

Crime and Violence in Development

A Literature Review of Latin America and the Caribbean

By

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Abstract

The authors review the recent literature on crime and violence in Latin America and the Caribbean and present a broad overview of the main ideas and empirical findings. They provide estimates of the magnitude of the problem, trends, and the manifestations of crime and violence in Latin America. They also discuss the ways in which violence affects development, the root causes of violence and the empirical evidence on the determinants of crime. The authors conclude by stressing that preventive measures and innovative social policies are efficient and under-utilized strategies to address the problem and call for both more research and operational experimentation.

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1. Introduction

With more than 140,000 homicide deaths per year, Latin America's homicide rate is twice the world's average, making it the most violent region in the world after Sub-Saharan Africa.² Selected indicators such as homicide rates, injury rates, and the size of the private security sector would suggest that some countries in the region exhibit war-like symptoms, despite being formally at peace. Alarming, crime and violence levels have been on the rise since the 1970s. The Pan-American Health Organization has described violence as the regional pandemic. Every year, Latin Americans lose an average of 3 days of good health due to violence and 28 million families are subject to robbery and theft.³

In Latin America, violence disproportionately affects the poor, eroding their assets and livelihoods. The abnormally high levels of crime and violence constitute a key obstacle to the development of the region. The cost associated with these levels of crime and violence is astounding: it is estimated at 14.2% of the regional GDP.⁴ In terms of human capital, 1.9% of GDP is lost annually, which is equivalent to the region's spending on primary education. Over the past 15 years, the net accumulation of human capital has been cut in half due to the increase in crime and violence.⁵ According to the Colombian National Planning Department, the cost of violence (including urban violence and armed conflict) amounted to 18.5% of GDP between 1991 and 1996.⁶ The cumulative effect of "lost growth" as a result of crime and violence is such that Colombia would today have a per capita income on the order of 32% higher than at present.⁷

This paper surveys the recent literature on crime and violence and provides a broad overview of the main ideas and empirical findings. It does not attempt to be comprehensive, but it rather seeks to provide an introduction. Section 2 provides an overview of the magnitude, trends, and manifestations of crime and violence in Latin America. Section 3 discusses the ways in which violence impacts on development and offers some cost estimates. Section 4 surveys the literature on the root causes of violence and the empirical evidence on the determinants of crime. Finally, Section 5 concludes. Additionally, the paper presents three annexes: (1) Data Sources on Crime and Violence for LAC, (2) Overview of Selected Papers on Crime and Violence in LAC, and (3) Overview of Selected Empirical Papers on Crime and Violence in LAC.

² The World Health Organization's "World Report on Violence and Health" (2002) estimates the homicide rate per 100,000 population at 19.3 for the Region of the Americas, including the United States and Canada.

³ Londoño and Guerrero (2000).

⁴ Ibid.

⁵ Londoño (1996) quoted in Ayres (1998).

⁶ Departamento Nacional de Planeación (1998) quoted in Buvinic, Morrison and Orlando (2002).

⁷ Rubio (2000).

2. Crime and Violence in Latin America: Magnitude, Trends, and Manifestations

The extent to which countries in Latin America are affected by crime and violence varies significantly. For 1994, the most recent year for which comprehensive data are available, homicide rates per 100,000 were 51.9 in the Andean region, 30.1 in Brazil, 21.1 in Central America and the Hispanic Caribbean, 19.5 in Mexico (1995 data), 8.7 in the English Caribbean and 6.2 in the Southern Cone.⁸ Crime and violence rates are especially high in post-conflict countries. In El Salvador, for example, the homicide rate increased by 36% after the end of the civil war.⁹ But high levels of violence are not exclusively a symptom of countries experiencing or emerging from periods of political unrest. Rather, it appears that countries at varying levels of development are affected by it.

Alarmingly, crime and violence levels have been on the rise since the 1970s. Data indicate an overall upward trend in criminal activity in most countries of the region, a few exceptions being Argentina, Chile and Costa Rica.¹⁰ The highest rates of increase were recorded in the English Caribbean, where homicide rates jumped by more than 67% and in the Andean region, where rates more than doubled. In Brazil and Central America (including the Hispanic Caribbean), rates increased by 29.7% and 20.6%, respectively, whereas increases in the Southern Cone and Mexico were 14.8% and 7.1%. For the region as a whole, the non-population-weighted rate of increase was 40.7% between 1984 and 1994, or approximately 3.4% per year.¹¹ One of the most dramatic increases occurred in Jamaica: between 1977 and 2000, the rate of violent crime increased from 254.6 incidents per 100,000 to 633.4 per 100,000 and the murder rate jumped from 19.2 per 100,000 to 39 per 100,000.¹²

Violence is most severe and visible in urban settings. The main metropolises such as Rio de Janeiro, Mexico City, Lima, and Caracas account for more than half the total of their national homicides.¹³ While the majority of the literature analyzes crime and violence in urban contexts, large parts of the rural population are also affected by it. A high incidence of rural violence is most marked in conflict and post-conflict countries, such as in El Salvador, Guatemala, and Colombia. El Salvador has one of the highest incidences of rural violence, with 76% of homicides occurring in rural areas.¹⁴ Kay (2001) suggests that Latin America's potential for rural violence is largely rooted in its unequal and exclusionary agrarian socioeconomic system, although the manifestation of violence depends on a number of factors, including particular political circumstances.¹⁵

Not only has there been a marked increase in crime and violence levels since the 1970s, but also a change in its form. Since the 1990s, the most visible manifestation of violence

⁸ Morrison, Buvinic, and Shifter (2003).

⁹ Buvinic and Morrison (2000).

¹⁰ Fajnzylber, Lederman, and Loayza (1998).

¹¹ Morrison, Buvinic, and Shifter (2003).

¹² Harriott (2004) in Harriott, Brathwaite and Wortley (2004).

¹³ Briceño-León (1999) quoted in Moser (2004).

¹⁴ World Vision (2002) quoted in Moser (2004).

¹⁵ Kay (2001).

is no longer overt political conflict but instead crime and delinquency.¹⁶ Violence is a heterogeneous phenomenon with a number of different manifestations: homicides, robberies, kidnappings, muggings, assaults, domestic violence, sexual violence, violence against children and the elderly, etc.¹⁷ Victimization surveys demonstrate that different socio-economic groups experience violence differently: middle and high-income neighborhoods are mostly affected by property crime, whereas homicides and physical injuries are more common in low-income neighborhoods.¹⁸ In a study of Colombia, Gaviria and Velez (2001) find that in the main metropolitan areas the rich households bear most of the burden of property crime, whereas the poor, especially the people with low educational attainment, bear a disproportionate burden of domestic violence.¹⁹ The bulk of the data on homicides and injuries are not disaggregated by ethnic groups, but evidence on the local level indicates that those who suffer from social and cultural exclusion, such as indigenous groups and afro-descendants, are likely to be disproportionately affected by violence.²⁰ Ethnic and rural violence is especially pervasive in conflict settings.

