



WORLD DEVELOPMENT REPORT 2011

BACKGROUND CASE STUDY

DRUG TRAFFICKING AND VIOLENCE IN CENTRAL AMERICA AND BEYOND

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The findings, interpretations, and conclusions expressed in this paper are entirely those of the author. They do not necessarily represent the views of the World Development Report 2011 team, the World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

This paper was prepared as a background paper for the 2011 World Development Report on Conflict and Development. It draws heavily from work prepared for the World Bank study *Crime and Violence in Central America*, which provides more detail on much of the work, and which the author co-led with Bernice Van Bronkhorst. The section on drivers of violence in Central America presents the findings of joint work with P. Facundo Cuevas (World Bank), and the section on the links between the drug trade and violence draws from a background paper written for the larger Central America study by Jeffrey Miron (Harvard University). Peter Reuter (University of Maryland) provided valuable guidance during the development of the original work underlying this paper, and the author has benefitted from discussions with Norman Loayza (World Bank). The author also thanks Martin Jelsma (Fellow, Transnational Institute), David Mansfield (International Consultant and Advisor on illicit drug issues) and Colombia's Departamento Nacional de Planeacion for helpful comments.

Abstract

This paper examines the relationship between narcotics trafficking and violence in Central America. The first part of the paper addresses particular questions posed for the 2011 World Development Report and examines several competing hypothesis on the drivers of crime in Central America. A key finding is that areas exposed to intense narcotics trafficking in Central America suffer from higher homicide rates. Drug trafficking has corrupted state institutions, which have been overwhelmed by the resources deployed by trafficking organizations. The second part of the paper reviews the reasons drug trafficking and anti-trafficking enforcement are associated with violence in general and considers policy options.

Introduction

This paper addresses questions posed for the 2011 World Development Report (WDR) concerning the drug trade and violence in Central America. The WDR team asked background paper authors to answer a series of questions related to 1) the causes and dynamics of violent conflict, 2) peace-building and state-building: confidence and legitimacy, and 3) building institutions.¹

To address these issues as they relate to narcotics-related violence, the first half of the paper focuses exclusively on Central America, beginning with a summary of original empirical research on the correlates of homicide at the subnational level in the region. The next section reviews attitudes in Central America towards the criminal justice system. The third section describes narcotics-related corruption in the region.

The second half of the paper takes a broader perspective. Section 4 reviews the question of why the narcotics trade is associated with violence in general and discusses how drug prohibition enforcement may be associated with violence. The fifth section discusses policy options for Central America and considers the larger debate on international drug policy. Two annexes also provide brief consideration of the narcotics trade in West Africa and Colombia.

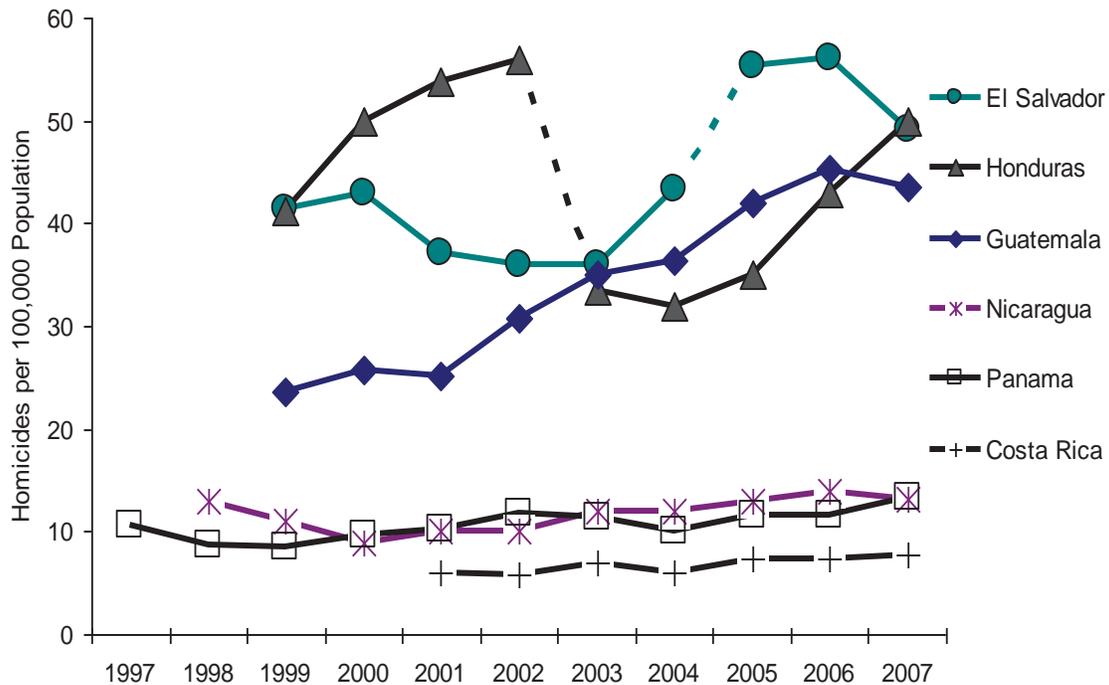
1. Drivers of Homicide in Central America

Drug trafficking is one among several factors that may have predisposed Central America to high levels of current violence. The primary measure of violence used in this paper and in most cross-country research is homicide rates. Homicides are less likely than other crimes to be substantially underreported in official data. However, an important caveat of using any administrative data is that comparability over time might be affected when there are institutional changes that involve the statistical system. That is the case, for example, with El Salvador. In 2005, the national police, the medical forensics institute, and the attorney general's office integrated their processing of homicide data, making for more much improved statistics. A similar process in Honduras has generated higher quality data since 2003. Consequently, in both countries, homicide figures under the new data regime are not comparable to previous years.

Recognizing these caveats, data presented in Figure 1 make it clear that Central American homicide rates up through 2007 exhibited a rising trend. In Guatemala homicide rates have almost doubled since 1999, after a sharp decrease 1996-1999 following the signing of the peace agreement which ended the country's civil war. Homicides appear to have intensified in El Salvador and Honduras, although this may be in part a consequence of the improvement in methodology for collecting statistics. Homicide rates in Nicaragua, Panama, and Costa Rica, while substantially lower, increased at an average pace of 5 to 10 percent per year.

¹ The WDR team also posed questions related to regional and global dimensions and measuring results and outcomes. This paper does not substantially address those questions.

Figure 1: Homicide Trends in Central America



Source: Cuevas and Demombynes (2009).

Note: Dotted lines indicate changes in methodology or data sources across years.

Among the factors that have been cited as possible drivers of violence in the region are the legacy of past armed conflicts, the prevalence of youth gangs, and poverty and inequality. Armed conflicts vary in length and characteristics across countries of Central America. Guatemala suffered a civil war spanning four decades, from 1960 to 1996, with levels of violence peaking in the early 1980s. The conflict between government forces and insurgent groups spilled over into the non-combatant population and disproportionately affected the indigenous population, which bore more than 80 percent of casualties (Guatemalan Commission for Historical Classification 1999). Nicaragua experienced two different conflicts: the 1975-1979 civil war between the Somoza dictatorship and the Sandinista insurgency and the 1980-90 contra war between the Sandinista government and CIA-backed contra forces. In El Salvador, where a left-wing insurgent force fought a military government and death squads from 1980-1991, 80 percent of resulting deaths are estimated to be civilian (United Nations 1992).

