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Immigration, Fear of Crime, and Public Spending on Security

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Immigration, fear of crime and public spending on security[a]

Vincenzo Bove[b] Leandro Elia[c]
Massimiliano Ferraresi[d]

We explore the relation between immigration, crime and local government spending on security in Italian municipalities. We find that immigration increases the share of public resources devoted to police protection, particularly when migrants are culturally distant from the native population. We uncover a misalignment between perception and reality, as immigration is associated to fear of future crimes rather than the actual probability of being victim of a crime. We also demonstrate that immigration from culturally distant societies corresponds to a deterioration in civic cooperation and interpersonal trust, which can affect perceptions of safety and the demand for police services.

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[b]Department of Politics and International Studies and CAGE (Competitive Advantage in the Global Economy), University of Warwick, Coventry CV4 7AL; e-mail: v.bove@warwick.ac.uk

[c]Department of Economics and Social Sciences, Marche Polytechnic University; e-mail: l.elia@univpm.it

[d]European Commission, Joint Research Centre (JRC), Ispra, Italy; e-mail: massimiliano.ferraresi@ec.europa.eu

1. Introduction

Since 2000, the size of transnational migration has continued to grow rapidly worldwide, with the number of persons living in a country other than where they were born increasing by 50% between 2000 and 2017 (UN DESA, 2017). Immigration offers valuable economic opportunities and gains for both migrants and their host societies, and there is by now a considerable body of work on the effects of immigration on economic growth, unemployment and wages (see e.g., Friedberg and Hunt, 1995; Card et al., 2012; Dustmann et al., 2012; Boeri et al., 2015).

Yet, the arrival of new immigrants often stoke social and political tensions and increase security concerns. In this article, we explore whether and to what extent immigration shapes local government spending on public security. Using data on Italian municipalities, we show that immigration, by increasing a perception of insecurity, leads to more public spending on police protection. Spending on security is an important but largely neglected share of local government budgets, and it is often a cause of concern in many countries, particularly when it crowds out public investments in other areas, such as infrastructure and social welfare. For example, in recent years the law enforcement response to demonstrations in the US has spurred a heated debate on police reforms. Numerous reports show that US police departments have grown dramatically in size and police spending has outpaced the decrease in crime rates. As a result, many major cities spend as much as 40% of their municipal budgets on policing, leaving a dwindling pool of resources for community resources and services.[1] We contribute to this debate by shedding new light on how immigration contributes to (over)spending on security outside the exemplary US case.

The consequences of immigration today are not only a salient issue but also a contentious one in most of the destination countries, splitting public opinion and fueling negative attitudes towards immigrants. There are at least three main concerns that drive hostility against immigration. The first is the consequence of immigration for the wage of low-skilled workers (e.g., Peri and Sparber, 2009; Ottaviano and Peri, 2012; Dustmann et al., 2016). The second concern revolves around the potential fiscal burden placed by immigrants on public finances as recipients of generous social transfers, "as much as and probably more than by effects on labour market outcomes" (Preston, 2014, p.569, and Boeri, 2010). The third concern, which is the focus of our article, is the perceived effect of immigration on crime. Existing research shows that immigrants do not significantly increase the overall crime rate or the number of violent crimes - some effects are only detected on property crimes - and that legalization further reduces the crime rate of immigrants (see e.g., Bianchi et al., 2012; Bell et al., 2013; Mastrobuoni and Pinotti, 2015; Pinotti, 2017;

1. See, e.g., https://www.politico.com/interactives/2020/police-budget-spending-george-floyd-defund/ https://www.washingtonpost.com/business/2020/06/04/us-spends-twice-much-law-order-it-does-social-welfare-data-show/

Light and Miller, 2018). Yet, ethnic diversity is also often associated with an increase in the *fear* of crime (e.g., Langella and Manning, 2019). This can lead to additional public spending on security.

Italy illustrates this point clearly. The debate about law and order has intensified in the country since more than 600,000 would-be migrants have arrived across the Mediterranean to Italian shores between 2014 and 2017. Since 2007, crime rates per 1,000 inhabitants have decreased by almost 25% across all Italian regions. Crimes perpetrated by foreign residents show a similar decreasing trend. Yet, by one estimate, 60% of Italians do not feel safe in their cities.[2] Matteo Salvini, former minister of interior and leader of the Northern League, a federalist and right-wing populist party espousing anti-immigrant rhetoric, has often blamed immigration for a lack of security and has pledged to recruit 10,000 new police officers (Il Giornale, 08/10/2018). This is not unique to the Italian case and similar patterns have been observed in other countries, such as Germany.[3]

Concerns about immigration often lead to tensions between locals and immigrants, religious prejudices or racist attitudes, the emergence of extremist groups and support for violence against outsiders (see e.g., Hainmueller and Hopkins, 2014; Barone et al., 2016; Halla et al., 2017). These tensions are often exploited by political parties to reap electoral gains. Not surprisingly, recent studies have uncovered a strong effect of immigration on the success of anti-immigrant parties (e.g., Barone et al., 2016; Halla et al., 2017; Brunner and Kuhn, 2018; Bellucci et al., 2019) and on antigovernment sentiment (Bratti et al., 2017).

At the same time, past work on immigration, and the size and composition of public spending, has emphasized changes in preferences for tax rates, public goods provision and redistribution as a consequence of increased ethnic heterogeneity (e.g., Alesina et al., 1999; Luttmer, 2001; Razin et al., 2002; Speciale, 2012; Dahlberg et al., 2012). However, in the case of local public finances, much less systematic evidence has been uncovered regarding immigration and the choice of specific public spending items (Gerdes, 2011). In a novel study, Gamalerio (2018) shows that municipal governments are less likely to host refugees in response to electoral incentives and that opening a refugee centre leads to an increase in total municipal expenditures. Elections, in turn, can affect immigrants' settlement patterns, and Bracco et al. (2018) provide evidence that the presence of a mayor of the far-right Northern League

2. See `http://www.swg.it/politicapp?id=ijkr`. Moreover, the 2018 report of the research institute Censis finds a "widespread bitterness" among Italians, with 63% of respondents reporting a negative opinion about immigration from non-EU countries, and 75% believing that immigrants lead to an increase in crime (Sole 24 Ore, 7/10/18).

3. According to official figures, crime rate in the country in 2017 was at its lowest in 30 years, with fewer than 7,000 crimes committed per 100,000 inhabitants. Similarly, the proportion of non-German crime suspects continues to decline every year. Yet, by one estimate, 44 per cent of Germans feel less safe in public spaces than a few years ago (FT, 26/11/18). To address these concerns, the government has introduced new security measures, including plans to employ 15,000 more police officers.

party discourages immigrants from moving into the same municipality.

Yet, no study has looked directly at one crucial aspect of the political effect of immigration, its impact on the share of public resources that local governments devote to security. Against this background, we provide new and, compared to what has been previously established by anecdotal examples, convincing empirical evidence of how immigration leads to more funding for public security in receiving municipalities. We also explore some of the underlying transmission mechanisms.

We use a rich dataset with detailed information on local government spending for more than 7,000 Italian municipalities between 2003 and 2015, and combine it with municipal-level data on the population of foreign-born residents, including their country of origin. We leverage exogenous variations in immigration flows following recent rounds of enlargement of the European Union. We use the sudden increase of immigrants from new European Member States to construct a novel shift-share instrument. We complement this approach with historical data on migration and political preferences during the Fascist regime. We find that immigration increases spending on police protection, such as enhanced police presence and surveillance. On average, the amount of spending allocated to local security increases by 0.12-0.30 percentage points for one point increase in the share of immigrants. This is a very large effect, as municipalities spend on average about 4.3% of their budget on security, and they are often in serious financial distress. Moving beyond the dichotomy of immigrants-natives, we also incorporate the genetic, linguistic or religious proximity of foreign-born individuals to native populations into the relationship between migration flows and security spending. We find that the higher the distance the stronger the impact of immigration on law enforcement spending. Our results survive a variety of additional robustness checks.

We offer suggestive evidence into some of the mechanisms behind these results. It is possible that municipalities with larger immigrant concentrations may be associated with higher crime rates, which motivates higher spending on municipal police. We detect no relation between an increase in immigration and crime rates. A plausible interpretation would be that in response to an increase in crime driven by new immigrants, municipalities increase spending on local law enforcement, which in turn reduces crime. While possible, this interpretation is somehow hard to square with the role of municipal police officers, whose main duty is to enforce local regulations on traffic, commerce and legal residence, whereas crime prevention is in the remit of the National police. We return to this point later.

Alternatively, there could be a significant misalignment between perceptions of crime and reality at the local level, and immigration could increase people's fear of future crimes, as opposed to the actual probability of being a victim of crime. We use survey data to show that individuals whose neighbors are of different race, or birthplace, are more likely to report that fighting crime is a national priority, and to believe that immigrants increase crime problems. To dig deeper into these results, we ask why immigration shapes worry about crime and perceptions of feeling unsafe. Higher demand for public order and

safety at the local level could be driven by a deterioration in the level of social capital, the ties and relationships that bind members of a society. Social capital is often used as a marker of the cohesiveness of societies and the degree of peaceful coexistence and interactions among individuals. When social capital is eroded, we should observe more concerns about lack of security and increased demands for law and order (Liska and Warner, 1991; Buonanno et al., 2009). We find a negative correlation between immigration and the number of nonprofit organizations, a common measure of the strength of social networks at the local level. Immigrants' country of origin seems to be again crucial and the coefficient is larger the higher the cultural distance between immigrants' home and host countries. Having neighbors of different race or foreign neighbors is similarly negatively correlated to trust in social interactions and erodes social cohesion and civic cooperation. At this point, we note that this correlational evidence on the erosion of social capital and the fear of crime can provide a credible explanation for the observed pattern.

In the following sections, we take stock of the existing literature on the economic implications of migration inflows. In particular, on the basis of current research, we ask whether and how immigration affects the choice of different public spending items; and why cultural dissimilarities should affect municipal spending on police protection.

2. Immigration, cultural distance and public spending

Our research question lies at the intersection of two separate yet intertwined strands of research: one on ethnic diversity and public goods provision, and one on cultural distance and economic outcomes. In recent years, scholars have documented the importance of immigration and diversity in explaining public spending decisions. In a core contribution to the debate, Alesina et al. (1999) find that in ethnically heterogeneous jurisdictions in the United States, the relative amount of spending that goes to core public goods like education and roads is low. There are two reasons behind this finding: first, heterogeneous communities value public goods less, as each group's utility for a specific public good diminishes if this is shared with other groups; second, different ethnic groups have diverging preferences over which type of public goods should be provided with tax revenues. In a similar vein, Alesina and Glaeser (2004) show that heterogeneous countries, such as some Latin American ones, have lower levels of social spending, whereas homogeneous communities, such as Scandinavian states, have a more generous welfare state.

