Organized Crime, Bank Lending & Productivity: The Effects of Anti-Mafia Police Actions in Italy

Bruno Buchetti | University of Padua, European Central Bank (ECB)
Michele Fabrizi | University of Padua
Elisabetta Ipino | Seattle University
Ixart Miquel-Flores | European Central Bank (ECB), Frankfurt School of Finance & Management
Antonio Parbonetti | University of Padua

Abstract

Organized crime distorts markets, undermines financial trust, and hampers capital allocation. Using data from 38 anti-Mafia police operations in Italy between 2019 and 2021, we provide causal evidence on the economic effects of dismantling criminal firms. Combining official court records, ECB loan-level data, and firm-level balance sheets, we show that removing Mafia-connected firms increases bank lending to neighbouring legitimate firms by up to 2.1% in high-infiltration areas. However, borrowing costs also rise modestly due to banks' reassessment of credit risks. Local banks react more moderately than foreign ones, benefiting from superior soft information. We further find that productivity increases in affected municipalities, suggesting that removing criminal distortions revitalizes credit markets and real economic activity.


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1. Introduction

Organized crime can have pervasive effects on economies, undermining both market competition and institutional integrity. At the macro level, research shows that organized crime reduces electoral competition and raises corruption (Pinotti et al., 2013; Geys & Daniele, 2014; De Feo & De Luca, 2017), while at the firm level, it distorts operations and suppresses growth (Ambrosini et al., 2024; Bianchi et al., 2022; Slutzky & Zeume, 2024). Despite its clear harm, less is known about how organized crime affects the financial sector—particularly bank lending. This is a critical gap, especially in Europe where banks provide the bulk of external finance to firms (De Santis & Surico, 2013). Recent studies suggest that Mafia-connected firms engage in tax evasion, earnings manipulation, and strategic concealment (Ravenda et al., 2015; Chircop et al., 2023), all of which distort banks' risk assessments. We examine whether eliminating such firms through judicial action affects local credit supply and firm productivity.

Our study leverages a uniquely robust dataset derived from real-world anti-Mafia police operations, governed by Article 416-bis of the Italian Penal Code—the central legal instrument for prosecuting Mafia-related criminal activity. This provision enables law enforcement and judicial authorities to dismantle organized crime groups through asset seizures, arrests, and public disclosure of firm-level criminal affiliations. We used this legal infrastructure to identify Mafia-connected firms with exceptional precision and transparency. Drawing on official judicial records and the Telemaco corporate registry, we traced the corporate roles (e.g., board members, shareholders) of individuals convicted of Mafia association. In line with established methodologies (Chircop et al., 2023; Ambrosini et al., 2024), we classified a firm as criminal if it was linked to individuals convicted under Article 416-bis. This approach ensures legal certainty, as it excludes speculative or unproven links. Across 111 anti-Mafia operations between 2018 and 2021, we identified 722 such criminal firms across Italy. Importantly, we only considered municipalities where police actions occurred for the first time during our sample period to avoid confounding effects from prior interventions.

To estimate the causal effects of these anti-Mafia operations on credit allocation and economic performance, we employed a stacked difference-in-differences (DiD) methodology. This approach overcomes biases present in traditional staggered DiD frameworks by constructing event-specific comparisons between treated municipalities (and their neighboring areas) and untreated municipalities within the same province. Our identification strategy allows us to exploit both the exogenous timing and localized exposure of anti-Mafia shocks, ensuring credible counterfactuals and isolating the true effect of criminal firm removal. In sum, our study combines highly credible judicial data on real-world Mafia enforcement with a state-of-the-art causal inference strategy, offering a rare opportunity to quantify the financial and economic consequences of disrupting organized crime in practice.

