

How Criminal Organizations Expand to Strong States: Migrant Exploitation and Political Brokerage in Northern Italy

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Abstract

The widespread presence of criminal organizations in strong states presents a theoretical and empirical puzzle. How do criminal organizations — widely believed to thrive in weak states — expand to states with strong capacity? I argue that criminal groups expand where they can strike agreements with local actors for the provision of illegal resources they control, and that this practice is particularly profitable in strong states where using illegal resources is risky. Using a novel measure of organized crime presence, I show that (1) increases in demand for unskilled labor, and in criminals' capacity to fill it by exploiting migrants allowed southern Italian mafias to expand to the north, and that (2) mafia expansion gave a persistent electoral advantage to political parties collaborating with them. This suggests that criminal organizations should be reconceptualized not only as substitutes for weak states but also as complements to strong states.

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1 Introduction

The emergence of groups competing with the state for power is widely regarded as the product of state weakness (Fearon and Laitin, 2003). From terrorist to criminal organizations, insurgent groups thrive by offering protection and services to citizens living in states that are too weak to offer them (Gambetta, 1996). Accordingly, scholars and practitioners alike consider economic development, strong institutions, and high social capital as the best weapons to defeat violent groups competing with the state, from Maoist rebels in India to the Taliban in Afghanistan (Sambanis et al., 2003; Berman et al., 2011).

While this prevailing view sheds light on the *emergence* of groups competing with weak states, it fails to explain a phenomenon which has received little scholarly attention but which can be observed across many regions and time periods: criminal organizations have tended to *expand* precisely where institutions are strong, economic conditions stable, and the civil society active. To name just a few examples, the Sicilian Cosa Nostra famously moved to the United States, the Hong Kong Triads to Canada, the Calabrese ‘Ndrangheta to Germany and Australia, and the Russian mafia to France. This choice is puzzling. Transplanting a criminal organization requires building anew a reputation for violence, a network capable of delivering information and favors, and establishing governance over the territory (Smith and Varese, 2001). For these reasons, Gambetta (1996) described mafias as “a difficult industry to export” (p. 251). Expanding to strong states would seem to make these tasks even more daunting, as these states have higher capacity to detect and crack down on incipient criminal groups.

In this paper, I study how criminal organizations expand to strong states. I develop a theory predicting where criminal groups will move successfully, conditional on their desire to expand, and I test it in the context of the expansion of southern Italian mafias to northern Italy. I construct a new measure of mafia presence, and I show, first, that expansion to the north of Italy took place where demand for mafias’ services and mafias’ capacity to offer these services were higher and, second, that actors dealing with mafias obtained durable gains from this collaboration. Together, the theory and the empirical results provide foundations for the understanding of why criminal organizations can successfully establish themselves in strong states.

My theory focuses on one distinctive feature of strong states: their capacity to enforce rules that regulate markets and punish violators (Polanyi and MacIver, 1944). Rule enforcement makes

it risky for local economic actors to take illegal shortcuts, as the risks and costs of prosecution are higher. Criminal organizations can solve this problem by assuming control over illegal resources - notably cheap, informal labor - and offering these resources to economic actors operating in strong states. The intermediation of agents specialized in illegality allows economic actors to violate laws without facing high risks of being detected and prosecuted.

My theory further predicts when mafias expansion to strong states is most likely to occur. Criminal organizations' ability to access, control, and offer illegal or informal labor to local actors is greatly enhanced in periods of mass migration. In fact, in most episodes of expansion, criminal groups have moved at the same time as waves of migrants from the same area of origin. Sicilians moved 'en masse' to the U.S. together with criminals, as did Hong-Kongese to Canada, Calabrians to Germany and Australia, Salvadoreans to the U.S. I argue that criminals manage to exert control over immigrants by exploiting the difficulties immigrants face to integrate in the formal labor market (or their outright exclusion from it, if they lack legal status to work) and their susceptibility to intimidation. In particular, when criminal groups have the same origin as immigrants, they can easily threaten to harm members of their family and social network back home. Deals with economic actors and the control over immigrants enable criminal groups to generate revenue streams, as local actors pay to receive these services, and, perhaps most importantly, to re-build resources that are essential for organized crime and that cannot be exported — namely, networks of informants and contacts in the legal economy, as well as a reputation for violence in the new territory.

I test this theory in the context of northern Italy, a region with high social capital and well-functioning democratic institutions (Putnam et al., 1994), but which has suffered increasing levels of mafia infiltration since the 1960s. I first provide qualitative evidence showing that southern mafias gave northern businessmen access to illegally employed migrants. This cheap workforce was particularly attractive during boom times in the construction sector, when unskilled labor was in high demand and costly to hire. Because migrants came from southern Italy like mafias, mafias could easily exert control over them. Qualitative evidence suggests that criminal groups recruited migrants as soon as they set foot in the north, offered them immediate (but informal) employment, and prevented them from reporting their situation of illegality to the police even when work-related accidents took place.

Second, I investigate whether this phenomenon was systematic across cities and whether it contributed to mafias' expansion. I collect data on construction employment and internal migration

in all Italian municipalities since 1960, and I build a new measure of mafia infiltration by scraping mafia-related news from historic newspapers. I then validate this measure with present-day indicators of organized crime from judicial sources and NGOs. I instrument both for construction employment and migration from the south of Italy to test whether their joint increase determines a higher probability to observe mafia presence. I instrument construction by exploiting a law from 1865 which required cities above 10,000 inhabitants to plan their development in advance, for example by laying down plumbing and building infrastructures where new neighborhoods were created. I show that this law put cities in a better position to expand further when the economic boom started in the 1960s, using a regression discontinuity design: cities above the threshold experienced a larger growth in construction employment in the 1960s and 1970s while other characteristics of these cities remained unaffected. I instrument migration using a shift-share instrument and I leverage droughts in the south of Italy as push factor for migration to the north.

Instrumental variable estimates show that the *joint* effect of southern migration and construction increases mafia presence in the north. Instead, point estimates on construction and migration alone are negative or insignificant, allowing me to rule out that mafias expanded by making profits in the construction industry or that migration alone caused an increase in crime. Results are robust to different definitions of mafia presence and of instruments, as well as different specifications. By contrast, the effect is null when I consider migration from provinces unaffected by organized crime and sectors with large employment growth but employing high-skilled workers.

In sum, southern mafias were more likely to successfully establish a permanent outpost in the north of Italy where a demand for their services existed and where they could find the resources to address it. The service of illegal labor provision and control they offered can be best conceptualized as a complement to a strong state that would prosecute labor violations if they were to be denounced, rather than as a substitute to a weak state not providing sufficient protection to its citizens.

I then turn from examining the determinants of transplantation of organized crime to its effects. I test a second prediction of the theory: that if a deal is struck with organized crime, we should see actors involved in it benefiting by gaining a competitive advantage. I cannot identify businessmen who dealt with mafias, but I can identify one political party with established links to organized crime: the Christian Democracy (DC) (Lupo, 2009). I causally identify the effect of organized crime infiltration on political outcomes using a difference-in-differences design. I find that cities affected by mafia in the 1960s–1970s display significantly higher support for the DC. Although in cities without

mafia the DC lost support with the disappearance of the Communist threat and later with the Tangentopoli corruption scandal, the differential vote share gained by the DC in cities affected by mafia is unaffected by any of these political upheavals and, if anything, keeps increasing. I provide suggestive evidence that mafias helped the DC by controlling the votes of southern migrants. Cities affected by mafias are also more likely to vote for Berlusconi's party from 1994 onwards, indicating long-term effects of mafia infiltration on politics. Instead, the main anti-immigration party (Lega Nord) receives a lower vote share, suggesting that anti-immigration sentiments do not drive the results. Overall, this evidence suggests that the expansion of organized crime leveraged deals not only with economic actors but also with political actors, including political brokerage which gave a durable advantage to complicit parties.

A vast literature attributes the emergence of organized crime to its ability to provide protection in place of a weak state, in Sicily (Bandiera, 2003; Buonanno et al., 2015; Dimico et al., 2017; Acemoglu et al., 2019), Russia (Varese, 2006; Lonsky, 2020), China (Wang, 2017), and Japan (Hill et al., 2003). A related literature examines the strategies that other non-state armed groups, such as rebels and terrorists, use to expand their operations (Weinstein, 2006; Bueno de Mesquita, 2013). A much smaller literature focuses on the expansion of criminal groups beyond their territory of origin. Varese (2011) uses case studies to compare instances of successful and failed transplantation qualitatively. Buonanno and Pazzona (2014), Pinotti and Stanig (2016), and Sviatschi (2020) study the *supply* effects of forced resettlement of criminals on mafia expansion.

My research differs from these studies by focusing on how criminal groups expand to strong states, a phenomenon which current theories connecting organized crime emergence to state weakness do not explain. By considering the *demand* for organized crime services in strong states and examining their role as labor racketeers and political brokers, I show that criminal groups can act as *complements* to strong states — providing services aimed at avoiding states' prosecution for labor and electoral violations — rather than as substitutes for weak states.

I also contribute to a growing literature studying the connection between migration and crime. While previous studies focus on the real and perceived effects of immigration on insecurity (Dancygier, 2010), I take a different perspective and consider migrants as resources that criminals can exploit to expand. This perspective contributes to explaining why the correlation of immigration and crime persists even when migrants do not commit crimes at higher rates than natives.

The evidence I provide on the effects of mafia infiltration on electoral outcomes contributes to

the literature studying how criminal groups influence politics (Bó et al., 2006). While other papers have presented evidence that criminal groups can affect party vote shares in places like Colombia, Brazil, and Sicily (Ch et al., 2018; Hidalgo and Lessing, 2015; Buonanno et al., 2016), this paper provides causally identified evidence that criminal groups can also affect voting in the context of a strong state.

Methodologically, I propose a new measure of mafia presence based on news scraping and validation with official indicators that can be replicated in other countries and time periods. Furthermore, I contribute to the literature using instrumental variables to study politics (Condra et al., 2018) by identifying a novel instrument for both construction employment and migration, which enables me to identify the determinants of mafia presence.

Once criminal organizations have put down roots in an area, it is hard to eradicate them. Crackdowns on organized crime can backfire and lead to civilian killings, distrust in government, and the rise of new criminal groups (Skarbek, 2011; Lessing, 2017; Castillo and Kronick, 2020; Osorio et al., 2018). It is therefore important to identify the conditions allowing criminal organizations to set foot in a new area and the levers that can be pulled to prevent their expansion.

2 Theory of organized crime expansion to strong states

Previous work has examined the reasons leading criminals to move away from their areas of origin and found they mostly relocate to escape police prosecution, because of wars with rivals, or due to forced resettlement (Varese, 2011; Sviatschi, 2020). In this study, I take the supply of criminals as given and I seek to explain the reasons they are able to establish permanent roots in some places and not in others, conditional on moving.¹

Obstacles to expansion: From the point of view of the existing knowledge on organized crime and criminality in general, the expansion of criminal organizations to strong states presents a puzzle. First, the prevailing view holds that criminal organizations emerge as substitutes for weak states which fail to protect citizens and their property rights (Gambetta, 1996; Skaperdas, 2001). States with strong capacity accomplish these functions efficiently, suggesting we should not see any criminal group emerging in these contexts. Second, research in criminology shows that the

¹Varese (2011) also considers the demand for criminality. However, differently from this study, he (1) uses a methodological approach based entirely on qualitative evidence, (2) identifies migrants as unimportant for crime transplantation, and (3) attributes organized crime expansion to criminal groups' activity of substituting weak states. Section A, SI discusses the difference between this study and Varese (2011) in greater detail.

expansion of criminal activity is generally hard to accomplish (Guerette and Bowers, 2009), and one could expect it to be particularly difficult in strong states. Identifying weak spots in a new territory and assessing risks takes time and effort, with uncertain returns (Johnson et al., 2014). Constraints to expansion are even more binding for organized crime, which is rooted in resources that are inherently local: a reputation for violence, a system of informants, a network of people who owe favors to criminals or can be blackmailed, and a system of governance and consensus over a territory. For these reasons, Varese (2011) suggests that mafia transplantation is more similar to a politician trying to be elected in a different country than to a company opening a foreign outpost. Strong states have more resources to repress expansion and should be more likely to succeed than weak states. And yet, organized crime frequently manages to set foot in new areas without being defeated by strong states. I theorize a strategy of expansion which allows criminal groups to overcome these two obstacles.

Rule enforcement: I start by focusing on a distinctive feature of strong or relatively strong states: their capacity to enforce rules that regulate markets and punish violators (Polanyi and MacIver, 1944).² Rule enforcement increases the risks and costs of undertaking illegal activities, so that businessmen willing to hire workers without a contract face a higher risk of judicial prosecution and of blackmailing by informally hired employees. Criminal organizations can offer a solution to these problems as they often have the capacity to control the behavior of workers such that reporting risks are substantially decreased.

Capacity to offer illegal labor: Access to a network of low-income controllable workers is a distinctive feature of criminal organizations across countries. First, criminal groups generally emerge and maintain their strongholds in poor communities in which the incentives to accept illegal forms of employment are higher. Second, even when they move away from their original area, control over low-income individuals is often retained by exercising control over migrants. Historically, in fact, criminals have moved together with masses of migrants from the same area of origin. Migrations of Sicilians to the U.S. (Cressey, 2017), Russian migrants escaping the Soviet Union to Europe (Varese, 2006), refugees from the civil war in El Salvador to the U.S. (Sviatschi, 2020), and Italians from Calabria to Germany and Australia have all been correlated with expansions of

²Several definitions of state strength have been proposed (see Berwick and Christia (2018) for a review). For the purpose of this theory, I characterize strong states as relatively better at enforcing their own rules, a definition close to that of state as regulator of the market society (Polanyi and MacIver, 1944) and in line with others (e.g., legibility is crucial for rule enforcement (Scott, 1998)).

criminal organizations. Criminal groups have a reputation of violence amongst migrants from the same origin and they can credibly threaten to retaliate against their family members who stayed behind.

