (i.e., locations where it is easier to get a fast Internet connection) are those where the far-right mayors' effect is found; on the contrary, this effect disappears in municipalities far away from a UGS (where the Internet connection, therefore, tends to be slower and more difficult to get).

One of the reasons the Internet, and especially social media, can increase

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[50]I also performed the same exercise looking at the internet availability (i.e., municipalities with low or high Internet penetration): the results are entirely in line with those presented in this section.

hate crimes is that they facilitate coordination between individuals. For example, Petrova et al. (2020) demonstrate the importance of this mechanism in the Russian context. On the contrary, Müller and Schwarz (2020) do not find the coordination effect relevant in the United States. I test the relevance of the coordination mechanism by focusing on the episodes that Lunaria identifies as "group hate crimes" – i.e., crimes committed by more than one individual. These episodes (1,021 out of the 4,788 in the dataset) are therefore those that require coordination.

Column 3 of Table 3.26 present the results, again using the actual internet speed and the instrumental variable approach. As is evident, the results of this exercise are less conclusive; if, on the one hand, the magnitude and direction of the coefficients support the coordination mechanism, statistical precision is lost, and the coefficients do not seem to be notably different between the two subgroups.

3.7. Conclusion

Recently, extreme right-wing parties have been gaining considerable electoral support at the national and local levels. Countries such as Germany, France, Austria, and, more recently, Spain have seen the emergence of parties with a strong anti-immigrant stance. Simultaneously, a significant increase in assaults against minorities (e.g., Muslims, Jews, and members of the LGBT community) has been observed throughout Europe. With their rhetoric and institutional actions, extremist politicians might have contributed to the growth of this climate of intolerance.

In this paper, I focused on the role of local politicians, figures who often do not enjoy widespread media coverage but can have a crucial impact on their community (Putnam, 1966). More specifically, I empirically evaluated whether the election of far-right mayors impacts the probability that a hate crime against foreigners occurs in the community. I set the analysis in Italy, a country in which anti-immigration parties, among which the *League* stands out, have obtained remarkable and widespread political success in the territory. At the same time, international bodies have pointed out attrition between national and local authorities to implement laws to protect minorities.

The high number of Italian municipalities allowed me to implement an RD

approach that established a solid causal relationship between far-right mayors and hate crimes by comparing local elections that were won or lost with a tiny margin of votes by the far-right candidate.

I found that, in municipalities where mayors supported by extreme-right parties are in power, the likelihood of a hate crime occurring is significantly higher; estimates indicate an increase in the yearly probability of a hate crime of around five percentage points. Additionally, a significant increase in the most severe hate crimes – i.e., those involving physical assaults or damages – is observable. The effect of the far-right mayors on hate crimes is particularly strong in the first part of their mandate and for mayors not eligible for re-election. Reassuringly for my identification strategy, I did not find any effect when looking at the crimes that happen in the municipalities before the far-right mayors' election. To discard the possibility that the results were due to a reporting bias, I also provided several robustness checks.

In the second part of the paper, I explored two potential channels that might explain the results. First, I looked at the erosion of social norms. Following Bursztyn et al. (2020), the idea behind this mechanism is that some citizens may have innate racist views, and the election of a far-right mayor may serve as an indication that they are not alone. This, in turn, may lead these individuals to be less reluctant to commit hate crimes. I confirmed the relevance of this mechanism in my context in two ways. First, I showed that my results are driven by municipalities in which the far-right mayor was elected for the first time. Second, I provided evidence of spillover effects in neighboring municipalities. Using a staggered difference-in-differences approach and focusing on the Labor Market Area (LMAs), I found that, after the appointment of a far-right mayor, the probability of hate crimes also increases in the surrounding municipalities.

A second channel that I explored is the role of the Internet. Recent literature has shown that the Internet and social media significantly impact hate crimes (Müller & Schwarz, 2018, 2020; Petrova et al., 2020). The relevance of this mechanism is confirmed in my analysis. Indeed, the effect of far-right mayors is present in areas that are highly exposed to the Internet, while it fades away in areas with low coverage. A potential reason that can explain why the possibility to go online impacts the frequency of hate crimes is that it reduces the cost of coordination (Petrova et al., 2020). However, this does

not seem to be the case in this context since I found no difference in the effect of radical mayors on hate crimes committed in groups depending on the Internet coverage.

Overall, this paper contributes to the literature by showing a potential, severe effect of the appointment of extreme politicians. I also contribute in terms of data by providing a new and detailed dataset of hate crimes, an issue that suffers from a general problem of shortage of data. While my paper focuses on the hate crimes suffered by immigrants, many other minorities, because of their sexual orientation, religious belief, or political vision, are often victims of these repugnant episodes. Constant monitoring of this phenomenon is, therefore, necessary. This must be based on accurate data collection processes and dissemination; also, it is necessary that politicians, of whatever ideology and level of administration, are committed to strongly condemning these crimes.

Appendix A: List of Figures

Figure 3.1: Municipalities where far-right candidates run and win

Far-right candidates run (Sample)   Far-right candidates win (Treated)
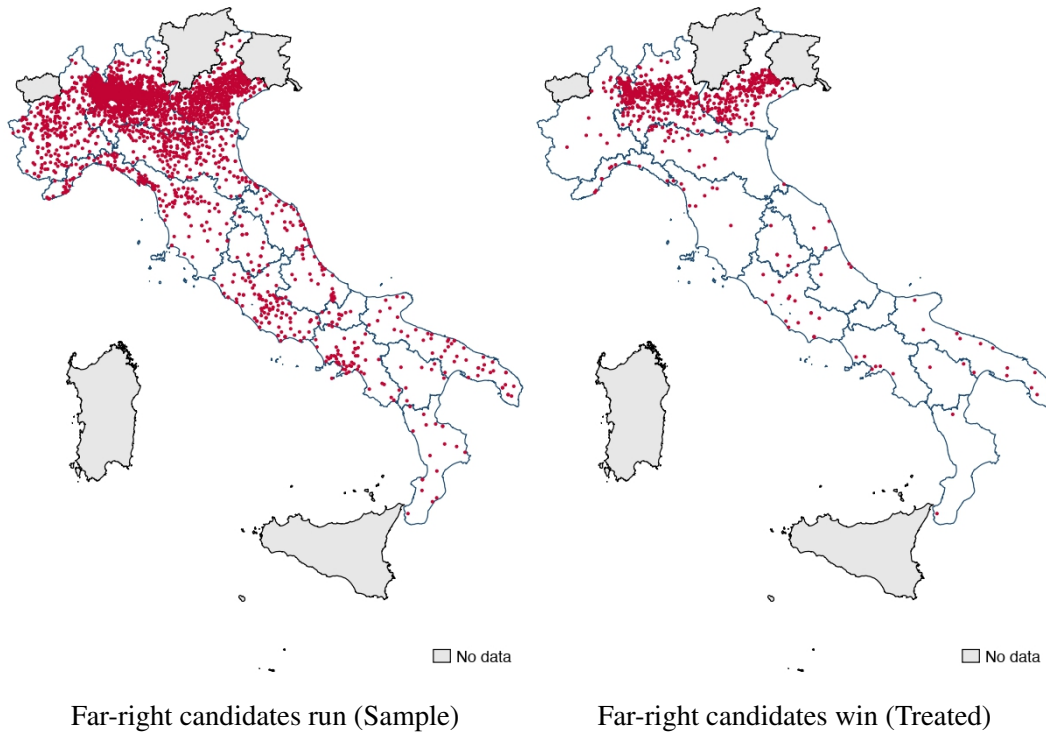
Source: Italian Minister of Interior

Figure 3.2: Municipalities where at least one hate crime is reported (2008-2018)

Source: Lunaria – *"Cronache Di Ordinario Razzismo"*

Figure 3.3: Hate crime by year and nature
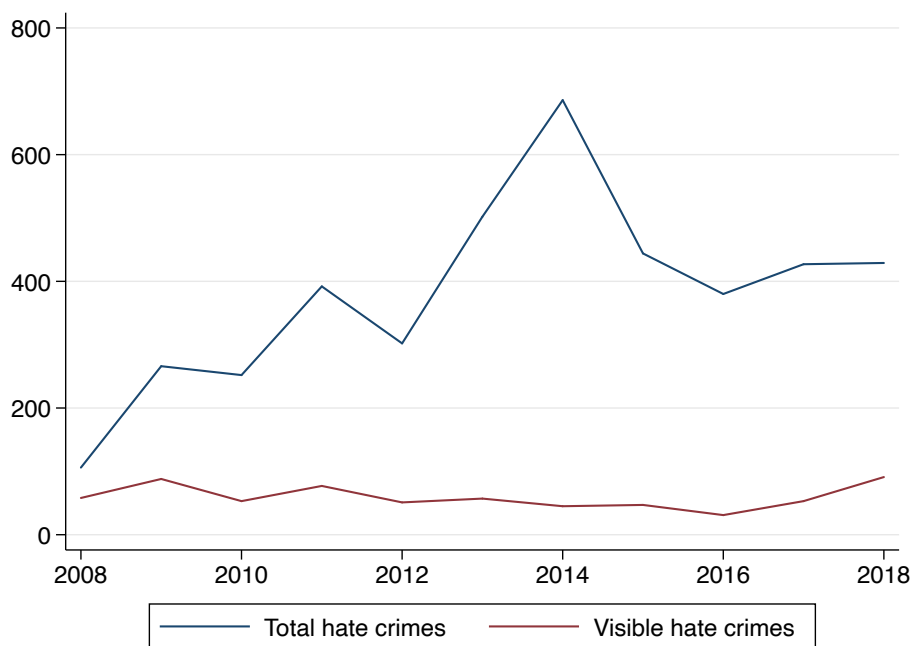
Source: Lunaria – *"Cronache Di Ordinario Razzismo"*

Figure 3.4: Hate crime by year and area
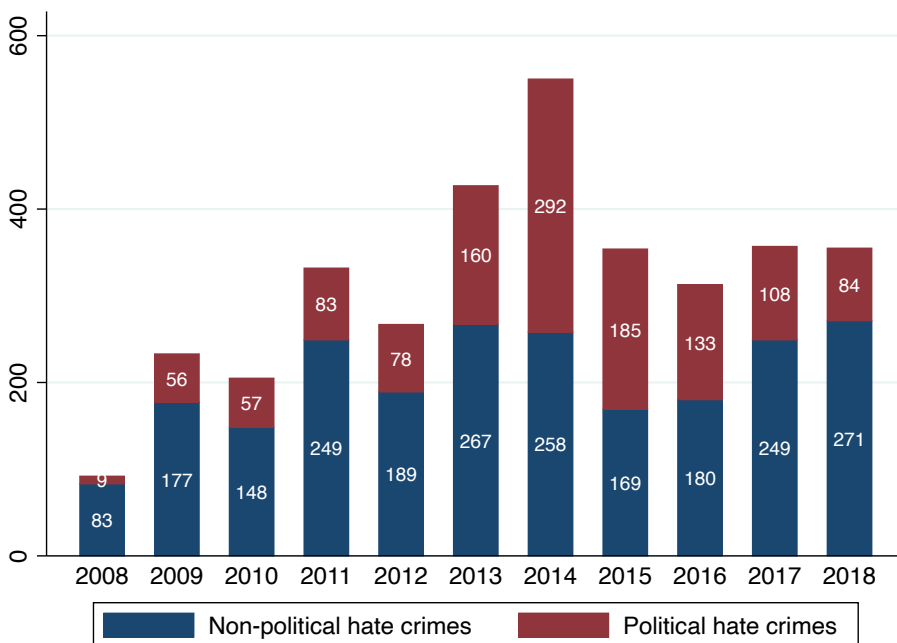
Source: Lunaria – *"Cronache Di Ordinario Razzismo"*

Figure 3.5: Effect of far-right mayors on hate crimes (2008-2018)
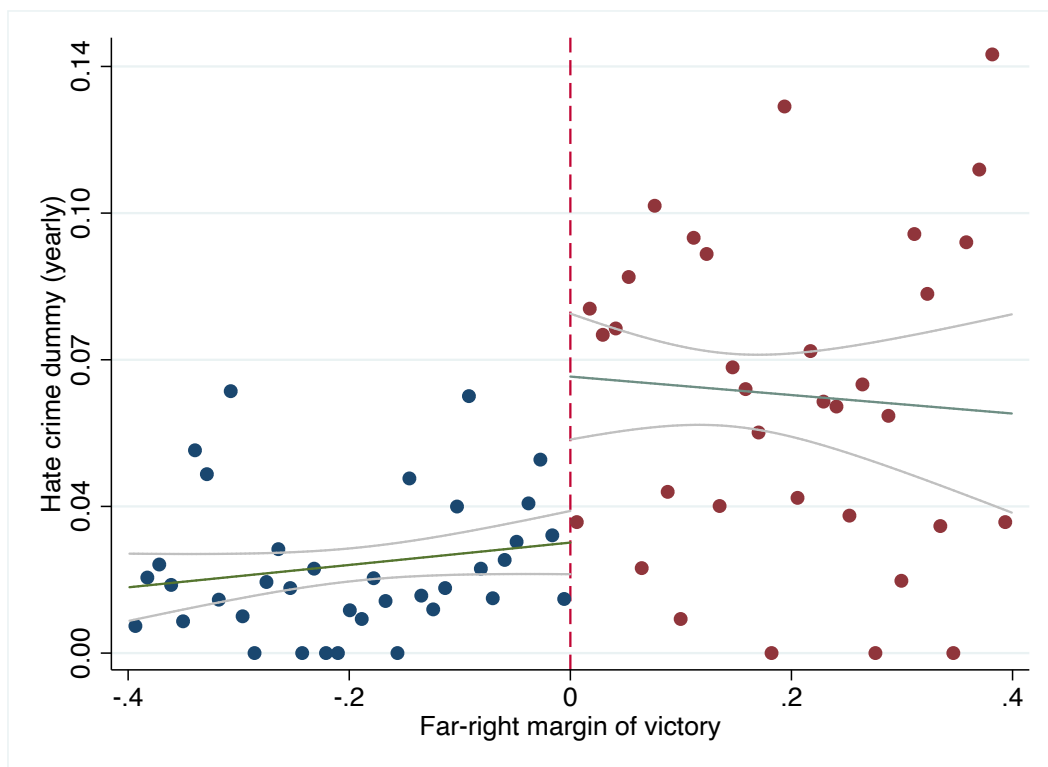
Note: Each point represents the bin sample average that a hate crime is reported for margin of victory. The straight line is a first-order polynomial in Margin of Victory fitted separately on each side of the margin of victory threshold at zero. 95% confidence intervals are shown.

Figure 3.6: Far-right margin of victory (2008-2018) – McCrary test
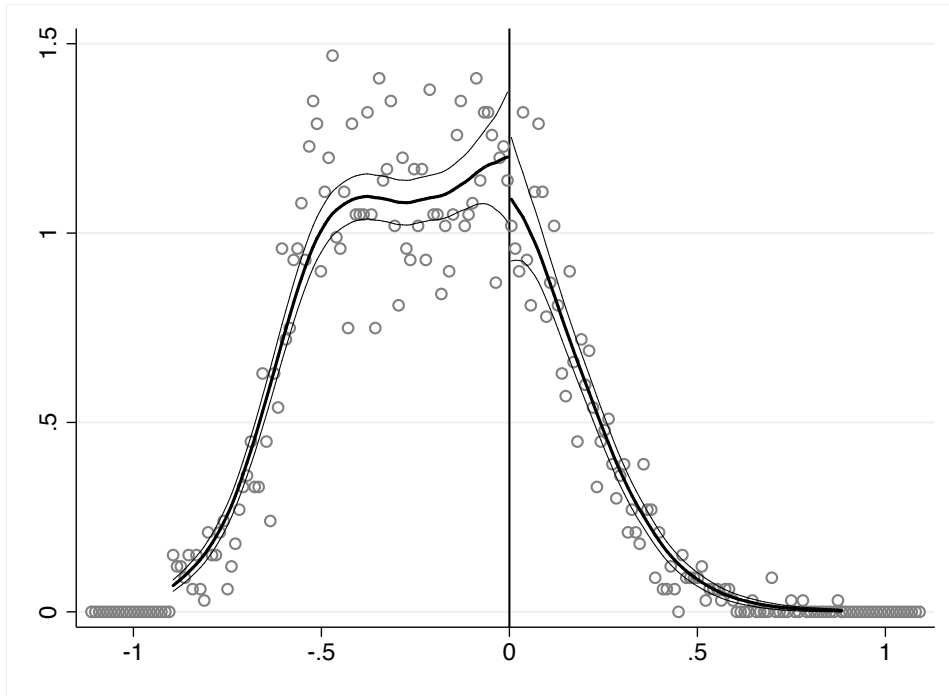
Figure 3.7: Manipulation test plot based on Cattaneo et al. (2016)
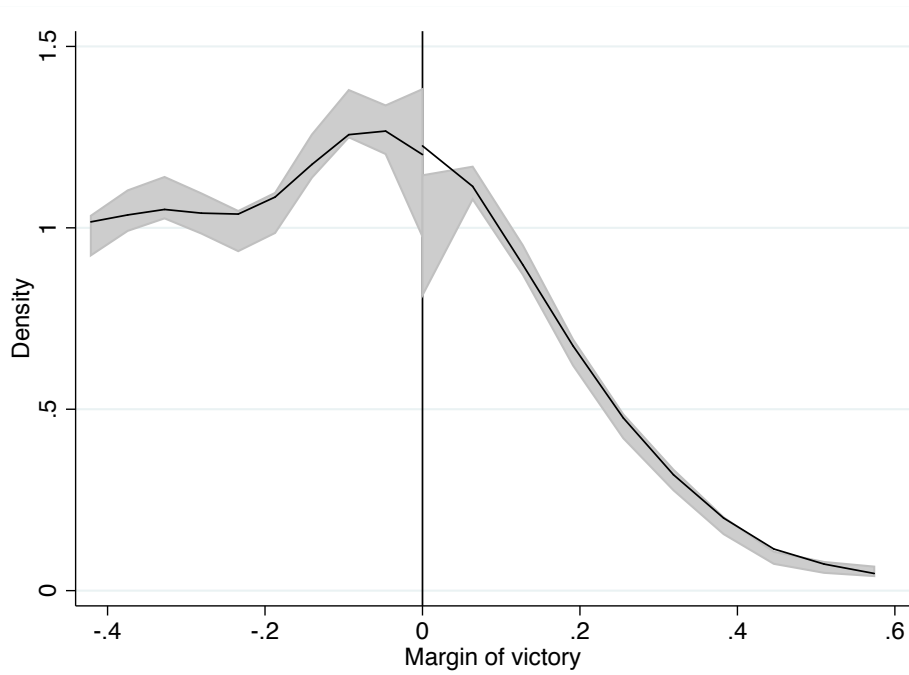
Figure 3.8: Histogram of far-right margin of victory (50 bins)
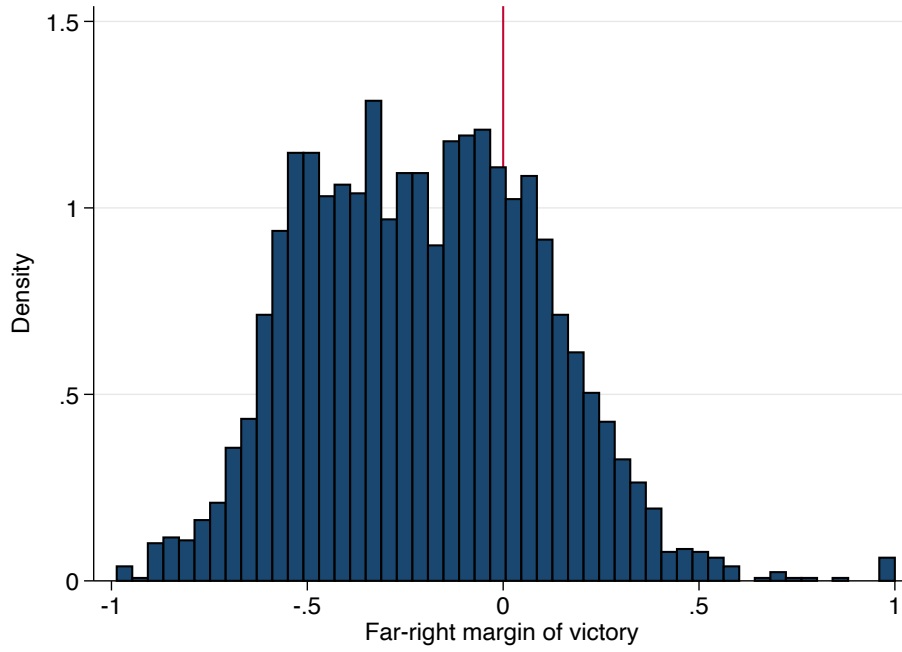
Figure 3.9: Hate crimes sources
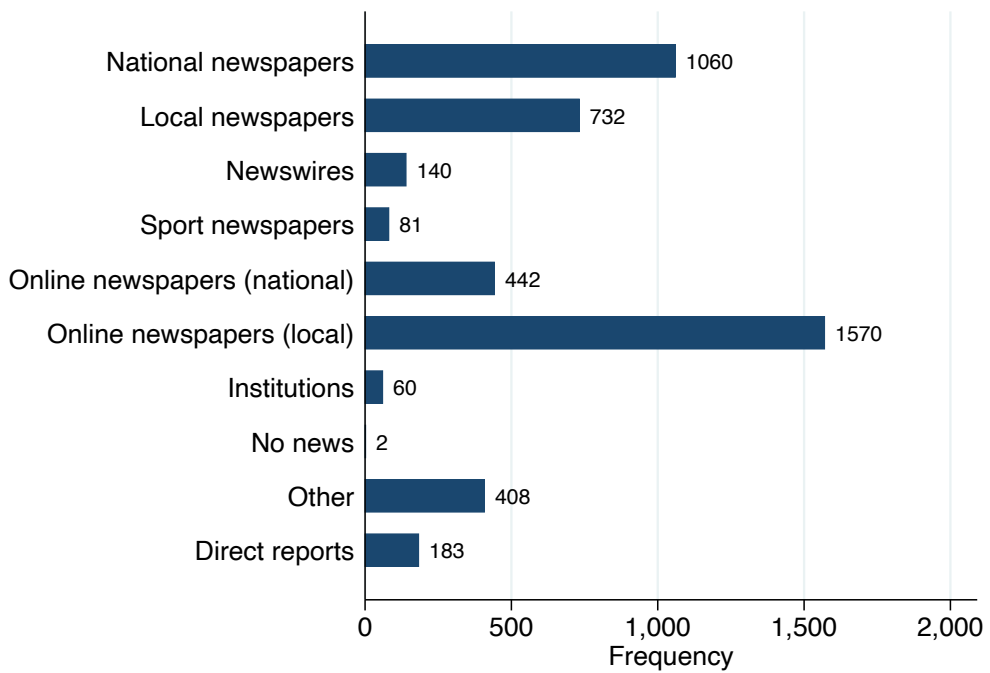
Figure 3.10: Source analysis, by electoral success of far-right candidates

