

THE REGIONAL MIGRATION STUDY GROUP

# PAYING FOR CRIME: A REVIEW OF THE RELATIONSHIPS BETWEEN INSECURITY AND DEVELOPMENT IN MEXICO AND CENTRAL AMERICA

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Woodrow Wilson  
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Eleanor Sohnen  
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The Study Group's mission, membership, and research can be found at:

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## Executive Summary

In Mexico and Central America, crime and insecurity are undermining the region's economic and social prosperity by diverting public and private resources away from economically productive uses and eroding the trust between citizens and the state that is critical to sustain healthy and dynamic societies. Worldwide, crime and homicide rates are correlated with income inequality, unemployment, and lack of progress in social development. In this region, the situation is directly attributable to the growing prominence of drug-trafficking organizations (DTOs), but has also been fueled by institutional weaknesses, lack of alternative economic opportunities for young people, and a general culture of impunity.

Central America's Northern Triangle<sup>1</sup> has the highest homicide rates in the world, which have grown precipitously since 2007. Mexico's homicide rates are relatively lower, but exhibit the same growth trends, particularly in drug-trafficking hotspots. Given governments' limited capacity and resources, even the most violent of crimes are often not resolved, nor are criminals held accountable. Most perpetrators — and victims — of homicides are young men; many are connected to the drug trade or to gangs. Many of the homicides in the region are committed using unregistered firearms that are trafficked from the United States or left over from the region's civil wars.

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As the governments of the region cannot be relied upon to provide protection, private spending to prevent and respond to violence is considerable. Businesses are highly impacted by insecurity and often face direct financial costs relating to damaged physical property and employee safety. Firms in Mexico and Central America identify crime as one of their primary obstacles to growth. Their security-related expenditures divert money away from wages and human and physical capital investments, and increase operating and market-entry costs, discouraging business formation and expansion and resulting in lower productivity and competition. Furthermore, individuals seeking to provide security for themselves and their families may curtail or change their daily activities and make far-reaching life choices that impact investments in human capital and their long-term livelihoods. All of these conditions combine to worsen the business climate and discourage domestic and foreign investors, ultimately hampering economic growth.

Insecurity has many negative social and political implications that can erode a society's social capital by increasing fear, reducing the quality of life, and contributing to vigilantism. Polls indicate that around 70 percent of Mexicans and Central Americans consider crime to be "very much" a problem in their society. Government officials or institutions that are perceived as inept or colluding with organized crime also contribute to the withering of social and political trust by undermining the state's credibility and making policy implementation more difficult.

Given the consequences that insecurity and crime have for Mexico and Central America, the governments of the region must work to devise and implement policies that address the links between crime rates and development, citizens' lack of trust in institutions, and the high economic toll of insecurity overall. Further research is also needed to better understand how the recent surge in violence has impacted individuals, companies, and governments. Addressing these areas will ensure that policymakers develop appropriate strategies that deal with the sources of the problem and permit them to allocate their resources efficiently and effectively.

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<sup>1</sup> The Northern Triangle is comprised of El Salvador, Guatemala, and Honduras.



## I. Introduction

For Mexico and Central America, insecurity, crime, and violence are major barriers to economic growth and development. Insecurity negatively impacts citizens' health and quality of life. It erodes trust and cooperation, both interpersonal as well as between citizens and governments and security and judicial institutions. It reduces individuals' and businesses' willingness to invest in human and physical capital. And it diverts scarce public resources toward health and security spending — limiting the capacity of government institutions to finance and carry out other critical functions, and often crowding out public investment in human development. In effect, crime, violence, and insecurity can stunt countries' social, economic, and political growth, rendering them vulnerable to stagnation and decay. If left unchallenged, crime and insecurity can prevent these societies from realizing their full developmental and economic potential.

The relationship between violence and development is complicated. Across the world, however, several trends are clear: Countries with lower levels of income inequality and unemployment have lower homicide rates. Meanwhile, countries with higher growth rates have lower crime rates overall — both violent crime and property crime.<sup>2</sup> Furthermore, studies have found a global correlation (though causation cannot be inferred) between relatively high rates of homicidal violence and failure to achieve progress on certain Millennium Development Goals, namely: eradicating extreme poverty, youth unemployment, and hunger; improving primary school enrollment ratios; and reducing infant mortality and adolescent birth rates. Overall, during the period from 1990 to 2008, countries with lower average homicide rates had an 11 percent higher chance of improving their standing in the United Nations' Human Development Index — a composite measure of social and economic development — than those with higher homicide rates.<sup>3</sup>

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*For Mexico and Central America, insecurity, crime, and violence are major barriers to economic growth and development.*

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These findings — while unsurprising — are especially relevant for the region. Over the past two decades, the countries of the Northern Triangle have undergone a remarkable transformation — from largely rural to mostly urban populations, from autocratic to democratic regimes, and from resource-dependent to export-oriented economies. Economic growth is increasingly stable, and poverty and inequality have declined.<sup>4</sup> Mexico, further along on its development path, has seen a consolidation of its middle class — pushed by impressive gains in educational enrollment and attainment, as well as increases in its per capita income.<sup>5</sup> However, in Central America particularly, the important progress made in decreasing extreme poverty and expanding access to education is far from permanent; destructive dynamics could undermine support for democracy in the region and eliminate these and other critical human and economic development gains.

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2 United Nations Office on Drugs and Crime (UNODC), *2007 World Drug Report* (Vienna: UNODC, 2007), [www.unodc.org/pdf/research/wdr07/WDR\\_2007.pdf](http://www.unodc.org/pdf/research/wdr07/WDR_2007.pdf).

3 Geneva Declaration on Armed Violence and Development, "More Violence, Less Development: Examining the Relationship between Armed Violence and MDG Achievement," 2010, [www.genevadeclaration.org/fileadmin/docs/MDG\\_Process/MoreViolenceLessDevelopment.pdf](http://www.genevadeclaration.org/fileadmin/docs/MDG_Process/MoreViolenceLessDevelopment.pdf).

4 Hugo Beteta, *Central American Development: Two Decades of Progress and Challenges for the Future* (Washington, DC: Migration Policy Institute, 2012), [www.migrationpolicy.org/pubs/RMSG-CentAmDevelopment.pdf](http://www.migrationpolicy.org/pubs/RMSG-CentAmDevelopment.pdf).

5 Luis de la Calle and Luis Rubio, *Mexico: A Middle Class Society — Poor No More, Developed Not Yet* (Washington, DC: Woodrow Wilson International Center for Scholars, 2012), [www.wilsoncenter.org/publication/mexico-middle-class-society-poor-no-more-developed-not-yet](http://www.wilsoncenter.org/publication/mexico-middle-class-society-poor-no-more-developed-not-yet).



An overview of the underlying causes and factors contributing to the insecurity in the region is critical to understanding the problem. Rising crime and violence are often attributed to the growing prominence of drug-trafficking organizations (DTOs); in reality, such organizations are not only a cause but also an effect. Other interrelated factors have also contributed to the deterioration of public security throughout the region. The transition away from one-party rule and associated institutional arrangements in Mexico, the continuing weakness of government institutions and a culture of impunity reinforced during the years of military rule and civil war in Central America, the tremendous opportunities and incentives for rent seeking, and a lack of viable alternative economic opportunities to emigration or the drug trade have contributed to societies where crime and violence flourish and drug trafficking has emerged as a primary economic activity.

Mexico and Central America are victims of geography, sandwiched between the Andean region, where the world's cocaine is produced, and the United States, where 36 percent of it is consumed.<sup>6</sup> Similar to the Caribbean two decades ago, Central America has become a "service station" for drug traffickers and suffers the associated societal ills. As drug interdiction has increased in the Caribbean, the Central American trafficking routes have become key. Around 90 percent of the cocaine consumed in the United States now crosses the land border with Mexico, with most of that flow arriving via Central America's Pacific and Atlantic coasts.<sup>7</sup> Although cocaine use has been decreasing in the United States, it may be growing in the region, where traffickers are increasingly paying collaborators in product. Surveys of experts and public health officials in Guatemala and Mexico indicate a rise in cocaine usage; Latin America and the Caribbean now account for approximately 17 percent of world cocaine users.<sup>8</sup> Although cocaine is the principal drug trafficked in this corridor, cartels are also increasingly controlling production and distribution of other substances, including heroin and methamphetamines. However, even as cocaine use has decreased in the United States in recent years, violence to the south has skyrocketed as intercartel battles have focused on territory rather than product.<sup>9</sup> Drug traffickers have also been able to diversify into the businesses of arms and human smuggling.