It is difficult to construct precise indicators in order to measure the magnitude of violence in its various forms and draw comparisons. As mentioned above, the most widespread measure is homicide rates, which is problematic, since it does not capture other, non-fatal types of violence and crime. Furthermore, homicide rates give a somewhat skewed picture of the crime situation, since the majority of crime tends to be property crime. Using homicides as a proxy for all violence will not yield an accurate picture. Another challenge is that homicide data are not always reliable and often includes unintentional deaths, such as car accidents. Furthermore, methodologies for violence indicators vary across countries and crimes suffer from severe underreporting, especially crimes such as domestic violence and the abuse of children and the elderly. Rubio (1998) estimates that only 15–30% of violent crimes are reported in Latin America.²¹ Victimization surveys provide an excellent tool to form realistic estimates of the extent of crime and violence in the absence of reliable statistical data. These surveys demonstrate that underreporting is especially severe in poor areas. For similar levels of thefts, burglaries, and muggings, middle-class and rich neighborhoods have a much higher level of reporting than poorer areas.²² The low level of reporting is partly explained by mistrust of the police in low-income neighborhoods. Poorer areas also tend to display high levels of impunity. Criminals are often known and identified by shantytown dwellers, but an omerta of forced complicity protects them.²³

¹⁶ Rodgers (1999) in Moser and Lister (1999).

¹⁷ The 2002 “World Report on Violence and Health” defines violence as the “intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.” Crime, on the other hand, is defined as an act punishable by law. While *crime* and *violence* are closely related to one another they are not interchangeable. There is non-violent crime as well as non-criminal violence.

¹⁸ See for instance Gaviria and Velez (2001).

¹⁹ Gaviria and Velez (2001).

²⁰ Borjas (1995), Katzman (1999) quoted in Buvinic, Morrison and Orlando (2002).

²¹ Rubio (2000).

²² Vanderschueren and Oviedo (1995) quoted in Vanderschueren (1996).

²³ Diagne (1995) quoted in Vanderschueren (1996).

Although violence tends to be discussed in terms of homicide rates, domestic violence is in fact among the most pervasive types of violence in Latin America, even if its visibility is low. Surveys undertaken by Heise, Ellsberg and Gottmoeller (1999) indicate that between 10% and 50% of women declared having been beaten or mistreated physically by their current or former partner.²⁴ In up to half of the cases, domestic violence goes hand in hand with psychological and sexual violence.²⁵ In Colombia, domestic violence affects almost half of the Colombian households while criminal victimization affects less than 10% of them.²⁶ The same study reveals that women from the bottom quintile of the income distribution are 15% more likely to suffer from domestic violence than women from the top quintile. The probability of being a victim of domestic violence rises as much as 10% from the top to the bottom quintile of the income distribution in urban Colombia. Empirical evidence suggests that the main risk factor for domestic violence is the lack of education: each year of schooling reduces the probability of domestic violence by more than 1%.²⁷ The costs of domestic violence go beyond the public health burden, as domestic violence affects the productivity and employability of women. Cost projections based on the estimated number of national victims, estimate the total cost to society from domestic violence at 1.6% of GDP for Nicaragua and at 2% of GDP for Chile.²⁸

In contrast to domestic violence, youth violence is highly visible, whether in the form of gangs, in schools or on the streets. In Latin America, both the perpetrators and victims of violence are mostly young and male. In the Caribbean, an estimated 80% of violent crimes are committed by men, the majority of whom are under 35 years, with an increasing number under 14.²⁹ In 1995 in Rio de Janeiro, 91% of the city's homicide victims were men and 57% were between the ages of 15 and 29.^{30 31} For the year 2000, the World Health Organization estimated the homicide rate for Latin American youth aged 10 – 29 at 36.4 per 100,000, more than double the African rate of 17.6.³² However, there are substantial regional variations in youth homicide rates and youth homicides have not risen equally fast in all countries. Colombia shows the most severe increase, with rates rising 159% between 1985 and 1994, from 36.7 per 100,000 to 95 per 100,000. For the same period, Venezuela recorded an increase of 132% from 10.4 per 100,000 to 24.1 per 100,000. In Mexico, youth homicide rates have been slightly more stable, rising from 14.7 per 100,000 to 15.6 per 100,000 for the period above.³³ Youth violence often occurs in the context of gangs. There are an estimated 30,000 – 35,000 gang members in El Salvador with a similar number in Honduras.³⁴ Gangs are a primarily male

²⁴ Heise, Ellsberg, and Gottmoeller (1999) quoted in Buvinic, Morrison, and Orlando (2002).

²⁵ Buvinic, Morrison and Orlando (2002).

²⁶ Gaviria and Velez (2001).

²⁷ Ibid.

²⁸ Morrison and Orlando (1999) quoted in Buvinic, Morrison and Orlando (2002).

²⁹ Gabriel and Bishop (1995) quoted in Moser and van Bronkhorst (1999).

³⁰ Veija (1997) quoted in Moser and van Bronkhorst (1999).

³¹ De Roux (1994) quoted in Ayres (1998).

³² World Health Organization (2002).

³³ Ibid.

³⁴ Ibid.

phenomenon and members tend to come from economically deprived urban areas. Gangs tend to flourish in environments where the established social order has broken down and social capital is low.

Youth violence is closely bound up with violence against children. There is a significant relationship between exposure to violence or victimization as a child and a later propensity for violent conduct.³⁵ It is estimated that 6 million minors in the region are the object of severe maltreatment and that 80,000 die each year as a result of injuries caused by their parents, relatives or others.³⁶ A recent study found that over 2 million children and youth, and 23 % of families experience abuse in urban Colombia, and that in Mexico City 1 million children and 13 % of households do so.³⁷ This study also finds that abuse has a significant negative effect on human capital: it affects on children's educational attainment and adult labor wages. The public health literature makes a strong case for the prevention of violence against children and domestic violence as a form of primary violence prevention.

With the rapid rise of crime and violence levels, citizen security has been identified as a key concern of the Latin American electorate. Latinobarómetro polls quote delinquency among the top concerns of the population along with unemployment, inflation, poverty and corruption.³⁸ The same poll reports low levels of inter-personal trust. Polls suggest that violence tolerance levels differ across societies and the perceptions of violence levels are not always matched by reality. Interestingly, Latin Americans seem to feel less secure than they actually are, according to research by Smulovitz (2004) on Argentina and Basombrío (2004) on Peru.³⁹

³⁵ Dahlberg (1998) quoted in Buvinic, Morrison and Orlando (2002).

³⁶ De Roux (1994) quoted in Ayres (1998).

³⁷ Knaul and Ramírez (2005).

³⁸ Latinobarómetro (2002) quoted in Buvinic, Morrison and Orlando (2002).

³⁹ Smulovitz (2003), Basombrío (2003) in Frühling and Tulchin with Golding (2003).

3. Crime and Violence as a Development Problem

The development literature began exploring the effects of crime and violence on development in the mid 1990s, and since, a number of scholars have convincingly argued that crime and violence are among the key obstacles for development in Latin America.⁴⁰ Evidence shows that violence consistently undermines development efforts at various levels and that it drives the depreciation of all forms of capital, i.e. physical, human and social. Most importantly, violence disproportionately affects the poor and erodes their livelihoods and assets. As Moser (1996) argues, the more assets an individual or household can acquire and the better they manage them, the less vulnerable they are. Violence, however, severely hampers the poor's ability to accumulate assets. The ways in which assets are affected by violence is detailed in the Table 1 below.

