


Toxico-Economics and Abused Drugs

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Disclosures & Cautions

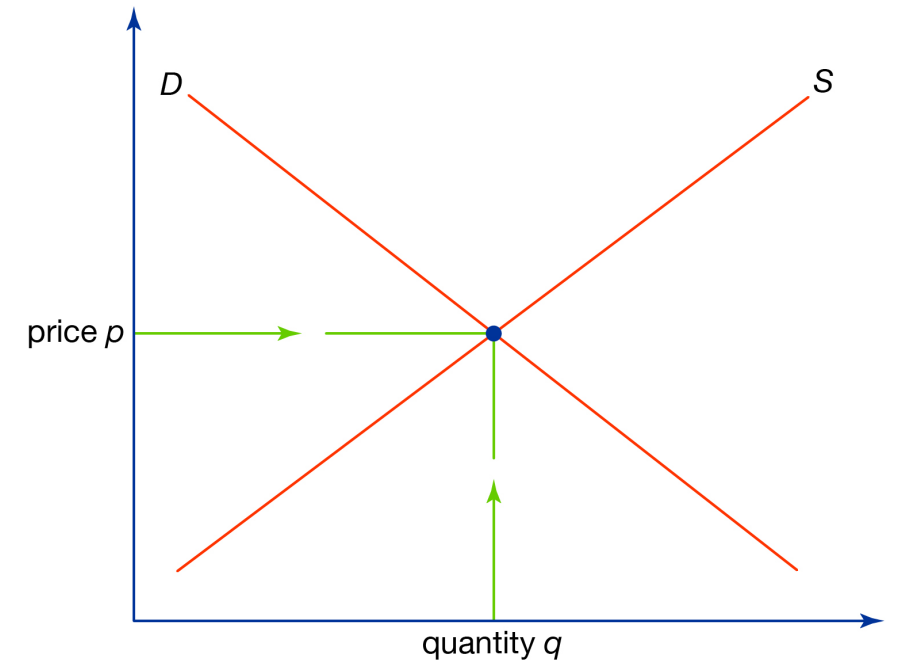
No financial interests to disclose.

This is a discussion of the pervasiveness of the drug trade and not an endorsement for participation.

Econ 101

“The demand curve slopes down and the supply curve slopes up, and where they meet is the equilibrium point, or market-clearing price.”

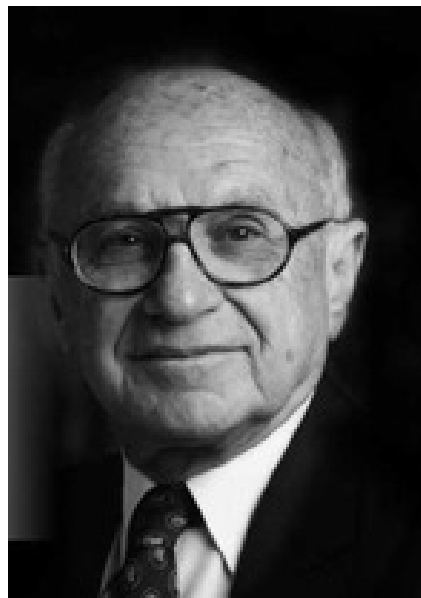
Supply and demand



Drug Policy & Economics

“See, if you look at the drug war from a purely economic point of view, the role of the government is to protect the drug cartel. That's literally true.”

