Journal of Economic Behavior and Organization 245 (2026) 107467

Contents lists available at ScienceDirect

Journal of Economic Behavior and Organization

journal homepage: www.elsevier.com/locate/jebo

Cohesion or collusion? EU funds in places with corrupt local institutions

Marco Di Cataldo [a,b], Elena Renzullo [a,b,*], Andrés Rodríguez-Pose [b,c]

[a] Department of Economics, Ca' Foscari University of Venice, UK
[b] Department of Geography and Environment, London School of Economics, UK
[c] Cañada Blanch Centre and Department of Geography and Environment, London School of Economics, UK

ARTICLE INFO

JEL classification:
H7
H11
H77

Keywords:
Quality of institution
EU cohesion policy
City council dismissals
Organised crime

ABSTRACT

This paper provides the first analysis of how local institutional quality affects the distribution of EU funds across private beneficiaries, public entities, and local governments. Using high-quality Italian administrative data on city council dismissals due to collusion with organised crime, we examine whether corruption affects municipal control over EU resources. We apply a staggered difference-in-differences model and event studies and find that corrupt local governments receive significantly fewer EU funds for their own operations. However, this is not a consequence of efficient corruption detection, but rather a strategic choice. Corrupt administrations avoid larger EU projects to sidestep stricter anti-mafia regulations. This distortion weakens Cohesion Policy's impact, deprives communities of critical investment, and hampers local economic growth. While Italy's anti-mafia laws appear effective in blocking criminal access to EU funds, our findings expose the adaptability of organised crime, which simply switches its operations below existing regulatory thresholds. The takeaway is clear: good institutions matter. Where corruption thrives, EU funds do not disappear entirely, but they flow differently, fundamentally to smaller, more opaque projects. Stronger oversight is essential to ensure that Cohesion Policy delivers on its promise.

1. Introduction

The importance of institutions in shaping economic outcomes is now widely accepted (Acemoglu and Dell, 2010; Rodríguez-Pose, 2013). A growing body of research has documented how the efficiency, impartiality, and integrity of institutions influence a broad range of economic dimensions, including innovation, infrastructure development, regional competitiveness, and public sector efficiency (e.g., Rodríguez-Pose and Di Cataldo, 2015; Crescenzi et al., 2016; Annoni and Dijkstra, 2017). In line with these findings, variations in institutional quality across European regions have been found to play a significant role in determining the effectiveness of the EU Cohesion Policy (Becker et al., 2013; Rodríguez-Pose, 2013; Rodríguez-Pose and Garcilazo, 2015; Barbero et al., 2023; Di Stefano and Resce, 2025). The logic is straightforward: where institutions function well, policy interventions are more likely to deliver results. Where institutions are plagued by inefficiency —or, worse, corruption— public investment risks being wasted, misallocated, or actively siphoned off for other purposes.

Despite the wealth of research highlighting the broad importance of institutional quality, we still know little about the precise ways

* Corresponding author at: Department of Geography and Environment, London School of Economics, UK.
E-mail address: e.renzullo@lse.ac.uk (E. Renzullo).

https://doi.org/10.1016/j.jebo.2026.107467
Received 18 March 2025; Received in revised form 18 January 2026; Accepted 31 January 2026
Available online 30 March 2026

in which corruption distorts the allocation of EU funds. This gap is more than a theoretical oversight; it has tangible policy implications. The EU's Cohesion Policy is the largest development policy in the world, accounting for nearly one-third of the Union's total budget. Given the vast sums at stake, ensuring that these resources reach their intended targets, rather than vanish into a black hole of inefficiency or corruption, is of paramount importance. Recognising this, the EU has since 2014 formally acknowledged institutional quality as a driver of the outcomes of its investment decisions (Barca, 2009; Barca et al., 2012; Camagni and Capello, 2015). However, while the principle is now established, empirical evidence on its practical application remains thin.

This paper aims to fill that gap by examining how corruption at the local level affects both the overall amount and the distribution of EU investment. Specifically, we investigate whether local governments tainted by corruption —defined as those found to have colluded with organised crime— receive less funding and, crucially, whether they systematically distort its allocation. To do this, we make use of a highly detailed and unique dataset: administrative records from the Italian Ministry of Interior, which document cases of municipal government dissolution[1] due to collusion with criminal organisations, as prescribed by Law 164/1991. This legislation —one of Europe's most robust anti-mafia laws— allows the national government to dissolve local administrations when direct or indirect links between elected officials and criminal organisations compromise institutional integrity. The law, in effect, provides a real-world stress test for the relationship between governance quality and public investment.

Italy is an ideal case study for several reasons. First, its *Opencoesione* dataset offers an unusually granular breakdown of EU-funded projects, including thematic objectives, beneficiary types, and exact geographical allocations. Such level of detail makes it possible to track the flow of funds with a degree of precision rarely available elsewhere. Second, Italy is one of the largest recipients of EU Cohesion Policy investment, making it a critical testing ground for the policy's effectiveness. Third, the country's stark economic divide —between a relatively prosperous North and a South that has long lagged behind— is inextricably linked to persistent disparities in institutional quality (Nifo and Vecchione, 2015). This economic fragmentation provides a natural setting for assessing how governance quality influences development outcomes.

For analytical clarity, we focus on local governments in Italy's less developed regions,[2] where the intersection of weak institutions and organised crime is most pronounced. This focus is motivated by three main considerations. First, restricting the analysis to these regions ensures that all municipalities operate under the same EU investment framework, avoiding distortions that could arise from comparing areas with vastly different economic structures. Second, it helps prevent large development gaps from compromising the comparability between treated and control groups. Third, and most importantly, these regions have a long-standing history of institutional weakness, making them a particularly suitable context for studying the relationship between corruption and EU funding.

Our empirical strategy exploits the natural discontinuities created by Italian municipal election cycles and city council dismissals. Following Di Cataldo and Mastrorocco (2022), we define municipalities as having "weak institutional quality" when they are governed by an administration that is ultimately dismissed for collusion with organised crime. By tracking municipalities from the election of a compromised government to its eventual dissolution, we construct a staggered analysis of institutional quality deterioration. This allows us to compare municipalities with and without corrupt institutions both before and after a clear institutional decline, using a combination of difference-in-differences and event study approaches.

The results paint a clear picture. Municipalities where local governments have been found to collude with criminal organisations receive, on average, 93 % less EU funding than their non-corrupt counterparts. This gap appears to stem from a strategic choice by corrupt administrations rather than from weaknesses in administrative capacity or the human capital of their politicians. Instead of seeking larger EU-funded projects —subject to stricter Italian public procurement regulations aimed at preventing criminal infiltration— local governments affected by collusion with organised criminality deliberately avoid them. This strategy is particularly evident for projects initiated during the legislative term of a mayor identified as involved in collusion, a clear sign of the distortive activity of a corrupt administration. Moreover, this behaviour is not limited to sectors traditionally linked to organised crime, such as construction and waste management (Rizzo et al., 2023; Forgione and Migliardo, 2025), but also extends to less targeted investment categories, including social services as well as public services and transportation. The result? A distortion in investment patterns that ultimately depresses local economic growth.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature and situates our research within the broader discourse on institutions and development funding. Section 3 describes the data sources and methodology. Section 4 outlines Italy's institutional landscape, detailing the process of city council dismissals and the structure of the EU Cohesion Policy. Section 5 sets out our research design and identification strategy. Section 6 presents the main findings, robustness checks, and additional tests assessing the exogeneity of the relationship between EU funds and political collusion. Section 7 examines the mechanisms underlying our results and their economic consequences. Section 8 concludes with some policy implications.

2. Quality of government and development funding

Our study straddles three strands of scholarly research, all converging on a single, uncomfortable truth: institutions matter, and when they fail, public money has a habit of vanishing into a bureaucratic void, or worse, into the pockets of the corrupt.

[1] City council dismissals apply to Italian municipalities, the lowest tier of government in Italy. The country operates under a three-tier system: the central government, 20 regional governments, and currently 7,918 municipalities (*comuni*), each responsible for local administration and public service delivery.

[2] The European Commission classifies Apulia, Basilicata, Campania, Calabria, and Sicily as less developed regions in Italy. Further information is available at: https://ec.europa.eu/regional_policy/sources/factsheet/cohesion-policy-achievement-and-future-investment/italy_en.pdf

The first strand concerns the uneven impact of EU funds on regional development. Recent research is clear on this point: the effectiveness of EU funding is shaped, for better or worse, by the quality of local institutions (Rodríguez-Pose and Garcilazo, 2015; Di Caro and Fratesi, 2022). Some regions use these funds to drive innovation and growth, while others seem to absorb them with little to show for it. Rodríguez-Pose and Garcilazo (2015) highlight how regional government quality not only determines the effectiveness of EU investment but also influences how much additional funding is needed to achieve meaningful economic growth. From a policy perspective this means that stronger institutions yield better results, often at a lower cost. Barbero et al. (2023) take this further, using a dynamic spatial computable general equilibrium (CGE) model to demonstrate that even a modest 5 % improvement in government quality can boost the impact of Cohesion Policy by up to 7 %. Institutional quality also plays a crucial role in securing funding. Di Stefano and Resce (2025) highlight that regions with weaker institutions often miss out on funding despite greater need, while those with stronger institutions are more successful, even when their need is lower. Our study contributes to this debate by focusing on how local institutional quality affects not only the overall volume of EU funding but also its distribution among private beneficiaries, public entities, and local governments. While others have examined whether funds lead to economic growth, we ask a prior but equally fundamental question: where does the money actually go?

The second strand concerns the murky relationship between EU funds and institutional corruption. This is a topic of significant interest to policymakers but curiously underexplored in academia. What little research exists suggests that EU funding —while intended to reduce regional disparities— can also fuel corruption in weak institutional settings. Fazekas and Tóth (2016) use single-bidding tenders to estimate corruption risks in public procurement, concluding that EU funds exacerbate corruption across the 27 Member States. In response to such risks, the European Commission has rolled out an "audit explosion" and introduced conditionalities to police fund allocation (Mendez and Bachtler, 2011). Yet enforcement remains patchy, and EU Member States tend to turn a blind eye to fraud and misallocation. After all, the primary goal of national governments is often not to spend funds wisely but simply to "absorb" them, meeting budgetary targets while sidestepping awkward conversations about where the money ultimately ends up.