The fact that children are heavily affected by violence is especially concerning, since childhood and adolescence are critical stages for the accumulation of these assets. The accumulation of youth's human capital assets is severely restricted when violence limits their access to education and health care. The fewer assets an individual has, the more likely they are to turn to alternative means of survival (which often include violence), thereby perpetuating violence and the erosion of assets in households and communities.⁴¹ The effect violence has had on the accumulation of human capital is staggering: Londoño (1996) estimates that over the past 15 years the net accumulation of human capital in Latin America and the Caribbean has been cut in half due to the increase in crime and violence.⁴²

Table 1. The Asset Vulnerability Framework and Violence

Violence erodes:

- *Labor* as an asset when it limits access to jobs.
- *Human Capital* as an asset when it limits access to education and health facilities by both users and providers.
- *Social Capital* as an asset when it reduces trust and cooperation between community-level social organizations.
- *Household* relations as an asset when it limits the capacity of households to function effectively as a unit.
- *Productive assets* when it destroys housing – the urban poor's most important productive asset.

Source: Moser (1996), (1998) quoted in Moser and Van Bronkhorst (1999)

A slightly different way of conceptualizing the effects of crime and violence on development – instead of focusing on an individual's or a household's assets – is to try and discern direct and indirect impacts on the economy as a result of violence and then attempt to estimate these as costs, e.g. the cost of policing or the cost of health services.

⁴⁰ Ayers (1998), Moser and Van Bronkhorst (1999), Morrison, Buvinic, and Shifter (2003).

⁴¹ Moser and Van Bronkhorst (1999).

⁴² Londoño (1996) quoted in Ayres (1998).

Of course, not all expenditures can be treated as “costs” of violence since this disregards the need for some basic level of police, judicial and health spending, even in the absence of violence. The assumption is, however, that a high incidence of violence induces the population and policy-makers to divert resources from other, presumably more productive purposes, such as education.⁴³ This approach is useful in that it tries to illustrate the magnitude of the problem in monetary terms.

Table 2 below provides a typology of costs that can arise from crime and violence. The direct costs include the impact on the health sector (the cost of injuries and deaths in terms of disability-adjusted life years), destruction of capital, cost of policing, judicial services and private security. It is estimated that countries in Latin America devote between 0.3% and 5% of GDP to treating the health consequences of violence and spend between 2% and 9% of GDP on providing judicial and police services.⁴⁴ In Colombia, public spending on security and criminal justice was 5% of GDP in 1996, private expenditures on security amounted to another 1.4% of GDP.⁴⁵ In a separate study, the Colombian National Planning Department estimated the costs of urban violence and armed conflict at 18.5% of GNP between 1991 and 1996. The loss of life has the largest share in this cost estimate with 43% of the total, followed by increased military spending with 30%, spending on security with 23%, terrorism with 3% and health with 1%.⁴⁶ In Venezuela, direct costs of violence are estimated to be 9% of GDP in terms of health and material losses for 1997.⁴⁷ Cruz and Romano (1997) estimate that spending of government institutions, legal costs, personal injuries and prevention activities amounted to more than 6% of GNP in El Salvador in 1995.⁴⁸ Since these figures arise from different methodologies, they are not strictly comparable with one another and are only intended to provide an indication of magnitudes.

⁴³ Buvinic and Morrison (2000).

⁴⁴ Ibid.

⁴⁵ Buvinic, Morrison and Shifter (1999).

⁴⁶ Departamento Nacional de Planeación (1998) quoted in Buvinic, Morrison and Orlando (2002).

⁴⁷ Londoño and Guerrero (2000).

⁴⁸ Cruz and Romano (1997) quoted in Buvinic, Morrison, and Orlando (2002).

Table 2. Socioeconomic Costs of Violence: A Typology

Direct monetary costs	Value of goods and services used in treating or preventing violence: <ul style="list-style-type: none"> • Police • Criminal justice system • Medical • Psychological counseling • Damage to physical infrastructure (housing, etc.) • Social services
Non-monetary costs	Pain and suffering: <ul style="list-style-type: none"> • Increased morbidity • Increased mortality via homicide and suicide • Abuse of alcohol and drugs • Depressive disorders
Economic multiplier effects	Macroeconomic, labor market, intergenerational productivity effects: <ul style="list-style-type: none"> • Decreased labor market participation • Reduced productivity on the job • Lower earnings • Increased absenteeism • Intergenerational productivity impacts via grade repetition and lower educational attainment of children • Decreased investment and savings • Capital flight • Decreased tourism • Decreased government revenue • Impact on policy-making by distorting government spending
Social multiplier effects	Impact on interpersonal relations and quality of life: <ul style="list-style-type: none"> • Intergenerational transmission of violence • Erosion of human capital • Erosion of social capital and the social fabric • Reduced quality of life • Erosion of the state's credibility • Reduced participation in democratic processes

Source: Adapted from Morrison, Buvinic and Shifter (2003).

In addition to these direct costs, crime and violence have significant “multiplier” effects on the economy by depressing savings, investments, earnings, productivity, labor market participation, tourism, and ultimately growth. A recent study for Colombia suggests that for every additional 10 homicides per 100,000 residents, the level of investment falls by approximately 4%.⁴⁹ Put another way, if homicide rates in Colombia had remained unchanged since the 1960s, total annual investment in Colombia today would be around 20% higher. Over time, violence and its costs can become nearly self-fulfilling, with violence leading to lower investment and a deteriorating economy, which in turn can unleash new bouts of aggression and crime. As mentioned in the introduction, a study on Colombia by Rubio (1996) concludes that the cumulative effect of “lost growth” as a result of crime and violence has been such that the country would today have a per capita

⁴⁹ Buvinic and Morrison (2000).

income in the order of 32% higher than it currently has.⁵⁰ Schneidman (1998) estimates the reduction in average annual growth in Colombia at 2% over the past decade.⁵¹

Estimates of the total cost of violence are staggering. The total economic cost of violence for the city of Rio de Janeiro was projected at US\$ 1 billion for 1993.⁵² For Colombia estimates vary, ranging from 18.5% according to the National Planning Department, to more conservative estimates of 8.4% of GDP according to Londoño and Guerrero (2000).⁵³ The latter authors estimate that the figure is similarly high for Brazil, El Salvador, Mexico, and Peru.⁵⁴ Violence also has an impact on policy-making, since violence exacerbates the difficulties of collecting government revenue and distorts public spending.⁵⁵

Although less easily quantifiable, the impact of violence on interpersonal relations and the quality of life is not to be underestimated. This includes the intergenerational transmission of violence, an erosion of social capital, reduced quality of life and diminished participation of population in democratic processes.⁵⁶ Some have argued that violence can have an important function in terms of catalyzing political and social change. While this may be the case, it remains certain that violence only becomes necessary as a way of initiating political and social change when efficient institutional channels for peaceful democratic participation are nonexistent. Democracy is intimately bound up with the question of violence because in theory it should offer protection from arbitrary abuse. A high incidence of violence, however, challenges the state's monopoly of force and its responsibility to protect its citizens. In Latin America, the promise of reduced state violence has not always materialized and in many parts democratization has been accompanied by a continuation or even an increase in the use of force by the police and the military.⁵⁷ The democracies in the region have been described as "uncivil democracies" in which the political right to vote has been achieved but violence, impunity and weak or malfeasant judiciaries block the realization of civil rights.⁵⁸ Collective insecurity has subjected democratic institutions in Latin America to new demands. Fruehling (1995) has argued that the political impact of social violence is very large within a regional context characterized by a weak democratic culture.⁵⁹

⁵⁰ Rubio (1996) quoted in Ayres (1998).