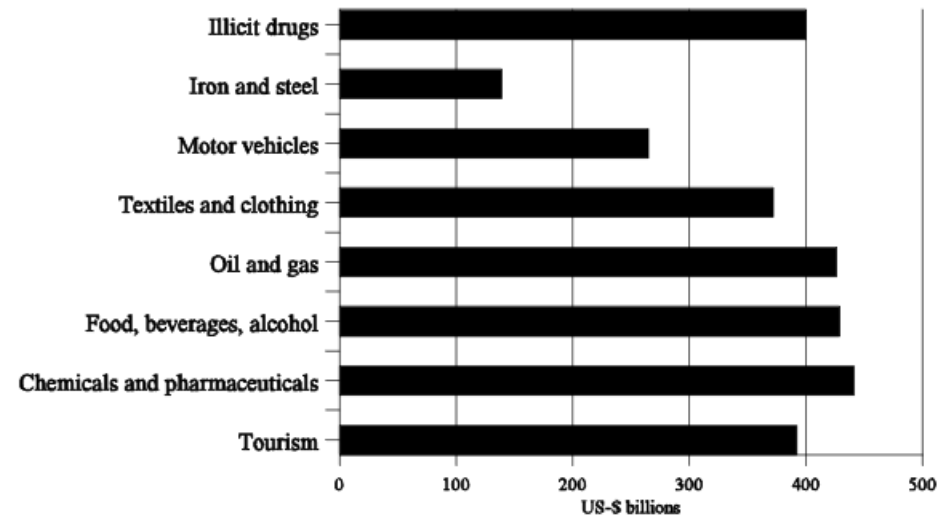
 **Milton Friedman**



Nobel Prize 1976 for consumption analysis
and monetary theory

World Commodity Exports

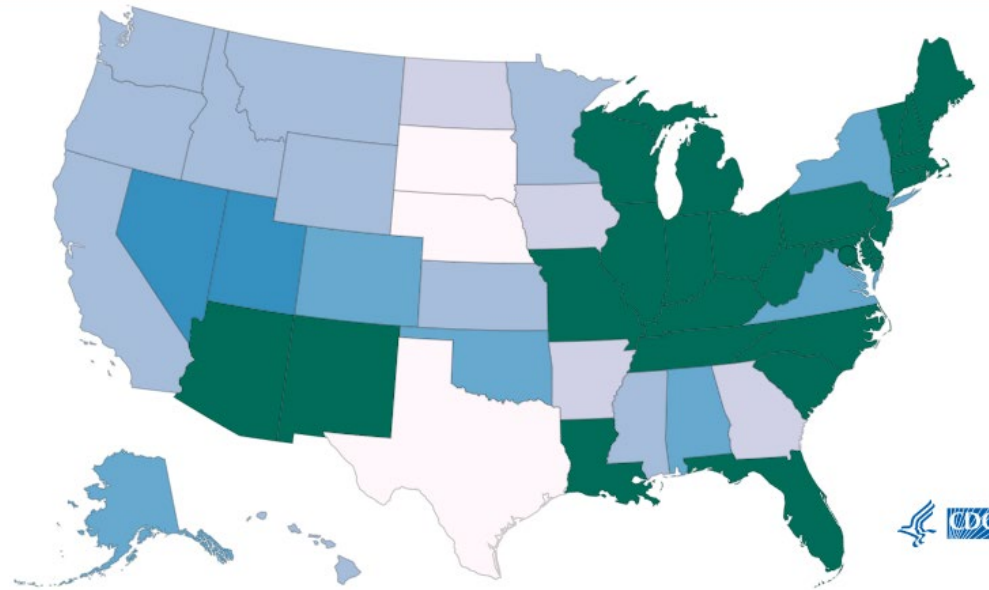
Figure II. Turnover of illicit drug trade compared to international trade (exports) in major commodities and services (1995)



Sources: UNDCP, IMF, UNCTAD, World Tourism Organization.

Overdose Deaths 2019

Number and age-adjusted rates of drug overdose deaths by state, US 2019



Range Category



ToxicoEconomics

What are we talking about?

Why is this important?

Who does it impact?

What are the links between drugs of abuse and economics?

Online DarkMarket – Free Samples

Free samples to get people hooked have been reported for over a century.

Sellers in the DarkMarket offer hundreds of almost-free samples or promos of nearly all major drugs — cannabis, stimulants, prescription drugs, ecstasy and psychedelics.

These samples weren't entirely free because customers were often asked to pay nominal fees, such as for shipping.

Sellers largely want reputable reviewers to try their product and leave feedback.

“Rips”

MANY DRUG SALES ARE ACTUALLY “RIP OFFS,” MEANING THEY INVOLVE NO REAL DRUGS, JUST FILLER.

What if prison sentences were lighter for dealers selling impure drugs? Dealers would spend less time in jail and more time on the street. Nicola Persico's mathematical model shows this would discourage rip-off wary users from buying drugs, which would in turn lower the demand for illegal substances.

■ % of transactions that are rip-offs

■ cost of rip-off compared to pure drug



Based on DEA data of drug transactions from 1981-2003

Cryptocurrencies and ToxicoEconomics

Each year there are \$76 billion worth of illegal drug and other transactions that use bitcoin.

People who use bitcoin illegally often transact with the same parties many times. Their transactions tend to be smaller and they engage in more transactions than bitcoin investors.

As mainstream interest in bitcoin increases and other cryptocurrencies emerge, illegal bitcoin transactions decline.

Online illegal drug marketplaces promote drug use but there may be benefits compared to drug transactions that happen on the street, including reduced violence and safer drugs because online vendors rely on positive user feedback.

AN ECONOMIC ANALYSIS OF A DRUG-
SELLING GANG'S FINANCES

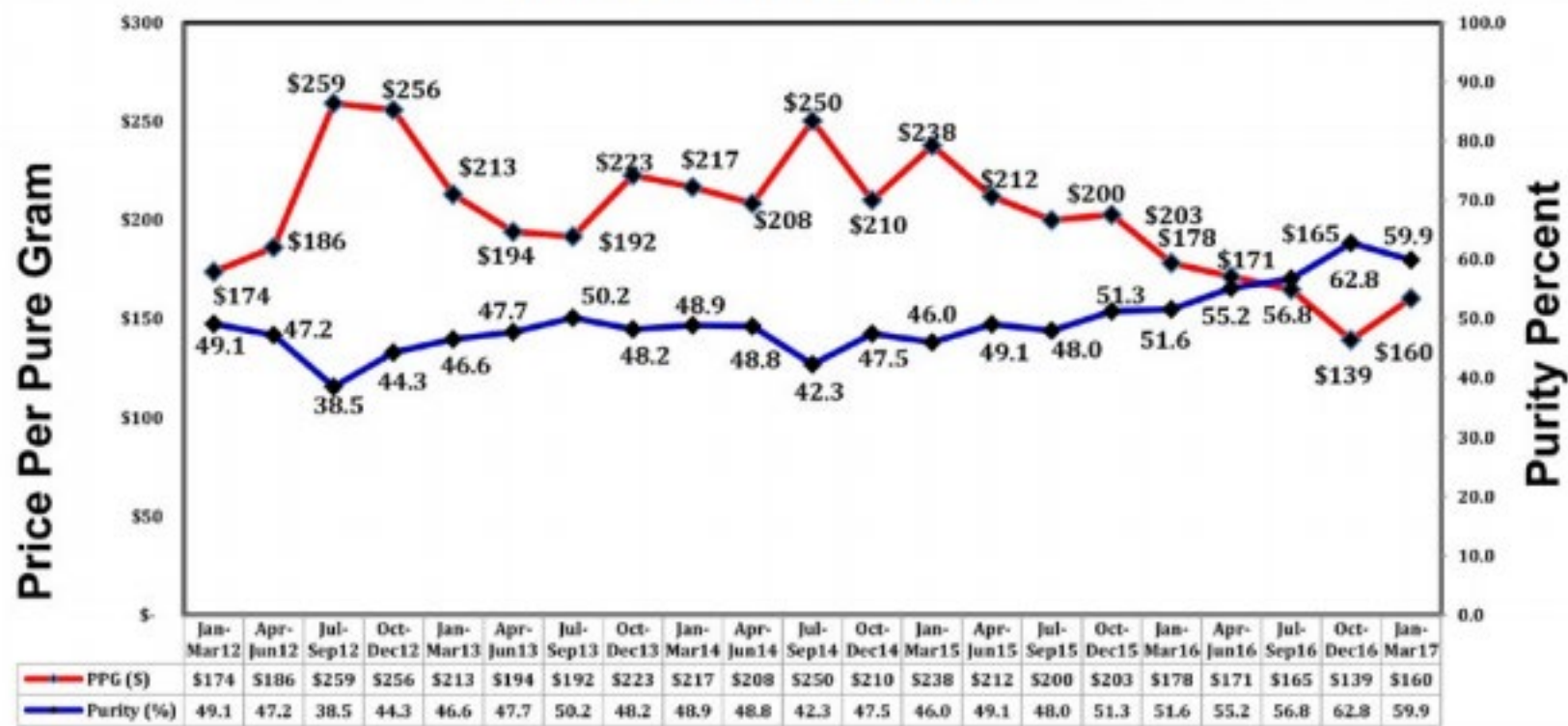
Steven D. Levitt
Sudhir Alladi Venkatesh