A third and closely related strand of research examines how institutional quality is measured and the extent to which corruption and transparency can be reliably quantified. Our study pushes this agenda forward by introducing a new approach to assessing local institutional quality, based on the transparency of Italian municipal governments. Rather than relying on broad, subjective governance indicators, we take a more direct approach; we use real-world instances of city council dismissals for mafia collusion as an institutional stress test.

Finally, our research contributes to the growing scholarly work on the influence of organised crime on public resource distribution. There is little doubt that mafia-style organisations have long recognised the financial opportunities presented by public investment. Barone and Narciso (2015) document how businesses operating in areas with a strong mafia presence are more likely to receive national subsidies. Luca and Proietti (2022) find that the geography of Italy's publicly funded asylum seeker reception facilities is linked to the presence of organized crime. Pereira Dos Santos et al. (2021) link EU fund inflows to increased mafia activity in Sicilian municipalities. Meanwhile, Arbolino and Boffardi (2023) find that corruption and organised crime significantly delay the implementation of EU Cohesion Policy, raising questions about how much of the allocated funding ultimately translates into tangible development. Di Cataldo and Mastrorocco (2022) go further, showing that when local governments fall under mafia influence, public resources are skewed towards sectors that offer the greatest strategic advantages to criminal organisations.

Our study bridges these strands by examining the allocation strategies of colluding local governments. This approach is novel in that it does not merely assess how corruption affects the amount of EU funding a municipality receives but also investigates who ultimately benefits when local institutions operate under the shadow of organised crime. By doing so, we provide new insights into the mechanics of public fund allocation in environments where governance is compromised, extending our understanding of how corruption distorts economic development and weakens state capacity.

3. Data

3.1. European cohesion policy

Our primary data source for tracking European funds is *Opencoesione*, an extensive dataset covering payments and allocations for all Italian projects at least partially funded by the European Cohesion Policy. This dataset contains a goldmine of detail, offering granular insights into project timelines (start and end dates, payment schedules), geographic locations, co-financing from national and local authorities, and contributions from the private sector. Most crucially for our study, it identifies the specific beneficiaries of EU investments.

The dataset covers approximately 1.5 million projects across two EU programming cycles —2007–2013 and 2014–2020— allowing us to construct a rich municipal-year dataset for some of the less developed Italian regions (Sicily, Calabria, Campania, Basilicata, and Apulia). By focusing on these regions, we track EU fund flows over the 2007–2020 period, providing a robust foundation for our empirical analysis.

3.2. Local corruption

To capture the extent of institutional failures —specifically, corruption at the local level— we turn to government decrees implementing Law 164/1991. This law, a cornerstone of Italy's anti-mafia legislation, grants the national government the authority to dissolve local governments found to be colluding with organised crime. These decrees provide an official record of city council dissolutions, offering not just a list of affected municipalities but also insights into the timing and nature of their collusion with criminal organisations.

We take this a step further by conducting a text analysis of these decrees, extracting additional information that helps refine our identification strategy. In essence, rather than relying on broad governance indicators or self-reported measures of corruption, we leverage concrete legal actions as a proxy for institutional quality, giving us a more direct and reliable measure of local governance failures.

3.3. Socioeconomics and demographic controls

To control for broader structural factors that might influence EU fund allocation, we compile all available time-varying municipal-level data, including population density, from the Italian Institute of Statistics (ISTAT). These variables help ensure that our analysis isolates the impact of corruption from the many other economic and demographic factors that differentiate municipalities.

3.4. Local policymakers characteristics

Finally, we incorporate individual-level data on municipal and regional government officials. These data are sourced from the Registry of Local and Regional Administrators (*Anagrafe degli amministratori locali e regionali*), provided by the Italian Ministry of Interior. This dataset offers a detailed breakdown of policymakers' backgrounds, including educational attainment, birthplace, age, gender, and previous occupation.

4. Institutional setting

4.1. Local governments in Italy

Italian local government operates through a three-tiered structure: the mayor, the executive committee, and the city council. The mayor and the executive committee wield executive power, while legislative authority rests with the city council. Given the sheer breadth of their responsibilities, Italian mayors are among the most influential political figures in the country, making them a crucial proxy for assessing local institutional quality in our research.

Elected directly by the public for a five-year term, as established by Law 81/1993, mayors can serve a maximum of two consecutive terms. During their tenure, they oversee a strikingly broad portfolio, which includes public utilities (waste management, local roads, water supply), public housing, local transportation, and even police services. In short, their decisions shape the daily lives of residents and, as our study explores, the extent to which EU funds reach the intended beneficiaries or disappear into less productive channels.

4.2. EU cohesion policy

The EU Cohesion Policy is currently the European Union's flagship regional investment programme, designed to reduce disparities and promote economic, social, and territorial cohesion across member states. In financial terms, it is the largest EU policy, absorbing approximately one-third of the entire EU budget. For the 2021–2027 period, the EU has earmarked €392 billion to the policy, underlining its significance as a development tool.

The allocation of resources under the EU Cohesion Policy is based on a combination of discretionary decisions, shaped by political and institutional considerations, and a formula-driven framework. This framework classifies European regions into three tiers: more developed regions, transition regions, and less developed regions. The latter group receives the lion's share of the funds (European Commission, 2015).[3]

In line with this approach, EU investment in Italy is predominantly directed towards the country's less developed regions, reflecting the longstanding economic divide between a developed North and a less developed South (Polverari, 2013). Fig. 1 illustrates the total EU payments per capita received by municipalities from 2007 to 2020. The different shades of green highlight that the less developed regions —Calabria, Campania, Apulia, Sicily, and Basilicata— were the primary recipients of EU funds. In per capita terms, Basilicata and Sicily received the highest investment, with Basilicata securing €2908 per capita and Sicily €2152 per capita over the 14-year period.

To examine the potential influence of low-quality institutions on the allocation of EU investment, we begin by identifying all EU-funded projects directed towards private beneficiaries, including entrepreneurs, businesses, corporations, citizens, and societies. We then separately classify EU projects based on funds allocated to public beneficiaries, which include public authorities such as Italian

[3] Less developed regions are those with a GDP per capita below 75 % of the EU average. Transition regions fall between 75 % and 90 %, while more developed regions exceed 90 %.

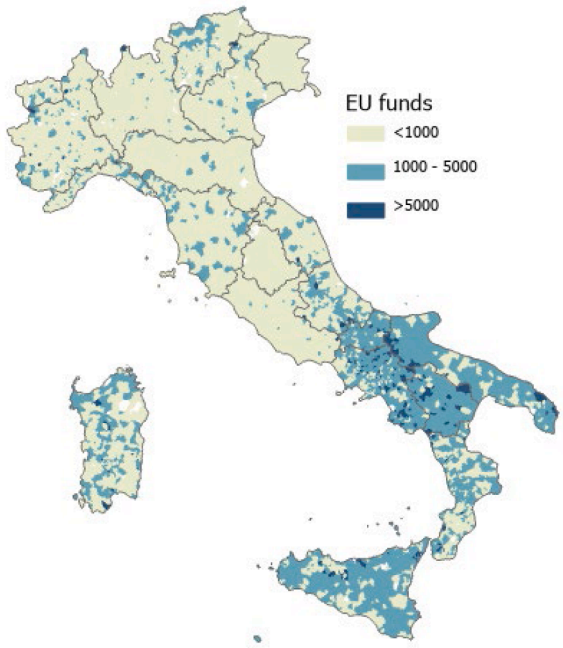

Fig. 1. EU funds per capita across Italian municipalities.
Note: The figure illustrates the per capita allocation of EU funds to each municipality from 2007 to 2020. Darker shades of green indicate higher funding levels, with the South securing the majority of funding.

regions, Italian ministries, mountain communities, public universities, and schools. Lastly, we focus on EU projects specifically designed for and managed by municipal governments. This classification allows us to thoroughly analyse the distribution of EU funds across different types of beneficiaries (Fig. 2). The data indicate that the public sector absorbed the largest share of EU resources, followed by the private sector and then local governments. The amounts allocated to the private sector and to local governments are similar.

4.3. Local government dismissals for organised crime infiltration

To assess the extent of corruption within local governments, we examine cases where mafia-style organisations have successfully embedded themselves within municipal administrations. The decentralisation of public spending in the 1970s —intended to bring governance closer to local communities— had an unintended consequence: it made local governments an attractive target for organised crime. As decision-making power shifted away from the central state, criminal networks found it increasingly worthwhile to exert influence at the local level.

In response to these risks, Italy introduced Law 164/1991. This is a landmark anti-mafia measure granting the national government the authority to dissolve municipal administrations found to have direct or indirect links to criminal organisations. This represented a sharp escalation in enforcement: before 1991, incriminating evidence against a single official would result in their removal from office; after 1991, an entire local government can be disbanded if collusion with organised crime is suspected. Further details on the legal framework are provided in Appendix A.

While Law 164/1991 offers a robust mechanism for identifying corruption, it is not without its limitations. As with any legal process, there is a risk of both false positives (wrongful dismissals of city councils with no actual mafia ties) and false negatives (instances where collusion goes undetected, allowing compromised governments to remain in office). However, the risk of these errors significantly distorting our findings is minimal for several reasons.

First, Italian judicial authorities are notoriously thorough in their anti-mafia investigations. Dismissals under Law 164/1991 are based on detailed Ministry of Interior decrees, outlining the specific grounds for dissolution. Second, reversals of these dismissals are exceptionally rare. Between 2002 and 2020, only ten cases were overturned, suggesting a high degree of legal robustness in the enforcement process. Third, while undetected cases of collusion could introduce an attenuation bias —mistakenly including infiltrated municipalities in the control group— this would, if anything, lead us to underestimate the impact of corruption, rather than overstate it (Di Cataldo and Mastrorocco, 2022).

Table B4 in the Appendix provides a breakdown of city council dismissals due to collusion or corruption from 2002 to 2020. As expected, these dismissals are overwhelmingly concentrated in less developed regions, long-standing strongholds of mafia activity. This geographic concentration is a key reason why our study focuses on municipalities in Sicily, Campania, Calabria, Apulia, and Basilicata: these are the regions where the intersection of organised crime and local governance has been most pronounced.

