

# THE DRUG PROBLEM IN THE AMERICAS: STUDIES

THE ECONOMICS  
OF DRUG  
TRAFFICKING



Organization of  
American States



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Secretary General  
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OAS Cataloging-in-Publication Data  
Insulza, José Miguel.

The drug problem in the Americas : Chapter 4 : The economics of drug trafficking.  
p.43 ; cm. (OAS official records)  
ISBN 978-0-8270-6012-8

1. Drug abuse--America. 2. Drug control--America. 3. Drug traffic--America. 4. Drug addiction--America.  
I. Organization of American States. Secretary General. II. Title. III. Title: The economics of drug trafficking.

OEA/Ser.D/XXV.4 Add.4

# THE DRUG PROBLEM IN THE AMERICAS: **STUDIES**

## **THE ECONOMICS OF DRUG TRAFFICKING**

Organization of American States



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# THE ECONOMICS OF DRUG TRAFFICKING

## Summary and Findings

- While estimating the size of global and hemispheric drug markets presents tremendous challenges, evidence suggests that some two thirds of total revenues are earned at the final, retail level in consuming countries.
- Wholesalers and traffickers through transit countries account for another 20-25 percent of revenues, while just under 1 percent of total retail sales finds its way to drug cultivators in the Andes.
- In terms of the size of overall drug markets, the most recent UN estimates place total retail sales of illicit drugs at some \$320 billion or 0.9 percent of GDP. Other estimates are lower.
- The UN estimates annual drug revenues in the Americas at \$150 billion or just under half the global total, though other estimates are lower. North America currently occupies a dominant share of the hemispheric total, reflecting higher prices as well as higher drug prevalence, though this could change in future years.
- Cocaine estimates enjoy better consensus, with U.S. sales accounting for some \$34 billion out of a global retail cocaine market of about \$85 billion. Cocaine estimates for the rest of the hemisphere are a small fraction of this figure, but this could change when revised Brazilian data become available.
- Estimates of marijuana and methamphetamine revenues suffer particularly high rates of uncertainty.

## The supply chain:

- The drug trade tends not to be vertically integrated; however, Mexican drug trafficking organizations do control much of international smuggling and U.S. wholesale drug markets, and are increasingly purchasing cocaine in South America.
- Markups in the illicit drug trade are orders of magnitude higher than markups for legal goods. For many substances, especially those that are plant-based, it is entirely possible that markups would fall substantially if the substances were produced, transported, and distributed like other commercial goods.

- Large seizures of substances are typically made at points in the supply chain where the value of drugs is lower—at or near the source. All else equal, it would be preferable to seize the same amount of drugs at the end of the supply chain, when the value of drugs is the highest.

## Trends in transferring illicit profits:

- Money laundering drags “legal” economic agents into illegal activities. It generates “grey” areas in which apparently legal players take part in clearly illegal actions.
- Traditionally, cash was first smuggled from the United States into Mexico and then a portion was shipped onward to Colombia via a variety of methods, including bulk cash transfer. Recently, financial resources have more typically been transferred directly from the United States to source countries.
- With many countries imposing greater controls in their formal financial systems for the control of cash transactions, cash smuggling has become one of the main mechanisms of income distribution through the drug production chain. This can be seen in the increase in cash seizures at ports and airports, in terms of both the number and total amount of seizures.
- Drug-related proceeds available for money laundering through the financial system total an estimated 0.4 to 0.6 percent of global GDP. Around half of these proceeds are estimated to be laundered within the jurisdiction where the profits are generated, by entering the banking or real estate sector or through other types of investment.
- The mining industry is a major source of economic growth in the Andean region—and a major source of laundered money. In some cases, criminal organizations turn gold into jewelry, which can be transported with greater ease than bulk cash.



# PART 1

## ILLICIT DRUG DEMAND

### The Size of Illicit Drug Markets

In the last comprehensive estimates undertaken, the United Nations Office on Drugs and Crime estimated that the total retail value of the global illicit drug trade was US\$320 billion for the year 2003, equivalent to 0.9 percent of global GDP.<sup>1</sup> Retail drug markets in the Americas were estimated to be worth \$151 billion, or around 47 percent of the global total. The largest retail markets in dollar value were North America (approximately 44 percent of the global total) and Europe (33 percent), whereas South America, Central America, and the Caribbean were approximately 3 percent of the global total. While more recent data are not available for all drug markets, partial data suggest that North America's share has decreased somewhat since 2005.<sup>2</sup> Additional adjustments may be needed when revised cocaine demand data from Brazil are made available. As discussed below, all drug revenue estimates—and particularly those for total global illicit drug revenues—should be interpreted as broad approximations and not as precise knowledge.

In order to better understand these estimates, this section examines the retail market value of each of the main drugs, globally and in different regions of the Americas. Different methodologies that are commonly used to estimate the value of drug markets are also discussed.

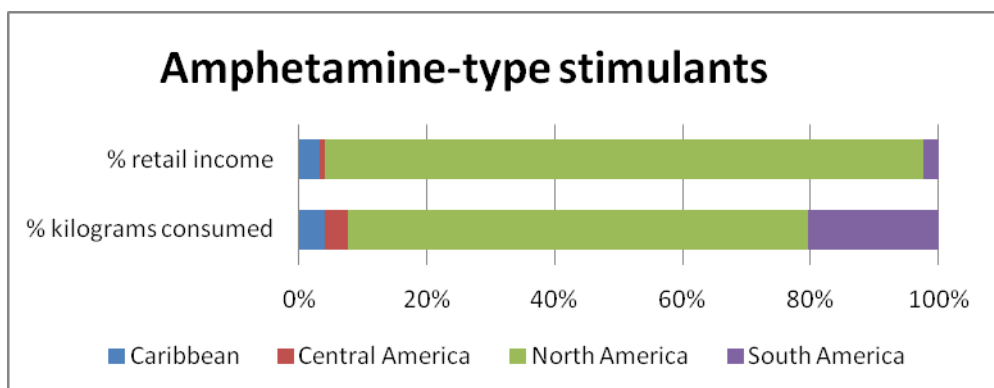
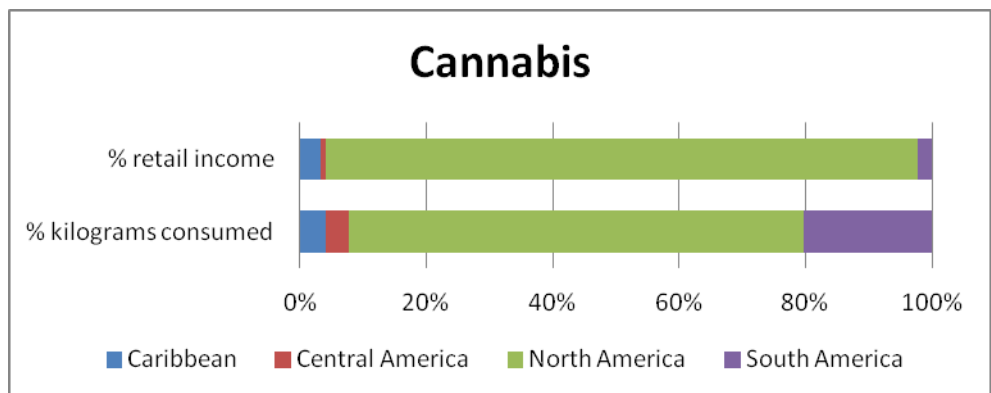
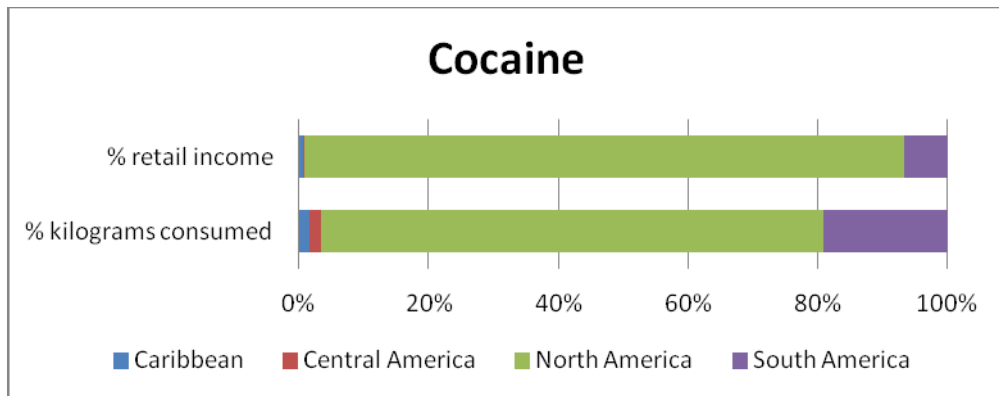
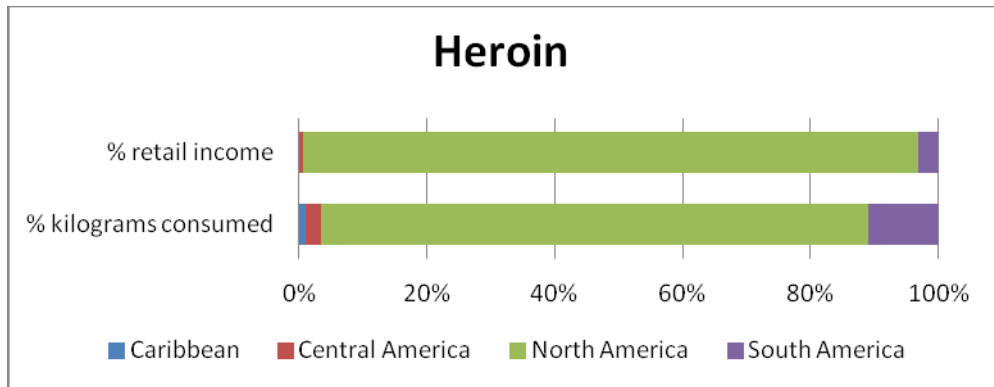
Before considering these details, it is important to emphasize that the dollar retail value of drug sales is only one of several measures of the drug market. Because retail prices for illicit drugs are higher in North America than in the rest of the hemisphere, the value of retail sales overstates North America's share of consumption. This is illustrated in Figure 1, which plots the share of retail earnings and kilograms consumed in the Caribbean, Central America, North America, and South America. Each of the major drugs is considered separately, and data are from 2003, the most recent year for which information is available by region and by drug. In all cases, North America's share is smaller for kilogram weight than for market value, whereas the shares for the other regions are larger. Ecstasy is the only drug for which this pattern is not pronounced.

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<sup>1</sup> UNODC, *World Drug Report 2005*.

<sup>2</sup> UNODC, *World Drug Report 2012*.

Figure 1



Source: 2005 World Drug Report.

## Measuring the Size of Illicit Drug Markets

There are two commonly used methods for estimating the size of illicit drug markets, a *supply-side* approach and a *demand-side* approach. Both make maximal use of limited information— either about drug production or use—and both require a variety of assumptions to fill in missing information.

