Online Annex 4. Crime and its Macroeconomic Consequences in Latin America and the Caribbean[1]

Crime rates in Latin America and the Caribbean are substantially higher than those of other regions in the world, and have macroeconomic impact, reducing output growth by lowering both capital accumulation and productivity. Closing the violence gaps between LAC and the world average could generate substantial growth in the region.
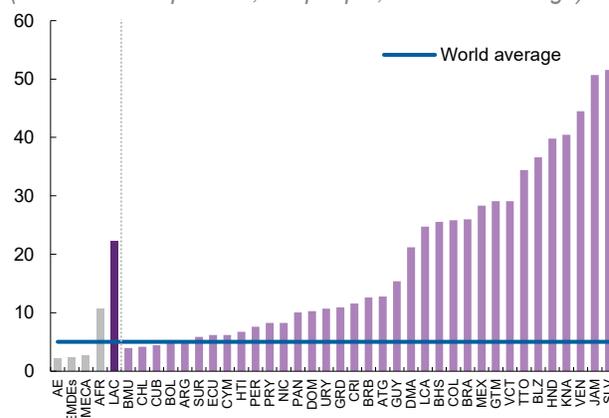
Crime and violence are acute problems in Latin America and the Caribbean. Crime rates—measured by reported intentional homicides—have been historically high in LAC (Online Annex Figure 4.1) and have recently worsened in many countries in the region.[2] With the exception of Bermuda, Chile, and Cuba, all LAC countries have crime rates above the world average. Countries like El Salvador (until recently), Jamaica, Venezuela, Honduras, and Belize stand out among those with the highest crime rates, significantly above those in Africa and the Middle East, as well as other Emerging Economies.

Crime entails significant macroeconomic costs. To unveil the macroeconomic impact of crime, we conduct panel-data regressions encompassing 97 countries for the period 1993-2019, focusing on the overall impact on GDP as well as the main channels—i.e., capital accumulation, labor participation and total factor productivity (Online Annex Figure 4.2). The potential endogeneity between economic outcomes and crime is

Online Annex Figure 4.1. Crime across Regions/Countries
(Homicide rate per 100,000 people, 2017–19 average)

Sources: United Nations Office on Drugs and Crime; World Bank, World Development Indicators; and IMF staff calculations.
Note: Data labels use International Organization for Standardization (ISO) country codes. LAC = Latin America and the Caribbean; AE = Advanced Economies; AFR = North and Sub-Saharan Africa; EMDEs = Asian and European Emerging Markets and Developing Economies; MECA = Middle East and Central Asia.

addressed by instrumenting the latter with criminal deportations from the US.[3] Results suggest that a one standard deviation increase in LAC's homicide rates lowers the region's GDP growth by 0.14 percentage points (in our preferred specification). This occurs both through lower capital accumulation and TFP growth, while labor force participation does not seem to be particularly affected.

Estimates suggest that the gains from closing the violence gap are large. The results imply that reducing the difference in crime levels between LAC and the world average by 20, 50, or 100 percent would boost LAC's GDP growth by 0.05, 0.1 or 0.5 percentage points, respectively (Figure 14, panel 2). These gains are heterogeneous across countries, reflecting differences in violence levels. Countries like Jamaica and Honduras would benefit the most, boosting GDP growth by about 0.2 percentage points per year by closing their gaps with the world average by 50 percent. Crime also entails large social costs (e.g., affected lives) that are beyond the scope of this analysis.

Spending on public order and safety is already high in LAC. Governments in the region spend a relatively large share of GDP on public order and safety (Online Annex Figure 4.3), with greater spending in security taking place in countries with more crime—for example, Online Annex Figure 4.2 shows that a 1 standard deviation increase in homicide rates increases government spending on law and order by 0.1 percent of GDP. While high levels of

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[1] Prepared by Rafael Machado Parente.