Past conflicts could be a driver of current high rates of violence through a number of channels. They might have increased the supply of guns in circulation, damaged social capital, or established violence as a norm for conflict resolution. Past conflicts also can affect current levels of conflict through more indirect means, such as by shaping the form of current criminal justice institutions. Although the region's past conflicts are often cited as a contributor to current levels of violence, a casual examination shows that they do not explain the cross-country patterns of homicide. Honduras, one of the most violent countries in the

region, did not have an extended civil conflict.² Three nations in the region did have extended conflicts in the 1980s—Nicaragua, Guatemala and El Salvador—but Nicaragua’s homicide rate is a fraction of those in its northern neighbors, and Nicaragua’s conflict was no less deadly. In El Salvador the war led to a count of 75,000 casualties (United Nations 1992), approximately 1 death for every 66 Salvadorans. In Nicaragua, it is estimated that the conflict left a death toll of 80,000—1 for 38 Nicaraguans. In a historical sense, these are among the most severe conflicts in modern history; as a point of comparison, U.S. deaths in World War II were 1 per 387 Americans (Seligson and McElhinny 1996).

Another possible driver of violence in Central America is youth gangs. During the 1980s, migration from Central America to the United States increased sharply, largely as a consequence of people fleeing the armed conflict and political repression at home. The growth of young migrant populations in some urban areas, particularly Los Angeles, led to the proliferation of gangs composed of Central Americans and Mexicans, including Mara 18 and Mara Salvatrucha. In the 1990s, many gang members were deported to their native countries—chiefly El Salvador, Guatemala, and Honduras—where they established local branches of their gangs but maintained connections to the American organizations. Gang members are widely viewed as perpetrators of crime and violence. While estimates of their membership vary widely, it is generally believed that roughly 70,000 people, mostly young men, are gang members in Central America (Comisión de Jefes y Jefas de Policía de Centroamérica y El Caribe 2003), and it is estimated that approximately 10-15 percent of all homicides are gang-related (Instituto de Medicina Legal 2006, Lara 2006). While the role of gangs in violence is somewhat unclear, it is well documented that young males are disproportionately represented as victims of crime in Central America, as in the rest of the world. Nearly 60 percent of all homicide victims in the region are men age 15-34 (World Bank 2010, based on analysis of the 2004 WHO Mortality Database).

Economic and inequality conditions prevailing in a locality may affect the prevalence of criminal activity. Higher inequality could be associated with higher crime in a context where perpetrators tend to be of lower income than their victims, since the more unequal income distribution is, the higher the incentives for perpetrators to engage in robbery or burglary, as expected gains relative to own income are larger (Ehrlich 1973). While this provides a possible link between crime and inequality, the theoretical connection between crime and *average* income levels is less clear. The poorer the community, the poorer both potential perpetrators and victims are, so it is unclear how this will be reflected in crime levels. In fact, the evidence on economic conditions points to a lack of association between crime and average income of a locality. In contrast, the evidence on inequality suggests that crime and inequality are positively related (Demombynes and Ozler 2005, Fajnzylber et al 2002, Soares 2004).

Finally, drug trafficking could be a driver of violence. The region’s location between the United States, which is the principal consumer nation, and cocaine supplier nations—Colombia, Bolivia, and Peru—combined with increased drug interdiction in the Caribbean has made Central America a key trafficking route. Roughly 90 percent of the cocaine

² Honduras did, however, have a repressive military government which sanctioned CIA-supported death squads. The human rights abuses were detailed in a 1995 *Baltimore Sun* series, a declassified 1997 CIA report, and reports of Honduras’s National Human Rights Commission.

consumed in the U.S. crosses the land border between Mexico and the United States, with the large majority of that flow crossing through or along the Pacific and Atlantic coasts of Central America (United Nations Office on Drugs and Crime 2010). Drug trafficking can generate high rates of violence through a number of channels, which are discussed in the second half of this paper.

In order to assess the relative importance of these different factors—the legacy of past armed conflicts, the prevalence of youth gangs, and poverty and inequality—Cuevas and Demombynes (2009) analyzed variation in 2006 homicide rates at the subnational level for all the countries of the region. In a regression framework, they examined how measures of the various risk factors are associated with homicide. Because direct information on gang prevalence was not available, two risk factors for gang activity were used: the fraction of young men in the population, and the share of households which are headed by females. If female-headed households are typically single-parent households, youth living in such households may be less likely to be monitored, increasing the risk of gang membership.

Figure 2 shows a map which displays the variation in homicide across Central America in 2006. Key results from the Cuevas and Demombynes analysis are shown in Table 1. Most clearly evident is that drug trafficking is strongly associated with homicide rates: drug-trafficking hot spot rates have murder rates more than double those in areas of low trafficking intensity, controlling for other factors. Areas with higher shares of young men and higher shares of female-headed households also have higher levels of violence, but the effects are modest.

Table 1: Summary of Findings for Drivers of Homicide in Central America

Possible Driver	Finding
Drug Trafficking	Drug-trafficking hot spots have murder rates that are more than double those in areas of low trafficking intensity in the same country, controlling for other factors.
Youth-at-Risk	Areas with higher shares of young men in the population have higher homicide rates, controlling for other factors.
Lack of Monitoring of Youth	Areas where larger shares of households are headed by females face higher levels of homicide rates, controlling for other factors.
History of Armed Conflict	Varying intensity of armed conflict in Guatemala, El Salvador, and Nicaragua does <i>not</i> explain within-country variation in current violence. Areas that experienced high rates of death during past conflict are not more violent today. However, this evidence does not rule out possibility that past conflict had country-wide effects that drive current violence.

Somewhat surprisingly, within country, there is no association between current levels of homicide and past levels of armed conflict. In other words, in Guatemala, El Salvador, and

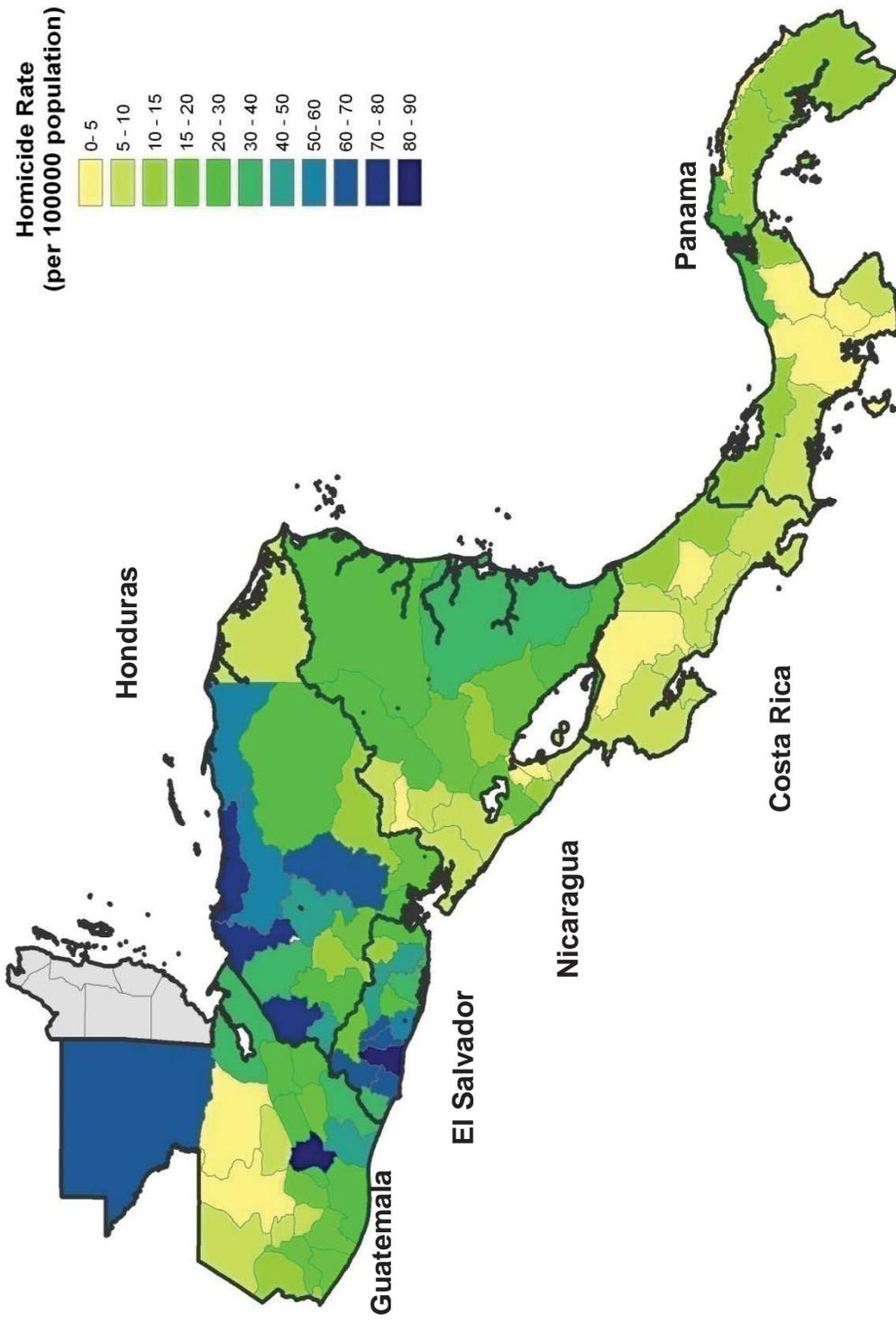
Nicaragua, areas that were centers of conflict in past decades are not any more violent than the rest of the country. This casts some doubt on the hypothesis that current levels of violence are driven by past violence.