The recent debate has increasingly focused on the welfare state, to assess whether immigrants are indeed a fiscal drain. In fact, a number of studies explore whether welfare-state generosity is a social magnet to immigrants, yet the results are mixed (see e.g., Borjas, 1999b; Levine and Zimmerman, 1999; Pedersen et al., 2008; Razin and Wahba, 2011). In the case of local public finances, limited systematic evidence has been uncovered regarding immigration and the choice of different public spending items. Using data on Danish municipalities from 1995 through 2001, Gerdes (2011) finds no evidence of a

decline in the Danish welfare state (daycare, schools, healthcare, and care for the elderly) due to an increase in the share of immigrants.

To understand the impact of immigration on public spending, one also needs to factor in the cultural distance between home and host societies. Economists have long argued that culture affects important economic outcomes, in particular patterns of international trade and economic development. For example important differences in societal norms, customs, and habits, proxied by genetic distance, can act as barriers to the diffusion of development from the frontier country (Spolaore and Wacziarg, 2009; Bove and Gokmen, 2018). Similarly, language barriers represent a major hurdle to trade between countries through its effect on transaction costs (see e.g., Melitz and Toubal, 2014). Particularly in the post-Cold War period the leading source of conflict seems to be cultural, and therefore cultural differences cause clashes over several issues including trade (see Gokmen, 2017; Bove and Gokmen, 2017, who empirically validate Huntington's (1993) Clash of Civilizations hypothesis). This literature has also pinpointed some of the channels through which immigration, and cultural differences, affect public spending. As Guiso et al. (2006, p.29) eloquently put it, "the opening through which culture entered the economic discourse was the concept of trust".[4] The contemporary literature on culture and economic outcomes has been jump-started by Arrow (1972) and Fukuyama (1995) who suggest that the level of trust in a society influences its economic success. Guiso et al. (2009) demonstrate how the perception of trust, taken from Eurobarometer surveys, increases trade across a sample of European countries. Interestingly, when they instrument trust using its long-term cultural building blocks, such as the commonality in religion and somatic/genetic distance, their estimates show larger coefficients. This finding implies that additional channels, besides trust, are likely to explain the impact of culture on economic outcomes.

The cultural distance between groups in a country is likely to make it harder to produce public goods, yet this argument has been subject to a rather limited number of cross-national empirical studies. Desmet et al. (2009) show that countries with high linguistic distance between groups have low levels of redistribution by the government. Belmonte et al. (2017) find that negative attitudes toward ethnic diversity reduce tax morale in centralized political systems, and this effect is lower in ethnically fragmented communities. These findings are based on the premise that individuals who are averted to ethnic diversity are more reluctant to contribute to the provision of public goods which can benefit other ethnic groups. While this brief overview cannot do justice to the broad knowledge generated by existing work, there is still limited evidence about the effect of immigration on local security spending and the underlying transmission mechanisms. In the remainder of the paper, we will explore whether

4. Guiso et al. (2006) summarize why trust can affect economic decisions: "Trust is particularly relevant when transactions involve some unknown counterpart like a buyer or seller of goods in another country, when the transaction takes place over a period of time rather than being completed on the spot, and when the legal protection is imperfect." (Guiso et al., 2006, p.34).

and how immigration has a substantive, economically relevant, impact on local government spending on security. We find that immigration does affect the amount of resources devoted to police protection. Building on the literature surveyed in this section, we also show that the effect is stronger the higher the cultural distance of the immigrants from the native population.

3. Data

The empirical analysis is based on a rich dataset of Italian municipalities. Italy is divided into 20 regions - five of which ruled by special statutes - 96 provinces, and as of 2019, 7,914 municipalities (*comuni*), the basic administrative division. All three levels have elected councils, own competences and financial resources. The density of Italian municipalities varies significantly by province and region: while, on average, an Italian municipality has about 6,400 inhabitants, 90% of them have less than 15,000 inhabitants. Thus even a small number of immigrants can have a meaningful effect on local spending decisions. We combine data from different archives to include municipal financial data, demographic and socio-economic characteristics, the country of origin of the permanent residents in each municipality, the cultural distances between immigrants and natives and data on different markers of social capital. Due to lack of information for some local governments, our final sample consists of a balanced panel of 7,243 municipalities, with 94,159 observations, from 2003 to 2015. Section A.1 of the Online Appendix provides detailed information on the institutional context and a more comprehensive background material on municipal spending and immigration in Italian municipalities.

Municipal financial data are released by the Ministry of Interior. All financial variables are computed in real terms using the consumption price index with base 2015 provided by the Italian National Statistical Office (ISTAT). Our core variable of interest is security spending, which includes police costs such as salaries, police presence and patrols, and the capital component in the production function for law enforcement, such as vehicles, communication devices and special clothing. We focus on *security spending*, computed as share of total current expenditure. Although data on disaggregated security spending are unavailable, Figure 1 shows that there is a very strong correlation between security spending and the number of local police officers in each municipality, thus suggesting that higher spending on security is likely to lead to changes in the size of the police force and a larger police presence.

———————— [Figure 1 in here] ————————

We control for an array of time-varying variables, taken from ISTAT. In particular, our models include the population size (*population size*) and density (*population density*). We also compute the share of population aged 65 and older (*share of 65+*) to capture social support requirements resulting from changes in population age structure. In terms of economic and financial data, we include the per capita personal income tax base (*income*) to capture average income. Furthermore, we account for the fiscal rules imposed by the

central government on municipalities by setting a dummy variable (*domestic stability pact*) equals to 1 if a municipality has to comply with these rules (i.e., when they have a population of over 5,000 and above 1,000 since 2013) and zero otherwise.[5]

We also exploit information on resident population by municipality for the period 2003-15, taken from ISTAT. Each municipality keeps a population register (*anagrafe*), which records changes of residence from and to other Italian municipalities as well as other countries. Population register data are reported on a yearly basis (see Bonifazi et al., 2009). Interestingly, the decomposition of the standard deviation of migration shares into between and within variation shows that there are major variations in the number of migrants across municipalities as well as over time within each municipality.[6] At the same time, Italian municipalities show remarkable differences in the share of public spending on security, with a minimum of zero and a maximum of almost 47% and quite large variations over time (between -14% to 40%). To further improve our identification strategy, we also take historical data on migrant populations by province in 1936 and the share of votes for the National Fascist Party in 1929 Italian general election. These information are accessible from ISTAT historical archive which contains analyses, research and documents produced by the institute in printed and electronic format. Note that we are interested in the effect of foreign-born people that are (more) permanently settled in Italy, rather than refugees or any provisional movements of people for temporary protection, on security spending. The latter is also a phenomenon of much smaller scope: according to the UNHCR, at the end of 2015 Italy hosted about 118,000 refugees, as compared to more than 5 million foreign residents. And asylum applications at their peak in 2016 numbered less than 150,000, with a negligible share of successful applications.

Immigrants stem from a variety of countries of origin, and to comprehensively capture the degree of cultural affinity with the natives we use genetic, religious and linguistic distances. *Genetic distance* captures differences in allele frequencies across a range of neutral genes, and Spolaore and Wacziarg (2016) show that genetic distance capture a wide array of cultural traits transmitted intergenerationally within populations over the long run.[7] By measuring the time

5. The domestic stability pact is an agreement with the central government on balance targets designed to meet government budget targets under the European Stability and Growth Pact.

6. On the one hand, there are some municipalities, such as Rocca de Giorgi, Airole and Baranzate, which are strongly characterized by the presence of migrants, and where the share of foreign residents over the total population is close to 30%. On the other hand, some municipalities, such as Loreglia, Parlasco, Rondanina, Siapiccia, Sagama, Escolca and Montebello sul Sangro, did not record any new immigrant in the period 2003-2015.

7. There are several versions of this variable (see Cavalli-Sforza et al., 1994) and the one we use, from Spolaore and Wacziarg (2009) and called F_{ST}, is a measure of distance to the most recent common ancestors of two populations, i.e. their degree of genealogical relatedness, or equivalently, the length of time since two populations split apart. F_{ST} is constructed using information on 128 alleles related to 45 selectively neutral genes. It includes alleles coding for blood groups, immunoglobulin, hemoglobin, enzymes and lymphocyte antigens (Spolaore and Wacziarg, 2009).

since two populations shared common ancestors, genetic distance provides an ideal summary of differences in slowly changing genealogically transmitted characteristics, including habits and customs (Spolaore and Wacziarg, 2009, p. 523). We add a measure of *religious distance* based on the World Christian Database (WCD) on the prevalence of religion in each country and taken from Spolaore and Wacziarg (2016). In terms of *linguistic proximity*, to establish a close link with recent works, we use two indexes, one based on language trees (Fearon, 2003) and another one based on lexicostatistics (Dyen et al., 1992). In the former languages are grouped into families based on similarities between them and it is therefore based on a discrete number of common nodes. The latter is constructed using 200 common meanings and provides the percentage of words between dominant languages spoken in each country-pair which originate from the same ancestor word (the so-called "cognate words"). Measures of distance between populations are often based on dominant groups. Yet, most countries are highly heterogeneous and to accurately determine the expected distance between two randomly selected individuals, we use genetic, religious and linguistic distances weighted by the share of sub-population belonging to each distinct ancestral, religious or linguistic group in each country (see Spolaore and Wacziarg, 2009). Moreover, we use the same transformation such that distance is bounded by 0 and 100.[8] Table 1 contains the summary statistics.

——————— [Table 1 in here] ———————

4. Empirical strategy

We estimate the effect of increased immigrants on local security spending using standard panel data regressions with fixed effects. The baseline empirical model is specified as follows:

$$s_{it} = \gamma migrants_{it} + \beta_k' x_{it} + f_i + f_t + \varepsilon_{it} \tag{1}$$

where s_{it} is the share of public spending devoted to security and $migrants_{it}$ is the share of immigrants over the total population in municipality i and year t. x_{it} is the vector of control variables that includes the population size and density, the share of 65+, per capita personal income tax base, and a binary variable indicating whether a municipality has to comply with the domestic stability pact. f_i and f_t are the municipality and year fixed effects and ε_{it} is the error term. Our main parameter of interest is γ and describes the relationship between the share of immigrants and local spending on security. We report robust standard errors clustered at the municipality level throughout the analysis, in order to control for arbitrary group-wise heteroskedasticity and serial correlation.[9]

8. The correlations among the above distances are not large, ensuring that they account for some distinct element of culture, that are not captured by the remaining measures.

9. The immigrants share might correlate between neighbouring municipalities, as will the out-

Immigrants may sort themselves among municipalities and this self-selection will bias the estimation of the effect of immigration on security spending. This issue of endogenous immigrants settlement has long been a concern in the literature and it is often mitigated by using an instrumental variables approach, as long as an exogenous instrument is available. In the absence of a natural experiment in location decision, a typical strategy relies on the so-called "shift-share" instrument, which is built by interacting the national inflows of migrants by country of origin with immigrants' previous geographic distribution. The rationale behind this instrument is that aggregate outflows of migrants are influenced by push factors in the country of origin, and, once they leave, immigrants settle in enclaves established by earlier migrants from the same country of origin. One underlying assumption is that pull factors that attracted immigrants in the past are uncorrelated with current local demand shock (see Altonji and Card, 1991; Card, 2001).