When migrants have scarce opportunities to integrate in the destination society, organized crime can profit from its proximity and power over them to offer them employment in the absence of a legal contract while guaranteeing that they will not report their condition to the police, even in case of negative shocks or work accidents. This can be the case for legal migrants facing frictions in entering the formal labor market due to lack of integration policies (as in this paper), and it is even more so in other contexts for illegal migrants, unable to access formal employment and subject to the threat of expulsion.³ I argue that members of criminal groups from the same area of origin as migrants, speaking their same foreign language or dialect and able to use their social networks at home to threaten punishment, can exercise forms of control and exploitation over migrants, such as labor racketeering.

Expansion: What do criminal organizations obtain in return for the provision of illegal resources to local actors? Other than generating rents (local actors pay criminals for their services), agreements provide criminal groups with the opportunity to re-build in the new territory some of the most crucial resources on which their power is rooted: networks within the community, the acquisition of a reputation for violence, and the possibility to blackmail businessmen and politicians to obtain information and favors. I contend that, in exchange for the services they provide, criminal organizations create the conditions allowing them to establish their presence in a new territory.

Hypothesis: *Expansion takes place when criminal groups are able to strike agreements with local actors. These agreements provide local actors with critical illegal resources and organized crime with revenues and with the opportunity to build essential assets (networks, reputation, governance).*

How can criminal groups guarantee silence over illegal hiring? First, they can recruit workers using their own channels, thus avoiding compromising businessmen, and exploit their intimidation power to guarantee that workers will not denounce them. Second, while business competitors or institutional actors might try to denounce illicit activities, documenting them judicially is hard in the absence of individuals willing to testify. It is in this sense that organized crime, with its capacity to enforce informal contracts and keep them secret, is most useful in strong states, where the cost

³The lack of integration policies is not a manifestation of state weakness, but rather a policy choice that states with varying degrees of strength can adopt.

of illegal transactions becoming public is highest and where this behavior would be most effectively prosecuted. Therefore, differently from the previous literature, this theory conceptualizes criminals as offering businessmen a service of protection *from* strong states' prosecution for illegal activities (thus a *complement* to a strong state), rather than protection in place of a state unable to provide it publicly (a substitute to a weak state).

Testable Predictions

I test two predictions from the theory:

Prediction 1: Determinants of expansion. Criminal groups expand where they have the capacity to offer informal labor and where the demand for such labor is high.

I test this theory by focusing on a strong state and exploiting variation in the extent of demand for illegal labor and in criminal groups' capacity to offer it.

Prediction 2: Effects of deals with organized crime. Actors striking deals with organized crime benefit from the agreement and gain an advantage over their competitors.

I test this second prediction using variation in electoral outcomes of parties that, based on judicial evidence, established links with criminal groups. Lasting electoral gains indicate that there was an important deal made by these parties with mafias. This shows that mafias expand by using deals both with economic and political actors.⁴

3 Qualitative Evidence: The Expansion of Southern Italian Mafias to the North

In this section, I present the results of my qualitative work on how criminal organizations moved to the north of Italy. I consulted primary and secondary sources. I cite the secondary sources below and the primary sources include a systematic review of (i) all 5,067 news mentioning the word “mafia” or “labor racketeering” between 1951 and 1980 from the archives of the national newspaper La Stampa,⁵ (ii) the documents of the Parliamentary Commission investigating on mafias' expansion to the north, (iii) judicial inquiries of the trials prosecuting mafia members operating in the north,

⁴Testing to what extent businessmen benefited from the agreement is not feasible, as I cannot identify which businessmen entered in collusive agreements with mafias. Conversely, I cannot disentangle whether the agreements with political actors were functional for mafias' initial expansion or for their later development. Overall, these two pieces of evidence show a consistent picture of expansion based on deals with both economic and political actors.

⁵I use this source because the online archives include news from as early as 1950, unlike other Italian newspapers.

and (iv) additional primary sources which were mentioned in these three sets of documents, such as regional council reports and articles from other news outlets.

The expansion of southern mafias to the center and north of Italy started in the late 1950s. In those years, Italy — especially if we exclude the south — was a comparatively strong state, with a firm monopoly of violence within its territory, a modern bureaucracy, a well-regulated market society, and a large public sector. The conditions often identified as conducive to the emergence of criminal groups — the lack of protection of citizens’ security and property rights, creating the demand for private forms of protection — were absent, in a state that had crime rates in line with other countries and well-enforced property rights. The 1960s and 1970s were also the years of the “economic miracle,” a boom in construction and manufacturing which increased the demand to hire unskilled workers and attracted a mass of southern migrants looking for employment in the north. From the start of the boom in 1958 to its slowdown in 1974, 4 million people had resettled to the center-north, corresponding to one-fourth of the entire southern population (Figure B.1). The vast majority of migrants was employed, often illegally, in the construction industry. It was estimated that 70% of the construction workforce in Genoa, 80% in Turin, and 85% in Milan came from the south. Most migrants worked for low pay and fell victim to frequent workplace accidents. Many lived in slums on the outskirts of cities, spoke dialects and often no Italian, and experienced many forms of discrimination (Ascoli, 1979). This mass migration ended in 1974, when the oil crisis reduced the speed of economic development in the north. Since then, migration from the south has continued at lower intensity. Together with the migrants, a number of mafia members also moved to the north, many pushed by their own ambitions and some brought there by the state.

The state forcibly relocates mafia members

Until 1995, the Italian Government had a policy forcing mafiosi into internal exile by relocating them to other cities outside of their region. The policy of *soggiorno obbligato* was a by-product of an idea that mafias were the result of a backward environment, so that relocating mafiosi to a more developed place would disrupt their ability to organize criminal groups (Varese, 2006). Far from breaking criminality, this policy favored mafias’ expansion by pushing people with criminal skills to virgin territories, according to both the Parliamentary Commission investigating mafias and recent empirical work by Buonanno and Pazzona (2014) and Pinotti and Stanig (2016). Many of those sent into exile managed to be relocated to cities of their choice, and at the same time, other

mafia members moved north of their own accord.⁶ Even if forced resettlement created an additional supply of mafiosi moving north, their presence did not automatically translate into successful mafia expansion. For example, although the province of Cuneo ranked first in number of resettled mafia members (CPA, 1976), the province ranks 98th out of 103 in the index of mafia presence developed by Calderoni (2011). It thus remains unclear what determined criminals' success at creating new outposts, conditional on moving.

The racket of migrant workers

What did mafia members do in the north after they resettled? Evidence from newspapers and from the work of the Parliamentary Commission suggests that mafiosi undertook a variety of different criminal activities, from extortion and usury to kidnapping. Another common pattern is their involvement in the construction sector⁷ and in particular in the racket of migrants from the south. Judicial investigations following a scandal which took place in Turin in 1971⁸ shed light on how this system worked.

Most construction companies were relatively small, as jobs required a varying number of laborers. Companies relied on subcontracting to recruit workers on call. As the economic miracle unfolded, cheap and intermittent labor became more scarce, as most day laborers found employment in sectors offering regular income and lower risks (CPA, 1976). To save money and time, many businessmen began relying on informal subcontracting to individuals connected to criminal groups. This process happened in a proper — extralegal — marketplace: in Turin, workers showed up in the morning where migrants arrived from the south, at the train station, and members of mafias hired as many as they needed. Mafias collected a cut from both the businessmen and the migrants for their service.⁹ When work-related accidents took place — and they were common¹⁰ — mafias could guarantee that migrants would not report them to the authorities for fear of repercussions on themselves or on their family members in the south (L'Unità, 1971). Workers were even hesitant to accept the

⁶Notable examples include the boss Joe Adonis in Milan, Geraldo Alberti (Cosa Nostra) in Cologno Monzese, Giacomo Zagari ('Ndrangheta) in Piedmont and Frank Coppola in Lazio (CPA, 1976).

⁷Several mafiosi resided where rapid urban development was happening. For example, Frank Coppola moved to Torre San Lorenzo, a small sea-town in Lazio, bought land and obtained construction permits (CPA, 1976). The Cuntrera-Caruana family did the same in Ostia. The 'Ndrangheta families Gallace and Tripodo moved further south on the coast, in Anzio, Nettuno and Fondi. All operated in the construction sector.

⁸The scandal involved a construction worker killing four 'Ndrangheta members in retaliation for having been exploited (La Stampa, 1971).

⁹In Turin, the price of this service for businessmen varied between 25 and 75% of the pay of a specialized worker. For workers, a fee was asked in advance of even starting to work (La Stampa, 1971, p.5).

¹⁰There were 63 registered deaths in one year only in Turin — a number likely to be an underestimate (Regional Council of Piedmont, 1972).

help of the unions that tried to penetrate this system, due to the mafias' intimidation power. A union representative explained: "When we talk, workers stay silent or provide false information. Meanwhile, mafia members engage in threatening acts against us. They do so not so much to scare us, rather to show workers that they are stronger than we are" (Regional Council of Piedmont, 1972).

Businessmen: According to the Parliamentary Commission, businessmen accepted the intermediation of mafias out of convenience. The economic boom had made hiring day laborers difficult, and informality allowed employers to evade taxes on labor and payments into social security, cutting the cost of labor in half. Mafias were important for recruiting and also to prevent workers from reporting (La Stampa, 1971).¹¹ What fraction of the construction companies in a city were in collusion with mafias? The most extreme case discovered was that of Bardonecchia, where an estimated 85% of the workforce was subject to labor racketeering. In Turin, a much larger city, the estimate was between 70 and 80% (CPA, 1976). This anecdotal evidence is in line with Gambetta and Reuter (1995), who explain that agreements involving a large number of firms are the most efficient for mafias to manage, as they guarantee a better control of pricing and make it costlier to exit. While businessmen outside of the agreement have incentives to request police investigation of these practices, anecdotal evidence suggests that obtaining proof was hard in the absence of workers willing to testify.

Migrants: Why did migrants accept to work without a contract and under the threat of mafias? The Parliamentary Commission report suggested that mafias managed to obtain control over migrants not only with intimidation, but also with offers of help when migrants faced unemployment and marginalization. For instance, mafia members waited for migrants at the train station and offered them employment as soon as they set foot in the north (La Stampa, 1969). In this sense, the Commission identified the lack of services to match migrants with employers and to integrate them in the new society as the root cause of labor racketeering. Interviews with union members also highlighted that employees consented to work without protection because regularization costs would be curtailed from their pay (La Stampa, 1971). Qualitative evidence suggests that a combination of short time horizons on the part of the laborers with the lack of a social safety net and ineffective labor market regulation led workers to *prefer* to join the mafia labor racket rather than go through formal channels.

The state: The institutions in charge of remedying this exploitative market actively responded

¹¹For a study of current extortion of firms in northern Italy, see Piemontese (2020).

to the threat of mafia expansion, when evidence of it was available. For instance, there were a number of official responses to the Turin scandal: the judiciary led investigations, unions held a joint conference, the regional council created a special commission, and the Antimafia Commission investigated these crimes. However, these efforts were insufficient to eradicate the phenomenon: even in Bardonecchia, the most-scrutinized city, an estimated 30% of the workforce in 1974 was still subject to racketeering. It was rare that institutions could collect sufficient evidence to convict criminals since both businessmen and migrants consented to mafias' intermediation. As a result, variation in the quality of institutions is unlikely to explain differing levels of mafia infiltration.

4 Data

4.1 Mafia presence

No systematic data on mafia presence in Italy from the 1960s to 1980s are available from institutional sources. I create a measure of mafia presence in this period by scraping newspaper articles discussing typical mafia-related crimes from the national newspaper *La Stampa*. I then validate this measure by collecting official indicators of mafia presence which only exist starting from the 1990s, after mafias' initial expansion had taken place. Through this process, I can create the first municipal-level time-varying measure of mafia presence for the period preceding the 1990s and for the whole country.

For each scraped mafia-related news, I extract the date, the location, and the body of the article. For the subsample of news which do not have a location tag, I extract the name of the city where the event took place from the article's body. I validate this procedure on the sample of news for which the newspaper itself reports the location of the event. For each city, I obtain a measure of news per capita that I aggregate at the decade level. In 17% (N=1,046) of the municipalities in the center and north of Italy there is at least one news story related to mafias. The median number is two news items per 10,000 residents and the number of infiltrated cities increasing steadily over time (Figure B.2a, SI). Although cities with mafias tend to be larger on average, there is no systematic relation between mafia and city size (Figure B.4, SI), suggesting that reporting on mafias is not more likely in larger cities.

Validation of the news as a measure of mafia presence

A first concern is that the type of activities mafias undertake might vary as a function of their level of penetration of the territory, with newly infiltrated places being less likely to display instances of violence to avoid alarming local authorities. To account for this possibility, I track multiple types of crimes, including not only violence, but also extortion and infiltration in the legal economy. If actual mafia activity remains undetected by these multiple indicators, the data will contain false negatives, introducing random noise in the dependent variable and lowering the likelihood of observing significant effects.

A second important concern is that we might observe instances of mafia in a territory not because of intense mafia activity but, rather, due to a successful judicial activity, which might take place exactly where mafias are weaker. I address this concern in two ways. First, I scrape not only news explicitly containing the words *mafia* or *'Ndrangheta*, but also typical crimes committed by mafias, such as extortions, kidnappings, vote buying, drug trafficking, and labor racketeering. Second, I validate the measure obtained from news by comparing it to official indicators of mafia presence. Although there are no data at the same point in time, I can compare news in 1960–1989 to the distribution of mafia presence later on, from 1990 to today, when official indicators are available.¹²

Specifically, I gather information on the following official indicators: (1) goods, properties, and firms seized from mafias,¹³ (2) city councils dissolved due to mafia infiltration,¹⁴ (3) mafia-related victims,¹⁵ and (4) judicial evidence on which cities have a permanent ‘Ndrangheta cell.¹⁶ Thus, my information comes from different sources — from institutions to NGOs — and locations — from local to national. This range of sources contributes to the robustness of my findings: if mafias, in their strongholds, can successfully divert the investigative activities of the local police, they are less likely to also affect a parliamentary commission or national newspapers.

News and official indicators agree in classifying cities as with or without mafia presence in 78% of the cases. I map the spatial distribution of news and official indicators in Figure 1.¹⁷ We observe

¹²While newspapers start mentioning the presence of mafia members and crimes already in the 1960s, the recognition that mafias had moved to the North and their prosecution only starts in the late 1990s. As a result, almost none of the official indicators show signs of mafia presence in the decade 1990s, such that a comparison between news and indicators in this period (the only in which the two measures overlap) does not convey relevant information.