Far-right candidates lose

Far-right candidates win
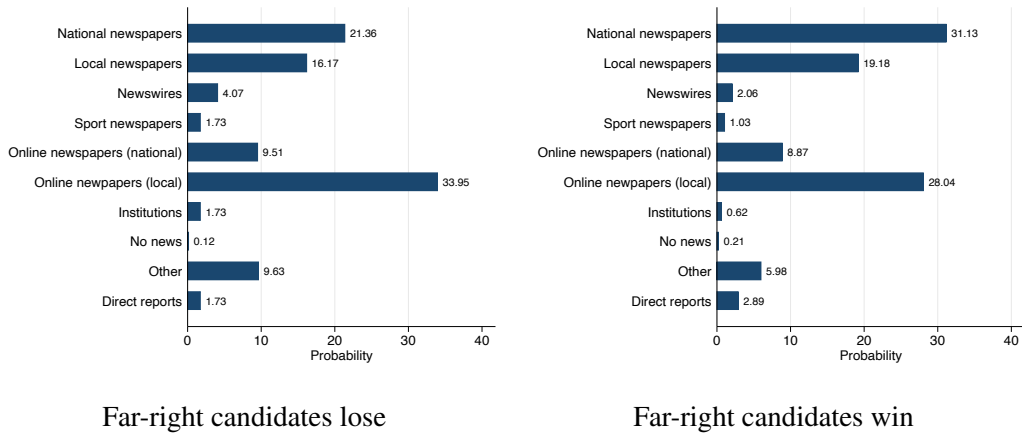
Figure 3.11: Sub-samples based on the hate crimes sources
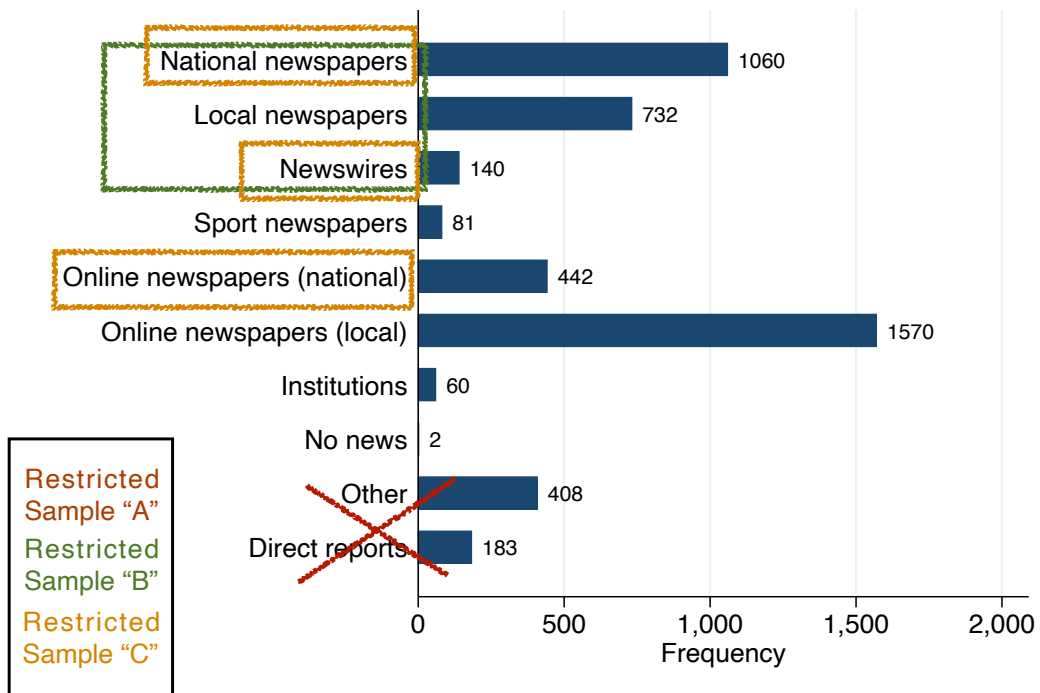
Figure 3.12: Effect of far-right mayors on hate crimes, by mandate time period

First half of the mandate

Second half of the mandate
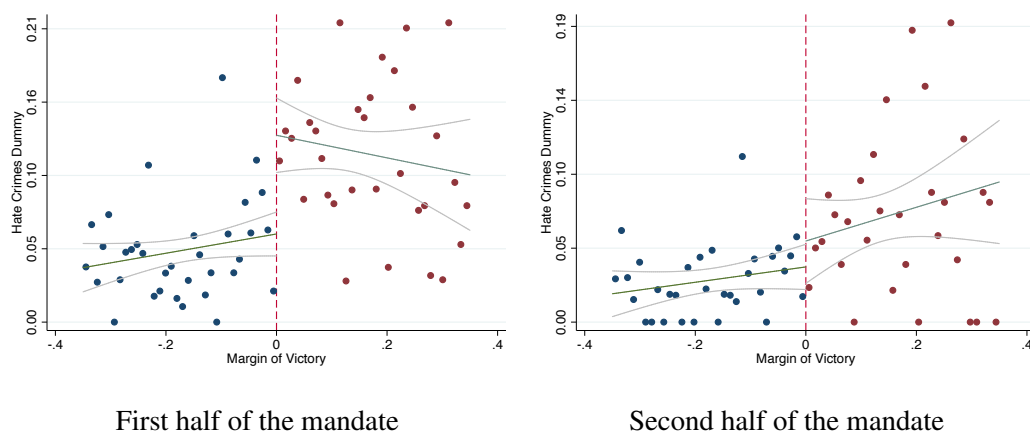
Figure 3.13: Far-right success, northern vs non-northern regions
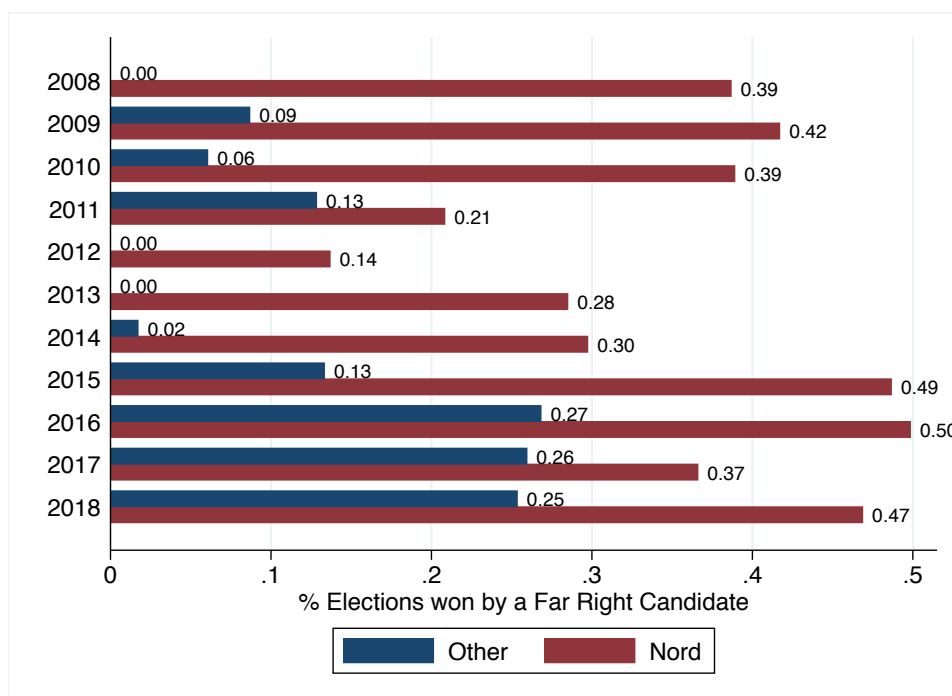
Note: Piedmont, Lombardy and Veneto are defined as northern regions.

Figure 3.14: Far-right success, Labor Market Areas

Not in the analysis
At least one far-right mayor
No far-right mayor
No data
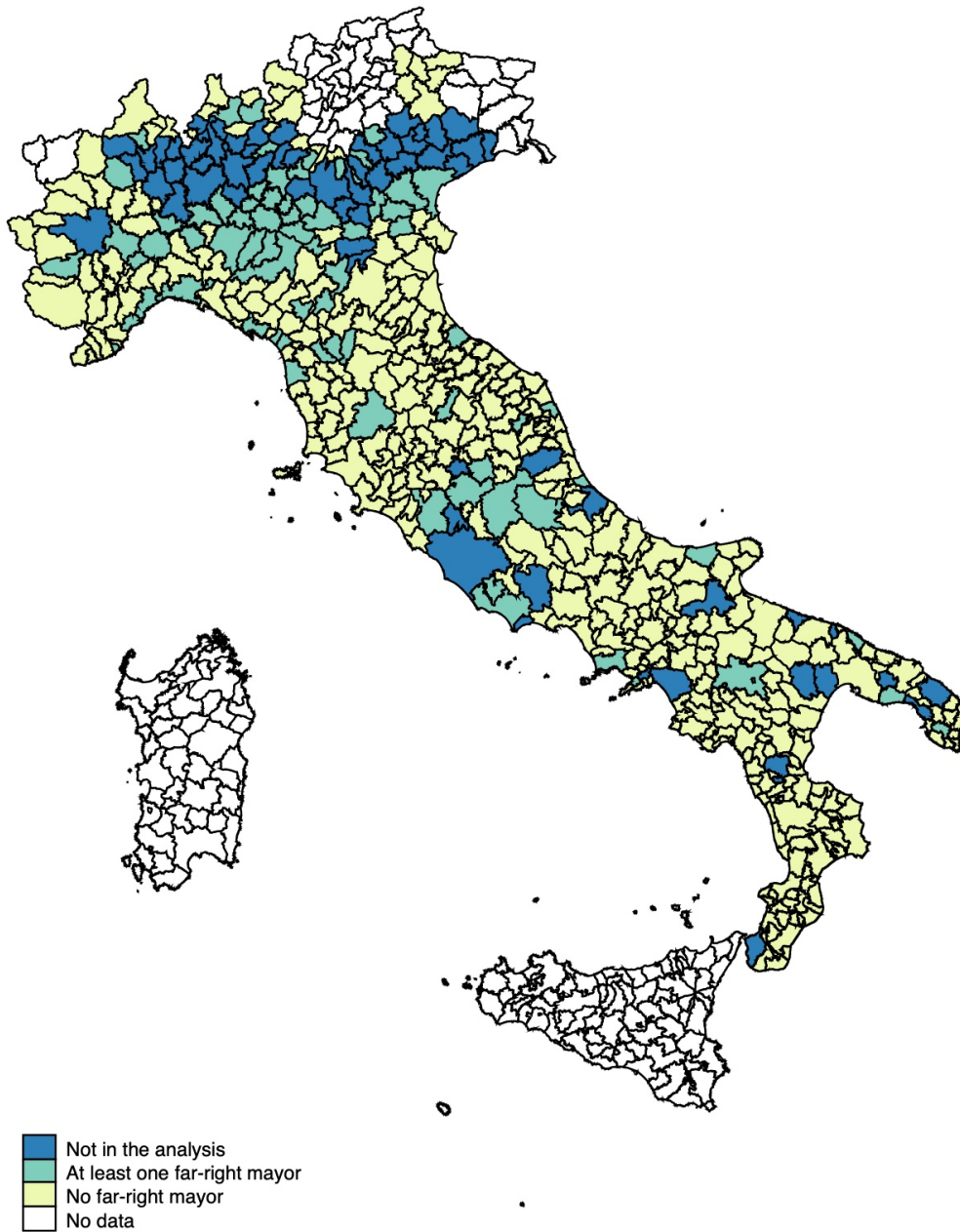
Figure 3.15: Spillovers, case study
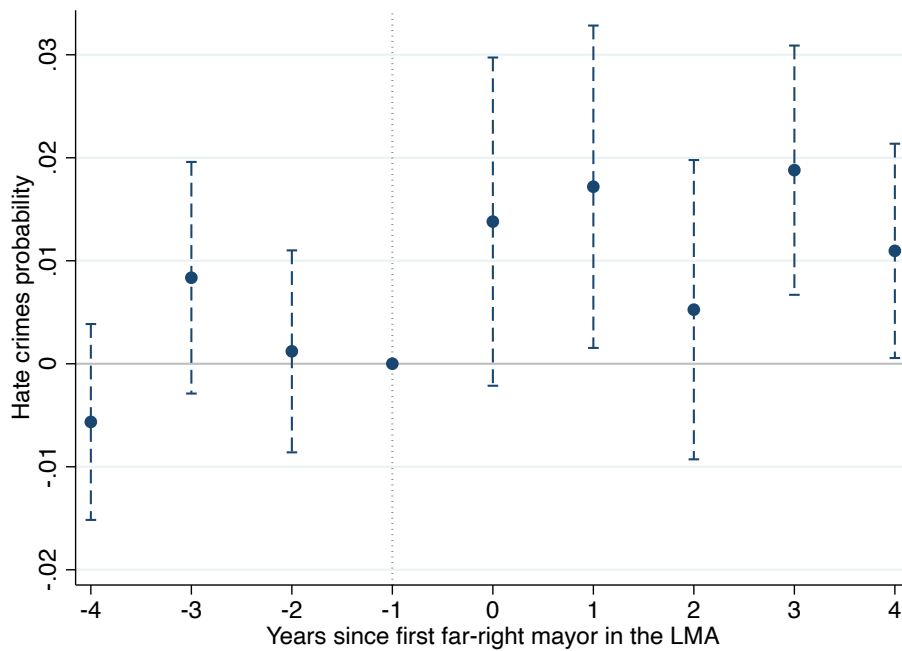
The graph shows the result of an event-study where the dependent variable is a dummy equal to one if at least a hate crime is reported during the year. The treatment consists in the election of the first far-right mayor in the municipality's LMA. X reports the years since treatment. Years: 2008-2018. All Regressions include year and municipal fixed effects, and controls for mayor (age, gender, education level) and timing variant municipal controls ((ln) population and (ln) foreign population.) 95% c. i. shown.

Appendix B: List of Tables

Table 3.1: Far-right performance in local elections (2008-2018)

	N	Mean	SD	Min	Max
Far-right candidate ran	20735	0.157	0.363	0.000	1.000
League candidate ran	20735	0.128	0.334	0.000	1.000
Far-right candidate won	20735	0.041	0.199	0.000	1.000
Far-right candidate won (if one ran)	3246	0.264	0.441	0.000	1.000
Far-right margin of victory (if one ran)	3246	-0.202	0.301	-0.987	1.000

Source: Italian Interior Minister.

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Table 3.2: Municipalities summary statistics, by far-right presence

Far-Right candidate:	Run	Not run elections	Diff.
Population (2008)	12551.158	6482.733	6068.425***
Surface area	33.168	34.505	-1.336
% of immigrants (2008)	0.072	0.050	0.022***
log income per capita (2005)	9.586	9.479	0.107***
Production units per capita (2005)	0.086	0.076	0.010***
Unemployment rate (2001)	0.055	0.098	-0.043***
% pop. with higher education (2011)	46.388	46.287	0.101
% of pensioners (2001)	0.230	0.258	-0.028***
% of students (2001)	0.060	0.065	-0.005***
Non profit assoc. per capita (2008)	0.005	0.005	-0.001***

Means displayed. Source: 2001 Italian Census; Italian National Institute of Statistics.

Table 3.3: Hate crimes summary statistics, by far-right presence (mandate level)

Far-Right candidate:	Run	Not run elections	Diff.
Dummy hate crimes	0.154	0.050	0.104***
Dummy hate crimes (political)	0.090	0.013	0.077***
Dummy hate crimes (non-political)	0.101	0.036	0.065***
Tot. hate crimes per capita	0.230	0.119	0.111***
Tot. hate crimes per capita (political)	0.112	0.017	0.096***
Tot. hate crimes per capita (non-political)	0.118	0.067	0.051***

Means displayed. Source: Lunaria – "Cronache di Ordinario Razzismo".
Years: 2008-2018.

Table 3.4: Hate crimes summary statistics – RD Regression

	Mean	SD	Min	Max
Extensive Margin				
Hate crime	0.064	0.244	0.000	1.000
Political hate crime	0.035	0.183	0.000	1.000
Non-political hate crime	0.040	0.195	0.000	1.000
Visible hate crime	0.014	0.117	0.000	1.000
Violent hate crime	0.011	0.104	0.000	1.000
Intensive Margin				
Hate crime (per 10,000 people)	0.066	0.695	0.000	58.309
Political hate crime (per 10,000 people)	0.032	0.295	0.000	9.948
Non-political hate crime (per 10,000 people)	0.034	0.629	0.000	58.309
Visible hate crime (per 10,000 people)	0.009	0.301	0.000	29.155
Violent hate crime (per 10,000 people)	0.005	0.121	0.000	8.525
N:		11482		

Summary statistics at municipal-year level. Only municipalities with a far-right candidate considered. Years: 2008-2018.