Working Paper 6592
<http://www.nber.org/papers/w6592>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
June 1998

Cocaine Price v Purity Marketing of “High Heat”

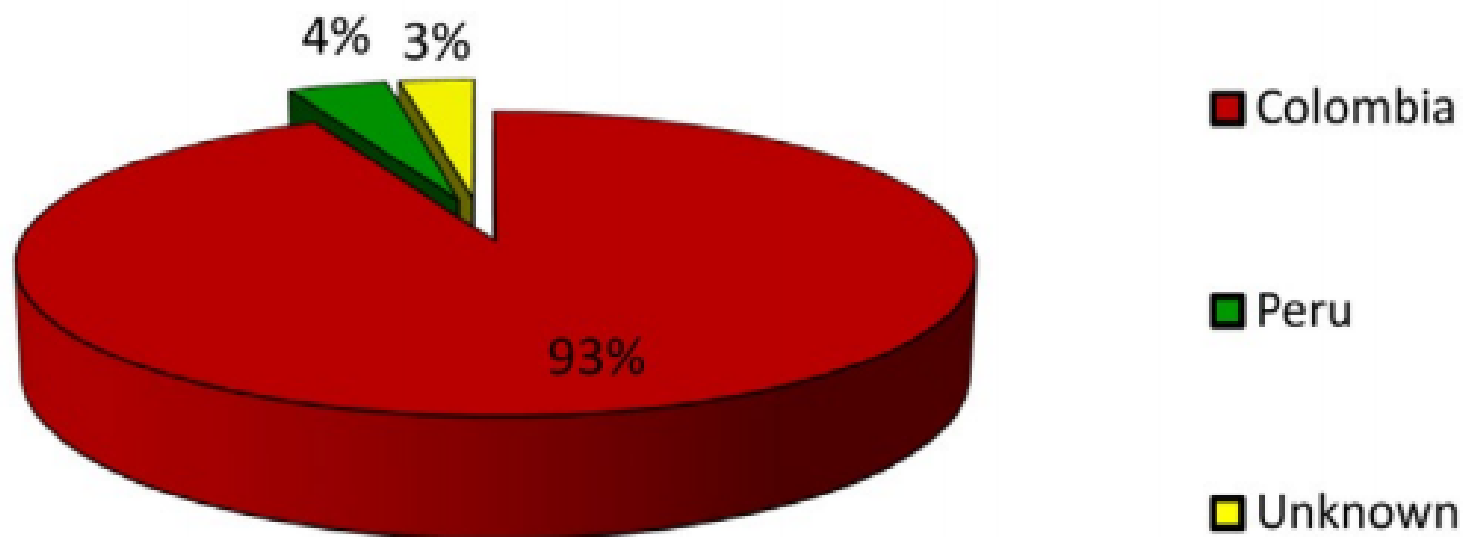
Figure 50. Price and Purity of Domestic Cocaine Purchases,
January 2012 – March 2017.