¹³Law 646/1982, data from the National Agency for Seized and Confiscated Goods.

¹⁴Law 221/1991.

¹⁵Information from a report by Vittimemafia (NGO) which I transformed into a database.

¹⁶From documents of the following mafia trials in the center and north: Aemilia, Crimine, Geena, Infinito, Maglio, and Minotauro.

¹⁷Because my objective is to assess the extent to which the two measures overlap, I compare the spatial distribution of news and official indicators without normalizing them by population, which changes (potentially endogenously)

a strong correspondence in mafia presence across the two maps. Both maps indicate mafia presence in the surroundings of Rome, Milan, Turin, and Genova. Mafia is also present in the most common touristic destinations of the time (Ravenna, Viareggio, Venice), a pattern consistent with mafias settling where mass tourism yielded a boom in construction development. There are more news items than official indicators in Piedmont (north-west), the region of Turin, where the first scandal revealing the existence of mafias in the north took place. Aside from this area, the two maps display high levels of covariance in mafia presence, even though they rely on different sources and refer to different time periods, validating news as a predictor of mafia presence.

Compared to existing measures, my index enables to map mafia presence in Italy for a considerably longer period, from 1960 to today. Current measures of mafia presence at the municipal level start from the 1990s or later (Dugato et al., 2019) or are only reported for Sicily at a specific point in time (Cutrera, 1900). My method allows me to map the entire country from as early as archives of news are available, at the municipal level, and to verify the correspondence of news with other indicators. This method could be adapted to study organized crime in other countries, allowing for consistent comparative research on organized crime across space and time.

4.2 Other data

I gather data on sectoral employment from 1951 from the Italian National Statistical Institute and on inter-provincial migration from IRPPS, which provide a matrix of people moving from province of origin to destination from 1955 onward (Figure B.3, SI). I also use census data on city characteristics from 1951 onward, census population in 1871, the Drought Severity Index from Van der Schrier, Briffa, Jones, and Osborn (2006), the number of forcibly resettled mafia members (CPA, 1976), and national elections results 1948–2008 from the Ministry of Interior Affairs (descriptive statistics in Table 1, SI).

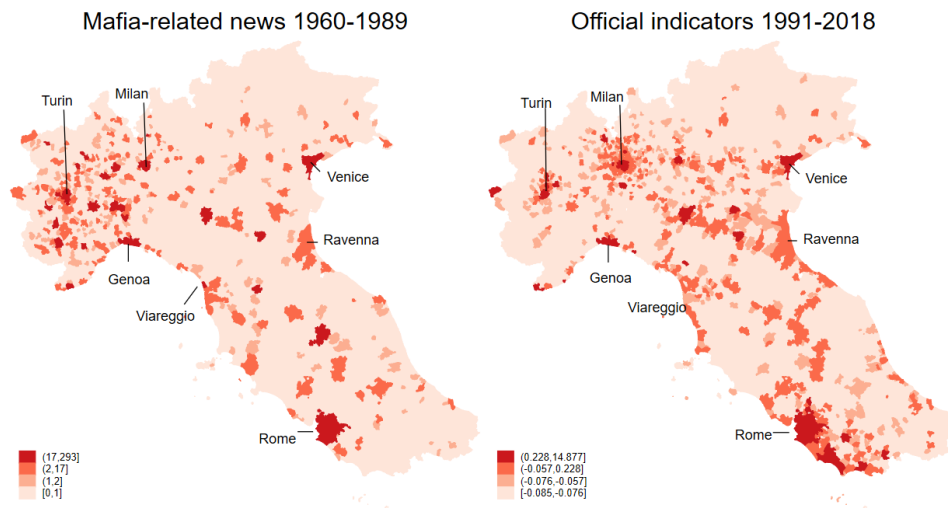
5 Determinants of Expansion

5.1 Empirical Strategy

In this section, I start by introducing the empirical specification. I then build and discuss the instruments for construction and immigration.

over time.

Figure 1: Mafia presence as defined by news, 1960–1989, and official indicators, 1990–2018



Notes: (Left) Maximum number of news items related to mafia (extortion, kidnapping, drug trafficking, labor racketeering, vote buying, and news mentioning the word mafia or 'Ndrangheta) recorded in a city-decade, 1960–1989. (Right) Official indicators of mafia presence (average of standardized number of: goods, properties and firms seized from mafia, mafia-related homicides, 'Ndrangheta outposts uncovered by the judiciary, and city councils dissolved for mafia infiltration), 1991–2018.

Empirical Specification

I test the hypothesis that mafia expansion is more likely when cities experience a joint increase in construction employment and in migration from the south. I estimate:

$$Mafia_{it+1} = \alpha_i + \beta_t + \gamma C_{it} + \delta M_{pt} + \zeta C_{it} \times M_{pt} + \epsilon_{it} \quad (1)$$

where $Mafia_{it+1}$ is mafia presence in city i (included in province p) and decade $t + 1 = [1971-1981, 1981-1991]$, C_{it} is the population share of employees in the construction sector, M_{pt} the population share of immigrants from the south in province of destination p , and α_i and β_t are city and decade fixed effects. City fixed effects control for differences in city characteristics (such as being a larger or higher social capital city), so that the coefficients γ , δ , and ζ capture the effects of changes in construction, migration and their interaction within the same city.

The coefficient of interest ζ captures the joint effect of an increase in construction employment and migration from the south on mafia presence. The prediction of the theory is that this effect should be positive. Importantly, I partial out the individual effects of construction employment and migration, as these two variables could have effects on their own, independently of the mechanism I am interested in. For instance, higher employment could reduce the incentives to engage in crime, leading to a negative effect of construction, captured by γ . Similarly, differences between the levels of criminality by migrants and natives would be captured by δ , the point estimate on migration. Since these two variables are controlled for, the interaction between construction employment and immigration from the south allows me to test the theory by estimating the contribution of a demand for unskilled labor to mafia expansion when a migrant workforce is available for exploitation.

There are two possible technical concerns with this specification. First, equation 1 assumes that interaction effects between immigrants and the construction sector are linear. I provide empirical support for this assumption in Section C, SI. Second, estimates are likely to suffer from both omitted variable bias and reverse causality issues. I deal with endogeneity and reverse causality by instrumenting both construction employment and migration.

Instrument for Construction

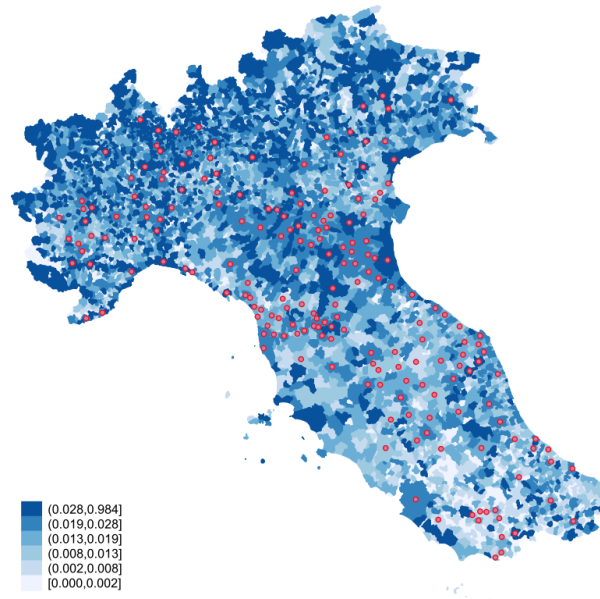
In 1865, the Kingdom of Italy approved a law allowing the adoption of a development plan for cities with more than 10,000 residents.¹⁸ Adopting a development plan led cities to program their expansion in advance, laying down plumbing, building roads and other infrastructures where new neighborhoods were created. In the 1960s, after the law was removed and the construction boom had started, cities which had been subject to better-designed development entered the boom in a better position to develop further. I show that these cities indeed experienced a larger growth with a regression discontinuity design. Using population in 1871 (the first census after the law’s passage) as running variable, we observe that growth in construction employment in the 1960s–1970s is discontinuously larger for cities above 10,000 residents (Figure 2b). As shown in Table 4, SI, this effect is only present during the boom and is absent both before (there is no jump in 1951, indicating no anticipation effects) and after, in 1981. This is consistent with the effect we would expect: before the construction boom started, the marginal advantage given by better spread infrastructures does not matter as much as to determine differential construction growth. Two decades after the start of the boom, this advantage disappears and cities which had been exposed to regulated development in the nineteenth century have the same growth in construction employment as those that did not. Importantly, the law did not have a lasting impact on any other city-characteristic recorded in the census or on migration in either 1951 or later. These and other tests are presented in SI D.2, while cities affected by this policy are mapped in Figure 2a.

To build the instrument, I interact a dummy equal to 1 for cities above the population threshold in 1871 with national growth in construction employment over time, net of the contribution of the city of interest. To account for potential endogeneity introduced by the use of a population cutoff, I control for the interaction of population and growth in employment at the national level in the first and second stage. Table 13, SI shows that the instrument strongly ($F=20$) and significantly predicts construction employment in 1961–1971 while Figure F.1, SI indicates a monotonic effect of the instrument on construction.

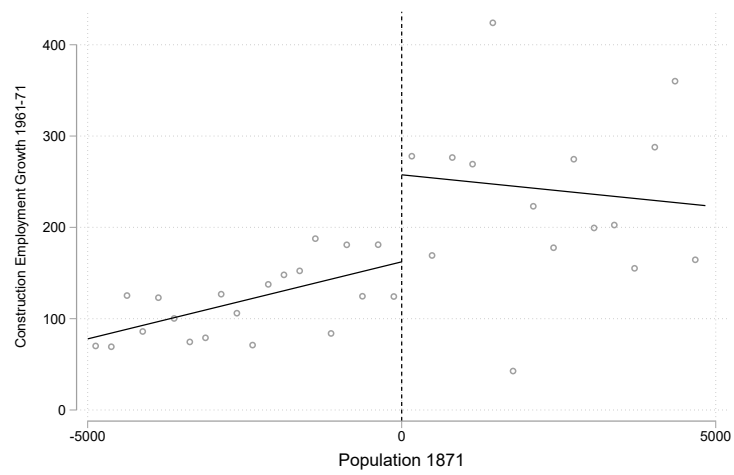
The identification of an instrument that impacted construction while leaving other important covariates such as economic development unchanged is a methodological contribution of this paper. More details on this instrument’s specification and identifying assumptions are included in SI D.

¹⁸The law and the assignment mechanisms are discussed in SI D.1.

(a) Construction employment per capita 1961 (blue) and cities assigned to adopt a development plan (red)



(b) Effect of development plan (>10,000 inhabitants in 1871) on growth in construction employment 1961–71 (RDD)



Instrument for Migration

The instrument for southern migration is built using a modified version of the shift-share instrument (Card, 2001). The idea behind this instrument is that immigrants tend to cluster geographically and that new waves tend to settle where initial settlers established their residency. If early settlers act as pull factors for subsequent migrants, then early migration patterns can be used to predict migration without relying on current (endogenous) flows. The shift-share instrument exploits this logic by interacting two terms: the *share* of initial settlers from each province in the south in 1955 (before mafias and mass migration’s arrival) with (2) the flows of migrants of the same origin at the national level at time t (the *shift*).¹⁹ The instrument positively and strongly ($F=94$) predicts the population share of southern migrants (Table 13, SI) and this relation approximates monotonicity (Figure F.1, SI). I check the robustness of this instrument to violations of the exogeneity assumption (Goldsmith-Pinkham et al., 2020) by adopting a specification in which the flows of migrants are predicted from an exogenous push factor: the severity of drought in the south of Italy, which led southerners to abandon the countryside at higher rates. The migration instrument and its robustness are discussed in SI E.

Finally, the instrument built from the interaction of the instrument for construction and migration meets the identification assumptions, as discussed in SI F.

5.2 Results

The main results of the instrumental variable estimation are reported in Table 1, column 2. The direct average causal effect of construction employment on mafia is negative and significant. This finding echoes the literature showing that employment reduces crime by increasing the opportunity cost of engaging in illegal activities (Becker, 1968). The direct effect of south-to-north migration on mafia is also negative, although at the limit of statistical significance, in line with recent literature showing that migrants have lower propensity to commit crimes once employment is controlled for (Bianchi et al., 2012). The negative direct effect of these two variables on mafia presence allows me to exclude that criminal organizations expanded by making profits in the construction industry or that migration itself caused an increase in crime.

Instead, the impact of a *joint* increase in construction and migration on mafia presence is positive

¹⁹I follow the most recent IV literature in leaving out the contribution of new migrants to the province (Tabellini, 2020), but results are robust to including it.

and significant. When both migration and construction increase by one standard deviation, there is an increase of 0.098 mafia-related news items per 100 inhabitants. A middle-sized town of 15,000 inhabitants would pass from having zero to 15 news about mafia in a decade, relative to an equally sized town experiencing growth in construction but not in migration (or growth in migration but not in construction).²⁰

To illustrate this interaction, Figure 3 plots the change in mafia presence caused by an increase in construction employment for different values of migration (left panel). Conditional on above-average levels of migration, an increase in construction employment increases mafia presence. Similarly, conditional on high levels of construction employment, an increase in migration increases mafia presence (right panel). As in every instrumental variable approach, results have to be interpreted as the effect on compliers — cities in which construction and migration changed as a result of the instruments.^{21,22}

Section G explores the robustness of the results to different definitions of the dependent variable and of the instruments. One may wonder whether measured increases in mafia presence are partly driven by increases in the likelihood that mafia-related crimes are reported in the data. Although this is a typical limitation in the crime literature, my setting allows me to speak to this concern by exploiting indicators of mafia presence available for later periods as source of validation. I use a lasso and a random forest algorithm to select only types of news that predict official indicators. Results are robust to this definition, as well as to excluding news stories explicitly covering mafias — which might capture an increase in concern for infiltration rather than in actual mafia presence —, to transformations of the outcome accounting for its skewed distribution. As expected, I obtain null results from a placebo test on mafia news at $t - 1$. Further, I test the robustness of results to changes in the specification choice and instrument definition, such as exogenously predicting the flows of migrants using drought severity in the south as push factor and restricting the sample

²⁰The sum of the three coefficients (construction, migration and their interaction) does not have any interpretation, as it conflates the direct effect of construction employment on crime, the direct effect of migration, and the effect of their interaction. Instead, the coefficient of interest is the effect of the interaction, after partialling out the direct effects of construction employment and of migration.