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In this context, DTOs have emerged as the de facto authorities in much of the region, the best-organized and most-efficient power structures. In using violence (or the threat of violence) to impose territorial control, DTOs have replaced or challenged the state's monopoly on force and regulation of economic activity in many parts of the region, and further normalized both arbitrary violence and illicit trade. They are aided by porous regional borders and the fact that government institutions are weak, inefficient, and lack coordination, and that their resources and organizational capacity cannot match those of the cartels. The drug-trafficking business, to state the obvious, can be incredibly lucrative. To wit: each ton of cocaine that reaches the United States nets traffickers around \$85 million,<sup>10</sup> and total income in Mexico from the illegal drug trade is estimated at \$2.7 billion to nearly \$8 billion.<sup>11</sup> In comparison, total public

6 UNODC, *World Drug Report 2011* (Vienna: UNODC, 2011), [www.unodc.org/documents/data-and-analysis/WDR2011/WDR2011-web.pdf](http://www.unodc.org/documents/data-and-analysis/WDR2011/WDR2011-web.pdf).

7 Ibid.

8 Ibid. Secretaría de Seguridad Pública (SSP), *Informe del Estado de la seguridad pública en México* (Mexico City: Secretaría de Seguridad Pública, 2010), [www.insyde.org.mx/images/informe\\_estado\\_seguridad\\_publica.pptx](http://www.insyde.org.mx/images/informe_estado_seguridad_publica.pptx).

9 Elizabeth Dickinson, "Legalizing Drugs Won't Stop Mexico's Brutal Cartels," *Foreign Policy*, June 22, 2011, [www.foreignpolicy.com/articles/2011/06/22/legalizing\\_drugs\\_wont\\_stop\\_mexicos\\_brutal\\_cartels](http://www.foreignpolicy.com/articles/2011/06/22/legalizing_drugs_wont_stop_mexicos_brutal_cartels).

10 Ibid.

11 UNODC, *World Drug Report 2010* (Vienna: UNODC, 2010), [www.unodc.org/unodc/en/data-and-analysis/WDR-2010.html](http://www.unodc.org/unodc/en/data-and-analysis/WDR-2010.html); and Centro Nacional de Atención Ciudadana de la Policía Federal (2010) cited in Eduardo Guerrero-Gutiérrez, "Security, Drugs and Violence in Mexico: A Survey," prepared for the 7<sup>th</sup> North American Forum, Washington, DC, October 6-8, 2011, [http://iis-db.stanford.edu/evnts/6716/NAF\\_2011\\_EG\\_\(Final\).pdf](http://iis-db.stanford.edu/evnts/6716/NAF_2011_EG_(Final).pdf).





expenditures on security in 2010 in the region were as follows: El Salvador, \$766 million; Guatemala, \$890 million; Honduras, \$426 million; and Mexico, \$15.5 billion.<sup>12</sup> If these expenditures seem reasonably matched, it should be noted that public funds are destined for all federal and state public security needs throughout each country — not just those related to trafficking.

Though inter- and intra-DTO battles are responsible for the lion's share of the increase in homicides, crime and violence are also perpetrated by people who are not involved in the drug trade — the vast majority of them male, most of them young, some of them gang members. (The bulk of victims of violent crime are also young men.) Their involvement in violent and criminal behavior is a result of a number of factors: societal, economic, community, interpersonal, and, of course, individual. Educational attainment is rising in the region, but the poor quality of education generally means low returns to schooling, while slow job creation means that decent employment opportunities are scarce. Open unemployment in urban areas ranges from 13 to 16 percent among 15- to 24-year-olds in Mexico, Honduras, and El Salvador, and underemployment is much higher;<sup>13</sup> young people who neither study nor work may be particularly at risk for engaging in criminal activity. Again, a culture of impunity, weak rule of law, and the diversion of scarce public security and justice resources toward drug-related activity means that crime often goes unpunished. Furthermore, these youths have — as traffickers do — increasing access to the vast stockpiles of firearms left over from the civil wars, as well as recent imports from the United States and elsewhere.

Given the chicken-or-egg nature of the problem — as weak institutions and rule of law and low levels of development facilitate insecurity and violence, which further weaken institutions and rule of law and hold back development — disentangling the causes and effects of insecurity is a significant task, and beyond the scope of this report. Therefore, the report does not aim to explain the causes of crime and violence in Mexico or Central America. Rather, it reviews the evidence on the relationships between insecurity, crime, violence, and development. It provides an overview of the extent of insecurity in the region; describes the direct and indirect costs of crime and violence; addresses the impact of these costs on social, economic, and political development and growth; and outlines several key conclusions and knowledge gaps for policymakers.

## II. Extent of the Problem

The homicide rates in the countries of Central America's Northern Triangle are the highest in the world, and have been rising rapidly since 2007. Though the national homicide rate is comparatively lower in Mexico, the same trend is apparent; murders have nearly doubled since 2007 (see Figure 1). In Guatemala the intentional homicide rate is now nearly twice as high as it was during the civil war of the 1980s,<sup>14</sup> with approximately 40 percent of murders linked to drug trafficking.<sup>15</sup> Honduras' rate more than doubled between 2006 and 2010, and is now the highest in the world.

12 United Nations Development Programme (UNDP), *Información sobre el gasto público de seguridad y justicia en Centroamérica 2006-2010: Resultados preliminares para la Conferencia de apoyo a la Estrategia de Seguridad en Centroamérica* (Panama City, Panama: UNDP, 2011), [www.pnud.org.gt/data/publicacion/informe\\_gastopublico.pdf](http://www.pnud.org.gt/data/publicacion/informe_gastopublico.pdf); Mexico Evalúa, *El gasto en seguridad: Observaciones de la Auditoría Superior de la Federación a la gestión y uso de recursos* (Mexico City: Mexico Evalúa, 2011), [www.mexicoevalua.org/descargables/6c9a29\\_MEX\\_EVA-INHOUS-GASTO\\_SEG.pdf](http://www.mexicoevalua.org/descargables/6c9a29_MEX_EVA-INHOUS-GASTO_SEG.pdf).

13 Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean* (Santiago, Chile: ECLAC, 2011), [www.eclac.org/publicaciones/xml/8/45608/LCG2513b.pdf](http://www.eclac.org/publicaciones/xml/8/45608/LCG2513b.pdf).

14 UNODC, *Global Study on Homicide: Trends, Context, Data* (Vienna: UNODC, 2011), [www.unodc.org/documents/data-and-analysis/statistics/Homicide/Globa\\_study\\_on\\_homicide\\_2011\\_web.pdf](http://www.unodc.org/documents/data-and-analysis/statistics/Homicide/Globa_study_on_homicide_2011_web.pdf).

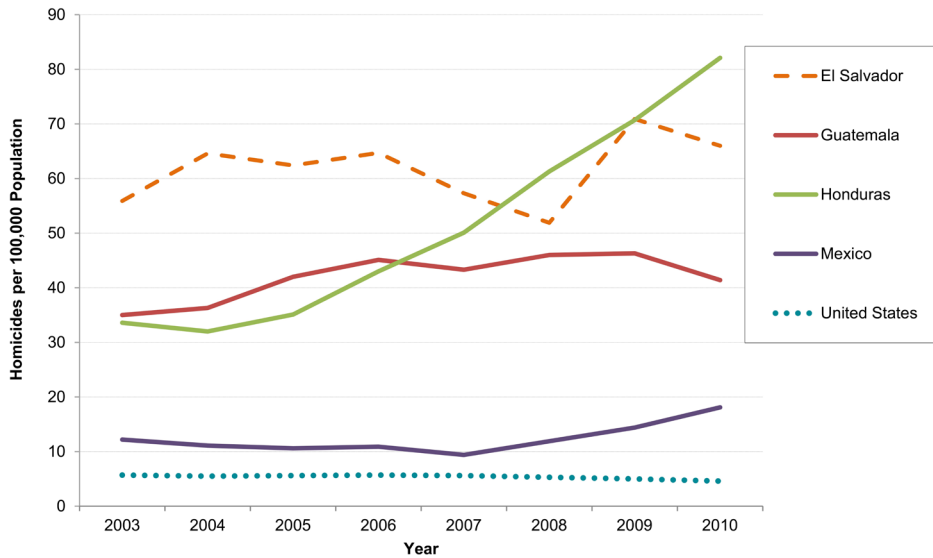
15 Testimony of Thomas Harrigan, Drug Enforcement Administration Chief of Operations before the Senate Caucus on International Narcotics Control, *US–Central America Security Cooperation*, 112<sup>th</sup> Cong., 1<sup>st</sup> sess., May 25, 2011, [www.justice.gov/dea/pr/speeches-testimony/2012-2009/110525\\_ca\\_security\\_cooperation.pdf](http://www.justice.gov/dea/pr/speeches-testimony/2012-2009/110525_ca_security_cooperation.pdf).





In the region higher homicide rates are associated with the percentage of households headed by women,<sup>16</sup> the population of men ages 15-34, and, most significantly, with drug-trafficking hotspots.<sup>17</sup> The recent increase in homicide rates is linked to territorial battles between emerging and faction cartels — but ordinary citizens are far from immune. Furthermore, of course, not all homicides are drug related; many of the murdered are indirect victims of a culture of impunity. In some countries, such as Guatemala, authorities sanctioned violence against civilians by state forces and military groups over many decades.