Source: DEA

Source of US Supply of Cocaine

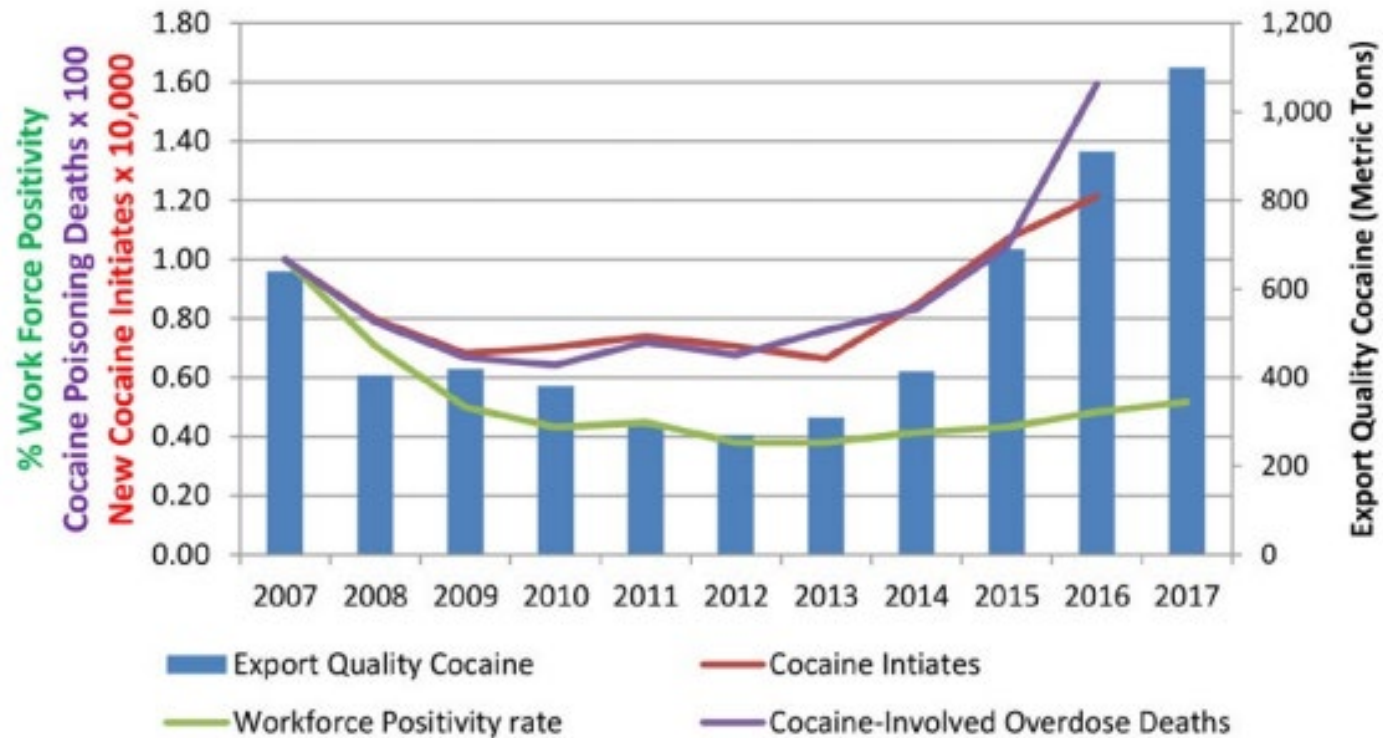
Figure 49. Origin of Cocaine Samples Seized in the United States Mainland, 2017.