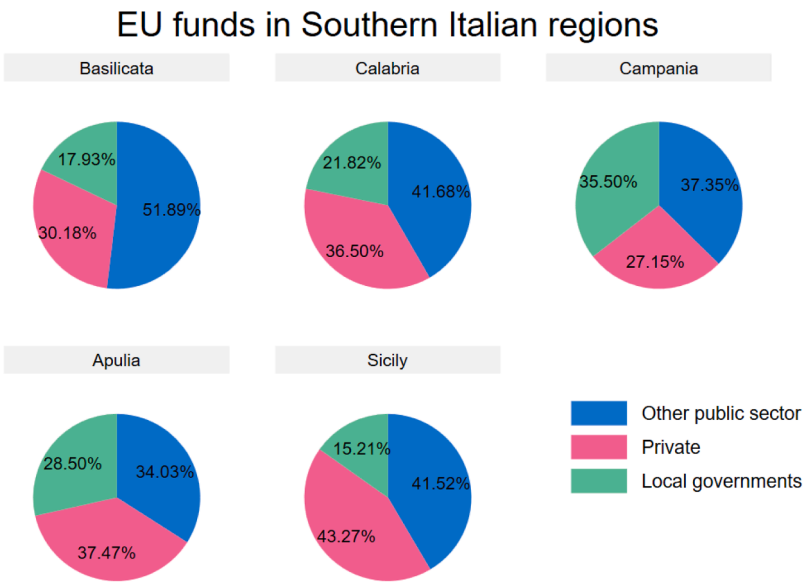

Fig. 2. EU funds distribution across beneficiaries in less developed Italian regions.
Note: The figure presents the total per-capita amount of EU funds received by less developed regions from 2007 to 2020. It distinguishes between EU funds allocated to private beneficiaries, public beneficiaries, and local governments.

Fig. B2 in the Appendix further illustrates the time distribution of city council dismissals for mafia infiltration. Besides the first years after the implementation of the law (1991–1993), a spike is visible in 2012. This surge occurred under Italy's technocratic government,[4] signalling a deliberate crackdown on mafia influence in local administration. Whether this reflected a genuine institutional shift or simply a short-term increase in enforcement remains an open question. What is clear is that criminal infiltration of local governments remains an enduring challenge, with tangible consequences for the allocation of public funds.

5. Research design

5.1. *Definition of the treatment units*

To analyse how local institutional quality evolves over time, we take advantage of two key time discontinuities: municipal elections and city council dismissals. Unlike national elections, municipal elections in Italy occur on a staggered schedule, with different municipalities voting at different times. The timing of city council dismissals, however, follows no predictable pattern, as it depends on anti-mafia investigations and subsequent legal proceedings. This creates useful variation for our analysis, allowing us to track changes in institutional quality over time. Appendix B, Fig. B2, provides further details on the cases of city council dismissal for mafia infiltration over time.

Following Di Cataldo and Mastrorocco (2022), we use these discontinuities to identify the onset and duration of institutional decline. Our approach assumes that when a municipality's government is dissolved, this signals a period of weak institutional quality stretching from the year of the previous election to the point of dismissal. To illustrate this process, we consider the case of Borgetto, a municipality in the province of Palermo, Sicily. Elected in 2013, Borgetto's local government was dismissed in 2017 under Law 164/1991 due to collusion with organised crime. A team of national commissioners then took control until the next election in 2019. In our municipal-year dataset, Borgetto is therefore classified as a 'treated' municipality for the period from 2013 to 2017.

One challenge in this approach is that collusion between local institutions and organised crime may occur at any stage post-election. To address this, we analyse the Ministry of Interior decrees enforcing Law 164/1991, identifying terms that indicate organised crime's influence on elections.[5] This allows us to isolate cases where criminal organisations directly influenced electoral outcomes, thereby ensuring that we exclude dismissals due to other forms of mafia involvement.

Another methodological concern is how to handle municipalities that have experienced multiple city council dissolutions over time. To avoid biasing our estimates by including locations with long-standing governance failures, we restrict our analysis to municipalities that were dissolved for the first time after 2007. This decision significantly reduces the risk of historical institutional weakness distorting our results and ensures that the analysis only includes municipalities experiencing a first-time dismissal within the

[4] Between November 2011 and December 2012, Italy was led by a technocratic government under Mario Monti. The government was fundamentally appointed to tackle the country's sovereign debt crisis.
[5] Table B1 in the Appendix reports all the keywords used in the text analysis.

relevant period.

Fig. 4 illustrates the geographical distribution of city council dissolutions for organised crime across the less developed regions of Italy. The sample of treated units (in violet) includes 28 dissolutions: 18 in Calabria, 2 in Campania, 2 in Apulia, and 7 in Sicily.

5.2. Definition of the control units

The control group consists of municipalities of Sicily, Campania, Calabria, Basilicata, or Apulia that have never experienced dissolutions, as well as those that experienced enforcement actions but were not dissolved (for instance, municipalities flagged for irregularities before 2013 but whose governments remained intact, as seen in Fig. 3 with Borgetto).

We exclude post-dissolution years from our control group for two key reasons. First, we omit the commissioning period —the interval in which central government commissioners temporarily take over local administration— since previous research has shown that this period has unique economic effects, making it fundamentally different from regular legislative terms (Acconcia et al., 2014; Daniele and Geys, 2015; Daniele and Dipoppa, 2023). Second, we exclude years following the commissioning period to avoid potential path dependence. As Berardi et al. (2024) suggest, policymakers in subsequent administrations may differ in both behaviour and composition due to the legacy of prior dissolutions. Including these observations could contaminate the control group, as municipalities that experienced dismissal may follow distinct trajectories from those that never did.

5.3. Threats to identification

Our identification strategy must address several potential endogeneity concerns, given that local corruption cases are anything but randomly assigned. The first issue arises from the possible correlation between institutional quality and EU fund allocation. Di Cataldo and Renzullo (2025) and Banaszewska et al. (2021) suggest that EU funds do more than just finance projects; they may also shape electoral outcomes at both national and local levels, influencing which policymakers take office. Meanwhile, criminal groups are not passive observers of these financial flows. Municipalities receiving larger inflows of EU funds offer greater economic incentives for infiltration, making them attractive targets for organised crime. De Angelis et al. (2020) estimate that without EU funding, the annual rate of white-collar crimes in Southern Italy would decline by 4 %. These factors introduce the risk of reverse causality, where EU fund allocation itself influences the presence of corruption rather than the other way around. To mitigate this issue, Section 6.2 demonstrates that treated and control units exhibited parallel trends in EU investment levels before the decline in institutional quality, ensuring that our estimates capture the effect of corruption rather than pre-existing differences in funding patterns.

A second challenge stems from our treatment definition. Our approach categorises corrupt local institutions as a binary variable: activated at election and deactivated upon government dissolution. While this simplification holds for many municipalities, it does not universally apply. Corruption is not always a sudden event; in most cases, it is a continuous presence, persisting before and beyond the electoral cycle. If corruption was already embedded before a government's formal election, this could affect the purity of our control group.

To address this, we refine our control group by excluding all cases in which the mayor had previously held any position in the preceding legislature. Given the mayor's central role in Italian local governance, the continued presence of the same individual across consecutive terms makes it possible that corruption did not begin with the most recent administration. In addition, we conduct three key robustness checks. First, we implement event study analyses to assess whether the effects of city council dismissals emerge in the years leading up to dissolution. Second, we further restrict the control group by excluding municipalities where either (i) at least one member of the executive committee had previously held office; or (ii) at least one city councillor had served in any institutional role during the prior administration (Table C4 in the Appendix). Third, we perform a placebo analysis, randomly selecting treated units to ensure that there is no systematic effect of corruption on EU fund allocation that could be driven by unobserved factors rather than institutional quality itself.

5.4. Identification strategy

The main aim of this research is to examine how local corruption and collusion affect the distribution of EU funds among different beneficiaries. To do so, we exploit the staggered timing of municipal elections across Italy, treating them as a quasi-natural experiment.

At the core of our approach is a before-and-after comparison: we track the EU funding received by municipalities identified as having corrupt local institutions and compare it to those without, both prior to and after a documented decline in institutional quality. This strategy allows us to isolate the effect of collusion with criminal organisations on EU fund allocation while controlling for time-invariant differences between municipalities and broader economic trends affecting all local governments.

To achieve this, we employ a two-way fixed effects (TWFE) model, which accounts for unobserved heterogeneity at the municipal level —factors that could influence the allocation of EU funds— as well as year-specific effects that may impact all municipalities in a given period. By doing so, we assess how changes in institutional quality shape the flow of EU investments across different types of beneficiaries. The model takes the following form:

$$EU\_funds_{it} = \theta_1 + \beta_1 corrupt_{it} + (X_{it}\gamma') + (P_{it}\theta') + \alpha_i + \eta_t + \varepsilon_i \quad (1)$$

where EU_funds_{it} represents EU Cohesion Policy investments in municipality i in year t. In our various specifications, this variable captures four key measurements of EU funding: a) the total amount of funding; b) the funds allocated to local governments; and those

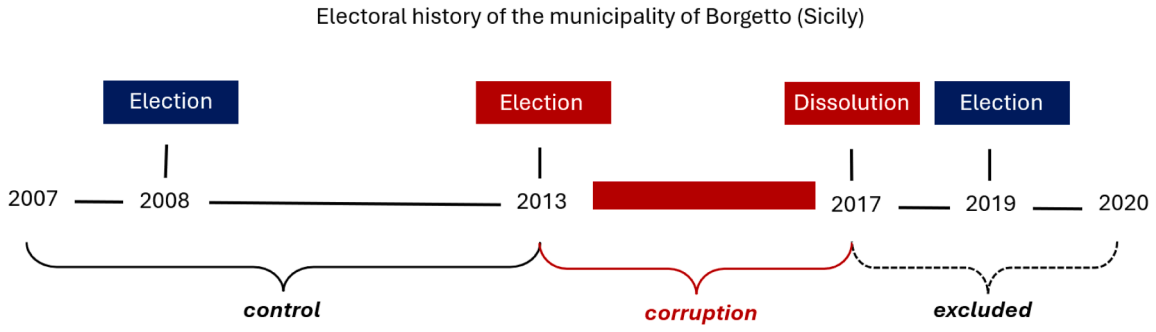

Fig. 3. Timeline of the treatment definition.
Note: This figure provides an example of how we define the treatment period. The treatment period spans from the election of Borgetto's local government in 2013 to its dissolution in 2017. During this period, judicial authorities attested collusion between organised crime and members of the local government.

