



Forensic detectives investigate the murder of a man who was killed in front of his wife on the stairs of his apartment block, Culiacán, Mexico, November 2009.

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A Fatal Relationship

GUNS AND DEATHS IN LATIN AMERICA AND THE CARIBBEAN

INTRODUCTION

Armed violence is a defining problem for contemporary Latin America and the Caribbean (Davis, 2006, p. 178).¹ Many countries in the region suffer from rates of armed violence as high or higher than those in countries affected by war (Geneva Declaration Secretariat, 2011, pp. 51–65).

Some countries in the region not only show significantly higher homicide rates than countries elsewhere, but their security situation is also deteriorating. Homicide rates are generally increasing, and the brutality of the violence in some countries can be extraordinary. For example, in May 2011, neighbours of a remote ranch in northern Guatemala found the bodies of 27 farm workers, including two women and three teenagers. All but two had been decapitated (ICG, 2011, p. 2). While the killings were gruesome, even by the standards of the country's long history of violence, attacks of this kind are not unheard of in several countries in Latin America and the Caribbean.

Firearms are a defining feature of armed violence in the region. Specifically, the proportions of homicides committed with firearms in the majority of countries in Latin America and the Caribbean are higher than elsewhere in the world, although they vary considerably within the region.² To date, firearm homicide levels and trends have not been subject to any comprehensive reviews; nor have studies been carried out on the types of firearms most commonly used in the region. This chapter aims to address this knowledge gap.

The main findings are:

- In 21 of 23 countries in Latin America and the Caribbean for which data has been reviewed, proportions of homicides committed with firearms were higher than the global average (42 per cent). The exceptions were Cuba and Suriname.
- Having experienced increases in homicide rates between 1995 and 2010, El Salvador, Guatemala, Honduras, Jamaica, and Venezuela all suffer from very high homicide rates (>30 per 100,000). Together with Brazil, Colombia, Panama, and Puerto Rico, these countries also exhibit very high proportions of homicides committed with firearms (>70 per cent).
- In contrast, Argentina, Chile, Cuba, Peru, Suriname, and Uruguay report low homicide rates (<10 per 100,000), improving or stable trends between 1995 and 2010, and a proportion of firearm homicides below 60 per cent.
- Like the rest of the world, countries in Latin America and the Caribbean appear to show a positive relationship between the national homicide rate and the percentage of firearms used in homicides. That is, higher homicide rates are usually accompanied by higher percentages of firearms used in homicides.
- While evidence is scarce, it does suggest that pistols and revolvers predominate in firearm homicides in Latin America and the Caribbean; however, further research is needed on the different types of firearms and perpetrators involved in different categories of armed violence.

The chapter is divided into four parts. The first section provides an overview of firearm homicides in Latin America and the Caribbean and discusses the methodology used to establish a database on homicides and firearm homicides. It then analyses the relationship between national homicide rates and the proportion of firearm homicides, presents trends in homicide rates between 1995 and 2010, and provides a cross-country comparison of firearm homicides on the basis of 2010 data. The second section unpacks some patterns and characteristics of firearm homicides in the different countries and sub-regions. It looks at Mexico, the Northern Triangle (El Salvador, Guatemala, and Honduras), southern Central America (Costa Rica, Nicaragua, and Panama), the Caribbean, Colombia and Venezuela, Brazil, and the Southern Cone sub-region (Argentina, Chile, Paraguay, and Uruguay). The third section presents the results of an extensive literature review on the type and origins of firearms most commonly involved in homicides in the region. The final section outlines topics for further research, including the availability of firearms, the presence of youth gangs and drug-trafficking organizations, and impunity in relation to firearm homicides.

FIREARM HOMICIDES: AN OVERVIEW

Armed violence has a range of impacts—from loss of property to feelings of insecurity and fear, emotional suffering, physical injury, and death. Homicide, commonly defined as an ‘unlawful death purposefully inflicted on a person by another person’, is a useful, but imperfect, indicator for assessing levels of armed violence (UNODC, 2011, p. 10). While homicide data is typically more accessible than other types of armed violence measures, it does not reflect non-fatal types of violence and crime, such as armed robberies, kidnappings, assaults, sexual violence, or non-fatal firearm injuries (NON-LETHAL VIOLENCE). Nor does it include suicides or unintentional firearm deaths. Furthermore, homicides are rarely recorded as such if the body is not found; consequently, in unresolved cases of enforced or involuntary disappearances that result in the killing of victims, the deaths are not necessarily recorded (Geneva Declaration Secretariat, 2011, p. 50). Thus, although homicide rates are useful proxies, they frequently under-count the actual numbers of deaths and only provide a partial picture of armed violence victimization.

Box 1.1 Compiling statistics on firearm homicides

In most countries, all natural and non-natural deaths are certified and registered. Information on a death generally comes from death certificates—which are typically filled out at hospitals, health clinics, emergency rooms, mortuaries, or forensic institutes. These records are usually integrated into national health statistics. Ideally, deaths are coded according to the International Classification of Diseases, currently in its tenth revision. A homicide is recorded as a fatal ‘assault’,³ which covers ‘injuries inflicted by another person with intent to injure or kill’ (WHO, n.d.). Sub-categories can capture the type of weapon used to commit the assault.

The criminal justice system is the second major source of homicide data and its statistics are among the most comprehensive. Since this information typically concerns illegal killings, the police and the criminal justice system investigate the intent of the killing, creating statistics on intentional homicides (Geneva Declaration Secretariat, 2011, p. 50). While the most important sources of criminal justice data are the statistics of the national police, the records from forensic institutes and legal medicine bureaus are also key.

How is relevant data recorded following a homicide? The Instituto de Medicina Lega (Institute of Forensic Medicine, IML) in San Salvador, for one, indicates that the first step concerns the scientific investigation of the crime scene. Once IML staff have secured and registered the elements at the crime scene, they transfer the body of the victim to the IML, where they identify the cause of death and secure any further evidence in and on the body of the victim (such as bullets). This evidence is processed by the Laboratorio de Investigación Científica del Delito (Laboratory for the Scientific Investigation of Crime), which undertakes a ballistic examination of the bullets and cartridges recovered at a crime scene, among other relevant evidence. In the Salvadoran case, homicide statistics are produced by the IML and include information on whether a firearm or other instrument was used to commit the homicide.⁴

Establishing a methodology

For purposes of this chapter, the Small Arms Survey created a database on homicides and firearm homicides for the period 1995 to 2010. The data is drawn from public health and criminal justice statistics (see Box 1.1); source material used for the *Global Burden of Armed Violence 2011* report (Geneva Declaration Secretariat, 2011); and the United Nations Office on Drugs and Crime (UNODC) homicide statistics (UNODC, n.d.). Additional information and clarifications were directly requested from national statistical offices of all countries in Latin America and the Caribbean.

Once all sources had been compiled, several time series from varying sources were available for most countries. The most reliable source for each country was then selected based on careful consideration of the characteristics of the available data and communication with the statistical offices. Preference was given to sources that included the longest time series of data on homicides and proportions of homicides committed with firearms. Whenever several comprehensive data sources were available for a single country, a selection was made based on the following criteria: the accessibility of the sources (publicly available data); the clarity of the sources (such as provided definitions); consistency in the elaborated time series (regular reporting); and up-to-date reporting.⁵ The resulting Small Arms Survey Database covers the years between 1995 and 2010 and includes a total of 34 countries in the three sub-regions of Central America, the Caribbean, and South America for which data on homicide rates is available for at least five consecutive years.⁶

At the global level, 42 per cent of firearms are committed with firearms.

Patterns of firearm homicides

At the global level, 42 per cent of homicides are committed with firearms (UNODC, 2011, p. 10). Yet the majority of countries in Latin America and the Caribbean have significantly higher proportions of firearm homicides than this global average. For the year 2010, or the latest year for which data is available, the Small Arms Survey Database suggests that firearms were used in an average of 70 per cent of homicides in Central America; that average drops to 61 per cent in the Caribbean and 60 per cent in South America.⁷ Overall, the figures stand in stark contrast to those of Asia and Europe, where only 22 and 24 per cent of homicides are carried out with firearms, respectively (Geneva Declaration Secretariat, 2011, p. 99).

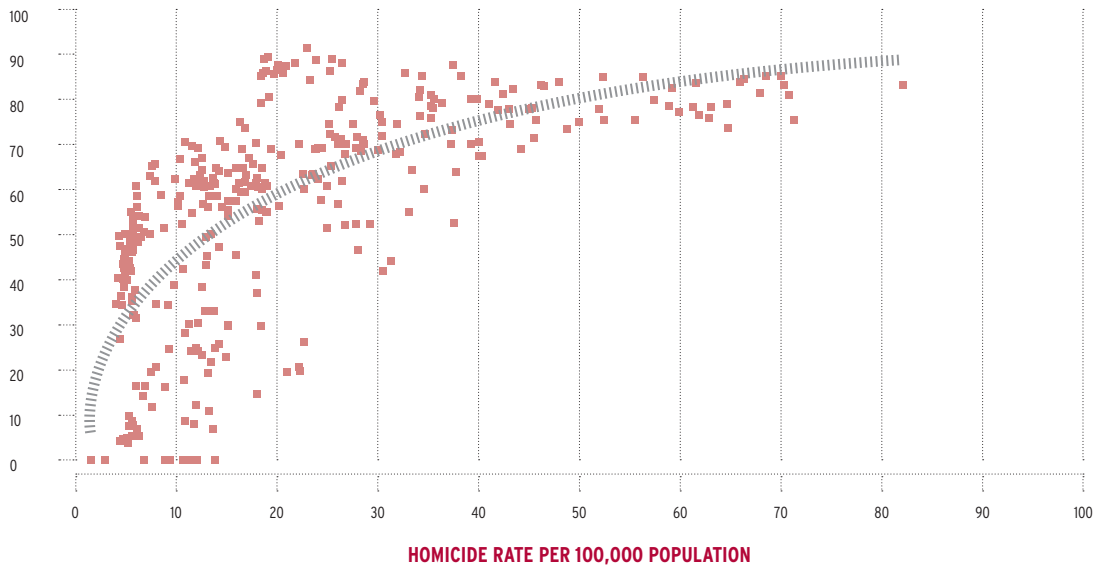
In trying to explain the more frequent use of firearms in homicides in Latin America and the Caribbean, it is important to note that overall homicide rates in the region are much higher than elsewhere. Indeed, a statistical analysis of data on the instrument of homicides confirms that there is a positive relationship between national homicide rates and the proportion of homicides committed by firearms.⁸ Globally, in countries with high or increasing levels of violence, the use of firearms—effective instruments for committing homicides—is growing. This is true for countries in Latin America and the Caribbean as well. Figure 1.1 presents data on national homicide rates and the percentage of homicides committed with firearms in all countries in Latin America and the Caribbean for which data was available between 1995 and 2010.

Figure 1.1 includes both cross-sectional (different countries) and longitudinal (same country, different years) data. What can be observed is that higher overall homicide rates seem to be linked to higher overall proportions of firearm homicides. It is unclear whether firearm homicides are driving overall homicide rates or vice versa. Whatever the causality, there is clearly an important relationship between the two.