Source: DEA

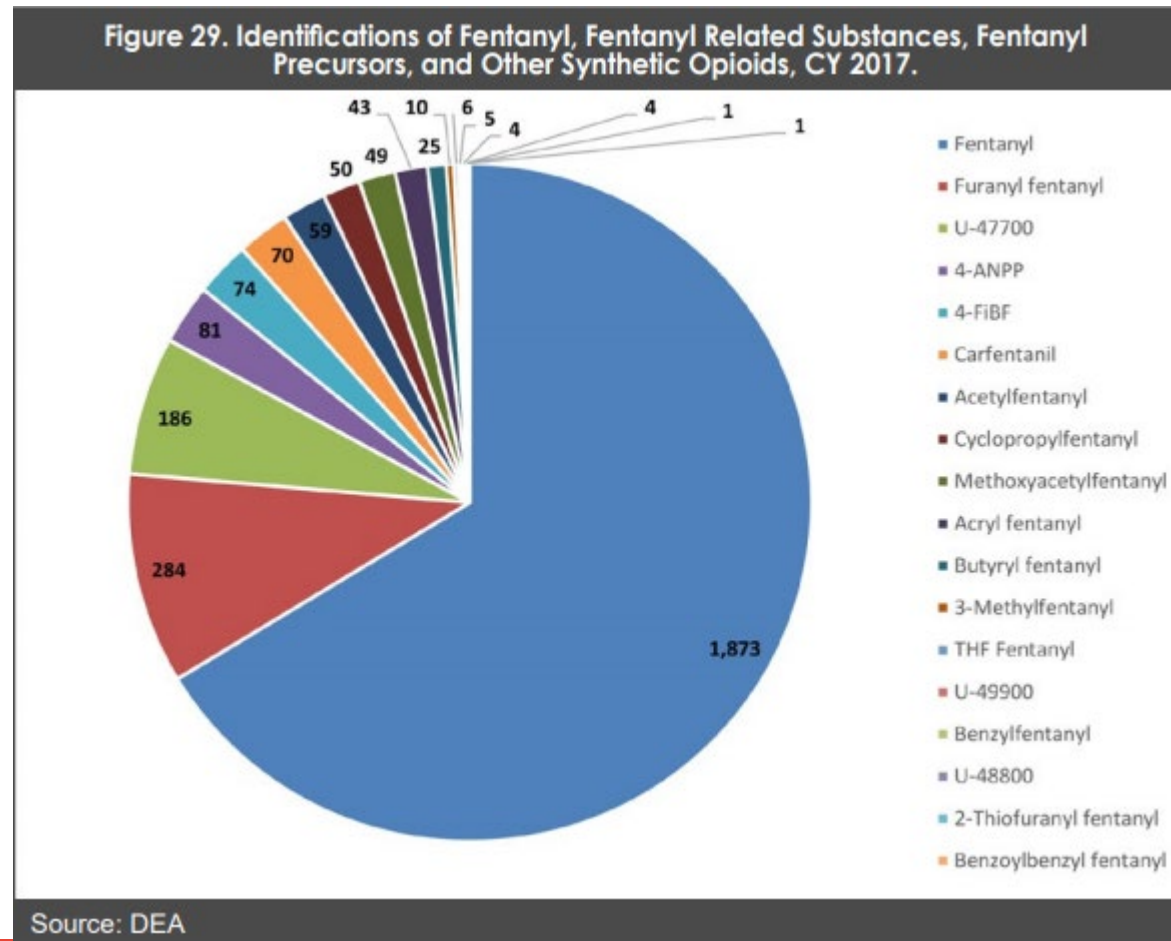
Cocaine Production Estimates

Figure 47. U.S. Cocaine Indicators and Colombia Export Quality Cocaine Production, based on 2007 Value, 2007-2017.