Fig. 4. Dismissals of municipal governments due to organised crime.
Note: This figure shows the geographical distribution of city council dismissals for mafia infiltration across our sample of municipalities from 1998 to 2020. Dismissals due to organised crime are primarily concentrated in less developed Italian regions, with some exceptions. Dismissals are marked in violet if the motivations for mafia dismissal are related to infiltration taking place in coincidence with the local elections, as identify through our text analysis (65% of total). All other dissolutions for mafia infiltration are shown in red.

assigned to c) private and d) public beneficiaries. All these measurements are expressed in logarithmic per capita terms to adjust for outliers and variations in the size of Italian municipalities.[6]

The key explanatory variable, $corrupt_{it}$, is a binary indicator that takes a value of one for all years a municipality is governed by an administration that is later dissolved due to collusion with organised crime. This period runs from the year following the most recent municipal election until the year of the dissolution.

The coefficient of interest, β_1, captures the average treatment effect on the treated (ATT) municipalities, that is the impact of

[6] Tables B2 and B3 in the Appendix provide, respectively, a description of the main variables used in this study and their descriptive statistics.

declining institutional quality on EU fund allocation, under two key assumptions. First, the parallel trends assumption, which requires that, in the absence of a city council dissolution, municipalities —regardless of whether they experience corruption— would have followed similar EU funding trajectories. Second, the assumption that treatment effects remain consistent across different groups of treated municipalities and over time.

To further refine our analysis, we control for a range of time-varying factors. The vector X_{it} includes municipal pre-taxable income —an important proxy for economic activity— and population density. The vector P_{it} captures political characteristics such as the average education level and age of policymakers.[7] To mitigate the influence of unobserved factors specific to each municipality and to adjust for year-specific shocks, we incorporate municipality (α_i) and year (η_t) fixed effects into our model. The model also clusters standard errors at the municipal level, ensuring consistency with the application level of our treatment.

Recent studies have highlighted a potential pitfall of TWFE models: they can produce misleading estimates if treatment effects vary across different municipalities or change over time (Athey and Imbens, 2018; Sun and Abraham, 2021). To address this concern, we supplement our analysis with an alternative approach using the Callaway and Sant'Anna (CSA) estimator (2021). This method provides more robust estimates by eliminating forbidden comparisons between groups that received treatment at different times, ensuring that our results remain valid even when treatment effects are not uniform across municipalities.

6. Results

6.1. Main results

Table 1 examines the effect of corruption within local governments on the distribution of EU funds, comparing municipalities affected by collusion between local politicians and organised crime with those that have no history of city council dismissals. The results are presented using both TWFE and CSA estimates.

Column 1 reports the impact of corruption on total EU fund allocations. While the TWFE model yields a significant estimate, the CSA model does not. There is no clear evidence that municipalities with corrupt administrations received a different total amount of EU funds compared to their non-corrupt counterparts.[8] Columns 2–4 break down EU funds by recipient type: private beneficiaries, public beneficiaries (excluding local governments), and local governments. This allows to visualise a stark difference between the two categories of municipalities: local governments tainted by collusion obtained substantially less funding than those without a record of criminal infiltration. This trend is consistent across both the CSA and TWFE models (column 4).

Quantitatively, municipalities with colluding local governments received 154 % less funding under the TWFE model and 93 % less under the CSA model compared to municipalities without identified corruption. The allocation of EU funds to private and public beneficiaries (excluding local governments) remained largely unaffected (columns 2 and 3). By design, these funds are those over which local authorities have the least control, making them less vulnerable to strategic behaviour by colluding administrations. Other beneficiaries can be influenced by local collusion only if organised crime also exerted control over those private or public entities, which is an assumption that falls outside the scope of our identification strategy. In contrast, EU funds allocated directly to local governments are, by design, more likely to be affected by local government quality and political dynamics.

The key takeaway is that while overall EU funding levels may not have been directly affected by local corruption, who controls the funds was. Specifically, municipalities with corrupt local governments received significantly less funding for their own operations, suggesting that colluding officials deliberately avoided projects requiring stricter scrutiny or regulatory compliance.

A thorough set of robustness tests reinforces these findings. First, we re-estimate the model using the CSA approach but apply an alternative control group. In our primary estimations, the control group in both the TWFE and CSA models includes municipalities that are either never-treated or not-yet-treated at a given point in time. However, since many never-treated municipalities share similar socioeconomic and demographic characteristics with treated ones, we also test an alternative definition of the control group. Specifically, we replicate the analysis using only never-treated municipalities as the control group. As shown in Appendix C (Table C1), this alternative specification confirms that local government corruption significantly reduces the allocation of EU funds for municipal operations.

Second, we acknowledge that municipalities experiencing financial distress, serious legal violations, or political dismissals may differ significantly from our primary control group.[9] To account for this, we exclude legislatures impacted by other types of dismissals, ensuring a cleaner control sample. Appendix C, Tables C2 and C3, provide these alternative specifications. Table C2 excludes municipalities dismissed for financial distress and serious legal violations, while Table C3 further removes those dismissed due to political reasons. In both cases, the results hold: municipalities tainted by collusion garnered substantially less EU funding for local government

[7] Our main results hold even when time-varying controls are excluded from the specification.

[8] The Bacon decomposition test (Goodman-Bacon, 2021) does not indicate a severe negative weighting problem in our setting. Nevertheless, the presence of heterogeneous treatment timing can still lead to biased estimates when using TWFE. For this reason, and in line with the growing literature on staggered difference-in-differences designs (Sun and Abraham, 2021; Callaway and Sant'Anna, 2021; Roth et al., 2023), we adopt the Callaway and Sant'Anna (CSA) estimator as our preferred specification, using the TWFE estimator as a robustness check.

[9] Italy's legislative framework (*Testo Unico degli Enti Locali*) outlines several grounds for dismissing local governments beyond collusion with organised crime. As detailed in Appendix A, these fall into three main categories: financial mismanagement, serious legal violations, and political factors. Data from the Italian Ministry of Interior (2002–2020) provides insight into the frequency and nature of such dismissals, with descriptive statistics available in Appendix B.

Table 1
Corrupt local governments and EU funds.

	Total EU funds	*EU funds to:*		
		Private beneficiaries	Public beneficiaries	Local governments
	(1)	(2)	(3)	(4)
Panel A: CSA				
Corrupt	−0.068	0.407	−0.104	−0.932*
	(0.284)	(0.402)	(0.219)	(0.504)
Observations	20,543	20,543	20,543	20,543
Panel B: TWFE				
Corrupt	−0.841***	−0.191	−0.202	−1.544***
	(0.205)	(0.303)	(0.205)	(0.340)
Observations	20,596	20,596	20,596	20,596
Controls	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
Municipal fixed effects	✓	✓	✓	✓

Note: The table analyses the impact of weak local institutional quality on the allocation of EU funds, distinguishing between total funds (column 1), funds allocated to private beneficiaries (column 2), funds allocated to public beneficiaries excluding local governments (column 3), and funds directed to local governments themselves (column 4). EU funds are always expressed as the logarithm of per capita values. CSA: Callaway and Sant'Anna (2021) estimator; TWFE: Two-Way Fixed Effects model. Corrupt: dummy variable taking value 1 for years in which a local government colludes with organised crime, from the election year until dissolution. Controls: population density, municipal income, average education level and age of policymakers.

operations than those with cleaner records.

While these alternative specifications strengthen our findings, they also come with trade-offs. Excluding municipalities dismissed for other reasons reduces the number of treated observations, limiting statistical power. Additionally, ensuring a control group free from all other forms of government failure makes it more challenging to test the parallel trends assumption, particularly when different types of dismissals occur close together in time.

A third robustness check addresses the concern that institutional quality may have already started deteriorating before the official election of the dismissed local government, thereby contaminating our control group. We leverage detailed Ministry of Interior data on local politicians and exclude from the control group (i) cases of corruption where at least one member of the executive committee previously held office; (ii) cases of corruption where at least one city council member served in any role in the prior administration. Table C4 shows that, across most specifications, lower local government quality is significantly associated with reduced allocations of EU funds to local governments.

Fourth, we replicate the analysis using alternative measures of the outcome variable. Specifically, we use the average size of EU-funded projects per capita and the number of projects per 1000 inhabitants. The results, presented in Table C5, further confirm the consistency and robustness of our main findings on EU funds allocated to local governments.

Next, we address potential geographic clustering of organised crime by removing from the control group all municipalities sharing an administrative border with a municipality experiencing local government dissolutions due to collusion with organised crime. This entails removing 360 municipalities in total. The results of this exercise, presented in Table C6, further confirm the validity of our findings.

As a sixth robustness check, we exclude municipalities dismissed in 2012 to account for the national technocratic government's impact on local governance. The sharp increase in city council dissolutions that year suggests an exceptional enforcement effort, which could distort the broader pattern of dismissals. Removing these cases (Table C7, Appendix C) does not alter our conclusions. Once again, corrupt local governments still received significantly lower EU funding.

Finally, we examine the role of political alignment. The relationship between local and national or regional government coalitions may influence EU fund allocation (Bouvet and Dall'Erba, 2010; Bodenstein and Kemmerling, 2011; Dotti, 2016). If municipalities aligned with the national government systematically acquired more funds, this could confound our estimates. However, after controlling for political alignment in Tables C8 and C9, the results remain robust.

Taken together, these findings demonstrate a clear and consistent pattern: while corruption did not necessarily reduce the total amount of EU funding flowing into a municipality, it significantly reduced the resources allocated directly to local government operations. This suggests that colluding officials were actively steering clear of EU-funded projects subject to stricter oversight, potentially distorting local economic development as a result.

6.2. Exogeneity checks - parallel trends

The core findings of this study reveal a negative correlation between the presence of politicians colluding with organised crime and the allocation of EU resources to local governments. A crucial assumption of our staggered difference-in-differences analysis is that, before any decline in institutional quality, EU investments should follow a parallel trend across municipalities, regardless of whether their local institutions are initially considered high or low quality. In other words, in the absence of collusion, the trajectory of EU investment should not differ systematically between municipalities with different levels of governance quality.