⁵¹ Schneidman (1998) quoted in Moser and Van Bronkhorst (1999).

⁵² Lewis and Carter (1997) quoted in Moser and Van Bronkhorst (1999).

⁵³ Londoño and Guerrero (2000).

⁵⁴ Ibid.

⁵⁵ Buvinic and Morrison (2000).

⁵⁶ Buvinic, Morrison and Orlando (2002).

⁵⁷ Pereira and Davis (2000).

⁵⁸ Holston and Caldeira (1998) quoted in Pereira and Davis (2000).

⁵⁹ Fruehling (1995) quoted in Buvinic, Morrison, and Shifter (1999).

4. Causes and Determinants of Crime and Violence: Empirical Evidence

A number of typologies exist to categorize different types of violence. The public health approach often systematizes violence according to characteristics of those committing the violent act, i.e. self-directed, interpersonal or collective violence.⁶⁰ Rozenthal (1998) suggests a division into “political, delinquency and interpersonal violence” and, in a similar vein, Chernick (1998) suggests “political, criminal and social violence”.⁶¹ Moser and Shrader (1999) point out that these typologies lack conceptual congruency and propose the categories political, economic, and social violence, each identified in terms of the type of power that consciously or unconsciously violence is used to gain or maintain.⁶² In a later paper the same author proposes political, institutional, economic, and social violence, each defined in terms of motivation for the physical act that consciously or unconsciously is used to gain power.⁶³ As these examples show, constructing clear-cut categories is difficult for such a multi-faceted phenomenon and most categories will overlap somewhat. The number of typologies also reflects the fact that the field is compartmentalized between different academic approaches, the dominant ones being public health and psychology.

Public health specialists and psychologists have tended to focus their efforts on research into the root causes of violence. They emphasize that violent behavior is learned and that it is affected by biological and environmental factors alike. As already mentioned, there is a significant relationship between exposure to violence or victimization as a child and a later propensity for violent conduct. But in addition to that, violence is the result of a complex interplay of individual, relationship, social, cultural and environmental factors. The most widely used model to conceptualize the various influences on violence is the so-called ecological model (see figure below), which identifies four levels of influence on violent behavior. These are individual factors (such as biological and demographic factors, educational attainment, substance abuse, etc.), relationship factors (e.g. relations with peers, partners, family), community factors, (i.e. the context into which social relationships are embedded, such as schools and neighborhoods) and societal factors (such as cultural norms, such as norms that entrench male dominance or support the use of excessive force by police).⁶⁴

⁶⁰ World Health Organization (2002).

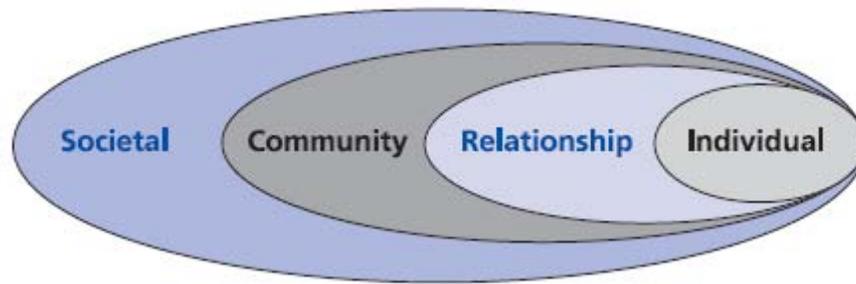
⁶¹ Rozenthal (1998), Chernick (1998) quoted in Moser and Shrader (1999).

⁶² Moser and Shrader (1999).

⁶³ Moser (2004).

⁶⁴ World Health Organization (2002).

Figure 1. Ecological Model for Understanding Violence



Source: World Health Organization, World Report on Violence and Health (2002)

Economists, on the other hand, have traditionally analyzed crime and violence in terms of expected benefits vs. expected punishment (or cost). Early work has focused on the incentives of potential criminals, concluding that the higher the return of criminal versus legal activities and the lower the probability of apprehension and incarceration, the higher the individuals' propensity to commit a crime.⁶⁵ Empirical studies show that violence responds to changes in expected punishment, and that the variable is thus policy sensitive.⁶⁶ Evidence also suggests that the severity of sentences does not have a significant deterrent effect, but the probability of being caught and tried can have a significant impact.⁶⁷ Fajnzylber, Lederman and Loayza (1998, 2000, 2002) have conducted extensive research on the economic determinants of crime in Latin America on which the section below draws heavily.

Fajnzylber et al. find that income inequality, not income, is among the key factors motivating crime. Greater inequality is associated with higher intentional homicide and robbery rates, but the level of income per capita is not a significant determinant of national crime rates. Countries with more unequal income distribution tend to have higher crime rates than those with more egalitarian patterns of income distribution. Crime tends to decline as the poorest quintile receives higher shares of national income. Data suggest that changes in income distribution, rather than changes in absolute levels of poverty, are associated with changes in violent crime rates.⁶⁸ These findings provide an explanation for the abnormally high rates of crime and violence in Latin America. Growth in the region has tended to be exclusive rather than inclusive, preventing the poor from taking advantage of their most abundant asset, i.e. their labor.⁶⁹ Another study finds that a one-point rise in a country's Gini coefficient is associated with nearly a one-point increase in its homicide rate.⁷⁰ However, the relationship between inequality and violence is not completely straightforward: some countries have seen decreasing income inequality accompanied by an increase in violence (measured in homicide rates) such as Brazil and

⁶⁵ Becker (1968)

⁶⁶ Levitt (1994) quoted in Ehrlich (1996); Buvinic, Morrison and Orlando (2002).

⁶⁷ Buvinic, Morrison, and Orlando (2002).

⁶⁸ Fajnzylber, Lederman, and Loayza (2002).

⁶⁹ Ayres (1998).

⁷⁰ UN Global Report on Crime and Justice (1999) quoted in Buvinic and Morrison (2000).

Venezuela, or a decrease in homicide rates accompanied by an increase in income inequality (Costa Rica and Mexico).⁷¹ Larger income inequality as measured by the Gini coefficient is also correlated with an increased incidence of robberies, but not to the same extent as in the case of homicides.⁷² As with the homicide regressions, level of per capita income is not robustly correlated with the robbery rate.⁷³

Correlations between crime and violence and unemployment offer less conclusive results, and the exact relationship between the variables remains to be clarified in further research. Some analysts have concluded that there is no correlation between unemployment and crime and violence in Latin America. But as Ayres (1998) points out, the fact that there is no direct causality does not signify that the two issues are unrelated. Data clearly shows that violence is counter-cyclical: homicide rates rise in periods of low economic activity, suggesting that unemployment has some effect on crime.⁷⁴ A considerable body of evidence supports the notion that young men in particular respond to the economic returns of crime, and these returns will be perceived as larger if legitimate employment is scarce or non-existent. Thus there is an argument that unemployment is a factor motivating crime and violence in urban areas in Latin America.⁷⁵

Regarding the effect of education, studies find that average years of schooling do not have a conclusive impact on crime and violence rates.⁷⁶ However, when the average years of schooling of the adult population is used as a proxy for the country's educational attainment, education appears to have a significant crime reducing impact. The contrast of results obtained using secondary enrollment rates and average years of schooling may indicate that the efforts to educate the young may not reduce crime and violence levels immediately, but eventually lead to a significant reduction of crime, especially of the violent sort.⁷⁷ The level of educational attainment of the adult population also has a robbery-reducing impact.⁷⁸ As mentioned above, the lack of education is one of the main risk factors for domestic violence: each year of extra schooling reduces the probability of domestic violence by more than 1%.⁷⁹

As mentioned in Section II, crime and violence in Latin America is a predominantly urban phenomenon. The significance of the correlation between urbanization and crime and violence is somewhat disputed in the literature. Buvinic and Morrison (2000) argue that crime rates in Latin America are strongly correlated with city size.⁸⁰ They suggest that crowding intensifies anti-social behavior and that transient populations cannot foster the level of social cohesion that tends to keep violence at bay. Furthermore, evidence

⁷¹ Morrison, Buvinic, and Shifter (2003).