*Supply-side approaches* for calculating the size of cocaine and heroin markets utilize satellite data that estimate coca and poppy production. Construction of these estimates requires assumptions about how to extract information on production from satellite imagery, as well as assumptions about the temporal frequency of coca and poppy harvests, the average drug content in coca and opium, and the efficacy of eradication efforts. Assumptions are also required about the quality of chemicals, the skills of chemists employed to convert coca and poppy into cocaine and heroin, the amount of drugs seized, and (for regional estimates) how these drugs are distributed across different markets. Constructing supply-side estimates is even more difficult for cannabis and synthetic drugs. Past supply-side estimates for these drugs may have been systematically biased and should be treated with caution.

*Demand-side estimates* are derived from information about drug use taken from household and student surveys. Hospital admissions data, surveys of the prison population, and other data sources may also be used. In order to construct estimates of population drug use from these surveys, researchers must make assumptions about under-reporting, which is likely to be substantial.<sup>3</sup> They must also account for the fact that heavy users are generally under-represented in household surveys and often in other data sources as well. Missing a small fraction of heavy users can result in large inaccuracies in demand-side estimates. For example, according to one recent estimate, two thirds of U.S. past-year marijuana consumption can be attributed to just 4 percent of users, with these users consuming over 100 times more than the median past-year user.<sup>4</sup> If heavy users instead were half or double that amount, then overall U.S. marijuana consumption estimates could change significantly.

Moreover, surveys often ask only about use days, not the quantity of drugs consumed per usage, so the latter must also be estimated. Potency and purity also must be estimated. Estimates of global demand are further complicated, as information from different countries often references different demographic populations and years, and many countries are missing data altogether.

To partially accommodate these challenges, researchers have assessed the sensitivity of their estimates to different assumptions. This yields a range of

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<sup>3</sup> Ellen Harrison, John Haaga, and Toni Richards, "Self-Reported Drug Use Data: What Do They Reveal?" *The American Journal of Drug and Alcohol Abuse* (1993), 19 (4), 423-441; Stephen Magura and Sung-Yeon Kang, "Validity of Self-Reported Drug Use in High Risk Populations: A Meta-Analytical Review," *Substance Abuse and Misuse* (1996), 31 (9), 1131-1153.

<sup>4</sup> Beau Kilmer, Jonathan Caulkins, Brittany Bond, and Peter Reuter, "Reducing Drug Trafficking Revenues and Violence in Mexico: Would Legalizing Marijuana in California Help?" (RAND Corporation: 2010).

reasonable estimates that is wide but nevertheless useful for understanding the general magnitude of the drug trade.

## *Cocaine*

The cocaine trade has been investigated in the greatest detail, and there is relative consensus on its approximate retail value. UNODC estimates that the total retail value of the global cocaine trade equaled approximately \$85 billion in 2009 (range: \$75-100 billion).<sup>5</sup> Both the demand-side methodology for this estimate—based on household surveys—and the supply-side methodology—which utilizes information on cocaine production and seizures—produce broadly similar estimates. UNODC estimates that the largest retail markets are North America (\$40 billion, or 47 percent of the global market), followed by the markets of West and Central Europe (\$34 billion, or 39 percent of the global market). Latin America accounts for approximately 4 percent of the total. The most recent data do not break down the Latin American cocaine market into smaller regional markets, but the 2003 data plotted in Figure 1 suggest that South America contributes the largest share of the Latin American market. The U.S. market is estimated to be worth approximately \$38 billion, which is similar to another widely cited estimate of \$30 billion (range: \$25-35 billion).<sup>6</sup> There have been significant differences between cocaine production estimates calculated by the UN and the U.S. government, likely due to differences in satellite imagery, assumptions about yield, and assumptions about the efficacy of crop eradication. While these differences can be quite large for a given year, the difference in the estimated average cocaine production over a longer period is less marked. Caution must be taken in interpreting year-to-year differences in estimates of the value of the cocaine trade, since these will typically fall within the margin of error.

## *Heroin*

UNODC has also recently produced estimates of the value of the retail heroin market. It estimates that the value of the global retail heroin market in 2009 was approximately \$55 billion.<sup>7</sup> The United States and Canada account for only 13 percent (\$8 billion) of this market, with around half of the world's heroin consumed in the European Union and Russian Federation. A specific number is not estimated for Latin America, which is included in the "other" category, and the report cites missing data for over half the countries in this region. Unless the Latin American heroin market has changed dramatically since 2003 (see Figure 1), which is quite unlikely, its retail value remains small.

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<sup>5</sup> UNODC, *World Drug Report 2012*.

<sup>6</sup> *What America's Users Spend on Illegal Drugs* (Washington, D.C.: Office of National Drug Control Policy, 2012); Kilmer et al., "Reducing Drug Trafficking Revenues and Violence in Mexico: Would Legalizing Marijuana in California Help?"

<sup>7</sup> UNODC, *World Drug Report 2012*.

## Cannabis

The most recent UNODC estimates for the retail market value of cannabis are contained in the 2005 World Drug Report. This report cautions that the error between the estimated value of the cannabis market and the actual value could be much larger than the error for the cocaine and heroin markets, due to data inconsistencies that made it impossible to reconcile supply- and demand-side estimates. UNODC chose an estimate between those produced by the supply- and demand-side approaches, estimating the global cannabis retail market at \$141 billion, with the U.S. market worth slightly less than half of this total (\$64 billion). The South American market was estimated to be small in value terms, at \$4.2 billion. However, other studies have since argued that the true value of the global cannabis market is likely about half of the UNODC estimate, noting that UN cannabis production estimates imply implausibly high levels of cannabis use in the United States.<sup>8</sup> In general, supply-side estimates are likely to be less useful for a product like marijuana—which can be produced almost anywhere, including indoors—than for coca and poppy, which are produced outdoors in limited areas with specific geographic conditions.

Using a demand-side approach, a report for the U.S. Office of National Drug Control Policy calculated that the U.S. marijuana retail market was worth approximately \$11 billion in 2000 (nearly \$14 billion in current dollars).<sup>9</sup> Other studies using a demand-side approach have estimated the U.S. cannabis retail market in 2005 at approximately \$20 billion; by 2012, other estimates pegged this market at between \$15 and \$30 billion.<sup>10</sup> The upper end of this range is close to the estimated retail value of the U.S. cocaine market. While considerable uncertainties lead to a large margin of error, it is clear that the U.S. retail market value of cannabis relative to cocaine has grown substantially over time, as cocaine usage and prices have declined, whereas marijuana usage appears to have increased since 2005.

## Amphetamine-type stimulants

Estimates of the retail value of amphetamine-type stimulants are at least as uncertain as those for marijuana. UNODC estimated the global retail market for amphetamines at \$28 billion in 2003, with \$17 billion (60 percent) of this market concentrated in North America and less than 1 percent in South America.<sup>11</sup> The total retail value of ecstasy was estimated to be \$16 billion, with North America contributing \$8.5 billion (52 percent) and South America contributing \$1.2 billion (7 percent). More recently, the 2010 World Drug Report cites a very wide range of global production estimates for amphetamines (149 to 577 metric tons). Supply-side estimates for

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<sup>8</sup> Kilmer et al (2010); Peter Reuter and Franz Trautmann (eds.), *A Report on Global Illicit Drug Markets 1998-2007* (European Communities: 2009).

<sup>9</sup> *What America's Users Spend on Illegal Drugs* (Washington, D.C.: ONDCP, December 2001).

<sup>10</sup> Beau Kilmer and Rosalie Liccardo Pacula, "Estimating the size of the global drug market: A demand-side approach" (RAND Corporation: 2009); Jonathan Caulkins, Angela Hawken, Beau Kilmer, and Mark A.R. Kleiman, *Marijuana Legalization: What Everyone Needs to Know* (Oxford University Press: 2012).

<sup>11</sup> UNODC, *World Drug Report 2005*.

amphetamines are calculated by tracking amounts of precursor chemicals, but this can be problematic since the precursor chemicals also have legitimate industrial uses.

A more recent study using a demand-side approach estimates that the annual retail value of the U.S. methamphetamine market is between \$3 and \$8 billion, with a best guess of \$5 billion.<sup>12</sup> The margin of error is large because the footprint of methamphetamine use does not match the footprint of the data collection system. Methamphetamine use in the United States is concentrated in certain regions, and it is not primarily an urban drug, whereas data collection systems are centered in urban areas. Moreover, because there have been dramatic shifts in methamphetamine consumption and production during the past decade, estimates are highly dependent on the year analyzed. While there are considerable uncertainties, the amphetamine market is clearly smaller than the cocaine and cannabis markets in North America, smaller than the cocaine market in South America, and potentially smaller than markets for other drugs elsewhere in the hemisphere as well. However, data are not available to provide a detailed analysis for all regions.

In summary, while the margin of error is large, there is general consensus on the approximate total retail value of cocaine and heroin markets in the Americas. In contrast, there has been considerable controversy over the size of the cannabis and amphetamine markets. The margins of error for these markets tend to be larger relative to best estimates of their retail value than the margins of error for cocaine. As a result, some analysts have argued that the true retail value of the global illicit drug market may be only half of the \$320 billion estimate in the 2005 World Drug Report, in large part because this estimate likely overstates the value of the global cannabis market.<sup>13</sup> It is not possible to fully resolve these debates since even widely varying estimates tend to be within each other's margins of error. However, even if the \$320 billion estimate is significantly overstated, the value of the illicit drug trade is still extremely large, relative to many legitimate industries as well as relative to total crime proceeds.<sup>14</sup>

## Elasticity of Demand

Before turning to a more detailed discussion of the organization of the illicit drug trade, it is important to briefly consider how illicit drug demand responds to changes in price. When the price of an illicit drug changes, the quantity consumed by existing users may change and the total number of users may also respond. The percentage change in total consumption resulting from a 1 percent change in price is referred to as the demand elasticity. For cocaine and cannabis, the elasticity of demand has been estimated at around -0.5, indicating that demand falls by 0.5 percent when price increases by 1

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<sup>12</sup> Kilmer et al (2010).

<sup>13</sup> Reuter and Trautmann (2009); Francisco E.Thoumi, "The Numbers Game: Let's All Guess the Size of the Illegal Drug Industry," *Journal of Drug Issues* 35.1 (2005): 185-200.

<sup>14</sup> UNODC, *Estimating Illicit Financial Flows Resulting From Drug Trafficking and Other Transnational Organized Crimes* (Vienna: UNODC, 2011).

percent.<sup>15</sup> This elasticity is similar to that observed for tobacco and implies that a price increase more than compensates for the reduction in demand and results in higher overall drug revenues. There are fewer studies for heroin, but a reasonable estimate for elasticity appears to be around -0.3.<sup>16</sup> For methamphetamine, a successful U.S. government effort to reduce the supply of precursor chemicals led the price of the drug to temporarily triple and the purity to decline from 90 percent to 20 percent.<sup>17</sup> Simultaneously, amphetamine-related hospital admissions dropped by 50 percent, and use among arrestees declined by 55 percent. However, these indicators returned to their previous levels within four months as prices fell and purity increased.