Figure 1. Geographical Distribution of Criminal Firms

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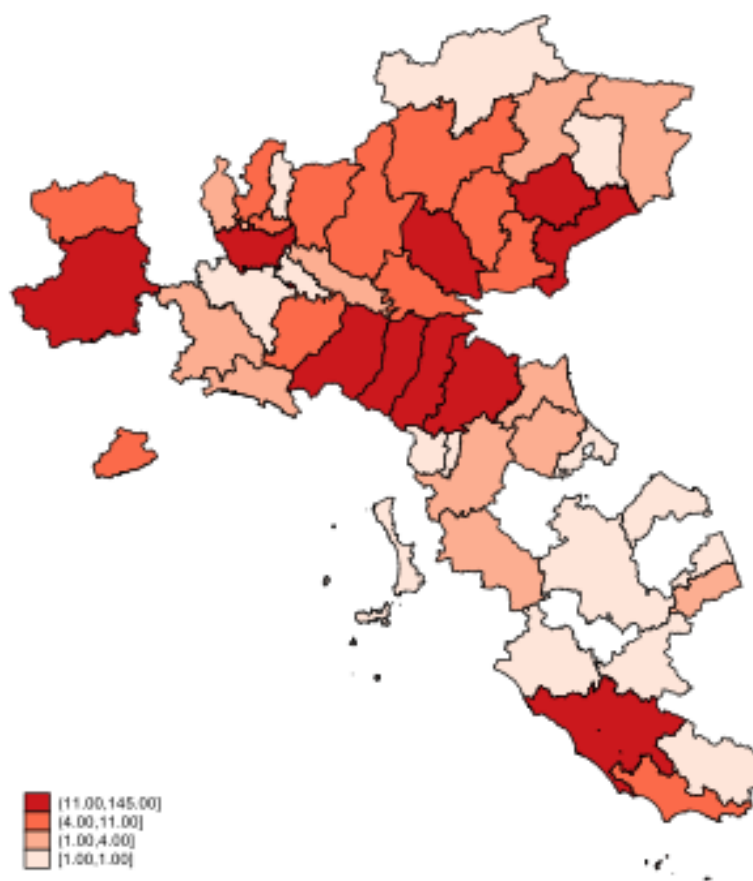
This figure shows the number of firms classified as criminal in each Province across Northern and Central Italy over the 2019-2021 period. Province borders are sourced from the Italian National Institute of Statistics (ISTAT).

2. Lending Effects of Anti-Mafia Operations

We find a significant intermediation effect: bank lending to legitimate peer firms increases by an average of 0.8% after an anti-Mafia operation. This rises to 2.1% in municipalities with intense Mafia presence or rent extraction practices (Ambrosini et al., 2024; Mirenda et al., 2022). These findings align with prior work suggesting that criminal organizations suppress fair competition and investment (Gambetta, 1996; Von Lampe, 2015), and that their removal improves market dynamics (Chircop et al., 2023; Zimmerman & Forrester, 2020). The mechanism is intuitive: as criminal firms exit, legitimate businesses regain confidence and demand more credit to invest in newly competitive environments.

2.1 Information Effects

Risk Reassessment and Borrowing Costs: We also identify an information effect: interest rates on new loans rise modestly (≈0.018 percentage points), as banks update their risk models in light of the revealed criminal infiltration. This echoes classic models of credit market asymmetries (Stiglitz & Weiss, 1981; Holmstrom & Tirole, 1997; Akerlof, 1970), where limited borrower transparency elevates perceived risk. The increased probability of default we observe post-intervention (≈0.07 pp) suggests that banks face uncertainty not only about the removed firms but also about others operating in the same area. These "institutional voids" may reflect residual Mafia influence or concerns about regulatory enforcement (Johnson et al., 2002; Dell'Ariccia et al., 2014; Gennaioli et al., 2014). Figure 2 confirms the validity of the parallel trends assumption prior to treatment, as there are no statistically significant deviations from zero before the intervention. Following the anti-Mafia police actions (denoted by time zero), we observe a clear and

persistent increase in bank lending to local firms. The post-treatment estimates are positive and grow over time, indicating a sustained credit expansion in treated municipalities. This dynamic response supports the interpretation of a causal effect of Mafia firm removal on financial intermediation, consistent with the hypothesized intermediation channel.

2.2 The Importance of Soft Information

Our results highlight the role of soft information—qualitative knowledge obtained through proximity and relationships—in credit risk assessment (Petersen & Rajan, 2002; Degryse & Ongena, 2005; Agarwal & Hauswald, 2010). Local and domestic banks that are embedded in the community raise interest rates less than foreign or non-local institutions, who are less familiar with borrowers' histories and reputations. This distinction is vital. When public shocks reveal hidden risks, banks that rely only on hard data tend to respond with broad caution, while those with established relationships can make finer-grained adjustments (Liberti & Petersen, 2019; Degryse & Van Cayseele, 2000).