In this paper, we use a variation of this approach by introducing a novel shift-share instrument. In particular, we exploit changes in the inflow of migrants prompted by the Enlargement of the European Union (EU). Over the period 2003-15, the EU has expanded three times and accepted 13 new Member States to the Union. In a similar vein, Mastrobuoni and Pinotti (2015) exploit exogenous variation in the status of immigrants following the 2007 European Union enlargement to estimate its effect on immigrant crime. In fact, the Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia joined the EU in 2004. Romania and Bulgaria became EU members in 2007; and Croatia joined up in 2013. Throughout the period, and particularly around the specific dates of accession (2004, 2007 and 2013), the EU witnessed large population movements. The principle of free movement, that gives EU citizens the right to reside and work in any other EU country, promoted larger migration flows particularly from "new" to "old" Member States. This pattern was also prominent in Italy and visible in Figure 2, where we report the size of migration flows to Italy over the period 2001-2018 from EU-28 members and non-EU members. Immigration from EU-28 countries increased in 2004 and jumped quite remarkably in 2007.

——————— [Figure 2 in here] ———————

As we want to leverage the aggregate variation in migration produced by the EU enlargement, we build on Docquier et al. (2016) and Ortega and Peri (2014) and estimate the total number of immigrants in Italy stemming from countries that joined the EU in the period 2003-15 through a gravity model of migration. This model exploits cross-country differences in migration flows imputable to migration costs.[10]

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come variables. To check whether this is the case, we have replicated our main analysis by clustering standard errors at the province level. Results are reported in Table B.1 of the Online Appendix and, reassuringly, are very close to ones that cluster at the municipality level.

10. For a recent study on self-selection and reasons to emigrate, see Aksoy and Poutvaara (2019).

The gravity model considers immigrants from all countries of origin and takes the following form:

$$\log m_{jt} = \delta' w_{jt} + \lambda' distance_j f_t + f_j + f_t + \epsilon_{jt} \tag{2}$$

where $j = 1, ., 189$ is the country of origin of immigrants and $t = 2003, ., 2015$. This model controls for a number of exogenous variables which capture shocks in the country of origin, and which are thus unlikely to be correlated with unobserved demand factors in the host country. In particular, the vector w_{jt} includes the log of j's population, the log of j's per capita GDP, j's area and a dummy for EU-28. Moreover, we exploit the panel dimension of the data and include country (f_j) and year (f_t) fixed-effect and interactions between capital-to-capital distance and year dummies. These additional variables capture changes in transportation and communication costs over time. Finally, ϵ_{jt} is the error term.

From model 2 we compute $\widetilde{m}_{et}$, the annual number of (predicted) immigrants from new EU Member States, where $e = 1, ., 13$ indicates the thirteen new EU Member States.[11] We then apportioned these (predicted) national figures to municipalities using the settlement of immigrants from new EU countries in municipality i in 2003, σ_{ie2003}. Year 2003 is the earliest period in which data at the municipal level on migration stocks, disaggregated by country of origin, are available. The resulting quantity is the weighted average of the predicted inflows of immigrants from new EU Member States with weights σ_{ie2003}. As the endogenous variable in (1) is a share, we compute the percentage over the total population of municipality i:

$$\widehat{m}_{it} = \frac{\sum_e \sigma_{ie2003} \widetilde{m}_{et}}{pop_{it}} \tag{3}$$

This is the shift-share instrument constructed using a sub-set of countries, the new EU Member States. Note that the predicted share of immigrants varies across municipalities and years. Finally, we look at when exactly these countries joined the EU, and construct our instrument as the interaction between $\widehat{m}_{it}$ above and a binary indicator, τ_t, that equals one after the year of accession for each new EU member state and zero otherwise. This approach allows us to further isolate the portion of the correlation between immigration and local public spending that is due to the causal effect of immigration prompted by the EU enlargement. The first-stage regression of our instrumental variables strategy reads as follows:

$$\textit{migrants}_{it} = \phi(\widehat{m}_{it} \times \tau_t) + \theta_k' x_{it} + f_i + f_t + \xi_{it} \tag{4}$$

The identification of the casual effect of immigration on local public spending relies on two key elements: (i) the exogeneity of migration inflows prompted

11. All results from 2SLS estimation are robust to using the observed inflow of immigrants.

by the accession of these new Member States to the Union, and (ii) the presence of pre-existing ethnic settlements, uncorrelated to security spending decisions and economic trends, that shape immigrants' location decision.

There are no data on the distribution of immigrants across municipalities prior to 2003. This poses two potential problems. First, we may overestimate the correlation between the endogenous variable and the instrument as immigrants' geographical distribution appears in both variables in 2003. To exclude this possibility, we check whether results are affected by the exclusion of data for 2003, and re-estimate all models over the period 2004-15. As the estimates are virtually the same, we keep data for 2003 to estimate our models. Second, if the shares of immigrants in 2003 are correlated with local demand shocks, the instrument violates the exclusion restriction assumption as shown by Goldsmith-Pinkham et al. (2018). Borjas (1999a) notes that this violation also occurs if local demand shocks are serially correlated. Jaeger et al. (2018) have recently argued that current adjustments to past demand shocks can also raise concerns for the validity of the instrument. We address these concerns in three ways: (i) we follow Moriconi et al. (2018) and check the correlation between the instrument and past economic and demographic trends over the period 1991-2001; (ii) we use the share of immigrants in 1936, which is sufficiently distant in time, as suggested in Jaeger et al. (2018); (iii) we use the share of votes for the National Fascist Party (PNF) in 1929 Italian general election as a proxy for the historical level of openness of a territory towards foreign-borns. These robustness checks are discussed in section 6. Finally, note that recent waves of immigration caused by the EU enlargement – the exogenous variation we leverage to identify the causal effect of immigration on security spending – are in fact unlikely to be correlated with previous local conditions that attracted immigrants in the first place and to local public spending.

5. Estimation results

In this section we investigate whether public spending on security is affected by changes in the population of foreign-born residents. We first treat immigrants as homogeneous population, and then we use information on their countries of origin for each municipality-year. Having established our main result, we turn to the transmission channels by breaking up the relation between immigration and security spending into a series of specific questions.

5.1 Preliminaries

We begin with Table 2, where we explore different specifications of the model in equation (1). Model in column (i) only comprises our main explanatory variable and the time and unit fixed effects, while omitting the control covariates. Model in column (ii) includes the covariates: population size and density, the share of 65+, the average income, the presence of the domestic stability pact, as well as year and municipality fixed effects. Column (iii) excludes the provincial capitals, which are arguably the most important Italian municipalities. Column (iv) takes into account voting methods in local elections, and

excludes municipalities below 15,000 inhabitants as they use a single round system, whereas above this threshold they adopt a runoff system. Bordignon et al. (2016) find that under single round system, extremist voters play a larger role and policy volatility is also higher, which can make the budget process more complex to determine. Column (v) excludes the five regions with special status, Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia, given their degree of administrative and financial autonomy. Column (vi) excludes migrants from the top 5 countries of origin i.e., Romania, Morocco, Albania, China and Ukraine. Finally, to check the robustness of our findings to excluding extreme values, in column (vi) we drop all observations in which local security spending is below the 5th or above the 95th percentile while in column (vi) we exclude observations in which spending on police is below the 1st percentile or above the 99th percentile.

The results in Table 2 show a positive and statistically robust effect of immigration on the share of local government spending devoted to security. The size of the coefficient is remarkably similar across models. If for purely illustrative purposes one interprets these OLS estimates as causal, then according to them a one percentage point increase in the share of immigrants leads to an increase in the share of security spending in the range of 0.02 to 0.06 percentage points.

———————— [Table 2 in here] ————————

The omitted-variable bias generated by stable unit-level confounders should be safely handled in the fixed-effect models reported in Table 2; yet the inclusion of municipal fixed-effect do not guard against confounders that are time varying. For example, new immigrants may be less likely to settle in areas where negative attitudes towards them prevail, which may also lead to higher distrust and more resources devoted to security. If this is the case, OLS estimates of γ may be biased towards zero. At the same time, there is also the possibility of causality running both ways as some immigrant groups may be deterred by increased police presence whereas others can be encouraged to settle in areas with higher police visibility. Therefore, in Table 3 we replicate the specifications in Table 2 but we use a two-stage least squares (2SLS) estimator. The instrument is the predicted share of immigrants stemming from countries that joined the EU between 2003 and 2015 as in equation (3) and the first-stage regression is the one described in the equation (4). The last two rows of Table 3 report the first-stage estimates. As expected, we find that the coefficient of migration in the first-stage is positive and significant, and substantially large. The Kleinbergen-Paap F-Statistic is similar to the conventional F-statistic, but takes into account the clustering of the standard errors, and its values are above conventional levels that characterize weak instruments. Turning to our main results, we find that immigration has a substantive, economically relevant, impact on security spending. The amount of spending devoted to local security increases by 0.12-0.30 percentage points for a one point increase in the share of immigrants. The results hold independent of whether one controls for socioeconomic characteristics, suggesting that they tap changes in spending preferences that are not simply a function of local conditions. Recall that security

spending is measured as a share of local public spending, and that, according to Table 1, average spending is 4.4%. So even small changes in the number of immigrants can have important consequences for the level of spending on local law enforcement. All coefficients, with the exception of column (vi), where we exclude the top 5 countries of origin, are statically significant at the conventional levels.[12] To get further insights into the results above, Table B.2 shows that the positive effect of the share of immigrants from new EU members has a positive effect on security spending only after the first, second and third waves of EU enlargement.

Table A.1 explores the relation between immigration and the composition of local public spending by means of the two-stage least squares (2SLS) estimator. In particular, we estimate Eq. 1 using revenue and different spending items of the municipal budget as the dependent variable, and instrumenting the share of immigrants as in Eq.4.[13] Three basic results emerge: first, immigrants are associated with a decline in per-capita revenues, given their relatively lower fiscal contribution. As a result, they are also associated to lower total local spending. Second, more spending on security corresponds to fewer resources available to support road and transport services. Other functions, such as culture, sport and tourism and local economic development, remain unaffected. Third, public spending on welfare and administrative services also increases as a consequence of higher shares of immigrants.

———————— [Table 3 in here] ————————

We verify the above findings with a round of additional checks in Table 4, using the baseline model of column (ii) in Table 3. First, we control for the level of grants from the central government (column (i)) to address concerns about the possibility that higher municipal funding could encourage more relative spending on law enforcement.[14] Second, local governments generate most of the revenue from property taxes, but they also rely on fines and fees collected by law enforcement. As local governments may have incentives to allocate more resources to policing when they collect large amounts of fees and charges, we explicitly control for their value in column (ii). Third, as local governments often cooperate on a variety of issues and the supply of public

12. This result is not surprising since an important portion of the overall variation of our instrument is due to immigrants from Romania which is one of the top 5 countries of origin.

13. We refer the interest reader to Section A.2 of the Online Appendix for a more thorough discussion of how immigration affects local public finance.