²¹Because this is a setting with three continuous regressors and instruments, profiling compliers is not feasible, as there would be a different set of compliers for every level of each variable and for every combination of values (Abadie, 2003).

²²The difference between OLS and 2SLS indicates that construction employment, migration, and their interaction are endogenously related to mafia presence. For instance, places with both high construction employment and migration tend to be more educated and more likely to vote for the Communist Party before mafias' arrival, a circumstance which might have made expansion harder by reducing criminals' margin of action. This could explain why the coefficient of the interaction is lower in the OLS than in the IV specification. Additionally, as in all IVs, 2SLS estimates correct for measurement error in the independent variables. While OLS estimates are skewed towards zero by attenuation bias, IV estimates reduce bias and result in larger coefficients.

Table 1: Joint effect of construction employment and southern migration on mafia presence

	(1)	(2)
	Mafia	Mafia
	OLS	2SLS
Construction employment per capita	0.0026 (0.0041)	-0.169*** (0.052)
Southern migration per capita	0.0216*** (0.0081)	-0.032* (0.017)
Construction employment x Southern migration	0.0039 (0.0057)	0.098** (0.041)
Observations	11,926	11,926
Number of cities	5,963	5,963
City and decade FE	Yes	Yes

Notes: OLS (column 1) and 2SLS (column 2) estimates of Equation 1. Mafia is the population share of news related to mafia in a city-decade at $t + 1$ and regressors are standardized. City and decade fixed effects, and a control for the interaction of population in 1871 (determining the assignment of the development plan) with national growth in construction employment are included. Standard errors are clustered at the city level.

to cities with population included in the optimal RDD bandwidth. In Section H, I further show that the results are not driven by competition between firms (rather than growth in employment), discuss whether mafias’ expansion was pre-planned, and relate my results to the literature on forcibly resettled mafia members.

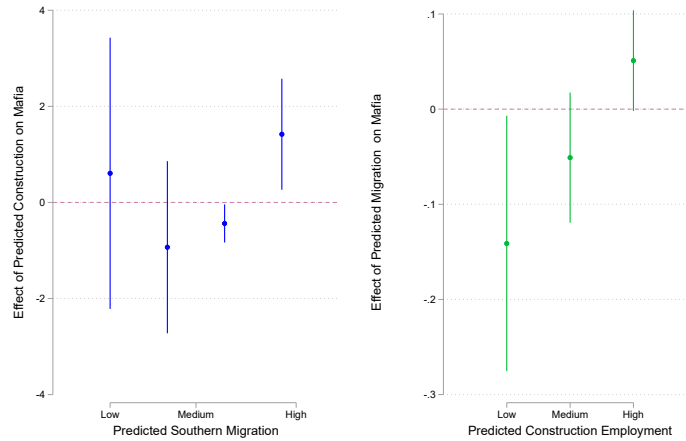
5.3 Testing the mechanisms

In this section, I test the validity of my theory by showing that when I drop any of the conditions identified as conducive to mafia expansion, results disappear. All tests are included in Table 16, SI.

First, an important component of my hypothesis is that migrants have to be controllable by mafias for them to be exploited as workers. The reputation and blackmailing power mafias hold among southerners should not apply to the same extent to migrants coming from other regions. Column 1 show that the effect on mafia presence disappears completely when we consider migrants from the center and north of Italy.

Second, cheap informal workforce must be convenient to hire. This may not be the case in sectors that are not labor-intensive or where hiring illegally is not an option. In the period I study, car manufacturing, petrol-chemistry, and retail sales were also booming. However, retail consisted of small family-owned shops not in need for extra workforce, and petrol-chemistry and

Figure 3: Effect of construction and migration on mafia presence, by levels of the other variable



Notes: The left panel shows the marginal effect of predicted construction employment on mafia-related news by quartiles of predicted southern migration. The figure indicates for which values of migration construction has a positive effect on mafia presence. The right panel shows for which values of construction migration has a positive effect.

car-manufacturing were dominated by Eni and Fiat which, being respectively public and under strict union scrutiny, could not hire illegal workers. As predicted, we do not observe effects of these sectors' expansion on mafia presence (columns 2 and 3).

Finally, unskilled labor is not attractive in skilled-intensive sectors (press, editorial, financial, and insurance services). Here again I find no effect on mafia (column 4).²³

6 Effect of mafias on politics

Up to this point, we have considered what allows the expansion of criminal organizations into new areas. I now turn to examining its effects: does criminal infiltration impact politics? Studying this question allows testing a second prediction of the theory: that actors striking a deal with organized crime should benefit from the agreement, gaining an edge over competitors. I exploit judicial evidence documenting agreements between criminal organizations and the Christian Democracy (DC) to test whether this party systematically gained votes in infiltrated cities.

The existence of agreements between the DC and mafias has been documented both judicially and empirically. While it was never the case that the party as a whole was infiltrated by organized crime, several members of the DC were either part of or had agreements with criminal groups.

²³In all these tests, sectoral employment is instrumented using a Bartik instrument.

Mafias’ support for the DC started from the first elections after WWII as a way to extract political favors from the incumbent party (Lupo, 2009). Trials for mafia association have involved important members of the party, including the seven-time Prime Minister Giulio Andreotti. While Andreotti was later acquitted for insufficiency of proof, the judges described the PM as having “an authentic, stable and friendly relationship with members of the Sicilian Mafia” (Dickie (2004), p. 322). De Feo and De Luca (2017) have shown that in Sicily, mafia-affected cities were 13 percentage points more likely to vote for the DC. Meanwhile, qualitative evidence suggests a similar pattern took place in the center and north of Italy. For example, in Bardonecchia the boss Lo Presti asked southern migrants to register in that city and vote for the mayoral candidate he controlled. The city council of Bardonecchia was subsequently dissolved for mafia infiltration, together with eight other city councils, and the judiciary identified multiple cases of mafia-related vote buying.

6.1 Empirical Strategy

I test whether the vote share of the DC in the center and north of Italy changed in cities infiltrated by mafias using the following instrumented difference-in-differences (DiD) specification:

$$Vote_{ie} = \eta_i + \kappa_e + \lambda \widehat{Mafia}_i \times Post_e + \mu X_{ie} + \nu_{ie} \quad (2)$$

where \widehat{Mafia}_i is average predicted mafia presence, $Post_e$ is a dummy equal to 1 in elections from 1958 onward,²⁴ and η_i and κ_e are city and election year fixed effects. The coefficient of interest λ captures the effect of predicted mafia presence on DC vote share post 1958. Predicted mafia presence is obtained by instrumenting actual mafia-related news with the interaction of construction employment and southern migration and is standardized. Using actual rather than predicted values for mafias does not yield parallel trends (Table 19, SI). In cities that will later be infiltrated by mafias, we observe a positive trend in DC vote share, a pattern which might have facilitated criminals’ endogenous settlement and which thus requires using predicted mafia. In all regressions, I control for the vector X_{ie} , including predicted migration from the south, construction employment, and their interaction. Section I, SI discusses the identifying assumption in more detail.

²⁴This year serves as a pre-mafia benchmark because the boom in migration began later, and the policy of forced relocation of mafiosi only started in 1956.

Table 2: Effect of predicted mafia presence on DC vote share 1948–1992 (DiD)

	(1)	(2)
	Vote share DC	Log total DC vote
Mafia x Post 1958	0.012*** (0.002)	0.025*** (0.006)
Observations	62,870	62,784
Number of cities	5,961	5,961
City FE	Yes	Yes
Election Year FE	Yes	Yes
Mean outcome	0.452	6.427

Notes: Effect of mafia presence (predicted from IV estimates) on DC vote share (column 1) and log total votes (column 2) after mafia arrival (Post 1958) (Equation 2). Controls for instrumented construction employment, southern migration, and their interaction, and city and year fixed effects are included, and column 2 controls for population. Standard errors are clustered at the city level.

6.2 Results

After the start of mafia expansion, an increase by one standard deviation in predicted mafia presence generates a 1.2 percentage points increase in the vote share for the DC (Table 2, column 1), which corresponds to a 2.5% increase with respect to the average of 45%. Because the number of voters (the denominator in the DC vote share) might itself be endogenous to mafia arrival, I also report estimates using the logarithm of the number of votes for the DC and controlling for city population (column 2). Results point to the same conclusion, although the effect size is smaller in proportion to the mean.²⁵ This finding is robust to redefining election year 1963 as the beginning of the post period and to removing controls for migration and construction (Table 22, SI).

6.3 Should the DC’s relative gains be attributed to mafias?

In absence of judicial evidence, it is hard to demonstrate empirically that the DC’s electoral gains in mafia-affected cities (shown in Table 2) were driven by mafias’ activities. However, I provide evidence supporting this interpretation and discuss alternative explanations for this result.

Voting patterns over time

In Figure 4 and Table 19, SI, I show the results of an event-study version of Equation 2, interacting average predicted mafia presence with each election year (instead of simply using a dummy *Post1958*)

²⁵This implies that cities affected by mafias show lower voter turnout, in part due to a reduction in vote for left-wing parties, which might be consistent with turnout suppression (Table 21, SI).

and using 1953 as reference category.

On the left, I plot the uninteracted year fixed effects, which show the change in vote share for the DC in each year after the 1953 elections (first set of coefficients). On the right, I plot the coefficients of year interacted with predicted mafia, which show the additional change in DC vote share for cities that have one standard deviation predicted mafia more than the average (second set of coefficients). The total change in cities that are one standard deviation above in mafia presence is the sum of the first and the second set of coefficients.

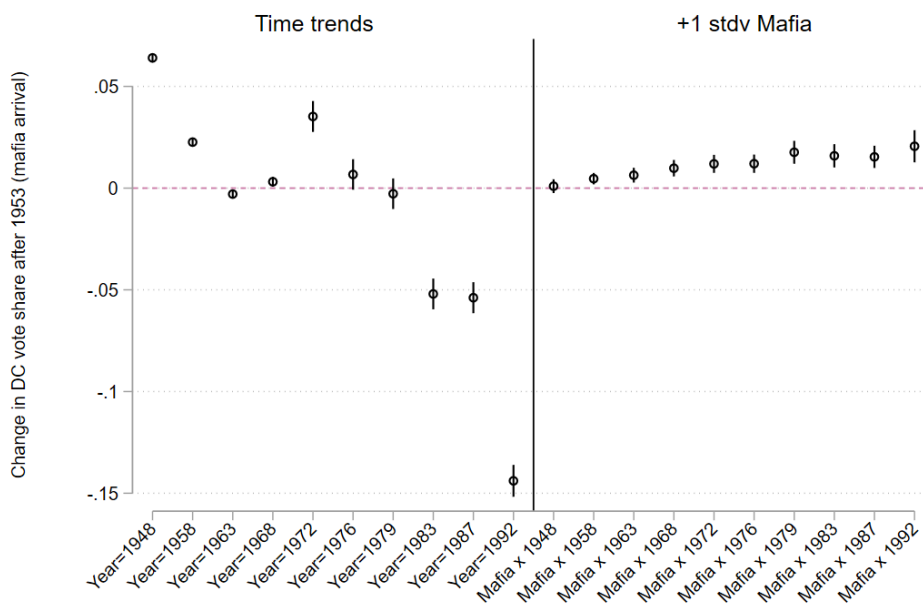
The overall change in the DC vote share over time (coefficients on the left of the figure) reflects major trends in the history of this party. From the mid-1970s, the DC started losing voters, a crisis which became deeper with the fall of communism and the exhaustion of the anti-communist mission which had fueled the party's supremacy. In 1992, with Tangentopoli, the largest corruption scandal in the history of the Italian Republic which directly hit the DC (Golden and Chang, 2001; Daniele et al., 2020), the vote share for this party dropped by 15 percentage points. The party was dissolved the subsequent year.

By contrast, the *differential* change in vote share for the DC (coefficients on the right of the figure) is growing over time, ranging from +0.4 in 1958 to +2.1 percentage points in the year of the scandal, 1992. Strikingly, the electoral advantage the DC gained in cities with more mafia does not decrease in response to large historical upheavals, such as the fall of the Berlin wall and the end of communism, as well as the largest corruption scandal in the history of the Italian Republic. Quite the contrary: while initially small (as we would expect from mafias' capacity to broker votes in a recently infiltrated context), this advantage increases over time (as criminal groups become stronger). This pattern is in line with the interpretation that the electoral edge gained by the DC in mafia-affected cities was provided by increasingly infiltrated criminal groups.

Targets of vote buying

If mafias were indeed brokering votes for the DC, whom were they gathering these votes from? Given mafias' control over southern migrants, we should expect places in which southern migrants were more present to vote for the DC at higher rates. Interacting the population share of migrants from the south with predicted mafia presence, I find that cities with more migrants and mafia presence turned out at larger rates after mafia infiltration and voted more for the DC — although the coefficient is marginally non-significant in both cases (Table 20, SI). It is of course possible that

Figure 4: Change in vote share for the DC post 1958 (after mafia)



Notes: Change in vote share for the DC in each year post 1958 (post mafia arrival). The first set of coefficients refers to year FE, the second to the interaction of year with predicted mafia presence (standardized).

migrants that moved to cities without mafias might be of a different type (e.g., more educated than unskilled migrants moving to cities with construction booms). If this were the case, the finding that migrants vote more for the DC only in highly-infiltrated cities could be the consequence of demographic differences, rather than of the pressure imposed by mafias on their voting behavior. This does not seem to be the case: more educated voters tended to vote more for the DC (column 4), meaning that demographic differences, if anything, might bias the result towards zero.

Long-run effects on voting

The DC dissolved after 1992, buried by the Tangentopoli scandal. But if political brokerage was taking place, what happened to mafia-controlled votes? Recent judicial evidence is proving that Berlusconi inherited not only the electoral dominance of the DC, but also their connection with criminal groups.²⁶ I test whether this support is visible in the data. In this case, I use an IV

²⁶Trials proved that for 20 years Berlusconi transferred semesterly payments of 50 million Lire to Cosa Nostra and that the Cosa Nostra boss Vittorio Mangano lived in Berlusconi's house, hired as a stable boy for horses (L'Espresso., 2018). Another trial is examining Berlusconi's involvement in the season of mafia-related massacres of 1993–1994 (Il Corriere, 2019).

approach without relying on the pre-post difference, as there is no period before mafia arrival that could allow using a DiD. Comparing cities with and without mafia in each election year after 1992, I find that mafia-affected cities are significantly more likely to vote for Berlusconi (Table 23, SI).