Table 3.5: Municipal and mayor controls summary statistics – RD Regression

	N	Mean	SD	Min	Max
Population (2008)	11449	11051	25703	49	598183
Surface Area	11420	31.066	46.111	0.120	654.390
% of immigrants (2008)	11411	0.073	0.038	0.000	0.249
log income per capita (2005)	11456	9.584	0.176	8.540	10.390
Production units per capita (2005)	11456	0.085	0.021	0.025	0.344
% pop. with highr education (2011)	11410	0.460	0.098	0.139	0.823
% of pensioners (2001)	11449	0.231	0.064	0.040	0.664
Non-profit assoc. per capita (2008)	11456	0.005	0.003	0.000	0.056
Mayor age	11020	51.869	10.246	24.000	86.000
Mayor male	11061	0.850	0.357	0.000	1.000
Mayor education:					
Primary	10623	0.007	0.083	0.000	1.000
Secondary	10623	0.533	0.499	0.000	1.000
Professional School	10623	0.017	0.129	0.000	1.000
Degree or higher	10623	0.443	0.497	0.000	1.000

Table 3.6: Far-right mayors effect on hate crimes – RD Estimates

	(1)	(2)	(3)	(4)	(5)
Conventional	0.052**	0.050**	0.046**	0.047**	0.041*
	(0.023)	(0.021)	(0.022)	(0.022)	(0.023)
Bias-corrected	0.053**	0.048**	0.047**	0.046**	0.041*
	(0.023)	(0.021)	(0.022)	(0.022)	(0.023)
Robust	0.053**	0.048**	0.047**	0.046*	0.041*
	(0.025)	(0.023)	(0.024)	(0.024)	(0.025)
Bandwidth:	0.135	0.156	0.121	0.155	0.116
N (Left):	1976	2258	1632	2069	1490
N (Right):	1663	1841	1416	1669	1288
Local FEs:	No	Yes	Yes	Yes	Yes
Mun. Controls:	No	No	Yes	No	Yes
Mayor Controls:	No	No	No	Yes	Yes

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least one hate crime is reported during the year. Years: 2008-2018. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.7: Far-right mayors effect on hate crimes – Second-order polynomial

	(1)	(2)	(3)	(4)	(5)
Conventional	0.062*	0.055*	0.045*	0.044	0.043
	(0.032)	(0.029)	(0.027)	(0.030)	(0.026)
Bias-corrected	0.064**	0.057*	0.046*	0.045	0.043*
	(0.032)	(0.029)	(0.027)	(0.030)	(0.026)
Robust	0.064*	0.057*	0.046*	0.045	0.043
	(0.033)	(0.030)	(0.028)	(0.031)	(0.027)
Bandwidth:	0.143	0.147	0.166	0.159	0.187
N (Left):	2092	2156	2189	2111	2347
N (Right):	1734	1760	1801	1715	1847
Local FEs:	No	Yes	Yes	Yes	Yes
Mun. Controls:	No	No	Yes	No	Yes
Mayor Controls:	No	No	No	Yes	Yes

RD Estimates (Second-order polynomial). Dependent Variables: Dummy equal to one if (at least) a hate crime is reported during the year *n-5*. Years: 2008-2018. Municipal controls: log of the population and of surface in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of no profit associations per capita. Mayor controls: age, gender, level of education. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.8: Balance controls around the threshold – First-order polynomial

	Mayor age	Mayor male	Mayor education
Far-right mayor	-1.544	-0.080	0.157
	(1.694)	(0.082)	(0.215)
Bandwidth:	0.136	0.108	0.095
N (Left):	1894	1529	1305
N (Right):	1594	1312	1134

	Pop. (Ln)	Surface area (Ln)	% Immigr.
Far-right mayor	-0.012	0.060	0.006
	(0.140)	(0.155)	(0.007)
Bandwidth:	0.131	0.140	0.111
N (Left):	1912	2020	1608
N (Right):	1603	1702	1386

	% Secondary educ.	Income (Ln)	% Employment
Far-right mayor	-0.581	0.038	0.003
	(1.820)	(0.027)	(0.007)
Bandwidth:	0.103	0.136	0.138
N (Left):	1482	1854	1869
N (Right):	1293	1572	1590

	% Pensioners	Non-profit per cap.
Far-right mayor	0.008	0.000
	(0.009)	(0.000)
Bandwidth:	0.134	0.098
N (Left):	1818	1349
N (Right):	1545	1205

RD Estimates. Standard errors clustered at the municipal level in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.9: Balance controls around the threshold – Second-order polynomial

	Mayor age	Mayor male	Mayor education
Far-right mayor	-1.333	-0.105	0.232
	(2.286)	(0.0972)	(0.247)
Bandwidth:	0.148	0.154	0.144
N (Left):	2063	2132	1948
N (Right):	1685	1718	1607

	Pop. (Ln)	Surface area (Ln)	% Immigr.
Far-right mayor	0.011	0.284	0.006
	(0.178)	(0.206)	(0.008)
Bandwidth:	0.147	0.156	0.159
N (Left):	2158	2249	2283
N (Right):	1761	1841	1852

	% Secondary educ.	Income (Ln)	% Employment
Far-right mayor	-0.080	0.061*	-0.004
	(2.101)	(0.036)	(0.010)
Bandwidth:	0.138	0.134	0.141
N (Left):	2010	1823	1898
N (Right):	1688	1545	1612

	% Pensioners	Non-profit per cap.
Far-right mayor	0.008	0.001*
	(0.012)	(0.000)
Bandwidth:	0.172	0.124
N (Left):	2296	1677
N (Right):	1858	1461

RD Estimates. Standard errors clustered at the municipal level in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.10: Far-right mayors effect on hate crimes – Different bandwidth

	(1)	(2)	(3)	(4)
Far-right mayor	0.053**	0.043**	0.057*	0.058*
	(0.024)	(0.020)	(0.030)	(0.035)
Optimal Bandwidth:	cerrd	mserd	cerrd/2	-
Bandwidth:	0.132	0.194	0.066	0.05
N (Left):	1948	2711	1047	712
N (Right):	1612	2138	897	652
Controls:	No	No	No	No

RD Estimates (First-order polynomial). Dependent Variables: dummy equal to one if at least one hate crime is reported during the year. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.11: Far-right mayors effect on hate crimes – Different cut-off

	(1)	(2)	(3)	(4)	(5)	(6)
Far-right mayor	0.014	0.052	-0.132	0.018	-0.008	-0.006
	(0.057)	(0.060)	(0.085)	(0.027)	(0.107)	(0.022)
Cutoff:	0.1	-0.1	0.2	-0.2	0.4	-0.4
Bandwidth:	0.030	0.028	0.049	0.044	0.095	0.058
N (Left):	396	397	394	534	259	633
N (Right):	319	404	303	514	89	701
Controls:	No	No	No	No	No	No

RD Estimates (First-order polynomial). Dependent Variables: dummy equal to one if at least one hate crime is reported during the year. Years: 2008-2018. Columns (1), (3) and (5) consider the sample of elections with a margin of victory > 0. Columns (2), (4) and (6) consider the sample of elections with a margin of victory < 0. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.12: Far-right mayors effect on *lagged* hate crimes – All years

	(1)	(2)	(3)	(4)	(5)
Conventional	-0.006	-0.019	-0.035	-0.013	-0.031
	(0.043)	(0.045)	(0.040)	(0.050)	(0.042)
Bias-corrected	-0.012	-0.024	-0.039	-0.019	-0.035
	(0.043)	(0.045)	(0.040)	(0.050)	(0.042)
Robust	-0.012	-0.024	-0.039	-0.019	-0.035
	(0.046)	(0.048)	(0.043)	(0.053)	(0.045)
Bandwidth:	0.147	0.122	0.164	0.116	0.159
N (Left):	473	385	468	339	442
N (Right):	382	333	388	295	360
Local FEs:	No	Yes	Yes	Yes	Yes
Mun. Controls:	No	No	Yes	No	Yes
Mayor Controls:	No	No	No	Yes	Yes

RD Estimates (First-order polynomial). Dependent Variables: Dummy equal to one if at least one hate crime is reported during the year *n-5*. Years: 2008-2018. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.13: Far-right mayors effect on *lagged* hate crimes – Year before the elections

	(1)	(2)	(3)	(4)	(5)
Conventional	-0.006	-0.019	-0.035	-0.013	-0.031
	(0.043)	(0.045)	(0.040)	(0.050)	(0.042)
Bias-corrected	-0.012	-0.024	-0.039	-0.019	-0.035
	(0.043)	(0.045)	(0.040)	(0.050)	(0.042)
Robust	-0.012	-0.024	-0.039	-0.019	-0.035
	(0.046)	(0.048)	(0.043)	(0.053)	(0.045)
Bandwidth:	0.147	0.122	0.164	0.116	0.159
N (Left):	473	385	468	339	442
N (Right):	382	333	388	295	360
Local FEs:	No	Yes	Yes	Yes	Yes
Mun. Controls:	No	No	Yes	No	Yes
Mayor Controls:	No	No	No	Yes	Yes

RD Estimates (First-order polynomial). Dependent Variables: dummy equal to one if at least one hate crime is reported during the year *n-1*. Years: 2008-2018. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.14: Far-right mayors effect – Visible and violent hate crimes

	Visible (1)	Visible (2)	Violent (3)	Violent (4)
Far-right mayor	0.017*	0.019**	0.012*	0.013*
	(0.009)	(0.009)	(0.007)	(0.008)
Bandwidth:	0.128	0.139	0.125	0.126
N (Left):	1870	1791	1805	1624
N (Right):	1591	1531	1564	1421
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least one visible or violent hate crime is reported during the year. Years: 2008-2018. Visible hate crimes: damages + physical assaults. Violent hate crimes: physical assaults. All Regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.15: Far-right mayors effect – Sub-sources robustness check

Source A: No direct Reports, NGOs, missing

	All	All	Visible	Visible
Far-right mayor	0.048**	0.038*	0.017*	0.018*
	(0.021)	(0.023)	(0.009)	(0.010)
Bandwidth:	0.159	0.116	0.138	0.126
N (Left):	2297	1495	2008	1633
N (Right):	1864	1293	1684	1426
Controls:	No	Yes	No	Yes

Source B: Printed newspapers and newswires

	All	All	Visible	Visible
Far-right mayor	0.034**	0.026	0.014*	0.014*
	(0.015)	(0.016)	(0.007)	(0.008)
Bandwidth:	0.132	0.112	0.123	0.111
N (Left):	1948	1468	1782	1443
N (Right):	1612	1262	1532	1257
Controls:	No	Yes	No	Yes

Source C: National newspapers and newswires

	All	All	Visible	Visible
Far-right mayor	0.034**	0.035**	0.019**	0.020**
	(0.016)	(0.015)	(0.008)	(0.009)
Bandwidth:	0.116	0.133	0.136	0.131
N (Left):	1670	1736	1980	1714
N (Right):	1427	1465	1662	1449
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least one (visible) hate crime is reported during the year. Years: 2008-2018. All Regressions include year and region fixed effects. Municipal and mayor controls: see Table 3.6. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.16: Far-right mayors effect – Left-wing newspapers exluded[1]

	All (1)	All (2)	Visible (3)	Visible (4)
Far-right mayor	0.039**	0.033*	0.019**	0.021***
	(0.020)	(0.019)	(0.008)	(0.008)
Bandwidth:	0.148	0.143	0.120	0.147
N (Left):	2174	1852	1733	1917
N (Right):	1773	1565	1492	1584
Controls:	No	Yes	No	Yes

[1] Repubblica, Huffington Post, L'Espresso, Il Manifesto, L'Unità, Radio Popolare. Hate crimes from Direct Reports, NGOs, and missing sources are also excluded.

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least one (visible) hate crime is reported during the year. Years: 2008-2018. Visible hate crimes: damages + physical assaults. All regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.17: Far-right mayors effect – Intensive margin

	All (1)	All (2)	Visible (3)	Visible (4)
Far-right mayor	0.081**	0.056**	0.027*	0.034**
	(0.036)	(0.027)	(0.016)	(0.017)
Bandwidth:	0.107	0.103	0.131	0.115
N (Left):	1574	1347	1931	1484
N (Right):	1352	1175	1607	1283
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent Variables: total hate crimes per 10,000 people during the year. Years: 2008-2018. All regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.18: Far-right mayors effect – Intensive margin (sub-sources)

Source A: No Direct Reports

	All	All	Visible	Visible
Far-right mayor	0.070**	0.051*	0.025	0.034**
	(0.034)	(0.027)	(0.015)	(0.017)
Bandwidth:	0.130	0.115	0.152	0.123
N (Left):	1901	1490	2227	1590
N (Right):	1597	1288	1794	1383
Controls:	No	Yes	No	Yes

Source B: Printed Newspapers and Newswires

	All	All	Visible	Visible
Far-right mayor	0.044**	0.039*	0.025	0.033*
	(0.020)	(0.020)	(0.016)	(0.017)
Bandwidth:	0.109	0.099	0.137	0.118
N (Left):	1599	1290	1999	1516
N (Right):	1357	1150	1677	1310
Controls:	No	Yes	No	Yes

Source C: National Newspapers and Newswires

	All	All	Visible	Visible
Far-right mayor	0.048**	0.043**	0.025	0.034**
	(0.021)	(0.021)	(0.015)	(0.017)
Bandwidth:	0.119	0.102	0.160	0.127
N (Left):	1704	1323	2302	1633
N (Right):	1465	1168	1869	1431
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent Variables: total hate crimes per 10,000 people during the year. Years: 2008-2018. All regressions include year and region fixed effects. Municipal and mayor controls: see Table 3.6. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.19: Far-right mayors effect – Political and non-political hate crimes

	Political		Non Political	
	(1)	(2)	(3)	(4)
Far-right mayor	0.032*	0.022	0.015	0.018
	(0.017)	(0.015)	(0.016)	(0.015)
Bandwidth	0.136	0.133	0.128	0.154
N (Left):	1994	1737	1860	1984
N (Right):	1663	1465	1586	1608
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least a hate crime is reported during the year. Years: 2008-2018. All regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.20: Far-right mayors (FRM) effect – Re-electable vs. non-re-electable.

| | All Hate Crimes | | Political Hate Crimes | |
| | Dummy | Per capita | Dummy | Per capita |
	(1)	(2)	(3)	(4)
FRM Re-eligible	0.039	0.032	0.015	0.001
	(0.032)	(0.042)	(0.023)	(0.024)
FRM Term Limit	0.178*	0.238**	0.104*	0.173**
	(0.098)	(0.115)	(0.058)	(0.084)
Difference:	0.139	0.206	0.089	0.172
Difference (P-value):	0.176	0.093	0.153	0.049

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least one (political) hate crime is reported during the year (Columns 1 & 3); Total (political hate crimes per 10,000 people during the year (Columns 2 & 4). "Difference" refers to the gap between the "FRM Term Limit" and "FRM Re-eligible" coefficient, while "Difference (P-value)" shows the significance of this gap. Years: 2008-2018. All Regressions include year and region fixed effects. Municipal controls: log of the population and of surface in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. All the covariates are balanced around the threshold, using the propensity score weighting methodology proposed by Carril et al. (2017). Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.21: Far-right mayors effect on political hate crimes, by re-eligibility & time

	Re-electable		Term Limit	
	First Half	Second Half	First Half	Second Half
	(1)	(2)	(3)	(4)
Far-right mayor	0.035*	-0.008	0.006	0.119*
	(0.021)	(0.027)	(0.046)	(0.070)
Bandwidth:	0.155	0.142	0.147	0.177
N (Left):	826	423	362	233
N (Right):	837	396	141	106
Controls:	Yes	Yes	Yes	Yes

RD Estimates (First-order polynomial). Dependent variables: dummy equal to one if at least one political hate crime is reported during the year. Years: 2008-2018. All Regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

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Table 3.22: Hate crime and probability of being re-elected (mandate level)

	All	Pol.	Non-pol.
	(1)	(2)	(3)
Dummy HC	-0.001		
	(0.019)		
Far-right mayor (FRM)	0.015	0.016	0.005
	(0.024)	(0.022)	(0.022)
Dummy HC × FRM	-0.030		
	(0.048)		
Dummy political HC		0.040	
		(0.032)	
Dummy political HC × FRM		-0.083	
		(0.063)	
Dummy non political HC			-0.014
			(0.022)
Dummy non political HC × FRM			0.019
			(0.060)
N	11952	11952	11952

OLS Estimates. Dependent Variables: Dummy equal to one if a (non-term limit) mayor is re-elected in the next term. Dummy HC takes value one if a hate crime is reported during the 5 years political mandate. Dummy (non) political HC takes value one if a (non) political hate crime is reported during the 5 years political mandate. Years: 2008-2018. All Regressions include year and region fixed effects and control for the electoral margin of victory. Municipal controls: log of the population and of surface in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.23: Far-right mayors effect on hate crimes – First vs not-first-time elected

Panel A: First-time elected

	Extensive Margin		Intensive Margin	
	(1)	(2)	(3)	(4)
Far-right mayor	0.054**	0.041	0.054*	0.047
	(0.027)	(0.026)	(0.031)	(0.033)
Bandwidth:	0.105	0.100	0.095	0.097
N (Left):	1428	1198	1294	1182
N (Right):	929	821	874	800
Controls:	No	Yes	No	Yes

Panel B: Not-first-time elected

	Extensive Margin		Intensive Margin	
	(1)	(2)	(3)	(4)
Far-right mayor	0.095	0.044	0.186	0.068
	(0.060)	(0.049)	(0.114)	(0.060)
Bandwidth:	0.099	0.115	0.116	0.111
N (Left):	1346	1375	1556	1330
N (Right):	277	273	307	265
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent variables (columns 1 and 2): dummy equal to one if at least one hate crime is reported during the year. Dependent variables (columns 3 and 4): total hate crimes per 10,000 people during the year. Years: 2008-2018. All Regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, %pensioners, %students, % of people with at least secondary education, employment rate, log of the average disposable income, number of non-profit associations per capita. Mayor controls: age, gender, and education level. All the covariates are balanced around the threshold, using the propensity score weighting methodology proposed by Carril et al. (2017). Standard errors clustered at the municipal level in parentheses. Significance levels: $^*\ p < 0.1$, $^{**}\ p < 0.05$, $^{***}\ p < 0.01$.

Table 3.24: Far-right mayors effect on *visible* hate crimes – First vs not-first-time elected

Panel A: First-time elected

	Extensive Margin		Intensive Margin	
	(1)	(2)	(3)	(4)
Far-right mayor	0.027**	0.030**	0.038*	0.043*
	(0.013)	(0.014)	(0.023)	(0.024)
Bandwidth:	0.106	0.103	0.132	0.140
N (Left):	1460	1238	1822	1671
N (Right):	946	830	1138	1089
Controls:	No	Yes	No	Yes

Panel B: Not-first-time elected

	Extensive Margin		Intensive Margin	
	(1)	(2)	(3)	(4)
Far-right mayor	0.004	-0.029***	-0.008**	-0.012***
	(0.013)	(0.011)	(0.004)	(0.004)
Bandwidth:	0.147	0.073	0.075	0.077
N (Left):	2019	854	998	919
N (Right):	370	185	203	190
Controls:	No	Yes	No	Yes

RD Estimates (First-order polynomial). Dependent variables (Columns 1 and 2): dummy equal to one if at least one visible hate crime is reported during the year. Dependent variables (Columns 3 and 4): total visible hate crimes per 10,000 people during the year. Years: 2008-2018. Visible hate crimes: damages + physical assaults. All Regressions include year and region fixed effects. Municipal controls: log of the population and of surface area in KM^2, % of immigrants, % of people with at least secondary education over total population, log of average disposable income, employment rate. Mayor controls: age, gender, and education level. All the covariates are balanced around the threshold, using the propensity score weighting methodology proposed by Carril et al. (2017). Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.25: Far-right mayors (FRM) spillover effects on neighbouring localities

	All Hate Crimes		Visible Hate Crimes	
	(1)	(2)	(3)	(4)
FRM in LMA × post FRM in LMA	0.009***		0.004**	
	(0.003)		(0.002)	
FRM in LMA × Year from election=1		-0.006		0.003
		(0.011)		(0.006)
FRM in LMA × Year from election=2		0.017*		0.004
		(0.010)		(0.005)
FRM in LMA × Year from election=3		0.025***		0.009*
		(0.009)		(0.005)
FRM in LMA × Year from election=4		0.029***		0.011**
		(0.009)		(0.005)
FRM in LMA × Year from election=5		-0.003		-0.005
		(0.010)		(0.005)
N	62122	18331	62122	18331

Difference-in-Differences estimates. Dependent variables (Columns 1 and 2): dummy equal to one if at least a (visible) hate crime is reported during the year. Visible hate crimes: damages + physical assaults. Years: 2008-2018. All Regressions include year and municipal fixed effects. Mayor controls: age, gender, education level. Timing Variant municipal controls: (ln) population and (ln) foreign population. Standard errors clustered at the Labor Market Areas (LMA) level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3.26: Far-right mayors (FRM) effect on hate crimes – Internet role

Panel A: Real Internet Speed (2018)

	Dummy HC	HC per capita	HC group
	(1)	(2)	(3)
FRM in slow Internet mun.	0.060	-0.019	0.005
	(0.045)	(0.053)	(0.014)
FRM in fast Internet mun.	0.063*	0.116**	0.015
	(0.035)	(0.049)	(0.017)
Difference	0.002	0.136	0.009
Difference Pvalue	0.970	0.059	0.672
N	2455	2455	2455

Panel B: Instrument for Internet Speed

	Dummy HC	HC per capita	HC group
	(1)	(2)	(3)
FRM in mun. close to UGS	0.093**	0.138***	0.006
	(0.038)	(0.053)	(0.012)
FRM in mun. far from UGS	-0.006	-0.039	-0.016
	(0.057)	(0.058)	(0.027)
Difference	-0.098	-0.176	-0.021
Pvalue	0.149	0.024	0.468
N	2418	2418	2418

RD Estimates (First-order polynom). Dependent variables (Columns 1): dummy equal to one if at least one hate crime is reported during the year; Dependent variables (Columns 2): total hate crimes per 10,000 people during the year; Dependent variables (Columns 3): dummy equal to one if at least one hate crime committed in a group is reported during the year. "Difference" refers to the gap between the "FRM in fast Internet mun." ("FRM in mun. far to UGS") and "FRM in slow Internet mun." ("FRM in mun. close from UGS") coefficient, while "Difference (P-value)" shows the significance of this gap. Years: 2008-2018. All Regressions include year and region fixed effects. Fast and slow Internet refers to municipalities with Internet speeds below or above the median (Source: AGCOM, 2018). "Close to UGS" and "Far from UGS" refers to municipalities with distance below or above the median from the closest UGS, used as an instrument for Internet Speed (Campante et al., 2018). Municipal and mayor controls: see Table 3.6. All the covariates are balanced around the threshold, using the propensity score weighting methodology proposed by Carril et al. (2017). Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix C: Additional Tables

Table 3.A1: Parties considered to be extreme right

Lega	Fratelli D'Italia	La Destra
Forza Nuova	CasaPound Italia	Fiamma Tricolore
Alleanza Nazionale	Movimento Sociale	Fascismo e Libertà

Table 3.A2: Hate crimes – By nature and year

Act type:	Damages	Discrimination	Verbal	Violence	Total
2008	9	35	21	57	122
2009	13	93	102	98	306
2010	5	112	108	56	281
2011	12	126	244	78	460
2012	9	59	220	62	350
2013	6	72	413	66	557
2014	10	75	634	45	764
2015	16	62	385	39	502
2016	12	59	344	25	440
2017	28	73	347	32	480
2018	29	53	287	87	456
Total	149	819	3105	645	4718

Appendix D: Fixed effects approach

To strengthen the results found through an RD approach in Section 3.4.1, I repeat the analysis using an alternative empirical methodology – i.e., a fixed effects approach. Specifically, in this part of the analysis, I focus on the full sample of municipalities in which, between 2008 and 2018, a candidate belonging to a far-right party has run for the local elections at least once. Simultaneously, to fully exploit the fixed effects strategy, this part of the analysis is carried out at the monthly level (while results presented in Section 3.4.1 were at the annual level).