14. Note that while total spending might be affected by the domestic stability pact, which is the only fiscal constraint that, over the period covered by our dataset, applies to local governments with a population above 5,000 inhabitants (and above 1,000 inhabitants since 2013), security spending as such is merely a function of local decisions. Whereas transfers from the central government represent an important fraction of municipal revenues, there are no transfers targeted to specific functions. The only exception are the fiscal grants that municipal governments receive when they open a reception center through the SPRAR program. These grants are used to pay firms and cooperatives to run the reception centers and finance the services to host refugees (see Gamalerio, 2018). There are also no constraints based on population - or on other demographic characteristics - that shape the composition of municipal spending.

services can create spatial spillovers (e.g., López et al., 2017; Ferraresi et al., 2018), we control for the share of security spending in neighboring municipalities, i.e., the spatial lag, to soak up spatial correlations (see column (iii)). Finally, changes in security spending can be a function of the initial level of municipal spending, and immigrants might self-select in areas with a specific initial level of spending. To account for this, we include the initial level of security spending interacted with year fixed-effects (see column (iv)). Overall, our results hold up remarkably well to this series of specification checks and the coefficients of share of migrants are almost unchanged. Interestingly, grants from the central government decrease the relative share of the budget allocated to security as they are usually used to increase funding for other services such as the maintenance of roads. Furthermore, both security spending of neighbouring municipalities and the amount of fees and charges collected by the police are associated to higher spending on law enforcement.

——————— [Table 4 in here] ———————

5.2 Heterogeneity

We now shift the focus towards the "types of migrants" that drive the impact of migration on local public finances and explore whether local spending on security differs according to the country of origin of immigrants. The dichotomization between natives and immigrants does not comprehensively capture the cultural diversity that may exist across and within such population groups. The cultural distance between social groups is likely to be a core driver of locals' negative attitudes and prejudice towards immigrants as well as concerns about insecurity and national cohesion (see e.g., Citrin et al., 1990). To overcome this limitation, we construct a simple measure of the distance between the immigrants and the host society, Italy. Denote by π_{nit} the share of immigrants from country n in municipality i at time t, and by d_n the cultural distance between populations n and Italy. The weighted cultural distance between countries n and Italy in municipality i at time t is then:

$$\text{WCD}_{it} = \sum_{n=1}^{N} (\pi_{nit} \times d_n)$$

In other words, for every municipality we sum up the dyadic distance between each subpopulation of immigrants and Italy, weighted by the proportion of immigrants belonging to each country of origin. As we discussed in Section 3, we rely on three proxies of cultural distance: genetic, linguistic and religious and for each of them we estimate the following model:

$$s_{it} = \gamma \text{WCD}_{it} + \beta_k' x_{it} + f_i + f_t + \varepsilon_{it}$$

Results are shown in Table 5 and are obtained from 2SLS regressions, where the instrument for WCD_{it} is the predicted weighted cultural distance, constructed as the sum of the dyadic distance between immigrants from new EU

Member States and Italy, weighted by the predicted share of immigrants from new EU Member States as in equation (3) and multiplied by the dummy for the post-accession period. Note that to be consistent with the analysis of Section 5.1, the instrument is calculated only on immigrants originating from new EU Member States.

To facilitate the interpretation of results we normalize the indicators, so that their values range from 0 to 100. Findings suggest that the greater the distance between migrants and native, the larger the increase in security spending. In terms of point estimates, we find that one point increase in the genetic distance leads to an increase in security spending of about 0.21 percentage points. Smaller effects are found if other measures of distance are used, with the effect being the smallest for religious distance (about 0.05 percentage points). The effect of linguistic distance ranges between 0.06 and 0.12 percentage points. Taken together, these results suggest that the cultural proximity of foreign-born individuals to native populations matters, and the relation between immigration and security spending is more pronounced as the cultural distance between migrants and natives increases.

———————— [Table 5 in here] ————————

As noted before, municipal spending on security is correlated with the number of police officers. As one would expect, then, when we use the number of police officers as the dependent variable we find that higher shares of immigrants, as well as their cultural distance from the natives, lead municipalities to deploy additional police officers (see Table 6). The effect is quantitatively large, statistically significant, and robust. A ten-point increase in the share of immigrants results in the deployment of two additional police officers. This is a quite large effect, if we consider that the average number of police officers in a municipality is approximately five. The magnitudes of the coefficients are similar when we factor in the heterogeneity in the migrant population.

———————— [Table 6 in here] ————————

6. Robustness checks

We probe the robustness of our empirical findings with a variety of alternative specifications and robustness checks. We omit tables due to space limitations, although the additional models can be found in the Online Appendix.

The "past-settlement" or "enclave instrument", a Bartik-like instrument introduced by Altonji and Card (1991), is a very popular tool to identify the causal impact of immigration on a variety of outcomes. The instrument generates variation in local migration over time due to the interaction between the immigrant composition of a place and aggregate immigration flows from origin countries. The validity of the instrument is premised on that both components should be uncorrelated, or less correlated, with current factors affecting budget decision. To demonstrate its validity, particularly with regards to the first component, the previously established immigrants settlement (Jaeger et al., 2018;

Goldsmith-Pinkham et al., 2018) we perform two checks. First, as persistent local conditions can affect both immigrants location decision and public spending, we follow Moriconi et al. (2018) and test the correlation of the instrument with economic and demographic trends at the municipality level over the period 1991-2001 in Table B.3. Results show that there are no pre-trend correlations, which mitigate concerns about correlation between the instrument and past demand shock. Second, as immigration composition in year 2003 may not be sufficiently distant in time, we use the share of immigrants obtained from Census in 1936,[15] or the share of votes for the National Fascist Party (PNF) in 1929 Italian general election as a source of cross-sectional variation. Unfortunately these information are only available at the province level. Thus, we first replicate the main models of Tables 2 and 3, using the province, rather than the municipality, as unit of observation, to make sure that our previous findings about immigration and local spending are consistent when using a higher level of aggregation. The results are qualitatively the same and can be found in Table B.4, columns (i) and (ii). In column (iii) we replace migrants distribution in 2003 with the corresponding distribution in 1936. As we can see, the coefficients in columns (ii) and (iii) are remarkably similar, which increases the confidence in our results. However, the 2SLS regression in column (iii) seems to be affected by weak instrument, as evidenced by the small value of the F-stat. This is a known drawback of shift-share strategies when cross-sectional variations that are distant in time are used, as they reduce the predictive power of the instrument. In column (iv) we exploit variations in the share of votes approving the list of deputies appointed by the Grand Council of Fascism. Since this instrument only varies across provinces, the second-stage regression is estimated in changes over the period 2003-15. Specifically we estimate a model of the following form: $\Delta s_p = \gamma \Delta m_p + \beta_k' \Delta x_p + \Delta \varepsilon_p$, and we instrument the change of immigrants, Δm_p, with the share of votes for PNF. Although only a minority of citizens, less than 2%, voted against, the number of "No" captures the degree of opposition against the regime. The proportion of "No" across provinces ranges from 10% in the province of Bolzano, Trento and Milano to almost zero in Matera, Lecce and Cosenza. As the National Fascist Party had very strong anti-immigration and anti-integration stances, we use this variation as a proxy for the historical level of openness of a province towards foreign-borns. Carillo (2018) demonstrates how people living near the Fascist New Towns built in the 20s currently display political attitudes in line with the fascist ideology. In particular, nationalism preferences and racism are persistent over time (Carillo, 2018). In fact, higher shares of approval for the list of deputies appointed by the Grand Council of Fascism correspond to lower shares of immigrants in the first stage. In the second stage, we find that immigration does indeed increase spending on security, and the coefficients are again similar to those in columns (i) to (iii). Finally, in columns (v) and (vi)

15. Other available Census data are for 1951 and 1961. However, we do not use them in the analysis because they record a fewer number of origin countries, thereby they fall short of appropriately explaining local variation in immigrants later in the 2000s.

we use the same specification of column (iv) except for the instruments, which are those employed in columns (ii) and (iii) i.e., the 2003 and 1936 migrants distribution. Overall, when we use immigration composition in 2003, we find a positive and significant effect of immigration on security spending. At the same time, and once again, using an instrument too distant in time - the share of immigrants in 1936 - leads to statistically insignificant results.

6.1 Alternative instruments

A fair concern with the instrument presented in Section 4 is that this is based on a subset of nationalities. This may pose issues if, for example, immigrants from the excluded nationalities have a higher propensity to move to municipalities with more positive attitudes towards them. If this is the case, the impact of migration on security spending would be over-estimated. To address this issue, we consider an additional instrument that exploits variation in migration inflows due to immigrants stemming from *all countries* between 2003 and 2015. We replicate the analysis of Table 3 but we use this alternative instrument.[16] As we can see in Table B.5, the coefficients are overall substantially large, ranging from 0.21 to 0.39, which suggest that the estimates in Table 3 may be a lower estimate of the strength of the immigration-security spending relationship. If anything, focusing on a subset of EU nationalities provides more conservative estimates.

The correlation between the instrument and the endogenous variable must be large to minimize finite-sample bias. The F-stat is generally used to gauge the size of the distortion of the IV estimator. As we have seen in the previous section, the F-stat is always above the value of 10, which indicates that the coefficient of the excluded instrument is different from zero in the first-stage regressions. Since our instrument is the interaction of the shift-share variable and the dummy for the post-accession period, part of the correlation between the instrument and the endogenous variable could be attributable to the latter rather than being driven by the previous settlement of immigrants. To exclude this possibility, we re-estimate all 2SLS models of Table 3 using the shift-share variable of equation (3) without interacting it with the post-accession dummy. Therefore, the instrument is the predicted share of immigrants stemming from the countries that joined the EU between 2003 and 2015, which is in fact equation (3). Results of this exercise are reported in Table B.6 and are close to those of Table 3, thus further corroborating our evidence of a strong effect of migrants on security spending. Moreover, the F-stat is well beyond the value indicating weak instruments. In sum, the interaction of the shift-share with the post-accession dummy does not drive our main conclusions. [17]

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16. In practice, the new instrument is given by: $\widehat{m}_{it} = \frac{\sum_w \sigma_{iw2003} \widetilde{m}_{wt}}{pop_{it}}$ where $\widetilde{m}_{wt}$ is the annual number of (predicted) immigrants from all countries ($w = 1, ., 189$) obtained from equation 2 and σ_{iw2003} is the settlement of immigrants by country of origin in municipality i in 2003.

17. We have also checked whether results remain unchanged when the share of immigrants (endogenous variable) includes only foreigners originating from new EU members, while using

7. Mechanisms

7.1 Does immigration increase crime?

We now investigate why the presence of foreign population leads to an increase in local spending on security. A seemingly obvious candidate is the crime rate as foreign nationals may either commit more crimes or lead to higher crime rates among native-born citizens. Were it the case, we would observe a positive relationship between crime rate and migrants, which in turn would translate into an increase in security spending. Hence, we collect data on the number of all registered crimes per capita from ISTAT. These data are only available at the province level. We then build a panel of 93 Italian provinces over the period 2003-2015 including the same financial, demographic and economic data of the previous tables and investigate whether the presence of immigrants is linked to an increase in crime.[18] Results of this analysis are reported in Table 7 and do not support the idea that an increase of immigrants is associated with an increase in crime. Overall, the share of migrants is actually negatively associated to crime (column (i)), whereas this relation is not statistically significant in column (ii), where we explicitly account for the 2007 EU enlargement.[19] The negative correlation found in column (i) is consistent with Mastrobuoni and Pinotti's (2015) finding on how the hazard rate of committing a crime decreases after immigrants obtain legal status. In fact, column (ii) shows that a higher presence of immigrants *after the 2007 EU enlargement* corresponds to a reduction in the crime rate.