A breakdown of national homicide trends and firearm homicides allows for a second observation.⁹ There appears to be a link between increasing homicide rates over time and an increase in the proportion of firearm homicides in

Figure 1.1 Relationship between homicide rates per 100,000 and proportion of firearm homicides in 30 countries in Latin America and the Caribbean, 1995-2010¹⁰

PERCENTAGE OF FIREARM HOMICIDES



Source: Small Arms Survey Database

many countries in Latin America and the Caribbean. Similarly, a decrease in homicide rates is reflected by a decrease in the proportion of firearm homicides.¹¹

Figure 1.2 presents national homicide rates and the proportion of firearm homicides on the basis of 2010 data (or data from the latest available year) in 23 countries in Latin America and the Caribbean. The figure confirms that, in general, the countries with higher homicide rates (top of the figure) exhibit higher proportions of firearm homicides, while the countries with lower homicide rates show lower proportions. There are a number of outliers, however, including Puerto Rico and Cuba.

Puerto Rico has the highest proportion of homicides committed with firearms across the entire region—91.5 per cent. While the country experiences homicide rates comparable to those of other Latin American and Caribbean countries, the percentage of homicides committed with a gun is disproportionately high. As a commonwealth of the United States, the island is significantly affected by access to the US firearms market. In 2010, the US Bureau of Alcohol, Tobacco, Firearms and Explosives traced 444 firearms that were confiscated by the police in Puerto Rico. In 322 cases, the source was a seller in the United States; 166 firearms were sold in Florida alone (ATF, 2010). The majority of firearms were confiscated due to illicit ownership or in the context of investigations. Out of all the confiscated firearms, only nine could be directly traced back to a homicide (ATF, 2010). While these figures do not provide a full picture of the origins of guns involved in homicides in Puerto Rico, they point to arms flows from the United States into Puerto Rico.

According to one report, lax airline regulations on travelling from the US mainland to Puerto Rico contribute to the islanders' ease of access to US firearms. Airlines seldom require passengers to show proof that their firearms are registered in Puerto Rico. Indeed:

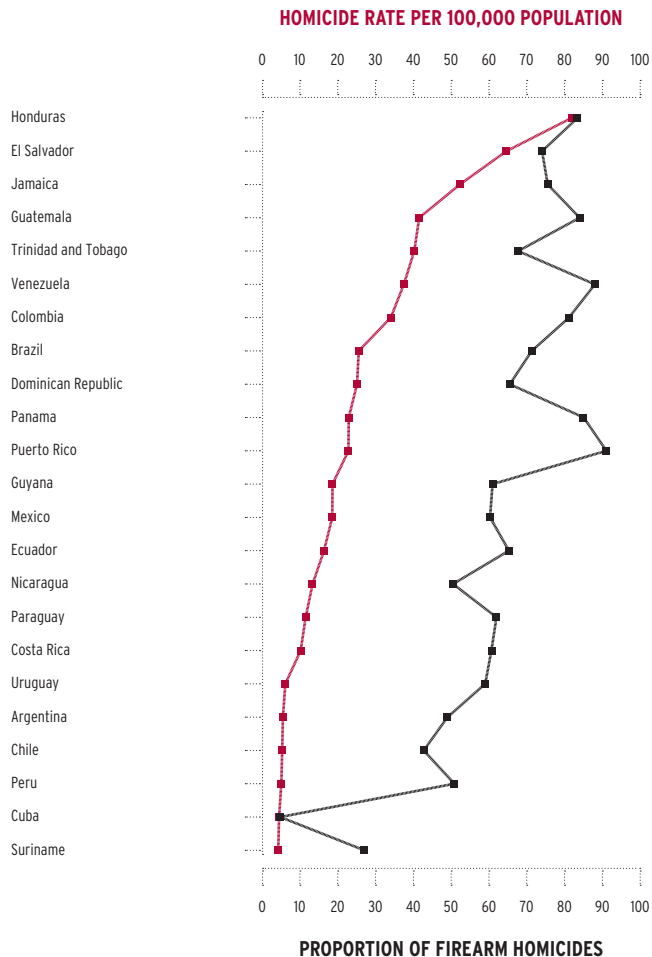
To travel with five Glock handguns, three AK-47 assault rifles and 11 pounds of ammunition, an American Airlines passenger simply needs to inform an employee and make sure the weapons are packed securely and safely before they're placed onto the luggage conveyor belt (Rivera-Lyles, 2007).

According to a former agent of the Federal Bureau of Investigation, it is not uncommon for passengers to buy weapons on the US mainland and resell them on the black market or directly to members of drug-trafficking organizations in Puerto Rico, earning USD 50–100 per gun (Rivera-Lyles, 2007).

In contrast, **Cuba**, geographically very close to Puerto Rico, has one of the lowest homicide rates in Latin America and the Caribbean (4.5 per 100,000). Of special note is that less than five per cent of these homicides are committed with firearms (4.8 per cent). Cuba's low proportion of gun homicide is exceptional, not just in comparison to its neighbours, but also to other parts of the world. The Ministry of Public Health in Cuba indicates that in the last decade, the vast majority of homicides were committed with knives—71.8 per cent in 2010. Almost one-quarter (23.4 per cent) of homicides included 'other instruments'.¹³ But even if the 23.4 per cent were counted as firearm homicides, the proportion of firearm homicides would remain far lower than in most countries in the region.

Little has been written on armed violence in Cuba and the reasons for the extremely low level of firearm homicides are not well understood. Community policing may play a role in social control and in keeping homicide rates down (Kruger, 2007). One report emphasizes that, since the 1959 revolution, gang violence has been 'exported' to the United States. Before 1959, Cuba was a major hub for organized crime, but now Cuban organized crime groups reportedly operate mainly in the United States (Galeotti, 2006). Another report finds that organized crime in Cuba is tightly controlled by the government, and that related activity levels are relatively low (Stratfor, 2008). Still, many questions remain as to why Cuba's experience is so markedly different from that of the rest of Latin America and the Caribbean.

Figure 1.2 **National homicide rates and proportion of firearm homicides in 23 countries in Latin America and the Caribbean, 2010 or latest available year¹²**



Source: Small Arms Survey Database

Trends in homicide rates

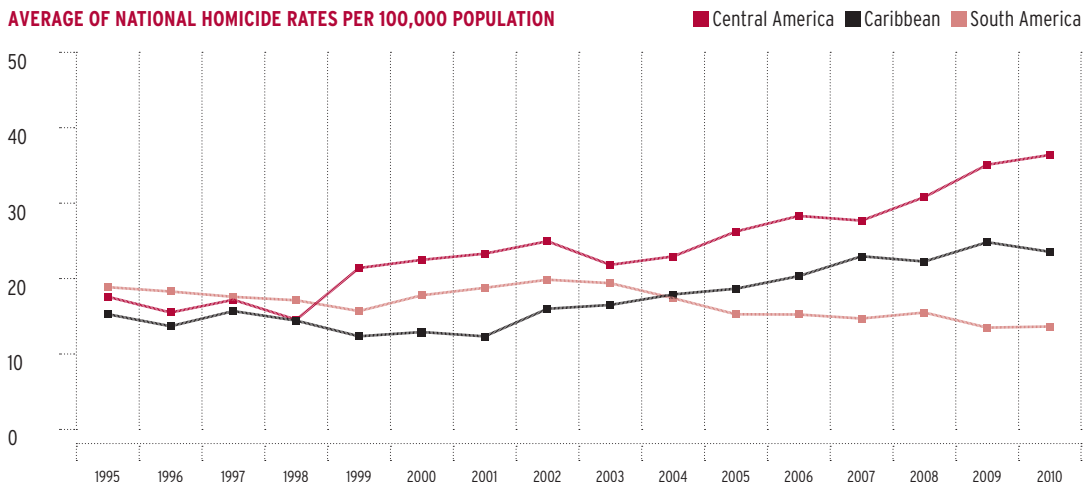
In contrast to global trends, a number of countries in Latin America and the Caribbean exhibit increasing homicide rates. Research shows that ‘the analysis of global trends in homicide rates is hampered by the lack of time-series data in many countries, especially in Africa,’ (UNODC, 2011, p. 25); nevertheless, available data reveals that in most countries in Asia and Europe, homicide rates are decreasing. UNODC finds that between 2005 and 2009, homicide rates increased mainly in countries that already suffered from high levels, including countries in Latin America and the Caribbean; meanwhile, ‘in 101 countries with low homicide rates—mainly located in Europe and Asia—and in 17 countries with medium homicide rates, they decreased in the same period’ (UNODC, 2011, p. 24).

Figure 1.3 shows the trend of average national homicide rates between 1995 and 2010 in each of the three sub-regions of Central America, the Caribbean, and South America. Each country was given equal weight within its sub-region; in criminal justice research, this method is used to generate a composite (sub-regional) rate (UNODC, 2011). The figure highlights that the three sub-regions had similar average national homicide rates in 1995: somewhere between 15 and 20 per 100,000 population. Since then, the trends have moved in very different directions. While Central America and the Caribbean show an increase in homicide rates, the average in South America decreased slightly.

It is important to note that all three sub-regions are highly diverse and that, among specific countries, there are considerable variations in patterns and trends of homicide rates. In fact, the sub-regional trends seen in Figure 1.3 often reflect a significant change in the national homicide rate of one or two countries in one sub-region, such as Honduras, Trinidad and Tobago, or Colombia.

