Drug trafficking and the homicide epidemic in the Caribbean Basin*

Brian Marein†

December 15, 2025

Abstract

Most of the world's highest homicide rates are found in the Caribbean basin. Common explanations for the region's violence, such as inequality and long-standing culture, fail to explain the explosive growth of violence in recent decades. This paper examines the role of drug trafficking, a leading explanation among law enforcement but one that is difficult to establish causally due to the illicit and covert nature of the trade. I leverage an exogenous shock to drug trafficking: the 1973 Chilean coup, which abruptly redirected smuggling routes northward to Colombia and through the Caribbean. Using Puerto Rico—the Caribbean territory with the best data coverage and one of the areas most affected by the trafficking surge—and a synthetic control constructed from US states—which report from the same data source and share federal gun laws and other policies affecting violence—I estimate that the shock caused a 50% increase in homicides. Evidence from other parts of the region supports drug trafficking as the key driver of the Caribbean's extraordinarily high levels of violence.

Keywords: homicide, crime, Latin America, Caribbean

JEL Classification Numbers: K42, N96

*I thank Gustavo Bobonis, John Devereux, Leah Lakdawala, Noel Maurer, Erik Nesson, Craig Palsson, and participants at the Carolina Region Empirical Economics Day and the Southern Economic Association 95th Annual Meeting for valuable comments and discussions. I also thank Noel Maurer for sharing Bahamanian homicide data.

†Wake Forest University, Department of Economics (mareinb@wfu.edu)

1 Introduction

Most of the world's highest homicide rates—including the top six and 23 of the top 30—are found in the Caribbean basin, a region that comprises Central America, the islands of the Caribbean Sea, and the northern coast of South America (UNODC, 2023).[1] In extreme cases, such as El Salvador, annual homicide rates have at times been comparable to the carnage of civil war (Speck, 2022). Despite vast differences in oft-cited determinants of violence, such as per capita income and political institutions, the Caribbean region as a whole suffers from extraordinarily high homicide rates. European (i.e., British, French, and Dutch) overseas departments, American unincorporated territories, and independent republics, ranging from low- to high-income, suffer violence reaching the level of an epidemic (UN Development Programme, 2023).

The causes of this violence are poorly understood, and the descriptive data do not support the leading explanations of inequality (Heinemann & Verner, 2006) or a "culture of violence" (see Causwell, 2023). Most studies supporting such conclusions either are cross-sectional (Briceño León et al., 2008; Cole & Marroquín Gramajo, 2009; Concha-Eastman et al., 2020; Ouimet, 2012), thereby failing to account for changes over time, or cover only the recent past (de Albuquerque, 1984; Croci & Chainey, 2023; Schargrodsky & Freira, 2021). But violence in the Caribbean has changed dramatically both in absolute and relative terms. In the early 20th century, were only 25% as high as they are currently, lower than the United States and much lower than the American South. Since the 1970s, most of the Caribbean has experienced explosive episodes of violence. Such changes are not easily explained by slow-moving variables or deep-seated culture.

In this paper, I consider an alternative explanation: drug trafficking. Police statistics usually point to drug trafficking as the primary cause of violence (e.g., 75% in Puerto Rico (Nadal Ferrería, 2012)), but establishing a causal link is challenging because the trade is illegal, and thus, difficult to track. Drug markets and violence could also both be caused by

[1] Rankings are based on data from 2006 to 2021.

another factor, such as poverty, meaning their coincidence may not reflect a causal connection (LaFree, 1999a).

Therefore, I take an approach that circumvents the need for data on drugs, exploiting an exogenous shock to drug trafficking: the 1973 Chilean coup, which abruptly shifted cocaine trafficking from Chile to Colombia and transformed many Caribbean locations into key points of transshipment between South and North America. Using the synthetic control method, I compare Puerto Rico to a "synthetic Puerto Rico" consisting of a weighted combination of US states that are not major points of drug transshipment. Puerto Rico is the Caribbean territory with the best data coverage and, shortly after the Chilean coup, had become a gateway to the United States for narcotics coming from Colombia—"the most critical point in the world for drug trafficking," according to one DEA agent (United Press International, 1975, p. 1). The onset of large-scale drug trafficking increased homicides by 5 per 100,000 inhabitants—about a 50% increase. In-space placebo tests fail to detect similarly large divergences among the donor pool states. An analysis of violence within Puerto Rico demonstrates that the initial escalation of violence was concentrated near the capital, San Juan, which is consistent with a surge in drug trafficking via the Port of San Juan rather than a response to general economic or cultural changes. Indeed, the surge of violence does not strongly correlate with changes in macroeconomic indicators, poverty, or inequality.

By tying the Caribbean's homicide epidemic to drug trafficking, this paper builds on studies which link the drug trade to violence in Colombia (Angrist & Kugler, 2008; Gaviria, 2000), Mexico (Dell, 2015; Enamorado et al., 2016), Central America (Demombynes, 2011), and the United States (Evans et al., 2022).[2] While not focusing exclusively on drug trafficking, Sviatschi (2022) shows that violence in El Salvador increased after the United States began deporting gang members back there. More broadly, Lappi-Seppälä & Lehti (2014) and de Albuquerque & McElroy (1999) describe homicide trends across

[2]Gaviria (2000) agrees that the cocaine trade triggered the escalation of violence in Colombia but argues that violence fed on itself by congesting the law enforcement system and lowering the probability of punishment, such that violence is not a simple reflection of drug-related crime.

countries, attributing the rise in violence in the Caribbean to the illicit drug industry without establishing a causal relationship. This paper is the first to estimate the causal impact of drug trafficking on the initial escalation of violence specifically in the Caribbean.

Previous research on violence in Latin America and the Caribbean tends to downplay the drug trade. The near consensus is that the region's violence is due to inequality (Heinemann & Verner, 2006). Within economics, Soares & Naritomi (2010) argue that crime is primarily explained by high inequality, low incarceration rates, and small police forces. Fajnzylber et al. (2002a,b) concur, emphasizing inequality.[3] Other studies point to deep-seated factors, notably culture. Neapolitan (1994) argues that Latin America is exceptionally violent because of cultural values, including "machismo," that evolved from colonization and subjugation. In the context of Jamaica, presently with the highest homicide rate in the world, Patterson (2019, p. 156) places the blame in large part on slavery, "an institutionalized form of naked violence" which left an indelible cultural imprint. Such explanations are difficult to reconcile with the explosive growth of violence in the late 20th and early 21st centuries. Rivera (2016) finds that Latin American countries involved in drug trafficking do not experience higher levels of violence, but the drug trafficking binary variable has almost no within-country variation and is not coded correctly.[4]

2 Caribbean homicides in long-run perspective

Latin America is often called the world's most violent region, but this is somewhat misleading. Argentina (4.6 homicides per 100,000 population in 2021) and Chile (3.6) are not exceptionally violent.[5] Before violence escalated around 2015, Uruguay consistently had a homicide rate below 7. Bolivia, among the poorest countries in the Americas with a GDP

[3] An earlier report by these authors, Fajnzylber et al. (1998), finds some evidence that higher drug related activity induces a higher incidence of intentional homicide and that Latin America is significantly more violent than other regions after controlling for a slightly different set of socioeconomic factors than their future work.

[4] For example, Brazil is coded as a drug trafficking country from 1992 to 2009 but not in 2010. Data are missing prior to 1992.

[5] Homicide rates are based on UNODC (2023). GDP data are from the World Bank.

per capita of $3,300, had a homicide rate of just 3.5 in 2021. Peru, with a GDP per capita of $6,600, had a homicide rate of 5.7 in 2020, below the United States. For comparison, the median homicide rate for Caribbean countries and territories in Table 1 is 20.3.

To be sure, Latin America *is* violent, but the Caribbean basin—which includes the Caribbean islands, Central America, and the northern coast of South America and is itself grouped within Latin America (often short for Latin America and the Caribbean, or LAC)—is especially violent. The Caribbean basin is the world's most violent region. This distinction is often overlooked because the Caribbean is a subregion of LAC, and many Caribbean islands, especially the Lesser Antilles, which includes most of the Commonwealth Caribbean, have small populations, in most cases less than one million.

Figure 1 comes from Jaitman & Guerrero Compeán (2015) and depicts the cross-sectional relationship between homicide rates and GDP per capita in 2012. The Caribbean basin in specific, not Latin America in general, stands out. The outliers from LAC are all within the Caribbean basin other than Brazil, which is also heavily involved in drug trafficking (Miraglia, 2015).

Table 1 reports homicide rates for all American and British dependencies in the Caribbean from 1923 to 1938 and from 2006 to 2021. The American rates are based on the number of homicides among all causes of death in vital statistics, whereas the British rates are based on the number of homicides reported or known to the police. These territories were chosen to assuage concerns about the reliability of historical data.[6]

Many of the aforementioned explanations for LAC's exceptionally high levels of

[6]Before 1950, virtually no LAC country issued vital statistics anywhere near complete (Palloni et al., 2021). By contrast, Puerto Rico and the Virgin Islands were admitted to the US Death Registration Area by the Census Bureau in 1932 and 1924, respectively, signifying that they had met minimum standards for data quality and coverage, including at least 90 percent completeness. Data for British dependencies come from the colonial Blue Books, which are standard sources in the economic history of the British Empire (Fourie, 2016), including the Caribbean (Carvalho & Dippel, 2020; Dippel et al., 2020). The Blue Books are widely regarded as reliable sources of information (Caruana-Galizia, 2015), although the data accuracy varies by topic (Westland, 2022). There is no obvious incentive for colonial administrators to underreport homicides, although there is a greater tendency in general to underreport homicides in criminal justice data compared to vital statistics (Kanis et al., 2017). Most of the British West Indies are small and without large hinterlands where homicides would more likely go undetected. In general, homicide rates are considered the most reliable measure of violent crime (LaFree, 1999b).

violence—inequality, machismo culture, the legacies of slavery and colonialism, etc.—rest on an implicit assumption the region has been persistently exceptionally violent. This is not the case. Most of the dependencies shown had homicide rates in the vicinity of 5 per 100,000 people from 1923 to 1938. In most cases, these rates exceeded homicide rates in England, Wales, and Canada, but they were lower than the United States, which had a homicide rate of 8.8. The comparison is even more striking with the American South (15.8) and, more narrowly, the Deep South (19.8). Homicide rates in the Caribbean in the early 20th century were on average only 25% as high as they are today.[7]

The only exception to the region's low levels of violence is Puerto Rico, which averaged 14.5 homicides per 100,000 population from 1932 to 1938. Even so, this rate is 32% lower than Puerto Rico's average homicide rate (21.2) from 2006 to 2021 and is lower than the Deep South in that period. Furthermore, as shown in Figure 2, violence diminished markedly in Puerto Rico thereafter, falling as low as 5.4 in 1957 and averaging 7.6 throughout the 1950s and 1960s, just above the rates that prevailed earlier in British Guiana, British Honduras, and Trinidad and Tobago. Prior to the escalation of violence in the 1970s, Puerto Rico's homicide rate was in the middle to lower range compared to that of the southern United States. It is inaccurate to characterize Puerto Rico as historically and persistently violent.