While some researchers have attempted to use these elasticities to estimate how much demand would increase in response to a legalized drug market, this exercise is difficult to interpret. As will be discussed later in this chapter, some estimates suggest that the pre-tax price of commercially provided cocaine and heroin could fall by as much as 96 percent and 98 percent, respectively, reflecting drastic declines in the costs of production. These price declines are orders of magnitude larger than the short-run price variation used to estimate elasticities under prohibition, and hence significantly outside the scope of historical experience. Thus, attempts to assess how usage would change in response to legalization require significant speculation, especially with regard to production cost declines and related tax offsets. This highlights the fact that legalization, especially if accompanied by commercial availability of substances, involves uncertainties in demand responses which are amplified by the possibility of large price reductions. In such an environment, it is unclear how much drug use would increase or patterns of use would change over what amount of time and by whom.

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<sup>15</sup> Reuter and Trautmann (2009).

<sup>16</sup> Anne Line Bretteville-Jensen, "Drug Demand—Initiation, Continuation and Quitting," *De Economist* 154.4 (2006): 491-516.

<sup>17</sup> Carlos Dobkin and Nancy Nicosia, "The War on Drugs: Methamphetamine, Public Health, and Crime," *American Economic Review* (2009), 99 (1), 324-349.





# PART 2

## THE ILLICIT DRUG SUPPLY CHAIN

The supply chain begins with producers: coca leaf producers are concentrated in the Andean region, whereas opium producers are in Mexico, Guatemala, and Colombia. Processing typically occurs near cultivation sites. Processing coca leaves into cocaine requires significant fixed capital, and thus has often been controlled by armed groups, such as the FARC in Colombia, who either own the equipment or provide security to the owners.<sup>18</sup> Marijuana and methamphetamine can be produced almost anywhere, and a large share of the hemisphere's production is concentrated relatively close to major consumer markets. Tightened regulations on precursor chemicals in the United States have led methamphetamine production to shift towards Mexico, and there is evidence that as Mexican officials have tightened access to precursor chemicals, precursors and methamphetamine are increasingly being smuggled into Mexico through Central America.<sup>19</sup>

International traffickers occupy the next stage of the supply chain, in cases where production does not occur in the country of final consumption. Traditionally, Colombian traffickers have purchased cocaine at processing facilities and smuggled this product into Mexico or another transshipment location.<sup>20</sup> More recently, processors have increasingly engaged in risk-sharing agreements with Colombian traffickers, selling them the cocaine at higher prices in exchange for bearing part of the losses if it is confiscated.<sup>21</sup> Moreover, in recent years Mexican drug trafficking organizations, which traditionally obtained cocaine from Colombian traffickers in Mexico, have increased their profits through buying cocaine hydrochloride (HCL) directly from the FARC and other HCL producers, particularly those along the Ecuadorian border.<sup>22</sup>

Between 80 and 90 percent of cocaine consumed in the United States is currently transshipped through Mexico. As cocaine seizures by the Mexican navy have intensified, cocaine has increasingly been transported through Central America, with Guatemala and Honduras particularly affected.<sup>23</sup> Colombian traffickers transport cocaine to Mexico and Central America using vessels, including semi-submersibles, as well as small planes. Around 70 percent of cocaine leaves Colombia via the Pacific, 20 percent via the Atlantic, and 10 percent via Venezuela.<sup>24</sup> The 600-mile land border between Guatemala and Mexico is difficult to patrol and provides extensive opportunities for smuggling. Thus Mexican trafficking drug trafficking organizations—particularly

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<sup>18</sup> Daniel Mejía and Daniel Rico Valencia, "La microeconomía de la producción y tráfico de cocaína en Colombia," Documentos CEDE 007293 (Universidad de los Andes: CEDE, 2010).

<sup>19</sup> UNODC, *World Drug Report 2012*.

<sup>20</sup> Mejía and Rico (2010).

<sup>21</sup> *Ibid.*

<sup>22</sup> Douglas Farah, "Money Laundering and Bulk Cash Smuggling: Challenges for the Mérida Initiative," in *Shared Responsibility* (Woodrow Wilson Center for International Affairs and the University of San Diego Trans-Border Institute, 2010).

<sup>23</sup> *Ibid.*; UNODC, *World Drug Report 2010*.

<sup>24</sup> UNODC, *World Drug Report 2010*.

the Zetas and the Sinaloa organization—have established extensive operations in Honduras and Guatemala, purchasing cocaine from Colombians (or transporting it directly from South America) and smuggling it by land into Mexico. In Mexico, these organizations are horizontally integrated with a variety of smaller criminal groups. They protect these groups' criminal operations or allow them to operate within their territory in exchange for a share of the proceeds.<sup>25</sup>

According to the U.S. Department of Justice's National Drug Intelligence Center, Mexican trafficking organizations are the dominant wholesale drug traffickers in the United States and the only drug trafficking organizations to have a nationwide presence. In addition to smuggling drugs into the United States, they control wholesale distribution of much of the cocaine, heroin, imported commercial-grade cannabis, and methamphetamine in the U.S. market. They also have a presence in more cities than non-Mexican drug trafficking organizations.<sup>26</sup> In recent years, many U.S. street gangs have been able to access cost savings by buying directly from Mexican trafficking organizations, cutting out the midlevel wholesalers who traditionally separated the international smugglers from retailers.<sup>27</sup> Mexican drug trafficking organizations are not generally directly involved in retail distribution of illicit drugs, nor is there systematic evidence that non-Mexican retailers are employed directly by Mexican drug trafficking organizations.

In 2004, Mexicans and Mexican-Americans accounted for 4 percent and 8 percent, respectively, of individuals incarcerated in the United States for drug distribution. Moreover, 90 percent of Mexican-Americans and 94 percent of Mexican nationals incarcerated in the United States for drug distribution reported no affiliation with drug trafficking organizations.

Drug markups are highest at the retail level, offsetting risks which are also the highest at this point in the supply chain, since retailers are most exposed to law enforcement and interact with a relatively unpredictable and shifting clientele. Retail sales are sufficiently risky that they may not present viable business opportunities for Mexican drug trafficking organizations, which already earn large profits from wholesale.<sup>28</sup> Additionally, many of the locations where retail transactions occur were already controlled by other criminal organizations before Mexican trafficking organizations became heavily involved in the U.S. drug trade. Dislodging these organizations would likely be quite costly.

In addition to trafficking and wholesaling activities, some reports suggest that Mexican drug trafficking organizations produce methamphetamine and marijuana in the United States (the latter reportedly in national forests). However, there is little concrete evidence that can be used to evaluate these

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<sup>25</sup> Alejandro Hope and Eduardo Clark, "Si los vecinos legalizan," Technical Report (Instituto Mexicano para la Competitividad, 2012).

<sup>26</sup> *National Drug Threat Assessment 2010* (National Drug Intelligence Center, Department of Justice, Document ID: 2010-Q0317-001, February 2010); Caulkins et al. (2012).

<sup>27</sup> *National Drug Threat Assessment 2010*.

<sup>28</sup> Patrick Keefe, "Cocaine Incorporated." *New York Times Magazine*, June 15, 2012: <http://www.nytimes.com/2012/06/17/magazine/how-a-mexican-drug-cartel-makes-its-billions.html?pagewanted=all&r=0>.

claims. When questioned, workers on site appear to “have no idea who they are working for and are able to give little information when arrested.”<sup>29</sup>

Heroin is a partial exception to the lack of vertical integration, particularly in heroin markets that have developed recently in the eastern United States.<sup>30</sup> For example, entrepreneurs from heroin-growing municipalities in Nayarit, Mexico, have developed rapidly expanding black tar heroin markets in Ohio and North Carolina, providing individuals already addicted to prescription opiates with a cheaper and more potent opiate source.<sup>31</sup> Individuals smuggle heroin through Mexico and across the U.S. border, paying drug trafficking organizations for permission to smuggle heroin through their plazas, or franchises. They then transport the heroin to local U.S. cells controlled by individuals from the same towns in Nayarit. These individuals in turn sell directly to consumers or to small retailers, remitting part of the profits back to Mexico. Rather than controlling street corners, these dealers have tailored their operations to an upper-middle class clientele, sometimes delivering heroin directly to their clients’ residences. This model minimizes costs by avoiding middlemen, allowing Mexican heroin to be priced cheaply enough to make inroads into new markets. Vertical integration appears to predominate primarily in these newer heroin markets, which are a small share of the U.S. heroin market. As heroin represents a relatively small share of the total value of U.S. retail drug markets, fully vertical integrated operations such as these are currently of limited quantitative importance.

In summary, the hemispheric drug trade tends not to be vertically integrated, although Mexican drug trafficking organizations do control much international trafficking, and U.S. wholesale drug markets are increasingly involved in the direct purchase of cocaine in South America.

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<sup>29</sup> Steve Fainaru and William Booth, “Cartels Face an Economic Battle,” *Washington Post*, October 7, 2009: [http://articles.washingtonpost.com/2009-10-07/world/36925085\\_1\\_mexican-drug-drug-cartels-marijuana-sales](http://articles.washingtonpost.com/2009-10-07/world/36925085_1_mexican-drug-drug-cartels-marijuana-sales).

<sup>30</sup> José Díaz-Briseño, “Crossing The Mississippi: How Black Tar Heroin Moved Into The Eastern United States,” in *Shared Responsibility*; Sam Quinones, “A Lethal Business Model Targets Middle America,” *Los Angeles Times*, February 14, 2010a. <http://articles.latimes.com/2010/feb/14/local/la-me-blacktar14-2010feb14>;

Sam Quinones, “Black Tar Moves In, and Death Follows,” *Los Angeles Times*, February 15, 2010: <http://articles.latimes.com/2010/feb/15/local/la-me-blacktar15-2010feb15>; Sam Quinones, “The Good Life in Xalisco Can Mean Death in the United States,” *Los Angeles Times*, February 16, 2010: <http://articles.latimes.com/2010/feb/16/local/la-me-blacktar16-2010feb16>.

<sup>31</sup> Díaz-Briseño (2010).



# PART 3

## THE DISTRIBUTION OF ILLICIT DRUG PROCEEDS

### Distribution across the Supply Chain

The distribution of drug revenues across the supply chain has been reasonably well-studied, particularly for cocaine. Revenues as discussed here do not adjust for seizures and costs incurred along the supply chain, which will be discussed subsequently.