Alternative interpretations

The gains obtained by the DC in mafia infiltrated areas are compatible with other interpretations. Voters might have reacted to mafia presence by voting more for the DC if this party was perceived as adopting a strong stance against organized crime. However, if any party could be depicted as actively opposed to mafias, this would be the Communist Party, which had historically been in opposition with criminal groups²⁷ and had several of its affiliates assassinated for undertaking battles against organized crime.²⁸

A gain for the DC could reflect natives' reaction to the arrival of southern migrants. Indeed, cities affected by mafias were also more likely to receive southern migration, as shown above. If voters were opposed to migration, they might have voted at higher rates for the right-wing party. This interpretation would also be compatible with the result showing larger effects in cities with both mafia and migration. However, all regressions control for migration to partial this effect out. Furthermore, if an anti-southern immigration story explains results, we should expect that, after the collapse of the DC, those votes would be inherited by the party representing anti-southerners' grievances, the Lega Nord. Instead, if anything the Lega Nord received fewer votes in cities infiltrated by mafias (Table 23, SI).

7 Conclusion

The emergence of criminal organizations has been attributed to weak states' incapacity to provide security and services to their citizens, leaving space for criminal groups to substitute important states' functions. The expansion of organized crime to areas with strong institutions requires a new explanation.

I propose a theory in which organized crime expands by striking alliances with local economic

²⁷See for example the Portella della Ginestra massacre, in retaliation for the victory of the Communist and Socialist party in the 1947 Constituency Assembly elections in Sicily (Dickie, 2004).

²⁸For instance, the PCI leader and member of parliament Pio La Torre was assassinated for initiating a law which allows courts to seize the assets of mafia members, considered as one of the most effective tools to fight mafias to date (Pino Arlacchi, Bulletin of Narcotics XXXIV, No. 4, 1984).

actors and providing them with illegal resources. I show that an important case of successful criminal expansion, the move of southern Italian mafias to the north, responded to this logic and was made possible by two factors: a boom in construction which caused an increase in demand for cheap unskilled labor, on one hand, and the arrival of immigrants from the same area of origin as mafias and over which criminal groups could have control, on the other. By providing cheap, informal labor to businessmen, criminal groups were able to create networks of mutual dependence with local actors, an essential resource for the successful penetration of organized crime in a new area. I also test a second prediction of a theory: that actors striking agreements with mafias gain a significant advantage from it. I show that the Christian Democracy, the party which judicial evidence indicates as having connections with mafias, gained a durable electoral advantage in cities infiltrated by organized crime.

While this paper focuses on Italy, there are several other cases in which the arrival of criminals and of migrants from the same area of origin coincided. In the early days of the Italo-American mafia, mobsters acted as intermediaries between local businessmen and Italian migrants to exploit their compatriots as workforce through the so-called “padrone system” (Lupo, 2009). One of the most prominent criminal group in the U.S., the MS-13, arrived from El Salvador at the same time as a wave of refugees escaping civil war. Similarly, the establishment of the increasingly threatening Miri-Clan in Germany coincided with the immigration of people of Turkish-Mhallami origin, and the ‘Ndrangheta presence in Australia has been linked to the waves of migration from Calabria in the 1950s. Today, anecdotal evidence on the Nigerian Black Axe expansion into Italy suggests that this group is thriving by exploiting the work of migrants from their country of origin at conditions close to slavery in the agriculture and construction sectors. This suggests that the dynamics I documented using micro-level evidence from Italy in the 1960s and 1970s might travel to other contexts.

The phenomenon documented in this paper is rather common, yet until now it has been unclear that migrant exploitation could be a significant determinant of organized crime expansion. My results have important policy implications not only for the fight against organized crime, but also for immigration policy. Immigrants are more likely to resort to exploitative illegal employment options offered by criminal groups when states do not facilitate their integration. This study suggests that reducing the opportunities for exploitation goes beyond the protection of victims and spills over into the prevention of organized crime expansion.

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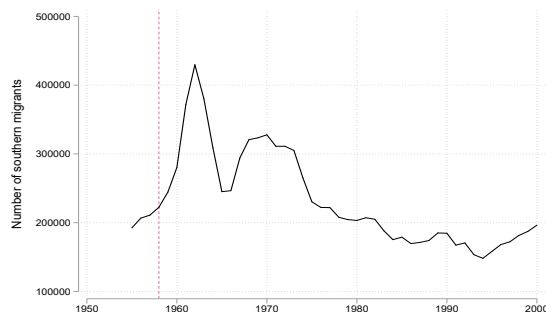
SUPPLEMENTARY INFORMATION

— For Online Publication —

A Additional details on the contribution

The conditions for the expansion of criminal organizations to new areas is the topic of investigation of the book “Mafias on the Move” by Federico Varese (2011). Pulling together evidence from seven case studies of failed and successful transplantation, including two in northern Italy, Varese finds that the unintended move of mafia members, the absence of other criminal groups, and the presence of new or booming markets in which mafias can provide private protection in the absence of the state are common to cases of successful expansion. The importance of the move of mafiosi, creating a supply of criminals, is confirmed in a number of studies, including in the Italian case (Pinotti and Stanig, 2016; Scognamiglio, 2018; Sviatschi, 2020), and the present paper takes it for granted and instead tries to assess where expansion is successful conditional on the move taking place. In examining the conditions allowing for a successful establishment of organized crime, my study innovates over Varese’s seminal contribution both methodologically and conceptually. First, instead of comparing across case studies as in Varese (2011) or across provinces as in Buonanno and Pazzona (2014), I use within-city and time variation comparing outcomes in all 5900 cities in the center and north of Italy over two decades, and I employ an identification strategy which accounts for the endogeneity of why both an increase in employment and an increase in migration take place in certain cities and not in others. Second, my study shows that an increase in employment in construction (booming markets in Varese) are only relevant to the extent that they coincide with migration booms, an element which has instead little role in Varese’s theory. Third and most importantly, while offering governance in markets that states are unable to control is the activity Varese (2011) identifies as crucial for transplantation, I contend that mafias expanded by offering cheap illegal labor to local businessmen while protecting them from the prosecution of the state. The service provided by expanding criminal groups is in some way the opposite to the service offered by emerging criminals: they offered entrepreneurs protection *from* the state when businessmen were hiring labor below market standards (a complement to a strong state), rather than protection in place of a state unable to provide it publicly (a substitute to a weak state).

Figure B.1: Number of migrants from southern provinces moving north, 1955–2000



B Descriptive Statistics

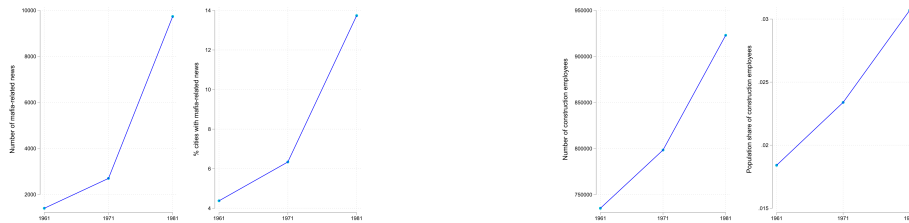
Table 1: Descriptive Statistics

	N	Mean	Sd	Min	Max
Mafia Presence:					
Mafia, news per capita		0.015	0.152	0.000	12.500
News selected by lasso		0.005	0.049	0.000	3.125
News selected by random forest		0.014	0.129	0.000	9.375
Assuming continuous presence		0.018	0.157	0.000	12.500
News mafia-crimes only		0.010	0.087	0.000	6.250
News winsorized		0.013	0.087	0.000	1.834
Mafia, t-1		0.002	0.051	0.000	5.093
Construction:					
Emp Constr pc		0.000	1.000	-0.718	33.083
Z Emp Constr		0.000	1.000	-0.152	7.897
Z Emp C No leave out		0.0001	1	-0.152	7.57
Constr Emp Growth since 1951		55.340	350.3	-18932	12747
Constr Emp Growth pc since 1951		0.052	0.536	-31.667	0.984
Above 10,000 inhab 1871		0.033	0.179	0.000	1.000
Migration:					
Migr South pc		-0.000	1.000	-0.742	4.248
Migr endog pop		-0.000	1.000	-0.837	3.835
Z Migr South		-0.000	1.000	-0.839	4.030
Z Migr Drought		0.000	1.000	-0.817	4.232
Z Migr No leave out		0.000	1.000	-0.738	4.722
Interaction:					
Emp C x Migr		-0.000	1.000	-0.419	48.547
Emp C x Migr endog pop		0.000	1.000	-0.471	42.311
Z Emp C x Migr		-0.000	1.000	-0.134	30.179
Z Constr x Migr Drought		0.000	1.000	-0.139	24.628
Z Constr x Z Migr No leave out		0.000	1.000	-0.132	28.654
Controls:					
Pop 1871		3076.261	8612.665	0.000	2910500
Pop 1871 x Growth (in 1000)		555859	1867916	0.000	82978060

Observations	11925			
Politics:				
DC vote share	0.309	0.251	0.000	0.992
Log total DC vote	6.108	1.635	0.000	13.393
Turnout	0.863	0.079	0.040	1.000
Berlusconi vote share	0.078	0.126	0.000	0.750
Log tot Berlusconi vote	5.847	1.414	0.000	13.406
Lega Nord vote share	0.053	0.101	0.000	0.706
Mafia x Post 57	0.000	0.935	-27.131	19.430
Mafia x Post 62	0,000	0.901	-27.131	19.430
Observations	95392			

Notes: The letter Z indicates an instrumental variable. All independent variables are considered in their zscores.

Figure B.2: Mafia and construction employment over time, 1961–1981



(a) Mafia-related news, total number and % cities affected

(b) Construction employment, total number and population share

Figure B.3: Population shares of construction employees (1951) and migrants from the South (1955)

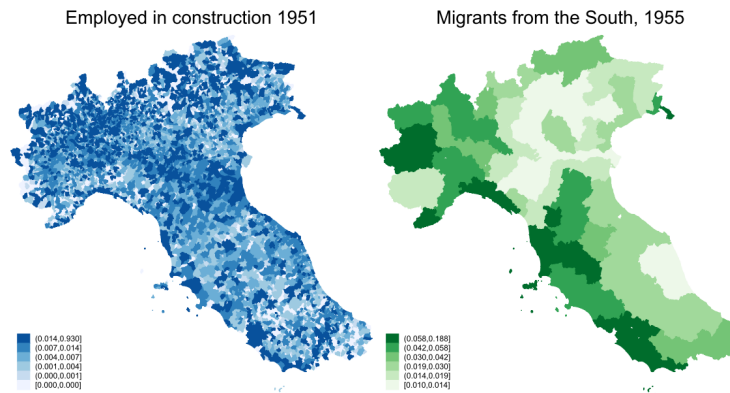
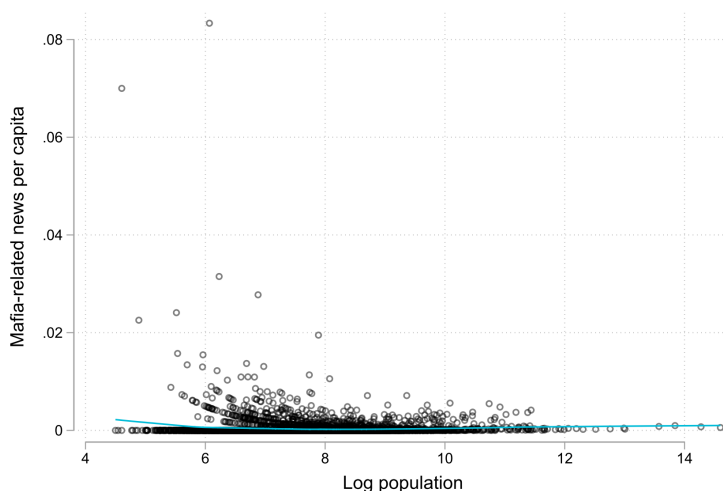


Table 2: Cities with and without mafia-related news, 1961–1981

	(1)	(2)	(3)	(4)
	No mafia news	Mafia news	Diff Mean	Std Difference
Population	-0.059 (0.110)	0.660 (3.610)	0.718 (0.035)	0.199
Pop density	-0.055 (0.825)	0.806 (2.513)	0.861 (0.035)	0.325
Family size	-0.264 (0.811)	-0.604 (0.644)	-0.340 (0.026)	-0.328
Analphabetism	-0.172 (0.816)	-0.350 (0.561)	-0.178 (0.026)	-0.179
With degree	0.147 (0.925)	1.191 (1.682)	1.044 (0.033)	0.544
Gender educ differ	-0.047 (0.915)	-0.101 (0.654)	-0.054 (0.029)	-0.048
Employment	-0.423 (0.877)	-0.472 (0.745)	-0.050 (0.028)	-0.043
Female Emp	-0.260 (0.877)	-0.307 (0.731)	-0.047 (0.028)	-0.041
Emp Agric	0.066 (1.006)	0.512 (1.100)	0.446 (0.033)	0.299
Emp Industry	0.225 (0.887)	0.944 (1.481)	0.719 (0.031)	0.417
Emp Services	-0.236 (0.879)	-0.617 (0.861)	-0.381 (0.029)	-0.310
Emp Commerce	0.189 (0.935)	0.285 (0.875)	0.096 (0.030)	0.075
Share elderly	0.182 (1.108)	0.206 (1.029)	0.025 (0.036)	0.016
Elderly Depend	0.278 (1.051)	0.222 (1.022)	-0.056 (0.034)	-0.038
Young Depend	-0.001 (1.018)	-0.261 (0.863)	-0.259 (0.033)	-0.194
Ratio male	0.019 (0.987)	-0.267 (0.878)	-0.286 (0.032)	-0.217
House w services	0.388 (0.923)	0.681 (0.868)	0.294 (0.030)	0.232
Property houses	0.208 (0.895)	-0.340 (0.890)	-0.548 (0.029)	-0.434
Inhab per room	-0.067 (0.424)	0.050 (3.836)	0.117 (0.039)	0.030
Lack Services	-0.388 (0.923)	-0.681 (0.868)	-0.294 (0.030)	-0.232
Observations	10,889	1,036	11,925	

Notes: All values are standardized.