This simple descriptive analysis helps to rule out explanations for violence based on slow-moving or deep-seated factors. Exceptionally high levels of violence are not a permanent feature of the Caribbean basin. Certainly, culture has evolved over the past century, but the aspects of culture suggested by previous works—such as "machismo" or the legacy of slavery—are not new but, rather, deeply rooted in history. Furthermore, culture is often slow to change so cannot account for sudden, explosive increases in violence—a defining feature

[7]This study is not the first to point out that homicide rates in the Caribbean were much lower historically than they are today. In particular, UNODC (2019) draws on data from the Blue Books to show that Jamaica had similar levels of violence as Singapore in the late 1950s. The study also reveals that several other societies in the Caribbean basin—the Dominican Republic, Puerto Rico, Trinidad and Tobago, and Venezuela—are shown to have had similarly low levels of violence as Jamaica at least through 1960s. The descriptive analysis in this paper is different in that it covers a larger and more diverse set of societies, in an earlier period, while relying on the most accurate data from the region in that era.

of Caribbean violence (Gaviria, 2010).

Although many countries are left out of this analysis, those included are sufficiently diverse to help rule out explanations based on cultural legacies dating back to colonization and slavery or other slow-moving variables. For instance, the list includes many islands that relied heavily on slave labor such that the modern population descends predominately from African and Afro-Caribbean slaves (e.g., St. Kitts and Nevis) but also some that relied much less on slave labor (e.g., Trinidad and Tobago and Puerto Rico).[8] Puerto Rico is conventionally part of Latin America, populated mostly by Spanish speakers, whereas the others are not. Puerto Rico and the US Virgin Islands are still territories of the United States, while Anguilla, Montserrat, and the British Virgin Islands remain British. The others are independent countries. Geographically, the list includes the Caribbean proper, Central America (i.e., British Honduras), and the northern coast of South America (i.e., British Guiana). Much attention is given to cycles of violence related to political instability or civil war, as in Haiti and El Salvador, but most of the list has been free of such turmoil. In spite of their differences, these countries and territories all suffer from exceptionally high levels of violence and, more importantly, have experienced an escalation of violence in recent years.

3 Homicides in Puerto Rico

A common explanation for the Caribbean's exceptionally high rates of violence is drug trafficking, as many areas in the region serve as transshipment points for drugs moving from South America to consumer markets in North America and Europe. It is widely believed that the drug trade is a primary cause of violence: various government reviews of violent crime conclude that a large share is related to drugs and drug gangs (e.g., 75% in Puerto Rico (Nadal Ferrería, 2012)). Griffith (1996) observes that the places with high rates of violent crime were those that recently had featured prominently as centers of drug activity.

[8]Less than half of the population of Trinidad and Tobago claims African descent (Central Intelligence Agency, 2023). Slaves comprised about 10% of the population of Puerto Rico (Dietz, 1986).

Similarly, Patterson (2019) finds a strong positive correlation between homicide rates and the the highest annual drug seizures per capita between 2010 and 2014.

However, evidence of a causal link between drug trafficking and violent crime remains scant. Establishing such a link is challenging due to the illicit nature of the drug trade, which complicates observation and measurement. Drug seizure data, often used as a proxy for trafficking activity, are unreliable because seizures occur somewhat randomly and are influenced by changing law enforcement resources and priorities. Given these limitations, it is unlikely that robust relationships between homicides and drug trafficking would emerge in panel data analyses with country and year fixed effects, as is common in applied microeconomics research. These challenges are further compounded by the limited availability and inconsistent quality of homicide data in the Caribbean basin. Annual homicide statistics are often underreported, particularly for historical periods, and discrepancies across sources suggest a degree of unreliability (see Lehti, 2013). While UNODC homicide data are available from 1990 onward, earlier data, as compiled by Lehti (2013), are incomplete and inconsistent.

To overcome these challenges, I adopt an approach that avoids relying on drug data and instead leverages a political event as an exogenous shock to drug trafficking in a region with excellent data coverage. Specifically, I focus on Puerto Rico before and after the 1973 Chilean coup, which pushed cocaine trafficking from Chile to Colombia and made Puerto Rico, among other Caribbean locations, a key transshipment point between South and North America. I argue that the results for Puerto Rico generalize to the broader region, and I briefly examine homicide trends in other contexts to support this claim.

3.1 Cocaine trafficking after the 1973 Chilean coup

There is widespread suspicion and compelling suggestive evidence that drug trafficking plays a central role in violence in Puerto Rico and the broader Caribbean. The most important change in the international illicit drug trade in the 1970s was the rise of Colombian

cocaine, primarily destined for the US market. While cocaine consumption in the United States grew steadily throughout the 1960s, supply remained limited. The Nixon years (1969-74) marked a turning point, as the amount of cocaine seized by US authorities grew exponentially. In 1970, the quantity of cocaine uncovered in the United States first exceeded that of heroin (Gootenberg, 2008).

Before the 1973 Chilean coup, Chile was the main player in cocaine transport to the United States. The period from 1970 to 1975 marked a transition to Colombian middlemen, as new right-wing dictators strangled traditional smuggling routes and urban cocaine networks across South America (Gootenberg, 2008, 2012). The coup in September 1973, in which General Augusto Pinochet ousted socialist President Salavador Allende, effectively dismantled the Chilean cocaine trade, creating an opportunity for Colombians to quickly step in. Pinochet jailed or expelled the country's leading cocaine traffickers to win favor with US President Richard Nixon and prevent a resurgent Left from using drug monies to undermine state security. In the immediate aftermath of the coup, even before Chilean police apprehended cocaine traffickers, there may have been a significant cutback in cocaine trafficking because of the strict curfew in effect and the continuous searches of buildings and vehicles (Kandell, 1973). By November 1973, an unprecedented, "unlimited" supply of cocaine was entering the United States from Latin America, and Colombians had become the principal transporters (Lernoux, 1973).

Puerto Rico became deeply entangled in the burgeoning Colombian cocaine trade due to its location and political status (Rody, 1979; UNODC and World Bank, 2007). Geographically, it lies in the Caribbean, conveniently positioned between Colombia and major entry points to the eastern seaboard of the United States, particularly Miami. San Juan, its main port, is one of the busiest in the Caribbean and the United States. As a US territory, Puerto Rico benefits from free trade with the mainland, meaning shipments from Puerto Rico are not subject to customs inspection upon arrival in the United States. These factors combined make Puerto Rico an ideal transshipment hub for Colombian cocaine

destined for its largest market. Indeed, by early 1975, Puerto Rico had become a gateway to the United States for narcotics coming from Colombia—"the most critical point in the world for drug trafficking," according to one DEA agent (United Press International, 1975, p. 1).[9] Violence is an important mechanism for dispute resolution in illegal markets in general (Dills et al., 2010), and Colombian drug traffickers are particularly notorious for their use of violence (Thoumi, 1996). Consequently, the rise of Colombian drug trafficking via Puerto Rico, and other parts of the Caribbean at varying times, plausibly contributed to the region's escalating violence.

Cocaine and other drug trafficking through Puerto Rico predated the 1973 Chilean coup, but Colombian cocaine and other drug trafficking expanded rapidly in its aftermath, with escalating violence during this period marking a break from previous trends.[10] Moreover, there was near-universal agreement among contemporary observers that the increase in violence before September 1973 was driven by the growing drug trade (e.g., "El aumento en el crimen", 1973). Police reports indicated that most homicides were linked to drug trafficking, with violence rarely spilling over to involve individuals outside the trade (Gúzman, 1975). The following analysis does not attempt to measure the total effect of drug trafficking on violence but rather focuses on estimating the impact of an exogenous shock—in this case, the coup and the subsequent increase in drug trafficking—on homicide rates.

[9] *The New York Times* reported in 1975 that Latin Americans, principally Colombians, had emerged over the previous two years as leaders of the hard-drug trade (Gage, 1975). Florida had become the leading site of cocaine seizures and possibly the primary mainland US entry point in the total amount of all drugs successfully trafficked, indicating the rise of a Caribbean trafficking route (King, 1975). In early 1975, police intercepted a cocaine shipment in San Juan valued at $15 million (equivalent to $92 million in 2025) (Reguero, 1975). In 1978, San Juan ranked second only to Miami among US cities in total cocaine confiscated (Brignoni, 1978).

[10] By around 1970, Colombians had already begun experimenting with cocaine distribution. A *New York Times* article published just months before the coup noted that Colombians had gained such a reputation in drug trafficking that presenting a Colombian passport immediately triggered suspicion and heightened scrutiny (Howe, 1973). Additionally, Puerto Rico's homicide rate had been rising in the years leading up to the coup.

3.2 US Vital Statistics

The analysis in this section uses annual, state-level homicide rates (per 100,000 population) based on the *Vital Statistics of the United States* and Puerto Rican annual vital statistics reports.[11] Vital statistics are the "gold standard" for comparative analysis of homicide rates (Kanis et al., 2017). Homicides are reported by place of occurrence except in 1942 (excluding Puerto Rico and the Virgin Islands), when they are reported by place of residence of the deceased. The intercensal population estimates used in the denominator of annual homicide rates are linear interpolations of decadal census population counts. Homicide rates for the United States in 1972 are extrapolated from six months of data.

Compared to other Caribbean locations, Puerto Rico has the advantage of consistently publishing annual homicide statistics since the early 20th century. In 1932, Puerto Rico was admitted to the US Death Registration Area after meeting minimum standards for data quality and coverage, including at least 90% completeness.[12]

3.3 Descriptive evidence: Puerto Rican homicides in long-run perspective

Puerto Rico's admission to the US Death Registration Area in 1932 and its consistent publication of annual vital statistics facilitate reasonable comparisons with US states. Figure 2 presents homicide rates in Puerto Rico and the South from 1932 onward. I include only a subset of states in the figure to enhance visualization, and the South serves as a natural

[11] Puerto Rico is included in the *Vital Statistics of the United States* except for the years 1967-69 and 1972. There are slight discrepancies between US and Puerto Rican vital statistics, so to maintain consistency, I rely solely on homicide rates reported directly by Puerto Rico for all years. Only in 1971 is there a large difference between the US and Puerto Rican vital statistics: the US reports 225 homicides, and Puerto Rico reports 343. A third source, Puerto Rico Planning Board (2010), is based on police records and reports 283 homicides, falling between the other two figures. Notably, four of the six years in which homicides reported in Puerto Rican vital statistics most outnumber homicides in the police records are from 1969 to 1972. This suggests that, if anything, the data series that I use *understates* the increase in homicides from 1973 forward relative to the other available sources.

[12] For context, Mahapatra et al. (2007) reports that roughly 30% of the world's population as of 2007 lived in areas which claim complete (defined as more than 90%) birth and death registration.

comparison group for Puerto Rico since it has historically been both less developed, and more violent (Grosjean, 2014), than the rest of the United States.[13]

In the 1930s, Puerto Rico's homicide rate averaged around 15 per 100,000 population. While this made Puerto Rico one of the most violent areas in the United States, it was not the most violent. Six states—Alabama, Florida, Georgia, Kentucky, Mississippi, and Tennessee—had even higher homicide rates, while South Carolina's rate was roughly equal to Puerto Rico's. As shown in Table 1, Puerto Rico was less violent than the broader South.