Italy's staggered municipal election cycle provides a useful framework for validating this assumption and allows us to examine the time dynamics of the treatment effect. We conduct an event study to test whether municipalities with more or less corrupt institutions exhibited any pre-treatment differences in EU fund inflows. The event study specification adopts the following form:

$$EU\_funds_{it} = \theta_1 + \sum_{\lambda=1}^{p} \beta_{-\lambda}\, c_{i,t-\lambda} + \sum_{\lambda=0}^{q} \beta_{+\lambda}\, c_{i,t-\lambda} + \alpha_i + \eta_t + \varepsilon_i \quad (2)$$

where c_{it} is a dummy variable that equals one if municipality i has corrupt institutions, meaning its local government has been infiltrated by criminal organisations. p represents pre-treatment effects (before the deterioration of local institutional quality), while q stands for the post-treatment periods (after the deterioration of institutional quality).

In line with the institutional framework of Italian local governments, we define the pre-treatment period as the legislative term preceding a city council dismissal. The reference category is the year before the election of the local government that will later be dismissed for mafia infiltration. If the parallel trends assumption holds, the coefficients for the pre-treatment period should not be statistically significant, meaning that before collusion occurred, there were no systematic differences in EU fund allocation between colluded and non-colluded municipalities.

To ensure robustness, we estimate event study models while controlling for heterogeneity in treatment effects using the CSA estimator. In line with established research practices (e.g. Braghieri et al., 2022), we also supplement these event studies with alternative staggered difference-in-differences estimators, including OLS TWFE and Sun and Abraham (2021).

Fig. 5 presents the event study estimates, divided into two panels. Panel A displays the results for the total amount of EU funds allocated to local governments, comparing estimates from CSA on the left with those from alternative estimators on the right. Panel B focuses on the number of EU-funded projects per 1000 inhabitants allocated to local governments, again comparing estimates from the primary estimator with those from alternative methods.

The analysis of these panels supports the parallel trends assumption. Prior to collusion happening, both the inflow of EU funds and the number of funded projects allocated to local governments remained stable, with no statistically significant differences between municipalities with and without colluding officials. In the years leading up to the treatment, neither group exhibited systematic discrepancies in funding levels or project counts before institutional quality deteriorated. Municipalities later found to be colluding with organised crime did not experience a significant decline in EU funding before the formal recognition of collusion.

However, once collusion began, the post-treatment estimates indicate a statistically significant decline in EU fund allocations to municipalities involved in collusion. This finding suggests that once local institutions became infiltrated by organised crime, they received substantially fewer EU resources, particularly for projects managed directly by the local government. The negative impact remains consistent across multiple estimation techniques, even after controlling for potential confounding factors such as political alignment and financial distress.[10]

6.3. Placebo test

To further assess the reliability of our main results, we conduct a placebo test. First, we refine our dataset by removing legislatures affected by institutional bottlenecks. Next, we introduce fictitious treatment units by randomly selecting 30 municipalities from our sample and assigning a year in which these simulated city council dismissals occur. These municipalities are then classified as "treated" from the beginning of the legislature preceding the simulated dismissals.

We then apply Model (1) to analyse how EU funds were allocated based on these fictitious treatment units. This procedure is repeated 300 times for each outcome variable.

These placebo tests serve a critical role in demonstrating that our results are not driven by type II errors. If undetected cases of collusion between local politicians and organised crime are systematically present in our control group, our estimates should consistently identify a significant relationship between EU funds allocated to local governments and the randomly assigned treated units.

Fig. D2 in the Appendix illustrates the results of these placebo exercises, plotting the estimated coefficients alongside their respective confidence intervals for each iteration. Non-significant estimates appear in blue, while significant ones are shown in red. In the vast majority of cases, the estimates are statistically insignificant, confirming that our findings are not an artefact of unobserved selection bias. Specifically, the proportion of significant cases is approximately 4 % when analysing EU funds allocated to local governments. These results reinforce the robustness of our analysis, indicating that the observed reduction in EU fund allocation to local governments was indeed linked to the presence of collusion and not driven by unobserved confounders.

[10] Additional event study estimates, excluding other types of dissolutions, are reported in Fig. D1 and support these findings.

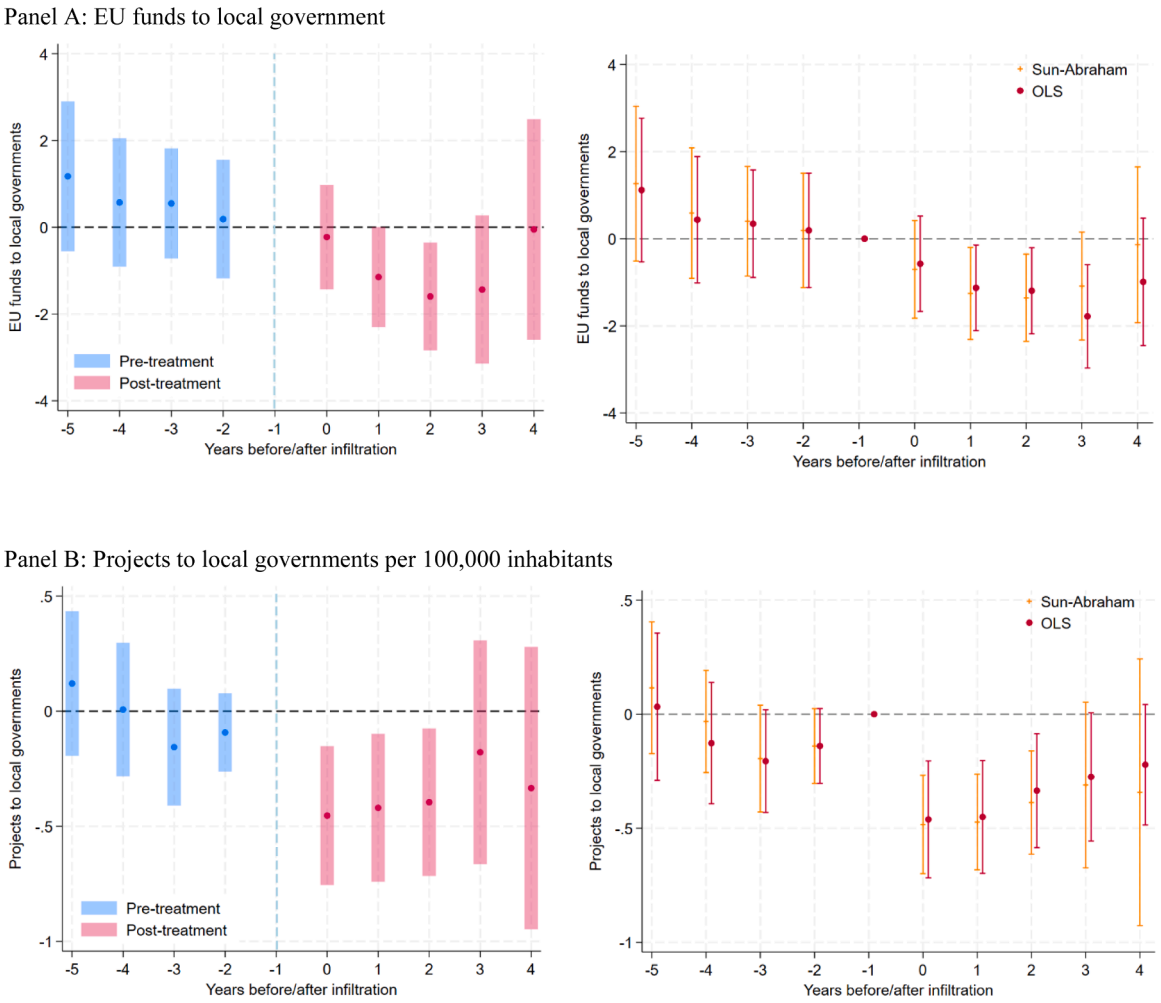

Fig. 5. Event study estimates.
Note: The figure presents the results of event studies (dynamic panel estimations) with a 95 % confidence interval. *t-1* represents the pre-election year (reference category), while 0 corresponds to the election year of municipal governments later dissolved for mafia infiltration. The figure shows event study results for the total amount of EU funds allocated to local governments, with estimates from CSA on the left and those from alternative estimators on the right. Panel A shows event study results for the total amount of EU funds allocated to local governments, with estimates from CSA on the left and those from alternative estimators on the right. Panel B presents equivalent results for the projects to local government per 1000 inhabitants, comparing results from the main estimator with alternative methods.

7. Mechanisms and consequences of local collusion and EU funds

7.1. Explaining mechanisms

Within the discretionary framework of the European Cohesion Policy, our findings underscore the critical role of local institutional quality in shaping the distribution of EU funds across beneficiaries and investment areas. The infiltration of organised crime into local governments appears to significantly reduce EU fund inflows to city councils, primarily by limiting investments in infrastructure projects.

We investigate three mechanisms that may account for this pattern. The first relates to the competence and capabilities of colluding politicians; the second concerns the effectiveness of the local government administration; and the third involves the Italian regulatory framework designed to prevent organised crime from exploiting public resources. We examine each in turn.

One possibility is that colluding politicians simply lacked the competence of their non-colluding counterparts. Daniele (2019) finds

that organised crime affects political selection by discouraging high-human-capital individuals from entering politics. Similarly, Daniele and Geys (2015) show that dismissing city councils for collusion improved the quality of local politicians. If colluding politicians were, on average, less competent, then the lower allocation of EU funds to their municipalities may be partly due to poor administrative capacity rather than corruption itself.

To test whether the observed effects are driven by colluding politicians' lower competence levels, we compute three empirical exercises. First, we compare the educational attainment of politicians in colluding versus non-colluding governments before and after collusion began. We use education as a proxy for competence and ability, following the approach of Besley et al. (2011). Our baseline model uses the educational attainment of mayors, city councillors, and executive committee members as the dependent variable, estimating effects using both TWFE and CSA methods. The results (Table D1) reveal no significant difference in educational attainment between politicians from colluding local governments and those never involved in collusion. Second, we compute the same exercise this time focusing on their prior political experience, measured by the number of mandates served. We use the average number of mandates held as the outcome and further distinguish by office, mayor, executive committee, and city council, to account for differences in responsibility and experience across institutional roles. The results reported in Table D2 show no meaningful differences in prior political experience between colluding and non-colluding politicians before and after collusion began.