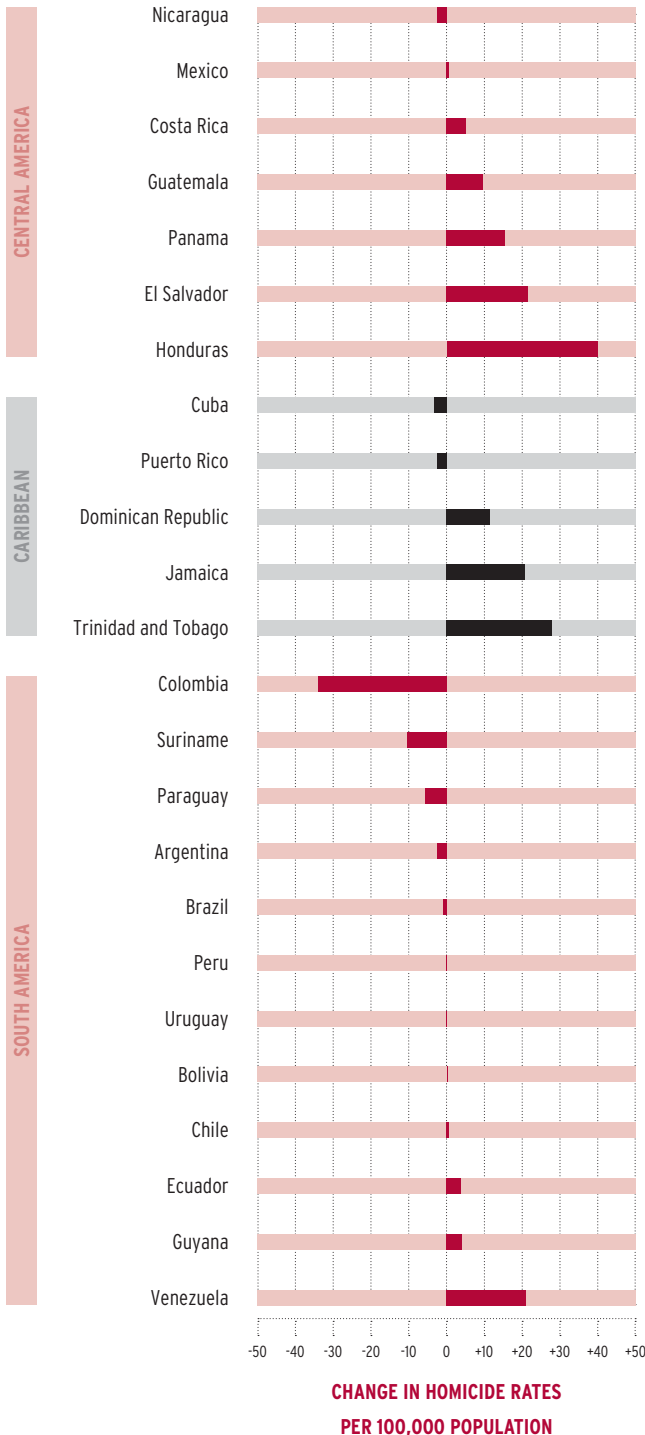
Figure 1.4 presents the changes in national homicide rates between 1995 and 2010 (or the earliest and latest reported year within this time period), by sub-region. It shows that, on average, more countries in Central America and the Caribbean experienced an increase, rather than a decrease, in homicides. In contrast, in South America, there is a balance between countries with increasing and decreasing homicide rates. Overall, the country with the greatest change in homicide rates between 1995 and 2010 was Honduras; between 1999 (the earliest for which data is available) and 2010, the national homicide rate rose from 42.0 to 81.9 per 100,000.

Figure 1.3 Trends in national homicide rates in 34 countries in Central America, the Caribbean, and South America, 1995–2010¹⁴



Source: Small Arms Survey Database

Figure 1.4 **Changes in national homicide rates in 24 countries in Central America, the Caribbean, and South America, 1995–2010¹⁵**



Source: Small Arms Survey Database

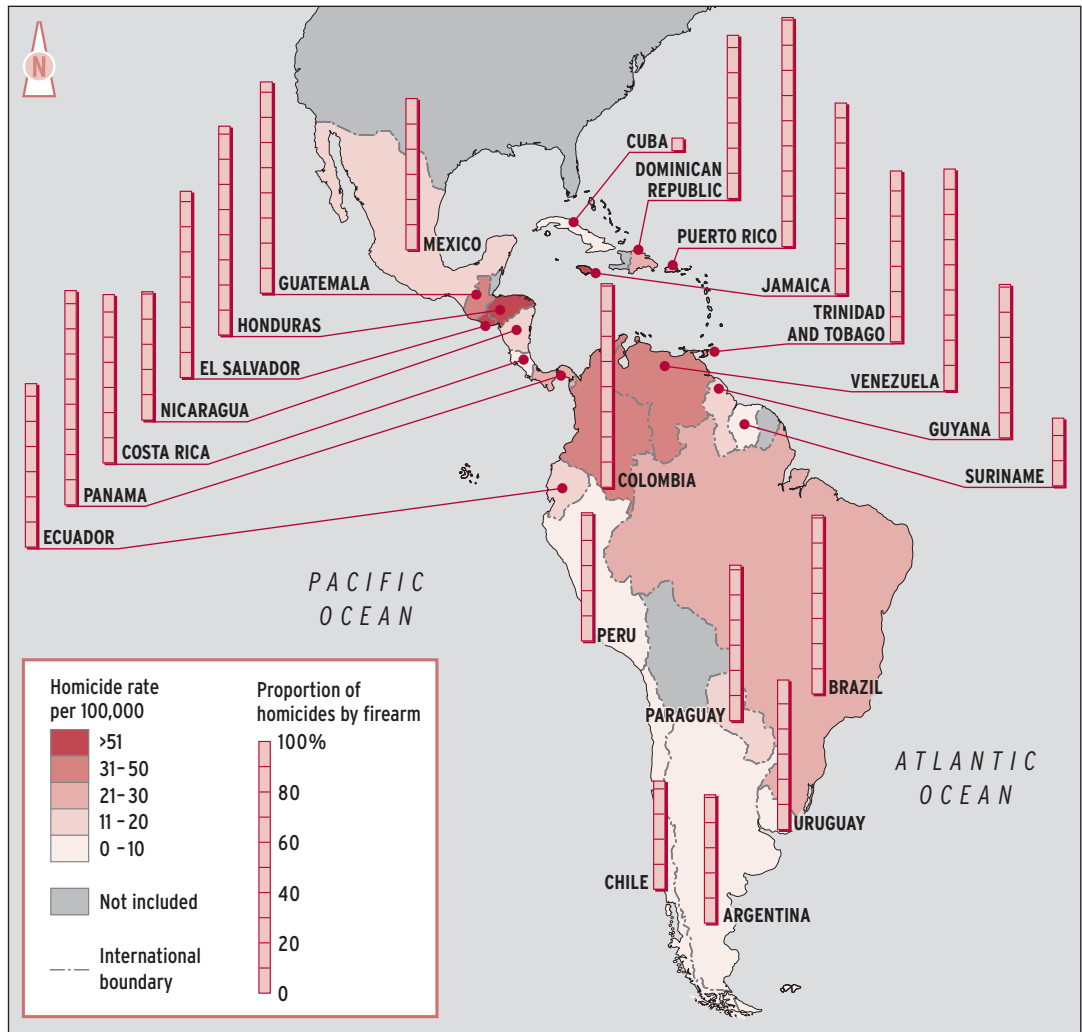
Map 1.1 displays the information shown in Figure 1.2 geographically. It presents a cross-country comparison of homicide rates on the basis of data from 2010 or the latest available year and the percentage of homicides that were carried out with firearms.

Together with the trend data shown in Figure 1.4, the map reveals certain patterns. While a number of countries suffer from very high and increasing homicide rates as well as very high proportions of firearm homicides, others have low, stable, or decreasing homicide rates, and a lower proportion of firearm homicides. El Salvador, Guatemala, Honduras, Jamaica, and Venezuela all exhibit homicide rates of more than 30 per 100,000, rates that have been rising since 1995, and proportions of firearm homicides above 70 per cent. The proportion of firearm homicides in Brazil, Colombia, Panama, and Puerto Rico also exceeds 70 per cent. In contrast, Argentina, Chile, Cuba, Peru, Suriname, and Uruguay all have homicide rates below 10 per 100,000, decreasing or stable rates since 1995, and proportions of firearm homicides below 60 per cent.

UNPACKING PATTERNS AND TRENDS

Many different factors result in certain countries—such as El Salvador, Guatemala, Honduras, Jamaica, and Venezuela—getting ‘caught in the crossfire’ of firearm homicides.¹⁶ This section aims to shed light on some of these factors. A breakdown of national homicide rates between 1995 and 2010 and the percentage of firearm homicides for countries in the region can be found in the annexe to this chapter. The following

Map 1.1 National homicide rates and proportion of firearm homicides in 23 countries in Latin America and the Caribbean, 2010 or latest available year¹⁷



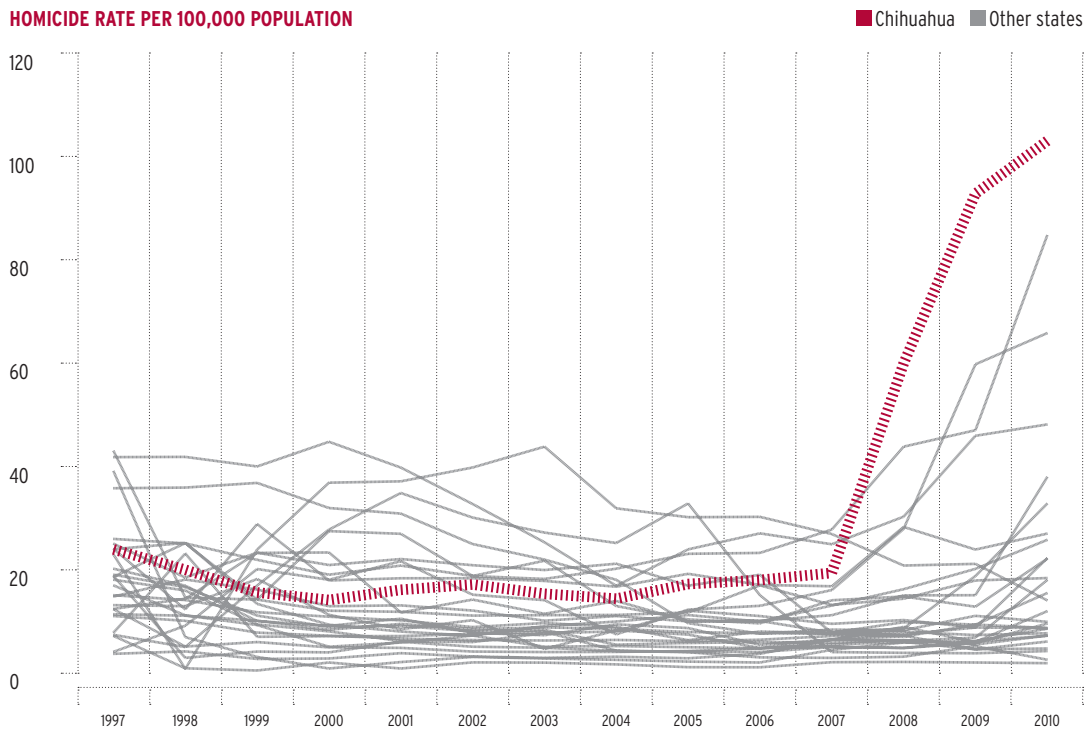
Source: Small Arms Survey Database

analysis considers the 23 countries highlighted on Map 1.1. The aim of this section is not to provide a comprehensive description of characteristics of firearm homicides in each country, but to shed light on selected patterns and trends.

Mexico

At the national level, the homicide rate in Mexico in 2010 was 18.6 per 100,000 (see Annexe 1.1). Yet while some parts of the country are almost unaffected by armed violence, others suffer from very high homicide rates. Moreover, some states have experienced a dramatic increase in homicides in recent years (see Figure 1.5). A case in point is Chihuahua, a state of more than three million inhabitants in the northern part of the country. In only three years, the intentional homicide rate in Chihuahua increased more than fivefold, from 19 in 2007 to 103 in 2010 (ICESI, n.d.).¹⁸

Figure 1.5 Homicide rate in Chihuahua, Mexico, compared to other states, 1997-2010



Source: ICESI (n.d.)