#### *Cocaine*

Figures 2 and 3 summarize revenues for the U.S. and global cocaine markets, whose retail values total around \$34 billion and \$85 billion respectively.<sup>32</sup> In both the global and U.S. cocaine markets, slightly over 1 percent of revenues are estimated to accrue to producers in the Andean countries, whereas retailers in the consumer countries receive around 65 percent of revenues. Around 9 percent of revenues accrue when the cocaine is trafficked from the producing countries to the transit countries. Wholesale profits are divided between international wholesalers, who smuggle the product from the transit countries into the consumer countries (for example from Mexico into the United States), and national wholesalers, who divide kilogram purchases of cocaine into smaller ounce units, which are in turn sold to retailers and divided further before being sold to the final consumers. International wholesale revenues are somewhat higher in the global cocaine trade than in the U.S. cocaine trade, but in both cases wholesalers receive between 20 percent and 25 percent of total revenues.

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<sup>32</sup> UNODC, *World Drug Report 2010*; *World Drug Report 2011*.

## Gross Profits in the U.S. Cocaine Trade

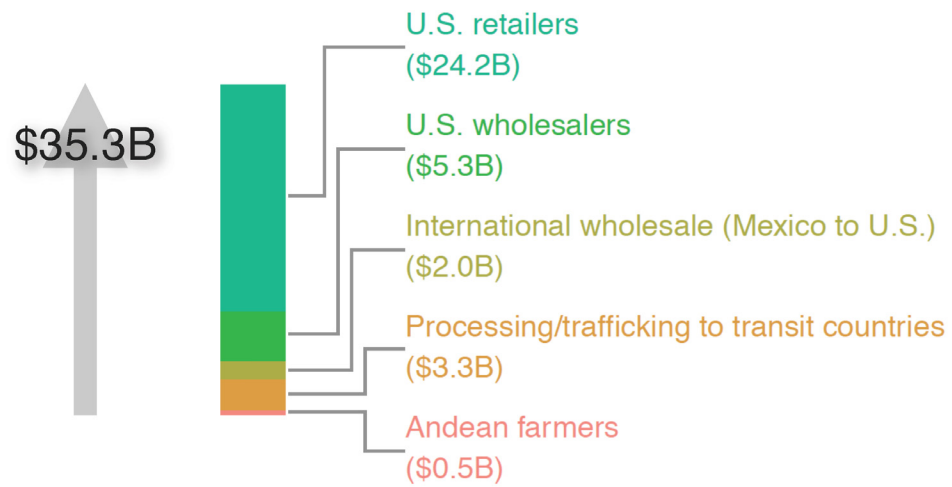


Figure 2: Source: UNODC (2010, 2011) and author's calculations.

## Gross Profits in the Global Cocaine Trade

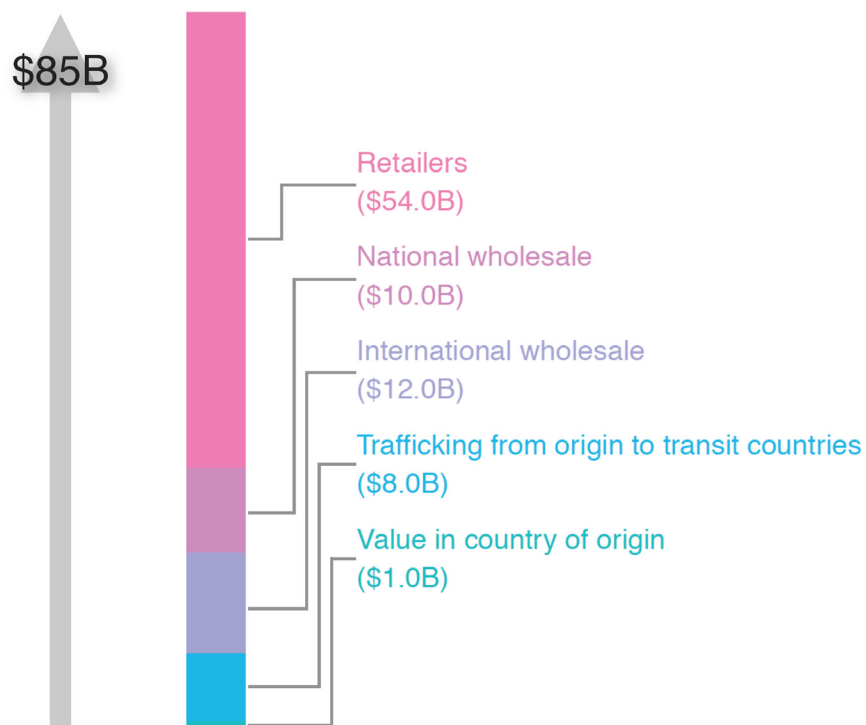


Figure 3: Source: UNODC (2010, 2011) and author's calculations.

Breaking down revenues among different Colombian participants in the cocaine market, another study again highlights that traffickers obtain the greatest financial benefits: in the cocaine trade, coca leaf producers receive 9 percent of revenues accruing to Colombians (equivalent to 1 percent of global

revenues). Twenty percent of gross Colombian profits accrue to processing coca leaves into cocaine, whereas traffickers who transport cocaine to Central America and other transshipment hubs receive 71 percent of the gross cocaine profits that accrue to Colombians.<sup>33</sup>

This skewed distribution of revenues complicates drug enforcement.<sup>34</sup> Large seizures are typically made at points in the supply chain where the value of drugs is lower. All else being equal, it would be preferable from an economic standpoint to seize the same amount of drugs at the end of the supply chain, where the value of drugs is the highest. However, by this point the drugs are divided into small quantities and held by a large number of sellers, making the seizure of a given quantity much more costly. Such an approach would also call into question the significant efforts that source and transit countries have invested in interdiction.

The above estimates can be improved by taking into account the financial impact of drug seizures. Seizures are quantitatively important: UNODC estimated that in 2009, cocaine seizures totaled 505 tons, greater than the estimated 440 tons of global cocaine consumption that year.<sup>35</sup> Cocaine seized will reduce retail profits, assuming, as the quantitative evidence indicates, that not all cost increases can be passed through to the consumer. Retailers now have to purchase additional cocaine to satisfy a given level of consumer demand. Seizures also benefit those who are further up the supply chain, since producers, traffickers, and wholesalers must purchase additional cocaine to replace the amount confiscated.

In practice, assigning seizures to a particular segment of the supply chain is not a trivial task. Suppose, for example, that a cocaine shipment from Colombia to Europe is intercepted by the Spanish navy. In some cases, the Colombian exporters may bear the cost of the lost delivery, in other cases the Spanish importers may bear these costs, and sometimes importers and exporters have risk-sharing agreements.<sup>36</sup> Nevertheless, reasonable assumptions can be made to assess the approximate redistribution of revenues as a result of seizures. Calculations suggest that about \$7 billion dollars—or 8 percent of gross global cocaine profits—are distributed away from North American and European criminal organizations as a result of seizures.<sup>37</sup> These resources are distributed towards international cocaine traffickers, primarily those transporting cocaine from producing to transshipment countries. Seizures thus lower retailers' and national wholesalers' share to around two thirds of total gross cocaine profits.

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<sup>33</sup> Mejía and Rico (2010).

<sup>34</sup> Beau Kilmer and Peter Reuter, "Prime Numbers: Doped," *Foreign Policy* (2009).

<sup>35</sup> UNODC, *World Drug Report 2011*.

<sup>36</sup> Mejía and Rico (2010).

<sup>37</sup> UNODC, *World Drug Report 2011*.

## Heroin

While less information is available on the heroin trade, existing data suggest a roughly similar distribution of revenues among retailers, wholesalers, traffickers, and growers. For the U.K. heroin trade, a recent study suggests that 73 percent of revenues accrue to U.K. retailers, 16 percent accrue to traffickers who bring the drug from Turkey into the United Kingdom, and 10 percent accrue to traffickers who transport the drug from Afghanistan to Turkey, while Afghan farmers receive just half a percent of revenues.<sup>38</sup> Adjusting heroin prices for purity produces similar revenue estimates.<sup>39</sup>

## Cannabis

Cannabis grows in a much wider variety of conditions than poppy and coca, making it more difficult to calculate revenues. Commercial-grade marijuana sells for around US\$40 per pound (\$80 per kilogram) in Mexico.<sup>40</sup> The import price in the U.S. is approximately \$400 per pound, with U.S. wholesale prices increasing at a rate of around \$400 per pound for every thousand miles traveled from the U.S.-Mexico border.<sup>41</sup> The ounce price is approximately twice the pound price, and grams cost around twice as much as ounces. Because marijuana is often distributed within social networks, the final purchase is sometimes conducted at the ounce level.<sup>42</sup> Sinsemilla (high-potency cannabis) growers in the United States receive approximately \$2,000 per pound at farm gate, wholesale prices are typically \$2,500 to \$4,000 pound, and ounce retail prices are around 1.6 times higher than wholesale prices.<sup>43</sup>

The percentage markup between wholesale and retail prices is likely somewhat lower for marijuana than for cocaine and heroin, whose prices are estimated to multiply three to five times between wholesale and retail. The markup for marijuana depends on what portion is sold to users in ounces versus grams.

While the markup for crossing the U.S. border is higher in percentage terms for marijuana than for cocaine, in absolute dollars the cross-border markup for a kilo of cocaine is several times higher than that of a kilo of marijuana.<sup>44</sup>

Calculating precise trafficking revenues would require specifying how much of different varieties of marijuana are grown in the United States versus imported, points on which there remain considerable disagreements.

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<sup>38</sup> Laura Wilson and Alex Stevens, "Understanding Drug Markets and How To Influence Them" (The Beckley Foundation Drug Policy Programme, 2010).

<sup>39</sup> Kilmer and Reuter (2009) report that retailers receive modestly lower revenues (64 percent) whereas Turkish traffickers receive somewhat higher revenues (23 percent).

<sup>40</sup> Kilmer et al. (2010); Centro Nacional de Planeación, Análisis e Información para el Combate a la Delincuencia de México (CENAPI) and Procuraduría General de la República (2010); UNODC, *World Drug Report 2008*.

<sup>41</sup> Kilmer et al. (2010).

<sup>42</sup> Caulkins et al. (2012).

<sup>43</sup> Ibid.

<sup>44</sup> UNODC, *World Drug Report 2010*.



Researchers have nevertheless estimated, using a range of reasonable assumptions, that Mexican drug trafficking organizations earn between \$1 billion and \$2 billion dollars in profits in U.S. wholesale cannabis markets each year.<sup>45</sup>

Little information is available on methamphetamine, and this market has changed substantially in recent years. Thus, this report will not attempt to calculate methamphetamine revenues.