**Figure 1. Homicide Rates in Mexico, Northern Triangle, and United States, 2003-10**



Source: United Nations Office on Drugs and Crime (UNODC), *Global Study on Homicide: Trends, Context, Data* (Vienna: UNODC, 2011).

In all of these countries, judicial and police institutions lack resources and the latest crime-solving techniques, and, in many cases, can be paid off. Most crimes go uninvestigated, and fewer are solved. In Guatemala, 96 percent of homicides went unresolved in 2009.<sup>18</sup> Ultimately, violence and crime — whether arising from battles over trafficking territory or under more mundane circumstances — has few official consequences. Unsurprisingly, according to the UN Office on Drugs and Crime (UNODC), in countries where the rule of law has been strengthened in the past 15 years, there has been a decline in the homicide rate and vice versa.<sup>19</sup>

Increasingly across the region, homicides are committed with firearms,<sup>20</sup> which are more widely available than ever before. It is estimated that there are around 18.4 million firearms in circulation in Mexico and the Northern Triangle, 73 percent of which are unregistered.<sup>21</sup> Some of these arms are remnants from the region's civil wars; others, which are relatively easily purchased in the United States, have moved

<sup>16</sup> This association aligns with sociological theories that hold that the percentage of households headed by women is a predictor of homicide, as these households are more prevalent in areas with breakdowns of social ties, which may lead to more violent crime.

<sup>17</sup> World Bank, *Crime and Violence in Central America: Volume II*, Report No. 56781-LAC (Washington, DC: World Bank, 2010), [http://siteresources.worldbank.org/INTLAC/Resources/Eng\\_Volume\\_II\\_Crime\\_and\\_Violence\\_Central\\_America.pdf](http://siteresources.worldbank.org/INTLAC/Resources/Eng_Volume_II_Crime_and_Violence_Central_America.pdf).

<sup>18</sup> Steven S. Dudley, "Drug Trafficking Organizations in Central America: *Transportistas*, Mexican Cartels and Maras," in *Organized Crime in Central America: The Northern Triangle*, eds. Cynthia J. Arnson and Eric L. Olson (Reports on the Americas #29, Woodrow Wilson International Center for Scholars, Washington, DC, 2011), [www.wilsoncenter.org/node/19779](http://www.wilsoncenter.org/node/19779).

<sup>19</sup> UNODC, *Global Study on Homicide*.

<sup>20</sup> *Ibid.*

<sup>21</sup> World Bank, *Crime and Violence in Central America: A Development Challenge* (Washington, DC: World Bank, 2011), [http://siteresources.worldbank.org/INTLAC/Resources/FINAL\\_VOLUME\\_I\\_ENGLISH\\_CrimeAndViolence.pdf](http://siteresources.worldbank.org/INTLAC/Resources/FINAL_VOLUME_I_ENGLISH_CrimeAndViolence.pdf).



south as payment to drug traffickers. US “gun-walking” programs such as the code-named “Fast and Furious” campaign have also (unintentionally) resulted in arms flows to Mexico and Central America.<sup>22</sup> Between 2009 and 2010, 70 percent of arms recovered in Mexico and submitted to a tracing program had originated in or passed through the United States.<sup>23</sup>

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### *In Guatemala, 96 percent of homicides went unresolved in 2009.*

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Drug-related homicide is localized in the region, and national averages can obscure these local trends. For example, though Mexico ranks 18<sup>th</sup> globally in terms of intentional homicide rates,<sup>24</sup> five of the world’s top ten most murderous cities are in Mexico.<sup>25</sup> And although Honduras tops the global list of homicide rates — 82 per 100,000 residents<sup>26</sup> — some areas, such as Choluteca and Roatán, see comparatively low rates, while San Pedro Sula, the country’s industrial capital, has the highest homicide rate of any city in the world: an astoundingly high 159 murders per 100,000 residents. In comparison, New Orleans — the city with the most murders per capita of any city outside Latin America — had a homicide rate of 58 per 100,000. Outside of the Americas, the cities with the highest murder rates in Africa and the Middle East were Cape Town, South Africa (46 murders per 100,000 residents), and Mosul, Iraq (35).<sup>27</sup> Elsewhere in the region, San José, Costa Rica, saw 15 murders per 100,000 residents in 2009.

Overall violent crime victimization rates are high.<sup>28</sup> For every murder victim, there are an estimated 20 to 40 victims of nonfatal violence.<sup>29</sup> In 2008 nearly one in six adults had been a victim of violent crime in Guatemala and El Salvador over the past year, as had nearly one in nine adults in Honduras.<sup>30</sup> In Mexico violent crime rates are lower, but violence related to organized crime in particular is spreading geographically — beyond the recognized hotspots such as Ciudad Juárez, Culiacán, Chihuahua, and Tijuana and into places previously considered safe, such as Guadalajara and Veracruz. Organized criminals are increasingly engaging in some of the activities most harmful to ordinary citizens: for example, kidnapping, extortion, and vehicle theft. Residents of Mexico and Central America are well aware of the situation: data on perceptions of insecurity appear to align with actual patterns of crime rates.<sup>31</sup>

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22 The operation, carried out by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) between 2009 and 2011, allowed the sale of around 2,000 firearms to suspected arms traffickers working through straw purchasers on behalf of Mexican gun cartels. The stated objective of the operation was to further the investigation and identification of traffickers, but as of October 2011, fewer than 700 guns had been recovered and no high-level traffickers had been apprehended as a result of the operation, while Mexican officials say the arms turned up at over 170 crime scenes, including the scene of the killing of a US Border Patrol agent. See Charles Grassley, “The Department of Justice’s Operation Fast and Furious,” presentation before the US House of Representatives Committee on Oversight and Government Reform, June 15, 2011, [www.grassley.senate.gov/judiciary/upload/ATF-06-15-11-CEG-Presentation-with-testimony.pdf](http://www.grassley.senate.gov/judiciary/upload/ATF-06-15-11-CEG-Presentation-with-testimony.pdf); Richard Serrano, “Emails Show Top Justice Department Officials Knew of ATF Gun Program,” *Los Angeles Times*, October 3, 2011, <http://articles.latimes.com/2011/oct/03/nation/la-na-atf-guns-20111004>.

23 Dianne Feinstein, Charles Schumer, and Sheldon Whitehouse, *Halting U.S. Firearms Trafficking To Mexico*, A Report to the United States Senate Caucus on International Narcotics Control, 112<sup>th</sup> Congress, First Session, June 2011, [www.feinstein.senate.gov/public/index.cfm?Fuseaction=Files.View&FileStore\\_id=beaff893-63c1-4941-9903-67a0dc739b9d](http://www.feinstein.senate.gov/public/index.cfm?Fuseaction=Files.View&FileStore_id=beaff893-63c1-4941-9903-67a0dc739b9d).

24 UNODC, *Global Study on Homicide*.

25 Consejo Ciudadano para la Seguridad Pública y Justicia Penal A.C. (Civic Council on Public Security and Criminal Justice), *Ranking de las 50 ciudades y las 50 jurisdicciones subnacionales más violentas del mundo* (Mexico City: Consejo Ciudadano para la Seguridad Pública y Justicia Penal A.C., 2012), [www.seguridadjusticiaypaz.org.mx/biblioteca/summary/5-prensa/145-san-pedro-sula-honduras-la-ciudad-mas-violenta-del-mundo-juarez-la-segunda](http://www.seguridadjusticiaypaz.org.mx/biblioteca/summary/5-prensa/145-san-pedro-sula-honduras-la-ciudad-mas-violenta-del-mundo-juarez-la-segunda).

26 UNODC, *Global Study on Homicide*.

27 Consejo Ciudadano para la Seguridad Pública y Justicia Penal, *Ranking de las 50 ciudades y las 50 jurisdicciones subnacionales más violentas del mundo*.

28 Category includes murder and non-negligible manslaughter, forcible rape, robbery, and aggravated assault.

29 UNODC, *The Globalization of Crime: A Transnational Organized Threat Assessment* (Vienna: UNODC, 2010), [www.unodc.org/documents/data-and-analysis/tocta/TOCTA\\_Report\\_2010\\_low\\_res.pdf](http://www.unodc.org/documents/data-and-analysis/tocta/TOCTA_Report_2010_low_res.pdf).

30 World Bank, *Crime and Violence in Central America, Volume II*.

31 José Miguel Cruz, *Public Insecurity in Central America and Mexico*, Latin American Public Opinion Project, Americas Barometer Insights No. 28 (Nashville, TN: Vanderbilt University, 2009), [www.vanderbilt.edu/lapop/insights/I0828en.pdf](http://www.vanderbilt.edu/lapop/insights/I0828en.pdf);



The majority of violent criminals and victims in the Northern Triangle are young men ages 15-34. Many, but certainly far from all, perpetrators and victims may be members of gangs: in 2006 there were estimated to be upwards of 20,000 active gang members in Mexico and 60,000 gang members in the Northern Triangle countries — some estimates pointing to even more than 300,000.<sup>32</sup> That is nearly 500 gang members per 100,000 inhabitants in Honduras, 180 in El Salvador, 111 in Guatemala, and 18 in Mexico. These numbers have likely grown not only due to criminal deportations of gang members from the United States, but also because of domestic recruitment.<sup>33</sup> Gangs and DTOs have historically been distinct from each other, but gangs often provide services to DTOs such as transportation, distribution, security, or contract killings. However, the distinctions and connections between the major transnational organized gangs (aka *maras*) operating in Central America, such as the Mara Salvatrucha or MS13 and the 18<sup>th</sup> Street gang, and local, home-grown and/or youth gangs (aka *pandillas*) are not always clear cut or well understood.