The main specification I study is the following:

$$HateCrime_{m,t} = \beta FarRight_{m,T} + \theta X_{m,t} + \zeta Z_{i,T} + \tau_t + \psi_m + \rho_t + \epsilon_m \quad (3.5)$$

where the dependent variable *HateCrime* is a dummy equal to one if (at least) one hate crime is reported in municipality m in month t. As in the main analysis, I decide to focus on the extensive margins (i.e., whether a hate crime occurred or not) instead of the intensive margin (i.e., the total number of hate crimes reported).

FarRight is a binary indicator that takes value one in municipalities where, in the most recent election year (T), a mayor who is a member of or is supported by a far-right party was elected. The parameter of interest is β and provides the treatment effect of the election of a far-right mayor on hate crimes. The presence of a far-right mayor lasts for a five-year term, while the data on hate crimes occurrence is, in this part of the analysis, at the municipal-monthly level. Hence, β provides the average monthly effect of electing a far-right mayor on hate crimes across the electoral cycle.

X is a vector of municipality controls that vary at the annual level: in particular, for this part of the analysis, they include the population and the foreign population; additionally, *Z* controls for mayor's characteristics, including gender, age, and level of education. Lastly, a rich battery of fixed effects is introduced. Specifically, τ is a year fixed effects, ψ is a municipality fixed effects, and ρ is a month of the year fixed effects, introduced to remove potential issues of seasonality in hate crimes. ϵ is a robust error term, clustered at the municipal level.

Table 3.A3 provides the results. To make the coefficients easier to interpret, the Table also reports the mean of the dependent variables and the coefficient β multiplied by twelve, which provides the average annual effect. As is evident, a positive and strongly significant effect of far-right mayors on the occurrence of hate crimes is confirmed. In particular, as reported in Column (1), in municipalities led by a far-right mayor the monthly probability of hate crimes is, on average, 0.3 per cent higher (that is equivalent to an annual increase of 3.6 percentage points).

Columns (2) and (3) show the results by dividing political and non-political hate crimes. As notable, when a fixed effects approach is used, the magnitude of the political and non-political hate crimes is similar, although the latter is slightly more statistically significant. Besides, columns 4 and 5 show the effect of far-right mayors when looking at specific types of crimes – i.e., visible (damage and physical attacks) or violent (physical attacks only). Also in this case, the results are positive and significant, confirming what found in Table 3.14 of the main body. The (x 12) coefficients indicate that the appointment of a far-right mayor increases the yearly likelihood of visible and violent hate crimes by 1.4 and 1 per cent respectively.

Although the interpretation of the coefficients is (slightly) different, it is reassuring that the effect found with an RD approach is confirmed when a fixed effects methodology is implemented. This is true not only when looking at all hate crimes but also at the most salient and severe ones. Finally, it is important to remark that the coefficients are also comparable in terms of magnitude, especially when looking at the visible and violent episodes. This is an additional factor that reassures the reliability of the results found in the main analysis.

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Table 3.A3: Far-right mayors effects on hate crimes – Fixed Effects

	All (1)	Political (2)	Non political (3)	Visible (4)	Violent (5)
Far-right mayor	0.0030***	0.0015*	0.0015**	0.0012***	0.0007**
	(0.0011)	(0.0008)	(0.0007)	(0.0004)	(0.0004)
Mean:	0.0089	0.0040	0.0054	0.0013	0.0010
Coefficient (x12):	0.0355	0.0176	0.0179	0.0143	0.0090
N:	254647	254647	254647	254647	254647
Controls:	Yes	Yes	Yes	Yes	Yes

Dependent Variables: Dummy equal to one if (at least) a hate crime is reported during the month. Years: 2008-2018. All regressions include year, month of the year and municipal fixed effects. Municipal controls: population and foreign population. Mayor controls: gender, age, and level of education. Standard errors clustered at the municipal level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

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4. IS THIS THE REAL LIFE OR JUST FANTASY? REFUGEE RECEPTION, EXTREME RIGHT VOTING, AND BROADBAND INTERNET

4.1. Introduction

The refugee crisis has been at the center of the global debate during the last years. In Europe, the salience of the topic has been a consequence of the broad political rhetoric and the increasing number of asylum applications in recent years (Figure 4.1). 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 refugees' redistribution can inform policymaking in this regard.

Recent literature in political economy has studied the effect of immigration on voters' behavior, especially focusing on the support for extreme parties, which have seen their approval soared in several European countries. However, the evidence produced is contradictory, as some studies find that immigration increases the support for far-right parties[51] and anti-immigration attitudes (Barone et al., 2016; Dustmann et al., 2019; Edo et al., 2019; Hangartner et al., 2019a, 2019b; Harmon, 2018; Otto & Steinhardt, 2014; Peri et al., 2020), while others find opposite results (Lonsky, 2020; Steinmayr, 2020; Vertier & Viskanic, 2019). This contradictory evidence calls for further research on the potential mechanisms behind these divergent results. In particular, there is not much evidence in the literature on the interaction between a micro-level of exposure (i.e., the direct contact between natives and immigrants) and a macro-level of exposure (i.e., the salience of migration in traditional and new media) and its effect on natives' attitudes.

This paper contributes to this recent literature in two ways. First, we study the effect of micro-exposure to refugees on natives' voting behavior. We focus on a diffuse reception policy in Italy, and we show that the opening of specific refugee centers *harms* the electoral performance of far-right and anti-

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[51]Throughout the analysis, we use "far-right parties", "extreme right" and "radical right" as synonyms.

immigrant parties. As described in more detail below, these specific refugee centers generate interactions between natives and immigrants that are consistent with the predictions of the contact theory (Allport, 1954): this could, in turn, explain the negative effect on anti-immigrant parties vote shares.

However, we also demonstrate that the intensity of the exposure – expressed as the size of the refugee centers – is critically important. In fact, we show that the negative effect on the radical right is more substantial for smaller refugee centers and that it eventually becomes positive when the refugee center's size rises above a certain threshold. This evidence points to the size of immigration inflows as a relevant explanation for the literature's contradictory findings. It also suggests that natives may perceive new immigrants' arrival as a potential threat to their economic, cultural, and social dominance when the number of refugees and asylum seekers hosted becomes too big. This perceived threat can lead to an increase in prejudice and anti-immigrant attitudes by natives against refugees and asylum seekers, as suggested by the "realistic group conflict theories" (Campbell, 1965; Dustmann et al., 2019; Lahav, 2004; Quillian, 1995; Sidanius & Pratto, 1999; Taylor, 1998).

Second, we study the interaction between this type of micro-level exposure and a macro-level exposure captured by the media's potential role. Specifically, we focus our attention on the role of broadband Internet. Indeed, recent literature shows how the Internet and social media can increase the polarization of society, benefiting extremist parties and worsening the relationship between immigrants and natives.[52] Given the evidence provided by this literature, we can expect the micro-level exposure effect to be more negligible in areas with greater access to broadband Internet and the associated macro-level of exposure. Consistent with this expectation, we show that the negative effect of refugee centers' on the support for the radical right is more substantial in areas with low access to the internet. This result suggests that the possibility to go online reduces the effect of the direct contact between immigrants and natives. This reduction can happen through the Internet and social media's role in reinforcing anti-immigration beliefs (Chan et al., 2016;

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[52]For a detailed literature review of the impact of the Internet and Social Media on political outcomes, see Zhuravskaya et al. (2020). Similarly, DellaVigna and La Ferrara (2015) review the literature on the economic and social impact of exposure to the broadly defined media.

Müller & Schwarz, 2018, 2020; Petrova et al., 2020) and support for populist parties (Guriev et al., 2021; Schaub & Morisi, 2019).

We implement the analysis using data from Italian municipalities and studying a program to relocate refugees and asylum seekers called "The Protection System for Asylum Seekers and Refugees" (SPRAR). As described below, SPRAR is one of the most important refugee reception programs in Italy. However, it is not the only channel through which refugees and asylum seekers are relocated locally (see Campo et al. (2021)). We focus on these types of refugee centers[53] mostly for two reasons. The first is data availability. Specifically, we implement the analysis by exploiting a rare database on the reception of refugees through this policy (see Gamalerio (2019) and Gamalerio et al. (2020a)). This dataset contains precise information on the location of the refugee center at the municipal level and on the number of places made available in the refugee center, allowing us to investigate the role of immigration inflow's size.[54]

The second reason is related with the type of contact that SPRARs can potentially produce between natives and migrants. As described in more detail in Section 4.2, the interactions generated by SPRAR centers seem to fulfill the conditions of the contact theory developed by Allport (1954), which can lead to a reduction in prejudice and anti-immigrant attitudes. SPRARs are medium-small centers directly opened and managed by municipal governments, aiming to help the refugees and asylum seekers integrate and become autonomous on the territory that hosts them. Municipalities that open these centers often employ asylum seekers in public utility works, fostering interaction with the local population. Besides, SPRARs provide job market orientation services to refugees, who may be hired by local firms and become work colleagues and friends with people in the local community. Also, anecdotal evidence describes how SPRAR centers' opening has helped many towns keep alive local public services like schools, especially in areas with a declining population. Thus, it is highly likely that SPRAR centers generate the type of direct contact that could improve the attitudes of natives toward migrants, as described by the contact theory (Allport, 1954). For this reason,

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[53]From now on, defined as "SPRARs".

[54]As a robustness check, we also show that our baseline results do not change if, inside the treatment variable, we consider other types of refugee centers for which we have less detailed data and information.

we think that SPRAR centers represent an exciting testing ground.

The empirical analysis studies the effect of the opening of SPRARs on the change in the support for far-right parties between the 2013 and the 2018 national elections. It also looks at the effect on the votes shares of political forces located in the center of the political spectrum. We estimate these effects through both ordinary least squares (OLS) and instrumental variables (IV). Specifically, we develop the IV analysis using pre-existing group accommodation buildings as an instrument for the opening of SPRAR centers. Examples of group accommodation buildings are homes for the disabled, elderly, orphans, and drug addicts. As explained in more detail below, we exploit the fact that these buildings, while they were created in the past with different purposes, could host asylum seekers in the years of the refugee crisis (Steinmayr, 2020). Crucially for our identification strategy, we show that these buildings do not correlate with the change in vote shares between the 2008 and the 2013 national elections. Conversely, they correlate with the vote shares between the 2013 and the 2018 elections. This evidence suggests that our instrument started to correlate with our dependent variables only during the years of the refugee crisis, namely when the group accommodation buildings could be used to host refugees and asylum seekers.

Once we implement this identification strategy, our results show that hosting refugees negatively affects the vote shares of far-right parties. At the same time, it benefits the moderate, centrist political forces. This effect is significant and quite large in magnitude: the IV estimates indicate that municipalities that opened a SPRAR center between the 2013 and 2018 elections experienced a change in the votes shares of extreme right, approximately 7 percentage points lower than municipalities that did not open SPRAR centers. The results are robust when controlling for municipalities' socio-economic features, the local politicians' characteristics, and the presence of other refugee centers opened through alternative channels different from the SPRAR program.

In the second part of the paper, we investigate two potential channels that might explain the main result. First, we focus on the dimension of the centers, and we show that small SPRARs drive the results. In fact, we demonstrate that the effect on the support for the radical right becomes positive if a refugee center with more than 28 places every 1000 inhabitants made available to

host refugees every year is opened. The result suggests that governments and policymakers should redistribute refugees and asylum seekers in a more homogeneous way and through the opening of diffuse and small reception centers.

Second, our heterogeneity analysis shows that the negative effect is more substantial for municipalities with lower access to broadband Internet. This suggests that the macro-level impact of an increase in the media migration's salience can potentially reduce the micro-level impact that works through the direct contact between natives and migrants.

The paper contributes to two very recent strands of literature. First, it contributes to the recent political economy literature, which studies how immigration and the reception of refugees and asylum seekers affect the electoral success of extreme right and populist political parties. Some of the papers in this literature find that large immigration flows and stocks can positively affect the vote for far-right and populist parties (Edo et al., 2019; Hangartner et al., 2019a, 2019b; Harmon, 2018; Otto & Steinhardt, 2014; Peri et al., 2020). The evidence produced suggests that this positive effect is concentrated in small municipalities and rural areas (Dustmann et al., 2019), and it is larger for migrants with dissimilarities in terms of language, religion, and race compared to natives (Mendez & Cutillas, 2014).

Specifically for Italy, Barone et al. (2016) show that immigrants' share at the municipal level positively affects the vote shares of (extreme) right parties. Our paper differs from Barone et al. (2016) in that we focus on asylum seekers and a specific reception policy. Also, Bellucci et al. (2019) study the positive causal relationship between perceived immigration and the votes shares of anti-immigrant parties. Our analysis differs from the one of Bellucci et al. (2019) in that we study the effect of direct contact between natives and immigrants and not natives' perceptions. Lastly, the paper probably most similar to ours is that of Campo et al. (2021). In their recent analysis, Campo et al. (2021) investigate the effect of the opening CAS centers on voting for the right-wing populist parties. Although their results are opposite to those found in our paper, the two analyses should be considered complementary. In fact, the SPRAR system is markedly different from the CAS system, especially in the kinds of interactions generated between natives refugees (see Section 4.2). Thus, the fact that different reallocation programs generate di-

vergent effects on the support for the radical right reinforces our assumptions about the importance of the integration-oriented services provided to asylum seekers in SPRARs.[55]

Conversely, other papers in the same literature find that migration can reduce the support for far-right and populist political parties (Steinmayr, 2020), especially when the inflow is small (Vertier & Viskanic, 2019). More specifically, Steinmayr (2020) uses data from Upper Austria to show that municipalities that host refugees experience a reduction in the positive overall trend in support for the far-right Freedom Party. Besides, Vertier and Viskanic (2019) show that the opening of refugee centers that follows the relocation of refugees from Calais to other French municipalities reduces the vote share increase of the far-right Front National. Our baseline results on voting for far-right parties are in line with the results of Steinmayr (2020). However, our paper differs in that we investigate how this baseline effect changes with the size of the refugee centers and broadband Internet availability. Our paper's baseline result and the heterogeneity analysis on the size of the refugee centers are consistent with the findings of Vertier and Viskanic (2019). Differently from them, we also investigate the role of the Internet and its interaction with refugees' reception.

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[55]Three other papers study the reception of refugees in Italy. Genovese et al. (2017) use survey data from Italian Regions to study how public feelings 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 refugees' reception on attitudes using survey data, while we use data on voting behavior measured at the municipal level. Bratti et al. (2021), using data on Italian municipalities and the 2016 Italian Constitutional Referendum, show that the geographical proximity to refugee reception centers leads to an increase in turnout and the share of anti-government votes, measured by the shares of "no" to the Constitutional Reform. Our paper differs in that we focus on opening refugee centers within a municipality rather than 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 indirect contact. The different focus probably explains why we find results that go in a different direction. Finally, data on SPRAR refugee centers are provided by Gamalerio (2019), who uses data on Italian municipalities to study the effect of electoral incentives on the probability that a municipal government opens a SPRAR center. The analysis of Gamalerio (2019) suggests that the opening of refugee centers in Italian municipalities is endogenous to various observable and unobservable municipal characteristics. For this reason, in this paper, we implement an instrumental variable strategy that enables us to deal with this potential endogeneity.

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This paper also contributes to the literature that studies how the Internet and social media can have a significant effect on voting behavior and the attitudes of natives toward immigrants (Bellucci et al., 2019; Chan et al., 2016; Falck et al., 2014; Gavazza et al., 2019; Guriev et al., 2021; Müller & Schwarz, 2018, 2020; Petrova et al., 2020; Romarri, 2020; Schaub & Morisi, 2019; Zhuravskaya et al., 2020). For example, the analyses by Müller and Schwarz (2018, 2020) describe how social media can lead to an increase in hate crimes toward immigrants, respectively in Germany and the US; similar results have also been found in Russia (Petrova et al., 2020). Moreover, Guriev et al. (2021) and Schaub and Morisi (2019) provides evidence on the relationship between the Internet and the electoral support for both right-wing and left-wing populist political parties. For what concerns the Italian context, Campante et al. (2018) provide evidence of the direct effect of broadband internet on voting behavior. In contrast, Bellucci et al. (2019) demonstrate that natives support more anti-immigration parties in areas with more broadband Internet availability when they expect more migrants to arrive.[56] We contribute to this literature by showing how the effect of direct contact between refugees and natives can change across areas with different levels of access to broadband Internet.

The rest of the paper proceeds as follows. Section 4.2 describes the different allocation policies of refugees in Italy, with a specific focus on SPRAR; Section 4.3 illustrates in details the sources and the characteristics of the dataset of the analysis; Section 4.4 presents the empirical analysis, reports the main results, and provides several robustness checks; Section 4.5 proposes two channels that can potentially explain the results; and, finally, Section 4.6 concludes.

4.2. Institutional Setting: the allocation of refugees in Italy

This paper studies how the opening of refugee centers affects voting for far-right parties. Specifically, we focus on a precise type of reception center called "The Protection System for Asylum Seekers and Refugees" (SPRARs). These centers represent the second reception level, usually hosting refugees

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[56]In the same Italian context, Mastrorocco and Minale (2018) detect a decrease in the share of votes for the center-right coalition as a result of the introduction of the digital TV.

and asylum seekers coming from the first reception level. In Italy, there are three types of refugee centers that form part of the first level of reception: CPSA (*"Centri di primo soccorso e accoglienza"*, i.e., First aid and hospitality centers), CDA (*"Centri di accoglienza"*, i.e., Hospitality centers) and CARA (*"Centri di accoglienza per richiedenti asilo"*, i.e., Reception centers for asylum seekers). The Italian central government manages CPSA, CDA, and CARA, and municipal governments do not participate in these centers' management. The first level of reception's scope is to identify the migrants who have just arrived in Italy, provide the first assistance, and give them the possibility to apply for asylum. While waiting for the outcome of their application, asylum seekers are usually redistributed in second-level centers – among which the most common are the SPRARs.