Markups in the illicit drug trade are orders of magnitude higher than markups for legal goods. For example, coffee beans cost around five times more at retail than at farm gate, whereas heroin costs around 170 times more.<sup>46</sup> Markups are higher for a number of reasons: participants must be compensated for the risks of incarceration and violence, prohibition reduces the efficiency of production and distribution, the supply chain is long with a large number of middlemen, and some participants have substantial market power. On the production side, the illicit nature of the drug trade reduces efficiency, as drug cultivation must be concealed, transport may not take direct routes and requires extensive bribes, and a drug dealer typically handles far fewer transactions per day than a pharmacist or grocer. Finally, at certain segments of the supply chain, participants may exercise significant market power through controlling trafficking routes or consumer markets. The fact that they face at most limited competition allows them to set higher prices.

For many drugs, especially those that are plant-based, markups could fall substantially if the substances were produced, transported, and distributed like other commercial goods. Using reasonable assumptions about the cost of transport and retail markups under a commercialized regime, one 2012 study calculates that the price of cocaine (prior to any taxation or fees) could fall 96 percent, from about \$66 to \$2.78 per gram at 63 percent purity, and retail heroin prices could fall by 98 percent, from about \$140 to \$3 per gram at 55 percent purity.<sup>47</sup> For marijuana, a recent study calculates that if high-potency marijuana could be legally cultivated in large grow houses (at \$200-\$400 per pound), the retail price per ounce could fall by more than 80 percent.<sup>48</sup> If plants could be cultivated in large outdoor fields, the same study estimates that the price decline would be even greater, albeit for a less potent substance. These same studies do not take into account the impact of any taxation or other administrative fees that could be imposed to raise retail prices closer to previous levels.

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<sup>45</sup> Kilmer et al (2010).

<sup>46</sup> Wilson and Stevens (2010).

<sup>47</sup> Caulkins, Jonathan, and Michael Lee. "Legalizing Drugs in the US: A Solution to Mexico's Problems for Which Mexico Should Not Wait." In *Rethinking the "War on Drugs" Through the US-Mexico Prism*, edited by Ernesto Zedillo and Haynie Wheeler, 108-124. New Haven: Yale Center for the Study of Globalization, 2012.

<sup>48</sup> Kilmer et al (2010).

## Distribution of Illicit Drug Proceeds across Participants

While the distribution of illicit drug revenues along the supply chains has been extensively examined, the microeconomic structure of how returns are distributed across participants is less well-understood, particularly for participants in the transit stages. The distribution of illicit drug proceeds across participants is important for various reasons. It is difficult to assess who will be most affected by policies designed to reduce drug proceeds without knowing who the residual claimants are. Estimating the percentage of drug trade proceeds that are laundered also requires assessing how earnings are distributed across participants.

Legitimate companies of similar size to drug trafficking organizations usually have managers, shareholders, and wage employees, with profits accruing largely to shareholders. For organizations operating in the illegal drug trade, little detailed information is available about the compensation of employees and about who is the residual claimant on earnings once the requisite expenses (wages, bribes, purchases of product and equipment, etc.) have been paid. Because accounting records are available only for certain plazas or franchises, and not for drug trafficking organizations' central operations, returns to managers and financiers operating above the plaza level remain uncertain.

Accounting books for drug trafficking organizations confiscated by the Mexican government provide considerable insight into how returns are distributed at the drug plaza level in Mexico.<sup>49,50</sup> First, Mexican drug trafficking organizations are large relative to other firms in Mexico, even looking only at the plaza as the fundamental operating unit. Plazas typically encompass drug trafficking organizations' operations in a given city or region and have two types of employees on their payrolls: internal employees and *ley* (law) employees, the latter consisting primarily of law enforcement officials who render services to the trafficking organization in return for bribes. The number of internal employees per plaza ranges from 61 to nearly 600, whereas the number of individuals receiving bribes ranges from 109 to nearly 1,000. In Mexico, 99 percent of firms have fewer than 50 employees, so even if only the internal employees are considered, each plaza has more employees than most Mexican firms.

Second, employees are reasonably well-compensated. The mean salary of internal employees, approximately US\$1,650 per month, is about 1.3 times the mean formal sector wage in Mexico and 6 times the minimum wage. Assuming wages are under-reported by 50 percent in the National Occupation and Employment Survey, the mean internal wage of drug trafficking organizations still falls around the 75<sup>th</sup> percentile. Wages of internal employees are relatively

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<sup>49</sup> For information about how earnings are distributed in the illicit drug retail sector, which falls beyond the scope of this chapter, readers are referred to Reuter et al. (1990) and Levitt and Venkatesh (2000). Sources: Steven Levitt and Sudhir Venkatesh, "An Economic Analysis of a Drug-Selling Gang's Finances," *Quarterly Journal of Economics* (2000), 115 (3), 755-789; Peter H. Reuter et al., *Money from crime* (RAND Corporation, 1990).

<sup>50</sup> All statistics presented in the discussion below are drawn from these accounting books, which are not publicly accessible.

similar across plazas. Relative wages are actually higher than what researchers have documented for illicit drug retailers in Chicago and Washington, D.C.<sup>51</sup> These statistics shed light on the systemic scale and persistence of the drug trade in Mexico in spite of its severe risks and criminal penalties.

Within an organization, operatives earn around twice the mean Mexican formal sector wage, whereas lookouts—who form the largest class of employees—earn slightly above the mean formal sector wage. Administrators, like operatives, earn around twice the mean formal sector wage. Operatives and lookouts are not likely to have especially high human capital, and thus the wages that they receive in the illicit sector are considerably higher than the wages that they would receive from legitimate employment.

In addition to paying wages to the employees that carry out day-to-day trafficking operations, bribes are paid on a monthly basis, primarily to law enforcement officers. While the average bribe is less than the average wage, in all but one of the plazas the total amount spent on bribes exceeds the total amount spent on wages of internal employees.

Over 70 percent of the operating funds that plazas use to cover wages, bribes, and other expenses (drug processing equipment, weapons, etc.) derive from unidentified foreign and national sources. The foreign component represents 65 percent of operating funds, and presumably consists of earnings that the trafficking organization makes selling drugs abroad. Most of the remaining operating funds are drawn from local sources, including earnings from local criminal activities. On average, nearly half of operating funds are used to pay wages and bribes. Machinery, likely used to process drugs such as methamphetamine, also forms an important expenditure, albeit only for some of the plazas. Plazas do not retain earnings, and at the end of the operating period they remit an average of 18 percent of their operating funds back to the central organization.

Since most operating expenses are funded by foreign earnings, reducing flows of illicit drug earnings to Mexico could compromise the continuing ability of the Mexican plazas to pay wages and bribes.

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<sup>51</sup> Ibid.



# PART 4

## MONEY LAUNDERING AND THE TRANSMISSION OF EARNINGS ALONG THE SUPPLY CHAIN

Before illicit drugs reach consumer markets, a variety of monetary transactions typically occur across multiple jurisdictions throughout the supply chain. These transactions range from providing peasants with agricultural inputs and purchasing drug processing equipment to bribing law enforcement officers and paying wages to the many individuals employed by the drug trade. This section examines two key questions: 1) how are earnings transmitted across the supply chain? and 2) approximately what percentage of retail drug proceeds is laundered?

Final retail earnings in the drug trade are usually received in cash. The bulk of these returns accrue to retailers, who either spend the cash or launder it into the financial system. Revenue earned by wholesalers may be spent directly in the consuming country, smuggled into another jurisdiction in the form of bulk cash, or laundered into the financial system. If smuggled as bulk cash, upon arriving in the next jurisdiction the earnings can again be spent, laundered, or smuggled further along the supply chain.

### Trends in Transferring Illicit Profits

Bulk cash is a straightforward and low-tech way to transfer resources. Small bills are exchanged for larger bills, bundled, and transported in reverse along many of the same routes used to smuggle drugs into consumer countries. With over 150 million vehicles crossing the U.S.-Mexico border each year, it is relatively simple to smuggle cash into Mexico undetected,<sup>52</sup> as U.S. authorities have limited capacity to inspect southbound vehicles and apprehend offenders. Moreover, the inspection rate would need to be quite high to make bulk cash a more expensive way to transfer funds than laundering them into the financial system, given estimates that the cost of laundering funds may average around 15 percent of their value. The U.S. Customs and Border Patrol estimates that most profits made by Mexican criminal enterprises in the United States are transported back to Mexico as bulk cash.<sup>53</sup> Wire transfers and prepaid cards are also important methods for transmitting drug earnings to Mexico. Depending on the organization and specific transaction, bulk cash transport to Mexico will either be managed by the drug trafficking organization itself or by an independent money broker.

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<sup>52</sup> Farah (2010).

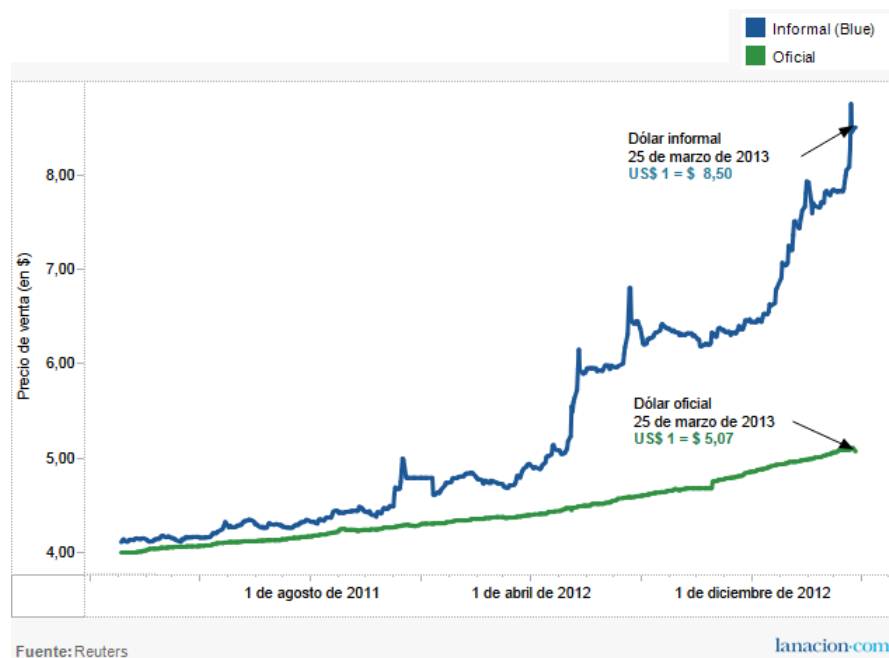
<sup>53</sup> United States of America-Mexico Bi-National Criminal Proceeds Study.

Traditionally, cash from cocaine sales was first smuggled into Mexico and then a portion was shipped onward to Colombia via a variety of methods, including bulk cash transfer. Recently, financial resources have more typically been transferred directly from the United States to cocaine sources countries.

Transnational organized crime needs to convert bulk cash into local currency to facilitate its introduction into the financial system and the subsequent steps of the money laundering process. In countries whose official currency is the U.S. dollar, this step is not necessary. Other countries that are attractive for bulk cash conversion are those with parallel markets for foreign exchange in which the high demand for dollars in cash makes currency conversion quick and profitable.