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*Though Mexico ranks 18<sup>th</sup> globally in terms of intentional homicide rates, five of the world's top ten most murderous cities are in Mexico.*

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### III. The Economic Costs and Development Effects of Insecurity

#### A. Costs

One of the approaches economists have taken to quantify the impacts of insecurity has been via cost accounting, or classifying and calculating the various direct and indirect economic costs of these activities to a country or a region. Although cost accounting is a convenient way to address the question, it is difficult to measure the considerable social costs that result from insecurity and lack of rule of law. Taking this limitation into consideration, we start at the individual-level costs and pan out to attempt to understand the country and regionwide costs of crime, violence, and insecurity.

For the individual victims of crime and their families, the direct financial losses could include the loss of productivity due to death or injury, the costs of medical care and legal services, and the costs of repairing or replacing damaged or destroyed property.

The indirect, nonmonetary losses may include lost investment in human capital and the effect of any psychological harm the victim suffers as a result of the crime. As a result of continuing lower productivity, an individual's earnings may be lower over his or her lifetime. Victims — or those who fear becoming victims — may also choose to spend money on private security (see Table 1). This money is then not available to use on other expenditures, including investments in human or physical capital, or for savings.

Similarly, businesses face direct financial costs due to damage or destruction of property and legal costs. Since insurance companies must pay out for medical costs and property damage, violent crime also raises insurance costs collaterally. An analysis of Mexican insurance quotes, by state, shows a positive and significant relationship between organized crime violence and car insurance prices. For every 100

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Guerrero-Gutiérrez, "Security, Drugs and Violence in Mexico."

32 US Agency for International Development (USAID), *Central America and Mexico Gang Assessment* (Washington, DC: USAID, 2006), [http://pdf.usaid.gov/pdf\\_docs/PNADG834.pdf](http://pdf.usaid.gov/pdf_docs/PNADG834.pdf).

33 Carlos Acevedo, *Los costos económicos de la violencia en Centroamérica* (San Salvador, El Salvador: Consejo Nacional de Seguridad Pública, 2008), <http://redalyc.uaemex.mx/pdf/308/30810929005.pdf>.

additional organized-crime-related deaths per 100,000 people, there is an associated 25 percent increase in car insurance prices.<sup>34</sup> Indirect losses to businesses would also include the opportunity costs of money spent on security or protection fees.

**Table 1. Private and Public Spending on Security (in current \$)**

	El Salvador	Guatemala	Honduras	Mexico
Private spending on security by households and businesses, 2008-09	\$329 million (1.8 percent of GDP) <sup>a</sup>	\$459 million (1.5 percent of GDP) <sup>a</sup>	\$176 million (1.9 percent of GDP) <sup>a</sup>	\$3.5 billion (0.4 percent of GDP) <sup>c</sup>
Public spending on security, 2010 <sup>b</sup>	\$766 million (3.5 percent of GDP) <sup>b</sup>	\$890 million (2.2 percent of GDP) <sup>b</sup>	\$426 million (2.8 percent of GDP) <sup>b</sup>	\$16.2 billion (1.6 percent of GDP) <sup>c</sup>

*Notes:* Private spending figures are most recently available for 2008 (Central America) and 2009 (Mexico). Public spending figures are from 2010. GDP = gross domestic product.

*Sources:* <sup>a</sup> Carlos Acevedo, *Los costos económicos de la violencia en Centroamérica* (San Salvador, El Salvador: Consejo Nacional de Seguridad Pública, 2008); <sup>b</sup> United Nations Development Programme (UNDP), *Información sobre el gasto público de seguridad y justicia en Centroamérica 2006-2010: Resultados preliminares para la Conferencia de apoyo a la Estrategia de Seguridad en Centroamérica* (Panama City, Panama: UNDP, 2011), [www.pnud.org.gt/data/publicacion/informe\\_gastopublico.pdf](http://www.pnud.org.gt/data/publicacion/informe_gastopublico.pdf); <sup>c</sup> Instituto Ciudadano de Estudios sobre la Inseguridad (ICESI), *El costo de la inseguridad en México: Seguimiento 2009, Análisis de la ENSI-7*, Cuadernos del ICESI 10 (Mexico City: ICESI, 2011), [www.icesi.org.mx/documentos/publicaciones/cuadernos/cuaderno\\_10.pdf](http://www.icesi.org.mx/documentos/publicaciones/cuadernos/cuaderno_10.pdf).

In Mexico, El Salvador, Guatemala, and Honduras, firms consistently perceive crime as one of their major obstacles to growth, higher than the global average (see Figure 2). More than one in five firms in El Salvador and Guatemala said it was their top constraint. In Mexico the percentage of firms reporting crime as their top obstacle to growth rose by 5 percentage points over the 2006-10 period.<sup>35</sup>

Indeed, rule of law has been shown to be one of the most important determinants of firm performance across Latin America. Firms that have experienced losses due to crime have been shown to have lower investment rates and lower productivity: for each 1 percent increase in corporate loss due to crime, 5 to 10 percent less investment is expected. Firms that spend large amounts on preventative security are also less productive overall.<sup>36</sup> Furthermore, these expenditures, by increasing operating costs and the price of new firms' entry into the market, discourage entrepreneurs from starting businesses, as well as existing businesses from expanding or locating in crime and violence-stricken areas. Moreover, not only do firms suffer from the poor business and investment climate engendered by a weak rule of law, but wages also decrease with deterioration of governance: corruption and crime both have significant negative effects on wages paid by employers, as money spent on bribes and private security isn't available to pay employees.<sup>37</sup>

34 Guerrero-Gutierrez, "Security, Drugs and Violence in Mexico."

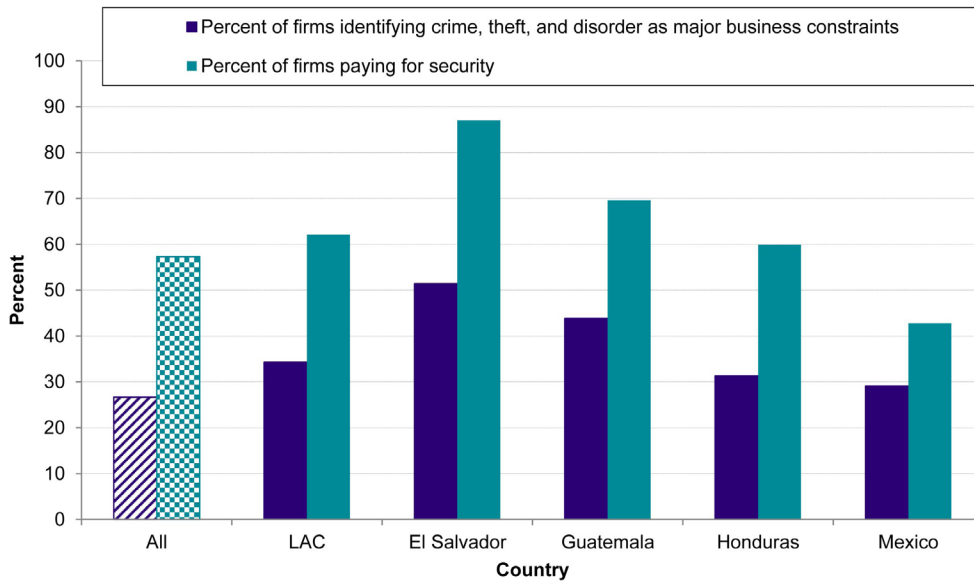
35 World Bank, "Enterprise Surveys, 2006 and 2011," [www.enterprisesurveys.org](http://www.enterprisesurveys.org).

36 Verónica Alaimo, Pablo Fajnzylber, J. Luis Guasch, J. Humberto López, and Ana María Oviedo, "The Investment Climate in Latin America," in *Does the Investment Climate Matter? Microeconomic Foundations of Growth in Latin America*, Latin American Development Forum Series, eds. Pablo Fajnzylber, J. Luis Guasch, and J. Humberto López (Washington, DC: World Bank and Palgrave MacMillan, 2009).

37 Ibid.



**Figure 2. Insecurity and Firms in Mexico, the Northern Triangle, and Latin America, 2010**



Note: LAC = Latin America and the Caribbean.

Source: World Bank, "Enterprise Survey, 2010," [www.enterprisesurveys.org](http://www.enterprisesurveys.org).