⁷² Fajnzylber, Lederman, and Loayza (1998).

⁷³ Ibid.

⁷⁴ Londoño (1996) quoted in Ayres (1998).

⁷⁵ Ayres (1998).

⁷⁶ Fajnzylber, Lederman, and Loayza (1998).

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Gaviria and Velez (2001).

⁸⁰ Buvinic and Morrison (2000).

shows that urban growth is also negatively correlated with confidence levels in the police and the judiciary. Others point out that rapid and poorly-managed urbanization can trigger a dynamic of mutual reinforcement between increasing crime rates and crumbling law enforcement institutions.⁸¹ Fajnzylber et al. find a weaker correlation between urbanization and the homicide rate, but a more significant one with the robbery rate.⁸² Thus robberies are likely related to population density and the social interactions that arise from it. A study on Colombian cities by Gaviria and Pages (1999) supports this conclusion, finding a strong correlation between crime and violence and a city's growth rate.⁸³ Thus the authors suggest that a high incidence of crime and violence is to an important extent a reflection of many cities' inability to keep up with an increasing demand for public safety brought by hasty and disorderly urbanization processes.

Drug production and drug possession are both significantly associated with higher crime rates. Fajnzylber et al. find that the incidence of intentional homicide is statistically larger in countries that produce drugs.⁸⁴ This goes with the popular view that violent crimes increase with drug trafficking and consumption. It remains to be studied, however, whether the incidence of homicides in drug producing and/or consuming countries is directly affected by drug-related activities or is the result of crime externalities of these activities. The drug possession crime rate is also positively associated with the robbery rate.⁸⁵

Econometric analysis has also shed some light on the phenomenon of criminal inertia, i.e. the persistence of crime over time. The regressions by Fajnzylber et al. reveal that crime and violence have an important inter-temporal dimension: current levels of violence influence future levels of violence. Current crime rates only respond to current policy variables with a significant lag.⁸⁶ The robbery rate also exhibits a significant degree of inertia, which is somewhat larger than that of the homicide rate. Sah (1991) points out that part of the problem may be that those living in areas with high crime participation rates can perceive a lower probability of apprehension than those living in areas with low crime participation rates, because the resources spent in apprehending each criminal tend to be low in high crime areas. Sah's conclusion that past crime tends to breed future crime has important policy implications for violence prevention initiatives.⁸⁷

Among the structural factors which contribute to the legitimization of violence are a country's level of impunity and corruption, racism, perceived lack of justice, and its links to social exclusion.⁸⁸ As mentioned in Section II, the high levels of mistrust of the police work to protect the criminals and explain the low levels of criminal reporting. The effectiveness of the police hinges on its relationship with the judiciary, i.e. on the effectiveness of criminal justice. Access to justice is especially problematic for the poor

⁸¹ Gaviria and Pages (1999).

⁸² Fajnzylber, Lederman, and Loayza (1998).

⁸³ Gaviria and Pages (1999).

⁸⁴ Fajnzylber, Lederman, and Loayza (1998).

⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Sah (1991).

⁸⁸ Moser and Van Bronkhorst (1999).

and for socially excluded minorities. Many see the high levels of impunity as one of the key reasons for the high violence levels in Latin America.⁸⁹ The world competitiveness report, which rates judicial systems of the world on the basis of efficiency and the opinions of users and public confidence, puts all Latin American judiciaries (except Chile) in the bottom 20%.⁹⁰ Perhaps not surprisingly, the lack of confidence in the administration of justice is most pronounced among low-income families and small economic units.⁹¹ In Colombia an empirical study of the determinants of violence measured by the homicide rate, found that in the seven major cities the main explanation for the increase of violence in the 1980s was drug trafficking and to a lesser extent, the collapse of the judicial system.⁹²

Finally, another significant risk factor for violent behavior is low social capital. Studies demonstrate that societies with low social capital are more susceptible to violence and data suggests that causality runs both ways.⁹³ Especially when the sense of trust among community members is taken as an indicator for social capital, regressions show a significant crime-reducing effect.⁹⁴ A study in Chicago showed that social cohesion among neighbors combined with a willingness to intervene on behalf of the common good is linked with a reduction in violence.⁹⁵ In a similar vein, Wilson and Kelling (1982) argue that disorder and urban decay are associated with crime and violence.⁹⁶ The presence of other types of violence in a society is also important, because it leads to a legitimization of violence to resolve any conflict. Countries such as Colombia, which experience high levels of political violence, also display a high level of tolerance for economic and social violence. One form of violence often feeds into others.

The 1999 United Nations Global Report on Crime and Justice concludes that the socioeconomic strain – measured by unemployment, inequality, and dissatisfaction with income – is a major factor in explaining the variation in “contact crimes” among countries in the world.⁹⁷ There is a consensus in the literature that overall levels of development are less important in explaining violence than the extent of inequality, the levels of growth and the pre-existing level of violence.⁹⁸ Tackling inequality is key for violence prevention. The link between inequality and violence has important implications for the type of growth that is conducive to violence prevention. Growth that is not pro-poor is unlikely to bring about a significant reduction in violence levels.

⁸⁹ Sanjuan (1999) quoted in Buvinic, Morrison, and Orlando (2002).

⁹⁰ World Economic Forum quoted in Ayres (1998).

⁹¹ Ayres (1998).

⁹² Garfield and Arboleda (2003) quoted in Giugale, Lafourcade and Luff (2003).

⁹³ Buvinic, Morrison and Orlando (2002).

⁹⁴ Lederman, Loayza and Menéndez (2002).

⁹⁵ Sampson, Raudenbush and Earls (1997) quoted in Moser and Van Bronkhorst (1999).

⁹⁶ Wilson and Kelling (1982) quoted in Buvinic, Morrison, and Orlando (2002).

⁹⁷ UN Global Report on Crime and Justice (1999) quoted in Buvinic and Morrison (2000).

⁹⁸ Fajnzylber, Lederman, and Loayza (1998).

5. Conclusion

There is a consensus in the literature that the explanation for the abnormally high level of violence is primarily due to the extent of inequality rather than the overall levels of development in Latin America. The fact that violence fundamentally hinges on inequality has important implications for the type of growth that needs to occur in order to achieve a reduction in crime and violence levels. Promoting pro-poor growth and equitable development to reduce the stark levels of inequality is key to curbing the violence pandemic. The main risk factors for violent and criminal behavior next to income inequality are the lack of education, low social capital, unemployment, unruly urbanization and inefficient criminal justice systems. Interventions should be geared towards the bottom quintile of the income distribution, attempting to reduce income inequality, ensure better access to education, jobs and justice, and build social capital. These preventive measures and innovative social policies are efficient and under-utilized strategies to address the problem. Violence prevention is inseparable from equitable development and social action.