Third, Table D3 shows that overall politicians serving in dismissed local governments do not differ in their pre-political occupation[11] from those in non-dissolved municipalities. The only exception concern politicians working in the primary sector. Colluding politicians are, on average, less likely to have worked in the primary sector than their non-colluding counterparts. However, this difference disappears when the sample is restricted to mayors (Table D4), and controlling for it does not affect the main results. These three empirical tests point out that the lower EU fund allocation observed in colluding municipalities was not driven by differences in competence.

Another possible explanation is that colluding local governments have weaker administrators, which could affect their ability to obtain EU funds independently of corruption. To rule out this alternative mechanism, we proceed in two ways. To begin with, we compare several characteristics of local government employees in colluding and non-colluding municipalities, both before and after the onset of collusion. Specifically, we examine the number of municipal employees, their contract type (full-time vs. part-time), education level, absenteeism, and age. Table D5 shows no significant differences in these indicators between municipalities involved in collusion and those that were never implicated.[12] We also formally test for joint differences across all administrative-capacity proxies by constructing a composite index using principal component analysis (column 6), which further supports the absence of a significant gap between colluding and non-colluding local governments. Then, we rule out the possibility that colluding and non-colluding local governments differed in their administrative capacity to attract EU funds prior to the onset of collusion. Table D6 shows no statistically significant difference in mean EU funds received. This indicates that path dependence in weak administrative capacity is unlikely to explain our results. These empirical findings suggest that the lower allocation of EU funds observed in colluding local governments is not driven by differences in the capacity or competence of municipal administrators.[13]

Turning to the third mechanism, a growing body of research suggests that organised crime operates with strategic efficiency in various economic sectors (Daniele and Dipoppa, 2023).[14] Consistent with this, the observed negative relationship between colluding local governments and EU fund allocation may stem from a deliberate effort to avoid regulatory scrutiny. Colluding politicians possibly preferred EU projects that attracted less oversight, thereby minimising the risk of exposure.

This strategy is closely linked to the Italian regulatory framework, particularly the Antimafia Information Law, which seeks to prevent organised crime from capturing public subsidies. Under this law, all public subsidies exceeding €150,000 awarded to private entities require anti-mafia certification.[15] Daniele and Dipoppa (2023) highlight how mafia-controlled firms deliberately request subsidies below this threshold to avoid stringent checks.

These firms strategically keep their subsidy requests below the threshold to avoid the stringent checks associated with higher-value projects. Building on this evidence, we investigate whether infiltrated local governments exhibited similar behaviour by deliberately selecting EU projects that were less likely to trigger anti-mafia regulatory scrutiny. While local governments were not directly subject to the Anti-mafia Information Law when applying for EU funds, they had to issue later public procurement tenders in accordance with Italian regulations to fulfil their objectives. This requirement, combined with the staggered nature of EU project calls —varying across years and regions during the programming cycle— created opportunities for strategic avoidance.

[11] Table B5 in the Appendix provides detailed definitions of the eleven occupational categories used in the classification.

[12] We acknowledge that these measures are proxies for local administrative capacity and, as such, do not fully capture the specialised technical and legal expertise required for grant preparation. Despite this limitation, the information provided by the Italian Ministry of Economy and Finance represents the most detailed data currently available.

[13] The main findings reported in Table 1 remain robust when controlling for all dimensions of local administrative capacity using a composite index constructed via principal component analysis. This additional robustness check is reported in Table C10.

[14] Mirenda et al. (2022) show that organised crime can boost the revenues of infiltrated firms, though at the expense of their financial stability, to maximise economic gains. Similarly, Le Moglie and Sorrenti (2022) find that economic activities in areas with a strong organised crime presence display greater resilience to shocks, such as financial crises. Castelluccio and Rizzica (2023) further highlight the strategic nature of organised crime, noting how it exploited the COVID-19 crisis to infiltrate firms more easily.

[15] The Anti-mafia Information Law, introduced in 1965, was the first legislation designed to prevent firms linked to organised crime from exploiting government subsidies and public resources. It required authorities to screen subsidy applicants for criminal ties. The law underwent major revisions in 1994 and 1998, with further strengthening in 2013 to counter evolving criminal tactics. The 2013 update also standardised the application threshold, lowering it from €154,937 to €150,000.

Table 2
EU projects above public tenders' threshold.

	Log projects per capita above €150,000		Projects above €150,000	
	CSA (1)	TWFE (2)	CSA (3)	TWFE (4)
Corrupt	−0.218*	−0.302***	−1.072	−3.540***
	(0.112)	(0.047)	(1.061)	(0.526)
Observations	20,247	20,297	20,247	20,297
Controls	✓	✓	✓	✓
Administrative capacity	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
Municipal fixed effects	✓	✓	✓	✓

Note: This table examines whether governments colluding with organised crime are less likely to select projects exceeding €150,000, which are subject to stricter scrutiny. CSA: Callaway and Sant'Anna (2021) estimator; TWFE: Two-Way Fixed Effects model. Corrupt: dummy variable taking value 1 during years in which local governments colluded with organised crime, from the election year until dissolution. Controls: population density, municipal income, average education level and age of policymakers. Administrative capacity: composite capacity index created with the principal component analysis taking into consideration: education level, the contract type, the absenteeism, and the age of local government workers.

To formally test this mechanism, we examine whether colluding local governments systematically avoided projects exceeding the anti-mafia threshold, comparing their behaviour before and after infiltration with that of non-infiltrated municipalities. We estimate Model 1 using two alternative measures of the number of projects above the €150,000 threshold as outcome variables. To account for potential limitations in grant-writing capacity, which may affect the ability to propose large projects, we include, as a control, the composite index of administrative capacity constructed via principal component analysis.

The results show that colluding local governments are significantly less likely to receive EU-funded projects above the €150,000 threshold, which are subject to stricter scrutiny (Table 2). On average, they received 22 % fewer such projects under the TWFE model and 30 % fewer under the TWFE model.

To validate that the strategic avoidance of high-value projects is specific to local governments colluding with organised crime, it is essential to attribute awarded projects to the administration that originally applied for them. While data on funding application dates are not available, the *Opencoesione* dataset includes the start date for each EU-funded projects. This information is crucial for minimising attribution lags, as Law 241/1990[16] mandates that the outcome of any public call in Italy be communicated within 30 days (or within 180 days for complex procedures). Consequently, EU-funded projects are expected to begin within six months of approval.[17]

Leveraging this timing information, we distinguish between projects initiated during a given legislative term and those that were not.[18] Since colluding local governments can directly influence only the projects launched during their own term, if the observed reduction in funding to corrupt local governments is due to strategic manipulation of EU project applications, as we hypothesise, we expect the subsample of projects initiated during the corrupt legislatures to exhibit a larger and more statistically significant gap with respect to non-colluding administrations.

Table 3 presents the results of this empirical exercise. Columns 1–2 focus on EU projects initiated during the legislative term, while columns 3–4 consider those that were not. Local governments tainted by collusion with criminal organisations are consistently associated with fewer projects exceeding the €150,000 threshold initiated during their term, relative to municipalities without a record of criminal infiltration. This pattern emerges across both outcome measures —the logarithm of projects per 1000 inhabitants (Column 1) and the total number of projects (Column 2)— and is robust to the estimation strategy, appearing under both the CSA estimator (Panel A) and the TWFE model (Panel B). By contrast, when restricting the sample to projects not initiated during the legislative term, the relationship between collusion and the number of EU-funded projects subject to anti-mafia certification becomes weaker and less consistent.

These results are further supported by event study estimates and additional empirical exercises. First, the event study confirms that the parallel trends assumption holds. As shown in Fig. C1 in the Appendix, there are no significant pre-treatment differences in the number of projects exceeding €150,000 that began during the legislative term. This pattern suggests that the reduction in large-scale projects directly managed by local governments is a consequence of collusion, rather than the result of pre-existing differences in local governance administrative capacity.

Second, to further validate this mechanism, we estimate the difference in EU funds allocated to local governments, distinguishing between projects initiated during the legislative term and those that were not. Table C11 in the Appendix reports the results of this robustness check. Columns 1–2 focus on EU funds for projects managed by local governments that began during the legislative term,

[16] https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:1990-08-07;241

[17] Due to data limitations, strategic avoidance of the Anti-Mafia Information Law is inferred, as we cannot distinguish between unsuccessful EU funding applications and weaker proposal quality. While this represents a limitation, we are confident that it does not severely affect the interpretation of our results, given the extensive empirical evidence indicating no significant differences in administrative or political competence and quality between colluding and non-colluding local governments.

[18] Notably, the EU-funded projects initiated during the legislative term account, on average, for only 47% of the total amount of EU funds allocated to local governments.

Table 3
Timing of the projects and anti-mafia information law.

	Projects started within legislature		Projects not started within legislature	
	Log projects per capita above €150,000 (1)	Projects above €150,000 (2)	Log projects per capita above €150,000 (3)	Projects above €150,000 (4)
Panel A: CSA				
Corrupt	−0.238***	−2.113**	0.001	1.040
	(0.090)	(0.918)	(0.140)	(0.898)
Observations	20,247	20,247	20,247	20,247
Panel B: TWFE				
Corrupt	−0.189***	−1.898***	−0.164***	−1.642***
	(0.0409)	(0.398)	(0.055)	(0.380)
Observations	20,297	20,297	20,297	20,297
Controls	✓	✓	✓	✓
Administrative capacity	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
Municipal fixed effects	✓	✓	✓	✓

Note: This table investigates whether local governments colluding with organised crime are less likely to select projects exceeding €150,000—the threshold requiring antimafia certification—depending on project timing. Columns 1–2 focus on projects that began during the government's legislative term, while columns 3–4 focus on those that did not. CSA: Callaway and Sant'Anna (2021) estimator; TWFE: Two-Way Fixed Effects model. Corrupt: dummy variable taking value 1 during years in which local governments colluded with organised crime, from the election year until dissolution. Controls: population density, municipal income, average education level and age of policymakers, administrative capacity. Administrative capacity: composite capacity index created with the principal component analysis taking into consideration: education level, the contract type, the absenteeism, and the age of local government workers.

while columns 3–4 examine funding for projects initiated earlier. Overall, municipalities with colluding administrations received significantly less EU funding for projects launched during their tenure compared to municipalities without evidence of criminal infiltration. This result holds across both the CSA and TWFE estimation models. Instead, results are not significant and not consistent when considering EU funds for projects that began outside the legislative term of the incumbent mayor.