The direct costs to governments include medical spending; spending on security, law enforcement, and criminal justice; and repair or replacement of infrastructure. Indirect costs include the lost investment in human capital (via public health programs, public education, and training programs) and diminished productivity due to death or disability of citizens, as well as foregone tax revenues that might have been collected from formal, licit businesses.

On the macroeconomic level, it is estimated that the costs of violence to the Mexican economy were approximately 12.3 percent of gross domestic product (GDP) in 2000 — or \$71.5 billion in current US dollars.<sup>38</sup> A more recent study estimates the total cost of insecurity to be 8.9 percent of GDP in 2009, or \$78 billion, 80 percent of which was paid for by individuals and firms.<sup>39</sup> While increases in certain types of insecurity-related expenditures would be expected to be proportional to the increase in violence — medical spending and material costs, for example — other expenditures have grown exponentially: from 2000 to 2010, as the murder rate rose 30 percent and total GDP grew about 19 percent, public spending on security in Mexico more than sextupled over the same period.<sup>40</sup>

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*It is estimated that the costs of violence  
to the Mexican economy were approximately 12.3 percent  
of gross domestic product (GDP) in 2000.*

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38 Juan Luis Londoño and Rodrigo Guerrero, "Violencia en América Latina: Epidemiología y Costos," in *Asalto al desarrollo*, eds. Juan Luis Londoño, Alejandro Gaviria, and Rodrigo Guerrero (Washington, DC: Inter-American Development Bank, 2000), [www.bvsde.paho.org/bvsacd/cd47/londono.pdf](http://www.bvsde.paho.org/bvsacd/cd47/londono.pdf); Viridiana Ríos, "Evaluating the Economic Impact of Drug Traffic in Mexico" (unpublished working paper, Department of Government, Harvard University, 2008), [www.gov.harvard.edu/files/Rios2008\\_MexicanDrugMarket.pdf](http://www.gov.harvard.edu/files/Rios2008_MexicanDrugMarket.pdf).

39 Instituto Ciudadano de Estudios sobre la Inseguridad (ICESI), *El costo de la inseguridad en México: Seguimiento 2009, Análisis de la ENSI-7*, Cuadernos del ICESI 10 (Mexico City: ICESI, 2011), [www.icesi.org.mx/documentos/publicaciones/cuadernos/cuaderno\\_10.pdf](http://www.icesi.org.mx/documentos/publicaciones/cuadernos/cuaderno_10.pdf).

40 Mexico Evalúa, *El gasto en seguridad*; UNODC, *Global Study on Homicide*; World Bank, *World Development Indicators 2011* (Washington, DC: World Bank, 2011), <http://data.worldbank.org/data-catalog/world-development-indicators/wdi-2011>.



**Table 2. Direct and Indirect Costs of Insecurity**

	Direct Costs	Indirect Costs
Individuals	<ul style="list-style-type: none"> <li>• Immediate loss of productivity due to death or injury</li> <li>• Ransom payments</li> <li>• Costs to repair or replace damaged or destroyed property</li> <li>• Medical care</li> <li>• Legal services</li> <li>• Insurance</li> </ul>	<ul style="list-style-type: none"> <li>• Preventive private security</li> <li>• Bribes</li> <li>• Lost investment in human capital</li> <li>• Effects of psychological harm of victimization</li> <li>• Compounded losses of lower productivity over a lifetime</li> </ul>
Firms	<ul style="list-style-type: none"> <li>• Cost to repair or replace property</li> <li>• Ransom payments</li> <li>• Legal services</li> <li>• Insurance</li> </ul>	<ul style="list-style-type: none"> <li>• Preventive private security</li> <li>• Bribes</li> <li>• Lost investment in human capital of employees</li> <li>• Lost potential customer base (for public outings)</li> <li>• Lost potential investment (domestic and foreign) due to poor business climate</li> </ul>
Governments	<ul style="list-style-type: none"> <li>• Medical spending</li> <li>• Spending on public security, law enforcement, and criminal justice</li> <li>• Repair and replacement of infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Lost investment in human capital (via public health, education, and training programs)</li> <li>• Diminished productivity of citizens</li> <li>• Foregone tax revenues from individuals and businesses</li> </ul>

In 2006, the costs of violence to Central America were calculated at \$6.5 billion, or 7.7 percent of regional GDP; 16 percent of these costs were due to lost life and disability.<sup>41</sup> Guatemala's costs equaled the regional average, but El Salvador and Honduras both exceeded the regional average, with burdens of 10.8 percent and 9.6 percent of GDP, respectively.<sup>42</sup> Public spending on security in the Northern Triangle as a percentage of GDP has, as in Mexico, grown exponentially. However, these estimates do not include all the costs of corruption or other nonviolent factors associated with, or stemming from, a weak rule of law. More research is needed to include these, as well as to understand how violence and security-related costs have evolved since these studies were undertaken.

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*In 2006, the costs of violence to Central America were calculated at 7.7 percent of regional GDP.*

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## B. Effects

To date, little progress has been made toward understanding the effects of these costs on economic and social development in the region and their implications for growth and continuing insecurity. Though social and human capital effects have not been fully quantified, they are integral to the long-run growth effects of insecurity. What can be said about the direct impacts of these costs on the countries of the region — in particular, on social, economic, and political development? Furthermore, how can we understand the indirect impact on investment? Here, we describe some of the unquantified impacts

41 World Bank, *Crime and Violence in Central America, Volume II*, 34.

42 Acevedo, *Los costos económicos de la violencia en Centroamérica*.





of violence and crime that we would expect to have multiplier effects on the economy and society, and explore the causal relationships that have been tested by researchers.

## I. Social Impacts

A vast majority — 71 percent — of Central Americans say that crime is “very much” a threat to their society’s future well-being;<sup>43</sup> 69 percent of Mexicans agree. Chronic crime, violence, insecurity — or whatever terms we wish to assign to the various dangers to physical and mental health and property — have serious social costs, which cannot necessarily be measured in economic terms. These include the erosion of social capital — interpersonal trust and respect for authority, for example — and reduced happiness and quality of life. Across the region, people who perceived higher levels of gang activity in their neighborhoods ascribed lower levels of trustworthiness to their neighbors.<sup>44</sup> And since even drug-related violence often occurs in public places and affects bystanders, fear may lead individuals to restrict many types of activity — recreational, as well as educational or economic.

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*A vast majority — 71 percent — of Central Americans say that crime is “very much” a threat to their society’s future well-being.*

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Crime may also erode social capital via the effect that being a victim, or knowing a victim, has on individuals’ attitudes toward the criminal justice system. In El Salvador and Guatemala, for example, victimization makes an individual significantly less likely to say that authorities should always respect the law in order to apprehend criminals.<sup>45</sup> These attitudes may contribute to vigilantism and *mano dura* (hardliner) tactics that may be ineffective and actually increase crime levels. Furthermore, a tolerance for or propensity to perpetrate violence can be transmitted intergenerationally.<sup>46</sup>

## 2. Political Impacts

The political impacts of crime and violence are, again, complex. Public opinion and the domestic and international financing of security influence political decisions and processes. As insecurity becomes more acute in the region, so can the polarization between hardliners and those who prioritize preventative measures and social spending. Government spending channeled into security — often timed concurrently with electoral cycles — may divert spending from other needed programs. In Honduras, for example, where a structural budget crisis means the government can barely pay basic costs such as government salaries, pensions, and necessary services,<sup>47</sup> military spending increased from 0.8 percent of GDP (2003 to 2006 average) to 1.3 percent (2007 to 2009 average), while health spending fell from 3.8 percent to 3.6 percent over the same period.<sup>48</sup> However, since social spending can also correlate with the political cycle — and, indeed, has not decreased as a percentage of GDP in most of the region — the issue at hand is whether expenditures, regardless of their categorization as “welfare” or “warfare” spending, are

43 World Bank, *Crime and Violence in Central America, Volume II*, 34.

44 Author’s analysis of data from the Latin America Public Opinion Project (LAPOP) 2010, [www.vanderbilt.edu/lapop/](http://www.vanderbilt.edu/lapop/).

45 Gabriel Demombynes, “The Effect of Crime Victimization on Attitudes Toward Criminal Justice in Latin America” (unpublished paper, World Bank, 2009), [www.webmeets.com/files/papers/LACEA-LAMES/2009/828/Criminal%20Justice%20Attitudes%20paper%205-4-09.pdf](http://www.webmeets.com/files/papers/LACEA-LAMES/2009/828/Criminal%20Justice%20Attitudes%20paper%205-4-09.pdf).

46 Mayra Buvinic and Andrew Morrison, “Economic and Social Consequences of Violence: Violence as an Obstacle to Development” (Technical Note 4, Division of Social Development, Inter-American Development Bank, Washington, DC, 1999), <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=362887>.

47 James Bosworth, “Honduras: Organized Crime Gained Amid Political Crisis,” in *Organized Crime in Central America: The Northern Triangle*, edited by Cynthia J. Arnson and Eric L. Olson (Washington, DC: Woodrow Wilson Center for International Scholars).