To enhance our understanding of how violence affects the poor, victimization needs to be analyzed in more detail, especially among marginalized ethnic and social groups, which are largely excluded from existing studies. Another pertinent question is how new local governance structures can contribute to a reduction in crime and violence.⁹⁹ There is an urgent need for both analytical work and operational experimentation.

As a final note further research is suggested in three areas. Crime and violence research could benefit enormously from national data being updated annually and in a comparable fashion across countries. Moreover, evaluations of existing violence prevention programs are called for, and finally the literature could benefit greatly from a consistent model to calculate costs of crime and violence.

⁹⁹ Ayers (1998).

References

- Ayers, Robert L., (1998) “Crime and Violence as Development Issues in Latin America and the Caribbean”, The World Bank, Washington DC.
- Becker, Gary S., (1968), “Crime and Punishment: An Economic Approach”, *Journal of Political Economy*, Vol. 76, pp. 169-217.
- Bourguignon, François, (1999) “Crime, Violence and Inequitable Development”, The World Bank, Washington DC.
- Buvinić, Mayra, Erik Alda and Jorge Lamas, (2005) “Emphasizing Prevention in Citizen Security: The Inter-American Development Bank’s Contribution to Reducing Violence in Latin America and the Caribbean”, *Sustainable Development Department Best Practices Series*, Inter-American Development Bank, Washington, DC.
- Buvinić, Mayra and Andrew R. Morrison, (2000) “Living in a More Violent World”, *Foreign Policy*, No. 118, pp. 58-72.
- Buvinić, Mayra and Andrew Morrison, (1999) “Technical Note 1: Basic Facts about Violence”, Inter-American Development Bank, Washington DC.
- Buvinić, Mayra and Andrew Morrison, (1999) “Technical Note 2: How is Violence Measured?”, Inter-American Development Bank, Washington DC.
- Buvinić, Mayra and Andrew Morrison, (1999) “Technical Note 3: Causes of Violence”, Inter-American Development Bank, Washington DC.
- Buvinić, Mayra and Andrew Morrison, (1999) “Technical Note 4: Violence as an Obstacle to Development”, Inter-American Development Bank, Washington DC.
- Buvinić, Mayra and Andrew Morrison, (1999) “Technical Note 5: Preventing Violence”, Inter-American Development Bank, Washington DC.
- Buvinić, Mayra and Andrew Morrison, (1999) “Technical Note 6: Controlling Violence”, Inter-American Development Bank, Washington DC.
- Buvinić, Mayra, Andrew Morrison and María Beatriz Orlando, (2002) “Violencia, Crimen y Desarrollo Social en América Latina y el Caribe” Chapter 5 in FLASCO, “Desarrollo Social en América Latina: temas y desafíos para las políticas públicas”, FLASCO, Costa Rica.
- Buvinić, Mayra, Andrew Morrison and Michael Shifter, (1999) “Violence in Latin America and the Caribbean: A Framework for Action”, Technical Study, Inter-American Development Bank, Washington DC.

Collier, Paul and Anke Hoeffler, (2004) "Murder by Numbers: Comparisons and Inter-Relationships between Homicide and Civil War", *CSAE Working Paper*.

DiIulio, John J. Jr., (1996) "Help wanted: Economists, Crime and Public Policy", *Journal of Economic Perspectives*, Vol. 10 (1), pp. 3-24.

Duce, Mauricio and Rogelio Pérez Perdomo, (2003) "Citizen Security and Reform of the Criminal Justice System in Latin America" Chapter 5 in Frühling, Hugo and Joseph S. Tulchin with Heather Golding (eds.), (2003) "Crime and Violence in Latin America", Woodrow Wilson Center Press, Washington DC.

Ehrlich, Issac, (1996) "Crime, Punishment, and the Market for Offenses", *Journal of Economic Perspectives*, Vol. 10 (1), pp. 43-67.

Fajnzylber, Pablo, Daniel Lederman and Norman Loayza, (2002) "What Causes Violent Crime?", *European Economic Review*, Vol. 46, pp. 1323-1357.

Fajnzylber, Pablo, Daniel Lederman and Norman Loayza, (2002) "Inequality and Violent Crime", *Journal of Law and Economics*, Vol. XLV, (April), pp. 1-40.

Fajnzylber, Pablo, Daniel Lederman and Norman Loayza, (2000) "Crime and Victimization: An Economic Perspective", *Economia*, Vol. 1 (1), pp. 219-278.

Fajnzylber, Pablo, Daniel Lederman and Norman Loayza, (1998) "Determinants of Crime Rates in Latin America and the World: An Empirical Assessment", The World Bank, Washington DC.

Freeman, Richard, (1996) "Why do so Many Young American Men Commit Crimes and what might We do about it?", *Journal of Economic Perspectives*, Vol. 10 (1), pp. 25-42.

Frühling, Hugo, (2003) "Police Reform and the Process of Democratization" Chapter 2 in Frühling, Hugo and Joseph S. Tulchin with Heather Golding (eds.), (2003) "Crime and Violence in Latin America", Woodrow Wilson Center Press, Washington DC.

Frühling, Hugo and Joseph S. Tulchin with Heather Golding (eds.), (2003) "Crime and Violence in Latin America", Woodrow Wilson Center Press, Washington DC.

Gaviria, Alejandro and Carlos Eduardo Velez, (2001) "Who Bears the Burden of Crime in Colombia?", Fedesarrollo, Bogotá.

Gaviria, Alejandro and Carmen Pages, (1999) "Patterns of Crime and Victimization in Latin America", Working Paper No. 408, Inter-American Development Bank, Washington DC .

Giugale, Marcelo M., Olivier Lafourcade and Connie Luff (eds.), (2003) "Colombia the Economic Foundations of Peace", Washington DC, The World Bank.

- Greenwood, Peter W., Karyn E. Model, Peter Rydell and James R. Chiesa, (1998) “Diverting Children from a Life of Crime: Measuring Costs and Benefits” RAND Corporation, Santa Monica.
- Guerrero Velazco, Rodrigo, (1999) “Technical Note 8: Violence Control at the Municipal Level”, Inter-American Development Bank, Washington DC.
- Hakim, Peter, (1999) “Is Latin America Doomed to Failure?”, *Foreign Policy*, No. 117, pp. 104-119.
- Harriott, Anthony, Farley Brathwaite and Scot Wortley (eds.), (2004) “Crime and Criminal Justice in the Caribbean”, Kingston, Arawak Press.
- Knaul, Felicia and Miguel Ángel Ramírez, (2005) “Family Violence and Child Abuse in Latin America and the Caribbean: The Cases of Colombia and Mexico”, *Sustainable Development Department Technical Papers Series*, Inter-American Development Bank, Washington, DC.
- Kay, Christóbal, (2001) “Reflection on Rural Violence in Latin America,” *Third World Quarterly*, Vol. 22 (5), pp. 741-775.
- Lederman, Daniel, (2000) “Ciencia, investigación y políticas públicas: El curioso caso del crimen y la violencia en América Latina”, The World Bank, Washington, DC.
- Lederman, Daniel, (1999) “Crime in Argentina: A Preliminary Assessment”, LCSPR, The World Bank.
- Lederman, Daniel, Norman Loayza and Ana María Menéndez, (2002), “Violent Crime: Does Social Capital Matter?”, *Economic Development and Cultural Change*, Vol. 50 (3), pp. 509-539.
- Londoño, Juan Luis, Alejandro Gaviria, and Rodrigo Guerrero (eds.), (2000) “Asalto al desarrollo”, Inter-American Development Bank, Washington DC.
- Londoño, Juan Luis and Rodrigo Guerrero, (2000) “Violencia en América Latina: Epidemiología y Costos”, Chapter 1 in Londoño, Juan Luis, Alejandro Gaviria, and Rodrigo Guerrero (eds.), (2000) “Asalto al desarrollo”, Inter-American Development Bank, Washington DC.
- Loreto Biehl, María, (1999) “Technical Note 7: Domestic Violence Against Women”, Inter-American Development Bank, Washington DC.
- Loreto Biehl, María, (1999) “Technical Note 9: The Role of the Police in Violence Prevention”, Inter-American Development Bank, Washington DC.