Nonetheless, we cannot rule out the possibility that the past conflicts had some effect on overall violence at the *national* level. Because the Cuevas and Demombynes study is based on variation *within* countries, it cannot capture national-level effects of the civil wars on current violence. There are two likely such effects. First, there is the spread of weapons. More than 3 million weapons are in circulation in the region as a whole, with far more illegally possessed weapons than legitimately owned firearms. The large number of weapons are in part the remaining stockpiles of arms leftover from conflicts in Guatemala, El Salvador, and Nicaragua.

The second possible national-level effect of civil war on crime is through the legacy of the conflicts for the criminal justice systems. The security forces of El Salvador, Guatemala, and Honduras deployed highly repressive counter-insurgency methods, which used assassination, extrajudicial execution, torture, and kidnapping to counter militant domestic opposition, often targeting civilian supporters of insurgents. The modern security forces in those three countries are the institutional heirs of the police and military apparatuses developed during those civil conflicts. As a consequence, they have continued to apply harsh, often extralegal methods which may be ineffective or even counterproductive at reducing levels of violence.

Overall, while the legacy of the civil wars undoubtedly play some role in current levels of violence, it is difficult to draw anything approaching clear connections, and the lack of an association between homicide rates and civil war prevalence at the subnational level argues against the civil wars as a primary driver of current violence. The large supply of arms—generated in part by the civil conflicts—may also be a contributing factor, but given that arms are readily available in the much lower crime countries of Panama and Nicaragua, weapons availability by itself does seem to be the primary drive of violence. Likewise, although the inherited repressive approach of the security forces may have disabled the effectiveness of the police, it is easy to think of cases of other countries with formerly brutal security forces that now have low levels of violence, e.g. Argentina and Chile. One reasonable interpretation of the facts is that the past civil conflict along with other factors may have generated fertile ground for violence which has been ignited by drug trafficking within a prohibition regime.

Figure 2: Map of Homicide Rates in Central America



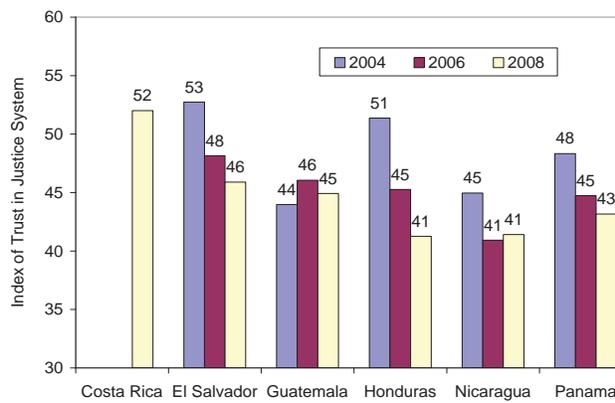
Source: Cuevas and Demombynes (2009)

2. Attitudes towards the Criminal Justice System in Central America

Against the background of high rates of violence, confidence in the criminal justice institutions of Guatemala, El Salvador, and Honduras is low. It is likely that this largely reflects the failure of those governments to check rising crime levels. The lack of delivery is not due to lack of will on the part of the government. There have been numerous efforts to reform the security services, alter policing strategies, and reduce crime.³

The lack of confidence in the police and criminal justice systems is reflected in perception surveys which show declining levels of trust in those institutions during recent years, when levels of violence reached new highs. Figure 2 shows the trust index in the justice system for the six nations of the region. Levels of trust dropped precipitously in El Salvador, Honduras, Nicaragua, and Panama between 2004 and 2008, while in Guatemala trust in the justice system stayed roughly at its initial, low level. It is likely that the fall in trust reflects popular frustration with the rising levels of crime.

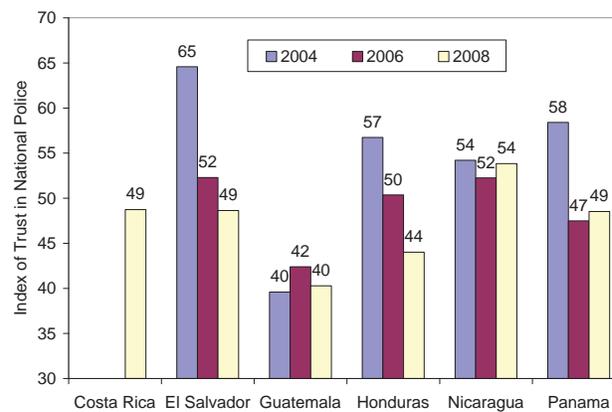
Figure 2: Trust in the Justice System Overall



Source: Author's analysis of Latin American Public Opinion Project data.

Note: Data for Costa Rica is only available for 2008. The index is the country-average of responses to the question "To what extent do you trust the justice system?" with numerical answers rescaled to a 0-100 scale.

Figure 3: Trust in the Police



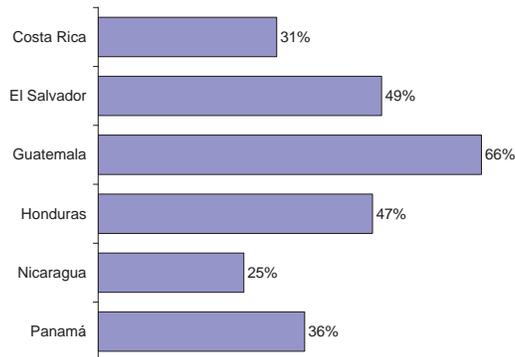
Source: Author's analysis of Latin American Public Opinion Project data.

Note: Data for Costa Rica is only available for 2008. The index is the country-average of responses to the question "To what extent do you trust the national police?" with numerical answers rescaled to a 0-100 scale.

In a similar vein, trust in the police (shown in Figure 3) also dropped in El Salvador, Honduras, and Panama during the period 2004 to 2008, with no change in Guatemala or Nicaragua. Trust in the police shows both greater variation across countries and greater changes over time than trust in criminal justice institutions. When asked whether the local police protect people from criminals or are involved in criminal activity, two-thirds of Guatemalans said that the police are involved in crime. Nearly half of Hondurans and El Salvadorans have the same opinion of their local police (Figure 4).

