Does the Fish Rot from the Head? Evaluating the Effect of Organized Crime on Educational Outcomes using a Spatial Regression Discontinuity Design

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Abstract

This paper explores the role of debauched institutions and organized crime on student outcomes. Specifically, we test the hypothesis that, other things being equal, student educational attainments are (on average) worse in those geographical areas where the presence of criminal organizations is more rooted and quality of institutions is lower. The mechanism through which this is likely to happen relies on the criminal organization’s view of ‘formal/official’ education as something ‘useless’ or even ‘detrimental’ with respect to its specific illicit goals. The school is also regarded as the institutional ‘outpost’ of that central government whose authority is not recognized by the criminal organization. It is therefore logical that in such a context students are less motivated to perform well at school.

We are not the first to empirically study the presence and the effect of organized crime on educational outcomes. For instance, Ferraz et al. (2012) investigate the effect of missing resources, due to corruption, on educational outcomes of primary school students in Brazil. The authors find a significant negative association between corruption and school performance of primary school students. Also, Borcan et al. (2017) report that a corruption fighting initiative such as introducing

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closed-circuit TV (CCTV) monitoring of high school exit exam in Romania was effective in reducing corruption and increased the effectiveness of the punishment threats. Hence, in this paper we aim at contributing to that strand of literature, focusing on the relationship between “environmental” corruption and student outcomes in primary education.

To measure student outcomes we use data from the INVALSI standardized test, which was firstly introduced in Italy in 2008 to assess students’ achievements in reading and mathematics at different stages of school education. Particularly, we rely on scores from tests taken at the end of the second and fifth years of primary school (when pupils are 7 and 10 year of age, respectively), for all pupils attending schools in the municipalities of four Southern regions where the presence of mafia organizations have traditionally been more relevant (i.e. Calabria, Campania, Apulia and Sicily).

Based on the work by Daniele and Geys (2015), to capture the presence of organized crime, we employ data on municipal government dissolutions by the national government for (presumed) mafia infiltration. Indeed, since its enforcement, the National Law 164/1991 has imposed the dissolution of a municipal government upon evidence of collusion between elected officials and criminal organizations. Following the removal of an infiltrated local administration, the central government appoints three non-elected, external commissioners, ruling the municipality for a period of 12 to 24 months. After the end of the transition period, regular elections are usually held. The municipal government dissolution is thus used in the empirical analysis as a source of exogenous variation, as its occurrence is fully determined at the national level.

In order to address our research question, we apply a spatial regression discontinuity design (SRDD), which is capable of controlling for threat effects and spillovers when addressing the effectiveness of education. In line with this approach, we exploit the fact that treatment intensity varies discontinuously in space as not all the municipalities in the four considered regions have been dissolved by the central government for (presumed) mafia infiltration. The underlying identification assumption of SRDD is that all other variables that influence INVALSI scores of primary school pupils do not change discontinuously and, hence, behave smoothly at the municipality borders. If this is the case, differences in student educational outcomes between municipalities close to the borders can plausibly only arise from differences in the institutional contexts and infiltrations of organized crime. In this respect, restricting the SRDD to municipalities in the South of Italy allows ruling out many uncontrolled sources of potential cross-regional heterogeneity, among which is the differences in teachers’ cheating behaviours between schools located in the North and the South of the country (Bertoni et al., 2013).
In this empirical analysis we therefore exploit discontinuity in data on municipal government dissolutions that occurs across space but not time. This is quite consistent with the idea of criminal infiltration at the municipality level as a latent but persistent phenomenon over time, which is only made evident at the moment of the municipal government dissolution for mafia. However, a series of robustness tests is performed to account for the fact that being dissolved should not be regarded as life brand for municipalities but institutional contexts are likely to change after a more or less long period of time.

**JEL classification:** D73; I21; H72  
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**References**