Taken together, these results mirror previous studies that find no empirical relationship between immigration and the overall crime rate in Italian provinces (see e.g., Bianchi et al., 2012, who however uses data for the period 1990-2003, whereas our sample starts in 2003).[20]

———————— [Table 7 in here] ————————

the predicted share of immigrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. We report the results in the Table B.7. Reassuringly, findings are very similar to that of Tab. 3.

18. Crime records are not available for year 2009 and we imputed these missing values by using linear interpolation.

19. We also investigate whether the potential impact of immigration on crime goes through higher spending on security. We estimate the relationship between crime and spending on security, while controlling for both province- and year-fixed effects, as well as for the same demographic and economic variables used in Table 7. While the coefficient associated with security spending is negative, the size is quite small (-0.038) and it is not statistically significant (p-value =0.184). This is not surprising as municipal police officers' main duty is to enforce local regulations on traffic, commerce and legal residence. They only have an auxiliary role in the area of crime prevention, public order, security, and public safety, which are the main responsibilities of the National police (we refer the interested reader to Fabini, 2016, for a detailed discussion of local police and law enforcement, particularly in relation to immigration). This evidence, although descriptive rather than causal, should help mitigate the above concern.

20. Our data allows us to distinguish between several major crime categories such as homicide, robbery, theft, and drug-related crimes. We do not find evidence of a significant effect of migration on any typology of crime. We omit these additional tables from the presentation, but the results can be replicated with our data replication material.

7.2 Does immigration increase fear of crime?

In the previous section, we found that the number of immigrants can give rise to increased public spending on security. In a similar vein, higher cultural distances between home and host countries lead to more spending on law enforcement. We also found that immigrants are not associated to increased insecurity. In this section, we evaluate an alternative explanation to the crime mechanism: immigration may just increase worry about crime. In a recent article, Langella and Manning (2019) present convincing evidence that diversity affects fear of crime and to a lesser extent the quality of social life. For this analysis, we use survey data from the wave 5 of the World Value Surveys (WVS) and select only respondents living in Italy.[21] To get as close as possible to the migration variables of previous models, we look at whether respondents live in a neighborhood where people from different race or foreign-born people are present. We focus on two outcome variables. The first is based on the WVS survey question on "[w]hat the aims of this country should be for the next ten years [...] Would you please say which one of these you, yourself, consider the most important?" Possible answers include "A stable economy", "Progress toward a less impersonal and more humane society", "Progress toward a society in which ideas count more than money", "The fight against crime". We first deleted all individuals who have not responded to this question before transforming this item into a binary variable capturing worry about crime. Thus, the variable takes on the value of one if "The fight against crime" is declared as the first choice by the respondent, and zero otherwise. The second outcome variable is based on the question "Immigrants increase crime problems". Individuals could reply on a scale from 1 to 10 with lower values standing for more concerns about immigrants and crime. In this case too, we transform the variable into dummy equals to one for any reported value below 4 and zero otherwise.[22] We estimate logistic regressions where the dependent variables are the two outcomes defined above and the main explanatory variables are whether respondents live in close proximity to (i) either ethnically diverse neighbors (*Neighbors of different race*) or (ii) foreign-born individuals (*Foreign neighbors*). All specifications control for gender, marital status, seven dummies for employment status, squares in ages, number of kids, religion and two dummies for medium and high income levels. We report results in Table 8.

We find that respondents living in close proximity to ethnically diverse neighbors or foreign-born individuals are more likely to suggest that fighting crime is indeed the main priority of the country. At the same time, both the birthplace of the neighbors and the ethnic background are correlated with increased lev-

21. The WVS consists of national sample surveys in over 90 countries and collects information on socio-cultural and political aspects. `http://www.worldvaluessurvey.org/wvs.jsp`. Wave 5 reports information on attitude toward immigrants and is chronologically the closest to our main analysis. Within wave 5, survey are conducted in the period 2005-09 across different countries. In Italy, the survey was conducted in 2009.

22. Note that results do not change if the categorical scale is used in lieu of the binary indicator. This additional table can be produced with our replication material.

els of concerns about immigration leading to higher crime rates. In particular, our results indicate that the probability of declaring the fight against crime as the priority of the country increases by 8 and 12 percentage points if the respondent's neighbors are of different racial backgrounds or are foreign-born, respectively. In a similar vein, the probability of reporting concerns about immigrants and crime increases when respondents live in a neighborhood where people from different race (14 percentage points) or foreign-born people (17 percentage points) are present.

———————— [Table 8 in here] ————————

7.3 Does immigration erode social capital?

To delve deeper into the underlying mechanism, we ask why fear of crime should increase with immigration flows. A wealth of studies, mostly in criminology, has consistently found that trust and social cohesion in neighborhoods are strongly associated to, and can help predict, fear of crime (see e.g., Bennett, 1991; Sampson et al., 1997; Swatt et al., 2013; Markowitz et al., 2001; Rader, 2017). We focus specifically on social capital, defined as the "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions" (Putnam et al., 1994, p. 167).[23] There is a normatively sympathetic component in its definition and scholars have thus not surprisingly developed an impressive body of research suggesting that trust and social networks allow individuals, companies, and nations to flourish (Putnam, 2000; Guiso et al., 2004; Nannicini et al., 2013; Guiso et al., 2016).[24] There is also a good deal of support for the importance of social networks and cohesion in shaping people's perceptions of their neighborhood. There are two dimensions to social capital: a structural component, which includes the existence and extent of social networks, and a cognitive or attitudinal component comprising trust and reciprocity. We contend that both dimensions are important and related to each other, although they could capture different aspects of social capital and thus exert different effects on public beliefs and fear of crime, and on individual demand for security (see e.g., Liska and Warner, 1991; Buonanno et al., 2009; Brunton-Smith et al., 2014; Sargeant et al., 2017).[25]

To investigate this hypothesis, in Panel A of Table 9 we first use the number of per-capita non-profit organizations, a proxy for the structural component,

23. Guiso et al. (2016, p.1406) defines social capital as the "persistent and shared beliefs and values that help a group overcome the free rider problem in the pursuit of socially valuable activities" and label it "civic capital".

24. Putnam et al. (1994) pioneered the research on social capital and institutional outcomes when he found that local government quality across regions in Italy improves with higher levels of social capital, measured by civic engagement.

25. Furthermore, previous studies have relied to a large extent either on self-reported perceptions of trust, or on actual measures of the structural component, while we use both subjective and more "objective" measures.

using municipal data from the 2001 and 2011 Census.[26]. We estimate a specification similar to Eq. 1 which controls for municipality and time fixed effects and whose dependent variable is the number of per capita non-profit organizations. We can see that an increase in the share of migrants is correlated to a reduction in the number of per-capita non-profit organizations (column (i)). Similarly, high linguistic distances between native and foreign-born residents are correlated to a significant decrease in the number of organizations (columns (iii)-(iv)).

In panel B of Table 9 we aggregate three waves (1990-1994, 1995-1998 and 2005-2009) of WVS for which information on Italy are available and focus on two proxies for social capital.[27] The variable for the attitudinal component is based on the question "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" Possible answers include "Most people can be trusted", "Need to be very careful" (*interpersonal trust*). For the structural component, we follow Knack and Keefer (1997) and use responses to a question about whether each of the following behaviors "can always be justified, never be justified or something in between": (i) "claiming government benefits which you are not entitled to"; (ii) "avoiding a fare on public transport"; (iii) "cheating on taxes if you have the chance". We sum values over the five items to create a scale indicating the strength of civic norms (*civic cooperation*).[28] Larger values indicate greater civic cooperation. We estimate pooled logistic regressions for *interpersonal trust* and pooled linear regressions for *civic cooperation* and control for gender, marital status, seven dummies for employment status, squares in ages, number of kids, religion, two dummies for medium and high income levels and time fixed effects. The main explanatory variables are whether respondents live in close proximity to either ethnically diverse neighbors (*Neighbors of different race*), or foreign-born individuals (*Foreign neighbors*). Our results suggest that individuals with foreign-born neighbors or neighbors of difference race are more likely to report low levels of trust toward other members of the society. Similarly, having neighbors of different race or foreign-born neighbors is negatively correlated with civic cooperation within societies. In terms of substantive effect, the probability of trust into social interactions decreases by 12 percentage points. In addition, the presence of neighbors of different race or born in another country is correlated with a reduction in our measure of civic cooperation of almost one point on a scale between 0 and 27.

——————— [Table 9 in here] ———————

26. Data on immigration in 2001 are not available and therefore we use the earliest accessible year which is 2003

27. The actual years on which the survey was run in Italy are 1990, 1999, 2009.

28. Knack and Keefer (1997) also consider other two additional variables, that is "keeping money that you have found" and "failing to report damage you've done accidentally to a parked vehicle". Unfortunately, these two indicators were not available for the 1999-2009 waves.

8. Conclusions

Our empirical analysis of immigration and public spending on law enforcement in Italian municipalities provides straightforward but important results. First, immigration leads to an increase in public spending for police protection. Municipal spending on security increases by 0.12-0.30 percentage points for a one point increase in the share of immigrants. This is a quite important effect, as municipalities spend on average about 4.3% of their budget on security, and they are often in serious financial distress. In fact, Italian cities have long struggled to afford the cost of basic infrastructure maintenance and to provide vital services. Second, when taking into account the rich diversity within migration flows, and between immigrants and native populations, we find that the effect is larger the higher the cultural distance between immigrants' countries of origin and their destination state. Third, a higher crime rate does not seem to be the primary source of our findings. Instead, we show that this is likely to be explained by an increase in people's fear of future crimes, as opposed to the actual probability of being a victim of crime. We also provide evidence to suggest that immigration is associated to a deterioration in the strength of social ties and interpersonal trust, two contextual factors that are shown to predict fear of crime and increase the demand for police services. Whereas fear of crime is stronger in communities with weak community bonds, social cohesion and trust among community members cause residents to feel safer and less afraid of crime. Our results are robust across a number of measures of social capital, different markers of cultural distance, and distinct instrumental variables approaches, including the use of historical data.

We explore a number of potential mechanisms, yet the list is inherently non-exhaustive and additional competing mechanisms are likely to be at play. For one, media coverage of migration too often emphasize negative news, over-representing instances in which immigrants are the perpetrator of crime and under-reporting cases in which they are the targets of violence or crime. Lack of municipal-level data on how the media covers issues of immigration and crime prevents us from investigating this alternative channel. At the same time, whereas the main duty of local police officers is to enforce local regulations, we are unable to "unpack" their specific activities due to the absence of detailed information. As some of their duties range from maintaining public order to ensuring the security and decorum of public spaces to checking documents to preventing crime, it would be particularly interesting to investigate which type of increased monitoring or enforcement activity are more affected by the presence of immigrants. We hope that some important avenues for further research might emerge from these limitations.