³ The challenge of criminal justice reform in Central America is discussed in detail in Chapter 6 of the World Bank's report *Crime and Violence in Central America*.

Figure 4: Fraction of Adults Who Say Local Police are Involved in Crime



Source: Author's calculations based on 2008 Latin American Public Opinion Project surveys.

3. Narcotics-Related Corruption in Central America.

The analysis presented in the first part of the paper shows that high levels of drug trafficking are associated with high rates of homicide in Central America. Evidence indicates that this may be in part due to the undermining of state institutions generated by drug trafficking is the undermining of state institutions. The limited information available indicates that narcotics-related corruption is rampant in many Central American countries. The International Narcotics Control Strategy Report (INCSR) published by the Bureau of International Narcotics and Law Enforcement Affairs (2008) reports that in Nicaragua “corruption is a pervasive and continuing problem in law enforcement and the judiciary” and that “public corruption is a problem in Honduras, including police and the judiciary. The [Government of Honduras] reports that drug trafficking and other organized crime activities are directed from the prisons and by current and former government and military officials.” The INCSR also notes that, “The use of bribery and coercion in the drug trade contribute to pervasive public corruption and undermines the [Government of Panama’s] criminal justice system.” Drug-related corruption appears to be particularly fierce in Guatemala. The INCSR (2009) says that “money from the drug trade has woven itself into the fiber of Guatemalan law enforcement and justice institutions,” and the INCSR (2008) finds the following:

The Government of Guatemala’s attempts to address drug trafficking have been hampered by narcotics-related corruption....

The police in general are suspected of corruption at many levels. The GOG has attempted to correct this by purging the police of corrupt officers. 1,215 police officers were removed from the police in 2007, primarily for corruption.

[I]n practice, there is corruption of some police, judges and other public officials, especially at the local level. This has been fostered and exploited by the narcotics traffickers. During 2007, the Ministry of Government fired hundreds of police officers, including many from the antinarcotics and port security units, to weed out corrupt officials. Despite the serious GOG steps to address narcotics-related

corruption, the severity of the problem continues to hamper law-enforcement actions against organized crime. In February, three visiting Central American parliamentarians and their driver were murdered, and the murder was tracked to Guatemalan police officers. The police officers were arrested and, subsequently, were themselves murdered while being held in prison before trials. This is a strong indication of infiltration by organized crime in the criminal justice system.

Another study (Due Process of Law Foundation, 2007) highlighted “the frequent incidence of drug trafficking as a cause of judicial corruption in several nations of the region.” It presents several case studies, including the following from Honduras:

At the defense attorney’s request, the presiding judge ordered house arrest for the accused in lieu of a pretrial detention order, leading to the escape of several individuals accused of illicit drug trafficking. What is noteworthy in this case is that the modification of the detainees’ legal status was based on certain irregularities (suspicious change in paper records, inadequate identification of residence to justify the substitution) that seemed to point to complicity among the different criminal justice officials involved to illegally benefit members of drug trafficking organizations.

The same report describes another case from Guatemala:

In this case from 2001, a first instance criminal court judge routinely ordered the release of groups of drug traffickers, even after they had been surprised with enormous quantities of drugs in their possession. One example is the release several individuals who were apprehended with 380 kilos of cocaine in their possession and were facing accusations of illicit drug trafficking. After a complaint was presented, the disciplinary control agency detected a pattern of official behavior that benefited drug trafficking in general through the use of “guaranteeist” arguments: other entities of the criminal justice system (the police for instance) would fail to adequately perform their duties or commit “irregularities.” The judge, in turn, would then use this as grounds for ordering the release of the accused and close the case....

[W]e were able to confirm the same pattern of behavior in other cases: apprehension agents, prosecutors, and lower-level judges who engage in a series of procedural anomalies that later serve as justification to free the accused....

[I]n no case did those responsible for these anomalies suffer any consequences for their behavior.

These observations raise the question as to why drug trafficking is so strongly associated with corruption. One explanation is that the prohibition on drug trafficking drives up the price, generating tremendous income for traffickers. As a consequence, trafficking organizations earn tremendous revenues and thus have large financial resources available, which can be used both for acquiring weapons used to intimidate officials with violence and for bribery payments.

A basic sense of the economics of the drug trade emerges from examination of the wholesale value of cocaine along the Pacific coast route between Colombia and the United States. The wholesale price of a newly minted kilo of cocaine is approximately US\$1000 on the Caribbean Coast of Colombia, and it rises sharply in value passing along Panama, Costa Rica, Nicaragua, Honduras, reaching US\$13,000 in Guatemala. In the United States, its value rises to over US\$30,000 wholesale and over US\$170,000 on the retail market.⁴

Note that normal transport costs account for only a miniscule share of the increase in value. The difference between the price of a kilo of cocaine on the northern coast of Colombia and in Miami is approximately \$30,000. The cost of shipping a single kilo of non-illicit substance over the same distance via Federal Express is less than \$50.⁵

The above figures imply that the “value added” of cocaine traveling the length of Central America from Colombia to Guatemala is equal to roughly \$12,000 per kilo, or nearly \$7 billion per year. This is equivalent to 5 percent of the region’s GDP. The value-added of cocaine transiting the region is roughly 20 times Panama’s and Guatemala’s combined 2007 defense budget of \$364 million, and it is more than 100 times the \$65 million allocated by the United States under the Mérida Initiative to assist interdiction efforts by Central American nations.⁶ This provides the drug trafficking organizations resources which dwarf those attempting to apprehend them.⁷

4. Why is Drug Trafficking Associated with Violence?

The links between drugs and violence are the subject of a substantial literature, most of which focuses on the United States.⁸ In the influential formulation of Goldstein (1985), there are three possible ways illicit drugs can generate violence:

1. Violence due to the direct effects of a drug on the user (psychopharmacological).
2. Violence carried out in order to generate money to purchase drugs (economic-compulsive).
3. Violence associated with disputes over drug territory, drug debts, and other drug-trade related issues (systemic).

Overall, according to MacCoun, Kilmer, and Reuter’s (2003) review, the “prevailing view about psychopharmacological ... violence is that it is rare and attributable mostly to alcohol rather than

⁴ These figures are necessarily very approximate. They correspond to 2009 and are drawn from data presented in UNODC(2010a), UNODC(2010b), and U.S. Department of Justice(2010).The US\$1000 figure is based on interviews conducted on the Caribbean Coast of Colombia in late 2009. UNODC(2010b) shows a higher price--US\$2174—for Colombia as a whole.

⁵ This figure is based information accessed on the Federal Express website on October 21, 2009.

⁶ Latin American Commission on Drugs and Democracy (2009)

⁷Two points merit emphasis. First, the fact that the value-added for cocaine transiting the region is *equivalent* to 5 percent of GDP does not indicate that 5 percent of the region’s GDP *consists* of narcotics trafficking. It is likely that much of the value-added is used for expenditures outside the region (e.g. for boats or planes) and that much of the expenditures within the region, such as for bribes, would not be counted as part of GDP. Second, the concept of value-added is distinct from profits. The value-added generated by the transit across the region goes towards expenditures—including weapons, fuel, salaries, bribes, etc.—as well as income to leaders of trafficking organizations (profits).