The steep increase in armed violence coincides with the beginning of the drug wars in 2006, when Mexican president Felipe Calderón first called in the army to battle drug-trafficking organizations. Compared to other countries in the region, Mexico has witnessed a disproportionately steep increase in the proportion of homicides by firearms (see Annexe 1.1). One study confirms that law enforcement and the military are not only facing more firearms, but also more militarized weaponry (Turbiville, 2010, p. 124). Another highlights that ‘the AK-47 assault rifle has gained a bad reputation in recent years as the weapon of choice of the Mexican cartels’ (Ortiz, 2011).¹⁹

The Northern Triangle

In the northern part of Central America, **El Salvador**, **Guatemala**, and **Honduras** form the so-called Northern Triangle. The three countries suffer not only from the highest homicide rates in the entire region, but also from increasing homicide rates. In all three countries, firearms are used in the vast majority of homicides (see Annexe 1.1).

The Northern Triangle is highly affected by large-scale drug trafficking. Situated mid-way between the cocaine-producing countries of South America and consumers in North America, Central American drug-trafficking organizations have been active since the 1970s. Yet, whereas the previous decades saw a comparatively stable situation with a ‘pax mafiosa’, the past ten years have witnessed a crackdown on drug-trafficking organizations in Colombia and the rise of powerful Mexican cartels that compete for control in Central America (Bosworth, 2010). The drug war in Mexico since 2006 has further destabilized the region, as the Mexican cartels increasingly move south (DRUG VIOLENCE). In May 2001, the International Crisis Group estimated that about 500 members of the Mexican drug cartel Los Zetas

were active in Guatemala. The May 2011 massacre of 27 farmers in northern Guatemala is described as a drug deal gone bad between Los Zetas and another cartel (ICG, 2011, p. 2).

Drug-trafficking organizations in the Northern Triangle frequently cooperate with *maras*, youth gangs active in all three countries. The *maras* were formed in Los Angeles by Central Americans, many of whom sought refuge from the civil wars in El Salvador (1980–92) and Guatemala (1960–96). In the mid-1990s, US immigration law was tightened and, between 1998 and 2005, the United States repatriated almost 46,000 convicted gang members, with 90 per cent of the deportees sent to El Salvador, Guatemala, and Honduras, where they gradually displaced the local gangs, known as *pandillas* (Jütersonke, Muggah, and Rogers, 2009). The transnational transposition of US gang culture may be causing more frequent and more brutal violence ‘due to the fact that it is less embedded within a local institutional context than traditional Central American *pandilla* culture, and therefore less rule-bound and constrained’ (Rodgers, Muggah, and Stevenson, 2009, p. 9).

In a recent study on crime and violence in Central America, the World Bank (2011) finds that the availability of firearms is another important factor in firearm homicides in the Northern Triangle. While it is not known how many guns entered Central America during the civil wars, one study suggests that up to two million AK-47s were delivered during the last days of the cold war (Agozino et al., 2009, p. 295). El Salvador and Honduras were the largest recipients of weaponry from the US government in the 1980s and early 1990s, El Salvador because of the war against the communist guerrillas and Honduras because it was the primary base of operations for the US-backed Nicaraguan resistance known as the Contras (Godnick, Muggah, and Waszink, 2002, p. 5).

The incomplete disarmament process after the civil wars resulted in the continuing presence of wartime firearms in the region. For example, although 3,000 combatants were demobilized in Guatemala after the peace accord in 1996, only 1,800 firearms were returned (IEPADES, 2006b, p. 12). Certainly not all firearms in circulation today can be traced back to the civil wars. Indeed, the World Bank finds that between 2000 and 2006, the value of imported firearms in Guatemala almost tripled, from about USD 3 million to USD 8 million. It further estimates that 2.8 million firearms are currently circulating throughout the three countries, the great majority of them illegally owned (World Bank, 2011, p. 20).

Drug-trafficking
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with *maras*.

Southern Central America

Compared to the countries of the Northern Triangle, the three countries in the southern part of Central America—**Costa Rica**, **Nicaragua**, and **Panama**—have significantly lower homicide rates (see Annexe 1.1). The relative efficiency of their justice systems may be one reason why. The World Bank indicates that Costa Rica and Panama are the only countries in the Central America sub-region whose governance indicators tend to rank in the upper half of the global sample, partly explaining the lower homicide rates (World Bank, 2011, p. 11).

Like El Salvador and Guatemala, Nicaragua also has a history of civil war (1972–91) and is known for the presence of youth gangs. It appears to suffer from lower levels of gang violence than its northern neighbours, however. While most refugees from El Salvador and Honduras went to Los Angeles, where some of them formed the *maras*, many Nicaraguans left for Miami, where gangs were either African-American or Cuban-American and generally did not accept Nicaraguans.²⁰ To this day, Nicaragua’s predominant youth gangs are the home-grown *pandillas*. Rodgers, Muggah, and Stevenson (2009) suggest that their presence—and the absence of *maras*—may help explain why Nicaragua suffers lower levels of violence than El Salvador and Guatemala. Nevertheless, evidence shows that not only *maras*, but also *pandillas*, have become involved in drug trafficking and dealing over the past decade.²¹

Although on a lower scale than the countries in the Northern Triangle, Costa Rica, Nicaragua, and Panama all suffer from increasing homicide rates. In addition, Panama experienced the second-highest proportion of firearm homicides in 2010 in Latin America and the Caribbean, after Puerto Rico. Research has shown that a negative relationship generally exists between the percentage of homicides committed with firearms and the proportion of homicides solved by the police (Geneva Declaration Secretariat, 2011, p. 102). There is thus concern that, with an increase in gun violence in Panama, law enforcement's ability to clear homicide cases may decline, which can create an atmosphere of impunity regarding gun homicides. As the World Bank notes:

These worries are compounded by fears of contagion from their three more violence-prone northern Central American neighbours and the prospect that they too could become havens for the drug trafficking that drives the high crime rates in the [Northern Triangle] (World Bank, 2011, p. 1).

The volume of drug seizures in Panama has already surpassed that of other Central American countries. Although this may also be due to the efficiency of the law enforcement system, it remains an indicator of active trafficking (World Bank, 2011, p. 12).

The Caribbean

Trends in homicides in many Caribbean countries are difficult to assess, since many of the islands have populations of less than 500,000. Of all the Caribbean countries reviewed in this chapter (see endnote 6), only five countries have a population of more than 500,000. Cuba and Puerto Rico are described in the previous section; the data for the other three countries—**the Dominican Republic, Jamaica, and Trinidad and Tobago**—shows that they have all witnessed increases in homicide rates. The situation in Jamaica is unique in the sense that homicide rates have consistently been higher than in any other country in the sub-region since 1995.²² In all three countries, the majority of homicides are committed with firearms (see Annexe 1.1).

Agozino et al. (2009) find that a central reason for the high proportion of firearm homicides in the Caribbean is the 'weaponization' of society, meaning that the use of guns has become increasingly embedded in significant sectors of society. This trend is especially pronounced within youth gangs. Data on homicides in Jamaica from 1998 to 2002 shows that gangs disproportionately use firearms when committing violent crimes. While around 70 per cent of all murders



A police investigator walks towards the body of a woman killed during a shooting rampage carried out by gunmen in Rockhall, Kingston, on election day, October 2002.
© Andrew Winning/Reuters

involved guns in 2002, 94 per cent of gang- and drug-related murders involved firearms (Lemard and Hemenway, 2006).²³ A recent study on gangs and guns in Trinidad and Tobago also reveals higher frequencies of gun use among gangs. It finds that, while homicides due to blunt, sharp, or other instruments remained comparatively stable over the years, those committed with firearms increased. This increase in gun-related homicides coincides with an increase in the number of urban gangs (Townsend, 2009, p. 18).²⁴

Because relatively few gun homicides are solved in Trinidad and Tobago, impunity for gun violence may also be a factor; Agozino et al. show that in 2006 the clearance rate for non-gun homicides was more than 62 per cent, whereas it was only slightly more than 20 per cent for gun homicides (Agozino et al. 2009, p. 292). Impunity surrounding gun homicides in a country with high levels of violence and frequent gun crime can result in cycles of retaliatory attacks.

Colombia and Venezuela

Colombia and Venezuela both show high homicide rates and high proportions of firearms used in homicides, but the trends are very different. Colombia—having started at a much higher level in 1995—experienced the most significant decrease in homicide rates among all countries in Latin America and the Caribbean. In contrast, homicide rates in Venezuela, starting at a lower level, have increased significantly (see Annexe 1.1).

A masked gunman points his handgun towards student opponents of President Hugo Chávez during a shootout at Venezuela's Central University, Caracas, November 2007.
© Gregorio Marrero/AP Photo





Since the 1990s, Colombian cities have introduced numerous measures to address gun violence; these play an important role in the reduction in homicides (see Box 1.2). Yet, after several years of steep drops in violence—mainly between 2002 and 2006—the rate of decline in homicide rates slowed down significantly. Restrepo and Aponte (2009) refer to this phenomenon as the ‘glass floor’ of homicides (*piso de cristal de los homicidios*). Furthermore, while national homicide rates largely decreased, the proportion of firearm homicides remained almost stable. This development stands in contrast to one of the main observations of this chapter, namely that the proportion of homicides committed with firearms tends to increase and decrease in parallel with homicide rates. Although the trend is not visible at the national level in Colombia, it is on a sub-national level (see Figure 1.6).

While the homicide rate of Colombia decreased significantly, the rate in Venezuela showed a steady increase since 1995 (see Annexe 1.1).²⁵ In addition, some argue, policies that resulted in reductions in Colombia simultaneously drove illicit actors to neighbouring countries, where there was less pressure from the military and police. In this sense, Colombia’s relative success may have created new problems for other countries, such as Venezuela.²⁶

In addition to such dynamics, however, a number of factors independent of Colombia may explain the rise in Venezuelan homicide rates. Romero (2010) finds that high and increasing income inequality, resulting from economic reforms of the 1980s and 1990s, is one of the reasons for the surge in violence in Venezuela. He points

Box 1.2 Reductions in firearm homicides in Colombian cities

In the 1990s, a number of Colombian cities witnessed extremely high homicide rates. The three cities most affected were Bogotá, Cali, and Medellín. In 1991, homicide rates in Medellín peaked at 266.3 per 100,000. In Cali, the homicide rate in 1994 stood at 121.5, and in 1993 the peak in Bogotá was 80.9. Since then, the homicide rates have dropped significantly in all three cities.

In Cali, homicides dropped from 121.5 in 1994 to 84.6 in 1997. The drop is believed to be related to a set of violence reduction interventions implemented by Cali's then mayor, Rodrigo Guerrero. The initiatives were reproduced in other cities in Colombia, including Bogotá (starting in 1997) and Medellín (starting in 2005).²⁷ As shown in Figure 1.6, implementation of the initiative did not correlate directly with major reductions in homicides in the cities; other measures may also have been relevant in bringing about the reductions.