Homicide rates throughout the US fell dramatically in the 1930s and 1940s, remaining low before rising once more in the 1960s. Puerto Rico followed a similar trajectory, experiencing a substantial decline in violence in the late 1940s and 1950s, with an average homicide rate of 6.9 per 100,000 in the 1950s and 1960s. In 1970, 13 of 16 southern states had a higher homicide rate than Puerto Rico, with the exceptions being Delaware, Oklahoma, and West Virginia. However, Puerto Rico's homicide rate began to rise sharply in the following years, both in absolute terms and relative to the mainland United States. Only in 1985 did Puerto Rico's homicide rate surpass all 50 states, then again from 1991 to 2019. These trends underscore that Puerto Rico has not always been exceptionally violent and raise the question of why homicide rates began increasing and exceeding those of even the South starting in the 1970s.

3.4 Synthetic control analysis

I evaluate the impact of drug trafficking on violence in Puerto Rico by exploiting the exogenous shock to the island's drug trade following the 1973 Chilean coup. To estimate this effect, I apply the synthetic control method introduced by Abadie et al. (2010), constructing a counterfactual Puerto Rico that did not experience a substantial increase in drug trafficking. The difference between the homicide rates of Puerto Rico and its synthetic control after the

[13] Godoy (2008) compares Puerto Rico's homicide rates from 1980 to 2005 with Florida, Mississippi, and New York, since New York had the largest stateside Puerto Rican community. Puerto Rico had a homicide rate almost four times higher than Florida and New York and more than double that of Mississippi, the poorest state. However, rates and trends for other types of violent crimes resembled those on the mainland.

1973 coup provides an estimate of the causal impact of the increase in drug trafficking on homicide rates, assuming that the Puerto Rican rate would have evolved similarly to its synthetic counterpart in the absence of the increase in drug trafficking.

The synthetic control is based on a donor pool consisting of US states. Using states as the donor pool is appropriate for several reasons: Puerto Rico's pre-treatment homicide rate falls within the convex hull of state homicide rates; Puerto Rico's reliance on trade with the United States ensures that economic conditions are closely linked; and federal policies affecting factors like gun availability apply to both Puerto Rico and the states.[14] Although Puerto Rico shares many similarities with Latin America, its culture has significantly converged with the United States since it became a US territory, particularly following the Great Migration of Puerto Ricans to the mainland after World War II. Also, using a single data source, US vital statistics, provides consistency and comparability.

I do not formally match states based on economic characteristics in the synthetic control because Puerto Rico is an outlier on most dimensions, including income per capita, the unemployment rate, and the labor force participation rate. Instead, to enhance comparability, I restrict the donor pool to the bottom half of states ranked by median household income. This approach closely aligns with the standard comparison of Puerto Rico to the South, historically the least developed region of the country. In fact, among the states in the South as defined by the Census, only Delaware and Maryland are excluded—two states often omitted from the region in conventional classifications. The advantage of this procedure over relying solely on the South is that a larger donor pool increases statistical power. Nevertheless, the donor pool weights remain concentrated on southern states. Florida is also excluded from the donor pool because of the outsized role of Miami in the drug trade, although in practice whether Florida is included is inconsequential.

Weights for the synthetic control are determined by minimizing the distance between the homicide rate of Puerto Rico and that of the synthetic control prior to treatment, as well

[14] In 1985, 86% of exports were destined for the United States (Puerto Rico Planning Board, 1987).

as the urbanization rate in 1970 as defined by the Census. Urbanization is included because rural and urban areas may experience different trends in homicide rates (McDowall & Loftin, 2009), and Puerto Rico is not an outlier in this regard. The weights are shown in Table 2.

Figure 3 shows Puerto Rico and its synthetic counterpart over the twenty years preceding the coup and the ten years following it. Later years are excluded to avoid capturing subsequent waves of violence that could exaggerate the treatment effect. Prior to 1973, homicide rates in Puerto Rico and synthetic Puerto Rico are closely aligned in both level and trend. From 1953 to 1972, the average absolute difference between the two is just 0.97 homicides per 100,000 population. After 1973, however, the two series visibly diverge, with Puerto Rico's homicide rate surging and remaining elevated, while synthetic Puerto Rico's rate fluctuates but remains relatively stable on average. In 1973, the difference between Puerto Rico and synthetic Puerto Rico is 3.3 times higher than the average absolute difference in prior years. Throughout the remainder of the 1970s, this gap remains, on average, more than five times larger than during the pretreatment period. These results suggest that Puerto Rico's homicide rate increased by 5 homicides per 100,000 population, or about 50%. The difference is statistically significant at the 10% level in 1974 and at the 5% level from 1975 onward, except in 1980. These findings suggest that drug trafficking was the primary driver of Puerto Rico's initial surge in violence.

To assess whether Puerto Rico's result is unusually large, the synthetic control analysis is rerun using each state in the donor pool as a placebo. Figure 4 confirms that Puerto Rico's outcome is exceptional: no state exhibits a similarly large relative increase in homicides in 1973 or immediately thereafter, and Puerto Rico consistently shows the largest difference from its synthetic counterpart throughout the post-treatment period.

Figure 5 presents the distribution of post-treatment to pre-treatment RMSPE (root mean squared prediction error) ratios for all states in the in-space placebo test. Intuitively, this ratio captures the divergence in homicide rates between the treated unit and its synthetic counterpart before and after treatment, with larger values suggesting a true causal effect.

Puerto Rico has the highest ratio in the sample, 40% larger than the next closest state.

The results suggest a causal effect of the exogenous increase in cocaine trafficking on homicides in Puerto Rico, assuming that other factors affecting homicides evolved similarly in Puerto Rico and the control group. Puerto Rico is a compelling case study because, unlike most of the Caribbean basin, it did not undergo major political change or turmoil in the years preceding the surge in violence. Notably, most countries in Table 1 gained independence from the United Kingdom in the 1960s, and political instability could increase violence. In contrast, Puerto Rico remained politically stable throughout the period.

3.5 Alternative explanations

In general, economic conditions do not strongly correlate with macroeconomic fluctuations (van Dijk, 2013). However, given that the Puerto Rican economy entered a prolonged stagnation in the 1970s, this subsection examines economic changes—especially those affecting the male labor force, as men commit most murders—as a potential explanation for the sudden rise in homicides.

The homicide rate—particularly its sudden, explosive growth—in Puerto Rico does not align with similarly drastic changes in male unemployment or labor force participation (see Figure 6). In a bivariate regression, male unemployment does not significantly predict the homicide rate from 1947 to 1973 ($p = 0.12$). After 1973, the relationship becomes statistically significant at the 5% level, but the coefficient is positive, suggesting that homicides decrease as the labor market worsens—the opposite of the expected relationship. The spike in homicides in the 1990s is preceded by a dramatic drop in the unemployment rate from a high of 26.7% in 1983 to 16.2% in 1990. More importantly, the initial rise in homicides in the 1970s occurs before the dramatic increase in unemployment.

Likewise, homicides do not mirror labor force participation, which trends downward over four decades but, for instance, slightly increases and then stagnates around the time that homicides surge. The correlation coefficient between the homicide and male unemployment

rates from 1970 to 2010 is -0.51, but this strong correlation is driven by just a few years. For the period from 1973 to 2007, the correlation coefficient drops to -0.07.

Poverty and inequality *declined* in the decades leading up to and during the escalation of violence (Andic & Mann, 1976; Sotomayor, 1996). Growth in real GDP per capita slowed but continued in the 1970s relative to the postwar "miracle," and material living standards rose with increased transfers from the federal government (Devereux, 2019). In sum, none of these factors explain the escalation of violence in Puerto Rico.

Lastly, the initial spike in homicides coincides with the 1973 oil crisis, as Arab oil producers embargoed countries that supported Israel during the Yom Kippur War. Indeed, Puerto Rico was heavily invested in the petrochemical industry, and the oil crisis helps to explain the economic downturn. However, the petrochemical industry was concentrated in the Tallaboa Valley on the island's southwestern coast (Picó, 1974), whereas the increase in homicides occurred almost entirely in and around San Juan in the northeast (see Section 3.6). The oil price shock does not explain the surge in violence.

3.6 The escalation of violence *within* Puerto Rico

Puerto Rico's exceptionally high homicide rates stem from an escalation of violence that began in the early 1970s. While the territory has experienced multiple cycles of violence, particularly in the 1990s and 2000s, the homicide rate has never returned to earlier levels, either in absolute or relative terms. This subsection examines the 1970s escalation by analyzing spatial variation in violence within Puerto Rico. Identifying where violence intensified can offer insights into its underlying causes. A key advantage of studying Puerto Rico is the availability of annual homicide statistics at the *municipio* (county) level.[15]

Figure 7 shows the distribution of changes in homicide counts across Puerto Rican *municipios* from 1968/69 to 1973/74, capturing the period before and after the initial escalation.[16] The median *municipio* saw one additional homicide, while the modal *municipio*

[15] *Municipio* translates to municipality, but *municipios* are US county equivalents.

[16] To reduce noise from small population sizes, homicide counts are averaged over two years at both the

experienced no change. Sixteen of 77 (21%) *municipios* recorded a decline in violence. Yet, the total number of homicides per year more than doubled, rising from 195 to 471 in just five years—an increase driven by a few outliers.

Figure 8 presents a heat map of changes in homicides by *municipio* from 1968/69 to 1973/74. Only seven *municipios* saw an increase of at least ten homicides, and all but one, Ponce, surround San Juan. San Juan and Río Piedras—the latter administratively part of San Juan since 1951—recorded increases of 47 and 65 homicides, respectively, together accounting for 41% of the total increase despite comprising just 17% of the territorial population.[17] Their share of homicides rose from 18% in 1968/69 to 31% in 1973/74.

Including nearby *municipios* with increases of at least ten homicides—Carolina (24), Bayamón (22), Caguas (18), and Guaynabo (10)—this area accounted for two-thirds of the total homicide increase while comprising only one-third of the population. Ponce, on the southern coast, which made up 5.8% of the total population, saw an increase of 12 homicides per year, representing 4.2% of the total rise. Clearly, the escalation of violence was not territory-wide but highly concentrated around San Juan.

Notably, these homicide figures are based on place of residence rather than place of occurrence. Thus, the surge in violence happened near San Juan and may have been even more geographically concentrated than the data suggest.

The spatial concentration of escalating violence near San Juan provides insight into its causes. This pattern helps rule out explanations based on broad cultural or economic trends, as other urban areas—such as Mayagüez and, to a lesser extent, Ponce—did not experience similar increases. A major policy change, such as federal gun restrictions, is also an unlikely cause. Instead, the increase in violence appears to be driven by location-specific factors, consistent with the rise of drug trafficking through the Port of San Juan, where most smuggling occurred (Seibert, 1975).

beginning and end of the period.