⁸ This section of the paper draws heavily from Miron’s (2008) background paper, which was prepared for this report, and also MacCoun, Kilmer, and Reuter’s (2003) review of research of the links between drugs and crime.

illicit drugs” and “economic-compulsive criminality is relatively rare,” with the exception of that carried out by heroin addicts. That leaves connections in the third category as the main explanation for the drug-violence connection. Both “psychopharmacological” and “economic-compulsive” connections are associated with drug *consumption*, while “systemic” links are tied chiefly to *trafficking*. Given that there is no evidence that drug consumption is particularly elevated in Central America and that the region is one of the world’s major drug transport corridors, systemic links are almost certainly behind the drug-violence connection in Central America.

Systemic ties between drug and violence fall into a number of subcategories.

- **Between trafficking organizations.** Drug traffickers do not have access to the courts and other legal mechanisms. For example, they cannot use the legal system to adjudicate commercial disputes such as non-payment of debts. They cannot sue for product liability, nor can sellers use the courts to enforce payment. Along a different line, rival firms cannot compete via advertising and thus might wage violent turf battles instead. Thus, disagreements are more likely to be resolved with violence. It seems likely that at least a portion of the murders in Central America are of this type, given that trafficking in the region may involve the transfer of narcotics between Colombian and Mexican organizations.
- **Within drug trafficking organizations.** Because they are black market firms, drug organizations are unable to establish formal structures with the platform of the legal system. For example, they risk legal penalties if they report their employees for misuse of company funds or property. Consequently the lines of power are by nature informal. Within such a system, violence can be a disciplinary tool for organization leaders and can also be a path to upward mobility within the organization. Although it is extremely difficult to gauge, this may account for some homicides in the region.
- **Via diversion of criminal justice resources or corruption of criminal justice system.** Even in a perfectly functioning criminal justice system, drug trafficking can indirectly increase violence if criminal justice resources are diverted to anti-drug efforts, reducing the criminal justice system’s ability to handle non-drug crime. In countries deeply affected by drug trafficking, the damage can be more severe. When drug trafficking corrupts the criminal justice system—buying off police, judges, and prosecutors—the system’s functioning for non-drug crime can be crippled, leading to higher levels of crime and violence not associated with drugs. Also, traffickers who have already corrupted the justice system through payoffs or threats to the authorities, and thus do not fear prosecution, may be more likely to use violence to settle disputes not related to trafficking. Although direct evidence is not available, it is likely that this channel accounts for a large portion of the drugs-violence connection in the region. As the accounts earlier in this chapter describe, corruption is pervasive in the police and criminal justice systems in El Salvador, Guatemala, and Honduras, which has probably restricted the ability of the authorities to confront violence.
- **Via gun diffusion.** If trafficking brings more guns or heavier weapons into an area, their easy availability could facilitate violence, both related and not related to the drug trade. Research in the United States has suggested that violence was prevalent around the period of

the crack epidemic in the United States because the trade fueled demand for guns, leading to diffusion of guns (Blumstein, 2000; Blumstein and Cork, 1996; Cork, 1999). The Latin American Commission on Drugs and Democracy highlighted this linkage: “The relationship between homicide, firearm, and drug commerce is central. Drugs finance the purchase of firearms, which sustain gang wars for control of territories and trafficking.”

- **Via enforcement of prohibition.** Enforcement of anti-drug laws involves arresting people, seizing drugs, and other activities which carry with them the risk of a violent confrontation between law enforcement agents and people who they suspect of violating the drug laws.

A number of researchers have argued that under certain conditions, aggressive drug enforcement may actually amplify violence (Eck and McGuire 2000, MacCoun and Reuter 2001, Reuter 1989, Riley 1998). The possible mechanisms are numerous. First, as suggested above, greater enforcement can divert resources that would otherwise go to fighting non-drug crime. Greater enforcement can also disrupt established trafficking patterns, generating new violence in competition between traffickers.

More importantly, as noted by World Bank researchers, “Whenever there are high rents from criminal activities and the costs of bribing are low, intensified sanctions and policing may actually generate the perverse consequences of promoting organized crime, widespread corruption, and higher crime rates” (Keefer, Loayza, and Soares 2010.)

More specifically,

The existence of a potentially large drug market means that there are large rents to be collected by producers and/or distributors. But since the market operates illegally, organized groups have a comparative advantage in setting up a distribution network and the associated enforcement of distribution contracts. These groups substitute for the state and other market institutions that would otherwise provide these services. However, the organized-crime enforcement of contracts entails violence, and violence is also used to raise entry barriers for potential competitors. (Kugler, Verdier, and Zenou 2004)

Similarly, Becker, Murphy, and Grossman (2006) note that if the demand for drugs is inelastic, increased enforcement will increase the price and reduce consumption but will also increase the total resources available to traffickers. With more cash in hand, traffickers are better equipped to bribe criminal justice officials and purchase weapons.

Evidence for this hypothesis comes from a long-term look at the evolution of violence in the United States. Miron (1999) and Dills, Miron and Summers (2008) show that increases in enforcement of drug and alcohol prohibition in the United States over the past 100 years have been associated with increases in the homicide rate.

For Central American nations, the danger is that increasing enforcement efforts might spark a new wave of violence beyond the abilities of the nation’s governments to confront. This concern was raised by the STRATFOR intelligence organization (Meiners, 2009) in its conclusions to its evaluation of the drug trade in Central America:

If Central American governments choose to step up counternarcotics operations ... they risk disrupting existing smuggling operations to the extent that cartels begin to retaliate....

[T]he drug-related violence that could be unleashed in Central America would easily overwhelm the capabilities of the region's governments.

The countries of Central America face a difficult situation. The drug war has already brought extreme levels of violence and impaired the region's criminal justice institutions, and yet an escalation of interdiction efforts—at any scale the region's governments could mount—could increase levels of violence without diminishing the capacities of drug traffickers.

Box 1: Lessons from Mexico and Colombia on Enforcement and Violence

Since early 2007, the government of Mexico has pursued a strategy of confrontation with the Mexican drug cartels. One effect of this has been a wave of drug-related violence across the country.

The Mexican government may draw some comfort from the experience of Colombia. As Annex II of this paper describes, the Colombia situation is complex: much of the violence in Colombia has not been perpetrated directly by drug traffickers, but by the major Colombian guerrilla groups, especially the Colombian Revolutionary Armed Forces (FARC), as well as former illegal paramilitary groups, that are all widely believed to have derived substantial income by taxing drug proceeds. However, from 1989-1993, the Colombian government experienced a tide of violence perpetrated by the Medellin cartel, which was at the time the dominant force in cocaine trafficking. The cartel's leaders feared extradition to the United States, where they were unable to manipulate the criminal justice system and would thus face imprisonment. In an attempt to prevent the government from implementing the U.S.-Colombia extradition treaty, the cartel declared war on the government. The cartel blew up a civilian airliner, detonated numerous bombs in public places, and assassinated presidential candidates, judges, journalists, and hundreds of police officers. As a result, the government engaged in a large scale struggle with the cartel, which culminated with the death of Pablo Escobar in 1993. Subsequently, with the breakup of the Medellin cartel and later government efforts which included the dismantling of the Cali cartel, the level of overt drug-related violence declined. The Colombian drug trade now functions through smaller, more low-key organizations, rather than a small number of centralized cartels, and murder rates—while still high by international standards—have declined notably from the peak of the 1990s (see Thoumi 2010 and Annex 2).

Mexico's current crime crisis, Colombia's experience of the late 1980s and early 1990s, the cross-country and U.S. literature, and several theoretical studies indicate that at least in the short run devoting greater effort to enforcement of drug trafficking prohibition may increase levels of violence. At the same time, the more recent declines in violence in Colombia suggest that over the longer run, it is possible for the government to eliminate the most violent cartel leadership and achieve a relative decline in violence.