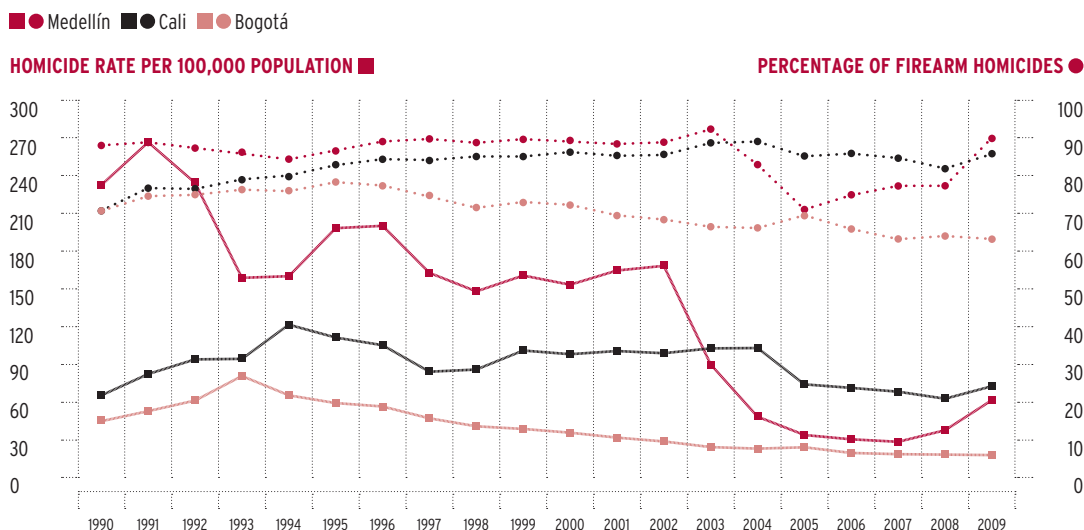
A number of gun control measures were part of the urban violence reduction efforts in the 1990s. With an estimated 5.9 guns per 100 persons, civilian gun ownership (legal and illegal) in Colombia is low by global standards (Karp, 2007). There are two primary reasons for this low level. First, the Colombian state enforces strong regulation of civilian arms possession. Second, the criminal market for guns is tightly controlled by the non-state groups involved in armed conflict (guerrillas and paramilitaries) and by drug-trafficking organizations. Still, the vast majority of weapons circulating in Colombia are probably illegal (Small Arms Survey, 2006, p. 219).

In response to the challenge posed by illicit weapons, the government introduced bans on carrying firearms and implemented firearm collection programmes. Villaveces et al. (2000) observe that the enforced ban on carrying firearms on weekends after paydays, on holidays, and on election days in Cali (1993-94) and Bogotá (1995-97) contributed to a significant drop in homicide rates in both cities.

Homicide rates in Colombian cities may also have dropped in response to the 2003-04 demobilization and disarmament of the paramilitary group Autodefensas Unidas de Colombia (United Self-Defence Forces of Colombia, AUC) and other 'hard' security measures that complemented the municipal violence prevention policies.²⁸

Despite the downward trends beginning in 2003, homicide rates in Cali and Medellín started to increase again from 2007 and 2008, as Figure 1.6 shows. Recent reports suggest that the demobilization of the AUC led to a fragmentation of the criminal hegemony over the drug trade. Many of these new groups work alongside and against each other in the interests of the drug trade. The changing power structures of drug-trafficking organizations as a result of the demobilization of the AUC, as well as mafia-related violence, are thought to be important factors influencing the recent increase in urban homicides, especially in Medellín.²⁹

Figure 1.6 Homicide rates and proportion of firearm homicides in Bogotá, Cali, and Medellín, 1990-2009



Source: elaboration based on Aguirre and Restrepo (2010, p. 272); DANE (n.d.)

out that, 'while many Latin American economies are growing fast, Venezuela's has continued to shrink, [and] the gap between rich and poor remains wide' (Romero, 2010).³⁰ Romero also observes an increasing atmosphere of impunity, with a continuing collapse of the old political and social order and a judicial system that has grown increasingly politicized (Romero, 2010).

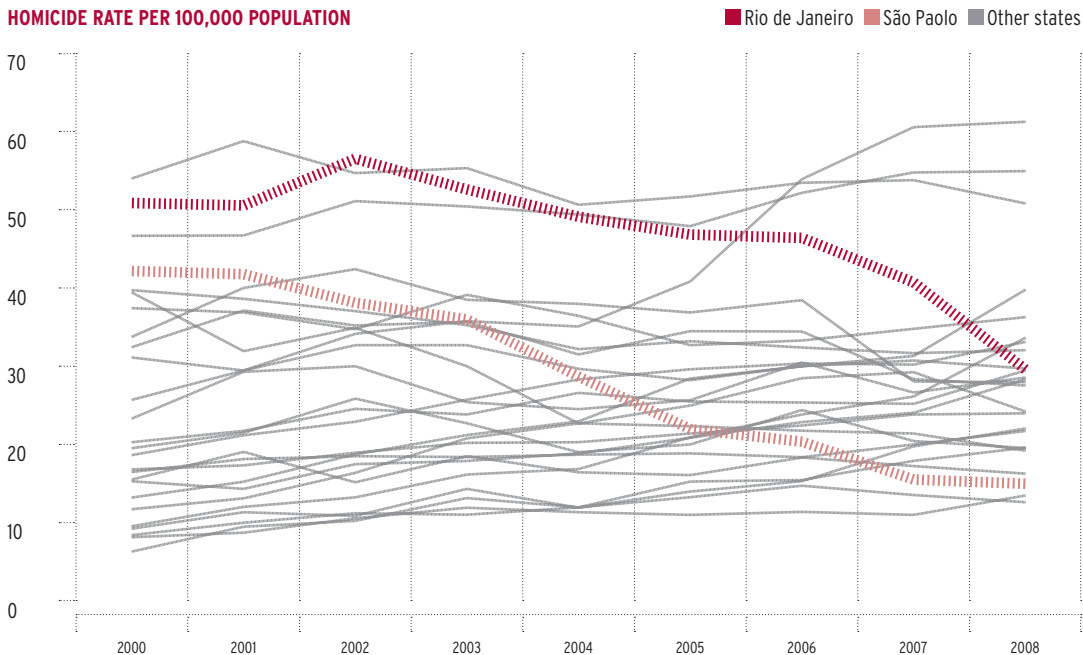
In line with one of the overall trends identified in this chapter, the proportion of firearm homicides in Venezuela has increased in parallel with rising homicide rates (see Annexe 1.1). Civilian gun ownership is widespread, although there is great uncertainty about the actual number of legal and illegal guns in circulation, estimated at between 1.6 and 4.1 million guns, the vast majority of which are illegal firearms (Karp, 2009, p. 56).

The Venezuelan military and security services serve as important sources of illegal firearms (Karp, 2009, p. 57). Unlike most of the world's militaries, Venezuela's armed forces are growing, and the number of military weapons is increasing. In what many analysts see as another potentially destabilizing factor, Venezuela will soon begin to manufacture its own Kalashnikov-pattern rifles with the assistance of a Russian arms company (InSight, 2010).³¹ There is concern that the new rifle will begin entering the black market (Tulyakov, 2010).

Brazil

In 2010, Brazil's homicide rate stood at 25.6 per 100,000. A majority of these homicides (71.3 per cent) were committed with firearms (see Annexe 1.1). Homicide rates have remained relatively stable since 2000 (the earliest year for which data is available). At the sub-national level, this picture is more complex. Violence is unevenly distributed, with pockets of very high levels of violence. High rates of firearm-related youth and gang violence remain characteristics of Brazil's larger cities, where 'young people live in juvenile subcultures that glorify the warrior ethos and

Figure 1.7 **Number of annual homicides in Brazil, per state, 2000-08**



Source: elaboration based on FBSP (2010, p. 34)³²

the assertion of masculinity through the power expressed in threats based on the use of firearms' (Imbusch, Misse, and Carrión, 2011, p. 115). At the same time, sub-national data for 2000–08 shows that a number of cities, including Rio de Janeiro and São Paulo, experienced major reductions in homicide rates (see Figure 1.7).

De Souza et al. (2007) suggest that a range of gun control measures introduced in Brazil from 2003 onwards have helped reduce the toll of violent deaths and hospitalization. In October 2003, the Brazilian government passed a gun law that:

sought to control the flow of firearms into the country, made it illegal to own guns that are not registered or to carry guns outside of one's home or business, instituted background checks for gun purchases, and raised the minimum age for gun purchase to twenty-five (de Souza et al., 2007, pp. 575–76).

The subsequent reduction in homicides is most pronounced in the city and state of São Paulo, where the number of annual homicides dropped from more than 15,000 in 2001 to slightly more than 6,000 in 2007 (FBSP, 2010, p. 34). Goertzel and Kahn (2009) attribute the 'great São Paulo homicide drop' to more effective policing methods, including strict enforcement of the gun control legislation. There was consistent investment in policing, with more and better training, more resources for prevention, and a special focus on the most affected areas and populations. In addition, between 2000 and 2010, police in São Paulo seized more than 200,000 illegal guns and gun holders surrendered more than 130,000 guns in buy-back campaigns (Mizne, 2011).

The Southern Cone

The sub-region in Latin America and the Caribbean that is least affected by gun violence is the Southern Cone (Cono Sur). This group of four countries in South America—**Argentina, Chile, Paraguay,** and **Uruguay**—all show comparatively low homicide rates and comparatively lower proportions of firearm homicides (below 60 per cent).³⁵ With the exception of Paraguay, they have homicide rates between 5.3 and 6.1 per 100,000 population. In addition, all four countries show either stable or decreasing homicide rates. Of the four, Paraguay—having had higher initial rates in 1995—witnessed the most significant decrease (see Annexe 1.1).

A number of researchers have analysed homicide trends in Argentina. Spinelli et al. (2006) find that in Buenos Aires in 2002—the year in which firearm homicides peaked—the firearm-related deaths were often connected to various aspects of organized crime, such as drug trafficking and arms smuggling. At the same time, Spinelli, Macías, and Darraidou (2008) link the reduction of homicides after 2002 to a number of socio-economic trends—such as reduced income inequality and poverty (measured in terms of families living under the poverty line) and increases in gross national product—rather than strict gun control measures.

In early 2007, the Argentine gun buy-back programme—the Programa Nacional de Entrega Voluntaria de Armas de Fuego—was introduced. Individuals who handed in a firearm received ARS 100–140 (USD 32–45), depending on the type of firearm. The programme netted 104,000 firearms and 750,000 units of ammunition throughout the country between 2007 and 2009 (Fleitas, 2010, p. 26).

Whether it had a positive influence on homicide reduction remains under debate. Lenis, Ronconi, and Schargrotsky (2010), for example, find that while it successfully reduced the number of accidental deaths, the programme did not influence the number of homicides.

TYPES AND ORIGINS OF FIREARMS USED IN HOMICIDES

The *type* of firearm involved in a homicide can be identified through ballistic investigation. When a shot is fired, the barrel leaves specific marks on the bullet. This ‘fingerprint’ can be used to identify the gun that fired the bullet. Increasingly, countries in Latin America use the Integrated Ballistics Identification System (IBIS), which can identify, correlate, and match projectiles and shell casings with the weapons that fired them.³⁴ As with real fingerprints, successful matches depend on the extensiveness of bullet markings and whether a specific gun barrel has been entered into the database.

If a crime weapon has not been recovered, matching projectiles to barrels is more challenging. This point is of concern in Bogotá, where law enforcement failed to recover firearms from perpetrators in an estimated 95 per cent of all homicide cases in 2002. If the projectile is not too damaged, ballistic examination can usually determine at least the calibre. Yet in the vast majority of cases in Bogotá, recovered bullets examined at the forensics lab did not provide sufficient information to allow for the identification of firearms because the database did not contain details about any projectiles previously fired from the same gun (León-Beltrán and Forero, 2004, p. 5).