Loreto Biehl, María, (1999) “Technical Note 10: Youth Violence Prevention”, Inter-American Development Bank, Washington DC.

Morrison, Andrew, (1993) “Violence or Economics: What Drives Internal Migration in Guatemala?”, *Economic Development and Cultural Change*, Vol. 41 (4), pp. 817-831.

Morrison, Andrew, Mayra Buvinic and Michael Shifter, (2003) “The Violent Americas: Risk Factors, Consequences, and Policy Implications of Social and Domestic Violence”, Chapter 5 in Frühling, Hugo and Joseph S. Tulchin with Heather Golding (eds.), (2003) “Crime and Violence in Latin America”, Woodrow Wilson Center Press, Washington DC.

Morrison, Andrew R. and Rachel A. May, (1994) “Escape from Terror: Violence and Migration in Post-Revolutionary Guatemala”, *Latin American Research Review*, Vol. 29 (2), pp. 111-132.

Morrison, Andrew with Miguel Perez, (1996) “Elites, Guerrillas and Narcotraficantes: Violence and Internal Migration in Colombia” *Canadian Journal of Latin American Studies*.

Moser, Caroline, (2004) “Urban Violence and Insecurity: An Introductory Roadmap”, *Environment and Urbanization*, Volume 16 (2), pp. 3 – 16.

Moser, Caroline and Jeremy Holland, (1997) “Urban Poverty and Violence in Jamaica”, Washington DC, The World Bank, Washington DC.

Moser, Caroline and Sarah Lister, (1999) “Violence and Social Capital: Proceedings of the LCSES Seminar Series, 1997-1998”, *LCR Sustainable Development Working Paper*, No. 5, The World Bank, Washington DC.

Moser, Caroline and Elizabeth Shrader, (1999) “A conceptual Framework for Violence Reduction”, *LCR Sustainable Development Working Paper*, No. 2, The World Bank, Washington DC.

Moser, Caroline and Bernice van Bronkhorst, (1999) “Youth Violence in Latin America and the Caribbean: Costs, Causes and Interventions”, *LCR Sustainable Development Working Paper*, No. 3, The World Bank, Washington DC.

Pereira, Anthony W. and Diane E. Davis, (2000) “New Patterns of Militarized Violence and Coercion in the Americas”, *Latin American Perspectives*, Issue 111, Vol. 27 (2), pp. 3-17.

Piquet Carneiro, Leandro, (2000) “Violent Crime in Latin American Cities: Rio de Janeiro and São Paulo”, Research Report, University of São Paulo.

Ribando, Clare, (2005) “Gangs in Central America” *CRS Report for Congress*, The Library of Congress, Washington DC.

Rodgers, Dennis, (1999) “Youth Gangs and Violence in Latin America and the Caribbean: A Literature Survey”, *LCR Sustainable Development Working Paper*, No. 4. The World Bank, Washington DC.

Rubio, Mauricio, (2000) “El desabordamiento de la violencia en Colombia” in Londoño, Juan Luis, Alejandro Gaviria, and Rodrigo Guerrero (eds.), (2000) “Asalto al desarrollo”, Inter-American Development Bank, Washington DC.

Sah, Raaj K., (1991) “Social Osmosis and Patterns of Crime”, *Journal of Political Economy*, Vol. 99 (6).

Sherman, Lawrence W., (1999) “Policing for Crime Prevention” Chapter 8 in Sherman, Lawrence W., Denise Gottfredson, Doris MacKenzie, John Eck, Peter Reuter, and Shawn Bushway, (1999) “Preventing Crime: What Works, What Doesn’t and What’s Promising – A Report to the United States Congress”, National Institute of Justice, Washington, DC.

Solimano, Andrés, (2004) “Political Violence and Economic Development in Latin America: Issues and Evidence”, ECLAC, Chile.

Teruel, Graciela, Renata Villoro, Andrew Morrison, and James Hammit, (forthcoming) “Measuring the Costs of Crime and Violence as an Input to Public Policy: Evidence from Mexico City”, Wilson Center, Washington, DC.

Vanderschueren, Franz, (1996) “From Violence to Justice and Security in Cities”. *Environment and Urbanization*, Vol. 8 (1).

World Health Organization, (2002) “World Report on Violence and Health”, Geneva.

Annex 1: Data Sources on Crime and Violence for LAC

United Nations Surveys of Crime Trends and Operations of Criminal Justice Systems

Data sets from 5 surveys are available for 1970 – 1994.

<http://www.uncjin.org/stats/wcs.html>

International Crime Victim Survey (ICVS)

United Nations Interregional Crime and Justice Research Institute (UNCRI)

Standardized sample surveys for households experience with crime, policing, crime prevention and feelings of safety for Argentina (1992 and 1996), Bolivia (1996), Brazil (1992 and 1996), Colombia (1997), Costa Rica (1992 and 1996) and Paraguay (1996).

<http://www.unicri.it/wwd/analysis/icvs/data.php>

Instituto Latinoamericano de las Naciones Unidas para la Prevención del Delito y el Tratamiento del Delincuente (ILANUD)

Various surveys on crime, delinquency, and victimization.

<http://www.ilanud.org.br/>

Pan-American Health Organization (PAHO)

Regional Core Data Initiative in Health

For the most recent country data on homicides and inter-personal injuries.

<http://www.paho.org/english/dd/ais/coredata.htm>

World Health Organization

World Report on Violence and Health (2002)

The statistical annex contains data for LAC countries for mortality caused by intentional injuries and homicides, disaggregated by age groups and gender, for the most recent year available between 1990 and 2000. Data for firearm related deaths (homicides, suicides, unintentional and undetermined) is also available for the most recent year between 1990 and 2000.

http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf

Latinobarómetro

Latinobarómetro conducts annual surveys in 18 Latin American countries. Questions on victimization are not specifically included, but they include perceptions of security, confidence in public institutions and basic health information.

<http://www.latinobarometro.org/index.php?id=149>

United Nations Office on Crime and Drugs

http://www.unodc.org/unodc/en/crime_cicp_research.html

Instituto Nacional de Estadística e Informática (INEI)

A variety of surveys for Peru including household surveys, surveys on violence and public security and women's issues.