It is important to consider how the countries of Central America differ from Mexico and Colombia. First, the countries of Central America could be fairly characterized as innocent bystanders in the drug war. The trafficking organizations are based in Mexico and Colombia, and the available evidence suggests that direct high-level involvement of Central Americans in the drug trade is not substantial. (More recently, however, some elements of drug production have taken place in Central America, particularly minor production of opium in Guatemala, see Bureau of International Narcotics and Law Enforcement Affairs 2010). Second, unlike the countries of Central America, Mexico and Colombia have been able to deploy substantial resources against the drug cartels. The full scale struggles that were waged in Colombia and are now ongoing in Mexico are a viable option for countries with relatively high incomes. In contrast, given the small size of their economies, even relatively prosperous Panama and Costa Rica do not have the resources to wage a major confrontation against the cartels.

5. Possibilities for Drug Policy Reform

The possibility that increased anti-drug enforcement might increase levels of violence suggests that Central American governments should consider alternative approaches. In recent years, there have been calls to reconsider elements of the prohibition and enforcement regime that has dominated drug policy in recent decades. For example, in 2005, a group of 500 economists, including 3 Nobel laureates, endorsed a proposal to legalize marijuana in a letter that said “prohibition has minimal benefits and may itself cause substantial harm.” The discussion around drug policy option has been driven in part by recognition that while the possible benefits of current drug policy—in the form of reduced drug consumption—accrue mainly to developed nations which are the main consumers, the effects are largely negative for developing countries. As recent World Bank work states,

... the costs of prohibition seem to be borne disproportionately by developing countries that traditionally grow crops associated with the production of drugs or that serve as trade routes to drug consumers in rich countries. These costs range from direct expropriation of the wealth of poor farmers involved in the cultivation of these crops to the increased institutional instability caused by criminal organizations that distribute drugs (Keefer, Loayza, and Soares 2008.)

In Latin America and the Caribbean, there has been some rethinking of drug policy. Mexico recently decriminalized possession and use of small quantities of narcotics. Discussion was also generated by the final report of the Latin American Commission on Drugs and Democracy (2009), which counts among its members former President César Gaviria of Colombia, former President Ernesto Zedillo of Mexico, and former President Fernando Henrique Cardoso of Brazil. The Commission also includes author and former Vice President Sergio Ramirez of Nicaragua and Sonia Picado, former diplomat and politician from Costa Rica. The Commission’s report points to recent initiatives in Venezuela, Argentina, Colombia, and Brazil to depenalize possession of illicit drugs for personal use. It calls for the decriminalization of possession of marijuana for personal use and urges that drug use be seen as a public health problem that should be addressed principally through campaigns of education, information, and prevention.

The discussion about drug policy reform often mixes three different terms: “decriminalization,” “depenalization,” and “legalization.” Greenwald (2009) summarizes the terms as follows:

- Depenalization: “drug usage remains a criminal offense, but imprisonment is no longer imposed for possession or usage even as other criminal sanctions (e.g., fines, police record, probation) remain available.”
- Decriminalization: either “only noncriminal sanctions (such as fines or treatment requirements) are imposed or ... no penal sanctions can be.”
- Legalization: “there are no prohibitions of any kind under the law on drug manufacturing, sales, possession, or usage.”⁹

⁹ This three-way classification is coarse and ignores subtler policy choices. In particular, both decriminalization and legalization would generally involve some system of regulation and administrative controls like those that apply variously

The most subtle of these three changes, *depenalization*, has been applied to marijuana in 12 U.S. states, the Netherlands, Italy, Spain and parts of Australia. Possession of heroin and cocaine has also been depenalized in Italy and Spain (MacCoun and Reuter, 2001). In 2001, Portugal took the slightly stronger step, *decriminalization* of all drugs, including cocaine and heroin (Greenwald, 2009.)

Advocates for depenalization or decriminalization suggest that these policies allow governments to redirect resources from enforcement to treatment and more effectively address drug consumption as a public health issue. Opponents of depenalization and decriminalization argue that reducing legal sanctions will result in higher levels of drug use. Research has not generally found a substantial effect of depenalization or decriminalization on drug use. MacCoun and Reuter (2001), summarizing the research on marijuana depenalization in the United States note that “survey analyses in depenalizing states have found either no change in marijuana use or an increase that was slight and temporary.” They draw similar conclusions from the research on experiences in Australia and the Netherlands. In a study of Portugal’s more far-reaching policy change, Greenwald (2009) also finds no evidence of any increase in drug usage rates following decriminalization.

What effect would depenalization or decriminalization have in the Central American context? It is possible that such a policy would allow governments of the region to address problems of drug consumption, and under a best-case scenario drug use in the region would decline. However, the limited evidence available suggests that drug use in the region is not at extremely high levels (this evidence, based on various surveys, is described in World Bank 2010). Given that only a small portion of drug-related violence is associated with drug *consumption*, even a substantial decline in drug use within the region would probably have only limited effects on levels of violence. There is no obvious channel by which depenalization or decriminalization would reduce the much larger problem of systemic violence associated with drug *trafficking*.

A much more contentious change in drug policy would be legalization of some or all narcotics, which would mean that not only drug use and possession but also trafficking would be legally permitted. As previous World Bank work has noted, the costs of drug prohibition are disproportionately borne by nations like those of Central America where drugs are transported en route to principal markets in rich countries. It follows that the benefits of curtailing prohibition would also flow to those same countries.

Legalization, however, is not a feasible policy option for the countries of Central America. They are committed to an international drug prohibition regime through various treaties. Additionally, unilateral legalization by individual countries would have perverse effects. Countries that legalized would see a surge in drug trade as they became safe havens for traffickers. Because the trafficking organizations would still operate outside international law and thus continue to employ violence. Although it is very difficult to predict the impact of such a large policy change, it is likely that legalization by one or more small countries would not reduce violence. Legalization could only be plausibly implemented on an international scale. A full analysis of the question of legalization is beyond the scope of this paper, but it is evident that such a sweeping change would have both costs

to pharmaceutical drugs, tobacco, and alcohol in many countries. The details of alternative drug policy regimes are beyond the scope of this paper.

and benefits which would vary across countries, with substantial uncertainty about both. Regardless, given the problems with unilateral legalization, from the narrow perspective of Central American policymakers, legalization is not a feasible policy option.

6. Conclusions

Central America can be fairly characterized as an innocent bystander in the drug trade as Central American countries are transit countries and neither producers nor significant consumers of cocaine. In addition, the trade is mostly controlled by Colombian and Mexican cartels. To date, policy emphasis has been primarily on interdiction efforts to combat trafficking. Even if increased interdiction is successful, if the demand for drugs is inelastic, increased enforcement will increase the price and reduce consumption but will also increase the total resources available to traffickers. With more cash in hand, traffickers are better equipped to bribe criminal justice officials and purchase weapons. The experience of Colombia, economic theory, and the historical record in the United States, all suggest that an escalation of interdiction efforts—at any scale the Central American governments could mount, even with assistance from abroad—would most likely increase levels of violence without diminishing the capacities of drug traffickers. For Central America, this conclusion argues against a ramping up of interdiction as a path towards reducing violence and instead suggests a focus on other proven crime prevention efforts and encouraging a global reconsideration of drug policy.¹⁰

¹⁰ The World Bank's 2011 report *Crime and Violence in Central America*, details proven crime prevention measures and discusses their application in the region.