2.3 Productivity Gains and Broader Economic Impact

Beyond credit markets, we find real economic improvements: productivity rises in affected municipalities, especially those where Mafia firms previously engaged in coercive rent extraction. This result aligns with literature showing that the exit of inefficient firms reallocates resources to more productive enterprises (Foster et al., 2008; Baldwin & Gu, 2006). The removal of criminal firms allows legitimate businesses to grow, innovate, and hire—free from fear or unfair competition. Anti-Mafia actions thus yield both financial and real-sector benefits.

Figure 2. Effect of Anti-Mafia Police Action on Lending
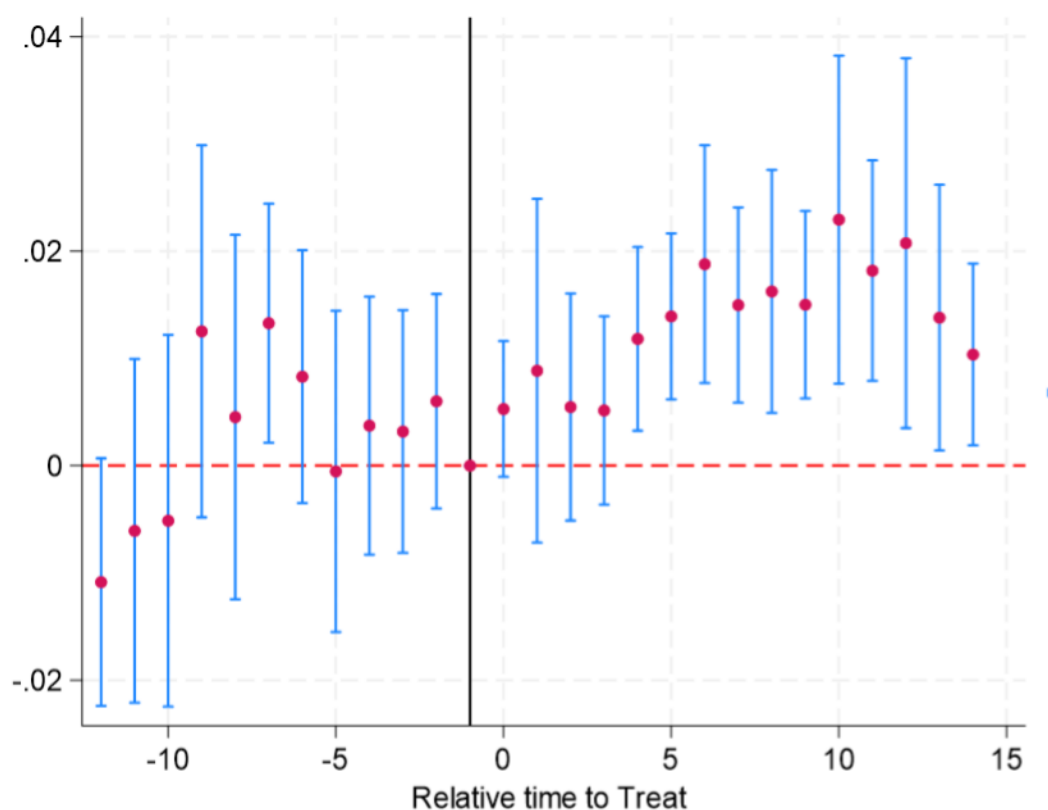
This figure illustrates diagnostic parallel trends in lending behavior (Loans) for the staggered adoption of anti-Mafia police actions. Point estimates are displayed along with 90\% confidence intervals. The baseline (omitted) reference period is one quarter prior to the police action in each municipality, indicated by the solid vertical line in the plot.

3. Policy Implication

Our findings carry important implications for policymakers, financial supervisors, and law enforcement authorities concerned with the intersection of organized crime and financial intermediation.

3.1 Targeted Law Enforcement Can Improve Financial Development

The dismantling of Mafia-connected firms produces a positive spillover effect on legitimate local businesses by increasing their access to credit. This suggests that criminal infiltration depresses financial activity not only directly through illicit behavior, but also indirectly by crowding out legitimate firms. Effective law enforcement can thus act as a catalyst for restoring fair market conditions and enabling economic expansion.

3.2 Transparency is a Double-Edged Sword

Anti-Mafia operations introduce greater transparency by revealing previously hidden firm-level connections to organized crime. While this is beneficial in the long run, it also triggers a short-term increase in perceived credit risk—especially for financial institutions without local knowledge. Policymakers must recognize that exposure of criminal risks may temporarily lead to higher borrowing costs and more cautious credit allocation, particularly by non-local or foreign lenders.