Immigrant populations in Europe have been growing fast for decades now. Crime in the same period, however, has moved in the opposite direction, with the rate of violent crimes in many countries well below what it was in 90s. Yet, political parties in Hungary, Austria and Italy have won election after campaigns based on exploiting and whipping up fears about the impact of immigration on crime. Similarly, worry about violent crime has lead to the political

success of anti-immigration parties at the local level. This can have important consequences for a municipality's determination of short and long term priorities and which local services should be funded. Our knowledge of the relation between migration and public spending on police protection is particularly anecdotal and current research remains silent on why, how, and under which circumstances an increase in immigration may affect security spending. This article contributes to our understanding of the consequences of immigration for the receiving municipality's fiscal position and the allocation of resources to security, which is crucial for effective public policy making.

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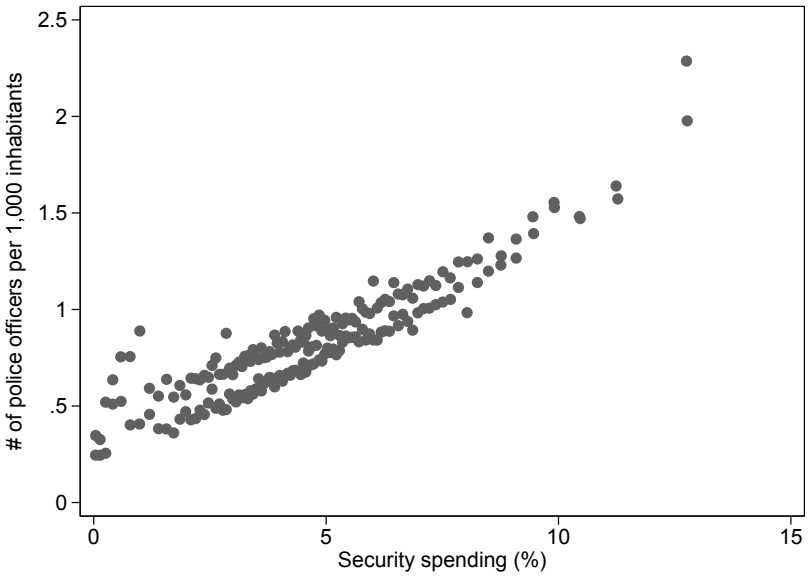

Figure 1: Correlation between spending on security and number of police officers (per 1,000)

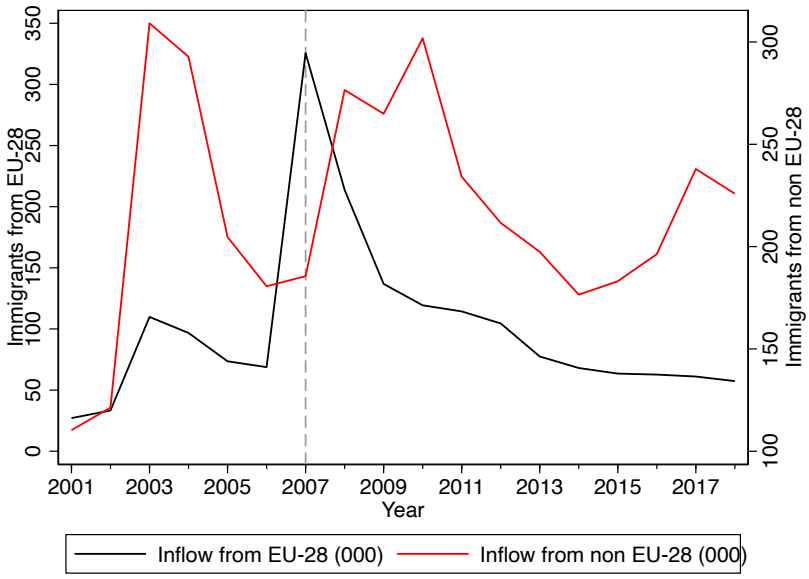

Figure 2: Inflows of foreign population in Italy, 2001-2018. (Source: OECD)

Table 1: Summary Statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
MUNICIPAL-LEVEL DATA					
spending on security (%)	94,159	4.37	3.13	0.00	46.75
migrants (%)	94,159	5.33	4.11	0.00	32.19
population density	94,159	304.61	653.99	0.73	13024.17
share of 65+	94,159	0.23	0.06	0.04	0.69
population	94,159	7577.21	42817.68	34.00	2872021.00
domestic stability pact	94,159	0.41	0.49	0.00	1.00
income	94,159	11318.96	3361.33	1762.21	58956.46
grants	86,916	338.62	478.59	0.00	37090.55
fees & charges	86,916	114.25	239.71	0.00	25999.76
security spending$_{-i}$ (%)	94,159	4.44	1.95	0.00	20.79
WCD (genetic)	94,159	6.91	7.11	0.00	100
WCD (linguistic cognate)	94,159	7.99	7.20	0.00	100
WCD (linguistic common nodes)	94,159	15.02	11.64	0.00	91.52
WCD (religious)	94,159	15.53	12.57	0.00	100
no. of nonprofit organizations	13,950	0.01	0.00	0.00	0.10
no. of police officers	67,834	5.21	9.02	0.00	85.00
PROVINCE-LEVEL DATA					
spending on security (%)	1,209	5.68	1.39	0.00	9.97
crime	1,209	0.04	0.01	0.02	0.09
population size	1,209	543806.70	614664.30	69610.00	4182007.00
population density	1,209	269.67	369.70	38.24	2863.54
share of 65+	1,209	0.22	0.03	0.13	0.29
income	1,209	12548.53	2990.99	5934.55	19810.86
migrants (%)	1,339	6.23	3.38	0.54	16.02
vote-share for the National Fascist Party 1929 (%)	88	98.57	1.66	92.98	100
WCD (genetic)	1,209	12.48	15.04	0.00	100
WCD (linguistic cognate)	1,209	16.45	16.75	0.00	100
WCD (linguistic common nodes)	1,209	14.47	15.75	0.00	100
WCD (religious)	1,209	14.43	15.78	0.00	100
INDIVIDUAL-LEVEL DATA					
neighbors of different race	4,587	0.12	0.32	0.00	1.00
foreign neighbors	4,581	0.11	0.32	0.00	1.00
interpersonal trust	4,503	0.34	0.47	0.00	1.00
civic cooperation	4,628	23.89	4.30	0.00	27.00
fight against crime	1,367	0.30	0.45	0	1
immigrants increase crime	867	0.53	0.50	0	1

Table 2: Migrants and local security spending. Results from fixed effects models.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	No controls	Controls	Excluding prov. capitals	Excluding municip. <15K	Excluding RSS	Excluding top 5 senders	Trimming 5%	Trimming 1%
Migrants (%)	0.035***	0.029***	0.023**	0.059*	0.024**	0.028**	0.031***	0.030***
	(0.009)	(0.010)	(0.010)	(0.035)	(0.010)	(0.014)	(0.007)	(0.008)
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7137	623	6196	7243	7190	7237
Observations	94159	94159	92781	8099	80548	94159	89422	93190

All regressions include municipal and time fixed effects. Model (ii)-(viii) include population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Model (iii) excludes municipalities that are administrative centers of the provinces. Model (iv) excludes municipalities with population lower than 15000 inhabitants. Model (v) excludes regions with special status (RSS): Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia. Model (vi) excludes immigrants from Romania, Morocco, Albania, China, Ukraine. Model (vii) excludes values of the dependent variable below (above) the 5th (95th) centile. Model (viii) excludes values of the dependent variable below (above) the 1th (99th) centile. Standard errors are clustered at the municipality level. *** significant at 1%, ** significant at 5% * significant at 10%.

Table 3: Migrants and local security spending. Results from 2SLS models.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	No controls	Controls	Excluding prov. capitals	Excluding municip. <15K	Excluding RSS	Excluding top 5 senders	Trimming 5%	Trimming 1%
Migrants (%)	0.147***	0.157**	0.150**	0.298***	0.124*	0.173	0.180***	0.150***
	(0.055)	(0.066)	(0.069)	(0.093)	(0.074)	(0.218)	(0.035)	(0.054)
FIRST-STAGE								
$\widehat{\text{Migrants}}$ (%)	0.222***	0.187***	0.179***	0.443***	0.174***	0.233***	0.186***	0.191***
	(0.021)	(0.019)	(0.019)	(0.059)	(0.020)	(0.058)	(0.021)	(0.020)
First-stage F-stat	112	93	88	57	75	16	81	92
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7137	623	6196	7243	7190	7237
Observations	94159	94159	92781	8099	80548	94159	89422	93190

All regressions include municipal and time fixed effects. Model (ii)-(viii) include population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Model (iii) excludes municipalities that are administrative centers of the provinces. Model (iv) excludes municipalities with population lower than 15000 inhabitants. Model (v) excludes regions with special status (RSS): Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia. Model (vi) excludes immigrants from Romania, Morocco, Albania, China, Ukraine. Model (vii) excludes values of the dependent variable below (above) the 5th (95th) centile. Model (viii) excludes values of the dependent variable below (above) the 1th (99th) centile. The share of migrants is instrumented by the predicted share of migrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table 4: Robustness checks: migrants and local security spending. Results from 2SLS models.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)
Migrants (%)	0.166**	0.164**	0.107*	0.118**
	(0.076)	(0.076)	(0.064)	(0.050)
$Grants_{t-1}$	-0.162***			
	(0.060)			
Fees & $charges_{t-1}$		0.200		
		(0.197)		
Security $spending_{-i}$ (%)			0.124**	
			(0.060)	
Spending 2003 * Year FE				not reported
FIRST-STAGE				
$\widehat{\text{Migrants}}$ (%)	0.163***	0.163***	0.185***	0.188***
	(0.018)	(0.018)	(0.019)	(0.019)
First-stage F-stat	78	79	91	93
Years	2004-15	2004-15	2003-15	2003-15
Municipalities	7243	7243	7243	7243
Observations	86916	86916	94159	94159

Variables "Grants" and "Fees & charges" are divided by 1,000. All regressions include municipal and time fixed effects, population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. The share of migrants is instrumented by the predicted share of migrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. Standard errors are clustered at the municipality level. *** significant at 1%, ** significant at 5% * significant at 10%.

Table 5: Genetic, linguistic and religious distance and local security spending. Results from 2SLS models.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)
		Distance		
	Genetic	Linguistic (cognate)	Linguistic (common nodes)	Religious
WCD_{it}	0.208**	0.117***	0.057**	0.054**
	(0.089)	(0.046)	(0.024)	(0.023)
FIRST-STAGE				
$\widehat{WCD}_{it}$	0.068***	0.161***	0.241***	0.254***
	(0.011)	(0.025)	(0.025)	(0.026)
First-stage F-stat	39	42	89	97
Years	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7243	7243
Observations	94159	94159	94159	94159

All regressions include municipal and time fixed effects, population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. The indicators of cultural distance are instrumented by the predicted weighted cultural distance. Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table 6: Migrants and number of police officers. Results from 2SLS models.