Annex 1: Drug Trafficking Through West Africa

In recent years, reports have emerged suggesting that West Africa may have had an increasing role as a hub for drug trafficking, in particular for cocaine shipments from South America to Europe. Along with these reports have arisen concerns that drug trafficking may have consequences for violence and corruption similar to those observed and described in this report for Central America. A recent report produced by the International Peace Institute (IPI), which reviews the literature on drug trafficking in West Africa, offers a typical presentation of the discussion in international drug policy circles.¹¹

What is evident from the IPI report is how extremely limited and fragmented information that exists about drug trafficking in West Africa. In Central America, governments, international organizations, and researchers have a reasonably well-developed capacity to collect and analyze information on violence and the drug trade. This is a consequence of the greater capacity of governments and civil society in Central America, a long-running international interest in the region's civil conflicts, and the United States' focus on source countries for trafficking into the U.S. In West Africa, in contrast, there are very few sources of reliable information. The known facts of trafficking presented in the IPI report are as follows:

- 1) In recent years, there has been an increase in cocaine seizures in West Africa, according to official government reports on seizures sent to the United Nations Office on Drugs and Crime. Most of these seizures were made in Nigeria.
- 2) There have been reports of arrests of prominent people in West Africa for trafficking. In 2002, the chairman of Mobile-Plus group in Benin was arrested for drug trafficking and money laundering, and in October 2003 a former Beninese ambassador to Cote d'Ivoire was arrested in Brazil for trafficking. In Guinea, after a military coup which followed the December 2008 death of the president, a number of associates of the president made videotaped confessions of having been involved with Latin American drug traffickers.
- 3) Many West African nations have conditions which could make them fertile ground for drug traffickers: high poverty, and fragile governments, with particularly weak criminal justice systems.

Beyond these thin facts, the remainder of collective knowledge on trafficking in West Africa consists largely of speculation.

The IPI report has a number of weaknesses that are common to much of the drug trafficking literature. The first has to do with the interpretation of data on seizures. Reported drug seizures are a product of a number of complex factors: the volume of seizures, the ability of traffickers to evade seizures, resources devoted to enforcement, the efficiency of drug enforcement efforts, the efficiency of the seizure reporting mechanism, and the incentives that governments face to manipulate enforcement figures. In the simplest analysis, a greater level of seizures may reflect either

¹¹ Cockayne, James and Phil Williams (2009). *The Invisible Tide: Towards an International Strategy to Deal with Drug Trafficking Through West Africa*. International Peace Institute.

more trafficking or more enforcement. On one page of the IPI report, a greater level of seizures is interpreted to indicate more trafficking: "... West Africa has emerged a major hub in the global drug economy. Between 2001 and 2006, annual cocaine seizures in the region increased" On the very next page, the alternative explanation is given: "There are some signs that interdiction in West Africa are having some impact: cocaine seizures in the region rose in 2007." One could just as easily draw completely the opposite conclusions: the 2001-2006 increase might represent increased enforcement, while the continued increase might be due to increased trafficking.

A second weakness of the IPI report is that gives too much credibility to rumor. For example, the report cites confidential discussions with Western intelligence community for the conclusion that "there is some evidence to suggest that drug-trafficking organizations are developing overland routes to ship cocaine from the West African hinterland to North Africa" West Africa is known for having high transaction costs for overland shipping: roads are of very poor quality, and shippers face repeated delays, inspections, and bribe payments. Given these circumstances, it seems unlikely that a land route is attractive to traffickers.

Finally, the IPI report fails to look at the question of the drug trade through West Africa in the context of the broader drug policy regime. Why would Latin American drug exporters even think of sending drugs to Europe through West Africa rather than a direct route, when such a path would not be considered were the product in question coffee, beef, oil, or computers? The answer must be that drug enforcement efforts have made an otherwise more practical sea or air route to Europe costly enough that a stopover in West Africa, despite its high costs, might be more attractive. This is a classic example of the "Whac-A-Mole" phenomenon of drug trafficking: enforcement efforts in one area just cause traffickers to shift their methods and routes elsewhere. (A thorough discussion of this phenomenon is found in Reuter 2010). To a large extent, the rise in drug trafficking in West Africa, to the extent that it has taken place, is a consequence of the international drug policy regime.

The IPI report comes to the conclusion that what is needed is more enforcement. It concludes that "[w]ithout a more effective international response, the slowly rising tide of drugs and drug money creeping onto West Africa's shores will, in time, exact a terrible toll. It will corrupt government, policy, and security forces. It will fuel crime, violence, and perhaps even drug wars, [etc.]" However, the Central American experience, and the wider literature discussed elsewhere in this paper, suggest the opposite conclusion. It is unlikely that greater enforcement will markedly reduce either the drug trade or associated negative spillovers, and it is possible that more enforcement efforts will actually generate more corruption and violence.

Annex 2: The Drugs-Violence Nexus in Colombia

There has been wide debate on the effect of the drug trade on violence in Colombia. On the one hand, the link seems obvious, given that two unfortunate distinguishing characteristics of Colombia have been its high homicide rates and its role as a source for much cocaine production. On the other hand, timing of the rise of the cocaine trade does by itself not explain the changes observed over time in Colombia. Additionally, as the discussion elsewhere in this paper emphasizes, it is the combination of drug trade and prohibition, rather than anything inherent in drug commerce that generates violence.

The drug trade in Colombia began with marijuana in the 1960s and then cocaine trade beginning in the 1970s, but significant coca plantings appeared only in the 1990s (see, for example, Bagley, 1988). However, intense levels of violence, particularly in rural areas, have been major factors in Colombian political life since long before the arrival of the drug trade. During the period known as *La Violencia* (1948–1957), as many as 200,000 Colombians were killed (Winn, 1999). The World Health Organization estimates that in 1979, before the significant growth of the cocaine trade, the murder rate was already at the very high level of 30 per 100,000.

The murder rate did rise with the cocaine trade during the 1980s, reaching the extreme level of 89 per 100,000 in 1991. This was during the period when drug kingpin Pablo Escobar and the Cali Cartel openly battled the government in an effort to intimidate policymakers from allowing traffickers to be extradited to the United States, waging a campaign of terror and assassination of police officers, judges, journalists, politicians, and civilians.