[17] Río Piedras merged with San Juan in 1951 but is shown separately in Figure 8 because the Department of Health reported it separately.

4 External validity

This section examines whether Puerto Rico's experience with drug trafficking and violence is unique. Establishing a causal link in panel data with multiple treated units is challenging due to the limited observability of the drug trade and the shifting nature of trafficking routes. Instead, I present descriptive evidence demonstrating that similar patterns of violence and drug trafficking have occurred in other parts of the Caribbean. While Section 3 offers causal evidence, this section demonstrates that, at the very least, the patterns observed in other Caribbean regions do not significantly differ from Puerto Rico's experience.

Figure A1 displays the homicide rate in the United States Virgin Islands (USVI) from 1924 to 2017. The rate fluctuates year-to-year due to the Virgin Islands' small population—22,012 in 1930 and 62,468 in 1970—but the trend is flat for the first several decades. From the 1970s onward, the homicide rate trends continuously upward. The rate averaged 5.8 per 100,000 in the 1920s, 5.1 in the 1930s, 9.9 in the 1940s, 8.8 in the 1950s, 11.8 in the 1960s, 16.9 in the 1970s, 19.7 in the 1980s, 23.4 in the 1990s, 36.6 in the 2000s, and 49.9 in the 2010s. The rise in violence coincides with a period of rapid population growth in the 1970s, making intercensal population counts potentially less reliable. The raw data show an even clearer trend: homicides begin rising steadily around the mid-1970s. While less is known about drug trafficking in the USVI compared to Puerto Rico, by no later than 1980 the USVI had become a hub for drug smuggling into the eastern United States (Goodwin, 1980). USVI police at the time attributed increasing violence in part to the drug trade (Akin, 1980).

Figure A2 presents Jamaica's homicide rate since 1962, which trends upwards throughout most of the sample. The surge of violence from the 1990s onwards is particularly pronounced. But there is also a notable acceleration in the mid-1970s, when the homicide rate per 100,000 increases from 7.7 in 1971 to 20.0 in 1977, maintaining that level until the 1990s except for a spike in 1980. Jamaica's location made it a key transit point for cocaine trafficking, as it lies directly between Colombia and South Florida. Drug-related crime escalated rapidly:

from 1970 to 1974, drug trafficking cases investigated by Jamaican police increased 1,000% compared to the entire 1960s, as petty criminals transitioned to the more lucrative drug trade (Headley, 2014). Investigations of drug trafficking continued to grow steadily throughout the 1970s. By the 1980s, Jamaican traffickers were believed to supply 60% of the crack cocaine entering the United States.

Figure A3 shows a similar pattern in the Bahamas, with an initial spike in the mid-1970s, followed by a surge in the late 1970s and 1980s, coinciding with the expansion of drug trafficking. The Bahamas, located just 50 miles east of South Florida and consisting of 700 islands and 2,000 cays, became a major transshipment point for South American drugs. The earliest arrests for drug trafficking occurred in the mid-1970s, after which the volume of trafficking through the Bahamas grew "exponentially" (Burlington, 1991, p. 63). By 1978, the Bahamas had overtaken Jamaica and Puerto Rico as the primary route for marijuana and cocaine entering the United States from South America (Riding, 1978).

Finally, Figure A4 displays the homicide rate for Trinidad and Tobago, the most populous country in the eastern Caribbean. Because of its larger population (compared to smaller islands like St. Kitts and Nevis, which had just 43,309 people in 1981), its homicide rate is less volatile, making trends easier to discern. Initially, the eastern Caribbean played a minor role in drug trafficking, as its geography made it less convenient for smuggling routes between South America and North America. However, in the 1990s, drug cartels expanded into the region to traffic drugs bound for the European market (Arnold, 2005). This aligns with homicide trends: in the 1980s and 1990s, the homicide rate was typically below 10 per 100,000—similar to the US—but by the 2000s, as cocaine seizures skyrocketed, the rate had more than quadrupled (UNODC and World Bank, 2007), usually exceeding 30 per 100,000.

Taken together, these findings support—or, at least, do not contradict—the conclusion that drug trafficking is the primary driver of the Caribbean's homicide epidemic. Violence increased in the 1970s in the US Virgin Islands, Jamaica, and the Bahamas, around the same time as Puerto Rico. These cases cannot be analyzed using the same counterfactual

approach as Puerto Rico in Section 3 because US states do not provide a plausible donor pool, except perhaps for the Virgin Islands. Even in that case, missing data and the islands' small, rapidly growing population make annual homicide rates noisy and imprecise. Trinidad and Tobago also cannot be evaluated in the same way, as large-scale drug trafficking emerged there much later. Nonetheless, the descriptive evidence is consistent with drug trafficking leading to increased violence.

5 Conclusion

The epidemic of violence in the Caribbean basin is a major development concern, and addressing its root causes could significantly improve living conditions in the region. Identifying these causes should be a priority. Previous research has proposed a variety of explanations. Economic inequality is often cited as a cause, but its slow-moving nature makes it difficult to explain the explosive growth of violence. Additionally, violence does not appear to be closely tied to short-run economic conditions.

The Caribbean has not always been exceptionally violent. Data from the most reliable sources in the region, the British Blue Books and US Vital Statistics, reveal that homicide rates in the early 20th century were, on average, one-fourth as high as they are today and were lower than in the United States. Like inequality, deep-seated cultural explanations cannot explain the timing or explosiveness of the escalating violence.

Some previous studies argue that drug trafficking is the common factor driving violence in the Caribbean, but establishing this link is difficult due to unreliable data on the illegal drug trade. This paper takes a different approach, focusing on the rapid expansion of drug trafficking through Puerto Rico following an exogenous shock, the 1973 Chilean coup, and the subsequent rise in Colombian trafficking. Using synthetic control analysis, the results suggest that Puerto Rico's exceptionally high violence rates began with its increased involvement in the drug trade. Evidence from other Caribbean locations also supports this conclusion.

Unfortunately, the appropriate policy response to drug trafficking in order to reduce violence is not obvious. Some evidence suggests that drug legalization can lower homicide rates, as seen in Mexico after US marijuana legalization (Swanson, 2020). However, there is little global political will to legalize cocaine, heroin, or other hard drugs. Efforts to crack down on trafficking in one area often just shift trade routes elsewhere (Dell, 2015). Moreover, once drug gangs are entrenched, disrupting drug markets can paradoxically increase violence (Werb et al., 2011). Despite the challenges in designing effective policy, the need to identify the causes of violence remains crucial. This paper demonstrates that, as many suspect, drug trafficking is the primary driver of exceptionally high homicide rates in the Caribbean, and public policy should focus on addressing this issue.

References

Abadie, A., Diamond, A., & Hainmueller, J. (2010). Synthetic control methods for comparative case studies: Estimating the effect of California's tobacco control program. *Journal of the American Statistical Association*, *105*(1), 493-505.

Akin, B. (1980, July 20). US Virgin Islands: Problem paradise. *Washington Post*. Retrieved from https://www.washingtonpost.com/archive/lifestyle/1980/07/20/us-virgin-islands-problem-paradise/30604b5c-7375-42bd-9d07-1c627b86e64b/

Andic, F. M., & Mann, A. J. (1976). Secular tendencies in the inequality of earnings in Puerto Rico. *Review of Social Economy*, *34*(1), 13-32.

Angrist, J. D., & Kugler, A. D. (2008). Rural windfall or a new resource curse? Coca, income, and civil conflict in Colombia. *Review of Economics and Statistics*, *90*(2), 191-215.

Arnold, G. (2005). *The international drugs trade*. New York: Routledge.

Briceño León, R., Villaveces, A., & Concha-Eastman, A. (2008). Understanding the uneven distribution of the incidence of homicide in Latin America. *International Journal of Epidemoiology*, *37*(4), 751-757.

Brignoni, B. (1978, September 13). San Juan es segundo lugar donde más cocaína se confisca en EU. *El Mundo*. Retrieved from https://gpa.eastview.com/crl/elmundo

Burlington, B. (1991). A smugglers paradise: Cocaine trafficking through the Bahamas. *Crime, Law and Social Change*, *16*, 59-83.

Caruana-Galizia, P. (2015). Strategic colonies and economic development: Real wages in Cyprus,Gibraltar, and Malta, 1836-1913. *Economic History Review*, *68*(4), 1250-1276.

Carvalho, J.-P., & Dippel, C. (2020). Elite identity and political accountability: A tale of ten islands. *Economic Journal*, *130*(631), 1995-2029.

Causwell, A. (2023, 17). *Moving on from the "culture of violence" myth.* Caribbean Policy Research Institute. Retrieved from https://www.capricaribbean.org/blog/moving-culture-violence-myth (Accessed: 2025-01-13)

Central Intelligence Agency. (2023, October 19). Trinidad and Tobago. *The World Factbook*. Retrieved from https://www.cia.gov/the-world-factbook/countries/trinidad-and-tobago

Clancy, A., Brookman, F., & Maguire, E. (2019). *Gang-related Homicide and Police Corruption in Trinidad and Tobago: A Rapid Evidence Assessment.* (Report commissioned by Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services). Kensington: University of New South Wales.

Cole, J. H., & Marroquín Gramajo, A. (2009). Homicide rates in a cross-section of countries: Evidence and interpretations. *Population and Development Review*, *35*(4), 749-776.

Concha-Eastman, A., Muñoz, E., & Rennó-Santos, M. (2020). Homicides in Latin America and the Caribbean. In X. Bada & L. Rivera-Sánchez (Eds.), *The Oxford Handbook of the Sociology of Latin America* (p. 697-716). Oxford University Press.

Croci, G., & Chainey, S. (2023). An institutional perspective to understand Latin America's high levels of homicide. *British Journal of Criminology*, *63*(5), 1199-1218.

de Albuquerque, K. (1984). A comparative analysis of violent crime in the Caribbean. *Social and Economic Studies*, *33*(3), 93-142.

de Albuquerque, K., & McElroy, J. L. (1999). A longitudinal study of serious crime in the Caribbean. *Caribbean Journal of Criminology and Social Psychology*, *4*(1/2), 32-70.

Dell, M. (2015). Trafficking networks and the Mexican drug war. *American Economic Review*, *105*(6), 1738-1779.

Demombynes, G. (2011). *Drug Trafficking and Violence in Central America and Beyond.* (World Development Report Background Papers 62031). Washington, DC: World Bank.

Devereux, J. (2019). Arrested development? Puerto Rico in an American century. *Journal of Economic History*, *79*(3), 708-735.

Dietz, J. L. (1986). *Economic history of Puerto Rico: Institutional change and capitalist development.* Princeton, NJ: Princeton University Press.

Dills, A. K., Miron, J. A., & Summers, G. (2010). What do economists know about crime? In R. Di Tella, S. Edwards, & E. Schargrodsky (Eds.), *The economics of crime: Lessons for and from Latin America* (p. 269-304). University of Chicago Press.

Dippel, C., Greif, A., & Trefler, D. (2020). Outside options, coercion and wages: Removing the sugar coating. *Economic Journal*, *130*(630), 1678-1714.