48 Sam Perlo-Freeman, “Budgetary Priorities in Latin America: Military, Health and Education Spending” (Stockholm International Peace Research Institute [SIPRI] Insights on Peace and Security no. 2011/2, Stockholm, December 2011), <http://books.sipri.org/files/insight/SIPRIInsight1102.pdf>.



allocated according to defined budget priorities and spent on necessary and effective programs, or are a means to a political end.

Politicians can fall under the influence of organized crime, and cartels may bankroll political campaigns. Concrete evidence is scarce, but analysts and electoral officials are warning that the political influence of cartels is increasing in Mexico, particularly on local elections; for example, there were reports of voter intimidation in the November 2011 gubernatorial election in the state of Michoacán.<sup>49</sup> In Guatemala researchers have found evidence that local and national drug traffickers have been or are in direct control of the local political scene in a number of communities in the Petén region, including the community of Sayaxché.<sup>50</sup>

A failure to effectively combat insecurity may erode the state's credibility — particularly in a region that does not have a long, uninterrupted democratic history — and reduce citizens' incentives to participate in the democratic process. In Honduras, and El Salvador, voter turnout for presidential elections has been on the decline over the past decade. Among registered voters, turnout for the post-military coup presidential election in Honduras was just shy of 50 percent in 2009, down more than 5 percentage points from the previous election.<sup>51</sup> Turnout in Mexico declined from around 64 percent in 2000 to 59 percent in 2006, but then increased to 63 percent in 2012.<sup>52</sup> Voter turnout in El Salvador's presidential elections dropped from 67 percent in 2004 to 62 percent in 2009.<sup>53</sup> Not all countries exhibit the same trend, however: turnout among registered voters in the first round of Guatemala's 2011 presidential election was 68 percent, 8 percentage points higher than the first-round presidential elections in 2007.<sup>54</sup>

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### *A failure to effectively combat insecurity may erode the state's credibility.*

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In Mexico, since February 2011, security issues have overtaken economic issues in public debates, and surveys show that Mexicans consider public security as the main problem that the government should address. That said, a majority (56 percent) of the population thinks that the country is less safe because of government strategies implemented against drugs and crime, and more citizens believe that the “drug war” is being won by the drug traffickers (42 percent) than by the army (29 percent). Despite this perception, the most trusted institution is the army, while the least trusted institutions are those of the police forces, senators, and representatives. Of police, local forces inspired the least amount of trust (with 10 percent of respondents saying they trusted local forces “a lot”) while state (15 percent) and federal police (25 percent) fared better, though still extremely poorly.<sup>55</sup>

Most respondents to the 2008 Latin American Public Opinion Project (LAPOP) survey in El Salvador, Guatemala, and Honduras said a military coup would be justified when crime levels are high. There, too, the most respected institutions were hierarchical and supranational or national (the church and the army) and the least respected institutions were democratic or local (congress and the police).

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49 Nick Miroff and William Booth, “Mexico’s 2012 Vote is Vulnerable to Narco Threat,” *Washington Post*, January 15, 2012, [www.washingtonpost.com/world/americas/mexico-2012-vote-vulnerable-to-narco-threat/2011/12/21/gIQAAny4i1P\\_story.html](http://www.washingtonpost.com/world/americas/mexico-2012-vote-vulnerable-to-narco-threat/2011/12/21/gIQAAny4i1P_story.html).

50 Ralph Espach, Javier Meléndez Quiñonez, Daniel Haering, and Miguel Castillo Girón, *Criminal Organizations and Illicit Trafficking in Guatemala’s Border Communities*, IPR 15225 (Alexandria, VA: Center for Naval Analyses, 2011), [www.cna.org/sites/default/files/research/IPR%2015225.pdf](http://www.cna.org/sites/default/files/research/IPR%2015225.pdf).

51 Supreme Electoral Tribunal of Honduras, “Sistema de Consultas del Proceso Electoral,” [www.tse.hn](http://www.tse.hn).

52 Federal Electoral Institute of Mexico, “Sistema de Consulta de la Estadística de las Elecciones Federales, 2008-09,” [www.ife.org.mx/documentos/RESELEC/SICCEE/index.html](http://www.ife.org.mx/documentos/RESELEC/SICCEE/index.html); Federal Electoral Institute of Mexico, “Elecciones 2012: Programa de Resultados Electorales Preliminares,” <https://prep2012.ife.org.mx/prep/NACIONAL/PresidenteNacionalVPC.html>.

53 Supreme Electoral Tribunal of El Salvador, [www.tse.gob.sv](http://www.tse.gob.sv).

54 Supreme Electoral Tribunal of Guatemala, [www.tse.org.gt](http://www.tse.org.gt).

55 Guerrero-Gutiérrez, “Security, Drugs, and Violence in Mexico.”



In Honduras — where the most trusted institutions are the church and the army — the number of survey respondents who said that a military coup would be justified if crime levels were high increased between 2004 and 2008. Their percentage reached 65 percent in 2008, the year before the military coup occurred. However, crime levels have only risen since then — possibly an outcome of the cartels' ability to solidify their transportation networks in the country during the power vacuum that followed the coup.<sup>56</sup>

### 3. Human Capital Effects

Educational gains in the region have been significant over the past several decades: primary and secondary enrollment and attainment rates have jumped impressively. If building human capital indeed cements the underpinnings of economic development, then why has growth remained elusive — particularly in Central America? Certainly, factors relating to poor educational quality and lingering effects of the global economic downturn — due to close US and intraregional economic linkages — must be accounted for, but the effects of insecurity are also partly to blame. As discussed earlier, loss of human capital and decreased labor productivity imply serious immediate costs for individuals and firms. However, insecurity can also have a significant, longer-term effect on human capital formation, retention, and utilization.

We still know very little about the specific impacts of local crime and violence on education in the region, but US studies have shown that they can be considerable. Controlling for demographic variables,<sup>57</sup> neighborhood and school crime and violence can explain a significant portion of variance in school attendance, the frequency of problem behaviors and disciplinary action in school, and student grades — with neighborhood violence having the greatest impact on school performance.<sup>58</sup> Educational attainment is also affected — moderate levels of local violence were found to decrease the likelihood of high school graduation by more than 5 percentage points on average, and decrease the likelihood of college attendance by nearly 7 percentage points.<sup>59</sup> That is, accounting for demographic and socioeconomic factors, more local crime and violence meant lower school attendance, lower grades, and a higher likelihood of getting into trouble at school. This is significant, because lower educational attainment and the time and money costs of grade repetition all have multiplier and intergenerational effects on income and productivity.<sup>60</sup>

In addition to the impact on youth, insecurity may dissuade adults from upgrading their human capital through education and training. Access to lifelong learning is critical to achieving occupational advancement and mobility. But fear of becoming a victim of crime may deter individuals — especially women — from attending night school, an important educational opportunity for full-time workers or women with daytime domestic duties.<sup>61</sup> Similarly, it may cause workers to cut back on their hours or avoid working at night.

A policy simulation designed to examine the relationship between crime rates and levels of investment in education found that in Mexico, increasing spending on police or increasing the severity of punishment reduces crime, but has little effect on educational investment. At the same time, increasing educational subsidies stimulates educational investment but reduces crime only slightly. This implies, not surprisingly, that both types of investment are necessary to accomplish the twin goals of reducing crime and increasing education.<sup>62</sup>

<sup>56</sup> Bosworth, "Honduras: Organized Crime Gained Amid Political Crisis."

<sup>57</sup> Control variables were gender, race/ethnicity, school level, school lunch program participation (as a proxy for lower socioeconomic level), and urbanicity.

<sup>58</sup> Natasha K. Bowen and Gary L. Bowen, "Effects of Crime and Violence in Neighborhoods and Schools on the School Behavior and Performance of Adolescents," *Journal of Adolescent Research* 14, No. 3 (1999): 319–42.

<sup>59</sup> Jeffrey Grogger, "Local Violence and Educational Attainment," *Journal of Human Resources* 32, No. 4 (1997): 659–82.

<sup>60</sup> Buvinic and Morrison, "Economic and Social Consequences of Violence."

<sup>61</sup> Ibid.

<sup>62</sup> David R. Hansen, "The Effects of Crime on Educational Investment: A Policy Simulation Approach," in "Three Essays in Development Economics" (PhD dissertation, Department of Economics, Stanford University, 2010), [www.stanford.edu/~dhansen1/David%20R.%20Hansen%20Job%20Market%20Paper.pdf](http://www.stanford.edu/~dhansen1/David%20R.%20Hansen%20Job%20Market%20Paper.pdf).