3.3 Local Banks Play a Critical Stabilizing Role: Our findings show that local and domestic banks—those with geographic and relational proximity to borrowers—adjust more moderately to the new risk environment. Their ability to gather and interpret soft information allows them to distinguish between criminal and non-criminal borrowers more effectively, avoiding unnecessary credit tightening. This underscores the importance of maintaining a healthy local banking sector that can mitigate the transitional disruptions caused by enforcement actions.

3.4 Data Infrastructure Enhances Supervisory Effectiveness
Granular supervisory data, such as the ECB's AnaCredit loan-level database, was instrumental in uncovering the real effects of anti-Mafia operations on credit and productivity. Such infrastructures are essential for evidence-based policy design and should be further developed and harmonized across jurisdictions. In particular, their integration with enforcement and anti-money laundering systems can provide early-warning indicators of systemic risk from criminal infiltration.

4. Anti-Crime Enforcement Has Broader Economic Benefits

Finally, beyond the financial sector, our study reveals that anti-Mafia interventions increase local productivity by removing inefficient, coercive firms and allowing capital to reallocate toward more competitive businesses. This highlights the macroeconomic value of criminal justice and regulatory coordination, suggesting that crime suppression is not merely a legal necessity but also a lever for boosting economic efficiency and resilience.

5. Conclusions

Eliminating organized crime yields measurable economic gains. Lending volumes rise, productivity improves, and trust is restored. But the transition comes with temporary frictions, especially for less-informed lenders. Supporting the role of local banks and fostering robust data infrastructures can help mitigate these risks and maximize the long-run benefits of law enforcement. Future research could extend this framework to other criminal threats—such as drug cartels or corruption rings—and explore their effects on financial intermediation and economic outcomes.

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About the author(s)

Bruno Buchetti an Assistant Professor at the University of Padua (Italy) and a Research Advisor in the Directorate General On-Site and Internal Model Inspections at the European Central Bank. He has also served as an Adjunct Professor at Toulouse Business School (TBS) and as a Visiting Researcher at the Miami Herbert Business School. His research focuses on financial accounting, corporate finance, and banking. Before his current academic and policy roles, he worked as a Supervision Analyst in the On-Site Inspections Division of the Single Supervisory Mechanism (SSM) at the European Central Bank and as a Bank Inspector at Credit Suisse AG in Zurich.

Michele Fabrizi is a Full Professor of Corporate Finance at the "M. Fanno" Department of Economics and Management at the University of Padua. He earned his Ph.D. in Economics and Management from the University of Padua, after spending a year conducting research and study at Boston University (USA). His research has been published in leading accounting and finance journals, including the Journal of Accounting Research, European Accounting Review, European Journal of Finance, and Journal of Business, Finance and Accounting.

Elisabetta Ipino is an Assistant Professor of Accounting at the Albers School of Business and Economics at Seattle University. She earned her Ph.D. in Economics and Management from the University of Padua. Before joining Seattle University, she held a tenure-track position at the John Molson School of Business (JMSB) in Canada. Her research has appeared in various accounting and finance journals, including the European Accounting Review, Accounting and Business Research, Journal of Business Finance & Accounting, and Corporate Governance: An International Review.

Ixart Miquel-Flores is a doctoral candidate in the Finance Department at Frankfurt School of Finance & Management. He has as well been a visiting Ph.D. student to the finance departments in The University of Virginia Darden School of Business, as well as The University of Chicago Booth School of Business. He uses modern applied econometric methods to understand the effects and consequences of monetary policy, financial regulation and new technologies on the banking sector. His research has been the focus of articles in reputable newspapers such as the Financial Times and Les Échos, as well as blogs such as Quantpedia and the Oxford University Business Law Blog. Ixart works at the European Central Bank (ECB), where he has acquired experience in fields such as Monetary Policy and Banking Supervision. You can visit his website at: www.ixartmiquel.com.

Antonio Parbonetti is a Full Professor of Accounting at the University of Padua, where he also serves as Deputy Rector with responsibilities for organization, budget, and personnel. He earned his Ph.D. in Business Administration from the University of Pisa. The research focuses on corporate governance, financial disclosure, and fair value accounting, with a particular interest in the intersection between organized crime and corporate behavior. His work has examined how mafia infiltration affects firms' transparency, performance, and governance structures, contributing to a deeper understanding of criminal influence in the economic sphere. He has published in leading international journals and had served on the editorial boards of many international journals.