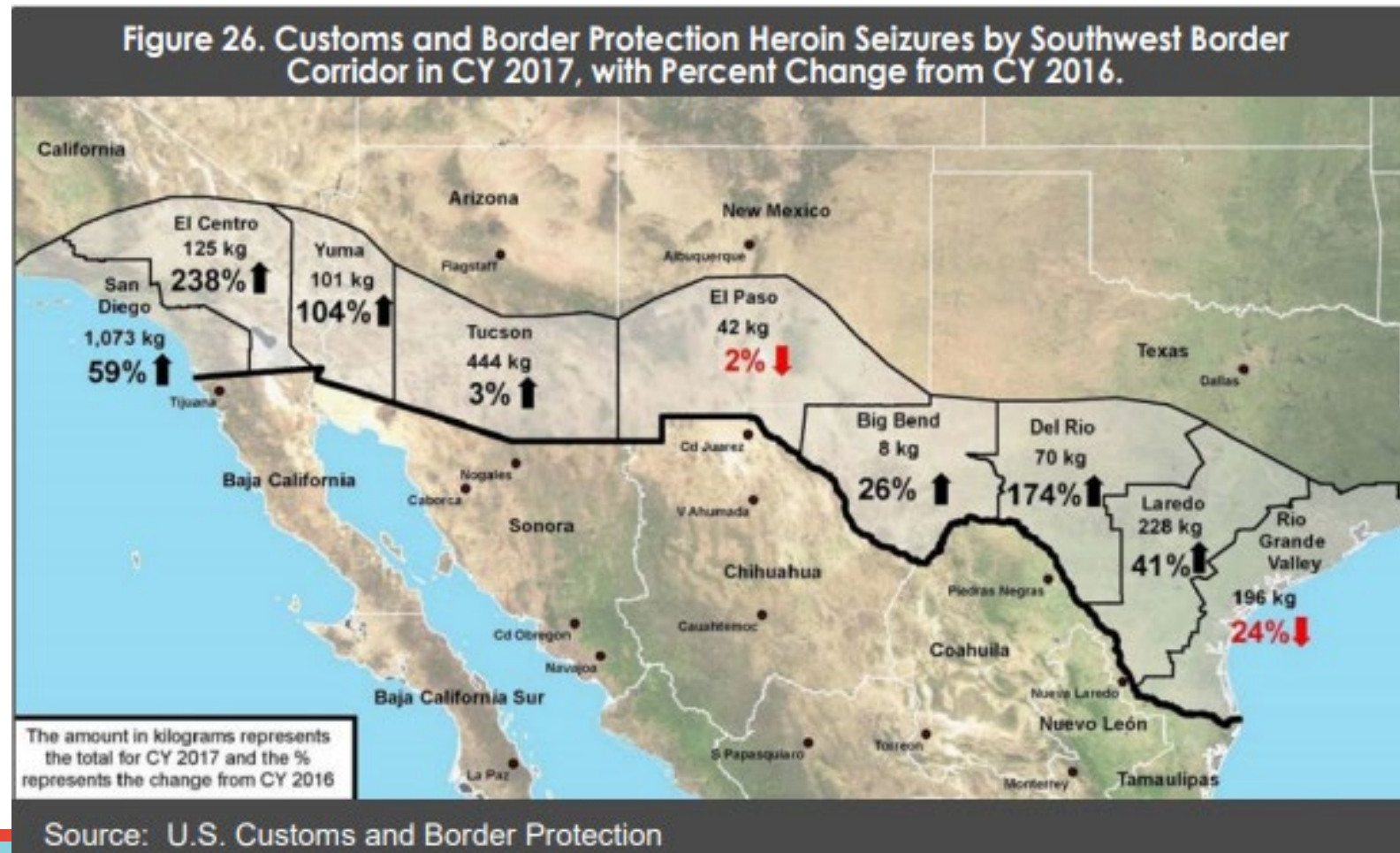


Source: DEA National Forensic Laboratory Information System, August 2017

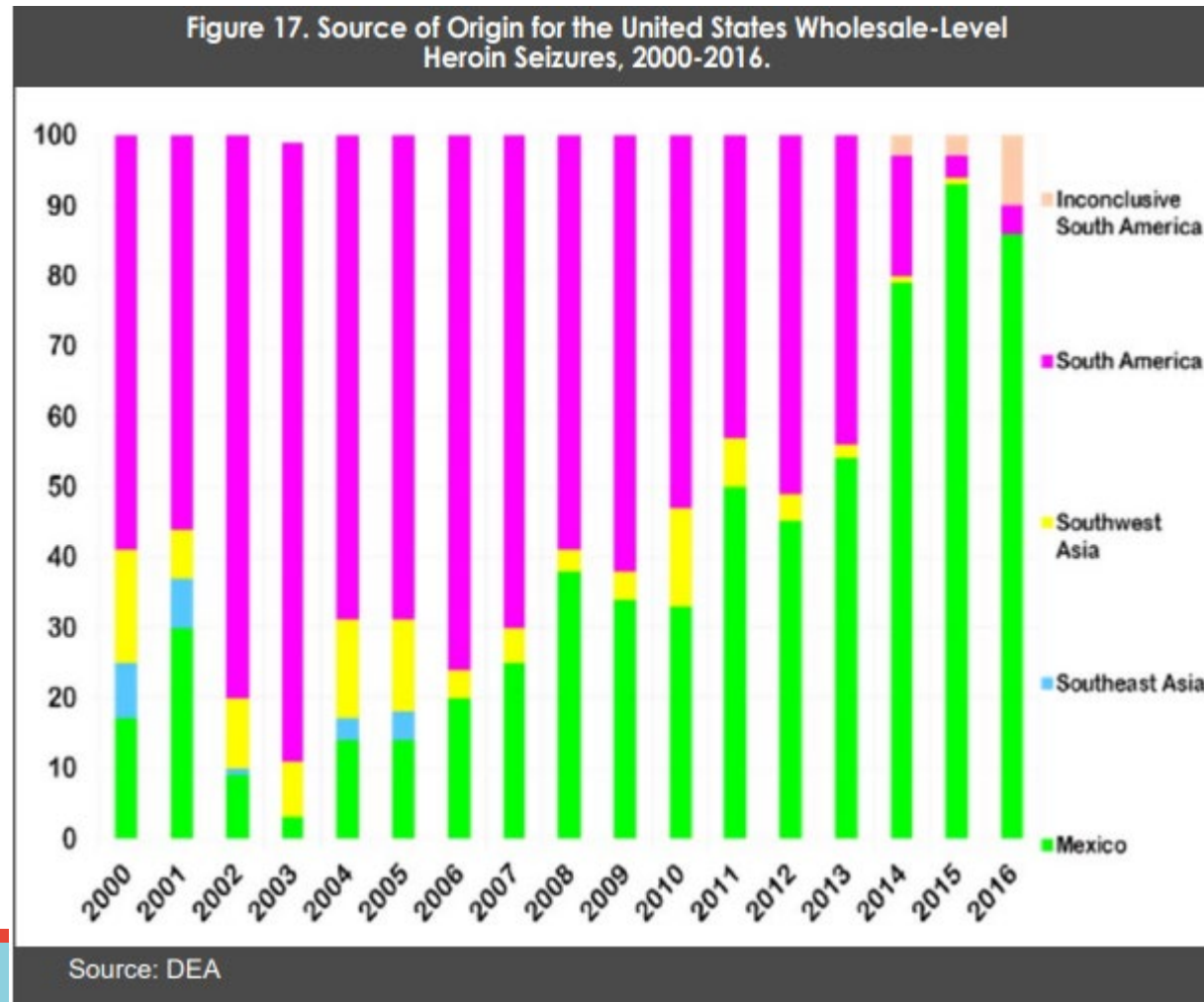
Fentanyl analogues



Heroin Border entry