With many countries imposing greater controls in their formal financial systems for the control of cash transactions, cash smuggling has become one of the main mechanisms of income distribution through the drug production chain. This can be seen in the increase in cash seizures, both in number and total dollar amount, at ports and airports.<sup>54</sup>

In some countries of the region (particularly Venezuela<sup>55</sup> and Argentina<sup>56</sup>), the existence of parallel currency markets makes dollar cash transactions attractive and profitable for criminal organizations. Criminal organizations can convert dollar proceeds to local currency equivalents directly or through third parties with relative ease and speed.



<sup>54</sup> Associated Press, "\$41 million in suspected drug money seized from Colombian, Mexican ports," September 29, 2009: <http://www.nydailynews.com/news/world/41-million-suspected-drug-money-seized-colombian-mexican-ports-article-1.382061>.

<sup>55</sup> Reuters, "Dólar paralelo en Venezuela toca máximo histórico de 8 bolívares," May 6, 2010, <http://www.reuters.com/article/2010/05/06/mercados-venezuela-dolar-idARN0610798220100506>.

<sup>56</sup> La Nación, "El dólar 'blue' quedó a \$8,27 mientras que el oficial a \$5,07," March 25, 2013: <http://www.lanacion.com.ar/1566812-el-dolar-blue-bajo-a-827-pesos-mientras-que-el-oficial-queda-en-507>.

The illegal drug economy needs to cover up the illicit origin of its assets and flows, in order to bring them into the legal economic system. Funds generated in the illegal drug economy enter the legal economy through money laundering, which comprises a set of activities within and outside the financial system aimed at legitimizing ill-gotten gains.

A variety of approaches can be used to launder drug proceeds into the formal financial system. These include over-invoicing imports, purchasing open system prepaid cards, exchanging digital currencies, sending money through more than 200 secure online payment systems, and laundering money through cash-intensive businesses—such as hotels, casinos, and construction—that are controlled by organized criminal groups.<sup>57</sup> Additionally, drug purchases can be laundered through purchasing and reselling real estate, vehicles, and other luxury goods. Even when various financial regulations are in place, records of property transactions often remain scattered across public notaries and are difficult to trace, making real estate a favored method both for consuming and laundering drug proceeds.<sup>58</sup>

While there is no agreement as to the volumes of illicit funds fed into the system, a broad consensus does exist as to the corrupting and distorting power of those funds. Given the multiplicity of players involved, the complete absence of transparency in their transactions, and the continually shifting mechanisms devised, the magnitude of the problem is hard to gauge. Furthermore, it is important to mention that although the illegal drug economy is one of the principal drivers of money laundering, this practice comprises multiple and complex illicit activities, including the bribing of government officials and tax evasion. From a security perspective, money laundering helps criminal organizations penetrate different spheres of society, besides wielding enormous power to corrupt civil servants and private sector actors.

Money laundering drags “legal” economic agents into illegal activities. It fuels and boosts direct and indirect relations between a number of actors, generating “grey” areas in which apparently legal players take part in clearly illegal actions.

Traditionally, the financial sector, and banks in particular, have been used to launder assets. The nature and diversity of the services provided by this sector permit maneuvers that can swiftly and safely channel funds generated by criminal activities, while hiding the origin of the proceeds. However, in response to the implementation of prevention systems in the financial sector, the organizations involved in money laundering have diversified their mechanisms, procedures, and flows and are now using other economic sectors. Currently, building on experiences of cases detected all over the world, prevention systems have been incorporated into a large number of sectors, such as insurance companies, securities brokers, foreign exchange dealers, remittance firms, casinos, minerals and precious stones merchants,

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<sup>57</sup> Wright (2006); Farah (2010).

<sup>58</sup> Farah (2010).

real estate, and among independent professionals, such as notaries, accountants, and attorneys.

## Frequent Forms of Money Laundering in the Region

Financial Intelligence Units and regional Financial Action Task Forces like FATF/GAFI (and GAFIC and GAFISUD for the Caribbean and South America, respectively) publish money laundering typologies and warning signs based on information obtained from institutions required to file reports on their operations.

Both the typologies and warning signs identify trends and patterns of behavior that could be replicated in other countries of the region. This provides important information for designing risk models for enterprises in sectors likely to be used by criminal organizations seeking to make ill-gotten gains appear legal.

Outstanding studies include those produced by Financial Intelligence Units in Argentina, Chile, Colombia, Ecuador, Mexico, Peru, and Venezuela, and the GAFISUD's regional typologies study.<sup>59</sup> The analyses in all those studies agree on the following list of the most prominent money laundering mechanisms in the region:

- The use of “front” or shell companies to purchase, transfer, convert, conceal, disguise, hold, or use ill-gotten gains located either in the country or abroad.
- The use of companies with rapid cash turnover to blend funds from licit and illicit sources.
- The use of foreign trade enterprises to repatriate foreign exchange by means of technical (false invoicing) or open contraband.
- Foreign exchange arbitrage operations using money from an illicit source to take advantage of parallel markets, using contraband (illegally imported) cash.
- The subdivision and transfer of ill-gotten gains through (legal or informal) fund transfer and remittance agencies.
- The fraudulent or unlawful purchase of real estate, jewels, works of art, precious metals, or assets that are difficult to quantify.
- The use of third parties' accounts (whereby the third parties may be accomplices or acting in good faith) to split, transfer, conceal, or

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<sup>59</sup> Available at: <http://www.gafisud.info/documentos.php>.



convert ill-gotten funds.

A warning sign is an atypical feature in a transaction that suggests a possible association with money laundering. Usually, the presence of a warning sign requires a verification process to explain the atypical behavior. Alternatively, additional warning signs can be sought to enable an operation to be classified as “suspicious.” Some examples include:

- Clients who refuse to provide information about their business activities or financial history when opening an account or carrying out a transaction.
- Clients who use intermediaries or avoid personal contact with the institution, in an attempt to perform transactions anonymously.
- Clients who provide personal or business references that are difficult to verify or related to illicit activities.
- Clients who, despite handling large volumes of money (mainly in cash), have no credit record or financial products.
- Local bank transfers and checks made out to third parties that apparently bear no relation to the enterprise’s core business.
- Companies conducting cash transactions that were founded on similar dates, have consecutive ID numbers, or the same telephone numbers, addresses, partners, legal representatives, or accountants.
- Companies that receive deposits or make cash withdrawals from unusual places or places that bear no relation to their core business, or increase the volume of their cash transactions without their sales increasing, or that do not show payroll or supplier expenses.
- Recently established nonprofit organizations that receive large amounts of money from abroad, mainly through wire transfers; that lack the infrastructure needed to carry on the activities they say they are pursuing; and that pay for their activities only in cash.

Money laundering triggered by the illegal drug economy has detrimental effects on the economy, social development, and democratic governance. Although money laundering is a crime that often goes unnoticed, its consequences run deep and extend beyond their impact on the economy. In underdeveloped areas with little state presence, the injection of funds stemming from the illegal drug market has a powerful impact, heaping goods and services on segments of the population hitherto cut off from traditional, legal economic circuits. Under such circumstances, organized crime groups develop ties with the communities, who view their activities and investments as opportunities for social and economic integration. The dynamics of this

relationship trigger “perverse” development, based on illegally acquired funds and the presence and control of criminal factions that impose order through threats and violence. In this scenario, traditional economic activities are crowded out as being less profitable while those propitious for money laundering and the concentration of resources thrive.

## Principal Consequences of Money Laundering

- ***It is conducive to new criminal activities.*** Because criminal organizations receive the proceeds of the crimes they commit, they can reinvest in their own structure and fund new criminal activities.
- ***It distorts the prices of goods and services in a manner detrimental to the economy.*** Money laundering schemes are not designed to make a profit in themselves, but rather to hide the criminal source of funds. That can distort the prices of goods and services and generate both unfair competition and economic or financial bubbles.
- ***It depresses financial system savings.*** When illegal money floods the financial system, interest rates on deposits may fall, hitting legal savers by lowering the return on their savings and thereby discouraging future saving.
- ***It fosters corruption.*** Their freely disposable wealth gives criminal organizations enormous power to corrupt both government officials and private sector businesspersons. Hence the importance of having rules and appropriate mechanisms for combating corruption as a way of contributing to the fight against organized crime.
- ***It diminishes competitiveness and may cause the currency to appreciate.*** The influx of large volumes of foreign exchange directed toward activities showing sudden, artificial growth could cause the currency to appreciate and produce “Dutch disease”-type consequences by making other legitimate activities less competitive.

Money laundering is not just tied to illegal drugs. Even if it were possible to diminish the funds derived from that illegal economy, the flow of money from administrative corruption, tax evasion, and other illicit activities—extortion, trafficking in persons, illegal arms sales, the smuggling of migrants, and illegal mining, to name a few—would continue to sustain the mechanisms and channels for concealing the sources of ill-gotten gains.

Money-laundering laws tend to be weak. All the evidence suggests that new developments in money laundering are always a step or more ahead of the legal schemes devised to combat it, which means that laws have constantly to be revised and replaced. To make headway on this front, consideration should be given to providing more state resources for investigation and stronger penalties, even though that might involve measures that the financial sector, and even migrants remitting funds to their countries of origin, might find

uncomfortable. Here it might be worth contemplating the imposition of criminal sanctions on institutions, and not just individuals, so as to avoid today's situation in which only low-ranking officers are punished when banks or other financial institutions commit crimes.

One of the main reasons why this phenomenon is transnational is that, in most cases, the "legalized" money ends up being deposited and used by head offices in the United States or Europe, not in the those financial institutions' branches in Latin America or the Caribbean. Therefore, the focus should be on enforcing the law in the countries where the money ends up. Equally important and pressing, when it comes to continual updating of the legal schemes for combating money laundering, is ensuring homogeneity in the legislation of the different countries involved, since discrepancies in this area completely cancel out the investigative and punitive capacities developed in countries with more advanced legislation. The possibility of developing common legal ground, at least in relation to this problem, should be explored.

In recent years there has been a shift in criminal justice policies at the regional level, with the focus broadening from incarcerating illicit actors to strategically identifying, locating, and recovering illicitly acquired assets through the means of forfeiture. These policies in most countries of the hemisphere have focused on the application of two fundamental legal instruments: criminalization of money laundering and confiscation of assets of criminal origin.

This legislation seeks to discourage criminal activity through the threat of meaningful asset seizures that can be carried out regardless of criminal liability. In addition, asset seizures target the financial structure of criminal organizations.

At the multilateral level, organizations like the World Bank,<sup>60</sup> UNODC,<sup>61</sup> and the OAS<sup>62</sup> have been promoting initiatives related to confiscation and forfeiture of illegally obtained assets in the region. Some of these initiatives employ innovative mechanisms to trace, locate, seize, and return assets situated in foreign countries, based on mutual legal assistance.