[2] While there are many other forms of crime that may have social and economic implications, their measurement tends to be less reliable as many crimes tend to go un-reported. Throughout the analysis, homicide is used as a proxy of broader crime. Homicide data is obtained from the United Nations Office on Drugs and Crime (UNODC), which includes both official data from national authorities and other sources approved by UN Member States.

[3] This strategy purges out endogenous variations in homicide rates and assesses their causal impact on economic outcomes. See Blake (2015), Kalsi (2018), Lariau et al. (2019) and Sviatschi (2022) for papers with the US criminal deportation instrument.

spending in public order and safety may be necessary to prevent additional crime,[4] this also suggests that more effective practices to combat crime could free up significant resources for other priority expenditures.[5] These other priority spending could, by tackling structural impediments to growth in LAC, generate labor market opportunities to reduce crime levels in the region (Dix-Carneiro et al., 2018; UN, 2023).

Online Annex Figure 4.2. Economic Impact of Crime
*(Regression coefficients)*
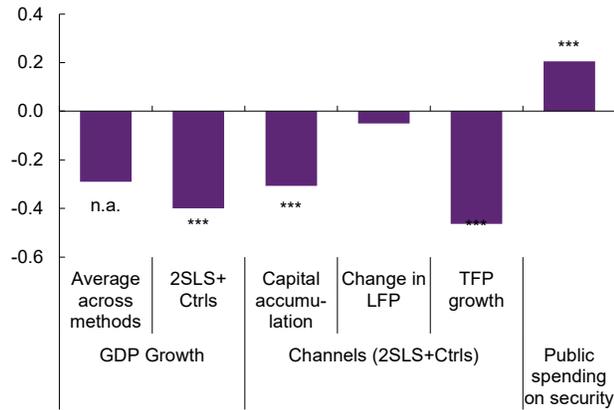
Source: IMF staff calculations.
Note: Each bar depicts the regression coefficient of homicide rates on the dependent variable in the X-axis. Public spending on security is measured as a share of GDP. Average across methods = OLS, OLS+controls, 2SLS and 2SLS+controls. Controls = lag GDP, lag inflation, lag trade openness, lag FDI, population growth rate, capital account openness, natural disaster, terms of trade, lag poverty and human capital index. All first stage F-stats rule out weak instruments. ***p<1%,**p<5%,*p<10%, n.a. = conf. intervals not available.

Online Annex Figure 4.3. Spending on Public Order and Safety
(Percent of GDP, 2016–19 average)
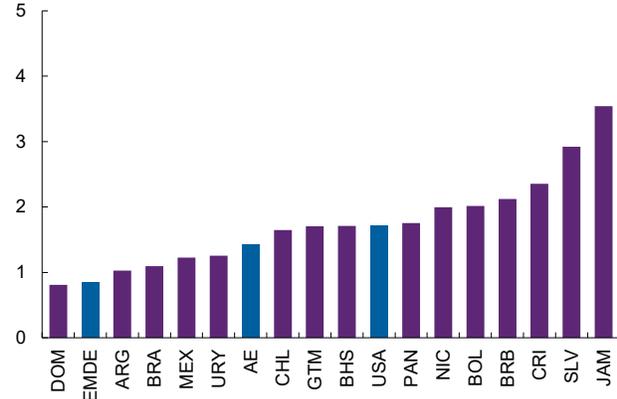
Sources: IMF, Government Finance Statistics, Classification of Functions of Government; and IMF staff calculations.
Note: Data linearly interpolated with historical information for countries with missing observations. Data labels use International Organization for Standardization (ISO) country codes. AE = advanced economies excluding the United States; EMDE = emerging market and developing economies in Asia and Europe.

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[4] For example, evidence suggests that crime is negatively associated with police spending (Chalfin and McCrary, 2017) and welfare/education spending (Fishback et al. 2010; Meloni, 2014; Hazra and Aranzazu, 2022).

[5] The IADB's Security and Justice Evidence-based Platform is a valuable source of scientific-based evidence on the effectiveness of existing security and justice solutions.