Dep.var.: Police officers	(i)	(ii)	(iii)	(iv)	(v)
		Distance			
		Genetic	Linguistic (cognate)	Linguistic (common nodes)	Religious
Migrants (%)	0.209***				
	(0.053)				
WCD_{it}		0.300***	0.151***	0.077***	0.072***
		(0.083)	(0.039)	(0.020)	(0.018)
FIRST-STAGE					
$\widehat{\text{Migrants}}$ (%)	0.209***				
	(0.022)				
$\widehat{WCD_{it}}$		0.070***	0.185***	0.270***	0.290***
		(0.011)	(0.032)	(0.023)	(0.028)
First-stage F-stat	93	40	33	88	105
Years	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	5218	5218	5218	5218	5218
Observations	67834	67834	67834	67834	67834

All regressions include municipal and time fixed effects, population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. The indicators of cultural distance are instrumented by the predicted weighted cultural distance. Standard errors are clustered at the municipality level. *** significant at 1%, ** significant at 5% * significant at 10%.

Table 7: Transmission mechanism: Do migrants increase crime? Results from 2SLS models.

Dep.var.: Crime rate	(i)	(ii)
Migrants (%)	-0.156**	0.040
	(0.079)	(0.085)
Post 2007		0.009*
		(0.005)
Migrants (%) $\times$ post$_{2007}$		-0.075***
		(0.026)
FIRST-STAGE		
$\widehat{\text{Migrants}}$ (%)	0.839***	0.007***; -0.008***
	(0.136)	(0.001);(0.002)
$\widehat{\text{Migrants}}\times$ post$_{2007}$ (%)		0.056; 1.618***
		(0.044); (0.224)
First-stage F-stat	38	22; 27
Years	2003-15	2003-15
Provinces	93	93
Observations	1209	1209

All regressions include province and time fixed effects, population density and size, the share of 65+, average income and the share of municipalities under the domestic stability pact. The share of immigrants in model (i) is instrumented by the predicted share of immigrants stemming from countries that joined the EU between 2003 and 2015. The share of migrants and its interaction with the dummy for post 2007 period in model (ii) are instrumented by the predicted share of migrants from new EU Member States and its interaction with post 2007 period dummy. The estimated coefficients of the two instruments and corresponding F-stat are reported next to each other at the bottom of column (ii). Standard errors are clustered at the province level. *** significant at 1%, ** significant at 5% * significant at 10%.

Table 8: Transmission mechanism: Fear of crime.

	Dep.var.: Fight against crime		Dep.var.: Immigrants increase crime	
	(i)	(ii)	(iii)	(iv)
Neighbors of different race	0.086**		0.139***	
	(0.042)		(0.047)	
Foreign neighbors		0.130***		0.168***
		(0.040)		(0.045)
Year	2009			
Observations	1367	1367	867	867

Marginal effects shown. Regressions use data from wave 5 (2009) of the World Value Survey and control for: gender, marital status, seven dummies for employment status, squares in ages, number of kids, religion, two dummies for income level. Standard errors are robust to heteroskedasticty. *** significant at 1%, ** significant at 5% * significant at 10%.

Table 9: Transmission mechanism: Do migrants erode social and civic capital?

PANEL A	DEPENDENT VARIABLE Number of non-profit organizations per capita				
	(i)	(ii)	(iii)	(iv)	(v)
		Distance			
		Genetic	Linguistic (cognate)	Linguistic (common nodes)	Religious
Migrants (%)	-0.041*				
	(0.022)				
WCD_{it}		-0.002	-0.019*	-0.014*	-0.010
		(0.007)	(0.011)	(0.008)	(0.007)
Years	2001;2011	2001;2011	2001;2011	2001;2011	2001;2011
Municipalities	6975	6975	6975	6975	6975
Observations	13950	13950	13950	13950	13950
PANEL B	DEPENDENT VARIABLE				
	Interpersonal trust		Civic cooperation		
	(i)	(ii)	(iii)	(iv)	
Neighbors of different race	-0.116***		-0.816***		
	(0.020)		(0.218)		
Foreign neighbors		-0.118***		-0.957***	
		(0.02)		(0.222)	
Years	1990; 1999; 2009				
Observations	4587	4581	4635	4628	

All regressions of Panel A include municipal and time fixed effects, population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Coefficients in Panel A are multiplied by 1000. Panel B displays marginal effects. All regressions of Panel B control for: gender, marital status, seven dummies for employment status, squares in ages, number of kids, religion, two dummies for income level and time fixed effects. Robust standard errors of models in Panel A are clustered at the municipal level. In Panel B standard errors are robust to heteroskedasticty. *** significant at 1%, ** significant at 5% * significant at 10%.

APPENDIX

A.1. Municipal spending and immigration in Italian municipalities

Italian municipalities are responsible for many of the basic civil functions, such as maintaining a registry of births and deaths. They also provide several pivotal public services including social welfare services, territorial development, local transport, infant school education, sports and cultural facilities, municipal police, and public utilities such as water supply and waste disposal. Municipalities are also responsible for planning of local areas and infrastructure networks. According to our data, municipalities' total expenditure during the period 2003-2015 was, on average, about 80 billions, but it has steadily declined from 2003 to 2012, reaching a minimum in 2012, the year of the sovereign public debt crisis, when the central government has reduced the funds transferred to municipalities (see Figure A.1). Municipalities are the lowest level of government, yet municipal spending makes up a significant portion of total government expenditure, as the ratio of municipal expenditure to general government expenditure ranges between 8% and 12%.[29]

———————— [Figure A.1 in here] ————————

In terms of current revenues, one-third of the funding comes from the upper levels of the governments, to finance a number of programs carried out on behalf of the central and regional governments. Following a lengthy process of fiscal devolution, municipalities must rely also on their own revenues, which account for 45% of their total current revenues, to fund local services and facilities. In particular, property taxes and sales and use taxes are the primary funding sources for many services that do not have a dedicated central or regional funding source. The main local tax is the property tax, called IMU (*Imposta municipale unica*), introduced in 1992 and imposed on "real estates" (land and permanently attached improvements such as buildings). This tax is paid every year by property owners directly to the municipality where the property is located. Another important revenue source is the tax or tariff on urban waste disposal, the *Tari* (*Tassa Rifiuti*), and a surtax on personal income (*Addizionale comunale Irpef*). Additional revenues (25% of the municipal budget) can be generated through user fees, linked to local provision of various services such as parking permits, occupation of public areas, and use

Turning to the issue of immigration, note that since the Italian unification in 1861, Italy was one of the leading European emigration countries. Between 1880 and 1976, about 13 million Italians left the country. Yet, since the second half of the 1970s, when net migration became positive, the country started receiving large migration inflows from developing countries, and later from Central and Eastern Europe. The number of migrants in percentage of total population between 2003 and 2015 was approximately 6.5%. In terms of country of origin, immigrants stem from 189 nationalities, the largest groups are from Romania (19.5%), Albania (12%) and Morocco (11%), respectively. Interestingly, 92% of foreign residents belong to non-OECD countries.

A.2. How immigration affects local public finance

In this section, we examine the impact of migrants on local revenue and spending. We then discuss how the composition of public spending changes according to the

29. Municipalities' current expenditure was on average 55 billion euros per year in the same period, approximately 70% of the municipalities' total expenditure.

share of migrants. We run models based on equation 1, and instrument the share of immigrants, $migrants_{it}$, as in Eq.4, where depending on the model specifications, the dependent variable is i) per capita total revenue, ii) per capita total spending, iii) per capita total deficit spending and iv) the share of public spending on a specific item for municipality i at time t. Table A.1 shows the effect of immigration on total and disaggregated local public spending. Column (i) presents the relationship between the share of migrants and total municipal revenues and indicates that immigration reduces the per-capita revenue: a one percentage point increase in the share of migrants leads to a decrease of about 25 euros per-capita in local revenues. This is not surprising, as immigrants are likely to have a relatively lower income than the local population, thus making a smaller fiscal contribution. As a consequence, we also find that an increase in the share of migrants generates a reduction in total local spending (see column (ii)): a one percentage point increase in the share of migrants leads to a decrease in local spending of 13 euros per-capita. It is worth noting that the decrease in local spending is smaller than the corresponding decline in local revenues. In other words, the presence of migrants seems to be associated with a decrease in the municipal surplus, i.e., the difference between revenue and spending, as column (iii) shows.

Municipalities are responsible for range of important public services, and to facilitate the empirical analysis, we aggregate them into six groups, according to the type of public good provided (see also Table 1). Reading across the last columns of results in Table A.1, we find that immigration does not only reduce local revenues and the size of municipal expenditures, but it also affects its reallocation. First, the increase in local security spending detected in Table 2 is at the expense of the budget allocated to Road, Transport Services, Panning and environment services (TPE), which is negatively affected by an increase in the number of immigrants. In particular, a one percentage point increase in the share of migrants leads to a decrease of about 0.7 in the quota of TPE spending categories. On the contrary, a one percentage point increase in the share of migrants is associated to an increase of 0.2 percentage points in the quota of public spending devoted to social services (SE) and an increase of 0.3 percentage points in the share of the municipal budget allocated to Administration and Management Services (Admin). To sum up, we note that local policymaker, as a response to an increase in the number of immigrants in her territory, adjusts her spending decisions by transferring money from key areas such as transports, land management and regional planning more generally to welfare programs, administration and police protection.

———————— [Table A.1 in here] ————————

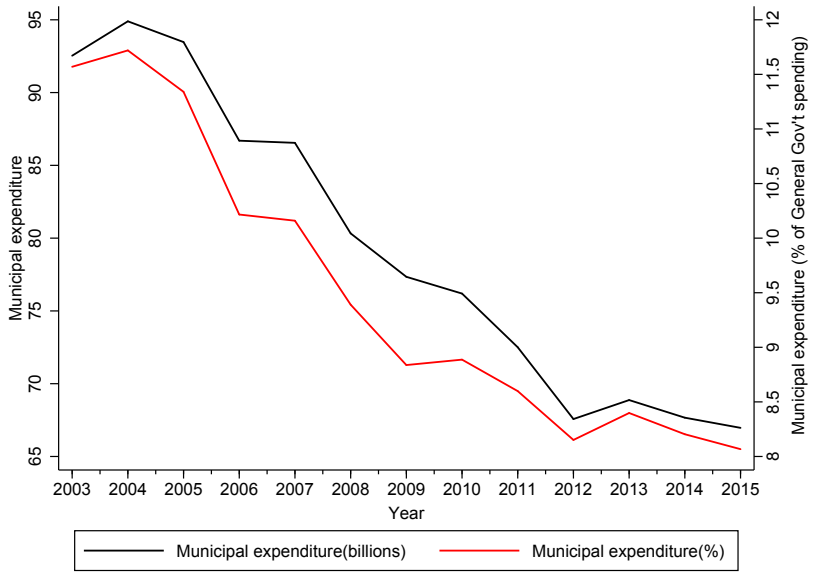

Figure A.1: Municipal Spending (Source: ISTAT)

Table A.1: Migrants and local public finance. Results from 2SLS models.

	total (p.c.)			disaggregated by expenditure functions				
Dep. var.	revenue	spending	surplus	Admin	TPE	CST	SE	SB
Migrants (%)	-25.398***	-13.336**	-12.063***	0.324***	-0.692***	-0.009	0.195**	0.015
	(6.489)	(5.315)	(3.650)	(0.124)	(0.150)	(0.054)	(0.097)	(0.060)
FIRST-STAGE								
$\widehat{\text{Migrants}}$ (%)				0.187***				
				(0.002)				
First-stage F-stat				93				
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7243	7243	7243	7243	7243	7243
Observations	94159	94159	94159	94159	94159	94159	94159	94159

- Admin: Administration & Management Services. TPE: Roads & Transport Services, Planning & Environment Services. CST: Culture, Sport and Tourism Services. SE: Social Services and Education Services. SB: Economic development. All regressions include municipal and time fixed effects, population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. The share of migrants is instrumented by the predicted share of migrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.