Crime and violence don't just destroy or diminish human capital, but may also channel it into illicit activities. For some people, and in some areas, crime may pay: as rational economic actors, individuals may decide that the greatest return to their human capital lies in criminal activity.<sup>63</sup> Alternatively, they may not see themselves as having other options, or they may be coerced or intimidated into participating in or overlooking crime. Indeed, bribes can comprise an important secondary source of income for officials and others. Furthermore, the power of intimidation is tremendous, and officials cannot necessarily depend on government protection if they resist corruption — many who have done so have been executed summarily by the cartels.

Mexico's illicit drug industry is the fourth-largest employer in the country, employing approximately 468,000 people, according to one estimate.<sup>64</sup> It is apparent that the failure of the Mexican state to enforce territorial boundaries between cartels has created a continual battle between these groups and required an influx of human capital, drawing a new group of employees into the industry. Drug-industry employment in the Northern Triangle overlaps with the aforementioned 60,000 gang members, but also includes the *transportistas* who shepherd the products through the isthmus. Extremely high levels of turnover due to homicide mean that occupational advancement within trafficking organizations can be rapid and economic payoffs high — for those who survive.<sup>65</sup>

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*In addition to the impact on youth, insecurity may dissuade adults from upgrading their human capital through education and training.*

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Finally, insecurity may displace human capital — creating refugees and migrants, both internal and international. Although evidence on linkages between insecurity and international migration in the region remains mostly anecdotal, in Mexico, one study estimates that a total of 264,693 Mexicans migrated internally or internationally in direct response to drug-related homicides during the 2006-10 period.<sup>66</sup> Internal migration of children and young people may also be linked to violence: the state of Chihuahua, for example, which was until 2000 a state of net immigration, saw a net outflow of 10,000 minors in the five years prior to 2010.<sup>67</sup>

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63 See, for example, Gary Becker, "Crime and Punishment: An Economic Approach," *The Journal of Political Economy* 76, No. 2 (1968): 169–217.

64 Ríos, "Evaluating the Economic Impact of Drug Traffic in Mexico."

65 Viridiana Ríos, "To Be or Not To Be a Drug Trafficker: Modeling Criminal Occupational Choices" (working paper, Department of Government, Harvard University, Cambridge, MA, April 2010), [www.gov.harvard.edu/files/Rios\\_MPSA2010\\_TobeOrNotToBe.pdf](http://www.gov.harvard.edu/files/Rios_MPSA2010_TobeOrNotToBe.pdf).

66 Viridiana Ríos, "Security Issues and Immigration Flows: Drug-Violence Refugees, the New Mexican Immigrants" (working paper 2012-0002, Weatherhead Center for International Affairs, Harvard University, Cambridge, MA, February 2012), [www.gov.harvard.edu/files/Rios2011\\_DrugViolenceRefugees.pdf](http://www.gov.harvard.edu/files/Rios2011_DrugViolenceRefugees.pdf).

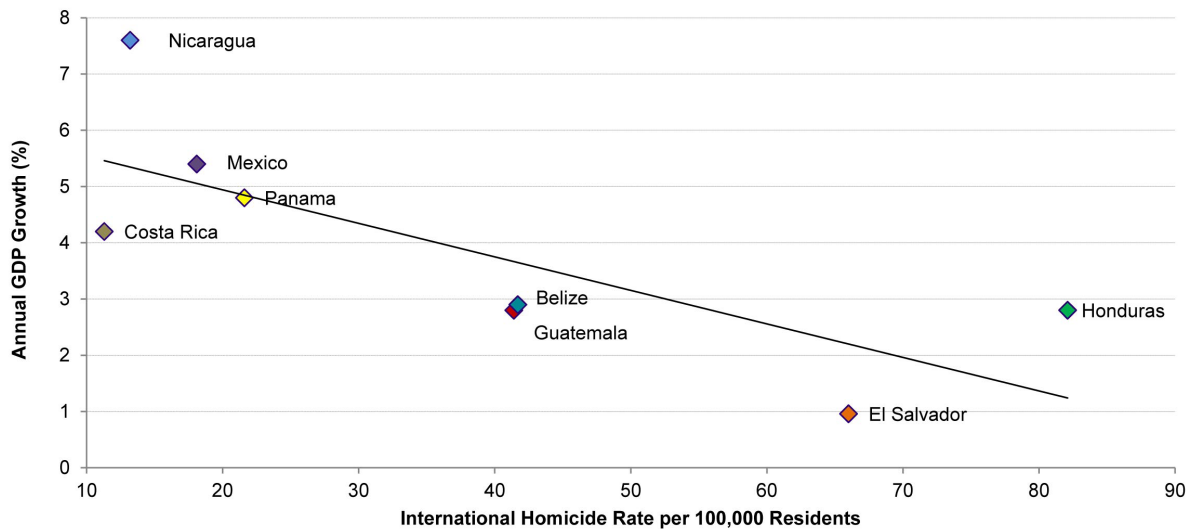
67 Instituto Nacional de Estadística y Geografía (INEGI), *Niños y adolescentes migrantes en México 1990-2010* (Aguascalientes, Mexico: INEGI, 2012), [www.inegi.org.mx/prod\\_serv/contenidos/espanol/bvinegi/productos/censos/poblacion/migracion/migracion\\_interna/Ninos\\_adolescentes\\_migrantes.pdf](http://www.inegi.org.mx/prod_serv/contenidos/espanol/bvinegi/productos/censos/poblacion/migracion/migracion_interna/Ninos_adolescentes_migrantes.pdf).



#### 4. Economic and Growth Effects

The cumulative impact of all the above effects on growth is substantial. In 2010 the regional GDP of Central America grew at just 2 percent, compared to the 6 percent seen on average in all of Latin America. Studies estimate that reducing homicide rates by 10 percent would boost annual economic growth by 1 percent in El Salvador and by 0.7 percent in Guatemala and Honduras.<sup>68</sup> For Mexico it has been estimated that if the growth in the homicide rate decreases by 10 percent, per capita GDP would increase 1.1 percent.<sup>69</sup> The cumulative effects of lost growth mean that over time, the difference between potential and actual GDP is considerable.

**Figure 3. Homicide and Growth in Mexico and Central America, 2010**



Sources: World Bank, *World Development Indicators* (Washington, DC: World Bank); UNODC, *Global Study on Homicide: Trends, Context, Data* (Vienna: UNODC, 2011), [www.unodc.org/documents/data-and-analysis/statistics/Homicide/Globa\\_study\\_on\\_homicide\\_2011\\_web.pdf](http://www.unodc.org/documents/data-and-analysis/statistics/Homicide/Globa_study_on_homicide_2011_web.pdf).

These growth calculations cited are based on the assumptions addressed above — that insecurity decreases labor market participation, reduces productivity, lowers earnings, and increases absenteeism. It also decreases tourism, foreign and domestic investment, and domestic savings, and spurs capital flight. To be sure, economic growth is intricately bound up with a multitude of factors; for this region, particularly, close linkages to the still-struggling US economy have had a major impact on growth. However, it is clear that the more-violent countries of Guatemala, El Salvador, and Honduras have rebounded much more slowly than the neighboring, less-violent countries of Costa Rica, Panama, and Nicaragua (see Figure 3).

In Colombia which underwent a similar transition as these countries in the 1980s and 1990s — that is, where an increase in drug trafficking led to increased violence — economists have shown that lack of security since 1980 has been, and remains, a major obstacle to growth, leading to a decrease in total factor productivity and a drop in economic growth of 2 percent annually.<sup>70</sup>

<sup>68</sup> World Bank, *Crime and Violence in Central America, Volume II*, 33.

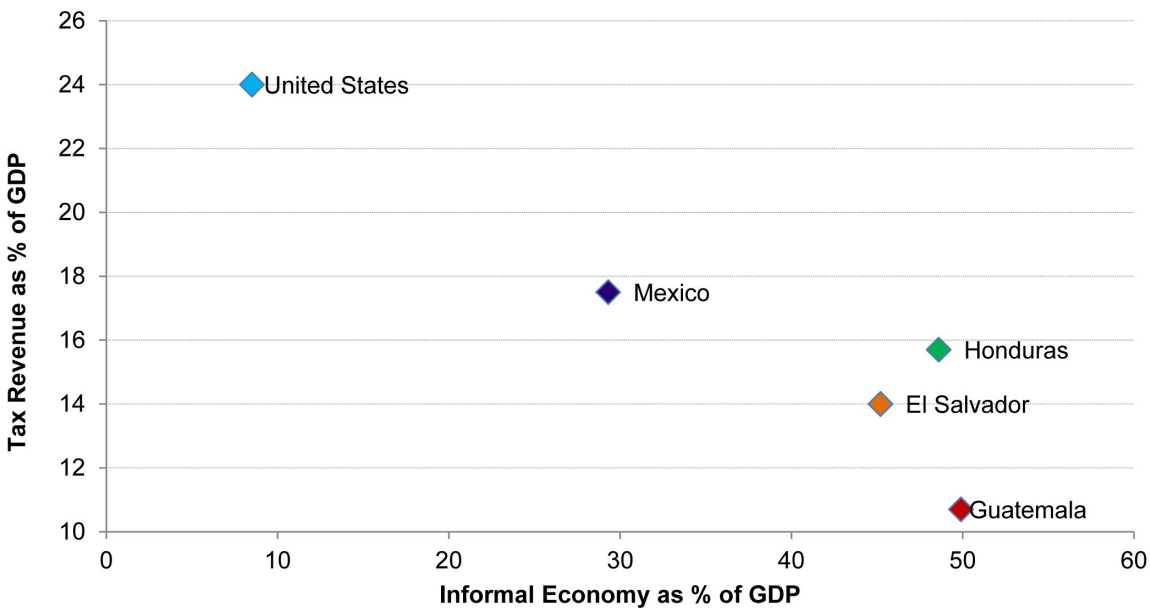
<sup>69</sup> BBVA Research, “Mexico Economic Outlook: Fourth Quarter 2010 Economic Analysis,” 2010, [www.bbvarresearch.com/KETD/fbin/mult/1004\\_MexicoOutlook\\_28\\_tcm348-235029.pdf?ts=222012](http://www.bbvarresearch.com/KETD/fbin/mult/1004_MexicoOutlook_28_tcm348-235029.pdf?ts=222012).