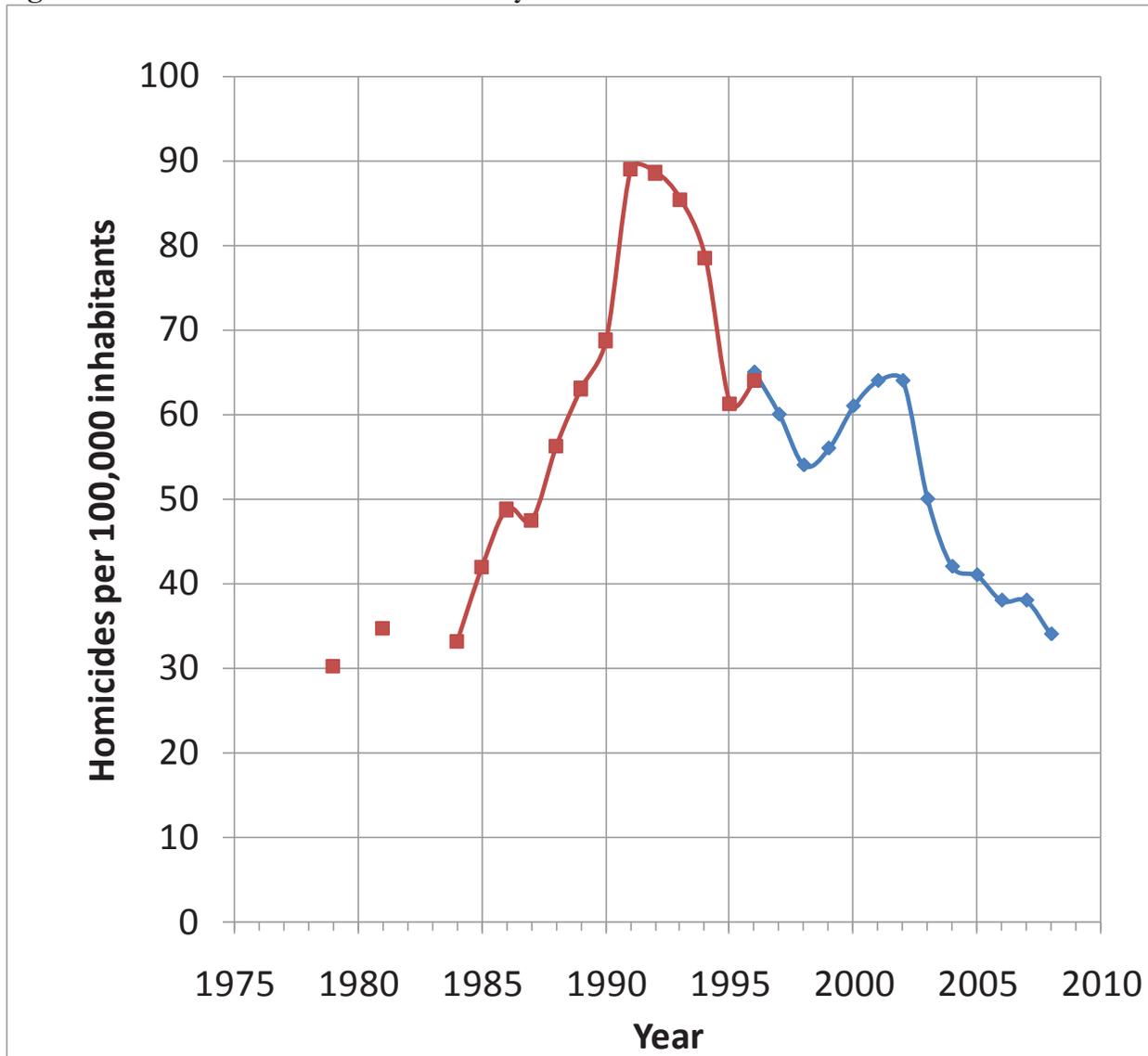
The murder rate dropped substantially after Escobar's death in 1993 and has fallen further since 2002, back to the rate of the early 1980s. Both because high levels of violence predate the cocaine trade and because the murder rate fell by nearly 2/3 from its 1991 level even while Colombia remained a main source of cocaine worldwide, the drugs-violence connection defies any simple story.

One piece of empirical evidence which demonstrates a link between the cocaine trade and violence is Angrist and Kugler's (2008) study of the local effects of changes in enforcement in the early 1990s which appear to have increased the price of coca leaf in Colombia, driving up production. They show that violent death rates increased in growing areas after the increase in coca cultivation.

Part of the complexity of the relationship derives from the fact that much of the violence in Colombia has not been perpetrated directly by drug traffickers, but by the major Colombian guerrilla groups, especially the Colombian Revolutionary Armed Forces (FARC), as well as former illegal paramilitary groups, which are all widely believed to have derived substantial income by taxing drug proceeds (Rangel, 2000; Rabasa and Chalk, 2001; Villalon, 2004). The drug trade did not initially contribute to the rise of the guerrilla groups and the paramilitaries, but has likely maintained the existence of both, as they evolved into organizations that perpetuated themselves through drug profits and kidnapping for ransom.

Although it is very difficult to attribute cause-and-effect, the decline in violence in recent years in Colombia appears to be due in large part to the demobilization of the paramilitaries combined with the government's largely successful effort in reducing the strength of the FARC. These changes have not markedly affected the volume of the cocaine trade. Although there are year-to-year swings, and estimates show that coca leaf cultivation in Colombia is below the peak levels observed 1999-2001, both coca leaf cultivation and production of cocaine remain at levels above those of the 1990s.¹²

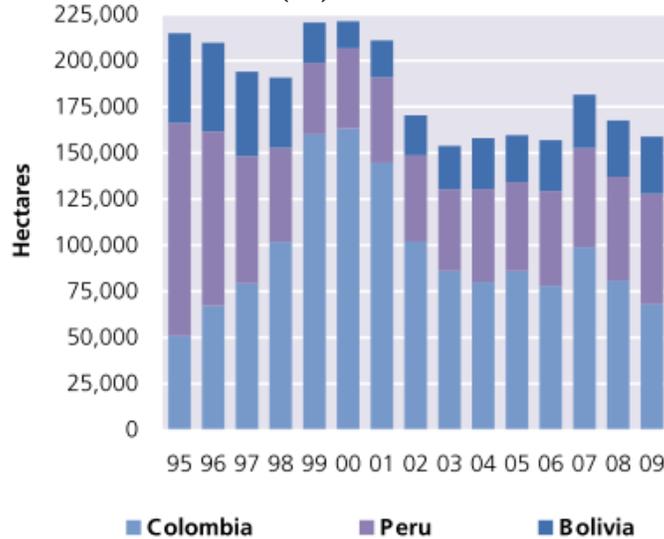
Figure A1: Homicide Rate in Colombia by Year



Sources: World Health Organization Mortality Database for 1979-1996 and Instituto Forense Medical Legal (2008) for 1996-2008

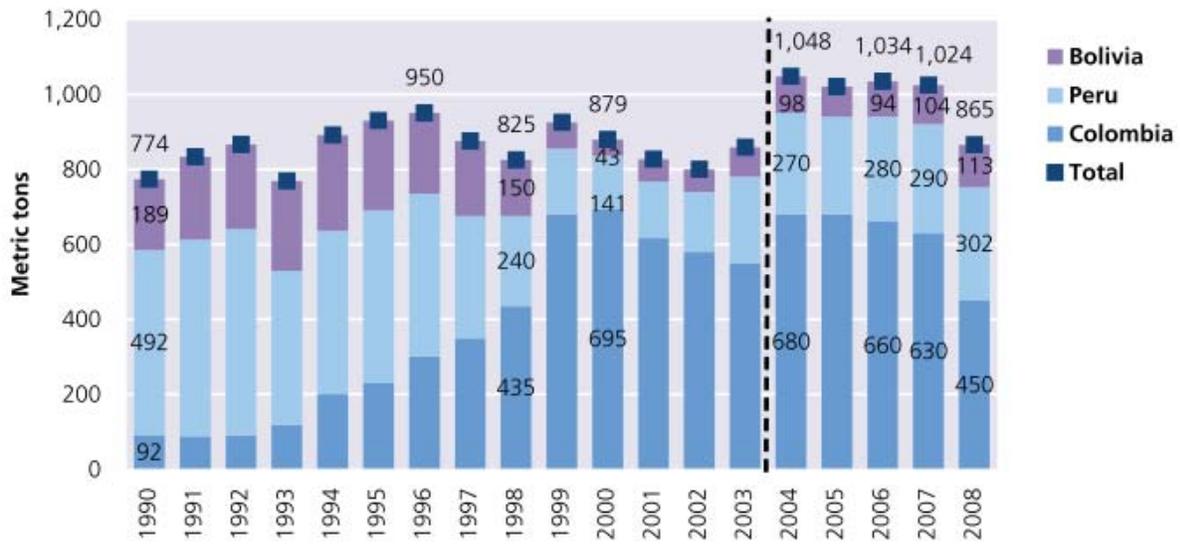
¹² For further discussion of the evolution of the drug trade in Colombia, see Mejía (2010) and Thoumi (2010).

Figure A2: Global Coca Bush Cultivation (ha), 1995-2009



Source: Taken from United Nations Office on Drugs and Crime (2009)

Figure A3: Global Cocaine Production, 1990-2008



Source: Taken from United Nations Office on Drugs and Crime (2009). Note that due to changes in methodology, figures from 2003 and earlier are not strictly comparable to those from 2004 and later.

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