In the absence of administrative statistics on *types* of firearms, smaller, localized datasets of guns seized by police can be examined. Yet caution must be used when treating data on firearm confiscations as a proxy for the weapons used in homicides. As Aguirre et al. (2009) observe, for example, confiscated firearms in Colombia can serve as a proxy for the nationwide demand for illicit firearms, but it is impossible to identify a direct relationship between seized firearms and their use in crime. Many of the firearms seized by police are not related to violent crimes but are linked to firearms regulation infractions or other minor offences (Aguirre et al., 2009, p. 15). A study of firearm seizures between 1973 and 2006 in Argentina confirms that only in a very small percentage (1.3 per cent) could the firearm be traced back to a homicide (Dreyfus, 2007a, pp. 42–43).

Despite these limitations, data on firearms seized in combination with specific case studies on the types of firearms involved in homicides help shed light on the types and origins of firearms involved in crime and violence in Latin America and the Caribbean.

Types of weapons

Gun seizure data reveals that in Latin America and the Caribbean, pistols and revolvers are the weapons most frequently used in crimes. For example, of some 3,000 guns that were confiscated by the National Civilian Police of **Guatemala** in 2006, 45 per cent were pistols, 27 per cent revolvers, 24 per cent shotguns, and 11 per cent craft guns (IEPADES, 2006a, p. 38). In addition, most of the weapons collected by the Government of **Panama** in weapon recovery campaigns are revolvers, rifles, and pistols. The seized sub-machine guns, hand grenades, rifles, and muskets are far fewer in number (FLACSO, 2007, p. 317).

A study on **Jamaica** paints a similar picture. In 2009, 50.6 per cent of the 569 firearms seized after a criminal event were pistols and 21.8 per cent revolvers. Homemade weapons (15.3 per cent), sub-machine guns (3.5 per cent), and shotguns (3.3 per cent) made up a smaller portion. Officials in Jamaica suggest that pistols may play an even greater role than the statistics reveal. The overwhelming majority of casings recovered from Jamaican crime scenes are for 9 mm semi-automatic pistols (Leslie, 2010, p. 34).

The proportion of homemade guns seized both in Jamaica and in Guatemala is significant. Research suggests that craft guns are common among youth gangs across Latin America and the Caribbean. Godnick, Muggah, and Waszink (2002) observe that youth gangs in Central America have been assembling makeshift pistols that are made of bed-

Pistols and revolvers are the weapons most frequently used in crimes.

springs and metal tubing. Some of the craft guns are sophisticated imitations of .22 mm, .38 mm, and 9 mm pistols. While these arms—which often contain parts and material from other guns—are probably more expensive than the most basic craft guns, they are still cheap, easy to use and dispose of, and difficult for authorities to trace (Godnick, Muggah, and Waszink, 2002, p. 8). A study focusing on the characteristics and practice of gangs in **Ecuador** reveals that revolvers stand out in gang members' preferences. Above all, they favour six-shot .38 mm revolvers. According to the same study, this firearm was also available in a craft version on the black market for around USD 35 (Loor, 2004, p. 25).

Data on gun seizures must be interpreted with caution. It is possible that criminal groups are especially watchful of expensive weapons, such as machine guns or assault rifles, which may partly explain why the police seize relatively few such firearms. Yet, while data on types of firearms used in homicides confirms that pistols and revolvers predominate, it also shows that craft guns are used. The police in **Costa Rica** produce regular detailed reports on criminal violence that include data on the types of firearms used in homicides (see Table 1.1). Information on the type of firearm was provided in 276 cases of the 338 homicides committed with a firearm in 2009. Revolvers were used in 143 cases, pistols in 133. No automatic weapons or assault rifles could be identified. It is possible that a part of the 62 firearms that were not identified were, in fact, automatic weapons or assault rifles. In that case, however, pistols and revolvers would still remain the most common weapons involved in homicides.

Seized weapons are displayed before being destroyed at a police facility in Panama City, October 2010. © Arnulfo Franco/AP Photo





Table 1.1 Firearm-related homicides and firearm types used in Costa Rica, 2003-09

	2003	2004	2005	2006	2007	2008	2009
All homicides	300	280	338	351	369	512	525
Firearm homicides	156	164	196	217	226	349	338
Firearm-related homicides (%)	52.0	58.6	58.0	61.8	61.3	68.2	64.4
Type of firearm identified in firearm homicides							
Pistols	70	79	102	128	118	190	133
Revolvers	82	14	74	72	99	136	143
Automatic and assault	4	12	24	17	12	0	0

Sources: Policía Judicial de Costa Rica (2006; 2007; 2008; 2009)

Table 1.2 Firearm types used in homicide and suicide cases, Honduras, 2005-08

Type of firearm	2005		2006		2007		2008	
	Number	%	Number	%	Number	%	Number	%
Pistol	314	37.6	391	38.6	415	38.4	420	37.2
Revolver	242	28.9	279	27.6	322	29.8	327	29.0
Craft gun	107	12.8	125	12.4	141	13.0	146	12.9
Light flintlock musket	103	12.3	134	13.2	68	6.3	73	6.5
Shotgun	30	3.6	34	3.4	34	3.1	39	3.5
Rifle	n/a	n/a	32	3.2	24	2.2	30	2.7
Sub-machine gun	n/a	n/a	17	1.7	15	1.4	21	1.9
Carbine	n/a	n/a	n/a	n/a	2	0.2	8	0.7
Other	40	4.8	n/a	n/a	60	5.6	65	5.8
Total	836	100	1,012	100	1,081	100	1,129	100

Sources: IUDPAS (2006; 2007; 2008; 2009)

Pistols and revolvers are also the predominant firearms used in homicides (and suicides) in **Honduras**. The University Institute on Democracy, Peace, and Security runs a violence monitoring project that provides quarterly and annual data on injuries and mortality at the national level in Honduras (see Table 1.2). In 2008, a total of 1,448 gun homicides and 316 gun suicides were recorded. Out of these deaths, 1,129 cases provided sufficient ballistic information to determine the type of firearm. Pistols are the guns most commonly used to commit homicides and suicides (37.2 per cent), followed by revolvers at 29.0 per cent (IUDPAS, 2009, pp. 1, 12). Craft guns are also widely used in Honduras; 12.9 per cent of all firearms recovered in homicides or suicides in 2008 were craft guns.

A study from **Ecuador** in 2005 highlights that, in the cases where bullets could be extracted from victims' bodies at morgues, the vast majority of ballistic examinations identified 9 mm bullets (121 out of 147), which are usually

used in pistols, while the rest involved .38 mm bullets (26 out of 147), which are more commonly used in revolvers (Zárate, 2006, p. 108).

These examples suggest that pistols and revolvers—and, to a lesser extent, craft guns—are the guns most commonly used in firearm homicides in Latin America and the Caribbean, rather than machine guns and assault rifles. At the same time, the literature suggests that drug-trafficking organizations are making increasing use of assault rifles and machine guns. The International Crisis Group reports that drug traffickers in **Guatemala** often carry assault weapons, including AK-47s, AR-15s, M-16 rifles, grenades, and even RPGs, Russian-type rocket launchers (ICG, 2011).

There is an emerging body of research on firearms used by drug-trafficking organizations in **Mexico**. The US Bureau of Alcohol, Tobacco, Firearms and Explosives indicates that, while drug-trafficking organizations in Mexico had primarily used .38 mm handguns for some time, cartel members and enforcers have since developed a preference for more powerful firearms. The most common now include the Colt AR-15 (.223-calibre assault rifle), AK-47-pattern weapons (7.62-calibre assault rifle), and pistols produced by the Belgian company FN Herstal (5.57-calibre pistols) (Hoover, 2008). Although precise numbers are not available, another report reveals that military-style firearms, such as 7.62 mm AK-type assault rifles, AR-15-type semi-automatic rifles, and handguns with high calibres (such as .38, .45, and 9 mm pistols), are increasingly seized from Mexican drug cartels (US GAO, 2009, p. 17).

Origins of weapons

Latin America has a long tradition of gun production, with some manufacturers tracing their history back many decades.³⁵ Brazil has the largest arms industry in the region, followed by Argentina. Firearms are also produced by private or government-owned industries in Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Venezuela (Small Arms Survey, 2004, p. 17). While most of the production is intended to equip the military and law enforcement institutions, some of the production is for private use. Research shows that, '[w]ith the important exceptions of major exporters led by Argentina, Chile, Mexico, and above all Brazil, [Latin America's] small arms producers tend to be niche manufacturers, serving captive local markets' (Small Arms Survey, 2004, p. 26).

Table 1.3 highlights the makes of the revolvers and pistols used in homicides in Bogotá, **Colombia**, in 2002. It shows that

Table 1.3 Firearm types used in homicides in Bogotá, 2002

Type of gun	Number of recovered guns	Per cent
Revolver Smith & Wesson	42	37.8
Revolver Llama	28	25.2
Revolver Ruger	11	9.9
Revolver Colt	5	4.5
Pistol Browning	5	4.5
Pistol Beretta	4	3.6
Pistol Walther	3	2.7
Pistol Smith & Wesson	3	2.7
Revolver Taurus	2	1.8
Pistol Taurus	2	1.8
Pistol Jericho	2	1.8
Rifle AK-47	2	1.8
Pistol Glock	1	0.9
Pistol Sig Sauer	1	0.9
Total	111	100

Source: León-Beltrán and Forero (2004, p. 6)

the most common type of firearm was the US-manufactured Smith & Wesson revolver, followed by the local Llama revolver. The Llama revolver is a product of the government-owned manufacturer INDUMIL, which primarily equips the Colombian army and the national police, although it also supplies the domestic market and exports some weapons (Small Arms Survey, 2006, p. 218). Since the data covers only a few months, however, the number of weapons is small and the figures were not officially released. Whether the predominant use of Smith & Wesson and Llama revolvers is a general pattern in homicides in Colombia remains an open question. Whether these weapons are legally or illegally owned also remains unknown.

As described in Box 1.2, Colombia has strict gun laws, and the vast majority of weapons circulating in the country are probably illegal. One study of the illegal gun market in Bogotá reveals that in 2006, pistols and revolvers could be bought for as little as USD 260. Machine guns, such as the M-60, could be purchased for around USD 10,000, or half the market price. The same study shows that criminals in Colombia increasingly rent firearms to avoid prosecution and enforcement of gun restrictions (Aguirre et al., 2009, p. 7).

Box 1.3 Firearms seized in Rio de Janeiro, 1951-2003

Table 1.4 shows that the bulk of the firearms confiscated by the police in Rio de Janeiro between 1993 and 2003 were revolvers (60.6 per cent), while pistols constituted 26.7 per cent (Dreyfus and Marsh, 2006, p. 23). At the same time, the data suggests a rise in the number of weapons with larger firepower, including sub-machine guns, machine guns, rifles, and carbines (Dreyfus, 2007b, p. 13).