We further examine alternative thresholds for EU project engagement. If the observed gap between colluding and non-colluding local governments was solely due to strategic behaviour to avoid anti-mafia regulations, then there should be no significant difference in the number of smaller projects, which were not subject to anti-mafia scrutiny. Table C12 in the Appendix reports the results of this placebo test, confirming that there is no statistically significant gap in the number of EU projects allocated to local governments below the €150,000 threshold.

Finally, we conduct an additional placebo test focusing on city council dismissals due to financial mismanagement and serious legal violations.[19] If the lower allocation of EU funds observed in colluding municipalities was due to criminal infiltration, rather than general administrative failure, then dismissals for these alternative reasons should not produce the same effect. We test this by replacing the corruption dummy in Model 1 with two dummy variables indicating whether a municipality was dissolved due to financial mismanagement or serious legal violations.

In both cases, the treatment period spans from the year following the previous election to the year of dissolution. As shown in Table C13 in the Appendix, there was no significant gap in EU fund allocations before or after dismissals for financial mismanagement or serious legal violations. This further reinforces our core conclusion: the strategic avoidance of high-value projects was specific to local governments colluding with organised crime, rather than a general feature of struggling or mismanaged municipalities.[20]

[19] Dismissals for financial mismanagement occur not only in cases of severe fiscal distress but also for non-compliance with legal requirements for municipal budget management. In contrast, dismissals for serious legal violations arise when a mayor is indicted for a major crime (Legislative Decree 235/2012), making them ineligible to hold office even before a final conviction, or when they accept another appointment. The Ministry of the Interior provides data on both types of dismissals for the period 2002–2020, covering most Italian regions except Valle d'Aosta, Friuli Venezia Giulia, and Sardinia. The dataset specifies the reasons for city council dismissals, allowing us to distinguish between financial mismanagement and legal violations. Appendix A presents a full overview of dismissal cases, while descriptive statistics are reported in Appendix B. To ensure we capture only dismissals for serious legal violations that reflect institutional weakness —rather than career progression— we exclude cases in which the mayor assumed a national or regional government position in the same year as, or the year following, the dismissal. To this end, we collected data on such career advancements through web scraping of national and regional government records and from the Ministry of the Interior.

[20] A limitation of these findings is the potential misclassification of some dissolutions. Specifically, dismissals linked to the career progression of Italian mayors into higher-level government positions may be mistakenly categorised as removals due to serious legal violations, potentially biasing the analysis. To mitigate this concern, we collect data from national and regional institutions —via web scraping from the Italian Parliament's website and that of the Ministry of the Interior— and exclude from the dataset the most common political career paths. However, we are unable to account for other types of public appointments beyond these channels.

7.2. Heterogeneity in investment allocation

This section examines whether the strategic behaviour of local governments, compromised by collusion with organised crime, in choosing fewer projects subject to the Anti-mafia Information Law differs across various EU investment areas. In doing so, we identify which types of investment projects were most affected by the general decline in the number of projects exceeding the 150,000 € threshold in these municipalities.

EU funds can be grouped into five main categories: social services; public services and transport; construction and waste management; innovation and R&D, and firms' competitiveness. A detailed breakdown of the project types included in each category is provided in Table B6.[21] As shown in Fig. B3, the distribution of EU funds across Italy's less developed regions shifts when comparing total allocations to those specifically directed to local governments. Funds managed by local governments are concentrated primarily in social services and public and transportation services, followed closely by construction and waste management. These are indeed the main areas of competence assigned to municipal governments in Italy, which induces us to focus exclusively on these three categories for our analysis.

We estimate Model 1 using, as outcome variables, the number of projects above €150,000 in each of the three investment categories. Table 4 reports the results, showing that local governments tainted by an association with organised criminality systematically received fewer EU projects subject to the Anti-mafia Information Law. The CSA estimates (Panel A) indicate that municipalities with corrupt administrations obtained 0.37 fewer projects above the €150,000 threshold in the public services category, 0.38 fewer in the combined category of public services and transportation, and 0.52 fewer in the waste and construction category. The TWFE estimates (Panel B) confirm this pattern.

These findings point out that organised crime acts strategically not only in sectors typically linked to its economic activities —such as construction and waste management (Di Cataldo and Mastrorocco, 2022; Rizzo et al., 2023; Forgione and Migliardo, 2025)— but also in other sectors of economic activity with which the mafia and similar criminal organisations are not usually strongly associated.[22]

Hence, colluding local governments have been willing to compromise the provision of essential public services to avoid triggering certification requirements and reduce the risk of detection. This raises a critical policy concern: if corrupt administrations systematically underinvest in core services, the long-term consequences could be substantial, undermining both economic growth and quality of life in affected municipalities.

7.3. Economic consequences

Having established that local governments colluding with criminal organisations received lower shares of European funds a key question arises: did this strategic behaviour have any impact on local economic growth?

While assessing the economic consequences of collusion is not the primary objective of this study, we provide preliminary evidence on whether the strategic behaviour of colluding politicians —particularly their avoidance of larger, more ambitious EU-funded projects— has had negative repercussions for local economic development.

To explore this, we construct an indicator measuring annual growth in pre-taxable income per inhabitant at the municipal level. While this is an imperfect proxy for economic growth, it remains the only available indicator that allows us to track the economic trajectory of municipalities while preserving the panel structure of the dataset.

We replicate our model using this growth indicator as the dependent variable. The results reveal a significant decline in local growth during periods of governance by administrations infiltrated by criminal organisations in the TWFE estimates (Table D7). The trajectory of local income growth, illustrated in Fig. D3 in the Appendix, further confirms the absence of significant pre-trends, strengthening the causal interpretation of the results.

These findings suggest that the substantial reduction in EU fund absorption, driven by the selection of less ambitious projects to evade anti-mafia scrutiny, had negative implications for local economic development. In other words, the strategic behaviour of colluding politicians —deliberately steering clear of larger, more closely monitored EU projects— may have contributed to depress local growth rates.

While this evidence is not exhaustive, it aligns with a well-established body of research documenting the detrimental effects of mafia infiltration on economic development (Pinotti, 2015; Mocetti and Rizzica, 2023). By distorting the allocation of public resources and discouraging investment in critical infrastructure, colluding administrations may not only have weakened the effectiveness of EU funds but also contributed to long-term economic stagnation in affected municipalities.

[21] This table lists the *Opencoesione* dataset keywords used to classify EU-funded projects based on their descriptions and titles. This method allows us to categorize over 70 % of all EU projects, as well as over 70 % of the EU funds allocated to local governments. In >60% of cases, the assigned projects belong to a single category.

[22] These results remain consistent across several robustness checks. First, they are robust to measuring the outcome variables as the logarithm of projects per 1,000 inhabitants (Table C14). Second, they are confirmed by event study estimates (Fig. C2). To further validate the results, we also replicate the analysis controlling for administrative capacity (Table C15) and focusing exclusively on projects subject to anti-mafia certification and initiated during each legislative term (Table C16).

Table 4
Investment categories and anti-mafia information law.

	Social services projects above €150,000 (1)	Public services and transportation projects above €150,000 (2)	Construction and waste management projects above €150,000 (3)
Panel A: CSA			
Corrupt	−0.371**	−0.380**	−0.518**
	(0.174)	(0.154)	(0.222)
Observations	20,548	20,548	20,548
Panel B: TWFE			
Corrupt	−0.548***	−0.471***	−0.366***
	(0.159)	(0.140)	(0.096)
Observations	20,596	20,596	20,596
Controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Municipal fixed effects	✓	✓	✓

Note: This table investigates whether local governments colluding with organised crime are less likely to select projects exceeding €150,000—the threshold requiring anti-mafia certification—across different investment categories. CSA: Callaway and Sant'Anna (2021) estimator; TWFE: Two-Way Fixed Effects model. Corrupt: dummy variable taking value 1 during years in which local governments colluded with organised crime, from the election year until dissolution. Controls: population density, municipal income, average education level and age of policymakers.

8. Conclusions

This research provides the first systematic analysis of how local corruption —measured through instances of municipal governments colluding with organised crime— distorts the allocation of EU funds. While much has been written about the role of institutional quality in economic development, our study goes further by disentangling the mechanisms through which corruption has shaped the distribution of EU resources. We distinguish between funds allocated to private beneficiaries, public entities, and local governments themselves, offering a nuanced view of how corrupt administrations behave in the face of regulatory constraints.

With the EU Commission dedicating a substantial share of its budget —one-third in the 2021–2027 period— to Cohesion Policy, our research is particularly timely. It helps identify whether these funds are being misdirected, potentially benefiting organised crime and undermining the policy's broader goal of promoting regional economic development. By leveraging high-quality administrative data on city council dismissals under Italy's anti-mafia legislation, we construct a dynamic measure of local corruption. Our methodological approach, which employs a staggered differences-in-differences model alongside extensive robustness checks, allows us to mitigate endogeneity concerns and isolate the causal impact of corruption on EU fund allocation.

Our findings demonstrate that corruption within local governments has played a decisive role in determining how EU funds are allocated. Municipalities with colluding politicians received significantly less funding compared to those with cleaner institutions. Moreover, corrupt local governments deliberately avoided EU projects above a certain financial threshold, likely with the aim of evading the scrutiny triggered by Italian anti-mafia regulations designed to prevent criminal infiltration into public procurement. This behaviour was not merely an administrative anomaly; it also depressed local economic performance by distorting competition and reducing investment in critical infrastructure and services.

These insights carry major policy implications. First, they indicate that Italy's public procurement regulations have been effective. They have served as a deterrent, preventing EU funds from being siphoned off by colluding local governments. However, they also reveal the adaptive efficiency of organised crime, which strategically positioned itself below regulatory thresholds to continue benefiting from public investment while avoiding oversight (Le Moglie and Sorrenti, 2022; Mirenda et al., 2022; Daniele and Dipoppa, 2023). Second, the results expose a more insidious consequence: colluding politicians distorted the competitive landscape, awarding projects based on criminal interests rather than public welfare. This behaviour has long-term consequences for local development, as areas governed by corrupt politicians experienced slower economic growth and reduced infrastructure investment.