Some countries have created specialized agencies responsible for receipt, identification, inventory management, maintenance, preservation, and custody of assets,<sup>63</sup> from early seizure through the trial process. Conventional systems of legal deposit have proved inadequate to manage certain complex assets such as condominiums, companies, hotels, farms, livestock, vehicles, and luxury homes, among others.

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<sup>60</sup> Stolen Asset Recovery Initiative: <http://star.worldbank.org/star/>.

<sup>61</sup> "Money-laundering, financing of terrorism and asset forfeiture": <https://www.unodc.org/southeasterneurope/en/money-laundering-financing-of-terrorism-and-asset-forfeiture.html>.

<sup>62</sup> Seized and Forfeited Asset Management Project: [http://cicad.oas.org/Main/Template.asp?File=/lavado\\_activos/bidal\\_eng.asp](http://cicad.oas.org/Main/Template.asp?File=/lavado_activos/bidal_eng.asp).

<sup>63</sup> In Peru: <http://conabi.pcm.gob.pe/?q=somos>; Mexico: <http://www.sae.gob.mx/Paginas/PortallInstitucional.aspx>; Ecuador: [http://www.consep.gob.ec/index.php?cod\\_categoria=5](http://www.consep.gob.ec/index.php?cod_categoria=5); Costa Rica: [http://www.icd.go.cr/sitio/index.php?option=com\\_content&task=view&id=32&Itemid=9](http://www.icd.go.cr/sitio/index.php?option=com_content&task=view&id=32&Itemid=9).

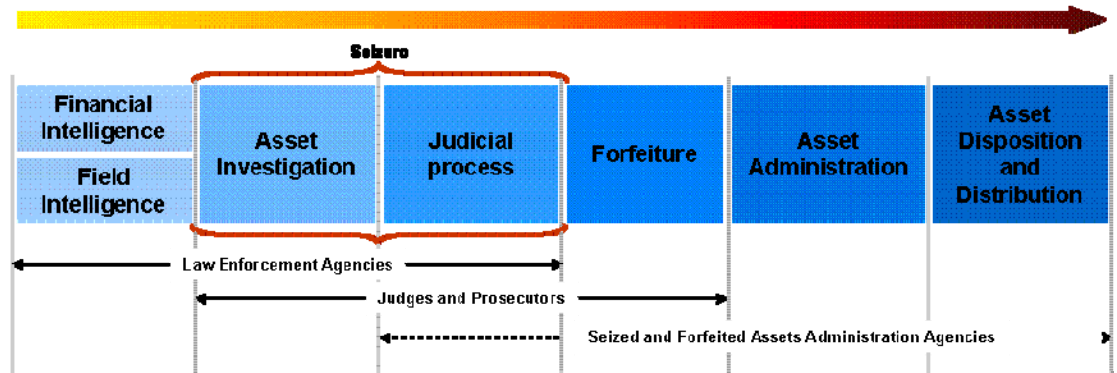


Figure: Asset administration process.

Frequently, these specialized agencies comprise elements in an inter-agency system in which they interact with other governmental bodies involved in this process, in coordination with the competent judicial authorities. Management of seized assets is a critical component in the effort to deprive organized crime of its illegal profits and assets.

One key controversy involves estimating the proportion of drug proceeds laundered into the financial system. This evaluation depends largely on how the returns of the drug trade are distributed across individual participants. When crime generates proceeds in small amounts, the offender will spend a significant proportion of this income on living expenses and small luxuries, leaving little to no income for laundering.<sup>64</sup> In contrast, when an individual's proceeds are larger, a higher percentage will usually be laundered into the financial system.

UNODC estimates that drug-related proceeds available for money laundering through the financial system total some 0.4 to 0.6 percent of global GDP.<sup>65</sup> Around half of these proceeds are estimated to be laundered within the jurisdiction where the profits are generated, by entering the banking or real estate sector or through other types of investment.

In a detailed analysis of money laundering in the cocaine trade, UNODC estimated revenues as well as the number of retailers and wholesalers in key countries. The former has been relatively well-studied, whereas much less is known about the latter. Next, the study calculated how proceeds are allocated among these participants by assuming that profits are distributed to retailers and wholesalers following the same distributions as the value of retail and wholesale seizures. After allocating profits across participants, the study subtracted an allowance for living expenses from each participant's estimated income and assumed that the remainder was available for laundering. These calculations suggest that 46 percent of gross cocaine retail profits and 92

<sup>64</sup> UNODC, *Estimating Illicit Financial Flows* (2011).

<sup>65</sup> Ibid.

percent of gross wholesale profits are available for laundering, resulting in an overall money laundering proportion of 62 percent of gross cocaine profits.

This novel approach provides a methodology for estimating money laundering in the absence of reliable data on the distribution of earnings across participants in the drug trade. However, it is not obvious that incomes will follow the same distribution pattern as seizures. The UNODC methodology estimates that the majority of returns—particularly in wholesale—are allocated to a very small proportion of the participants. Some sociological studies of U.S. drug gangs support this assertion, but others suggest that small-scale retailers receive higher compensation.<sup>66</sup> An alternative study of money laundering argues that no more than 25 percent of cocaine and heroin profits are laundered, because a good portion of the profits compensates low-level drug dealers who do not launder most of their earnings.<sup>67</sup> A key distinction between these assessments is how much of the returns accruing to retailers are available for laundering. In the absence of more systematic data on the internal workings of drug retail organizations, this controversy is unlikely to be resolved.

Perhaps more central than the magnitude of money laundering is how important it is to the smooth functioning of the illicit drug supply chain. Because operating expenditures, particularly bribes and wages, can be paid in cash throughout the supply chain, significantly impeding drug trafficking organizations' ability to launder money into the financial system may not affect their operating capacity much, although it could raise their costs. U.S. Customs and Border Patrol authorities argue that no more than half of bulk cash from U.S. drug proceeds is laundered into the financial system upon arriving in Mexico.<sup>68</sup> They argue that the percentage laundered is probably closer to one quarter, as drug trafficking organizations are able to pay the majority of their expenses in cash. This is consistent with another 2011 study, which estimates that around one third of criminal proceeds in Mexico enter the financial system.<sup>69</sup>

## Money Laundering and Illegal Mining

The mining industry is currently one of the major sources of economic growth in the Andean region. The price of copper rose 395 percent between 2000 and 2010, and the price of gold rose 438 percent.<sup>70</sup> In addition to the mining industry, trade of scrap metals has also become a profitable business. In

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<sup>66</sup> Levitt and Venkatesh (2000); Reuter et al (1990).

<sup>67</sup> Peter Reuter, "Are Estimates of the Volume of Money Laundering either Feasible or Useful? Comments on the Presentation by John Walker," Paper presented at the Tackling Money Laundering Conference, Utrecht University (November 2, 2007).

<sup>68</sup> United States of America-Mexico Bi-National Criminal Proceeds Study.

<sup>69</sup> Nicolas Brien et al., "A Bilateral Study on Money Laundering in the United States and Mexico" (Global Financial Integrity and Columbia School of International and Public Affairs: 2011).

<sup>70</sup> U.S. Geological Survey (2013), *Metal prices in the United States through 2010: U.S. Geological Survey Scientific Investigations Report 2012-5188*, available only at <http://pubs.usgs.gov/sir/2012/5188>.

the case of copper, countries that are not metal producers have experienced substantial increases in exports of scrap (up by 114 percent in seven years, in the case of Colombia<sup>71</sup>), which is unprecedented in the records of foreign trade in Latin America.

This wealth of resources does not go unnoticed by transnational criminal organizations, which view gold as an instrument of high intrinsic value that can be easily converted or transformed into other instruments (for example jewelry). These in turn can be transported with greater ease than bulk cash.<sup>72</sup> An additional comparative advantage of gold for criminal organizations is that most mines in the hemisphere are located in remote areas away from the control of the authorities. This dynamic has led to the consolidation of cartels that illegally exploit precious metals.<sup>73</sup>

The flow of proceeds from legal and illegal mining provides a suitable environment to launder money. Perhaps the most commonly detected modality is the payment of drug shipments in gold, which can then be transported on commercial flights or hidden in merchandise included in foreign trade transactions. In recent years there have been several such cases, primarily at airports in Bogotá, Lima, Quito, and Santiago de Chile.<sup>74</sup> In one of these cases, customs authorities seized 626 grams of gold, hidden in a suitcase belonging to a passenger coming from Spain, which at that time was valued at \$27,000.<sup>75</sup>

A second typology involves simulating production of gold at the mines; illicit money is then mixed with the money of legal origin and is shown as proceeds from mining operations.<sup>76</sup> Such operations can be seen in companies that have documents supporting the extraction of large quantities of gold but lack the equipment or employees to extract the recorded quantities.

Another method is to consolidate shipments of gold bought as scrap in small retail shops or pawn shops in the country of origin and then smuggle this to mining areas where it is reported as a product extracted directly from the mines.

This situation has led some countries such as Colombia and Peru to pass laws to combat illegal mining and implement mechanisms to detect the entry of gold and precious metals smuggled into their territory.

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<sup>71</sup> Andrés Rosales, "Cobre robado, con 'sello' de exportación," *El Tiempo*, September 29, 2012: [http://www.eltiempo.com/justicia/ARTICULO-WEB-NEW\\_NOTA\\_INTERIOR-12266762.html](http://www.eltiempo.com/justicia/ARTICULO-WEB-NEW_NOTA_INTERIOR-12266762.html).

<sup>72</sup> Financial Action Task Force, Report on Money Laundering Typologies 2002-2003, pages 19-24: <http://www.oecd.org/newsroom/2494366.pdf>.

<sup>73</sup> Laura Herrera, "Illegal mining finances armed conflict in Colombia," *Infosurhoy*, February 12, 2012: [http://infosurhoy.com/cocoon/saii/xhtml/en\\_GB/features/saii/features/main/2013/02/12/feature-02](http://infosurhoy.com/cocoon/saii/xhtml/en_GB/features/saii/features/main/2013/02/12/feature-02).

<sup>74</sup> "Policía, tras red de lavado de activos con oro," *El Tiempo*, February 18, 2013: [http://www.eltiempo.com/justicia/ARTICULO-WEB-NEW\\_NOTA\\_INTERIOR-12602341.html](http://www.eltiempo.com/justicia/ARTICULO-WEB-NEW_NOTA_INTERIOR-12602341.html).

<sup>75</sup> "Dian descubre un corazón de oro usado para lavar dinero," *Portafolio*, July 4, 2012: <http://www.portafolio.co/economia/dian-descubre-un-corazon-oro-usado-lavar-dinero>.

<sup>76</sup> Financial Transactions and Report Analysis Centre of Canada (FINTRAC), "Money Laundering and Terrorist Activity Financing Watch, July - September 2011," pages 5-6: <http://www.fintrac-canafe.gc.ca/publications/watch-regard/2012-01-eng.pdf>.