Eckberg, D. L. (1995). Estimates of early twentieth-century U.S. homicide rates: An econometric forecasting approach. *Demography*, *32*(1), 1-16.

El aumento en el crimen. (1973, April 5). *El Mundo*. Retrieved from https://gpa.eastview.com/crl/elmundo

Enamorado, T., López-Calva, C., Luis F.and Rodríguez-Castelán, & Winkler, H. (2016). Income inequality and violent crime: Evidence from Mexico's drug war. *Journal of Development Economics*, *120*, 128-143.

Evans, W. N., Garthwaite, C., & Moore, T. J. (2022). Guns and violence: The enduring impact of crack cocaine markets on young black males. *Journal of Public Economics*, *206*.

Fajnzylber, P., Lederman, D., & Loayza, N. (1998). *Determinants of crime rates in Latin America and the world: An empirical assessment.* Washington, DC: World Bank.

Fajnzylber, P., Lederman, D., & Loayza, N. (2002a). Inequality and violent crime. *Journal of Law and Economics*, *45*(1), 1-39.

Fajnzylber, P., Lederman, D., & Loayza, N. (2002b). What causes violent crime? *European Economic Review*, *46*(7), 1323-1357.

Fourie, J. (2016). The data revolution in African economic history. *Journal of Interdisciplinary History*, *47*(2), 193-212.

Gage, N. (1975, April 21). Latins now leaders of hard-drug trade. *New York Times*. Retrieved from https://www.nytimes.com/1975/04/21/archives/latins-now-leaders-of-harddrug-trade-operators-of-rings-supplying.html

Gaviria, A. (2000). Increasing returns and the evolution of violent crime: The case of Colombia. *Journal of Development Economics*, *61*, 1-25.

Gaviria, A. (2010). Comment on "Understanding high crime rates in Latin America: The role of social and policy factors". In R. Di Tella, S. Edwards, & E. Schargrodsky (Eds.), *The economics of crime: Lessons for and from Latin America* (p. 56-60). University of Chicago Press.

Godoy, R. (2008). Is homicide in Puerto Rico high? *Economics and Human Biology*, *12*(2), 188-207.

Goodwin, M. (1980, February 14). Top police aide says drug traffic yields corruption in Virgin Islands. *New York Times*. Retrieved from https://www.nytimes.com/1980/02/15/archives/top-police-aide-says-drug-traffic-yields-corruption-in-virgin.html

Gootenberg, P. (2008). *Andean cocaine: The making of a global drug*. Chapel Hill: University of North Carolina Press.

Gootenberg, P. (2012). Cocaine's long march north, 1900-2010. *Latin American Politics and Society*, *54*(1), 159-180.

Griffith, I. L. (1996). Drugs and criminal justice in the Caribbean. *Caribbean Quarterly*, *42*(2/3), 72-86.

Grosjean, P. (2014). A history of violence: The culture of honor and homicide in the US South. *Journal of the European Economic Association*, *12*(5), 1285-1316.

Gúzman, S. (1975, January 13). Ven nexo drogas, ola de asesinatos. *El Mundo*. Retrieved from https://gpa.eastview.com/crl/elmundo

Headley, B. D. (2014). War ina "Babylon": Dynamics of the Jamaican informal drug economy. *Dynamics of the Informal Economy*, *15*(3/4), 33-34.

Heinemann, A., & Verner, D. (2006). *Crime and Violence in Development: A Literature Review of Latin America and the Caribbean*. (World Bank Policy Research Working Paper 4041). Washington, DC: World Bank.

Howe, M. (1973, May 3). Colombia fights traffic in drugs. *New York Times*. Retrieved from https://www.nytimes.com/1973/05/03/archives/colombia-fights-traffic-in-drugs-smuggling-of-narcotics-is-seen-as.html

Jaitman, L., & Guerrero Compeán, R. (2015). *Closing Knowledge Gaps: Toward Evidence-based Crime Prevention Policies in Latin America and the Caribbean.* (Technical Note No. IDB-TN-848). Washington, DC: Inter-American Development Bank.

Kandell, J. (1973, November 16). Chile helping US fight drug rings. *New York Times*. Retrieved from https://www.nytimes.com/1973/11/16/archives/chile-helping-us-fight-drug-rings-10-seized-in-cocaine-traffic-face.html

Kanis, S., Messner, S. F., Eisner, M. P., & Heitmeyer, W. (2017). A cautionary note about the use of estimated homicide data for cross-national research. *Homicide Studies*, *21*(4), 312-324.

King, W. (1975, January 30). Drive on drug smuggling focusing on Florida area. *New York Times*. Retrieved from https://www.nytimes.com/1975/01/30/archives/drive-on-drug-smuggling-focusing-on-florida-area-drive-on-drug.html

LaFree, G. (1999a). Declining violence crime rates in the 1990s: Predicting crime booms and busts. *Annual Review of Sociology*, *25*, 146-168.

LaFree, G. (1999b). A summary review of cross-national comparative studies of homicide. In M. Smith & M. Zahn (Eds.), *Homicide: A sourcebook of social research* (p. 125-145). London: Sage.

Lappi-Seppälä, & Lehti, M. (2014). Cross-comparative perspectives on global homicide trends. *Crime and Justice*, *43*(1), 135-230.

Lehti, M. (2013). *NRILP Comparative Homicide Time Series (NRILP-CHTS): Homicide trends from 1950 until 2012.* (Research Brief 32/2013). Helsinki: National Research Institute of Legal Policy.

Lernoux, P. (1973, November 22). Cocaína invade Estados Unidos vía Latinoamérica. *El Mundo*. Retrieved from https://gpa.eastview.com/crl/elmundo

Mahapatra, P., Shibuya, K., Lopez, A. D., Coullare, F., Notzon, F. C., Rao, C., & Szreter, S. (2007). Civil registration systems and vital statistics: Successes and missed opportunities. *The Lancet*, *370*(9599), 1653-1563.

McDowall, D., & Loftin, C. (2009). Do US city crime rates follow a national trend? the influence of nationwide conditions on local crime patterns. *Journal of Quantitative Criminology*, *25*, 304-324.

Miraglia, P. (2015). *Drugs and Drug Trafficking in Brazil: Trends and Policies.* (Improving Global Drug Policy: Comparative Perspectives and UNGASS 2016). Washington, DC: Brookings Institution.

Nadal Ferrería, J. (2012). The colossal cost of subsidizing failure: How the Drug War impacts Puerto Rico's budget. *Revista Jurídica – Universidad de Puerto Rico*, *81*(4), 1139-1166.

Neapolitan, J. L. (1994). Cross-national variation in homicides: The case of Latin America. *International Criminal Justice Review*, *4*, 4-22.

Ouimet, M. (2012). A world of homicides: The effect of economic development, income inequality, and excess infant mortality on the homicide rate for 165 countries in 2010. *Homicide Studies*, *16*(3), 238-258.

Palloni, A., Pinto, G., Beltrán-Sánchez, H., & Verhulst, A. (2021). *The Latin American Mortality Database (LAMBdA): Methoodological Document (Version II).* Madison, WI: University of Wisconsin. Retrieved from https://www.ssc.wisc.edu/cdha/latinmortality2/wp-content/uploads/LAMBdA_documentation.pdf

Patterson, O. (2019). *The confounding island: Jamaica and the postcolonial predicament.* Cambridge: Harvard University Press.

Picó, R. (1974). *The geography of Puerto Rico.* Chicago: Aldine Publishing Company.

Puerto Rico Planning Board. (1987). *External Trade Statistics: 1985.* San Juan: Bureau of Economic Analysis.

Puerto Rico Planning Board. (2010). Criminalidad en Puerto Rico: Serie historica 1900-2009.

Reguero, J. R. (1975, Martes 11). Confiscan cocaína por valor $15 millones. *El Mundo*. Retrieved from https://gpa.eastview.com/crl/elmundo

Riding, A. (1978, May 21). Bahamas has become main avenue for marijuana and cocaine illegally entering US. *New York Times*. Retrieved from https://www.nytimes.com/1978/05/21/archives/bahamas-has-become-main-avenue-for-marijuana-and-cocaine-illegally.html

Rivera, M. (2016). The sources of social violence in Latin America: An empirical analysis of homicide rates, 1980–2010. *Journal of Peace Research*, *53*(1), 84-99.

Rody, F. A. (1979). The southeastern region. *Drug Enforcement*, *6*(3), 11-13.

Schargrodsky, E., & Freira, L. (2021). *Inequality and Crime in Latin America and the Caribbean: New Data for an Old Question.* (UNDP LAC Working Paper No. 13. Background Paper for the UNDP LAC Regional Human Development Report 2021.). New York: United Nations Development Programme.

Seibert, R. U. (1975, November). *Statement of Ronald U. Seibert, Special Agent in Charge of the Drug Enforcement Administration.* Testimony before the Subcommittee on Coast Guard and Navigation, Committee on Merchant Marine and Fisheries, US House of Representatives. (Hearing on *Drug smuggling*, November 21)

Soares, R. R., & Naritomi, J. (2010). Understanding high crime rates in Latin America: The role of social and policy factors. In R. Di Tella, S. Edwards, & E. Schargrodsky (Eds.), *The economics of crime: Lessons for and from Latin America* (p. 19-55). University of Chicago Press.

Sotomayor, O. J. (1996). Poverty and income inequality in Puerto Rico, 1969-89: Trends and sources. *Review of Income and Wealth*, *42*(1), 49-61.

Speck, M. (2022, April 6). El Salvador needs long-term solutions to end cycles of violence. *United States Institute of Peace*. Retrieved from https://www.usip.org/publications/2022/04/el-salvador-needs-long-term-solutions-end-cycles-violence#:~:text=Criminal%20violence%20was%20killing%20Salvadorans,been%20falling%20steadily%20since%20then.

Sviatschi, M. M. (2022). Spreading gangs: Exporting US criminal capital to El Salvador. *American Economic Review*, *112*(6), 1985-2024.

Swanson, S. P. (2020). *Declining Deadly Demand? The Impact of US Marijuana Liberalization on Violence in Mexico.* (Working Paper No. 20-06). University of Colorado Boulder.

Thoumi, F. E. (1996). Why the illegal psychoactive drugs industry grew in Colombia. In B. Bagley & W. Walker III (Eds.), *Drug trafficking in the Americas* (p. 77-96). Miami: North-South Center Press.

UN Development Programme. (2023, August 31). An epidemic on the move: The shifting landscape of citizen security in Latin America and the Caribbean. *UNDP*. Retrieved from https://www.undp.org/latin-america/blog/epidemic-move-shifting-landscape-citizen-security-latin-america-and-caribbean

United Press International. (1975, Mar 25). Solicitan cambios aduana PR para atacar flujo de drogas. *El Mundo*, 1, 14.

UNODC. (2019). *Global Study on Homicide.* Vienna: United Nations Office of Drugs and Crime.