Analysing the producers, *Bandeira and Bourgois* (2006) find that most of the weapons (76.6 per cent) are Brazilian-made, 35.0 per cent by Taurus and 21.0 per cent by Rossi (p. 12). *Rivero* (2005) shows that only one-fifth of Brazilian-made weapons (19 per cent) were registered at some point, whereas the rest (81 per cent) was never legally registered. In those cases, either the legal gun owners committed crimes or the guns had been diverted from their legal owners (*Rivero*, 2005, p. 206).

Rivero further demonstrates that a significant number of the high-power firearms were types that are typically for exclusive use by law enforcement or the military, such as the Brazilian-made .38 mm Taurus and Imbel pistols, Taurus 9 mm pistols, and pistols produced by Smith & Wesson (United States), Ruger (United States), and Norinco (China) (*Rivero*, 2005, p. 220). This suggests that many weapons are diverted from Brazilian government-controlled stockpiles to the illicit market. *Dreyfus* confirms this finding, showing that 18 per cent of firearms that have been traced back to their origins stem from official institutions, including the military police and the army (*Dreyfus*, 2007b, p. 22).

In some cases, guns were allegedly exported via **Paraguay** but never really left Brazil, only to be released on the local illicit market. Paraguay has long functioned as a hub for illicit procurement of weapons, both foreign- and Brazilian-made (*Dreyfus and Marsh*, 2006, p. 44; *Dreyfus*, 2007b, p. 27). For a long time, the country had lax regulations on firearms purchase. This eventually changed, first with the US ban on firearm exports to Paraguay in 1996 and, in 2002, with the adoption of tougher regulations in Paraguay. Among other measures, the purchase of firearms by foreigners was explicitly prohibited.³⁶ Fieldwork carried out in 2000 and 2005 showed that, despite these regulations, a substantial number of firearms imported until the mid-1990s could still be purchased in Paraguayan gun shops (*Dreyfus and Marsh*, 2006, pp. 36-37).

In addition, there is evidence of a flourishing illicit arms trade in the 'Tri-Border Area' between Argentina, Brazil, and Paraguay. In 2003, a report by the US Federal Research Division provided evidence that the area serves as a haven for illicit activities ranging from counterfeiting to intellectual property theft and money laundering; it has been identified as a central point for the laundering of funds from drug trafficking and for the funding of terrorist organizations (*Hudson*, 2003).

The data on weapons seized in Rio de Janeiro was influential at the policy level. It spurred the Parliamentary Commission of Inquiry to investigate arms trafficking in Brazil. A coalition of non-governmental organizations³⁷ also used the data to inform the discussion and the campaign advocating the adoption of the national disarmament statute (gun law) in December 2003. The new law introduced the prohibition for civilians to purchase firearms (except in at-risk professions) and the centralization at the federal level of permits and weapons registration (FLACSO, 2007, p. 122).

The presence of illicit gun markets is often heavily linked to the illicit drug trade. Studies show that Colombia ‘has a massive illegal market for weapons, with a complex network of buyers and sellers—many of them driven by the armed conflict and narco-trafficking’ (Small Arms Survey, 2006, p. 217). Colombia’s conflict and drug trade not only attract illegal firearms but also create pools of illicit guns that flow into neighbouring countries, Central America, and the Caribbean. Research on armed violence in **Jamaica** suggests that criminals commonly smuggle weapons such as AK-47s and M-16s from South and Central American countries—including from Colombia, Honduras, and Venezuela—into Jamaica, although many of the illicit guns originate in the United States (Leslie, 2010, p. 41).

In his research on **Honduras**, Bosworth (2010) observes that, while most drug-trafficking transactions are made in cash, payment in arms also occurs. Honduran authorities report that Mexican drug cartels such as Los Zetas move high-calibre firearms, mostly stolen from security forces in Mexico and Guatemala, into Honduras in exchange for cocaine.

Other reports indicate that Honduras has become the sub-regional centre of the booming business in illegal guns. More than 850,000 weapons are estimated to be circulating in the country. Of those, only 258,000 weapons are

Table 1.4 Types of firearms captured by police in Rio de Janeiro, 1951-2003

Type of firearm	1951-80		1981-92		1993-2003	
	Number	%	Number	%	Number	%
Revolver	16,868	69	23,197	77	22,402	60
Pistol	3,495	14	3,802	12	9,865	26
<i>Garrucha</i> (single- or double-barrel single-shot handgun)	378	1	1,080	3	1,617	4
<i>Fuzil</i> (assault rifle)	7	0	38	0	1,579	4
<i>Carabina</i> (carbine)	196	0	627	2	466	1
<i>Metralhadora</i> (machine gun)	12	0	97	0	442	1
<i>Arma tiro a tiro</i> (firearm without deposit or charger)	3,433	14	953	3	264	0
<i>Submetralhadora</i> (sub-machine gun)	8	0	77	0	192	0
<i>Escopeta</i> (shotgun)	4	0	43	0	25	0
<i>Garruchão</i> (long version of single- or double-barrel shotgun)	17	0	56	0	23	0
<i>Artesanal</i> (craft gun)	0	0	5	0	22	0
Rifle	17	0	27	0	11	0
<i>Mosquetão</i> ³⁸	2	0	14	0	9	0
Bazooka	0	0	4	0	9	0
<i>Caneta</i> (pen gun)	1	0	2	0	4	0
<i>Laça granada</i> (grenade launcher)	0	0	0	0	2	0
<i>Lança rojão</i> (rocket launcher)	0	0	0	0	1	0
Other	6	0	19	0	16	0
No information	1	0	5	0	10	0
Total	24,445	100	30,046	100	36,959	100

officially registered. As one study notes: ‘Huge stockpiles of military weapons, often poorly guarded and controlled by corrupt officials[,] are ending up in the hands of criminal gangs and drug cartels [that operate] throughout Central America and beyond’ (Graham, 2011). The Honduran newspaper *El Herald* recently reported on an investigation into the whereabouts of approximately 3,000 guns collected between the years 2002 and 2006 (Cullinan, 2011).

The diversion of firearms from military and law enforcement institutions, as well as private security companies, is reportedly not uncommon.³⁹ A study on state military surplus weapons and ammunition in South America finds that three-quarters of the region’s surplus is located in Argentina and Brazil (Karp, 2009). The same study observes that in **Brazil** poor stockpile security and corruption leads to widespread firearms diversion from law enforcement agencies into criminal hands (Karp, 2009, p. 31). The Oversight Division for Arms and Explosives in Rio de Janeiro maintains a registry of weapons seized between 1951 and 2003 in the context of criminal activities, illegal possession, and irregular use (such as permit lapses or alcohol consumption when carrying a firearm). The registry, which was cleaned to retain only crime weapons, shows that diversion from official institutions is not unusual (see Box 1.3).

In **Argentina**, cutbacks in the army in the 1980s and 1990s generated a surplus of at least 400,000 small arms and light weapons.⁴⁰ A report on surplus arms in South America suggests that many of these weapons have been diverted. Indeed, a significant number of semi- and fully automatic weapons originating from the Argentine army have been seized from criminals in Argentina and neighbouring countries (Karp, 2009, p. 27). Beyond these, most of the arms involved in crime in Argentina are Argentine-made. Of all the arms seized between 1992 and 2001 in the city of Mendoza after a crime, nearly 74 per cent were Argentine-made. Overall, 37.5 per cent of the arms seized were .22- and .32-calibre revolvers made by the Argentine firm Pasper (Appiazola, 2001, pp. 3–7).⁴¹

Despite such information, further research is needed on the origins and the legal status of firearms and ammunition, the dynamics of the illicit markets, and the mechanism of firearms involvement in armed violence.

The relationship between the availability of firearms and homicide rates is not straightforward.

MAPPING AN AGENDA FOR FUTURE RESEARCH

As discussed above, numerous factors may explain why the relationship between high homicide rates and the high proportion of firearm homicides is especially pronounced in a significant number of countries in Latin America and the Caribbean. These include the availability of firearms, the presence of organized crime and certain kinds of youth gangs, and impunity regarding firearm homicides. This section explores these factors and highlights gaps in our knowledge that further research might usefully address.⁴²

Availability of firearms

The widespread availability of firearms in Latin America and the Caribbean is often cited as an important cause of high levels of armed violence. Yet the relationship between the availability of firearms and homicide rates is not straightforward. In 2007, the Small Arms Survey estimated the civilian firearms possession rates in 178 countries in the world (both legally and illegally owned firearms). A comparison of global possession rates shows that—despite the inclusion of estimates on illegal firearms—Central America, the Caribbean, and South America have comparatively low possession rates. Central America had an average rate of 6.8 per 100, the Caribbean stood at 4.7, and South America at 12.1. In comparison, Western Europe—a part of the world with far lower proportions of firearm homicides—has an estimated average possession rate of 24.9 per 100.⁴³

These figures do not differentiate between legal and illegal firearms. In the context of firearm homicides, the availability of illegal firearms may be the more relevant indicator. As highlighted earlier, actual and potential perpetrators may have access to illicit firearms through black markets or as a result of diversion from state institutions. More research is needed to establish whether homicides are generally committed with legal or illegal firearms in Latin America and the Caribbean.

The illicit use of firearms depends not only on their availability but also on other factors, including measures to prevent civilian and criminal access to guns. In most cases it is extremely difficult to evaluate the effects of such measures on levels of armed violence. The impact of ‘softer’ measures, such as community awareness-raising efforts and gun buy-back programmes, is equally difficult to assess. A recent study on the effects of bans on carrying firearms in Colombian cities confirms that such restrictions contributed to a drop in the number of gun injuries (both fatal and non-fatal). Yet the study also finds that the positive effects largely depended on the efficiency of the law enforcement institutions tasked with enforcing the ban and confiscating guns (Restrepo and Villa, 2011). Whether a tightening of civilian gun regulations can reduce homicide rates is a question that calls for further research.

Little is known about the relationship between the presence of youth gangs and homicide rates.

The presence of youth gangs

Analysis of police statistics across different countries in the Americas, Asia, and Europe demonstrates a close link between the proportion of homicides committed with firearms and the proportion of homicides related to youth gangs (Geneva Declaration Secretariat, 2011, p. 100). In comparison to countries in Asia and Europe, states in the Americas show not only a significantly higher proportion of homicides committed with firearms but also a significantly higher share of all homicides that are attributed to gang violence.

A recent report by UNODC (2011) draws attention to the fact that, in the Americas, young men are much more frequently killed with firearms than in other parts of the world. In the 46 countries in the Americas for which UNODC has available data, a 15–34-year-old man is about six times more likely to be killed with a firearm than with a knife. In contrast, he would be almost as likely to be killed with a knife as with a firearm in the 17 Asian countries under review (UNODC, 2011, p. 40). According to UNODC, this demographic analysis suggests a higher involvement of youth gangs—which are typically composed of young men—in firearm homicides in the Americas.

Despite these claims, it remains unclear which gangs are actually involved in homicides, to what extent, and in what context. While limited evidence is available, there is no national-level breakdown of ‘gang presence’ or longitudinal data, such as ‘increased gang presence’. A recent World Bank report states that:

while gangs are doubtless a major contributor to crime in El Salvador, Guatemala and Honduras, the very limited evidence indicates that they are responsible for only a minority share of violence; multiple sources suggest that perhaps 15 percent of homicides are gang related (World Bank, 2011, p. ii).