## Nonprofit Organizations

A nonprofit organization, according to the definition of the Financial Action Task Force, is a legal entity or organization “that primarily engages in raising or disbursing funds for purposes such as charitable, religious, cultural, educational, social or fraternal purposes, or for the carrying out of other types of ‘good works.’” While the vast majority of nonprofit organizations are devoted to worthy causes, in some cases such groups can function as vehicles for laundering money or funding terrorist activities. These organizations often enjoy the public’s trust and represent a growing sector worldwide, both economically and politically. They may have access to considerable and diverse sources of funding, circulate large amounts of cash, and operate both at the national and international levels. Often, nonprofits are not subject to many regulations and are straightforward to establish.

Nonprofit organizations fall under the scope of Article 5 of the 1999 Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime. Although a preventive system has been developed to monitor nonprofit organization financial flows, several challenges remain. First, many countries in the region have not implemented the policies laid out in the international framework. Furthermore, full implementation of these policies will require strengthening international cooperation and enhancing, both from a quantitative and qualitative perspective, the exchange of information among all stakeholders from the private and public sectors as well as at the national and international level. This cooperation is paramount to the swift detection, investigation, and successful prosecution of individuals and nonprofit organizations who could potentially be linked to terrorist organizations and money laundering.

Other preventive measures can be implemented as a first step. The lack of legislation related to nonprofit supervision in most countries of Latin America and the Caribbean could be temporarily addressed by the public sector through the adoption of relevant international best practices and standards. Along the same lines, nonprofits could implement self-regulating mechanisms aimed at increased transparency of their activities, thus building public confidence. Finally, financial institutions could implement specific procedures when doing business with nonprofit organizations—knowing their clients through reinforced due diligence procedures, creating risk profiles, familiarizing themselves with typologies and red flags related to nonprofit organizations, and improving reporting mechanisms to relevant authorities.





# SECTION 5: POLICY IMPACTS

## Impact of Marijuana Legalization in Washington and Colorado on Mexican Trafficking Organizations

This section examines how the recent marijuana frameworks approved in the U.S. states of Washington and Colorado could affect Mexican drug trafficking organizations—and what consequences that could bring in terms of violence. While scenarios exist in which the revenue effects of these legal changes are large, the exact magnitude of these revenue effects are difficult to predict.

In the case of Washington, if its program of taxed and regulated sales of marijuana is allowed to proceed, legal in-state production and sale will tend to displace—though perhaps not completely—illegal production and imports from other U.S. states, Canada, and Mexico. Since Washington accounts for less than 3 percent of the total U.S. cannabis market, whether the impact is felt outside the state depends entirely on the amount of leakage or diversion to other states. Because prices will plausibly remain close to their current level, diversion is unlikely to be large.

In Colorado, lower taxes and somewhat less stringent regulations could lead prices to fall considerably below the current illicit market price. Indeed, prices might be low enough to make Colorado cannabis competitive with illicit wholesale cannabis in other states. The risks and avoidance costs imposed by law enforcement constitute a large share of the production costs of illegal marijuana, so avoiding these costs would constitute a major potential competitive advantage for Colorado-grown marijuana. Were this to happen, marijuana prices could eventually fall nationwide, reducing the proceeds and wholesale market shares of international trafficking organizations. However, even if Colorado’s law provides its growers with a substantial cost advantage, it will take multiple growing seasons for their market share to increase and for any resulting price declines to work their way through the markets.

In a mass diversion scenario stemming from the Colorado and Washington laws, Mexican commercial-grade marijuana could be displaced through much of the United States, probably retaining a significant market share only in border communities.<sup>77</sup> At the extreme, Mexican drug trafficking organizations could lose some 20 to 25 percent of their drug export income, and a smaller, though difficult to estimate, percentage of their total revenues. That would be a significant, but not crippling, financial blow. The loss of marijuana exports could also have indirect effects on drug trafficking organization’s profits, although these would probably be small relative to the direct effects on revenue. For example, if the labor supply curve is upward sloping—meaning

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<sup>77</sup> Hope and Clark (2012).

that the wage a drug trafficking organization must pay to hire an additional worker increases with the size of its workforce—then average wages paid to cocaine and heroin traffickers could decline, as those willing to work for less are reallocated from smuggling marijuana to smuggling other drugs. On the other hand, the loss of the U.S. wholesale marijuana market would mean fewer operations over which to spread fixed costs.

Any mass diversion scenario assumes that the U.S. federal government and other state governments are unwilling or unable to prevent Colorado and Washington from producing and exporting marijuana on a large scale. If marijuana traced to Colorado began to dominate cannabis markets across the United States, the federal government would be strongly pressured to intervene. Moreover, it requires that Mexican drug trafficking organizations cannot significantly reduce prices in response to increased competition. If they currently charge a wholesale price substantially above their marginal cost, they could potentially out-compete Colorado-produced marijuana—at least in some markets—by lowering their prices. Thus, their profit decline would be smaller than if the competition had driven them out of the market altogether.

Finally, if legally grown Colorado marijuana is able to dominate markets throughout the United States, this may change policies in ways that lower costs for Mexican drug trafficking organizations, allowing them to subsequently compete more effectively. A more tolerant Mexican approach to marijuana cultivation and transport could allow drug trafficking organizations to more efficiently organize their operations, cutting costs and reducing prices. Moreover, U.S. Customs and Border Patrol might devote less effort to interdicting marijuana at the Southwest border if Colorado-produced marijuana can cheaply meet U.S. demand and the commitment of the federal government to marijuana prohibition is questioned. Thus, while a large effect on Mexican drug trafficking organization profits is possible, it is far from assured.

The impact that the loss of marijuana revenues—in the event that they were large—would have on drug trade-related violence in Mexico is even more uncertain. Empirical evidence on how violence changes with illicit drug profits is mixed and thus offers little guidance.<sup>78</sup> In any case, a large loss in marijuana revenues would affect some drug trafficking organizations more than others. For example, Sinaloa revenues could fall by as much as 50 percent, whereas the Zetas would be less affected.<sup>79</sup> This raises the possibility that Sinaloa's rivals would take advantage of its weakened position by attempting to seize control of some of its territory, generating increased violence in the short to medium term. A large decline in marijuana revenues could also generate violence within drug trafficking organizations by spurring members to compete over dwindling profits and a declining number of jobs. On the other hand, a

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<sup>78</sup> Daniel Mejía and Pascual Restrepo, "Do Illegal Drug Markets Breed Violence? Evidence for Colombia," Universidad de los Andes Working Paper (2011); Llewellyn Hinkes-Jones, "How the Plummeting Price of Cocaine Fueled the Nationwide Drop in Violent Crime," *The Atlantic*, November 11, 2011; Steven Levitt, "Understanding Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six that Do Not," *Journal of Economic Perspectives* (2004), 18 (1), 163-190; Eric Olson and Christopher Wilson, "Beyond Merida: The Evolving Approach to Security Cooperation" (Woodrow Wilson International Center for Scholars, 2010).

<sup>79</sup> Hope and Clark (2012).

decline in profits could reduce violence in the long run, as the returns to entering and fighting over control of the drug trade would be lower. Even if effects on violence are non-trivial, they may be difficult to distinguish against a backdrop of other changes. Any changes in cannabis markets will take time to develop and may occur simultaneously with other changes that also affect violence rates in Mexico.

## Drug Legalization in a Producing or Transit Country

The impact of potential legalization of drugs in major transit countries is uncertain. On the one hand, all else being equal, legalization could reduce conflict over retail drug markets and transit routes, since retail drug prices would fall and drugs could be transported without fear of confiscation. Moreover, contracts could potentially be enforced and disputes resolved through the legal system rather than through violence. While the retail drug market in Mexico is small relative to the U.S. market, evidence nevertheless indicates that drug retailing organizations compete violently to dominate it.<sup>80</sup> In the absence of a credible approach for estimating how much of the drug violence under prohibition results from conflicts over Mexican retail markets and transit routes, it is difficult to estimate how large this effect would be, but it is nevertheless likely to be present.

On the other hand, drug legalization could reduce entry barriers into drug production and trafficking and increase returns, generating increased competition. Competition, in turn, could potentially lead to violence. Extensive resources would no longer be required for bribing large numbers of law enforcement officials, making it easier for small scale producers and transporters to enter the business. Moreover, while drugs would still need to be smuggled into the United States, drug production and transport within Mexico could be organized more efficiently under legalization, increasing the profits earned at a given set of drug prices. However, if entry barriers fell and returns increased, more groups could be induced to enter the drug trade. The profits of incumbent groups could fall, as entrants competed down Mexican drug prices and potentially wholesale prices in the United States as well. Incumbent groups, already highly specialized in using violence to reduce competition, could potentially employ coercion, intimidation, and corruption of local government officials to keep potential entrants out. Various evidence suggests that much of the drug violence in Mexico under prohibition is generated by competition between organizations.<sup>81</sup> Thus, increases in competition under legalization could plausibly increase violence, at least in the short run.

Moreover, even if incumbent drug trafficking organizations found it infeasible to control drug production and transport operations within Mexico, fights to dominate smuggling routes into the United States might intensify.

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<sup>80</sup> Ibid.

<sup>81</sup> Eduardo Guerrero-Gutiérrez, "Security, Drugs, and Violence in Mexico: A Survey," 7<sup>th</sup> North American Forum, Washington D.C. (2011); Melissa Dell, "Trafficking Networks and the Mexican Drug War," mimeo, 2012.

Sophisticated transnational criminal organizations would continue to have an advantage in international smuggling activities, and as incumbents saw their profits squeezed within Mexico, controlling entry points into the United States would become increasingly important. Competition to dominate U.S.-bound smuggling routes would likely generate violence, at least in the short run. Given that much of Mexican trafficking profits accrue from smuggling drugs across the border and to U.S. wholesale markets, and given that legalization would likely reduce trafficking organizations' operating costs within Mexico but not their monopolization of smuggling routes into the United States, it is not clear that their profits would fall massively, although the distribution across organizations might change substantially. In fact, if a small number of groups were able to monopolize smuggling into the United States, they might see their profits increase—regardless of who controlled internal production and transport—as the Mexican export prices fell but market power allowed them to continue charging similar wholesale prices in the U.S. market.

Because legalization is outside the realm of historical experience, it cannot be definitively established which of the impacts is most likely to dominate. This makes legalization an inherently risky option. Even if it became clear after a period of legalization that drug violence had increased, it is not clear that violence would immediately fall if prohibition were reintroduced, since drug violence tends to follow epidemic patterns.<sup>82</sup>

If marijuana alone were legalized, the above forces would still be present, but the effects would presumably be smaller since the stakes would be lower. Limiting legalization to marijuana might thus provide some insight with less risk. However, to the extent that the effects were quite small they would be difficult to distinguish from broader trends in violence. To the extent that they were large, the caveats about risk that apply to the legalization of all drugs would remain important.

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<sup>82</sup> Guerrero-Gutiérrez (2011).



ISBN 978-0-8270-6012-8



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