UNODC. (2023). *UNODC Research - Data Portal – Intentional Homicide. [dataset].* (Data retrieved from https://dataunodc.un.org/dp-intentional-homicide-victims)

UNODC and World Bank. (2007). *Crime, Violence, and Development: Trends, Costs, and Policy Options in the Caribbean.* (Report 37820). Washington, DC: United Nations Office on Drugs and Crime and World Bank.

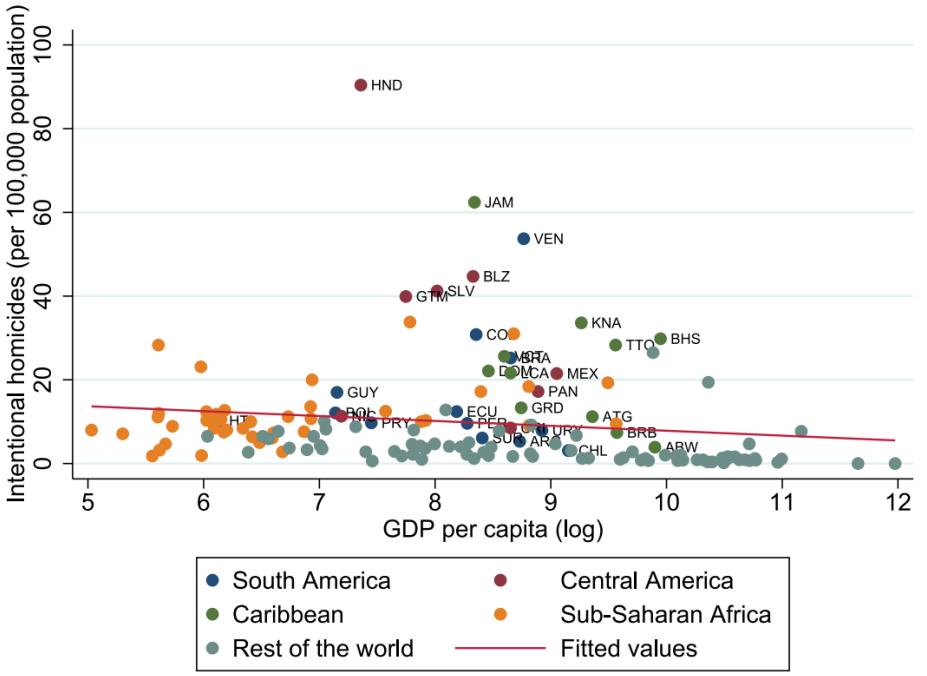
van Dijk, J. (2013). It is not just the economy: Towards an alternative explanation of post-World War II crime trends in the Western world. In S. Body-Gendrot, M. Hough, K. Kerezsi, R. Lévy, & S. Snacken (Eds.), *The routledge handbook of european criminology* (p. 109-124). Routledge.

Werb, D., Rowell, G., Guyatt, G., Kerr, T., Montaner, J., & Wood, E. (2011). Effect of drug law enforcement on drug market violence: A systematic review. *International Journal of Drug Policy*, *22*(2), 87-94.

Westland, T. (2022). How accurate are the prices in the British colonial Blue Books? *Economic History of Developing Regions*, *37*(1), 75-99.

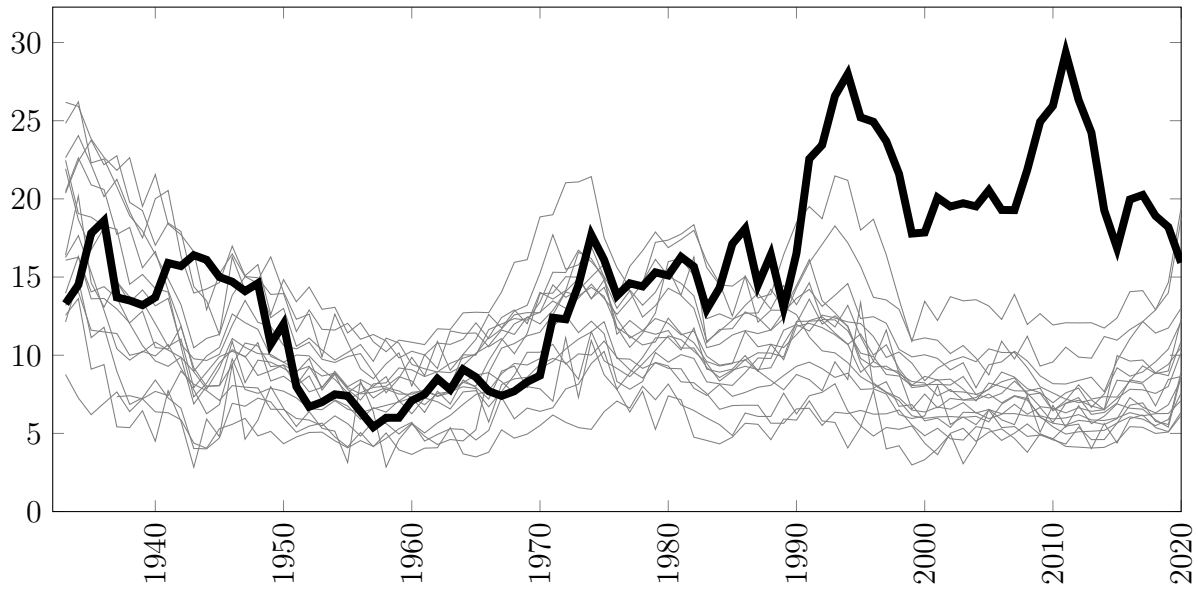
A Figures

Figure 1: Homicide rate and GDP per capita



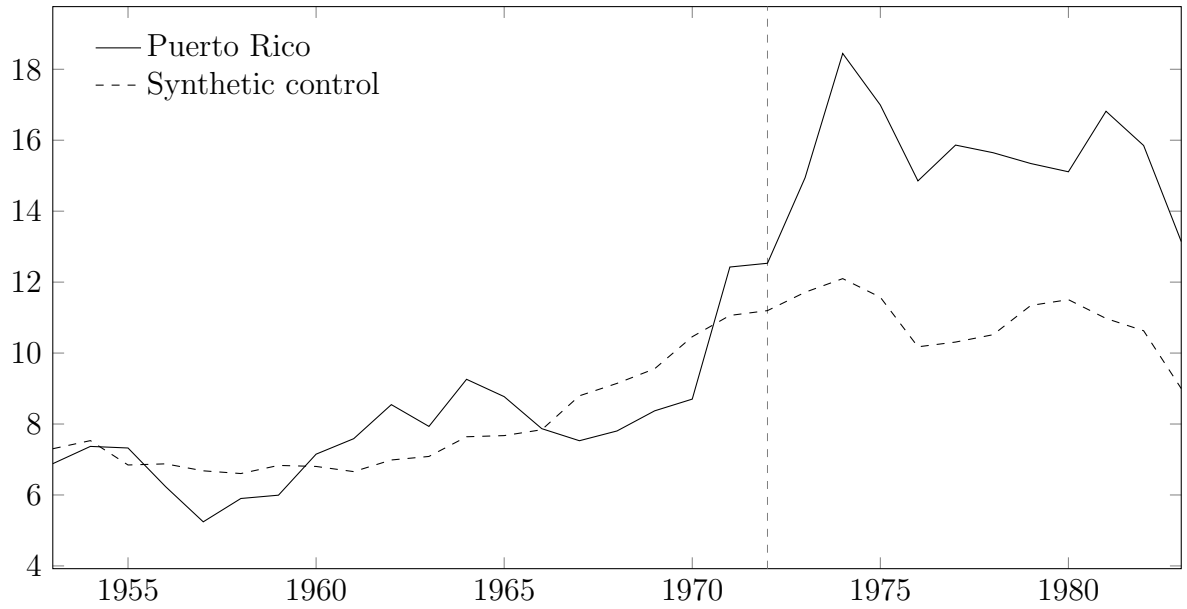
Source: Jaitman & Guerrero Compeán (2015)
Note: Fitted values also control for inequality and poverty levels.

Figure 2: Homicide rates in the US South and Puerto Rico, 1932-2020



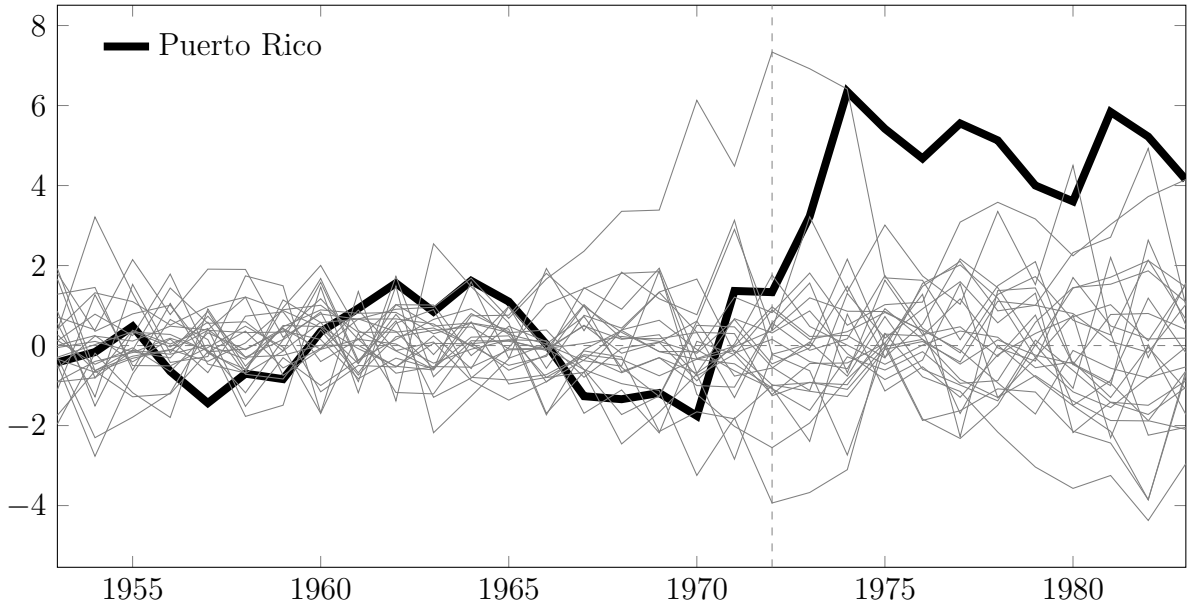
Source: US Vital Statistics
Notes: The black line is Puerto Rico. Grey lines are southern states as defined by the US Census Bureau. DC is excluded.

Figure 3: The effect of the early 1970s increase in drug trafficking on homicides



Notes: The dependent variable is the homicide rate per 100,000 population. The synthetic control is based on a donor pool consisting of 24 states states with below median household income, excluding Florida, and is determined by homicide rates from 1953 to 1972 and the urbanization rate in 1970. The vertical dashed line represents 1972, the year just prior to the 1973 Chilean coup.

Figure 4: Synthetic control difference in trends



Notes: Each line represents the difference between the homicide rate (in Puerto Rico and 24 placebo states, respectively) and a synthetic control based on a pool of all donor pool states. Puerto Rico is excluded from the donor pool. The vertical dashed line represents 1972, the year just prior to the 1973 Chilean coup.