Following the Arab Spring, in 2011-2013, the Italian central government opened a type of temporary center (ENA, Emergency North Africa) to host the increasing number of migrants from North Africa. Besides, since 2014, the Italian government introduced another type of center, the CAS (*"Centri di accoglienza straordinaria"*, i.e., Centers for extraordinary reception). The Italian government introduced CAS to deal with the refugee crisis and the associated increasing number of asylum seekers who have arrived in Italy in recent years (Figure 4.1). The provincial offices (*"Prefetture"*) of the Home Office manage CAS centers, and municipalities do not have powers. SPRAR and CAS centers have become the two main kinds of reception centers used in Italy in the last years. More in detail, CAS centers have provided roughly 75-80 % of all places available in reception centers. SPRAR centers approximately 15-20 %.[57]

As anticipated in Section 4.1, we focus the analysis on SPRAR centers primarily for two reasons. The first is data-related, as we can exploit a detailed dataset on SPRARs' presence and characteristics (Gamalerio, 2019; Gamalerio et al., 2020a) (See Section 4.3). The second is linked to the fact that SPRAR centers can potentially produce interactions between natives and

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[57]As an example, in April 2018, over a total of 173,150 refugees and asylum seekers, CAS centers were hosting 138,503 individuals and SPRAR centers 25,657 (sources: Openpolis and Documento di Economia e Finanza (DEF), 2018, Italian Ministry of Economy). Besides, as reported by the 2018 "Atlante SPRAR", in the same year, SPRAR centers have provided a total number of available places equal to 35,881, which have allowed SPRAR centers to host a total number of 41,113 immigrants.

immigrants that fulfill the conditions of the contact theory (Allport, 1954). Specifically, according to this theory, the direct contact between natives and immigrants can lead to a reduction in prejudice and anti-immigrant attitudes under the following four conditions: equal status between the two groups, common goals, intergroup cooperation, and authority support.

We think that the contact generated by SPRAR centers meets these conditions for a series of reasons. First, SPRARs are medium-small centers directly opened and managed by municipal governments.[58] Hence, local authorities must agree with the opening of the centers and support and encourage the interaction between the local population and the asylum seekers. Second, municipalities tend to employ the migrants hosted in public utility works, which fosters interaction between the refugees and the local population. Examples of these public utility works are providing support to the local elderly population (e.g., buy medicines and food, throw the rubbish, provide technological support, pay the bills) and kids (e.g., take them to school), or helping in cleaning and re-qualifying public spaces such as parks and communal vegetable gardens.[59] Third, SPRAR centers provide job market orientation services to refugees and asylum seekers, who may be hired by local firms and become work colleagues and friends with people in the local community.[60] Fourth, it is easy to find anecdotal evidence that describes how the opening of SPRAR centers has helped many towns keep alive local public services like schools, especially in areas with a declining population.[61]

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[58]When the Italian Home Office wants to allocate refugees and asylum seekers through the SPRAR program, it issues a tender. Table 4.A1 reports the timing of the tenders involved in our analysis. During this time span, local governments decide whether to submit a bid to open a SPRAR center on their territory. Winning municipalities are then allowed to open a SPRAR center and receive fiscal grants from the central government. These grants fund the SPRAR centers' activities, among which we find Italian language courses, health support, and job market orientation.

[59]For more information on the activities developed by SPRAR centers and the interaction between natives and refugees see the various editions of the "Atlante SPRAR" published over the years in the SPRAR web page.

[60]The "Atlante SPRAR" reports that, in 2018, 9845 migrants hosted through the SPRAR program participated in a professional training course. In the same year, 5363 refugees and asylum seekers found a job. SPRAR refugees and asylum seekers' main employment sectors were industry, agriculture, and food services.

[61]An example of this anecdotal evidence can be found in the article "Sono i profughi a far rivivere borghi abbandonati" from Linkiesta on 22/11/2014 (in Italian).

Thus, the features and the activities developed by SPRAR centers seem to fulfill the contact theory conditions of equal status, common goals, intergroup cooperation, and authority support that may lead to a reduction in anti-immigrant attitudes and voting behavior. For this reason, we think that SPRAR centers represent an exciting testing ground.[62]

Municipalities usually locate SPRAR centers in two types of buildings. First, municipalities can open SPRARs using flats that are available at the municipal level. These flats can be owned by both private citizens or by the municipal administration. Second, municipalities can locate SPRAR centers in group accommodation buildings such as homes for the disabled, elderly, orphans, and drug addicts. These are buildings that can potentially accommodate groups of people. As described below, we exploit the heterogeneous presence of group accommodation buildings at the municipal level to build an instrument for the opening of SPRAR centers (Steinmayr, 2020). Table 4.A2 describes the evolution over time of the share of SPRAR centers opened in the two different types of buildings, as described by the official SPRAR report published every year ("Atlante SPRAR").

As mentioned, we study the role of the reception center's size as one of the main heterogeneity mechanisms. The number of places available in SPRARs usually is the outcome of the interaction between municipalities and the Home Office. A municipal government willing to open a SPRAR needs to indicate in the bid the number of places that it intends to provide in the center. However, as Table 4.A3 reports, the Italian Home Office usually establishes a minimum and a maximum number of places that centers can provide. These numbers changes across tenders, and they usually depend on the size of the municipal population. As described in more detail in Section 4.5, in the empirical analysis, we exploit this institutional setup to analyze the role of the size of the reception center in affecting the natives' voting behavior.

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[62]As described in Section 4.1, in a robustness check, we include CAS centers within the treatment variable. Even though we have less detailed data and information on CAS centers, the paper's baseline results do not change when we also consider CAS centers within the treatment. Besides, as an additional robustness check, we show that the paper results do not change if we include as covariates a series of control variables that capture the presence of all the other types of reception centers in a municipality. All these robustness checks allow us to deal with the fact that SPRAR centers do not represent the only type of reception center in Italy.

We focus our analysis on the SPRAR centers opened in the period 2014-2018, which are the years during which the refugee crisis became more intense, as shown by the increasing number of asylum seekers who arrived in EU countries (Figure 4.1). In these years, also the number of municipalities that started to participate in the SPRAR program grew considerably. As shown by Table 4.A4 and Figure 4.2, 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.

4.3. Data

In our analysis, we use data coming from different sources. The first important dataset concerns the presence and characteristics of SPRAR centers. These pieces of information come from a detailed and rare dataset, recently used in the same Italian context (Gamalerio, 2019; Gamalerio et al., 2020a). This database contains comprehensive information on the SPRARs opened in both the period of interest of our analysis (i.e., the years 2014-2018) and the years before 2014. The data sources are the Italian Home Office, the official web page of the SPRAR program, and the "Briguglio archive", which reports different migration documentations. Specifically, we exploit information on the municipalities that bid for a center, the winning municipalities, the places available in any specific center, and the fiscal grants received.

Simultaneously, data on first-level reception centers (CPSA, CDA, CARA) comes from the Italian Home Office. The data on the presence of CAS and ENA refugee centers comes from the Openpolis foundation. The source used by Openpolis to reconstruct the presence of CAS and ENA centers at the municipal level is the National database of public contracts (*Banca dati nazionale dei contratti pubblici*) of the National Anti-Corruption Authority (ANAC, Autorit'a Nazionale Anti-Corruzione). Besides, Openpolis has used the web pages of the Home Office's provincial offices. As described by Openpolis, given the difficulty in obtaining data from the Italian Home Office's provincial offices, it is unclear whether this dataset on CAS and ENA centers contains complete information on all these types of centers opened at the municipal level. Moreover, this dataset does not report information on the size

of the reception centers.[63]

To construct the dependent variables of the analysis, we download the electoral outcomes for 2008, 2013, and 2018 national elections from the Italian Home Office website (*"Archivio storico delle elezioni"*). We use this data to calculate the change between elections in the vote shares of far-right parties,[64] of political parties in the center of the Italian political spectrum,[65] of the Five Stars Movement,[66] and to calculate the change in the electoral turnout. We use data for the election to the Chamber of Deputies only.[67]

Data on the group accommodation buildings comes from the Italian Statistical Office and the 2011 Census. Specifically, we collect information on the presence at the municipal level in 2011 of group accommodation buildings such as homes for the disabled, elderly, orphans, and drug addicts that can potentially accommodate groups of people. We use this data to build the instrument used to implement the identification strategy described in Section 4.4. It is worth highlighting that, using the 2011 Census, we are records the presence of group accommodations built before the years of the refugee crisis.

We also use data from the Italian Communications Guarantor Authority (in Italian "Autorità per le Garanzie nelle Comunicazioni", AGCOM) to distinguish between municipalities with low and high access to broadband internet. This data reports information at the municipal level on households' share with access to broadband Internet and information on the Internet speed measured in Mbps for all the municipalities. The year of reference for the AGCOM data is 2018.

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[63]For a very recent and comprehensive dataset on CAS, see Campo et al. (2021).

[64]We code as far-right the following political forces: Lega Nord, Fratelli d'Italia, Casa Pound, La Destra, Forza Nuova, Fiamma Tricolore, Rinfondazione Missina.

[65]We define centrist political parties the center-left Partito Democratico and the center-right Forza Italia (the party led by Silvio Berlusconi). These two political forces have been the main center-left and center-right parties for most of the Second Italian Republic years.

[66]The Five Stars Movement is a relatively new political party founded in 2009 by the comedian and activist Beppe Grillo in cooperation with the web entrepreneur Gianroberto Casaleggio. This party represents today one of the leading populist European parties, and the (short) experience in forming a government together with Lega in 2018 has hardened its position on immigration policies.

[67]This is because there is a minimum age for voters to elect the Senate. Thus, votes for the Chamber of Deputies are a preferred measurement of citizens' political preferences.

Data on municipalities' characteristics comes from the Italian Statistical Office (ISTAT). More in detail, we collect information on the municipal population, the area in squared kilometers, the altitude, the unemployment rate, the average income per capita, the location of the municipalities, the types and number of buildings, the number of no-profit association, the age structure of the municipal population, the level of education of the local population, and the share of immigrants. Data on the mayors' characteristics comes from the Italian Home Office ("Anagrafe degli Amministratori Locali"). Specifically, we collect information on the gender, age, level of education, political orientation, and election date of the mayors of all municipalities in the dataset. We use these municipal and mayoral characteristics as control variables in the analysis below.

The final sample contains 7627 Italian municipalities, for which we have data on all the relevant variables for our analysis. Table 4.1 reports the descriptive statistics of the variable of interests, while Table 4.2 displays the controls' summary statistics.

4.4. Empirical Analysis

4.4.1. Identification strategy

This paper aims to study the effect of the opening of refugee centers on the voting behavior of natives. We implement the analysis studying the effect of the SPRAR refugee centers opened in the period 2014-2018. During this period, the European refugee crisis started and escalated, with more than one million refugees and asylum seekers arriving in Europe in 2015 alone. Focusing on the period 2014-2018 enables us to study how voters' attitudes changed straight after the arrival of new refugees and asylum seekers when migration became a salient topic in politics and the media. Besides, as we can see from Table 4.A4, most of the centers opened starting from 2014, when the SPRAR program increased in size to deal with the rising number of refugees and asylum seekers arrived in Italy.

We develop the empirical analysis using the sample of all Italian municipalities for which we observe the electoral outcomes of the national elections run in the years 2013 and 2018 (i.e., the national elections just before and

just after the refugee crisis). We start the analysis by estimating the following OLS model:

$$Y_i = \alpha_0 + \alpha_1 OpenSPRAR_i + \alpha_k X_{k,i} + \epsilon_i \qquad (4.1)$$

where Y_i captures two main dependent variables. The first is equal to $\Delta_{\%} far-right 18-13 = (\% far-right_{2018}) - (\% far-right_{2013})$, which is the change in the vote shares for far-right parties between the 2018 and the 2013 national elections in municipality i. The second dependent variable is $\Delta_{\%} Forza Italia + PD 18-13 = (\% Forza Italia + PD)_{2018} - (\% Forza Italia + PD)_{2013}$, which is the change in the vote shares for centrist parties between the 2018 and the 2013 national elections in municipality i. Besides, we also look at the Five Stars Movement's vote shares and the electoral turnout.

The treatment variable is $OpenSPRAR_i$, a dummy variable equal to 1 for the municipalities that opened at least one SPRAR refugee center in the years 2014-2018 (i.e., between the 2013 and 2018 elections). The vector $X_{k,t}$ contains municipal and mayoral characteristics potentially correlated with both the dependent and the treatment variables. We cluster the standard errors at the local labor market level.[68]

Since the decision of opening a SPRAR center is endogenous, to deal with the potential biases in the OLS analysis, we turn to an instrumental variables (IV) approach. Similarly to Steinmayr (2020), we instrument the treatment variable $OpenSPRAR_i$ with the presence at the municipal level of pre-existing group accommodation. The source of these buildings is the 2011 Census, implying that we are catching structures already present before the refugee crisis. More in detail, we consider buildings such as homes for the disabled, elderly, orphans, and drug addicts that can potentially accommodate groups of people.

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[68]Labor market areas (LMAs) are 611 sub-regional geographical areas where the bulk of the labor force lives and works and where firms can find the most of the labor force necessary to occupy the offered jobs. Given their homogeneity in terms of population characteristics, we believe that clustering the errors at this level is the most natural choice. However, the results are also robust if we cluster the errors at higher spatial units, such as at the provincial level.

We start the IV analysis by running the following first stage regression:

$$OpenSPRAR_i = \gamma_0 + \gamma_1 GroupAccommodation_i + \gamma_k X_{k,i} + u_i \qquad (4.2)$$

where $GroupAccommodation_i$ is equal to 1 if municipality i was reported to have at least one group accommodation building in the 2011 Census. Hence, we run the following second stage regression:

$$Y_i = \beta_0 + \beta_1 Open\hat{S}PRAR_i + \beta_k X_{k,i} + \eta_i \qquad (4.3)$$

where $Open\hat{S}PRAR_i$ is the predicted value of $OpenSPRAR_i$ obtained from equation 4.2. The IV approach needs two main assumptions to be verified. First, it needs a strong first-stage regression, such that $GroupAccommodation_i$ correlates strongly with $OpenSPRAR_i$. The maps in Figure 4.3 provides a preliminary visual representation of this assumption. In the analysis below, we formally test for the presence of a strong first-stage regression. Second, the exclusion restriction assumption requires an exogenous instrument that can affect the dependent variable only through its effect on the endogenous treatment variable.

One might be concerned that our instrument is not exogenous and that the characteristics of municipalities with and without group accommodations are different. The presence of fixed effects at the municipal level and the extensive set of controls we introduce into our equation limit these concerns. What is actually crucial for our identification strategy is that the the instrument has an effect on voting only through SPRAR centers. We formally test this hypothesis in the reduced-form model described in Section 4.4.3. Reassuringly, we show that the presence of these buildings does not correlate with the change in vote shares between the 2008 and 2013 national elections. In contrast, their presence correlates with the vote shares between the 2013 and 2018 elections. This evidence suggests that our instrument correlates with the dependent variables only during the refugee crisis period when the group accommodation buildings could host refugees and asylum seekers.

Given these considerations, we are confident that the main parameter of interest β_1 can estimate the causal effect of opening a refugee center on natives' voting behavior.

4.4.2. Main results

Tables 4.3 and Table 4.4 provide the main results of the analysis, namely the effect of the opening of a refugee center at the municipal level on the voting outcomes at the national elections. Specifically, Tables 4.3 focuses on the change in the vote shares of far-right parties. In contrast, Table 4.4 reports the results obtained using as a dependent variable the change in the vote shares of the moderate parties. Finally, we study the impact of the opening of SPRAR on the vote shares of the Five Stars Movement and the electoral turnout: results on these outcomes are reported in Tables 4.5.

Tables 4.3 and 4.4 follow the same structure: in column 1, we report the coefficient estimated by an OLS regression. In column 2, we display the reduced-form model's coefficient, obtained regressing the dependent variable on our instrument. Columns 3 and 4 report the coefficients of the IV analysis implemented, respectively, with and without municipal and mayoral control variables. As described in more detail in Subsection 4.4.3, columns 5 and 6 look at the pre-trends, providing evidence on the validity of the exclusion restriction assumption of our instrument. The bottom Panel of Tables reports the coefficients and the F-statistics of the first stage.

We begin our analysis by looking at the effect on radical parties. The coefficient in column 1 of Tables 4.3 shows that SPRAR centers' opening during the 2014-2018 period negatively correlates with the change in the vote shares of far-right parties between the 2013 and 2018 national elections. Precisely, the presence of a SPRAR refugee center is associated with a change in the vote shares of extreme right parties that is approximately 0.7 percentage points lower.

As explained above, opening a SPRAR refugee center is endogenous to the mayor. Hence, to identify a causal effect, we run the IV model described in equation 4.3. As shown in the bottom panel of Table 4.3, the first stage is strong both with and without control variables, and group accommodation buildings and SPRARs positively correlate. Figure 4.3 provides a visual representation of this positive correlation. The coefficients of the IV analysis reported in columns 3 and 4 confirm the result of column 1. The municipalities that opened a SPRAR during the 2014-2018 period experienced a change in the vote shares of far-right parties, which is approximately 7 percentage

points lower than in municipalities that did not open a SPRAR center in the same period.

The results of Table 4.3 indicate that the opening of SPRARs hurt the electoral performance of extreme right. Given this evidence, it is interesting to investigate if other political forces benefited from the opening of the refugee centers, absorbing the vote shares lost by the far-right parties. For this reason, in Table 4.4, we repeat the same analysis for the moderate political parties (i.e., Partito Democratico and Forza Italia).

Columns 1-4 of Table 4.4 report the results of this analysis. The coefficient of the OLS analysis is small, negative, and not statistically different from zero. In contrast, the IV analysis coefficients in columns 3 and 4 are positive and statistically different from zero. More in detail, the coefficients show that the municipalities that opened a SPRAR refugee center during the 2013-2018 period experienced a change in the vote shares of the centrist parties, approximately between 3.8 and 5.4 percentage points higher compared to the changed experienced by the municipalities that did not open a SPRAR center. These results confirm that far-right parties' electoral damage after opening a refugee center mainly benefited the political forces that occupy the central area of the Italian political spectrum.

In contrast with the results of Table 4.4, the coefficient in column 3 of Table 4.5 shows that the negative effect of SPRAR refugee centers on the electoral performance of far-right parties did not benefit another important force in the Italian political arena, the Five Stars Movement. In fact, this party has never taken a clear line on immigration, so, a priori, we had no expectations about this outcome. Simultaneously, the coefficient in column 6 of Table 4.5 indicates that the opening of SPRAR centers during the 2014-2018 period did not affect significantly the electoral turnout at national elections.[69]

The OLS and IV coefficients in Tables 4.3 and 4.4 indicates the presence of a positive bias in OLS estimates when the dependent variable is the vote shares of radical right and a negative bias for the centrist parties. These biases

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[69]Results in this section focus on the intensive margin – i.e., changes in vote share. However, results are in line if we look at total votes to party x divided by the number of eligible voters (extensive margin). This analysis, together with the null result found on the electoral turnout, rules out the mobilization/demobilization effect and reinforces the idea that the effect is driven by people switching their vote.

are consistent in terms of sign and magnitude with the ones described by Steinmayr (2020) for the case of Upper Austria (where a 4 percentage points decrease in the political support for far-right parties was found). We can explain these biases in two ways.

First, even though the dataset on SPRAR centers is detailed, we cannot exclude measurement errors. As explained by Gamalerio et al. (2020a), in some cases, municipalities open SPRAR centers together, through municipalities' unions. These unions are local organizations introduced by groups of municipalities that aim to produce public goods together. In these situations, we have coded all the municipalities in the union as treated – i.e., as if they all had opened the center. However, this is not always the case, and some municipalities may have not received the refugee hosted in the center opened by the union.[70] Thus, these situations may create a measurement error that might lead to an attenuation bias, which the IV estimates tend to correct.[71]

Second, as described by Gamalerio (2019), many municipal governments are opposed to the opening of refugee centers on their territory for electoral reasons. Hence, the mayors from centrist parties who do not open SPRAR centers may attract right-wing voters' votes, subtracting the votes from radical right. This far-right voters movement could lead to a negative correlation between the opening of SPRAR centers and the vote shares of centrist parties. Hence, the OLS coefficient would be negatively biased for centrist parties and positively biased for extreme right parties.

4.4.3. Robustness checks

This section describes a series of tests that we run to check the robustness of our main results. First, we provide evidence on the validity of the exclusion

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[70]In some cases, using web resources, we could check which municipalities within the union effectively opened the SPRAR center and coded the treatment variable accordingly. Besides, we have checked that our results are robust to dropping from the analysis municipalities that opened a SPRAR center through a municipality union.

