

- Extended Abstract -

**Insecure Neighbourhoods, Lower Achievement:
Crime and Educational Outcomes in Ecuador**

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Over the past decade, Latin America has experienced a marked escalation in violence, with Ecuador emerging as one of the most dramatic recent cases. Once described as an “island of peace,” the country has undergone a rapid transformation characterized by surging homicide rates, territorial disputes among criminal organizations, prison riots, and widespread insecurity. This sharp deterioration in public safety raises urgent concerns about its broader socio-economic consequences, particularly in relation to human capital formation. A growing body of international evidence shows that exposure to community violence—whether direct or indirect—negatively affects children’s cognitive functioning, psychological well-being, and academic achievement.

Acute exposure to violent events has been shown to reduce test performance in the short term (Sharkey, 2010), while chronic exposure can slow cumulative learning growth (Burdick-Will, 2016). Although much of this literature focuses on the United States, recent contributions from Latin America (e.g., Brazil and Colombia) confirm that violence disrupts both the demand and supply of education. However, national-level evidence for Ecuador remains largely absent.

This study contributes to the literature by providing the first comprehensive national analysis of the impact of neighbourhood crime on student academic performance in Ecuador. We exploit detailed annual school-level data covering the period 2014–2024 and comprising approximately 100,000 student-level observations. Student performance is measured through standardized test scores administered annually. These data are combined with information on criminal events occurring in the

vicinity of schools, including vandalism, fights, robbery, and violent robbery, as reported by school administrators.

Empirically, we estimate a series of OLS models controlling for individual characteristics (gender, ethnicity), school characteristics (area, type of financing), grade level, and year and parish fixed effects. The analysis progressively introduces different measures of crime exposure and interaction terms with urban location to capture spatial heterogeneity.

The results consistently indicate that crime in the neighbourhood surrounding schools has a statistically and economically significant negative effect on academic performance. In baseline specifications, the presence of vandalism near the school is associated with a reduction of approximately 11 test-score points. When using perceived probability measures, we observe a clear gradient: compared to schools where vandalism is considered unlikely, schools where vandalism is deemed “very likely” show reductions in test scores of up to 16 points. Similar negative and significant patterns emerge for violent robbery in the vicinity of schools.

Importantly, the effect of crime is not uniform across space. Interaction models reveal that the adverse impact is substantially stronger in urban areas. Urban schools exposed to higher probabilities of vandalism experience significantly larger declines in performance compared to rural schools. This finding suggests that urban environments may amplify the educational costs of violence, potentially due to higher crime intensity, greater exposure frequency, or more pronounced institutional fragility in densely populated areas.

By contrast, we do not find systematic differences between male and female students, nor strong evidence of heterogeneity across broad natural regions of the country. The burden of violence appears to operate primarily through contextual exposure rather than through gender-specific mechanisms, at least in terms of standardized academic outcomes.

These findings are consistent with the theoretical mechanisms documented in the literature. Exposure to community violence is associated with heightened stress responses, sleep disruption, anxiety, and concentration difficulties, all of which impair cognitive performance. Acute stressors may directly affect test-taking ability, while chronic exposure may generate cumulative learning deficits. In Ecuador’s context—characterized by institutional fragility, territorial criminal control, and school closures in high-violence areas—these mechanisms are likely reinforced by disruptions in attendance, teacher turnover, and fear-induced behavioral changes.

From a development perspective, the implications are substantial. Ecuador, like many Latin American countries, already faces high levels of inequality and structural poverty. If violence systematically undermines learning outcomes, it may further entrench inequality by disproportionately affecting

students in high-risk urban environments. In this sense, crime operates not only as a public security issue but also as a constraint on human capital accumulation and long-term economic growth.

The policy implications are therefore multidimensional. First, educational policy in high-crime contexts cannot be designed independently of public security policy. Targeted interventions to improve safety around schools—such as safe corridors, coordinated policing strategies, and improved lighting—may mitigate the externalities of violence on learning. Second, urban schools located in high-risk areas should be prioritized in the allocation of compensatory resources, including psychological counseling services, after-school programs, and academic remediation initiatives. Third, strengthening institutional capacity and restoring state authority in “brown areas” characterized by weak law enforcement should be understood as complementary to investments in education.