Figure B.4: Relation between population and mafia-related news per capita



Notes: Mafia-related news per capita 1961–1989 and log of population in 1961 do not display a positive relation. While on average cities with mafia-related news are larger, there is mafia news in towns of all sizes.

C Interaction Effects, Diagnostic tests

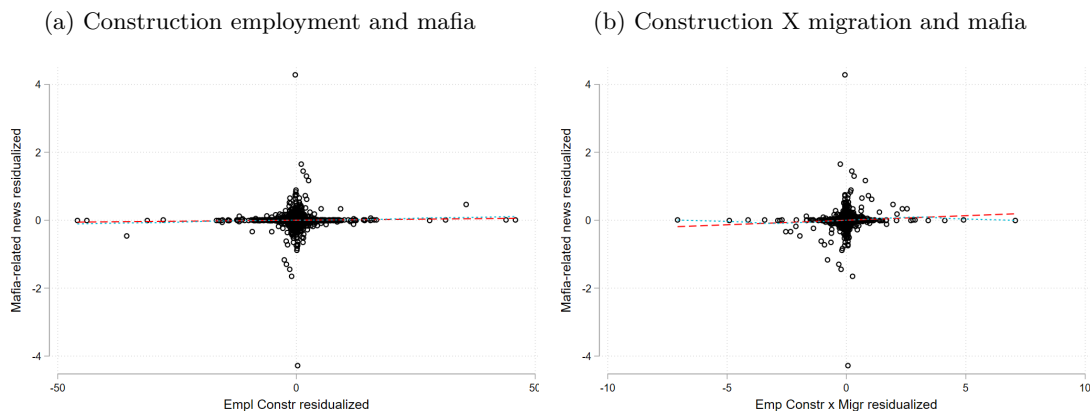
To assess the validity of the linearity assumptions underlying the use of a linear model (Equation 1), I consider a linear interaction diagnostic plot (Hainmueller et al., 2019). The linear regression line (in red, long dashes) and the non-linear curve (in blue, short dashes) do not diverge across values of construction and construction interacted with migration, suggesting that linearity might be a good approximation. Looking at Figure C.2, we observe how for higher levels of migration, the relation between construction and mafia becomes more positive, as we should expect from the theory.

D The Instrument for Construction

D.1 The Development Plan Law

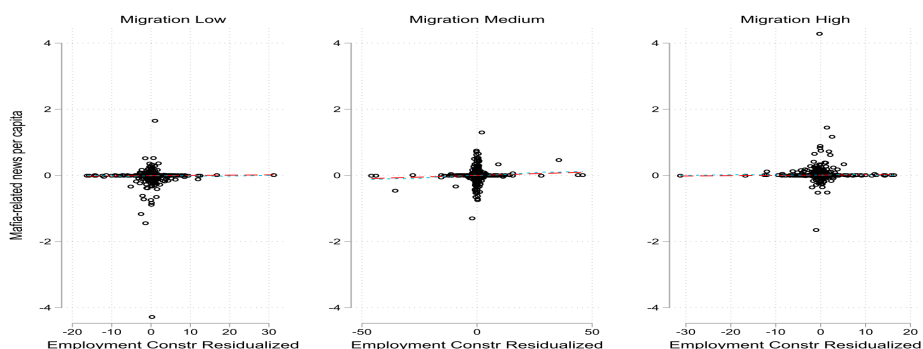
Assignment: Law 2359/1865, Capo VI established that cities with more than 10,000 inhabitants could adopt a development plan to design the future development of the city. The plan could be adopted with a simple resolution from the City Council after the approval of the Council for Public Works and it had a duration of 25 years. There is no full list of all cities that adopted it, and the most complete source is a database put together by the University of Milan cross-referencing

Figure C.1: Linear interaction diagnostic plot



Notes: All measures are residualized to account for city and decade fixed effects. A linear regression line is plotted in red and long dashes while a loess line is plotted in green with short dashes.

Figure C.2: Linear interaction diagnostic plot, by levels of migration



Notes: Values residualized to account for city and decade fixed effects. A linear regression line is plotted in red and long dashes while a loess line is plotted in green with short dashes.

information from three different archives,²⁹ which is, however, not exhaustive as each city adopted the act individually and not all municipalities saved the acts from 1865 onwards. Of the 197 cities above the threshold, 49 are listed in the database as having adopted a development plan, but many others could have adopted it and be missing in the database. Reassuringly, no city below 10,000 inhabitants is reported as having adopted a plan, suggesting there are no defiers. Although cities which surely adopted the plan (25%) tend to be larger on average (big cities have better historical administrative records), the distribution of construction employment per capita looks fairly similar to that of cities for which we do not know whether the plan was actually adopted. Because the latter constitute 75% of the sample, we also observe larger variation in the range of construction employee

²⁹Rete Archivi Piani Urbanistici, <http://www.rapu.it/>.

per capita in this subsample. Construction employment is lower on average and also in the median in cities with no development plan assignment (Table 3).

Table 3: Distribution of construction 1961–1971 in cities with and without development plan assignment

	N	mean	sd	min	p1	p10	p25	p50	p75	p90	p99	max
No development plan	11531	2.086	2.954	0.000	0.000	0.093	0.751	1.564	2.587	3.985	12.099	98.363
Reg plan, uncertain	294	2.094	1.019	0.262	0.352	1.068	1.513	2.016	2.561	3.101	5.167	11.365
Reg plan, certain	100	2.565	0.827	1.057	1.185	1.667	2.030	2.425	2.939	3.725	5.163	5.387

Notes: The table shows the distribution of construction employment per capita in several percentiles of the distribution for cities with absent, uncertain, and certain adoption of the development plan law.

D.2 Effect of the threshold on construction employment (RDD)

Law 2359/1865 remained in place from 1865 to 1942, when a new construction law was approved removing the threshold of application of the development plan and changing its characteristics. In 1942 Italy was in the middle of WWII and not much construction development took place until the war ended in April 1945. Between 1945 and 1950, most of the construction activity in Italy was aimed at the post-war reconstruction and once this was completed, from the 1950s, the country entered an economic boom. I hypothesize that, after the removal of the law, cities which had been subject to a more regulated urban development and which had therefore better and more homogeneously spread infrastructures in place to build new neighborhoods experienced a larger growth in construction. I test this hypothesis using a regression discontinuity design in which population in 1871 (the first census after the approval of the law) is the running variable. In particular:

$$Y_{it} = \zeta_0 + \eta C_i + \theta(Pop1871 - 10,000)_i + \kappa C(Pop1871 - 10,000)_i + \lambda_i \quad (3)$$

where Y_i is construction employment growth and C is the cutoff at which the law applies (10,000 inhabitants). Growth in construction employment for $t=[1961,1971]$ is calculated as the change in the number of construction employees from time zero (1951, pre-boom) to time t . Standard errors clustered at the city level are included in all specifications.

Results: Having developed according to the development plan causes an increase in construction employment growth at the threshold equal to 99 employees (Figure 2b and Table 4, column 1), doubling the mean number of construction employees in a city. A similar effect can be seen on the

growth of construction employees over total employees (column 2). This effect is only present during the years of the boom and not before, as shown by the null effect on construction in 1951, before the boom started (Table 4, column 3). This suggests that the plan produced no anticipation effects and that it is the start of the construction boom that triggered a difference in construction employment across cities which had and which had not adopted a development plan. Additionally, the advantage gained by these cities is temporary and disappears in 1981 (Table 4, column 4). This is consistent with the effect we would expect from the development plan: in the beginning, after removal of the law, cities which developed according to the plan have a slight advantage because of better-spread infrastructures. Two decades after the start of the boom, this advantage disappears and cities which had been exposed to regulated development in the nineteenth century look the same as those that did not.

The effect of the development plan law is absent if we consider as placebo any other population thresholds at which the law does not apply (Figure D.3). There is no sorting of cities at the cutoff (Figure D.2) and, to the best of my knowledge, no other discontinuous change happened at the 10,000 inhabitant threshold at the time in which the law was in effect.

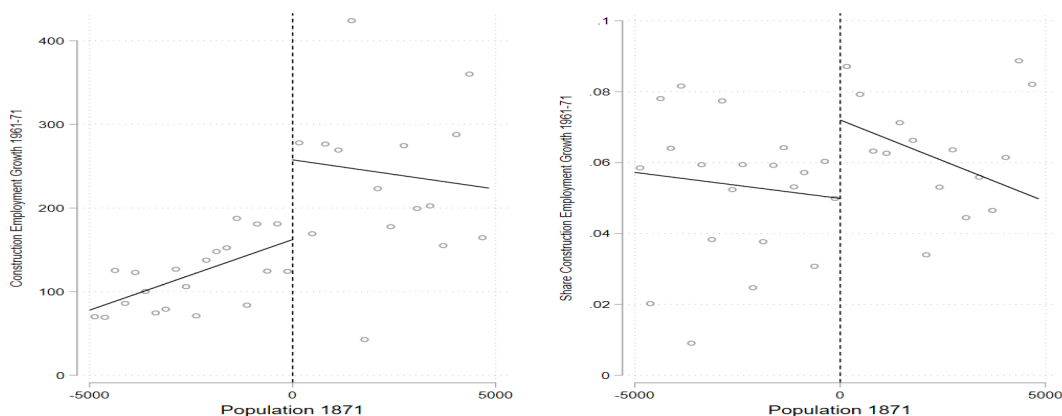
Table 4: Effect of the development plan on growth in construction employment

	(1)	(2)	(3)	(4)
	Δ Constr Emp 1961, 1971	Δ Share Constr Emp, 1961, 1971	Δ Constr Emp 1951 (before)	Constr Emp 1981 (after)
RD Estimate	99.58** (45.42)	0.0288** (0.0145)	-7.004 (48.20)	57.84 (60.04)
Observations	1434	658	387	878
Robust p-value	0.023	0.059	0.804	0.283
Polyn. order	1	1	1	1
Bandwidth	5551	3713	4050	5958
Outcome mean	100	0.0483	118.7	164.6

Notes: Results from RDD in Equation 3. In column 1 the DV is the absolute change in employees in construction in 1961 and 1971, while in column 2, I consider the change as a share of total employment. In column 3 I perform a test on the levels of construction before the start of the boom, in 1951, showing no anticipation effect. In column 4 I consider growth in construction employment in 1981, after the boom. Robust bias-corrected standard errors as developed in Calonico, Cattaneo, and Titiunik (2014) are reported in parentheses.

Exclusion restriction: I show that the discontinuity impacted construction employment growth, but not other outcomes which might have an effect on mafia presence. For example, one could be concerned that regulating the development of the city might have resulted in different

Figure D.1: Effect of the development plan on growth in construction employment



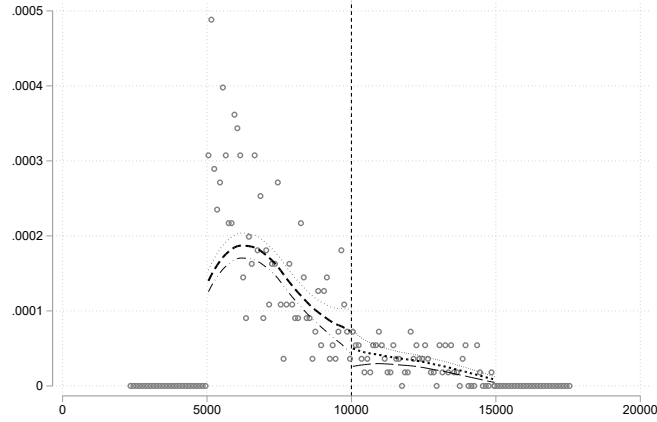
population growth patterns and that this change, rather than the effect on construction, is what drives the effect on mafia presence. I test the effect of the threshold on all the 20 variables present in the census, including population and houses' characteristics and employment information (Table 5 and Table 6). The threshold had no lasting effect on any of these covariates. Additionally, it can be shown that the threshold also had no effect on covariates in 1951 (Table 7 and Table 8). The only census indicator that is different across the threshold is the size of families in 1951 — likely a random difference, given the number of indicators we are testing, and given that significance disappears in the following decades. Finally, I show that this threshold has no effect on migration from the south nor on migration in general (Table 9). Considering these results, what we are capturing considering this threshold is only the increase in construction employment, and not a consequential increase in migration, population, economic activity, nor any other measurable covariate in this time period.

Table 5: Effect of threshold on covariates 1961–1981 (population and education)

	(1) Population	(2) Family size	(3) Pop density	(4) Gender educ differ	(5) Alphab- abetism	(6) Large families	(7) Educated young	(8) With degree	(9) Elderly Depend	(10) Young Depend
RD Estimate	3.994 (2.871)	0.142 (0.0988)	119.7 (117.9)	1.240 (3.989)	1.394 (0.951)	0.751 (0.893)	0.140 (0.779)	0.443 (0.714)	-0.877 (1.155)	1.641 (1.430)
Observations	1437	702	927	1536	705	500	644	1518	1485	798
Robust p-value	0.213	0.148	0.393	0.973	0.194	0.412	0.962	0.629	0.541	0.232
Polyn. order	1	1	1	1	1	1	1	1	1	1
Bandwidth	4596	2912	3489	4821	2924	3084	3604	4794	4726	3193
Outcome mean	11014	3.311	289.7	134.9	4.130	6.831	4.846	6.794	21.55	29.16

Notes: Coefficients from Equation 3 estimating the effect of the adoption of a development plan at the 10,000 inhabitants population cutoff. In this case, dependent variables are covariates on which no effect is expected.

Figure D.2: McCrary test, cutoff for the development plan adoption at 10,000



Notes: McCrary test of the density of the running variable (population 1871) at the cutoff of 10,000 inhabitants. A manipulation test using the local polynomial density estimators proposed in Cattaneo et al. (2018) shows no statistical evidence of manipulation of the running variable ($T=0.46$, $P\text{-value}=0.65$).