Ultimately, our study highlights the critical importance of local institutional quality not only in enhancing the effectiveness of EU Cohesion Policy but also in ensuring the fair and efficient allocation of public resources. The implications for EU policymakers are clear: stronger oversight mechanisms are needed to prevent investment from falling prey to corruption. This is particularly crucial in Italy's less developed regions, where EU funds serve as a lifeline for economic development and a key instrument for reducing regional disparities. Strengthening monitoring systems and enforcement mechanisms will be essential to protect European —or, for that sake, any type of public— investment, ensuring that these resources serve their intended purpose, which is no other than to promote growth, reduce inequality, and improve public infrastructure for the communities that need it most.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We thank Riccardo Crescenzi, Paola Profeta, Francesca Zantomio and all participants to the Cañada Blanch Lent Fellows Lecture 2023 at LSE, the 64th ERSA Congress in Athens, the XXXIV SIEP Conference in L'Aquila, the 2023 AISRe conference in Naples, the 65th Annual Conference of the Italian Economic Association, the 22nd CIEP Conference in Shanghai, and the XV NERI Workshop in Pescara for useful comments and suggestions. All errors are our own. Di Cataldo: marco.dicataldo@unive.it, Renzullo: e.renzullo@lse.ac.uk, Rodriguez-Pose: a.rodriguez-pose@lse.ac.uk

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jebo.2026.107467.

Data availability

Data will be made available on request.

References

Acemoglu, D., Dell, M., 2010. Productivity differences between and within countries. Am. Econ. J.: Macroecon. 2 (1), 169–188.
Acconcia, A., Corsetti, G., Simonelli, S., 2014. Mafia and public spending: evidence on the fiscal multiplier from a quasi-experiment. Am. Econ. Rev. 104 (7), 2185–2209.
Athey, S., Imbens, G.W., Wager, S., 2018. Approximate residual balancing: debiased inference of average treatment effects in high dimensions. J. R. Stat. Soc. Ser. B: Stat. Methodol. 80 (4), 597–623.
Annoni, P., Dijkstra, L., 2017. Measuring and monitoring regional competitiveness in the European Union. In: *Handbook of Regions and Competitiveness*. Edward Elgar Publishing, pp. 49–79.
Arbolino, R., Boffardi, R., 2023. Organised crime and corruption: what are the consequences for Italian Cohesion Policy investments? Reg. Stud. 1–16.
Banaszewska, M., Bischoff, I., 2021. Grants-in-aid and election outcomes in recipient jurisdictions: the impact of EU funds on mayoral elections in Poland. Eur. J. Polit. Econ. 68, 101993.
Barbero, J., Christensen, M., Conte, A., Lecca, P., Rodríguez-Pose, A., Salotti, S., 2023. Improving government quality in the regions of the EU and its system-wide benefits for cohesion policy. JCMS: J. Common Mark. Stud. 61 (1), 38–57.
Barone, G., Narciso, G., 2015. Organised crime and business subsidies: where does the money go? J. Urban Econ. 86, 98–110.
Barca, F., 2009. *An Agenda for a Reformed Cohesion policy: A place-Based Approach to Meeting European Union Challenges and expectations*. Report to Commissioner for Regional Policy. European Commission, Brussels.
Barca, F., McCann, P., Rodríguez-Pose, A., 2012. The case for regional development intervention: place-based versus place-neutral approaches. J. Reg. Sci. 52 (1), 134–152.
Becker, S.O., Egger, P.H., von Ehrlich, M., 2013. Absorptive capacity and the growth and investment effects of regional transfers: a regression discontinuity design with heterogeneous treatment effects. Am. Econ. J.: Econ. Policy 5 (4), 29–77.
Baraldi, A.L., Papagni, E., Stimolo, M., 2024. Neutralizing the tentacles of organised crime. Assessment of the impact of an anti-crime measure on mafia violence in Italy. J. Econ. Behav. Organ. 223, 57–85.
Besley, T., Montalvo, J.G., Reynal-Querol, M., 2011. Do educated leaders matter? Econ. J. 121 (554), F205–F227.
Bodenstein, T., Kemmerling, A., 2011. Ripples in a rising tide: why some EU regions receive more structural funds than others. Eur. Integr. Online Pap. 16 (1).
Bouvet, F., Dall'Erba, S., 2010. European regional structural funds: how large is the influence of politics on the allocation process? J. Common Mark. Stud. 48 (3), 501–528.
Braghieri, L., Levy, R.E., Makarin, A., 2022. Social media and mental health. Am. Econ. Rev. 112 (11), 3660–3693.
Callaway, B., Sant'Anna, P.H., 2021. Difference-in-differences with multiple time periods. J. Econom. 225 (2), 200–230.
Camagni, R., Capello, R., 2015. Rationale and design of EU cohesion policies in a period of crisis. Reg. Sci. Policy Pract. 7 (1), 25–49.
Castelluccio, M., Rizzica, L., 2023. *Mafia Infiltrations in Times of crisis: Evidence from the Covid-19 Shock* (No. W23/28). Institute for Fiscal Studies.
Crescenzi, R., Di Cataldo, M., Rodríguez-Pose, A., 2016. Government quality and the economic returns of transport infrastructure investment in European regions. J. Reg. Sci. 56 (4), 555–582.
Daniele, G., Dipoppa, G., 2023. Fighting organised crime by targeting their revenue: screening, mafias and public funds. J. Law Econ. Org. 39 (3), 722–746.
Daniele, G., 2019. Strike one to educate one hundred: organised crime, political selection and politicians' ability. J. Econ. Behav. Organ. 159, 650–662.
Daniele, G., Geys, B., 2015. Organised crime, institutions and political quality: empirical evidence from Italian municipalities. Econ. J. 125 (586), F233–F255.
De Angelis, I., de Blasio, G., Rizzica, L., 2020. Lost in corruption. Evidence from EU funding to Southern Italy. Ital. Econ. J. 6, 355–377.
Di Caro, P., Fratesi, U., 2022. One policy, different effects: estimating the region-specific impacts of EU cohesion policy. J. Reg. Sci. 62 (1), 307–330.
Di Cataldo, M., Mastrorocco, N., 2022. Organised crime, captured politicians, and the allocation of public resources. J. Law Econ. Org. 38 (3), 774–839.
Di Cataldo, M., Renzullo, E., 2025. EU money and mayors: does Cohesion Policy affect local electoral outcomes? J. Econ. Geogr. lbaf025.
Di Stefano, R., Resce, G., 2025. The determinants of missed funding: predicting the paradox of increased need and reduced allocation. J. Econ. Behav. Org. (231).
Dotti, N.F., 2016. Unwritten factors affecting structural funds: The influence of regional political behaviours on the implementation of EU cohesion policy. Eur. Plan. Stud. 24 (3), 530–550.
European Commission, 2015. European Structural and Investment Funds 2014–2020: Official texts and commentaries. Directorate-General for Regional and Urban Policy. https://ec.europa.eu/regional_policy/sources/guides/blue_book/blueguide_en.pdf.
Fazekas, M., Tóth, I.J., 2016. Corruption in EU Funds?: Europe-wide evidence of the corruption effect of EU-funded public contracting. In: *EU Cohesion Policy*. Routledge, pp. 186–205.
Forgione, A.F., Migliardo, C., 2025. The Mafia's economic grip: firm efficiency and a composite indicator of organised crime. J. Reg. Sci.
Goodman-Bacon, A., 2021. Difference-in-differences with variation in treatment timing. J. Econom. 225 (2), 254–277.
Le Moglie, M., Sorrenti, G., 2022. Revealing "mafia inc."? Financial crisis, organised crime, and the birth of new enterprises. Rev. Econ. Stat. 104 (1), 142–156.
Luca, D., Proietti, P., 2022. Hosting to skim: organized crime and the reception of asylum seekers in Italy. Reg. Stud. 56 (12), 2102–2116.
Mendez, C., Bachtler, J., 2011. Administrative reform and unintended consequences: an assessment of the EU Cohesion policy 'audit explosion'. J. Eur. Public Policy 18 (5), 746–765.
Mirenda, L., Mocetti, S., Rizzica, L., 2022. The economic effects of mafia: firm level evidence. Am. Econ. Rev. 112 (8), 2748–2773.
Mocetti, S., Rizzica, L., 2023. Organised crime in Italy: an economic analysis. Ital. Econ. J. 1–22.

Nifo, A., Vecchione, G., 2015. Measuring institutional quality in Italy. Riv. Econ. del Mezzogiorno 29 (1–2), 157–182.
Pereira dos Santos, J., Tavares, J., & Thomas, M. (2021). Does organised crime attract EU funding? Evidence from the Sicilian Mafia. CEPR discussion paper No. DP16732.
Pinotti, P., 2015. The economic costs of organised crime: evidence from Southern Italy. Econ. J. 125 (586), F203–F232.
Polverari, L., 2013. Policy rhetoric versus political reality: has the Italian state given up on the Mezzogiorno? Reg. Fed. Stud. 23 (5), 571–590.
Rizzo, L., Ferraresi, M., Secomandi, R., 2023. The spatial economic impact of crime: evidence from the construction sector in Italian municipalities. CESifo Econ. Stud. 69 (3), 177–193.
Rodríguez-Pose, A., 2013. Do institutions matter for regional development? Reg. Stud. 47 (7), 1034–1047.
Rodríguez-Pose, A., Di Cataldo, M., 2015. Quality of government and innovative performance in the regions of Europe. J. Econ. Geogr. 15 (4), 673–706.
Rodríguez-Pose, A., Garcilazo, E., 2015. Quality of government and the returns of investment: examining the impact of cohesion expenditure in European regions. Reg. Stud. 49 (8), 1274–1290.
Roth, J., Sant'Anna, P.H., Bilinski, A., Poe, J., 2023. What's trending in difference-in-differences? A synthesis of the recent econometrics literature. J. Econom. 235 (2), 2218–2244.
Sun, L., Abraham, S., 2021. Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. J. Econom. 225 (2), 175–199.