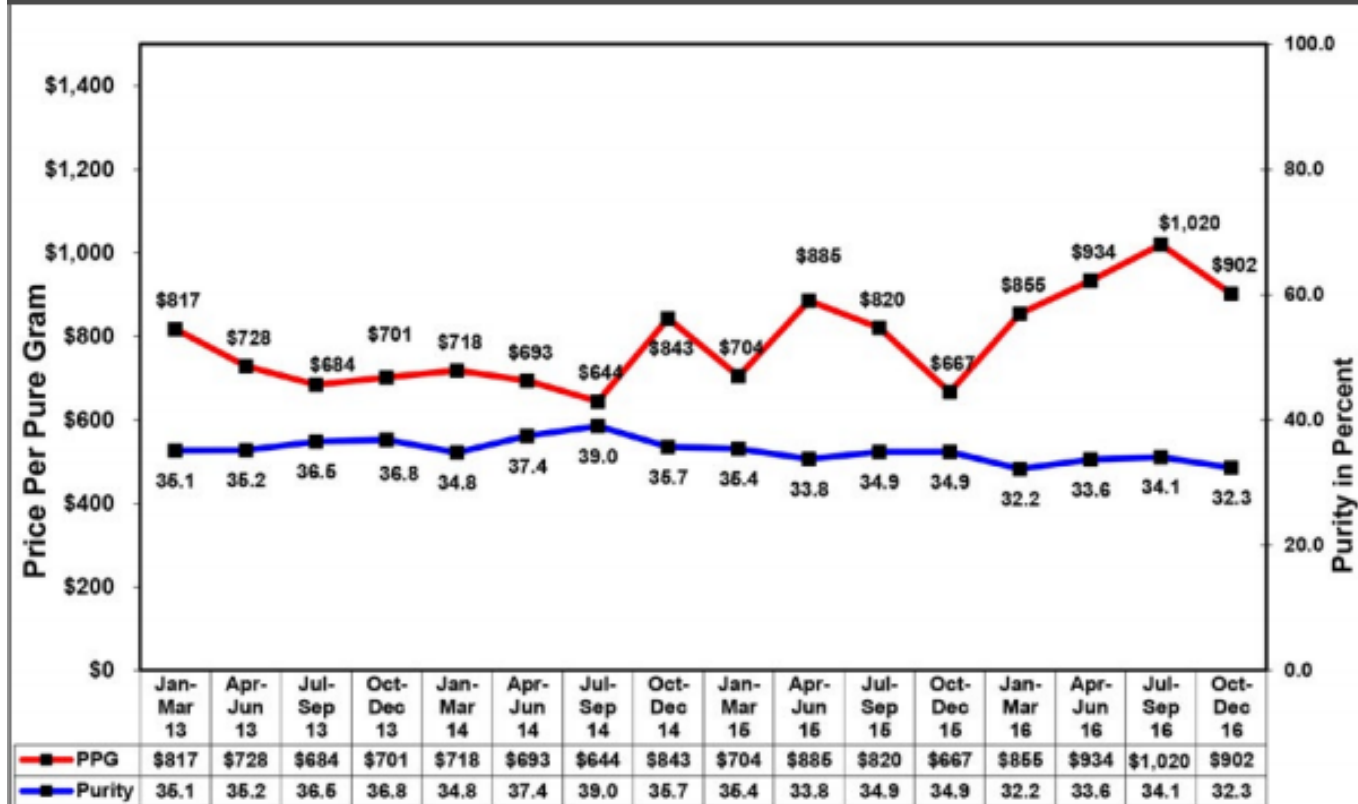


Heroin Source



Heroin Price v Purity over time

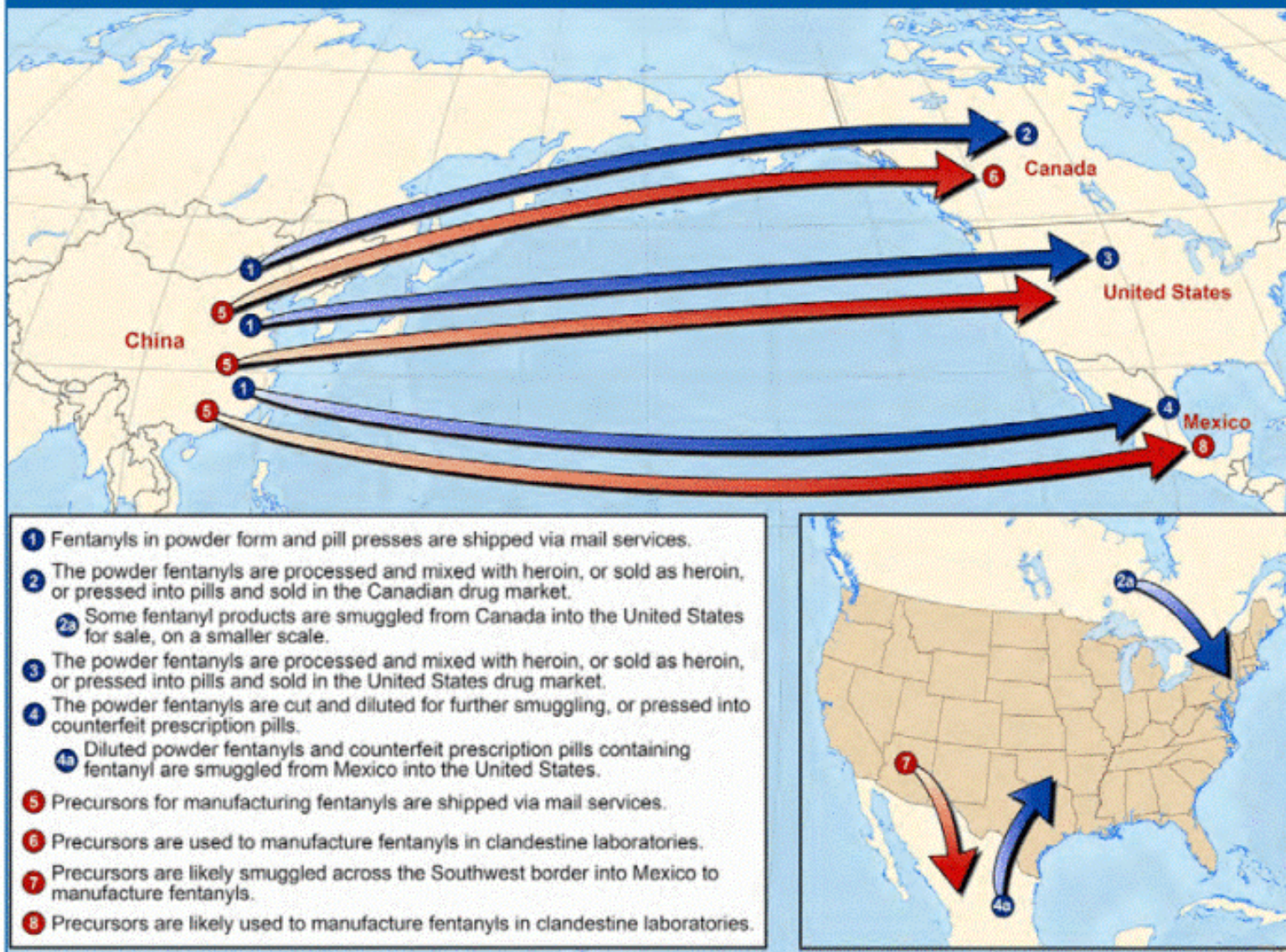
Figure 16. Domestic Heroin Purchases, January 2013 - December 2016.