Table 6: Effect of threshold on covariates 1961–1981 (employment and housing)

	(1) Emp Agric	(2) Emp Industr	(3) Emp Services	(4) Emp Commerce	(5) Female 2 Emp	(6) Property houses	(7) Pop in poverty	(8) Crowded houses	(9) Improper houses	(10) House w services
RD Estimate	-0.531 (1.170)	0.899 (2.159)	-0.258 (3.301)	0.306 (3.196)	3.923 (3.444)	0.379 (3.498)	1.187 (0.864)	0.940 (0.614)	0.317 (0.508)	-0.159 (3.430)
Observations	879	1074	1922	1209	726	702	624	522	1678	873
Robust p-value	0.655	0.635	0.856	0.918	0.189	0.700	0.235	0.175	0.475	0.855
Polyn. order	1	1	1	1	1	1	1	1	1	1
Bandwidth	3374	3908	5312	4134	2983	2891	3522	3171	5870	3362
Outcome mean	12603	19.06	24.78	45.29	27.48	56.54	6.220	3.492	0.236	67.02

Notes: Coefficients from Equation 3 estimating the effect of the adoption of a development plan. Dependent variables are covariates from Census on which no effect is expected.

Table 7: Effect of threshold on covariates 1951 (population and education)

	(1) Population	(2) Family size	(3) Pop density	(4) Gender educ differ	(5) Analpha- betism	(6) With degree	(7) Elderly Depend	(8) Young Depend
RD Estimate	1,219 (1,415)	0.656*** (0.250)	41.61 (78.50)	9.325 (9.487)	2.752 (1.988)	-0.190 (0.406)	-0.297 (0.567)	1.377 (1.808)
Observations	410	188	327	352	258	717	655	354
Robust p-value	0.521	0.00799	0.748	0.414	0.197	0.552	0.752	0.381
Polyn. order	1	1	1	1	1	1	1	1
Bandwidth	4219	2488	3680	3878	3165	5545	5375	3897
Outcome mean	10776	4.239	250.2	158.5	9.385	2.551	12.88	30.23

Notes: Coefficients from Equation 3 estimating the effect of the adoption of a development plan. Dependent variables are covariates on which no effect is expected.

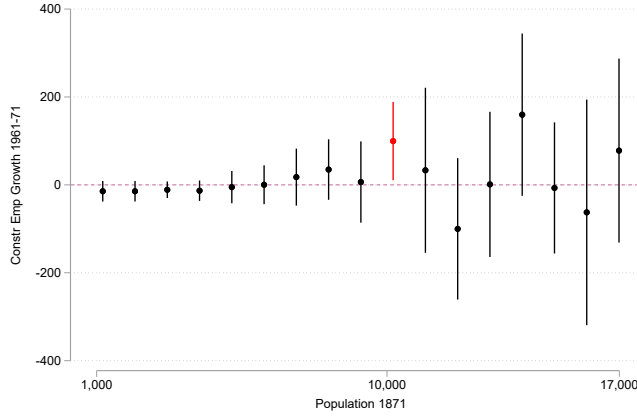


Figure D.3: Placebo at other cutoffs

Notes: Results from estimation of Equation 3 at other population cutoffs than the one at which the law applies (10,000 inhabitants, in red). The cutoff at 14,000 inhabitants is significant at 10%; the others are all insignificant. The cutoff at 17,000 inhabitants is the last at which it is possible to compute the local polynomial bandwidth above the cutoff.

Table 8: Effect of threshold on covariates 1951 (employment and housing)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Emp Agric	Emp Industr	Emp Services	Emp Commerce	Female Emp	Property houses	House w services
RD Estimate	-0.191 (1.437)	-0.579 (1.894)	2.077 (5.496)	-1.210 (4.322)	1.360 (2.255)	-3.212 (3.837)	-0.838 (3.804)
Observations	237	370	580	413	404	447	270
Robust p-value	0.924	0.844	0.799	0.833	0.380	0.699	0.643
Polyn. order	1	1	1	1	1	1	1
Bandwidth	2926	3987	5094	4257	4148	4418	3244
Outcome mean	12192	9.220	50.71	31.36	12.01	41.87	16.08

Notes: Coefficients from Equation 3 estimating the effect of the adoption of a development plan. Dependent variables are covariates on which no effect is expected.

Table 9: Effect of threshold on migration in 1961–1971

	(1)	(2)	(3)
	N migrants south 1961–1971	Share migrants south 1961–1971	Share migrants all regions 1961–1971
RD Estimate	682.9614 (1,986.043)	0.0026 (0.019)	0.0111 (0.039)
Observations	1006	676	764
Robust p-value	0.756	0.992	0.839
Polyn. order	1	1	1
Bandwidth	4766	3814	4038
Outcome mean	4166	0.0718	0.284

Notes: Coefficients from Equation 3, estimating the effect of the adoption of a development plan on migration from the south

D.3 Instrument Specification

I exploit the discontinuity in construction growth caused by the development plan law to build an instrument for construction. For city i and time t , I estimate:

$$ZC_{it} = Above10k_i \times \Delta C_t^{-\Delta C_{it}} \quad (4)$$

where $Above10k$ is a dummy for cities above the threshold and the second term is the national per-capita growth in construction employment net of the contribution of city i . Because $Above10k$ depends on population in 1871 (the first census after the approval of the law), we might be concerned that city size drive the effects. To account for this, both in the first stage and in the analysis, I control flexibly for the interaction of population in 1871 and the national growth in construction employment. This control ensures that the instrument only captures the jump in construction at the discontinuity, rather than incorporating the fact that (i) cities with larger population grow more and (ii) the effect of the development plan on construction might be larger in bigger cities.

IV rather than RDD: I use an IV for the main analyses rather than an RD for three reasons. First, it allows me to consider the *interaction* between construction and migration which, as discussed above, is the quantity of interest in this paper. Second, even if the RD allows one to run heterogeneity analyses by high and low levels of migration, it forbids the accounting of the endogeneity of migrants' destinations choices, which instead can be done with the IV. Finally, the local nature of the RD discards from the sample all information on small and large cities, making estimates sensitive to changes in the specification.

E The Instrument for Migration

For province of destination and origin d and p , the instrument for migration is built as follows:

$$ZM_{dt} = \frac{1}{P_{dt0}} \sum_o \sigma_{odt0} \times \Delta M_{ot}^{-M_{odt}} \quad (5)$$

where P is population at $t = 0$,³⁰ σ_{od} is the share of initial settlers of origin o living in province d in the north in 1955, and the second term is the national flow of immigrants of origin o who migrated

³⁰Following Card and Peri (2016), I do not scale the instrument for the contemporaneous population because this might introduce endogeneity in the instrument. However, I show results scaled by endogenous current population in the robustness section.

at time t , net of those who settled in province d .³¹ This instrument is built such that the only component that varies at the local level is the share of migrants before the move of mafias to the north. This choice accounts for the possibility that reverse causality — for example, that mafias attracted southern migrants where construction was higher — determines the finding.

E.1 Drought severity as a push factor

Recent literature has shown that violations of the exogeneity assumption in the shift-share instruments could arise from having either shares or flows systematically related to characteristics of the provinces of destination receiving more migrants from a certain origin (Goldsmith-Pinkham et al., 2020; Borusyak et al., 2019). To account for this possibility, I run a robustness test in which the flows of migrants are predicted by exogenous pushes in migration patterns: the drought severity in different provinces of the south of Italy. At a time when the transition from agriculture was largely in progress, a severe drought would cause people to abandon land cultivation in the south and look for employment elsewhere. This expectation is confirmed empirically (Figure E.1 and Table 10). I use the drought severity index from each sending province elaborated by Van der Schrier, Briffa, Jones, and Osborn (2006) to predict migration flows exogenously. Besides relying on quasi-random variation, this instrument additionally lowers the serial correlation in migration flows over time, another issue threatening the validity of shift-share instruments (Jaeger et al., 2018). First-stage results show another strong instrument (Table 11). Finally, I address the concern that observations with similar exposure shares might have correlated residuals, making standard errors invalid (Adão et al., 2019), following Borusyak et al. (2019) and showing that coefficients estimated at the shock level are equivalent to conventional shift-share coefficients (Table 12).

³¹Also in this case, I follow the recent literature using instrumental variables in leaving out the contribution of city i , but results are robust to including it.

Table 11: First Stage, Drought as push factor for migration

	(1)	(2)	(3)
	Emp Constr per capita	Migr South per capita	Emp Constr x Migr South
Z Constr Emp	0.021*** (0.007)	0.020** (0.009)	0.009** (0.005)
Z for Migr Drought	-0.097*** (0.021)	0.712*** (0.015)	0.299*** (0.037)
Z Constr x Z Migr Drought	-0.008 (0.017)	0.010 (0.038)	0.046*** (0.016)
Observations	11,926	11,926	11,926
Number of cities	5,963	5,963	5,963
City, Decade FE	Yes	Yes	Yes
SW F-Stat	17.38	11.96	7.820
A-R Wald test	22	22	22
Mean outcome	0	0	0

Notes: First stage of the instrumental variable approach described in Section 5.1 using an alternative instrument for southern migration, predicting the flows of migrants using as exogenous push factor drought severity in southern Italy.

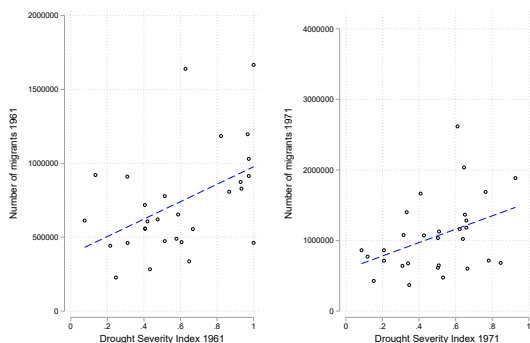


Figure E.1: Drought Severity Index and number of migrants, 1961-1971

	(1)	(2)
	N Migr 1961	N Migr 1971
Drought Severity	6,276*** (233.5)	10,078*** (383.6)
Constant	4,116*** (135.5)	6,300*** (160.9)
Observations	2,726	2,726
R-squared	0.219	0.160

Table 10: Effect of drought severity on number of southern migrants, OLS

Table 12: Standard and shock-level shift-share estimates

	(1)	(2)	(3)	(4)
	Standard	Shock-level	Standard	Shock-level
Mig South	8.051 (115.7)	8.051 (241.1)	4.704 (17.51)	4.704 (39.65)
Observations	198	81	198	81
Decade FE	Yes	Yes	Yes	Yes
City FE	No	No	Yes	Yes
Sum of shares x Decade	Yes	No	Yes	No

Notes: Estimates of the effect of southern migration on news per capita using the standard and the shock-level version of the shift-share instrument, with decade only (column 1,2) and decade-province fixed effects (column 3,4).

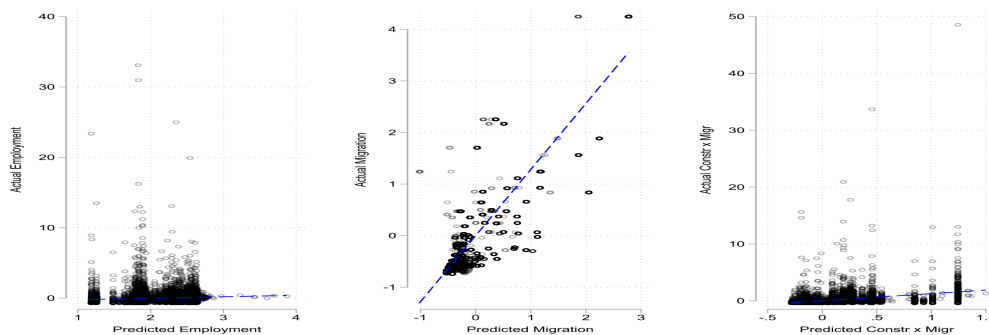
F Instrumental Variable Identifying Assumptions

Table 13: First Stage

	(1)	(2)	(3)
	Emp Constr pc	Migr South pc	Emp Constr x Migr South
Z Constr Emp	0.017*** (0.006)	0.050*** (0.008)	0.019*** (0.005)
Z for Migr	-0.104*** (0.023)	0.702*** (0.023)	0.305*** (0.037)
Z Constr x Z Migr South	0.009 (0.006)	-0.086*** (0.009)	0.005 (0.007)
Observations	11,926	11,926	11,926
City, Decade FE	Yes	Yes	Yes
SW F-Stat	19.9	93.9	81.7

Notes: First stage testing the impact of each instrument (Z) on corresponding regressor. All values are standardized. Regressions control for the interaction of population in 1871 (determining the assignment of the development plan) and growth in construction employment and include city and decade fixed effects. Standard errors are clustered at the city level. I report the Sanderson-Windmeijer F-statistic for models with multiple endogenous variables. A-R Wald Test=28.1.

Figure F.1: First Stage: Actual and predicted values



Notes: Actual and predicted values of construction employment per capita, southern migration per capita and their interaction. Each point is obtained from regressing the instrument on the correspondent actual value after partialling out decade and city fixed effects, and clustering standard errors at the city level.

G Main Results, Robustness

Table 14: Robustness using different definitions of mafia presence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	News selected by lasso	News selected by random forest	News mafia-crimes only	Assuming continuous presence	Mafia news t-1	News winsorized	Log Mafia news
Emp Constr pc	-0.053*** (0.016)	-0.159*** (0.049)	-0.106*** (0.034)	-0.161*** (0.051)	-0.010 (0.008)	-0.148*** (0.046)	-0.129*** (0.040)
Migr South pc	-0.011** (0.005)	-0.029* (0.015)	-0.018 (0.011)	-0.031* (0.017)	0.008** (0.004)	-0.025* (0.014)	-0.020 (0.013)
Emp Constr x Migr South	0.034*** (0.011)	0.083** (0.035)	0.049* (0.025)	0.099** (0.041)	-0.017* (0.009)	0.071** (0.031)	0.053** (0.026)
Observations	11,926	11,926	11,926	11,926	11,926	11,926	11,926
Number of cities	5,963	5,963	5,963	5,963	5,963	5,963	5,963
City, Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean outcome	0.005	0.014	0.009	0.018	0.002	0.014	0.011

Notes: Results from Equation 1 using alternative definitions of mafia presence. I use a lasso (column 1) and a random forest (column 2) algorithm to select only news that predicts official indicators of mafia presence. In column 3, I exclude news of labor-racketeering and mentioning the word mafia or 'Ndrangheta. I assume mafia presence to be present even if it was not observed at t if it was at $t - 1$ in column 4. column 5 presents a placebo test with news at $t - 1$. News per capita is winsorized to exclude potential outliers (top 0.1 percent) in column 6 and transformed to logarithmic to account for the skewness of the DV towards zero in column 7.