[71]In Section 4.4.3, we repeat the analysis using CAS refugee centers or a combination of CAS and SPRAR refugee centers as the treatment variable. As explained in Section 4.3, data on CAS centers are incomplete and characterized by measurement error. The fact that we observe the same attenuation bias in the analysis with CAS centers seems to reinforce the role of measurement error in biasing OLS estimates.

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restriction assumption of our instrument. Additionally, we show that the main results are not due to differential pre-treatment trends in electoral outcomes between municipalities that opened a SPRAR center and municipalities that did not. Second, we show that our results do not change if we add to the analysis control variables that capture the presence of other types of refugee centers at the municipal level. Finally, we show that we get similar results repeating the analysis using CAS refugee centers or a combination of CAS and SPRAR refugee centers as treatment variables (see Subsection 4.2 for more information on other types of refugee centers).

We report the results of the first robustness check in columns 5 and 6 of Table 4.3 for far-right parties and columns 5 and 6 of Table 4.4 for centrist parties. Columns 5 of Tables 4.3-4.4 show that the instrument does not correlate with the change in the vote shares of far-right and centrist parties between the 2008 and the 2013 elections. In contrast, columns 2 of Tables 4.3 and 4.4 show that the instrument negatively correlates with the change in the vote shares of extreme right between the 2013 and the 2018 elections and positively correlates with the change in the votes shares of centrist parties. This evidence indicates that the availability of group accommodation buildings at the municipal level started to correlate with the voting behavior only during the refugee crisis, namely when these buildings could host refugees and asylum seekers. By contrast, this correlation was not in place in the previous years when the migration inflows' magnitude was lower. Figure 4.4 provides a graphical visualization of this evidence. Besides, in columns 6 of Tables 4.3 and 4.4, we repeat the analysis using as a dependent variable the change in the vote shares of far-right and moderate parties between the 2008 and the 2013 elections. Both columns show how the treatment does not correlate with these past dependent variables. Thus, we can confidently exclude that the IV results are due to differential pre-treatment trends in electoral outcomes.

In Table 4.A5, we repeat the analysis adding as controls a series of variables that capture the presence of other types of refugee centers at the municipal level. More specifically, we control for dummy variables capturing the presence of first-level reception centers (CPSA, CDA, and CARA), CAS centers opened before and after 2014, and ENA centers. We also control for a continuous variable taken from the 2011 Census that counts the number of refugee centers hosted in the municipality's province. Besides, we control

for dummy variables equal to 1 for municipalities that have developed services that supported the activity of CAS and ENA refugee centers opened in other municipalities. As we can see from Table 4.A5, adding these control variables to our analysis leaves the results unchanged. This robustness check rules out the possibility that our results could be due to other types of refugee centers in the territory of the municipalities that opened a SPRAR center between 2013 and 2018.

Finally, in Tables 4.A6 and 4.A7, we repeat the analysis using CAS refugee centers (Table 4.A6) or a combination of CAS and SPRAR refugee centers (Table 4.A7) as treatment variable. As described in Section 4.2, CASs and SPRARs represent the main types of refugee centers in the Italian context. However, as illustrated in Section 4.3, data available on CAS centers are incomplete and likely to be characterized by measurement errors. Additionally, we do not have information on the CAS centers' size, making it possible to develop the heterogeneity analysis described below only for SPRAR centers. For these reasons, we have decided to focus the main part of the analysis on SPRARs. However, as a robustness check, we repeat the analysis including the information available on the presence of CAS centers at the municipal level in the treatment variable. Tables 4.A6 and 4.A7 confirm our results. Indeed, municipalities that underwent the opening of a CAS center or the opening of a CAS and/or a SPRAR center between 2014 and 2018 experienced a smaller change in the vote shares of far-right parties than in municipalities that did not open any refugee center in the same period.

4.5. Channels

This section explores two mechanisms that can explain the decrease in the support for the far-right parties pictured in Table 4.3. Specifically, we focus on the size of the center and the exposure to the Internet.

4.5.1. The role of the size of the center

We start by investigating how the baseline effect of SPRARs changes along with the size of the refugee centers. To develop this analysis, we collect data on the yearly number of places made available by the SPRARs opened in the

period 2014-2018. As shown in Figure 4.2, this number has been growing in recent years. Figure 4.2 also shows how the number of places available correlates with the total number of refugees and asylum seekers hosted in a specific year.

The number of places made available in a SPRAR center is usually the result of the interaction between the municipal government and the Italian Home Office. A municipal government that bids for a SPRAR center needs to indicate the size of the refugee center that it wants to open. However, as Table 4.A3 shows, the Italian Home Office usually establishes a minimum and a maximum number of places that can be made available. These numbers have been changing across tenders, and they typically depend on the municipal population.

To study how the baseline effect changes along with the centers' size, we add to model 4.3 a variable measuring the number of places in SPRARs every 1000 inhabitants (*Number S PRAR places*), made available in the period 2014-2018.[72] Given that this variable is different from zero only for municipalities with SPRARs, there is no need to interact the variable with the treatment $OpenS PRAR_i$, as such interaction term would be perfectly collinear with *Number S PRAR places*. We standardize this variable by subtracting its minimum value calculated across the municipalities that opened SPRAR centers in the period studied.[73] This standardization allows us to interpret the coefficient of $OpenS PRAR_i$ as the effect of a SPRAR center with the smallest size encountered in the data. The coefficient of the variable *Number S PRAR places* tells us how the effect changes when we add an extra-place above its minimum value.

The limitation of this exercise is that, as described above, municipal governments have a role in deciding the number of places in SPRAR centers. The interaction between *Number S PRAR places* and $GroupAccommodation_i$ is

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[72]For those municipalities that participated in more than one tender in the period studied, we kept the maximum number of places across tenders. For those municipalities that opened the SPRAR center through a union of towns, we divided the number of places equally across the municipalities within the union. The heterogeneity analysis results do not change if we drop the municipalities that opened the center through a union.

[73]More in detail, the smallest dimension for a SPRAR center found in the data is 0.02 places every 1000 inhabitants. The maximum size is 199 places every 1000 inhabitants, and the average size is 5.7 places every 1000 inhabitants.

thus potentially endogenous. To deal with this issue, we exploit the rules described in Table 4.A3. More in detail, we repeat the exercise instrumenting *Number S PRAR places* with the formal maximum number of places (*Max S PRAR places*) that the municipalities could potentially pick depending on the tender in which they participated and on the dimension of their population.[74] For the municipalities that did not open a SPRAR center, we fix *Max S PRAR places* as equal to the average of the caps imposed by the different tenders.

Results of these exercises are reported in Table 4.6. More in detail, Column 1 displays the paper's baseline result, which we use as a point of reference. In column 2, the endogenous variables are $OpenS PRAR_i$ and *Number S PRAR places*, and the instruments are $GroupAccommodation_i$ and its interaction term with *Number S PRAR places*. In column 3, the endogenous variables are $OpenS PRAR_i$ and *Number S PRAR places*, and the instruments are $GroupAccommodation_i$ and *Max S PRAR places*. The results in columns 2 and 3 of Table 4.6 show that the effect of a SPRAR center with the smallest size is negative, and it is similar to the baseline effect in column 1. The positive and statistically significant coefficients in front of the variables capturing the SPRAR centers' size indicate that this negative effect becomes smaller when the center's size increases.

Figure 4.5 provides a graphical representation of this evidence. The negative effect of SPRARs becomes smaller when the size of the centers increases, and it eventually becomes positive above a certain threshold. More specifically, we find that SPRAR centers' effect on radical right vote shares becomes positive and statistically different from zero for a number of places every 1000 inhabitants equal to 28. This result is consistent with the evidence provided by (Vertier & Viskanic, 2019) for France. This evidence indicates that, when the dimension of the refugee group becomes too big, natives could perceive refugees and asylum seekers as a potential threat for their economic, cultural, and social dominance, as suggested by the "realistic group conflict theories" (Campbell, 1965; Dustmann et al., 2019; Lahav, 2004; Quillian, 1995; Sidanius & Pratto, 1999; Taylor, 1998). The policy implication is that

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[74]This number is the one indicated in column 3 of Table 4.A3. For example, for a municipality with 25,000 inhabitants that opened a SPRAR center during tender 2, *Max S PRAR places* is 30. We used the maximum number across tenders for municipalities that participated in more than one tender in the period studied.

governments should try to allocate refugees and asylum seekers through more diffuse and smaller refugee centers.

4.5.2. The role of the Internet

The second mechanism that we investigate in this paper is the role of access to broadband Internet. As shown by recent literature (Bellucci et al., 2019; Chan et al., 2016; Falck et al., 2014; Gavazza et al., 2019; Guriev et al., 2021; Müller & Schwarz, 2018, 2020; Petrova et al., 2020; Romarri, 2020; Schaub & Morisi, 2019), the Internet and social media can have a significant effect on voting behavior and the attitudes of natives toward immigrants. Based on the evidence in the existing literature, we can expect the negative effect of SPRAR refugee centers on voting for far-right parties to be smaller in areas with greater Internet exposure. To evaluate the role of broadband technology, we use data from AGCOM, measured in 2018. We use three different measures for access to the Internet at the municipal level. These measures allow us to distinguish between municipalities with low access and high broadband access.

The first measure provided by AGCOM is the average speed (Mbps) of broadband Internet at the municipal level. We distinguish between municipalities with an average speed below the median and municipalities with an average speed above the median. Panel A of Table 4.7 reports the results of this exercise. The other two measures used in the analysis are similar to the ones used by Campante et al. (2018). Specifically, these two measures follow two categorical variables provided by AGCOM. The first variable is the share of households with access to broadband with speed above 0 Mbps. The variable can take six values in the following brackets: 0 %, 1-50 %, 51-75 %, 76-85 %, 86-95 %. and above 95 %. The second variable is the share of households with access to broadband with speed above 2 Mbps, and take six values in the same brackets. We divide the municipalities between those with values of the categorical variables below and above 4 (i.e., with at least 76 % of households with broadband access).[75] Panel B and C of Table 4.7 report

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[75]We tried to divide the sample using other values of the two categorical variables, and we got consistent results. We selected the value four because this is the one that allows us to get a strong first stage for both samples. The strong first stages enable us to get more reliable IV estimates.

the results obtained using these two measures for broadband internet access.

We find that municipalities with low Internet access drive the negative effect of SPRAR refugee centers on extreme right' electoral performance. The coefficient in column 2 of Panel A of Table 4.7 is negative, statistically significant, and with a bigger magnitude than the one of the coefficient in column 3. Besides, the coefficient in column 3 of Panel A is not statistically different from zero. The results in Panel B and C provide a similar picture. The coefficients in column 2 are negative, statistically significant, and with a magnitude approximately double of the coefficients in column 3. None of the two coefficients in column 3 of Panel B and C are statistically different from zero.

The results in Table 4.7 indicate that the direct contact between refugees and natives on voting outcomes is significant only in municipalities with low access to broadband Internet. The fact that this effect is smaller and not distinguishable from zero in municipalities with high broadband access indicates that the Internet can reduce the impact of direct contact on the attitudes of natives toward immigrants. This evidence is consistent with recent literature (Bellucci et al., 2019; Guriev et al., 2021; Müller & Schwarz, 2018, 2020; Petrova et al., 2020; Schaub & Morisi, 2019) which shows how the Internet and social media had an important role in explaining the surge in hate crimes toward immigrants and the increasing support for far-right parties with an anti-immigrant agenda. The results in Table 4.7 are connected with the results provided by Bellucci et al. (2019) who, using data from Italy, show that in places with higher broadband access, natives support more anti-immigration parties when they expect more migrants to arrive. However, differently from them, we show that the macro-level exposure provided by the Internet can also interact with actual migration inflows, besides that with perceived levels of migration by part of natives.

In conclusion, the evidence in Table 4.7 suggests that the macro-level exposure that works through the salience of the migration issue in the media can offset the effect of the micro-level exposure fostered by the direct contact between natives and migrants. As suggested by the literature, this is likely to happen through social media and the Internet's role in diffusing fake news and supporting populist and radical political parties' electoral campaigning.

4.6. Conclusion

This paper shows that hosting refugees can hurt the electoral performance of far-right and anti-immigration political parties. It also shows how the effect can vary with the size of the immigration inflow and the exposure to the Internet. The results of this paper call for future research for three reasons.

First, this paper focuses on one type of refugee center – i.e., SPRARs. SPRARs are medium-small refugee centers that, based on the anecdotal evidence, seem to work properly in terms of integration of the migrant population host and interaction between migrants and natives. As described above, we also show that our results do not change when considering another type of center, CAS refugee centers, within our treatment variable. CASs are, on average, bigger than SPRARs, and, following the anecdotal evidence, they do not seem to work well as much as SPRARs. Unfortunately, as already explained, the data on these centers used in this paper are incomplete. Specifically, the dataset may not contain information on all the CASs opened across Italy, and it does not contain information about the characteristics of the centers. It would be interesting if future research could replicate the analysis for CASs, especially looking at the centers' characteristics. This analysis would allow researchers to study how the effect of these centers changes along with their features.[76]

Second, we develop the analysis using data aggregated at the municipal level. A goal for future research could be to collect data on the exact location of refugee centers within the municipal territory. This kind of data could potentially allow the researchers to investigate further the mechanisms behind the impact of refugees' reception on the attitudes of natives toward migrants.

Finally, we have studied the Internet's role only by looking at the accessibility to broadband. We think that future research should dig more into the mechanisms behind the role of the Internet and its interaction with immigration inflow, for example, looking at the role of social media and fake news and how they interact with immigrants' presence.

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[76]For a very recent and interesting working paper on this analysis, see Campo et al. (2021).

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Appendix A: List of Figures

Figure 4.1: Number asylum seekers in EU Countries
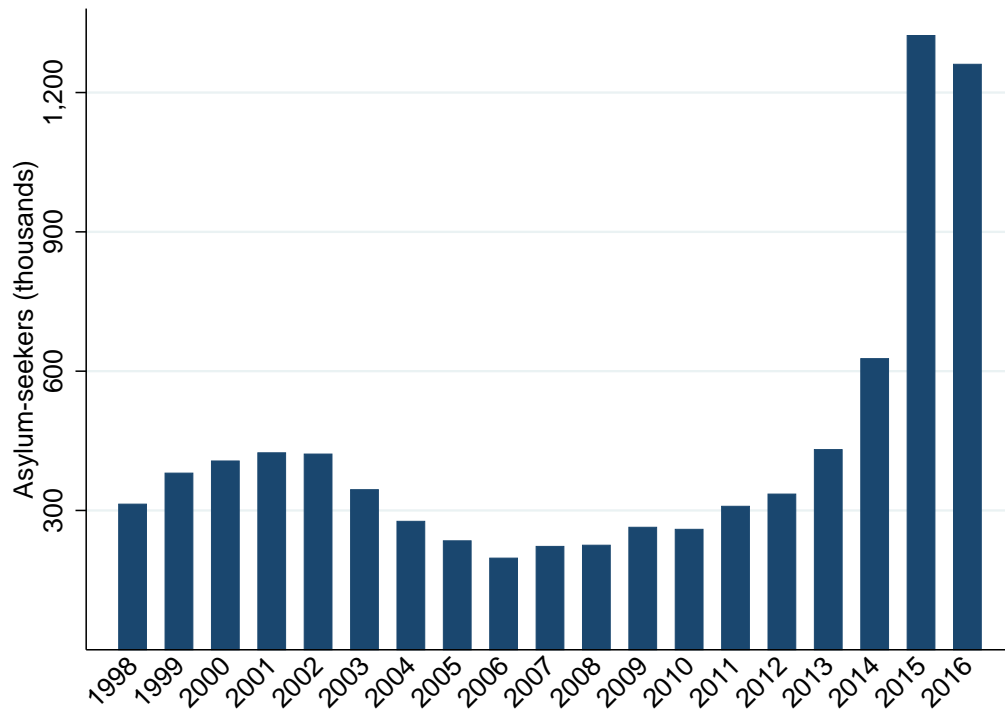
Asylum-seekers in EU Countries (thousands). Source: Eurostat.

Figure 4.2: Number of places and refugees in SPRAR centers
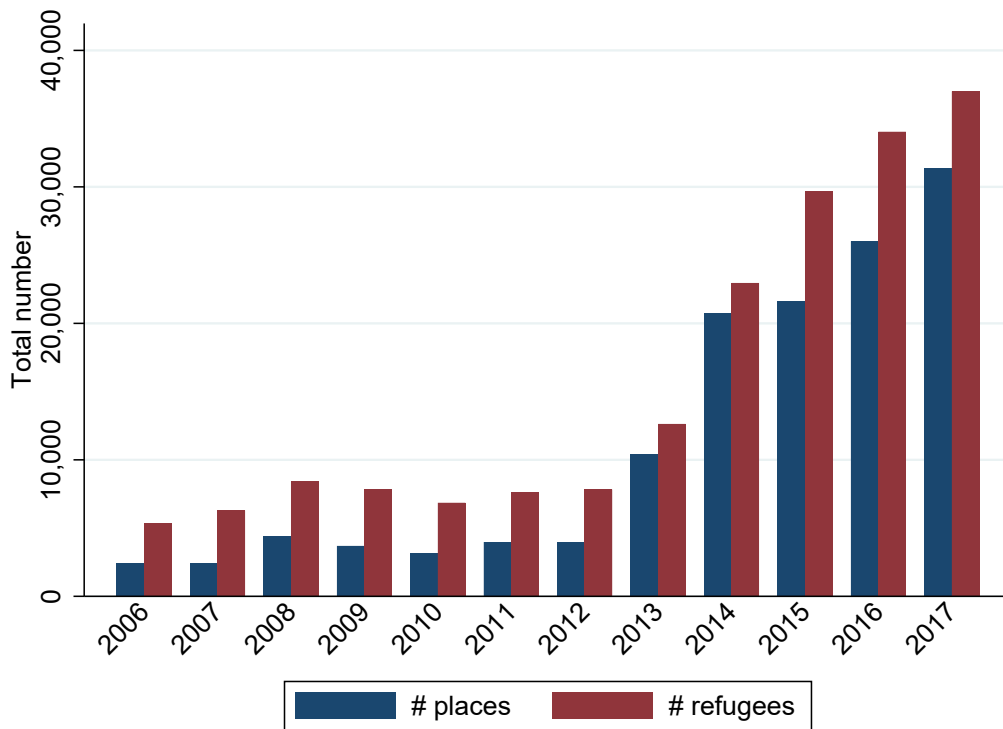
Sources: Gamalerio (2019) and SPRAR report "Atlante Sprar", published on the SPRAR webpage sprar.it. The graph reports the number of places made available and the number of refugees and asylum seekers hosted every year from 2006 up to 2017.

Figure 4.3: Location of Sprar refugee centers and group accommodation buildings
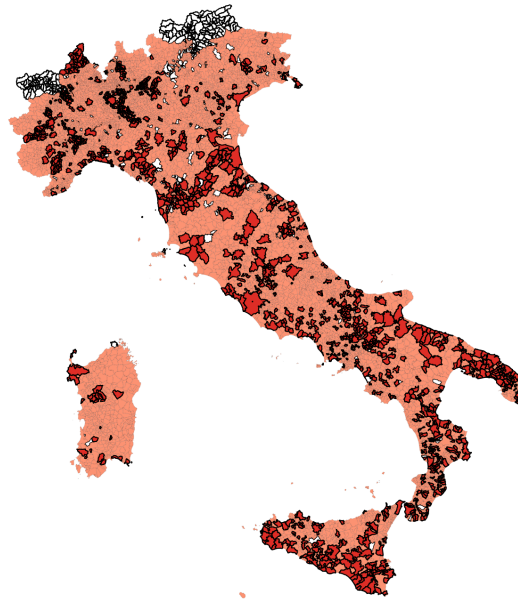
SPRAR refugee centers

Group accommodation buildings

Sources: Gamalerio (2019) and 2011 Census. Municipalities in white not included in the analysis because of missing data.