<http://www.inei.gob.pe/web/BiblioInei/ListarItemByTemaPalabra.asp?c=4&tt=Sociales>

Brazil: Ministério da Saúde

Various mortality indicators.

<http://tabnet.datasus.gov.br/cgi/idb2004/matriz.htm>

Annex 2: Overview of Selected Papers on Crime and Violence in LAC

Authors	Countries Covered	Types of Violence Covered
Ayres, Robert (1998) “Crime and Violence as Development Issues in Latin America and the Caribbean”	LAC Region with examples including Colombia, Costa Rica, El Salvador and Peru	Homicides, violence against women, youth violence
Bourguignon, François (1999) “Crime, Violence and Inequitable Development”	LAC	Homicides, robberies
Buvinic, Morrison y Orlando (2002) “Violencia, crimen y desarrollo social en América Latina y el Caribe”	LAC	Gender violence, ethnic violence, violence against the elderly and children, youth violence
Buvinic, Morrison and Shifter (1999) “Violence in Latin America and the Caribbean: A Framework for Action”	LAC	Physical, social and psychological violence
Fajnzylber, Lederman, and Loayza (2002) “What Causes Violent Crime?”	45 countries	Homicides, robberies
Fajnzylber, Lederman and Loayza (2002) “Inequality and Violent Crime”	39 countries	Homicides, robberies
Fajnzylber, Lederman and Loayza (2000) “Crime and Victimization: An Economic Perspective”	45 countries	Homicides, robberies
Fajnzylber, Lederman and Loayza (1998) “Determinants of Crime Rates in Latin America and the World”	LAC	Homicides, robberies
Gaviria and Pagés (1999) “Patterns of Crime Victimization in Latin America”	LAC	Property crime
Gaviria and Velez (2001) “Who Bears the Burden of Crime in Colombia?”	Colombia	Property crime, homicides, kidnappings and domestic violence
Harriott (2004) The Jamaica Crime Problem: Some Policy Considerations”	Jamaica	Property crimes, violent crimes
Kay (2001) “Reflections on Rural Violence in Latin America”	Brazil, Chile, Colombia, El Salvador, Guatemala, Mexico, Nicaragua, Peru,	Rural violence
Lederman, Loayza and Menéndez (2002) “Violent Crime: Does Social Capital Matter?”	39 developed and developing countries	Homicides
Londoño and Guerrero (2002) “Violencia en América Latina: epidemiología y costos”	Brazil, Colombia, El Salvador, Mexico, Peru, Venezuela	Property crime, homicides, robberies, urban violence
Morrison, Buvinic and Shifter (2004) “The Violent Americas: Risk Factors, Consequences and Policy	LAC	Domestic violence, social violence, violence against women

Implications of Social and Domestic Violence”		
Morrison and May (1994) “Escape from Terror: Violence and Migration in Post-Revolutionary Guatemala”	Guatemala	Rural violence, military/police violence
Moser and Holland (1997) “Urban Poverty and Violence in Jamaica”	Jamaica	Political violence, drug violence, gang violence, economic violence, interpersonal violence, domestic violence
Moser and van Bronkhorst (1999) “Youth Violence in Latin America and the Caribbean”	LAC, Brazil, Trinidad and Tobago	Youth violence, gang violence
Pereira and Davis (2000) “New Patterns of Militarized Violence and Coercion in the Americas”	LAC, Brazil, Chile, Colombia, Guatemala, Paraguay, Peru	Military violence, police violence
Piquet Carneiro (2000) “Violent Crime in Latin American Cities: Rio de Janeiro and São Paulo”	Brazil	Urban violence, police violence
Rodgers (1999) “Youth Gangs and Violence in Latin America and the Caribbean”	LAC, Nicaragua	Gang violence
Vanderschueren (1996) “From Violence to Justice and Security in Cities”	World, LAC, Brazil, Colombia	Urban violence
World Bank (2003) “Caribbean Youth Development”	Caribbean Region	Youth violence
World Health Organization (2002) “World Report on Violence and Health”	World, LAC	Youth violence, child abuse, domestic and sexual violence, violence against the elderly, collective violence

Annex 3: Overview of Selected Empirical Papers on Crime and Violence in LAC

Authors and Title	Methodology	Data Sources
Bourguignon, François (1999) “Crime, Violence and Inequitable Development”	Cross-section and panel data analysis of the relationship between inequality, poverty and crime	UN World Crime Surveys data on homicides and robberies for 1970-94 for a large number of countries, including 26 countries in LAC; inequality data from Deininger and Squire (1996) for mid 1980s
Fajnzylber, Lederman, and Loayza (2002) “What Causes Violent Crime?”	GMM estimations of panel data for economic determinants of crime and violence	UN World Crime Surveys data on homicides and robberies for 1970-94 for a large number of countries, including 26 countries in LAC
Fajnzylber, Lederman, and Loayza (2002) “Inequality and Violent Crime”	Correlations between Gini index and homicides and robberies	Panel data for 39 countries for 1965-1995 for homicides and for 37 countries (1970-1994) for robberies
Fajnzylber, Lederman, and Loayza (2000) “Crime and Victimization: An Economic Perspective”	GMM estimations of panel-data for economic determinants of crime and violence	Data from UN and WHO as well as various victimization surveys
Fajnzylber, Lederman, and Loayza (1998) “Determinants of Crime Rates in Latin America and the World”	Cross-sectional and panel data analysis of determinants of national homicide and robbery rates	UN World Crime Surveys data on homicides and robberies for 1970-94 for a large number of countries, including 26 countries in LAC
Gaviria and Pagés (1999) “Patterns of Crime Victimization in Latin America”	Analysis of victimization for property crime in relation to socioeconomic status, city size and city growth effects	Latinobarómetro data for 17 countries in LAC from 1996 – 1998 complemented by victimization surveys for Colombia (Encuesta Nacional de Calidad de vida), El Salvador (Londoño and Guerrero) and Peru (INEI)
Gaviria and Velez (2001) “Who Bears the Burden of Crime in Colombia?”	Probit estimations of the distribution of crime across victims, distribution of household investments in crime avoidance and distribution of domestic violence in Colombia	Fedesarrollo Social Surveys (September 1999, April 2000 and September 2000) for 8 Colombian cities; domestic violence data from National Survey of Demography and Health (ENDS) for 2000
Lederman, Loayza and Menéndez (2002) “Violent Crime: Does Social Capital Matter?”	GMM estimations of various social capital indicators on crime (measured by homicides)	National data for 39 developed and developing countries for 1980-94 and household surveys
Londoño and Guerrero (2002) “Violencia en América Latina: epidemiología y costos”	Cost estimates of crime and violence as a ratio of GDP based on authors’ surveys; cross section analysis of determinants of violence	Victimization surveys/case studies conducted by the authors, ACTIVA household surveys, Propia survey, Latinobarómetro surveys
Piquet Carneiro (2000) “Violent Crime in Latin American Cities: Rio de Janeiro	Spatial and longitudinal trends analysis of criminal indicators; logistic analysis of victimization	System of Mortality Information (SIM) from the Brazilian Ministry of Health; Occurrence

and São Paulo”	and different types of crime for different data sets; panel data analysis, fixed effect regressions	Bulletins from the Brazilian Justice and Security Departments; Victimization surveys by PNAD, ACTIVA, ILANUD, ISER and the Determinants of Crime Project
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