Table 15: Robustness using variations in the instruments and specification

	(1) Using Drought as push for Migr	(2) RDD bandwidth	(3) IV Constr w/o leave out	(4) IV Constr & Migr w/o leave out	(5) Cluster prov level	(6) Endogenous population	(7) Consider Abruzzo Molise as south
Emp Constr pc	-0.173*** (0.058)	-0.157 (0.104)	-0.168*** (0.052)	-0.170*** (0.057)	-0.169*** (0.057)	-0.180*** (0.053)	-0.169*** (0.052)
Migr South pc	-0.034 (0.026)	-0.064 (0.054)	-0.032* (0.017)	-0.027 (0.021)	-0.032** (0.014)	-0.029* (0.016)	-0.027 (0.018)
Emp Constr x Migr South	0.104* (0.060)	0.272 (0.189)	0.097** (0.041)	0.092 (0.057)	0.098*** (0.033)	0.102** (0.041)	0.091** (0.045)
Observations	11,926	586	11,926	11,926	11,926	11,926	11,044
Number of cities	5,963	293	5,963	5,963	5,963	5,963	5,522
City Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW F-Stat	7.820	30.82	83.21	58.25	461.63	107.24	107.24
A-R Wald test	22	21.6	27.7	22.6	12.2	28.1	28.1

Notes: The Table shows the results from robustness tests on the main estimation using alternative specifications. column 1 includes a variant of the shift-share instrument for migration predicting migration flows exogenously using drought severity in the south as a push factor. In column 2, I restrict the sample to the optimal bandwidth selected by the RDD for construction. column 3 does not subtract contribution of construction employment in city i from the national growth rates (no-leave-out instrument). Similarly, in column 4 I repeat the same test using a no-leave-out instrument both for construction and for migration. In column 5, I cluster standard errors at the province level (the level at which migration is observed) while in column 6, I replace the exogenous population in 1951 with current (endogenous) population as denominator for the migration instrument. Finally, column 7 considers two regions (Abruzzo and Molise) as part of the south rather than the center and north. Mafia presence is defined as the population share of news related to mafia in a city-decade at $t + 1$ (1971–1981). City and decade fixed effects are included in all estimates, together with a control for the interaction of population in 1871 (determining the assignment of the development plan) and growth in construction employment. Standard errors are clustered at the city level in all Cols except 4.

Table 16: Test of the mechanism

	(1)	(2)	(3)	(4)
	Migr not under mafia control	Not labor in- tensive (Retail)	Highly regulated (Fiat, Eni)	High-skilled labor
Share Employed	0.197 (0.573)	-0.370 (1.230)	0.269 (0.936)	0.059 (0.061)
Migr north pc	0.069 (0.121)			
Emp x Migr north	-0.349 (0.677)			
Migr South pc		1.265 (4.270)	-0.037 (0.281)	0.037*** (0.012)
Emp x Migr South		-1.441 (4.991)	0.126 (0.512)	-0.005 (0.017)
Observations	17,889	11,926	11,926	11,926
Number of cities	5,963	5,963	5,963	5,963
City, Decade FE	Yes	Yes	Yes	Yes
F-Stat	51.55	296.9	45.20	34.44
SW F-Stat	1.350	0.160	0.120	1.600
A-R Wald test	9.500	31.50	55.60	40.30

Column 1 replicates the main analysis using migration from the center and north of Italy (not under mafia control). column 2 and 3 consider employment in sectors booming but not in need of informal workforce because not labor-intensive or highly regulated. column 4 examines sectors employing high-skilled workers. Mafia presence is the population share of news related to mafia at $t + 1$ (1971–1981). City and decade fixed effects are included in all estimates. Only column 1 controls for the interaction of population in 1871 and growth in construction employment. Standard errors are clustered at the city level.

H Characterizing the results

What type of competition? The demand for cheap unskilled labor in the construction sector could have emerged as a result of two types of competition: (1) competition to hire unskilled labor — as I argue — and (2) competition between incumbent and entrant companies in the construction sector. While my theory is compatible with both stories, it is an empirical question which of the two channels prevailed. I replicate the main analysis by replacing employment in construction per capita with the number of firms in the construction sector per capita and by using a Bartik instrument for the number of firms. The interacted coefficient for competition between firms is negative and insignificant (Table 17), suggesting that this channel does not explain mafia expansion. Results are in line with qualitative evidence suggesting that the primary difficulty for construction companies was finding employees to hire at low cost.

Intentionality of mafias' moves: Evidence from the work of Varese (2011) and Pinotti and Stanig (2016) shows that the initial move of Italian mafia members to the north was largely caused by the policy of forced resettlement and thus it was unintentional, both in the decision to move and in the choice of where to relocate. Still, another part of mafiosi relocated intentionally and might have chosen to go exactly where they thought they would be able to relocate: where migration from the south and employment in construction were high. Although this is possible and compatible with the theory, if this was mafias' plan for expansion since the beginning, we should observe at least a correlation between construction employment, migration from the south, and mafia presence. Instead, OLS regression results show no significant correlation between these two variables and mafia presence. IV estimates exclude that findings are driven by intentionality using pre-resettlement migration and construction. Although intentionality would not constitute a contradiction to the theory, empirical evidence suggests that mafias' decisions of where to move might have been dictated by a variety of factors and that expansion happened to be successful where an exchange with locals took place thanks to incentives provided by a demand for unskilled labor and the availability of controllable migrants.

Resettled mafia members: A related question is whether the resettlement of mafia members had a differential impact on the probability that mafias expanded in cities with high construction and southern migration levels. I gather information on how many mafia members were forcibly relocated to each northern province from the CPA (1976). I then subset the estimates by whether a province received more than zero, more than median, or more than the 75th percentile of relocated mafiosi (Table 18). The effect of construction and migration tends to become larger as the number of resettled mafiosi increases, but it is present for all percentiles of resettled mafia members. Although more mafia members might have facilitated expansion, the theory tested in this paper is unlikely to be dependent on mafia members already being present in places in which migration or construction was larger.

Table 17: Competition for hiring versus competition against entrants

	(1)	(2)
	Mafia (Emp)	Mafia (Firm)
Emp/Firm Constr pc Constr pc	-0.169*** (0.052)	-0.067*** (0.022)
Migr South pc	-0.032* (0.017)	0.056 (0.057)
Emp/Firm Constr x Migr South	0.098** (0.041)	-0.030 (0.056)
Observations	11,926	11,926
Number of cities	5,963	5,963
City, Decade FE	Yes	Yes
SW F-Stat	81.70	7.400

Notes: The table compares the main analyses (column 1) with a specification replacing construction employment per capita with the number of firms per capita (column 2).

Table 18: Effect on mafia presence by number of forcibly resettled mafia members

	(1)	(2)	(3)
	Forcibly resettled mafiosi > 0	Forcibly resettled mafiosi > 50pc	Forcibly resettled mafiosi > 75pc
Emp Constr pc	-0.132 (0.037)	-0.174 (0.060)	-0.238 (0.100)
Migr South pc	-0.033 (0.015)	-0.042 (0.021)	-0.065 (0.031)
Emp Constr x Migr South	0.117 (0.042)	0.137 (0.062)	0.179 (0.077)
Observations	10,384	5,958	2,732
Number of cities	5,192	2,979	1,366
City, Decade FE	Yes	Yes	Yes
SW F-Stat	77.36	45.65	41.85
A-R Wald test	33.60	33.60	19.60

Notes: Results of the main specification (Equation 1) by number of forcibly resettled mafia members in the province (number larger than 0 in column 1, larger than the 50th percentile (n=35) in column 2, larger than the 75th percentile (n=48) in column 3.)

I Effect on politics

The identification assumptions in an instrumented difference-in-differences design are the same as those necessary for an IV and for a DiD. First, the instrument should only affect voting through mafia presence, conditional on covariates. The instrument for mafia, as discussed in the first part of the paper, also affects mafia (and voting) through construction employment and migration. I thus control for these variables (instrumented) in each regression to partial out their direct effect on mafia presence, as well as for city and year fixed characteristics. Second, the instrument should only affect mafia post-infiltration and not before. In this case, this assumption is easily met as our treatment (mafia presence) was zero in all time periods before period 1 (1958). Third, trends in voting before the treatment period starts should be parallel. I provide evidence for this assumption in Table 19, column 1. The insignificant coefficient for 1948 suggests that cities with and without mafia only start diverging in vote share for the DC from 1958 onward. When we look at trends in voting before the arrival of mafias using mafia presence not instrumented (i.e., not quasi-randomly assigned), we see instead that trends are not parallel (Table 19, column 2) and that the vote share for the DC starts increasing already before the arrival of mafia in cities, a pattern which might suggest that mafias established in these cities endogenously, due to a stronger presence of this party. Using an instrumented difference-in-differences design accounts for this endogeneity issue. The rest of this section includes other tables testing the effect of mafia expansion on politics.

Table 19: Parallel trends in voting pre-mafia arrival

	DC vote share (Mafia = predicted values)	DC vote share (Mafia = actual values)
Year = 1948	0.064*** (0.001)	0.064*** (0.001)
Year = 1958	0.023*** (0.001)	0.022*** (0.001)
Year = 1963	-0.003*** (0.001)	-0.003*** (0.001)
Year = 1968	0.003** (0.001)	0.003** (0.001)
Year = 1972	0.035*** (0.004)	0.033*** (0.004)
Year = 1976	0.007* (0.004)	0.004 (0.004)
Year = 1979	-0.003 (0.004)	-0.005 (0.004)
Year = 1983	-0.052***	-0.054***

	(0.004)	(0.004)
Year = 1987	-0.054***	-0.056***
	(0.004)	(0.004)
Year = 1992	-0.144***	-0.146***
	(0.004)	(0.004)
Mafia x 1948	0.001	0.022***
	(0.002)	(0.006)
Mafia x 1958	0.005***	0.013**
	(0.001)	(0.006)
Mafia x 1963	0.006***	0.014***
	(0.002)	(0.005)
Mafia x 1968	0.010***	0.004
	(0.002)	(0.005)
Mafia x 1972	0.012***	0.001
	(0.002)	(0.008)
Mafia x 1976	0.012***	0.013**
	(0.002)	(0.006)
Mafia x 1979	0.018***	0.005
	(0.003)	(0.006)
Mafia x 1983	0.016***	-0.007
	(0.003)	(0.007)
Mafia x 1987	0.015***	-0.004
	(0.003)	(0.008)
Mafia x 1992	0.021***	0.005
	(0.004)	(0.012)
Observations	62,871	62,870
Number of cities	5,962	5,961
City, Year FE	Yes	Yes

Table 20: Effect of mafia and migration on DC vote share and turnout

	(1)	(2)	(3)	(4)
	Turnout	DC share	Log DC votes	DC share
Mafia x Post 1958	-0.005*** (0.001)	0.011*** (0.003)	0.006 (0.009)	0.005* (0.003)
Migr South	-0.053*** (0.011)	-0.045** (0.023)	-1.109*** (0.117)	
Mafia Post x Migr South	0.015*** (0.005)	0.018 (0.015)	0.219 (0.153)	
With degree				0.008*** (0.001)
Mafia Post x With Degree				0.001** (0.001)
Observations	62,882	62,882	62,796	62,881
Number of cities	5,963	5,963	5,963	5,962
City Year FE	Yes	Yes	Yes	Yes

Notes: DiD estimating the effect of mafia arrival and southern migration (both instrumented) on turnout, DC vote share and log DC votes (1948-1992). column 4 considers the effect of mafia arrival and education (share of population with a school diploma). Controls for predicted employment in construction, migration and city and year fixed effects are included, and standard errors are clustered at the city level.

Table 21: Effect of predicted mafia presence on left-wing parties' vote share

	(1)	(2)
	Vote share Left	Log total Left vote
Mafia x Post 1958	-0.002* (0.001)	0.005 (0.008)
Observations	62,881	62,694
Number of cities	5,962	5,962
City, Year FE	Yes	Yes
Mean outcome	0.249	6.427

Notes: DiD estimating the effect of predicted mafia arrival on vote for the Communist and Socialist Party 1948-1992. Vote share (column 1) and log total votes controlling for city population (column 2). Controls for construction employment, southern migration, and their interaction (predicted from IV estimates), city and year fixed effects are included. Standard errors are clustered at the city level.

Table 22: Effect of predicted mafia presence on DC vote share, robustness

	(1)	(2)	(3)	(4)
	DC share Use 1963 as post	Log tot votes Use 1963 as post	DC share No controls migr, constr	Log tot votes No controls migr, constr
Mafia x Post 1963	0.012*** (0.002)	0.029*** (0.007)		
Mafia x Post 1958			0.012*** (0.002)	0.019*** (0.006)
Observations	62,870	62,784	62,870	62,784
Number of cities	5,961	5,961	5,961	5,961
City FE	Yes	Yes	Yes	Yes
Election Year FE	Yes	Yes	Yes	Yes

Notes: The table provides robustness tests of Table 2. In column 1 and 2, I consider as Post the period after 1963 instead of 1958. In column 3 and 4, I remove controls for migration and employment in the construction sector. All regressions include city and year fixed effects, and standard errors are clustered at the city level.

Table 23: Effect of mafia presence on voting in 1994–2008

	(1)	(2)	(3)
	Berlusconi vote share	Berlusconi log tot votes	Lega Nord vote share
Mafia predicted	0.005*** (0.001)	0.013 (0.012)	-0.007*** (0.002)
Observations	29,178	29,174	29,178
Number of cities	5,959	5,959	5,959
City FE	No	No	No
Election Year FE	Yes	Yes	Yes
Mean outcome	0.247	5.847	0.139

Notes: IV estimates of the effect of predicted mafia on vote 1994–2008. Election year fixed effects are included and standard errors clustered at the city level.