Figure 4.4: Reduced form coefficients
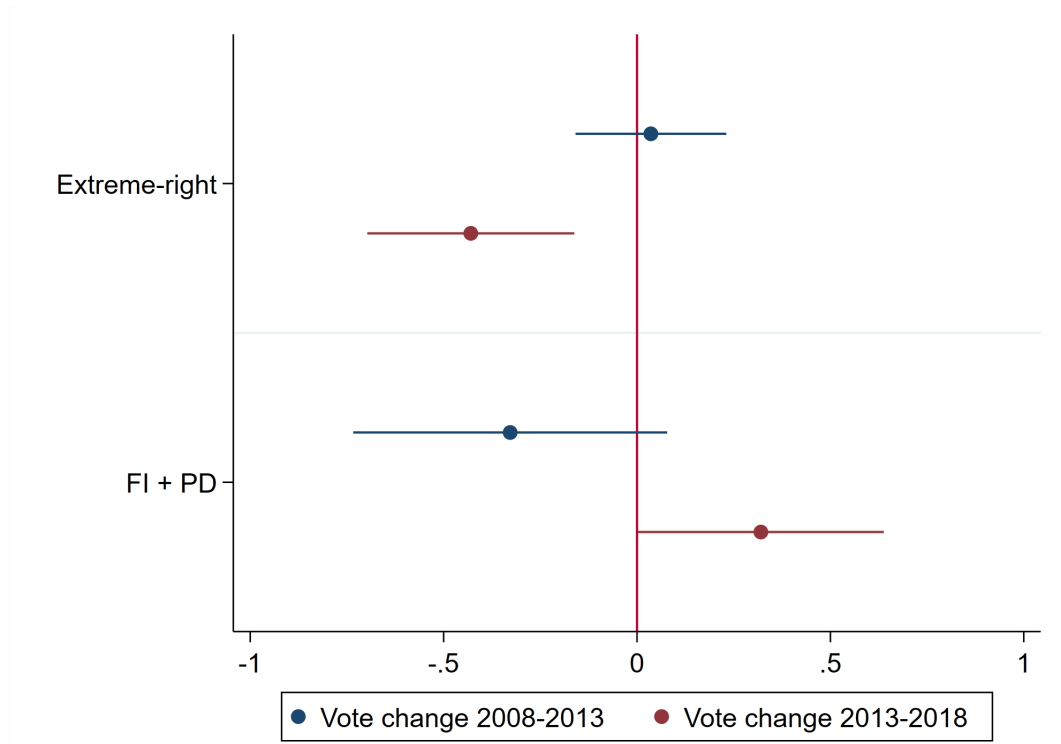
Each point represents the estimated coefficient of the reduced form, with 95% c. i. shown. All the regressions include macro area fixed effects, municipal and mayor controls.

Figure 4.5: Effect of SPRAR centers and size of the center
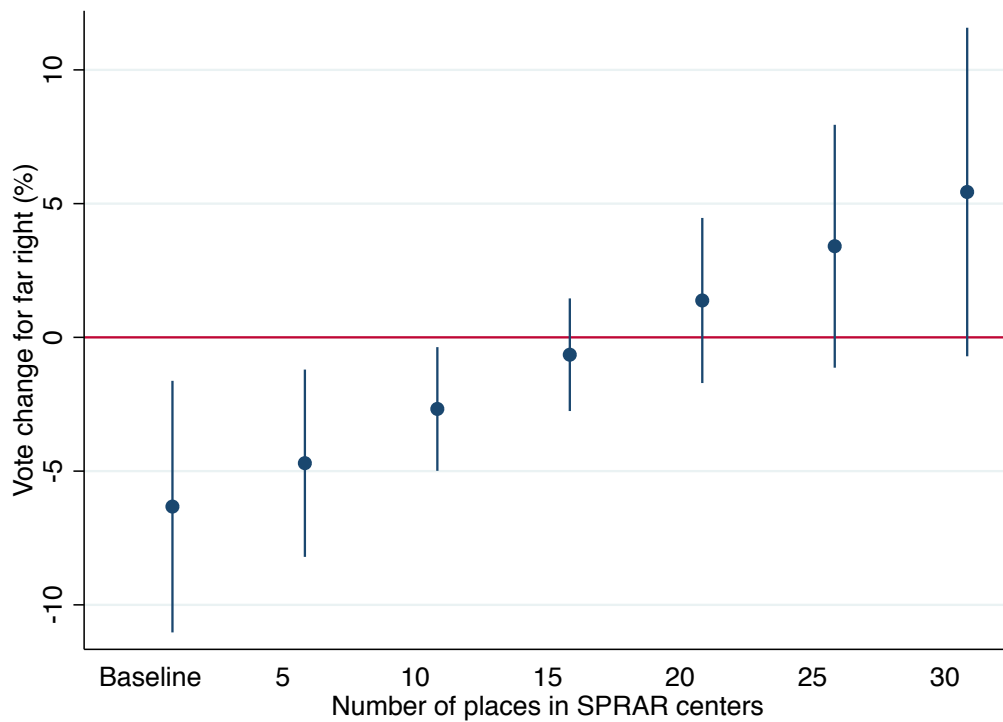
The Figure shows how the coefficient of SPRAR centers' effect on the vote shares of far-right parties changes with the size of the SPRAR center. The y-axis reports the change in far-right parties' vote shares between the 2013 and 2018 national elections. The x-axis reports the number of places every 1000 inhabitants made available in SPRAR centers. The dot captures the magnitude of the effect for a different number of places, and the blue vertical lines the 95% confidence intervals. The coefficient for baseline refers to SPRAR centers with the smallest number of SPRAR center every 1000 inhabitants.

Appendix B: List of Tables

Table 4.1: Summary statistics – Variables of interest

	count	mean	sd	min	max
Dep. Variables - Vote change between 2013-18 elections:					
Far-Right	7627	17.800	7.569	-12.950	63.636
FI + PD	7627	-16.708	6.584	-55.328	23.070
5SM	7627	3.787	10.160	-35.326	46.818
Turnout	7461	1.672	4.006	-43.258	41.212
Variables of interest:					
Open Sprar	7627	0.189	0.392	0.000	1.000
Dummy Accommodation (2001)	7627	0.401	0.490	0.000	1.000
Number of place in Sprar	7627	5.477	43.066	0.000	1941.176
Average Internet Speed	7627	9.328	3.528	0.000	17.268

Table 4.2: Summary statistics – Controls

	count	mean	sd	min	max
Controls:					
Open SPRAR before 2013	7627	0.027	0.161	0.000	1.000
% small buildings (2011)	7627	0.790	0.104	0.169	1.000
% not used buildings (2011)	7627	0.055	0.052	0.000	0.685
No profit organisations	7627	0.006	0.004	0.000	0.067
Population (2011)	7627	7619	40890	30	2617175
Surface (kmq)	7627	37.193	50.373	0.121	1287
Altitude	7627	341.115	280.963	0.000	2035
Unemployment rate (2011)	7627	0.105	0.063	0.008	0.422
% of college over total population	7627	0.074	0.028	0.000	0.291
% foreign pop (2011)	7627	0.059	0.042	0.000	0.367
Income per capita	7627	11879	3170	3267	34320
% younger than 14 (2011)	7627	0.131	0.027	0.000	0.237
% older than 65 (2011)	7627	0.228	0.058	0.055	0.620
Distance to closest capital city	7627	230	13	0	209
Female mayor	7627	0.138	0.316	0.000	1.000
Age of mayor	7627	52.395	9.700	25.286	84.857
Mayor graduated at university	7627	0.473	0.453	0.000	1.000
Far right Mayor	7627	0.034	0.160	0.000	1.000
Year term	7627	2.304	0.649	0.000	3.857

Table 4.3: Refugees reception and voting for far-right parties

Dep. Variable:		Δ % far-right 18-13			Δ % far-right 13-08	
	(1)	(2)	(3)	(4)	(5)	(6)
Open Sprar	-0.674**		-7.868***	-7.316**		0.611
	(0.265)		(1.672)	(2.924)		(2.417)
Accomodations		-0.430***			0.036	
		(0.136)			(0.143)	
Model	Ols	Red. Form	IV	IV	Red. Form	IV
F-Test			80.87	17.61		17.61
First Stage			0.111***	0.059***		0.059***
Controls:	Yes	Yes	No	Yes	Yes	Yes
N:	7627	7627	7627	7627	7627	7627

Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, SPRAR already open before 2013, % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4.4: Refugees reception and voting for centrist parties

Dep. Variable:		Δ % FI + PD 18-13			Δ % FI + PD 13-08	
	(1)	(2)	(3)	(4)	(5)	(6)
Open Sprar	-0.0755		3.803**	5.453*		-5.583
	(0.308)		(1.706)	(3.050)		(4.480)
Accomodations		0.320**			-0.328	
		(0.162)			(0.258)	
Model	Ols	Red. Form	IV	IV	Red. Form	IV
F-Test			80.87	17.61		17.61
First Stage			0.111***	0.059***		0.059***
Controls:	Yes	Yes	No	Yes	Yes	Yes
N:	7627	7627	7627	7627	7627	7627

Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, SPRAR already open before 2013, % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4.5: Refugees reception and other political outcomes

Dep. Variable:	Δ % 5SM 18-13			Δ % Turnout 18-13		
	(1)	(2)	(3)	(4)	(5)	(6)
Open Sprar	0.364		-1.276	-0.283		-1.717
	(0.351)		(2.807)	(0.179)		(2.512)
Accomodations		-0.075			-0.066	
		(0.164)			(0.094)	
Model	Ols	Red. Form	IV	Ols	Red. Form	IV
F-Test			17.61			16.27
First Stage			0.059***			0.059***
Controls:	Yes	Yes	Yes	Yes	Yes	Yes
N:	7627	7627	7627	7162	7162	7162

Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, SPRAR already open before 2013, % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4.6: Refugees reception and voting for far-right parties – Size refugee centers

	(1)	(2)	(3)
Open Sprar	-7.316**	-6.733***	-6.745**
	(2.924)	(2.560)	(2.642)
Number Sprar places		0.406**	0.397**
		(0.177)	(0.201)
F-Test	17.61	13.01	11.33
Mun. Contr.:	Yes	Yes	Yes
N:	7627	7627	7627

IV Regressions. Dependent Variable: Δ vote share far-right 2018-2013. Instrumental variables: a) in column 1, the instrument is the presence of group accommodation buildings ($GroupAccommodation_i$); b) in column 2, the instruments are $GroupAccommodation_i$ and its interaction term with $Number\,S\,PRAR\,places$; c) in column 3, the instruments are $GroupAccommodation_i$ and $Max\,S\,PRAR\,places$. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, SPRAR already open before 2013, % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market level in parentheses. Significance levels: $^{*}\,p < 0.1$, $^{**}\,p < 0.05$, $^{***}\,p < 0.01$.

Table 4.7: Refugees reception and voting for far-right parties – Internet

Panel A: speed broadband internet

	(1)	(2)	(3)
Open Sprar	-7.316**	-11.41***	-1.244
	(2.924)	(4.192)	(3.358)
Sample	All centers	Slow internet	Fast internet
F-Test	17.61	11.80	8.35
Mun. Contr.:	Yes	Yes	Yes
N:	7627	3813	3814

Panel B: % households with broadband speed > 0 Mbps

	(1)	(2)	(3)
Open Sprar	-7.316**	-11.49**	-4.840
	(2.924)	(5.104)	(3.187)
Sample	All centers	Low access	High access
F-Test	17.61	10.92	11.53
Mun. Contr.:	Yes	Yes	Yes
N:	7627	1602	6025

Panel C: % households with broadband speed > 2 Mbps

	(1)	(2)	(3)
Open Sprar	-7.316**	-10.67**	-4.460
	(2.924)	(4.575)	(3.287)
Sample	All centers	Low access	High access
F-Test	17.61	11.10	10.44
Mun. Contr.:	Yes	Yes	Yes
N:	7627	2383	5244

IV Regressions. Dependent Variable: Δ vote share far-right 2018-2013. Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal and mayor controls: see Table 4.3. Standard errors clustered at the local labor market level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix C: Additional Tables

Table 4.A1: SPRAR tenders timing

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	2017	-	-	-	2017-2020

Sources: Gamalerio (2019), Gamalerio et al. (2020a), Home Office and SPRAR. Description columns: 1) Column 1 indicates the number of the tender assigned for this paper; 2) Column 2 reports the year in which the tender is issued by the Home Office; 3) Column 3 indicates the starting date of the tender; 4) Column 4 reports the deadline for application to the tender; 5) In column 5, we find he date of opening of the refugee center; 6) The refugee center is active in the years in column 5. The last row (i.e., tender 5) refers to year 2017, during which the Italian Home Office accepted bids for SPRAR centers on a rolling basis (see Ministerial Decree 10 August 2016, n. 200).

Table 4.A2: Types of structures used for SPRAR refugee centers (%)

Type	2013	2014	2015	2016	2017	2018
Flats	75	80	82	83.1	83.8	86.2
Group Accommodations	25	20	18	16.9	16.2	13.8

Sources: Atlante SPRAR

Table 4.A3: Number of places in refugee centers by tender

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

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

Table 4.A4: Number of SPRAR municipalities

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

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' center 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' center), while exit (column 5) indicates the number of municipalities that leave the SPRAR program in a specific year (i.e. municipalities that close refugees' center).

Table 4.A5: Refugees reception and voting for far-right parties – Control for first-level reception centers

Dep. Variable:		Δ % far-right 18-13			Δ % far-right 13-08	
	(1)	(2)	(3)	(4)	(5)	(6)
Open Sprar	-0.660***		-7.868***	-8.047**		0.211
	(0.255)		(1.672)	(3.318)		(2.493)
Accomodations		-0.436***			0.0114	
		(0.136)			(0.136)	
Model	Ols	Red. Form	IV	IV	Red. Form	IV
F-Test			80.87	15.04		15.04
First Stage			0.111***	0.054***		0.054***
Mun. Contr.:	Yes	Yes	No	Yes	Yes	Yes
N:	7627	7627	7627	7627	7627	7627

Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, SPRAR already open before 2013, % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education, first level reception center, CAS refugee center (since 2014), CAS refugee center (before 2014), ENA refugee center, migrant centers at provincial level (Istat), CAS services (since 2014), CAS services (before 2014), ENA services. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4.A6: Refugees reception and voting for far-right parties – CAS Only

Dep. Variable:		Δ % far-right 18-13			Δ % far-right 13-08	
	(1)	(2)	(3)	(4)	(5)	(6)
Open Cas from 2014	0.387		-7.650***	-12.60***		0.977
	(0.243)		(1.466)	(4.727)		(4.094)
Accomodations		-0.438***			0.034	
		(0.136)			(0.143)	
Model	OLS	Red. Form	IV	IV	Red. Form	IV
F-Test			169.64	19.13		19.13
First Stage			0.114***	0.035***		0.035***
Mun. Contr.:	Yes	Yes	No	Yes	Yes	Yes
N:	7627	7627	7627	7627	7627	7627

Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, CAS already open before 2014, % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market level in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4.A7: Refugees reception and voting for far-right parties – SPRAR and CAS

Dep. Variable:		Δ % far-right 18-13			Δ % far-right 13-08	
	(1)	(2)	(3)	(4)	(5)	(6)
Open Sprar and/or Cas	-0.247		-5.508***	-5.133***		0.410
	(0.219)		(1.089)	(1.854)		(1.686)
Accomodations		-0.432***			0.034	
		(0.136)			(0.143)	
Model	OLS	Red. Form	IV	IV	Red. Form	IV
F-Test			152.21	33.84		33.84
First Stage			0.158***	0.084***		0.084***
Mun. Contr.:	Yes	Yes	No	Yes	Yes	Yes
N:	7627	7627	7627	7627	7627	7627

Instrumental variable: presence of group accommodation buildings. All regressions include macro-area fixed effects. Municipal controls: population, population squared, area, altitude, unemployment rate, average income per capita, distance from capoluogo, SPRAR already open before 2013, CAS already open before 2014 % of small buildings, % of empty buildings, number of no profit association per capita, % people aged >64, % people aged >15, % foreign population, % of people with college education. Mayors controls: gender, age, dummy equal to one if mayor has a post-graduate education, dummy equal to one if mayor belongs to the far right, year of the electoral term, year of the electoral term squared. Standard errors clustered at the local labor market in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

5. GENERAL CONCLUSIONS

On an early summer night in 2019, the vessel Sea-Watch 3, carrying 42 migrants rescued off the Libyan coast, forced the blockade of the Italian navy and docked at the port of Lampedusa after more than 17 days of waiting and agony for the migrants on board. Twitting vehemently, the most important representative of the Italian far-right, the then Minister of the Interior Matteo Salvini, attacked several times Captain Carola Rackete, immediately arrested after the unauthorized boarding. This event, followed by media worldwide, perfectly sums up how extreme the level of polarization on immigration has become. In this dissertation, I focused on the three main elements of the story: support for the far-right, immigrants, and the media.

Understanding what drives individuals to vote for parties or individuals who have often used violent rhetoric toward women and minorities and enacted discriminatory laws is critical. Simultaneously, it is crucial to comprehend what tools these political forces use to gain consensus and, even more relevant, the consequences of having these parties in power.

This dissertation attempted to provide answers to the points listed above. Using different empirical techniques and analyzing different European settings, I aimed to enlarge the knowledge on the causes and consequences of the political success of far-right parties, how the new media influence citizens' opinions, and which political parties have been advantaged (or harmed) from the recent paradigm shift in the communication process. The unifying theme of the chapters was the focus on immigration – and, more specifically, on the relationship, analyzed in various aspects, between natives and immigrants.

I started by asking whether the ability to access a potentially unlimited and relatively affordable medium of information – the Internet – changed the knowledge that natives have about migration patterns in their own country. Indeed, surveys and academic literature have found a strong misperception of natives, who vastly overestimate the number of foreigners in the country. Besides, natives think immigrants are culturally and religiously more distant from them and are economically weaker – less educated, more unemployed,

and more reliant on and favored by government transfers – than is the case (Alesina et al., 2018). The second chapter of my dissertation, *"Does the Internet change attitudes toward immigrants? Evidence from Spain"*, showed that people exposed to the early Internet (from 2008 to 2012) are associated with a better knowledge of the (national) migration trends; additionally, the possibility to go online is responsible for an overall improvement in attitudes toward immigrants. The analysis, set in Spain, exploited a unique and confidential survey dataset and combined a difference-in-differences method with an instrumental variable approach. In the second part of the analysis, I demonstrated that access to the Internet generates a decrease in the political support for the traditional Spanish right-wing party using both survey data and real electoral outcome.

Having extreme parties (or individuals) in power is no longer a remote possibility but a reality. This is the case both at the national and local levels. Understanding the effects on economic and social outcomes of these governments is both essential and underdeveloped in the literature. In the third chapter of my dissertation, *"Do far-right mayors increase the probability of hate crimes? Evidence from Italy"*, I aimed to contribute to this emerging research area by focusing on the effect of electing local politicians on hate crimes against immigrants. Hate crimes are soaring in many countries, and many argue that a close relationship exists between the increased support for extremist parties and acts of violence toward immigrants and other minorities. To empirically test this hypothesis, I used an RD approach, and I focused on the Italian context, where the presence of candidates belonging to anti-immigrant parties is significant and widespread in the territory. As a main result, I showed that in municipalities where extreme right-wing mayors are elected, the probability that a hate crime occurs is significantly higher. Municipalities with higher Internet access drive this effect; additionally, I demonstrated that the election of an extreme right mayor generates a change in behavior also in the surrounding municipalities.

One element that many argue has contributed to the success of far-right parties is the recent refugee crisis that European countries have faced, primarily as a result of the Arab Springs and the violence that has resulted from them. Anti-immigrant parties have exploited this abnormal arrival of asylum seekers to increase the fear of natives and gain votes. However, this

technique has not always proven successful. In the fourth chapter of this dissertation, *"Is this the real-life or just fantasy? Refugee reception, extreme right voting, and broadband internet"*, we studied the effect of a specific policy of relocation of asylum seekers in Italy (SPRAR) that involves opening medium-small centers and offering refugees the opportunity to interact with members of the local community. This micro-exposure to refugees had significant consequences on the voting choices of natives: using an instrumental variable approach, we showed that support for far-right parties is reduced in municipalities where a SPRAR center has been opened. However, this micro-exposure effect is smaller in higher macro-exposure areas to migrant news – i.e., in higher Internet exposure areas.

There are three takeaways from this dissertation. First, it is essential to point out how easily the Internet can convert from a medium that increase the population level of awareness (Chapter 2) to an echo chamber that raises citizens' fears (Chapter 4) and pushes them to behave violently (Chapter 3). If this has been proven to be true for traditional media, such as newspapers and TV, this issue is even more delicate with the possibility of going online, considering the highly self-segregated news platform provided by the Internet. This opens the door to potential strands of research on the supply of extremist parties and the characteristics of their representatives (Gennaro et al., 2021). A natural question is why non-extremist parties have failed lately to offer equally charismatic leaders. Besides, since there is an emerging consensus that populists have pursued successful communication strategies, often via social media and the Internet, an additional related question is why mainstream parties are not able to follow suit.