B.1. Robustness checks

Table B.1: Migrants and local security spending. Results from 2SLS models. Standard errors are clustered at the province level.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	No controls	Controls	Excluding prov. capitals	Excluding municip. <15K	Excluding RSS	Excluding top 5 senders	Trimming 5%	Trimming 1%
Migrants (%)	0.147**	0.157**	0.150*	0.298***	0.124	0.173	0.180***	0.150**
	(0.064)	(0.078)	(0.082)	(0.109)	(0.087)	(0.252)	(0.049)	(0.070)
FIRST-STAGE								
$\widehat{\text{Migrants}}$ (%)	0.210***	0.187***	0.179***	0.443***	0.174***	0.233***	0.186***	0.191***
	(0.009)	(0.028)	(0.082)	(0.081)	(0.028)	(0.069)	(0.029)	(0.029)
First-stage F-stat	43	46	48	30	37	11	41	45
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7137	623	6196	7243	7190	7237
Observations	94159	94159	92781	8099	80548	94159	89422	93190

All regressions include municipality and time fixed effects. Model (ii)-(viii) include population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Model (iii) excludes municipalities that are administrative centers of the provinces. Model (iv) excludes municipalities with population lower than 15000 inhabitants. Model (v) excludes regions with special status (RSS): Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia. Model (vi) excludes immigrants from Romania, Morocco, Albania, China, Ukraine. Model (vii) excludes values of the dependent variable below (above) the 5th (95th) centile. Model (viii) excludes values of the dependent variable below (above) the 1th (99th) centile. The share of migrants is instrumented with the predicted share of migrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. Standard errors are clustered at the province level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table B.2: Share of new immigrants and security spending.

Dep.var.: Security spending	(i)
Share EU 1st enlargement	-0.323
	(0.208)
Share EU 2nd enlargement	-0.170***
	(0.427)
Share EU 3rd enlargement	-0.479***
	(0.177)
Post 2004	0.113***
	(0.033)
Post 2007	-0.512***
	(0.045)
Post 2013	-0.242***
	(0.032)
Post 2004 × Share EU 1st enlargement	0.491***
	(0.188)
Post 2007 × Share EU 2nd enlargement	0.131***
	(0.335)
Post 2013 × Share EU 3rd enlargement	0.458***
	(0.153)
Years	2003-15
Municipalities	7243
Observations	94159

All regressions include municipal and time fixed effects, population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Share EU 1st enlargement includes immigrants from the Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic, and Slovenia; Share EU 2nd enlargement includes immigrants from Bulgaria and Romania; Share EU 3rd enlargement includes immigrants from Croatia. Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table B.3: Correlation between economic indicators and predicted share of migrants.

Dep.var.: $\widehat{\text{Migrants}}$ (%)	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
$\text{Population}_{2001\text{-}1991}$	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Observations	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232
$\text{Pop. density}_{2001\text{-}1991}$	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Observations	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232
$\text{Income p.c.}_{2002\text{-}2001}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Observations	7205	7205	7205	7205	7205	7205	7205	7205	7205	7205	7205	7205
$\text{Houses}_{2001\text{-}1991}$	0.04	0.05	0.06	-0.40	-0.43	-0.43	-0.41	-0.34	-0.35	-0.38	-0.36	-0.38
	(0.10)	(0.11)	(0.13)	(0.38)	(0.43)	(0.43)	(0.45)	(0.36)	(0.40)	(0.46)	(0.47)	(0.49)
Observations	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232
$\text{Unemp rate}_{2001\text{-}1991}$	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Observations	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232	7232

Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table B.4: Replication of the main results using province-level data. 2SLS models.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)
	OLS	2SLS	2SLS	2SLS	2SLS	2SLS
Migrants (%)	0.209***	0.397***	0.346			
	(0.044)	(0.105)	(0.250)			
$\text{Migrants}_{2015\text{-}2003}$ (%)				0.419**	0.749**	0.166
				(0.202)	(0.187)	(0.808)
FIRST-STAGE						
$\widehat{\text{Migrants}}$ (%)		0.417***	0.047			
		(0.062)	(0.030)			
$\widehat{\text{Migrants}}_{2015\text{-}2003}$ (%)				0.270***	0.397***	0.035
				(0.070)	(0.084)	(0.036)
First-stage F-stat		46	3	15	22	1
Instrument		2003 migrants distribution	1936 migrants distribution	1929 vote-share for PNF	2003 migrants distribution	1936 migrants distribution
Years	2003-15	2003-15	2003-15	2003/15	2003/15	2003/15
Provinces	103	103	89	88	88	88
Observations	1339	1339	1157	88	102	102

All regressions include province and time fixed effects, population density and size, the share of 65+, average income and the share of municipalities under the domestic stability pact. The share of migrants in model (ii) is instrumented by the predicted share of migrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. The share of migrants in model (iii) is instrumented by the predicted share of migrants using the 1936 Census migrants distribution. The 2003-2015 change in the share of migrants in Model (iv), (v) and (vi) is instrumented respectively by the share of vote for PNF in 1929 Italian general election, by the predicted share of migrants from new EU Member States using the 2003 distribution and by the predicted share of migrants obtained from 1936 Census migrants distribution. The 2003-2015 changes in following variables are used as controls: population density, the share of 65+, population and average income. Standard errors are clustered at the province level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table B.5: Migrants and local security spending. Results from 2SLS models. Instrument is the predicted share of immigrants from all world countries.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	No controls	Controls	Excluding prov. capitals	Excluding munic. <15K	Excluding RSS	Excluding top 5 senders	Trimming 5%	Trimming 1%
Migrants (%)	0.353***	0.382***	0.390***	0.213***	0.365***	0.553***	0.371***	0.377***
	(0.061)	(0.071)	(0.075)	(0.067)	(0.089)	(0.467)	(0.055)	(0.065)
FIRST-STAGE								
$\widehat{\text{Migrants}}$ (%)	0.229***	0.200***	0.193***	0.661***	0.172***	0.172***	0.195***	0.200***
	(0.024)	(0.022)	(0.022)	(0.047)	(0.024)	(0.024)	(0.023)	(0.022)
First-stage F-stat	95	81	77	195	53	62	73	80
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7137	623	6196	7243	7190	7237
Observations	94159	94159	92781	8099	80548	94159	89422	93190

All regressions include municipal and time fixed effects. Model (ii) also includes: population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Model (iii) excludes municipalities that are administrative centers of the provinces. Model (iv) does not include municipalities with population lower than 15000 inhabitants. Model (v) excludes regions with special status (RSS): Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia. Model (vi) excludes migrants from Romania, Morocco, Albania, China, Ukraine. Model (vii) excludes values of dependent variable below (above) the 5th (95th) centile. Model (viii) excludes values of the dependent variable below (above) the 1th (99th) centile. The share of migrants is instrumented by the predicted share of migrants originating from all world countries. Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.

Table B.6: Migrants and local security spending. Results from 2SLS models. Instrument is not interacted with post-accession dummy.

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	No controls	Controls	Excluding prov. capitals	Excluding munic. <15K	Excluding RSS	Excluding top 5 senders	Trimming 5%	Trimming 1%
Migrants (%)	0.164**	0.177**	0.172**	0.309***	0.140	0.184**	0.199***	0.168***
	(0.064)	(0.075)	(0.079)	(0.100)	(0.086)	(0.079)	(0.043)	(0.063)
FIRST-STAGE								
$\widehat{\text{Migrants}}$ (%)	0.386***	0.331***	0.318***	0.922***	0.306***	0.318***	0.326***	0.337***
	(0.050)	(0.046)	(0.046)	(0.126)	(0.048)	(0.034)	(0.049)	(0.047)
First-stage F-stat	59	51	48	53	40	71	43	50
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7137	623	6196	7243	7190	7237
Observations	94159	94159	92781	8099	80548	94159	89422	93190

All regressions include municipality and time fixed effects. Model (ii)-(viii) include population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Model (iii) excludes municipalities that are administrative centers of the provinces. Model (iv) excludes municipalities with population lower than 15000 inhabitants. Model (v) excludes regions with special status (RSS): Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia. Model (vi) excludes immigrants from Romania, Morocco, Albania, China, Ukraine. Model (vii) excludes values of the dependent variable below (above) the 5th (95th) centile. Model (viii) excludes values of the dependent variable below (above) the 1th (99th) centile. The share of migrants is instrumented by the predicted share of migrants originating from new EU Member States. Standard errors are clustered at the municipality level. *** significant at 1%, ** significant at 5% * significant at 10%.

Table B.7: Migrants and local security spending. Results from 2SLS models.Migrants originating from new EU members

Dep.var.: Security spending	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
	No controls	Controls	Excluding prov. capitals	Excluding municip. $<$15K	Excluding RSS	Trimming 5%	Trimming 1%
Migrants new EU-MS(%)	0.179***	0.173**	0.161**	0.336***	0.128*	0.196***	0.165***
	(0.068)	(0.073)	(0.075)	(0.105)	(0.077)	(0.039)	(0.061)
FIRST-STAGE							
$\widehat{\text{Migrants}}$ (%)	0.181***	0.170***	0.166***	0.393***	0.169***	0.170***	0.173***
	(0.015)	(0.015)	(0.015)	(0.033)	(0.016)	(0.016)	(0.016)
First-stage F-stat	138	123	119	139	106	110	123
Years	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15	2003-15
Municipalities	7243	7243	7137	623	6196	7243	7190
Observations	94159	94159	92781	8099	80548	94159	89422

All regressions include municipal and time fixed effects. Model (ii)-(vii) include population density and size, the share of 65+, average income and a dummy accounting for the domestic stability pact. Model (iii) excludes municipalities that are administrative centers of the provinces. Model (iv) excludes municipalities with population lower than 15000 inhabitants. Model (v) excludes regions with special status (RSS): Sardinia, Sicily, Trentino-Alto Adige, Aosta Valley and Friuli-Venezia Giulia. Model (vi) excludes values of the dependent variable below (above) the 5th (95th) centile. Model (vii) excludes values of the dependent variable below (above) the 1th (99th) centile. The share of migrants is instrumented by the predicted share of migrants stemming from countries that joined the EU between 2003 and 2015, multiplied by a post-accession dummy. Standard errors are clustered at the municipality level.*** significant at 1%, ** significant at 5% * significant at 10%.