The Estado Presente Program and Homicide Reduction in Espírito Santo – Brazil (2019–2022)

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Abstract

Brazil faces a persistent epidemic of lethal violence, recording around 45,000 homicides annually—10% of the world's total despite accounting for only 2.6% of its population. From 2000 to 2023, Brazil consistently ranked first in absolute homicide numbers. Amid this crisis, the state of Espírito Santo stands out as a success story. After recording homicide rates above 50 per 100,000 inhabitants between 2007 and 2010, the state launched the Estado Presente em Defesa da Vida Program in 2011. By 2024, Espírito Santo had achieved its lowest homicide numbers since 1996, falling below the national average for the first time. This study evaluates the causal impact of the program's second phase (2019–2022) using a quasi-experimental approach that combines Weighted Propensity Score Matching with a dynamic Difference-in-Differences framework, implemented through the PanelMatch package in R. The program adopts the UN's Citizen Security framework, structured around two axes: a police protection axis focused on qualified law enforcement with minimal lethality, and a social protection axis delivering coordinated public policies in vulnerable territories. The second phase introduced substantial innovations, including police force restructuring, advanced crime-fighting technologies, infrastructure expansion, inter-agency integration, and over thirty evidence-based social interventions. Results show that treated municipalities experienced a statistically significant and sustained decline in homicide rates compared to their synthetic control group. These findings offer robust empirical evidence that integrated public security strategies—combining law enforcement and social investment—can produce measurable reductions in lethal violence, even in historically high-crime contexts.

Keywords: homicide, citizen security, causal inference, brazil, panelmatch.