Little is known about the relationship between the presence of youth gangs and homicide rates. Systematic data collection and analysis are required to explore possible links between gang membership and the perpetration of homicide.

Organized crime

Research suggests that the extent to which gang members and other perpetrators possess and use firearms varies according to the general availability of and obstacles to buying an illicit gun, as influenced by the presence of a black market or the ease of firearm smuggling (Small Arms Survey, 2010, p. 111). This chapter highlights that firearms

smuggling and black markets, on the one hand, and organized crime and drug traffickers, on the other, frequently form two sides of the same coin.

Agozino et al. (2009) explain that the illicit drug and weapons markets are related in several ways. First, guns are required to ensure contracts in an illicit market where there are often no other guarantors. The availability of guns among those involved in the drug market leads to their increased use, such as when drug deals ‘go bad’. But once the guns have arrived in local communities, they may also be used in situations not directly connected with the drug market (Agozino et al., 2009, p. 293).

The principal driver of violence is, in fact, the illegal drug trade.

In its recent report on crime and violence in Central America, the World Bank (2011) concluded that the principal driver of violence is, in fact, the illegal drug trade, outranking other possible factors, such as the prevalence of youth gangs, the availability of firearms, and the legacy of conflict. Yet little is still known about the ties between the illegal drug trade, the availability of illicit firearms, and the use of firearms to commit homicides. Comprehensive analysis of the context of homicides, the types of perpetrators, and the type and origin of the instrument involved is still hampered by a lack of data.

Firearm homicides and impunity

As suggested in previous sections, firearms homicides are less likely to be solved than homicides committed with knives or other instruments. One reason for this is that—in contrast to homicides committed with knives or other bladed weapons—firearms do not require physical contact between the victim and the offender (Addington, 2006; Riedel, 2008). As one study points out:

Many countries have limited forensics capacity for detailed ballistics analysis, and the lack of close contact between the victim and the offender means that few types of physical evidence (such as the offender’s hair, blood, or fingerprints) are left behind (Geneva Declaration Secretariat, 2011, p. 102).

In addition, firearm homicides that are related to gang activities and drug-trafficking organizations are even less likely to be solved, as witnesses are often reluctant to come forward due to a fear of reprisals.

These findings imply that there may be a connection between high rates of homicide, high rates of homicides related to organized crime, frequent use of firearms, and low police and law enforcement performance in solving gun homicides. Indeed, ‘[c]ountries showing this combination of factors risk entering a spiral of increasing violence and impunity’ (Geneva Declaration Secretariat, 2011, p. 88). In the case of Guatemala, impunity in relation to firearm homicides and organized crime also has to do with the fact that drug traffickers have more money, more firepower, and more mobility than the police—especially the ability to disperse and regroup quickly (ICG, 2011). As summed up by a Guatemalan police officer: ‘Here we are with our *pistolitas*, and they have automatic rifles’ (ICG, 2011, p. 10). The question of whether there are direct causal relationships between impunity around organized crime, weak law enforcement capacities, and high firearm homicides calls for further research.

CONCLUSION

Many countries in Latin America and the Caribbean experience significantly higher homicide rates than other parts of the world. This chapter finds that the region also suffers from significantly higher proportions of homicides committed with firearms. In places with high or increasing levels of violence, the firearm—an effective instrument for committing homicides—is used even more frequently.

At the same time, the chapter shows that there are significant differences among countries in Latin America and the Caribbean. A number of them—mainly in the Southern Cone—exhibit homicide rates below 10 per 100,000, with firearms used in fewer than 60 per cent of cases. At the other end of the spectrum are countries with homicide rates of more than 30 and even exceeding 80 per 100,000, with firearm homicides accounting for up to 90 per cent of all cases. These include the three countries in the Northern Triangle—El Salvador, Guatemala, and Honduras—as well as Colombia and Venezuela.

A literature review suggests that pistols and revolvers are the weapons most frequently used in firearm homicides in Latin America and the Caribbean. At the same time, the trafficking and use of heavier firearms, such as assault rifles or sub-machine guns, is a feature of large-scale drug trafficking organizations. Evidence suggests that the majority of firearms used in crimes are illegal, yet little is known about the legal status of firearms used in armed violence in Latin America and the Caribbean.

While the chapter has shed light on the patterns and distribution of homicides and firearm homicides in the region, further analysis is needed to refine our understanding of this complex phenomenon. Of the topics requiring attention, the most pressing include the factors underpinning homicides, including firearm homicides. Illuminating perpetrators' access to guns, especially through illicit markets, is also an important area for assessing—and ultimately addressing—armed violence in the region. ■

LIST OF ABBREVIATIONS

AUC	Autodefensas Unidas de Colombia (United Self-Defence Forces of Colombia)
IBIS	Integrated Ballistics Identification System
IML	Instituto de Medicina Lega (Institute of Forensic Medicine, El Salvador)
UNODC	United Nations Office on Drugs and Crime

ANNEXE

Online annexe at <<http://www.smallarmssurvey.org/de/publications/by-type/yearbook/small-arms-survey-2012.html>>

Annexe 1.1. Trends in firearm homicides, 1995–2010

Annexe 1.1 comprises 23 graphs showing trends in homicide rates between 1995 and 2010 and the percentage of firearm homicides for Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

ENDNOTES

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- 1 For an overview of the research on violence in Latin America and the Caribbean, see Imbusch, Misse, and Carrión (2011).
 - 2 The terms 'firearms', 'arms', and 'guns' are used interchangeably in this chapter.
 - 3 The International Classification of Disease code for 'assault' is X85–Y09; it excludes injuries due to legal intervention and operations of war (WHO, n.d.).
 - 4 Interview with an IML representative conducted by Matthias Nowak, San Salvador, 23 August 2011.
 - 5 In Colombia, for example, three different sources provide data on homicides: 1) the National Police, 2) the National Administrative Department of Statistics (DANE), which produces public health data, and 3) the National Institute of Legal Medicine and Forensic Sciences. This study makes use of police data. The police report lower homicide rates than do the other two sources, but they provide the longest time series of homicide rates (see Aguirre, Moscoso, and Restrepo, 2011).
 - 6 This chapter groups countries in line with UN geographical regions (UNSD, n.d.a). For purposes of this chapter, the 34 countries under review are categorized as follows. *Central America* is composed of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

- The *Caribbean* comprises Anguilla, Antigua and Barbuda, the Bahamas, Barbados, Cuba, Dominica, the Dominican Republic, Grenada, Jamaica, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago. *South America* contains Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela.
- 7 Anguilla, Antigua and Barbuda, Bolivia, and Saint Lucia are not included in this calculation due to a lack of data on the proportion of firearm homicides; the Bahamas, Barbados, Belize, Dominica, Grenada, Saint Kitts and Nevis, and Saint Vincent and the Grenadines are excluded because they have populations below 500,000 (UN, n.d.b). In countries with such small populations, small changes in the number of homicides can lead to large changes in the rate, which makes it difficult to generate reliable rates per 100,000 population for a specific year within an acceptable confidence interval.
- 8 Elaboration of Geneva Declaration Secretariat (2011, p. 99).
- 9 A breakdown of national homicide trends and the percentage of firearm homicides in relation to the total homicide rate can be found in the annex to this chapter.
- 10 Of the total of 34 countries (see endnote 6) Anguilla, Antigua and Barbuda, Bolivia, and Saint Lucia are excluded from Figure 1.1 due to a lack of data on the proportion of firearm homicides.
- 11 Trends in countries in Latin America and the Caribbean are analysed in more detail in the next section.
- 12 See endnote 7.
- 13 Interview with a representative of the Ministry of Public Health conducted by Katherine Aguirre, Havana, Cuba, August 2011.
- 14 See endnote 6.
- 15 Countries with a population of less than 500,000 are excluded (Anguilla, Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines), see endnote 7.
- 16 See UNODC (2007).
- 17 The 23 countries are Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Suriname, Trinidad and Tobago, Uruguay, and Venezuela; see endnote 7.
- 18 See also Geneva Declaration Secretariat (2011, p. 64).
- 19 For a more detailed review of the characteristics of drug-related violence and of the types of firearms used in Mexico, see the chapter on drug violence in this volume (DRUG VIOLENCE).
- 20 Author interview with Dennis Rodgers, 21 December 2011.
- 21 See Rodgers, Muggah, and Stevenson (2009) and Rodgers (2006).
- 22 For literature on Jamaica, see, for example, Clarke (2006) and USAID (2007).
- 23 Cited in Leslie (2010, p. 33).
- 24 The research, undertaken in 2009, also finds that police efforts to reduce gun violence are sometimes mitigated by the government's direct financial support to urban gangs. As Townsend notes: 'In exchange, come election days, these gangs have been frequently called upon to turn out loyal supporters and physically menace would-be opposition voters' (Townsend, 2009, p. 15).
- 25 For literature on violence in Venezuela, see Briceño-León (2006) and Leon (2010).
- 26 Author interview with William Godnick, public security coordinator, United Nations Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean (UN-LiREC), 9 December 2011.
- 27 For a review of the effect of multi-institutional efforts to prevent and reduce crime and violence in urban centres in Colombia, see Guerrero (1999), Villaveces et al. (2000), and Aguirre and Restrepo (2010).
- 28 See Spagat (2008) and Rozema (2008).
- 29 See Pachico (2011) and Ortiz and McDermott (2011).
- 30 That said, the World Bank reports that inequality in Colombia is greater than in Venezuela; see World Bank (n.d.).
- 31 The factory is due to open in 2012 (*Universal*, 2011).
- 32 The population statistics are based on IBGE (2008).
- 33 On firearms in Argentina, Paraguay, and Uruguay, see Fleitas (2006).
- 34 For example, in May 2011, Mexican and Belizean government officials inaugurated a training course in ballistic investigation for members of the Belize Police Department. The training included an introduction to IBIS (Embassy of Mexico in Belize, 2011).
- 35 On the production of firearms in Latin America, see Klare and Andersen (1996) and Small Arms Survey (2004).
- 36 See Dreyfus et al. (2010).
- 37 The coalition included Viva Rio in Rio de Janeiro, Convive in Brasília, and the Instituto Sou da Paz in São Paulo, among others (FLACSO, 2007).
- 38 *Mosquetão* refers to an old type of rifle with a short barrel.
- 39 Latin America stands out as the region in which private security companies are the most heavily armed. They are a source not only of legal demand for firearms and ammunition, but also of diversion to illicit actors (Small Arms Survey, 2011, p. 114).
- 40 See UNGA (1997) for what weapons are included in the small arms and light weapons categories.
- 41 The United States is the second-most represented country of origin, accounting for 5.5 per cent of the weapons seized (Appiazola, 2001, pp. 3–7).
- 42 While this chapter has touched on socio-economic and structural factors that may affect levels of crime and violence in Latin America and the Caribbean—including economic inequality and overall levels of poverty—further exploration of these themes is beyond its scope. For more analysis of the main underlying factors of high crime rates in the region—high inequality, low police presence, and low incarceration rates—see Soares and Naritomi (2010).
- 43 Based on Karp (2007).

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