Figure 5: Histogram of Post/Pre RMSPE Ratios for In-space Placebo Tests

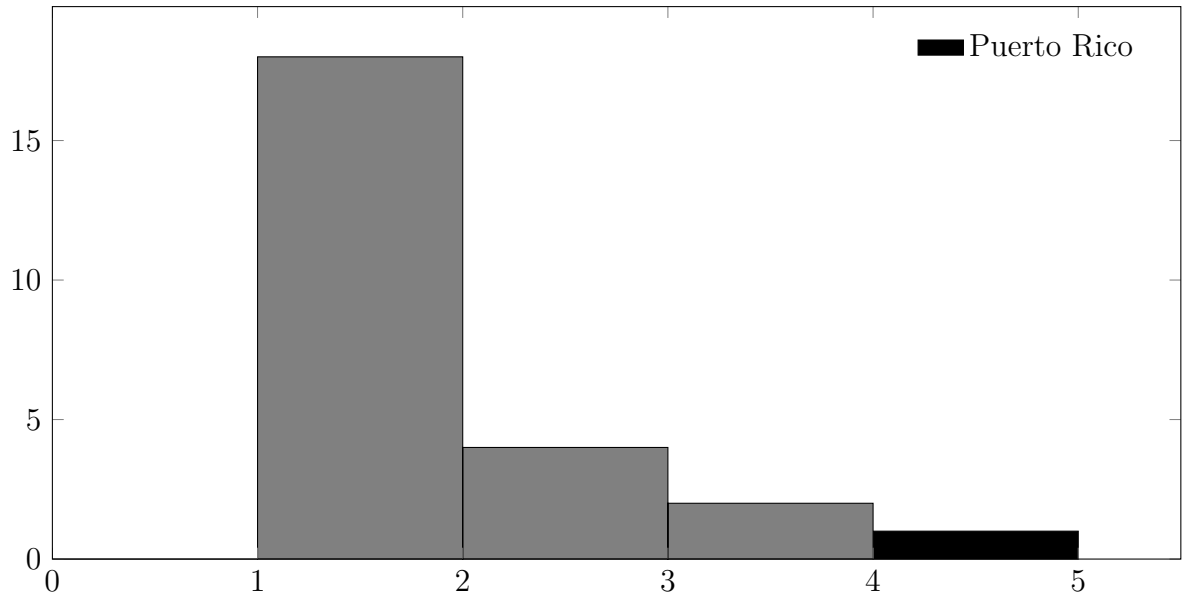
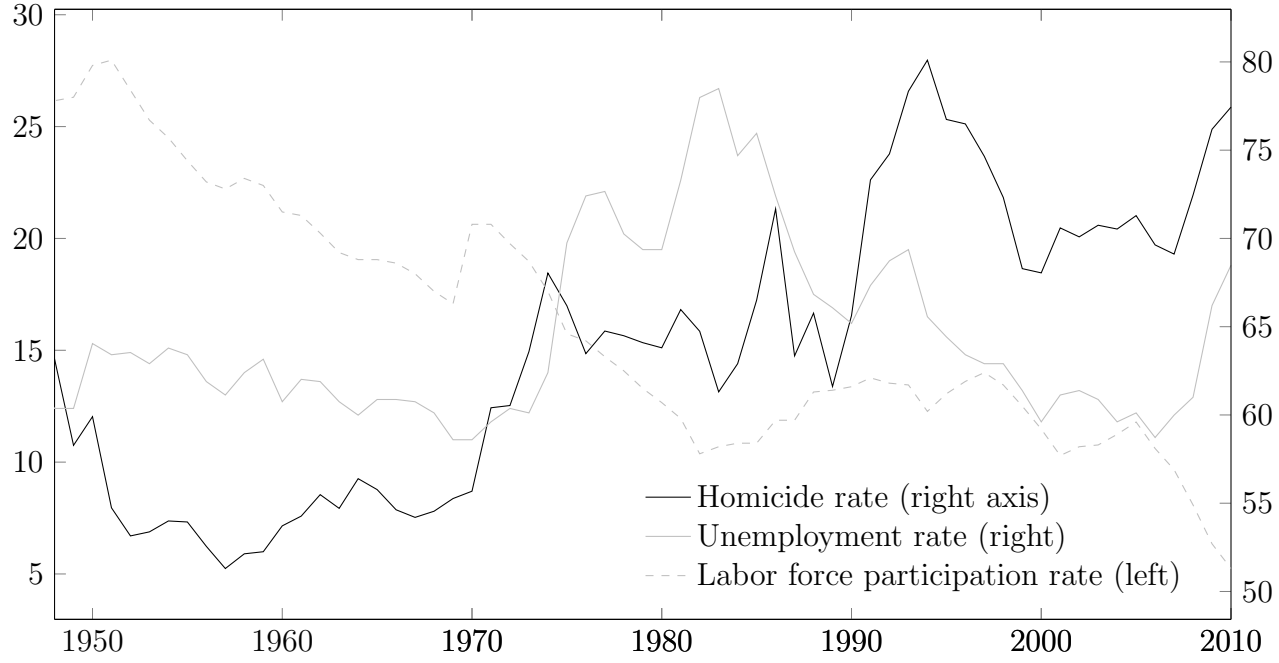
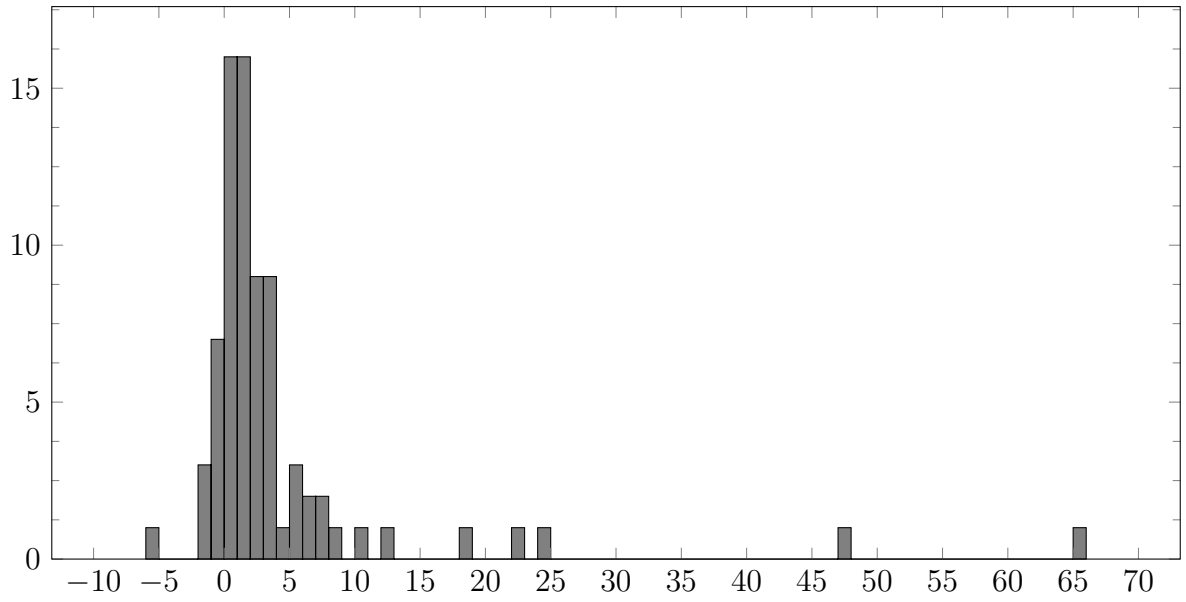


Figure 6: Homicides and labor market conditions for men in Puerto Rico, 1947-2010



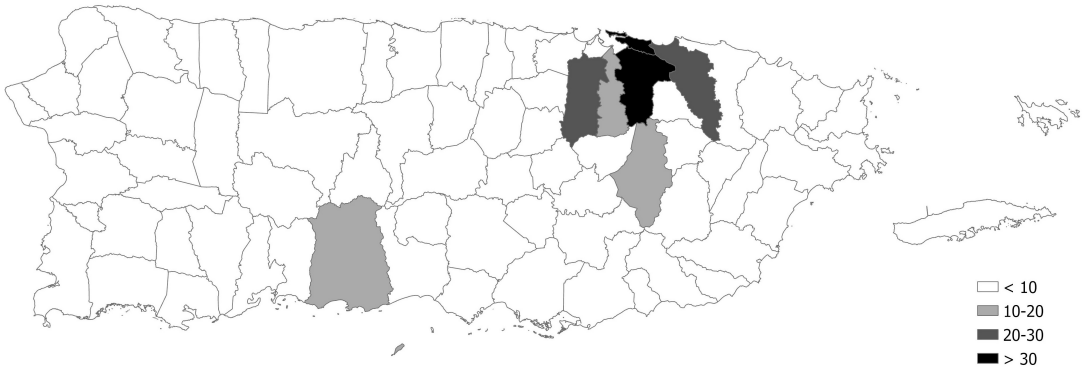
Sources: US Vital Statistics and Puerto Rico Department of Labor

Figure 7: Histogram of changes in homicides in Puerto Rico *municipios*, 1968/69-1973/4



Source: Puerto Rico Department of Health
Note: Changes are the difference between the average number of homicides per year from 1968-69 to 1973-74.

Figure 8: Increase in homicides in Puerto Rico from 1968/69-1973/4, by *municipio*



Source: Puerto Rico Department of Health
Notes: Río Piedras is shown as its own *municipio* in alignment with Puerto Rico's reporting of vital statistics.
Changes are the difference between the average number of homicides per year from 1968-69 to 1973-74.