Second, as we expect more and more extremist parties to come to power in the near future, careful analyses of their governments' impact are crucial. These should focus on traditional economic outcomes, such as investments, trade, and wages. However, as demonstrated by the third chapter, these analyses should also assess the effect of extremist governments on elements that ensure freedoms essential to democracies, such as the independence of media and judicial bodies and the quality of their bureaucrats (Bellodi et al., 2021). It is pivotal to monitor whether these administrations are responsible for discrimination in labor access, health care, and education. At the same time, future research should focus on how mainstream governments can defend

themselves against the threat of the arrival of extremist parties.

Lastly, a final thought on the management of refugees and, more generally, migration policies in Europe is necessary. Despite being a controversial topic, the evidence suggests that the aggregate economic impact of immigration on receiving countries is likely to be positive (Peri, 2016). However, to dismantle extremist parties' rhetoric, which associates the presence of migrants with negative social repercussions related to crime, the drain of social welfare benefits, and cultural differences, two elements are necessary. First, increase the level of awareness among the local population. Second, as highlighted by the fourth chapter, implement reception policies that generate integration and interaction between natives and immigrants.

BIBLIOGRAPHY

Albornoz, F., Bradley, J., & Sonderegger, S. (2020). The brexit referendum and the rise in hate crime; conforming to the new norm. *CeDEx Discussion Paper Series ISSN 1749-3293*.

Alesina, A., Miano, A., & Stantcheva, S. (2018). Immigration and redistribution. *NBER Working Paper 24733*.

Algan, Y., Guriev, S., Papaioannou, E., & Passari, E. (2017). The european trust crisis and the rise of populism. *Brookings Papers on Economic Activity*, *2017*(2), 309–400.

Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of economic perspectives*, *31*(2), 211–36.

Allport, G. (1954). The nature of prejudice. *Addison-Wesley*.

Alonso-Borrego, C., Garoupa, N., & Vázquez, P. (2012). Does immigration cause crime? evidence from spain. *American law and economics review*, *14*(1), 165–191.

Barone, G., D'Ignazio, A., de Blasio, G., & Naticchioni, P. (2016). Mr. rossi, mr. hu and politics. the role of immigration in shaping natives' voting behavior. *Journal of Public Economics*, *136*, 1–13.

Barone, G., & Kreuter, H. (2020). Low-wage import competition and populist backlash: The case of italy. *European Journal of Political Economy*, 101970.

Barrera, O., Guriev, S., Henry, E., & Zhuravskaya, E. (2020). Facts, alternative facts, and fact checking in times of post-truth politics. *Journal of Public Economics*, *182*, 104123.

BBC. (2020). Us hate crime highest in more than a decade - fbi.

Bellodi, L., Morelli, M., & Vannoni, M. (2021). The costs of populism for the bureaucracy and government performance: Evidence from italian municipalities. *BAFFI CAREFIN Centre Research Paper*, (2021-158).

Bellucci, D., Conzo, P., & Zotti, R. (2019). Perceived immigration and voting behavior. *Working Paper*.

Benesch, C., Loretz, S., Stadelmann, D., & Thomas, T. (2019). Media coverage and immigration worries: Econometric evidence. *Journal of Economic Behavior & Organization*, *160*, 52–67.

Berman, S., & Kundnani, H. (2021). The cost of convergence. *Journal of Democracy*, *32*(1), 22–36.

Bove, V., Elia, L., Ferraresi, M., et al. (2019). Immigration, fear of crime and public spending on security. *CAGE WP*, *424*.

Bracco, E., De Paola, M., Green, C. P., & Scoppa, V. (2018). The effect of far right parties on the location choice of immigrants: Evidence from lega nord mayors. *Journal of Public Economics*, *166*, 12–26.

Bratti, M., Deiana, C., Havari, E., Mazzarella, G., & Meroni, E. (2021). Geographical proximity to refugee reception centres and voting. *Journal of Urban Economics (Forthcoming)*.

Bruns, C., & Himmler, O. (2011). Newspaper circulation and local government efficiency. *Scandinavian Journal of Economics*, *113*(2), 470–492.

Bursztyn, L., Egorov, G., & Fiorin, S. (2020). From extreme to mainstream: The erosion of social norms. *American Economic Review*.

Calonico, S., Cattaneo, M. D., & Titiunik, R. (2014). Robust nonparametric confidence intervals for regression-discontinuity designs. *Econometrica*, *82*(6), 2295–2326.

Campante, F., Durante, R., & Sobbrio, F. (2018). Politics 2.0: The multifaceted effect of broadband internet on political participation. *Journal of the European Economic Association*, *16*(4), 1094–1136.

Campbell, D. T. (1965). Ethnocentric and other altruistic motives. *in David Levine (ed.), Nebraska Symposium on Motivation, Lincoln: University of Nebraska Press*.

Campo, F., Giunti, S., & Mendola, M. (2021). The refugee crisis and right-wing populism: Evidence from the italian dispersal policy. *IZA Discussion Paper No. 14084*.

Carrasco, R., Jimeno, J. F., & Ortega, A. C. (2008). The effect of immigration on the labor market performance of native-born workers: Some evidence for spain. *Journal of Population Economics*, *21*(3), 627–648.

Carril, A., Cazor Katz, A., Gerardino, M. P., Litschig, S., & Pomeranz, D. (2017). Rddsga: Stata module to conduct subgroup analysis for regression discontinuity designs.

Cattaneo, M. D., Jansson, M., & Ma, X. (2016). Rddensity: Manipulation testing based on density discontinuity. *The Stata Journal (ii)*, 1–18.

Chan, J., Ghose, A., & Seamans, R. (2016). The internet and racial hate crime: Offline spillovers from online access. *MIS Quarterly*, *40*(2), 381–403.

Cobham, A., & Jansk, P. (2019). Measuring misalignment: The location of us multinationals? economic activity versus the location of their profits. *Development Policy Review*, *37*(1), 91–110.

Colantone, I., & Stanig, P. (2018). The trade origins of economic nationalism: Import competition and voting behavior in western europe. *American Journal of Political Science*, *62*(4), 936–953.

Colussi, T., Isphording, I. E., & Pestel, N. (2021). Minority salience and political extremism. *American Economic Journal: Applied Economics (Forthcoming)*.

Conde-Ruiz, J. I., Garcıa, J. R., & Navarro, M. (2008). Immigration and regional growth in spain. *Working paper, FEDEA*.

Cox, N. J. (2015). Speaking stata: A set of utilities for managing missing values. *The Stata Journal*, *15*(4), 1174–1185.

Daniele, G., & Dipoppa, G. (2017). Mafia, elections and violence against politicians. *Journal of Public Economics*, *154*, 10–33.

Dehdari, S. (2018). Economic distress and support for far-right parties: Evidence from sweden. *SSRN Electronic Journal*.

DellaVigna, S., & La Ferrara, E. (2015). Economic and social impacts of the media. *Handbook of media economics* (pp. 723–768). Elsevier.

Dinas, E., Matakos, K., Xefteris, D., & Hangartner, D. (2019). Waking up the golden dawn: Does exposure to the refugee crisis increase support for extreme-right parties? *Political Analysis*, *27*(2), 244–254.

Dippel, C., Gold, R., Heblich, S., & Pinto, R. (2021). The effect of trade on workers and voters. *Economic Journal (Forthcoming)*.

Duffy, B. (2018). *The perils of perception: Why we're wrong about nearly everything*. Atlantic Books.

Dustmann, C., Fabbri, F., & Preston, I. (2005). The impact of immigration on the british labour market. *The Economic Journal*, *115*(507).

Dustmann, C., & Preston, I. P. (2007). Racial and economic factors in attitudes to immigration. *The BE Journal of Economic Analysis & Policy*, *7*(1).

Dustmann, C., Vasiljeva, K., & Piil Damm, A. (2019). Refugee migration and electoral outcomes. *The Review of Economic Studies*, *86*(5), 2035–2091.

ECRI. (2020). European commission against racism and intolerance (ecri) annual report.

Edo, A., Giesing, Y., Öztunc, J., & Poutvaara, P. (2019). Immigration and electoral support for the far-left and the far-right. *European Economic Review*, *115, June 2019, Pages 99-143*.

Eggers, A. C., Fowler, A., Hainmueller, J., Hall, A. B., & Snyder Jr, J. M. (2015). On the validity of the regression discontinuity design for estimating electoral effects: New evidence from over 40,000 close races. *American Journal of Political Science*, *59*(1), 259–274.

EMORE. (2018). An overview on hate crime and hate speech in 9 eu countries.

Eurobarometer. (2013). 373 (2013). *Europeans engagement in participatory democracy 2013*.

Eurobarometer. (2018). 86, 87, 88, 89, internet.

Eurostat. (2018). Migration and migrant population statistics.

Facchini, G., Margalit, Y., & Nakata, H. (2016). Countering public opposition to immigration: The impact of information campaigns. *CEPR Discussion Paper No. DP11709*.

Facchini, G., & Mayda, A. M. (2009). Does the welfare state affect individual attitudes toward immigrants? evidence across countries. *The review of economics and statistics*, *91*(2), 295–314.

Falck, O., Gold, R., & Heblich, S. (2014). E-lections: Voting behavior and the internet. *American Economic Review*, *104*(7), 2238–65.

Falk, A., Kuhn, A., & Zweimüller, J. (2011). Unemployment and right-wing extremist crime. *Scandinavian Journal of Economics*, *113*(2), 260–285.

Farré, L., González, L., & Ortega, F. (2011). Immigration, family responsibilities and the labor supply of skilled native women. *The BE Journal of Economic Analysis & Policy*, *11*(1).

FRA. (2018). Eu agency for fundamental rights: Hate crime recording and data collection practice across the eu.

Fukuyama, F. (2018). *Identity: The demand for dignity and the politics of resentment*. Farrar, Straus; Giroux.

Gamalerio, M. (2019). Not welcome anymore: The effects of electoral incentives on the reception of refugees. *CESifo Working Paper Series 7212, CESifo*.

Gamalerio, M., Morelli, M., & Negri, M. (2020a). Immigration, occupational choice and electoral rules: Theory and evidence on dual ballot openness. *CEPR Discussion Paper No. DP14896*.

Gamalerio, M., Luca, M., Romarri, A., & Viskanic, M. (2020b). Is this the real life or just fantasy? refugee reception, extreme-right voting, and broadband internet. *Available at SSRN Available 3277550*.

Gavazza, A., Nardotto, M., & Valletti, T. (2019). Internet and politics: Evidence from uk local elections and local government policies. *The Review of Economic Studies*, *86*(5), 2092–2135.

Gennaro, G., Lecce, G., Morelli, M., et al. (2021). Mobilization and the strategy of populism theory and evidence from the united states. *CEPR Discussion Papers DP15686*.

Genovese, F., Belgioioso, M., & Kern, F. (2017). The political geography of migrant reception and public opinion on immigration: Evidence from italy. *Mimeo*.

Gentzkow, M. (2006). Television and voter turnout. *The Quarterly Journal of Economics*, *121*(3), 931–972.

Gidron, N., & Mijs, J. J. (2019). Do changes in material circumstances drive support for populist radical parties? panel data evidence from the netherlands during the great recession, 2007–2015. *European Sociological Review*, *35*(5), 637–650.

Glaeser, E. L. (2005). The political economy of hatred. *The Quarterly Journal of Economics*, *120*(1), 45–86.

Grigorieff, A., Roth, C., & Ubfal, D. (2020). Does information change attitudes towards immigrants? representative evidence from survey experiments. *Demography*.

Grosjean, P. A., Masera, F., & Yousaf, H. (2021). Whistle the racist dogs: Political campaigns and police stops. *CEPR Discussion Paper No. DP15691*.

Guiso, L., Herrera, H., Morelli, M., & Sonno, T. (2017). Populism: Demand and supply. *CEPR Discussion Paper No. DP11871*.

Guiso, L., Herrera, H., Morelli, M., & Sonno, T. (2020). Economic insecurity and the demand of populism in europe. *WP Einaudi Institute for Economics and Finance*.

Guriev, S., Melnikov, N., & Zhuravskaya, E. (2021). 3g internet and confidence in government. *Quarterly Journal of Economics (Forthcoming)*.

Guriev, S., & Papaioannou, E. (2021). The political economy of populism. *Journal of Economic Literature (Forthcoming)*.

Hainmueller, J., & Hopkins, D. J. (2014). Public attitudes toward immigration. *Annual Review of Political Science*, *17*, 225–249.

Halla, M., Wagner, A. F., & Zweimüller, J. (2017). Immigration and voting for the far right. *Journal of the European Economic Association*, *15*(6), 1341–1385.

Hanes, E., & Machin, S. (2014). Hate crime in the wake of terror attacks: Evidence from 7/7 and 9/11. *Journal of Contemporary Criminal Justice*, *30*(3), 247–267.

Haney-López, I. (2015). *Dog whistle politics: How coded racial appeals have reinvented racism and wrecked the middle class*. Oxford University Press.

Hangartner, D., Dinas, E., Marbach, M., Matakos, K., & Xefteris, D. (2019a). Does exposure to the refugee crisis make natives more hostile? *American Political Science Review*, *113*.

Hangartner, D., Dinas, E., Marbach, M., Matakos, K., & Xefteris, D. (2019b). Waking up the golden dawn: Does exposure to the refugees crisis increase support for extreme-right parties? *Political Analysis*, *17*.

Harmon, N. A. (2018). Immigration, ethnic diversity, and political outcomes: Evidence from denmark. *The Scandinavian Journal of Economics*, *120*(4), 1043–1074.

Hatton, T. J. (2017). Public opinion on immigration in europe: Preference versus salience. *CEPR Discussion Paper No. DP12084*.

Héricourt, J., & Spielvogel, G. (2014). Beliefs, media exposure and policy preferences on immigration: Evidence from europe. *Applied Economics*, *46*(2), 225–239.

Imbens, G. W., & Lemieux, T. (2008). Regression discontinuity designs: A guide to practice. *Journal of econometrics*, *142*(2), 615–635.

IOM. (2020). International organization for migration, world migration report.

Ivandic, R., Kirchmaier, T., & Machin, S. J. (2019). Jihadi attacks, media and local hate crime. *CEPR Discussion Paper No. DP13743*.

Jofre-Monseny, J., Sorribas-Navarro, P., & Vázquez-Grenno, J. (2016). Immigration and local spending in social services: Evidence from a massive immigration wave. *International Tax and Public Finance*, *23*(6), 1004–1029.

Johnson, D. R. (2008). Using weights in the analysis of survey data. *Presentation prepared for the Population Research Institute, Pennsylvania State University, November*.

Lahav, G. (2004). Public opinion toward immigrants in the european union: Does it matter? *Comparative Political Studies, 37*.

Lee, D. S. (2008). Randomized experiments from non-random selection in us house elections. *Journal of Econometrics*, *142*(2), 675–697.

Lee, D. S., & Lemieux, T. (2010). Regression discontinuity designs in economics. *Journal of economic literature*, *48*(2), 281–355.

Lind, J. T. (2007). Fractionalization and the size of government. *Journal of Public Economics*, *91*(1-2), 51–76.

Lonsky, L. (2020). Does immigration decrease far-right popularity? evidence from finnish municipalities. *Journal of Population Economics*.

Luttmer, E. F. (2001). Group loyalty and the taste for redistribution. *Journal of political Economy*, *109*(3), 500–528.

Manning, A., & Roy, S. (2007). Culture clash or culture club? the identity and attitudes of immigrants in britain. *Centre for Economic Performance Discussion Paper*, *790*.

Margalit, Y. (2019). Economic insecurity and the causes of populism, reconsidered. *Journal of Economic Perspectives*, *33*(4), 152–70.

Mastrorocco, N., & Minale, L. (2018). News media and crime perceptions: Evidence from a natural experiment. *Journal of Public Economics*, *165*, 230–255.

Mayda, A. M. (2006). Who is against immigration? a cross-country investigation of individual attitudes toward immigrants. *The review of Economics and Statistics*, *88*(3), 510–530.

McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of econometrics*, *142*(2), 698–714.

Mendez, I., & Cutillas, I. (2014). Has immigration affected spanish presidential elections results? *Journal of Population Economics, 27*, 135–171.

Miner, L. (2015). The unintended consequences of internet diffusion: Evidence from malaysia. *Journal of Public Economics*, *132*, 66–78.

Mullainathan, S., & Shleifer, A. (2005). The market for news. *American Economic Review*, *95*(4), 1031–1053.

Müller, K., & Schwarz, C. (2018). Fanning the flames of hate: Social media and hate crime. *Journal of the European Economic Association*.

Müller, K., & Schwarz, C. (2020). From hashtag to hate crime: Twitter and anti-minority sentiment. *Available at SSRN 3149103*.

Nielsen, L. B. (2002). Subtle, pervasive, harmful: Racist and sexist remarks in public as hate speech. *Journal of Social Issues*, *58*(2), 265–280.

Noury, A., & Roland, G. (2020). Identity politics and populism in europe. *Annual Review of Political Science*, *23*, 421–439.

OSCE. (2014). Organization for security and co-operation in europe. hate crime data collection and monitoring mechanisms: A practical guide.

OSCE. (2016). Xenophobia, radicalism and hate crime in europe 2015. *OSCE report - Organization for security and co-operation in Europe*.

Otto, A. H., & Steinhardt, M. F. (2014). Immigration and election outcomes? evidence from city districts in hamburg. *Regional Science and Urban Economics*, *45*, 67–79.

Pennycook, G., & Rand, D. G. (2018). Who falls for fake news? the roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking. *Journal of personality*.

Peri, G., Mayda, A., & Steingress, W. (2020). The political impact of immigration: Evidence from the united states. *American Economic Journal: Applied Economics*.

Peri, G. (2016). Immigrants, productivity, and labor markets. *Journal of economic perspectives*, *30*(4), 3–30.

Petrova, M., Bursztyn, L., Egorov, G., & Enikolopov, R. (2020). Social media and xenophobia: Evidence from russia. *CEPR Discussion Paper No. DP14877*.

Preston, I. (2014). The effect of immigration on public finances. *The Economic Journal*, *124*(580).

Putnam, R. D. (1966). Political attitudes and the local community. *American Political Science Review*, *60*(3), 640–654.

Quillian, L. (1995). Prejudice as a response to perceived group threat: Population composition and anti-immigrant and racial prejudice in europe. *American Sociological Review, 60.*

Romarri, A. (2020). Does the internet change attitudes towards immigrants? evidence from spain. *IEB Working Paper N. 2020/04.*

Schaub, M., & Morisi, D. (2019). Voter mobilization in the echo chamber: Broadband internet and the rise of populism in europe. *European Journal of Political Research.*

Shields, M. A., & Price, S. W. (2002). Racial harassment, job satisfaction and intentions to quit: Evidence from the british nursing profession. *Economica*, *69*(274), 295–326.

Sidanius, J., & Pratto, F. (1999). Social dominance: An intergroup theory of social hierarchy and oppression. *New York: Cambridge University Press.*

Sola, A. (2018). The 2015 refugee crisis in germany: Concerns about immigration and populism. *SOEPpaper 966.*

Steinmayr, A. (2020). Contact versus exposure: Refugee presence and voting for the far-right. *Review of Economics and Statistics*, 1–47.

Taylor, M. C. (1998). How white attitudes vary with the racial composition of local populations: Numbers count. *American Sociological Review, 63.*

Vázquez-Grenno, J. (2018). Job search strategies in times of crisis: Natives and immigrants in spain. *The Manchester School*, *86*(2), 248–278.

Vertier, P., & Viskanic, M. (2019). Dismantling the'jungle': Migrant relocation and extreme voting in france. *Available at SSRN 2963641.*

Vliegenthart, R., Schuck, A. R., Boomgaarden, H. G., & De Vreese, C. H. (2008). News coverage and support for european integration, 1990–2006. *International Journal of Public Opinion Research*, *20*(4), 415–439.

Volkens, A., Lacewell, O., Lehmann, P., Regel, S., Schultze, H., & Werner, A. (2012). The manifesto document collection. *Manifesto Project (MRG/CMP/MARPOR). Berlin: Wissenschaftszentrum Berlin für Sozialforschung (WZB).*

Zhuravskaya, E., Petrova, M., & Enikolopov, R. (2020). Political effects of the internet and social media. *Annual Review of Economics*, *12.*