<sup>70</sup> Mauricio Cárdenas and Sandra Roza, “Does Crime Lower Growth? Evidence from Colombia” (working paper No. 30, Commission on Growth and Development, World Bank, Washington, DC, 2008), [www.growthcommission.org/storage/cgdev/documents/gcwp030web.pdf](http://www.growthcommission.org/storage/cgdev/documents/gcwp030web.pdf).



Violence may have long-term negative economic effects by hampering investment in specific sectors. In 2007, prior to the economic crisis and the current increase in violence, international tourism receipts made up 8 percent of exports in Honduras, 12 percent in Guatemala, and 15 percent in El Salvador.<sup>71</sup> Though studies show little effect of nonpolitical violence on tourism at the national level, tourism is place specific: establishments and jobs are created at the local level. Levels of insecurity may be the gravest in nontraditional tourist locations, but high levels of violence may be keeping potential tourist destinations from capitalizing on their natural advantages. And areas that now cater to middle-class domestic tourists — like Mexico’s Acapulco, which in 2011 had a homicide rate of 128 per 100,000 residents<sup>72</sup> — are indeed seeing the negative effects of drug-related violence on hotel occupancy rates.<sup>73</sup>

**Figure 4. Informality and Tax Revenue as Share of GDP in Mexico, the Northern Triangle, and United States, 2010**



Sources: Friedrich Schneider, Andreas Buehn, and Claudio E. Montenegro, “Shadow Economies All Over the World: New Estimates for 162 Countries from 1999 to 2007” (policy research working paper 5356, World Bank, Washington, DC, 2010), [www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/10/14/000158349\\_20101014160704/Rendered/PDF/WPS5356.pdf](http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/10/14/000158349_20101014160704/Rendered/PDF/WPS5356.pdf); Index of Economic Freedom, “Heritage Foundation,” [www.heritage.org/index/](http://www.heritage.org/index/).

The drug-, arms-, and human-trafficking industries, which operate primarily outside formal market structures, have further normalized informality in Mexico and Central America, where the shadow economy ranges from 29 to 50 percent of official GDP.<sup>74</sup> This is a further drain on overall productivity in the countries of the region, as informal firms have been shown to have lower productivity levels.<sup>75</sup> High levels of economic informality mean lower levels of tax collection in a region in which tax evasion is already pervasive: in Guatemala, for example, tax revenue is just 10.7 percent of GDP, low even by Central

71 World Bank, *World Development Indicators*.

72 Consejo Ciudadano para la Seguridad Pública y Justicia Penal, *Ranking de las 50 ciudades y las 50 jurisdicciones subnacionales más violentas del mundo*.

73 Dave Graham, “Reporte Especial: La Violencia del Narcotráfico azota a Acapulco,” Reuters, November 22, 2011, <http://mx.reuters.com/article/topNews/idMXN1E7AL18N20111122>.

74 Friedrich Schneider, Andreas Buehn, and Claudio E. Montenegro, “Shadow Economies All Over the World: New Estimates for 162 Countries from 1999 to 2007” (policy research working paper 5356, World Bank, Washington, DC, 2010), [www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/10/14/000158349\\_20101014160704/Rendered/PDF/WPS5356.pdf](http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/10/14/000158349_20101014160704/Rendered/PDF/WPS5356.pdf).

75 Inter-American Development Bank (IDB), *The Age of Productivity: Transforming Economies from the Bottom Up* (Washington, DC: IDB, 2010).





American standards (see Figure 4).<sup>76</sup> This in turn constrains the resources of governments to carry out critical functions, as well as their ability to professionalize the public service workforce, and to improve efficacy and efficiency.

Of course, trafficking may lead to localized economic growth as well. Researchers have found that some border communities in Guatemala that have recently seen a rise in drug trafficking are experiencing increasing investment, employment, income, population growth, and school matriculation, which may be linked to money laundering of contraband profits.<sup>77</sup> However, few studies quantify the potential positive economic impacts of trafficking.

## IV. Conclusions

Given the evidence on the costs of insecurity to the countries of the region and their impacts on social and economic development and growth, we can outline a number of key findings, as well as several areas where further research is needed to better understand these evolving relationships.

***Crime and homicide rates are correlated with income inequality, unemployment, and lack of progress in social development.*** Lower levels of income inequality and unemployment are correlated with lower levels of crime, both violent and property crimes. High homicide rates are related to a lack of improvement in key social development indicators.

***Homicide and violent crime rates in the region have increased rapidly in recent years and are among the highest in the world.*** The recent spikes in violent crime in the region are related to drug trafficking, but a general culture of impunity and lack of rule of law, and easy access to guns, means that an increasing majority of homicides (not just drug-related murders) are committed with firearms, and more often than not go uninvestigated and unpunished.

***Official security and justice institutions lack the organization and resources to effectively combat the trafficking cartels.*** Additionally, high levels of informal activity — which includes trafficking — and tax evasion mean lower tax revenues in countries that sorely need them to carry out necessary government functions.

***The military and the church are the most trusted institutions, regionwide, while Congress and the police forces are the least trusted.*** In the Northern Triangle, in particular, individuals increasingly say a military coup is justified when levels of crime are high.

***There is a wide range of direct and indirect costs associated with insecurity, which are estimated at between 7.7 and 12.3 percent of GDP.*** As a result of insecurity, individuals, firms, and governments pay material, medical, insurance, and preventive costs. Money spent on these is not available for wages, investment in physical or human capital, or savings, representing major opportunity costs.

***Firms across the region say crime is one of their top obstacles to growth.*** Firms that have experienced losses due to crime have lower investment rates and lower productivity.

***Reducing the homicide rate would increase GDP growth.*** It is estimated that reducing homicide rates by 10 percent would increase annual economic growth by 1 percent in El Salvador and 0.7 percent in Guatemala and Honduras. In Mexico a 10 percent decrease in the growth of the homicide rate would mean a 1.1 percent per capita GDP increase.

<sup>76</sup> Index of Economic Freedom, “Heritage Foundation,” [www.heritage.org/index/](http://www.heritage.org/index/).

<sup>77</sup> Espach et al., *Criminal Organizations and Illicit Trafficking in Guatemala’s Border Communities*.



***More research is needed to better understand the relationships and transmission channels among crime, violence, insecurity, and development.*** As policymakers continue to debate how to best combat trafficking and pervasive crime and violence, it is critical to understand how these dynamics are shaping the educational, occupational, and economic decisions of the region’s citizens; the decisions of businesses and investors; and the fiscal and institutional health of governments.

How have the estimated impacts on GDP growth changed since the recent eruption of violence? A cost-benefit or cost-effectiveness analysis of current anti-trafficking and anti-violence measures demand a rigorous updated look at how costs have evolved. Also, how do other types of costs stemming from a weak rule of law (those related to general corruption rather than to violence or its prevention, such as firms’ bribes to regulatory officials) impact these countries’ economic and social advancement?

Additionally, although firm-level evidence of the impact of crime on investment exists, more information is needed to understand the effects of crime and corruption on investment at the sector and country level.

Finally, and perhaps most importantly, a much fuller analysis of the effects of these costs on social and human development in the region is required. How many individuals receive income from criminal activity, directly or indirectly? How — and how much — does fear of being victimized lead individuals to curtail or change their activities, and invest in their own and their children’s human capital? And what effect does it have on migration, internal as well as international?

Finding answers to these questions will help policymakers and stakeholders better understand both the factors that have led crime and violence to spiral out of control, as well as the spectrum of effects on individuals, firms, and governments. Such an understanding is key to effectively combating all the drivers of insecurity — not just drug trafficking and organized crime — allowing institutional and nongovernmental actors alike to quantify and recognize how crime and violence impact their functioning, to conceptualize their own roles in developing smart policies to address the problems, and to direct resources toward the most effective solutions.

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*A much fuller analysis of the effects of these costs on social and human development in the region is required.*

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