B Tables

Table 1: Average homicide rates per 100,000 population in selected areas

	1924-38	2007-21
British dependencies		
Bahamas	3.8	27.0
Barbados	2.6	10.3
Bermuda	4.6	8.4
British Guiana (Guyana)	6.1	17.9
British Honduras (Belize)	6.9	34.6
Grenada	3.2	8.6
Jamaica	5.0	49.1
Leeward Islands	5.1	
Anguilla (UK)		15.0
Antigua & Barbuda		14.2
Dominica		16.7
Montserrat (UK)		10.2
St. Kitts & Nevis		44.0
Virgin Islands (UK)[1]		8.2
St. Lucia	1.4	23.5
St. Vincent & the Grenadines	1.3	28.2
Trinidad & Tobago	6.4	30.9
US dependencies		
Puerto Rico	14.5	21.2
Virgin Islands	5.3	45.1
Others		
England and Wales	0.8	1.1
Canada	1.5	1.8
United States[2]	8.4	5.4
South[3]	15.8	7.7
Deep South[4]	19.8	10.1

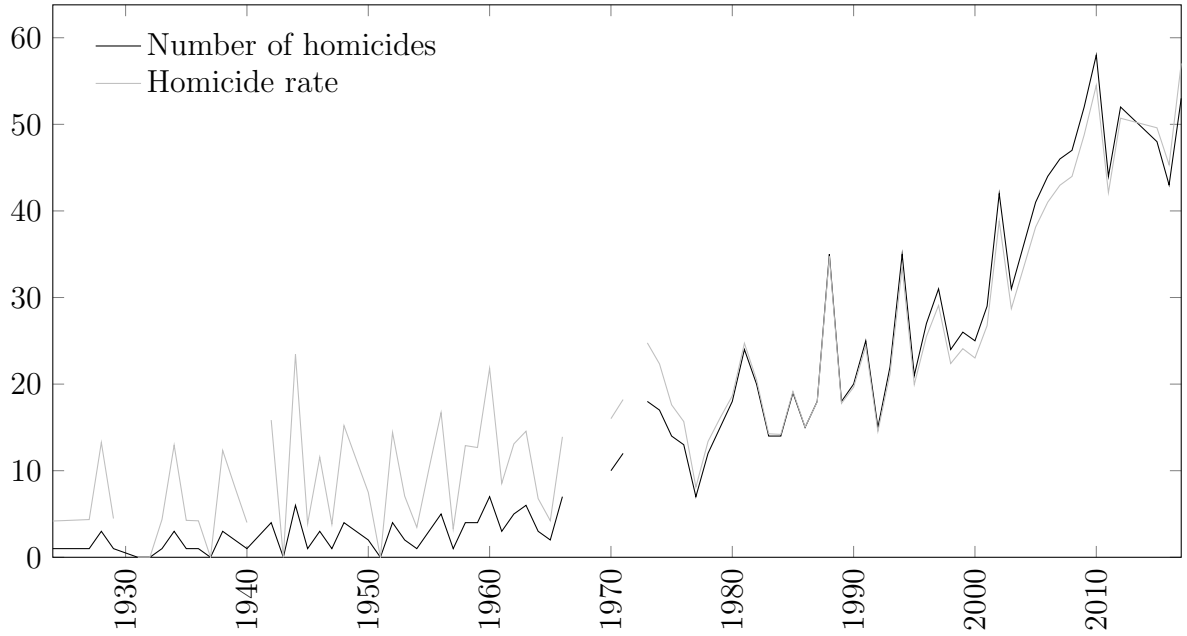
Sources: 1923-38: British Blue Books, US Vital Statistics, Eckberg (1995), UK Home Office, and Statistics Canada; 2006-2021: US Vital Statistics, UN Office of Drugs and Crime.
[1]Data for 2007-21 are from 2006 only.
[2]Excludes AK and HI. Data from 1924-38 only include 1933-38 to avoid changing composition in the Death Registration Area.
[3]Includes AL, AR, DE, FL, GA, KY, LA, MD, MS, OK, NC, SC, TN, TX, VA, and WV. Excludes DC for consistency with the rest of the paper.
[4]Includes AL, GA, LA, MS, and SC.

Table 2: Weights for synthetic control

Georgia	0.134
Texas	0.096
Alabama	0.053
Louisiana	0.048
South Carolina	0.047
Mississippi	0.045
Tennessee	0.043
North Carolina	0.042
Virginia	0.041
Missouri	0.04
New Mexico	0.04
Kentucky	0.037
Arkansas	0.036
Oklahoma	0.036
Kansas	0.03
Wyoming	0.03
Montana	0.028
West Virginia	0.028
Idaho	0.027
Nebraska	0.027
Maine	0.024
South Dakota	0.024
North Dakota	0.022
Vermont	0.022

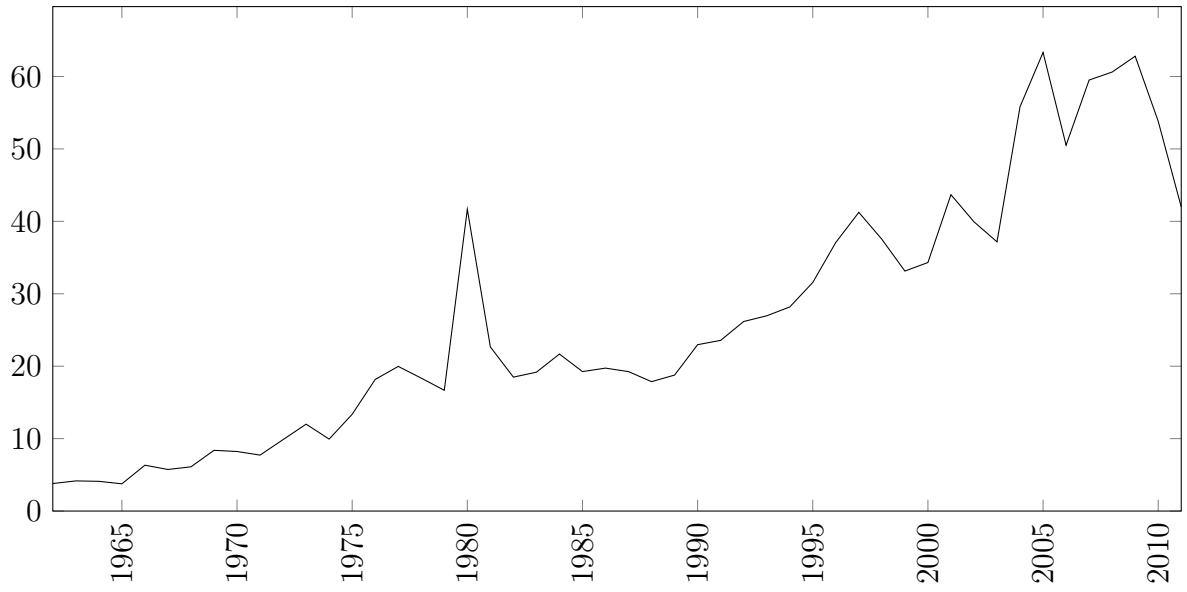
C Additional Figures

Figure A1: Homicides in the US Virgin Islands, 1924-2017



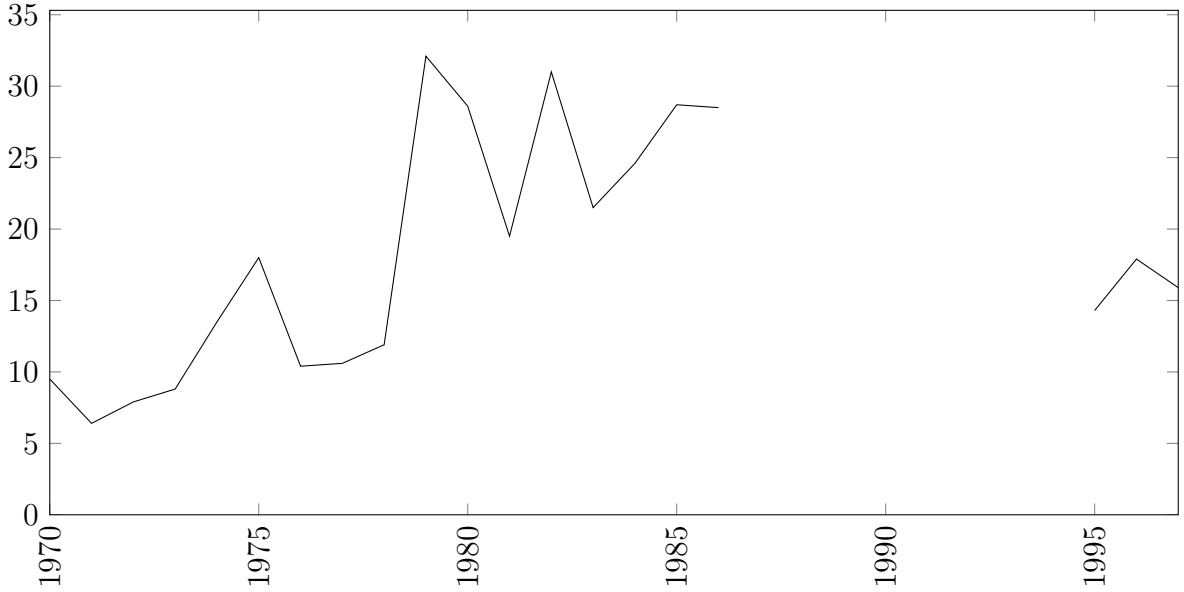
Source: US Vital Statistics

Figure A2: Homicide Rate in Jamaica, 1962-90



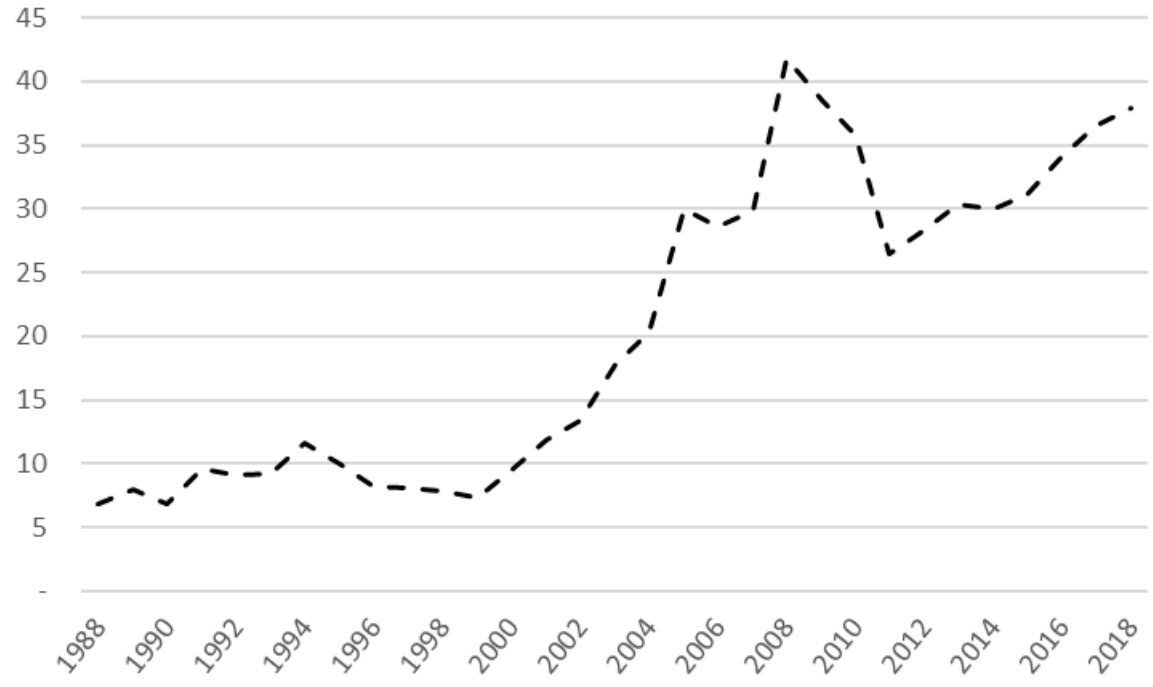
Source: Jamaica Constabulary Force

Figure A3: Homicide rate in the Bahamas, 1970-1997



Source: UN Crime Surveys

Figure A4: Homicide rate in Trinidad and Tobago, 1988-2018



Source: Clancy et al. (2019)