Source: DEA

Fentanyl Path

Figure 83. Illicit Fentanyl and Fentanyl Precursor Flow Originating in China



Source: DEA



CBP Drug Seizures

Office of Field Operations Nationwide Drug Seizures

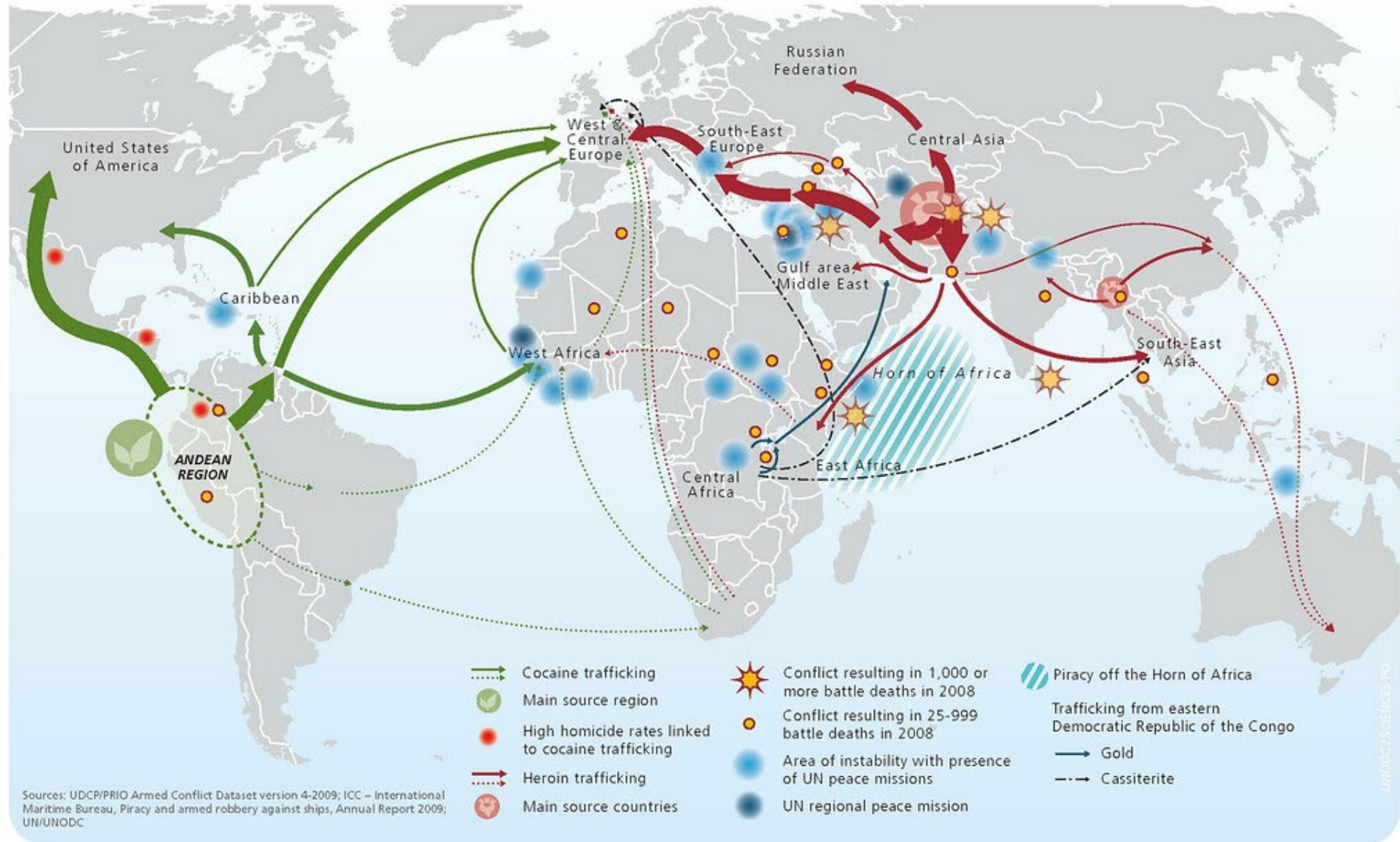
Numbers below reflect FY 2014-2018 totals, FY 2019 TD (to date) (October 1, 2018 - July 31, 2019)

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19 TD
Cocaine	45,323	38,346	52,838	62,415	51,713	81,889
Heroin	4,356	6,023	4,224	3,398	5,205	3,924
Marijuana	438,146	602,821	516,122	366,627	300,289	226,928
Methamphetamine	19,613	25,495	33,086	46,247	56,362	53,849
Fentanyl	n/a	70	596	1,875	1,785	2,096

*weights are in pounds (lb)

FIG. 170:

THE INTERSECTION OF TRANSNATIONAL ORGANIZED CRIME AND INSTABILITY



Examples of Drugs of Abuse and Economics

1. Freakonomics
2. The Wire
3. Breaking Bad

The Art of Money Laundering



Transnational Crime	Estimated Annual Value (US\$)
Counterfeiting	\$923 billion to \$1.13 trillion
Drug Trafficking	\$426 billion to \$652 billion
Illegal Logging	\$52 billion to \$157 billion
Human Trafficking	\$150.2 billion
Illegal Mining	\$12 billion to \$48 billion
IUU Fishing	\$15.5 billion to \$36.4 billion
Illegal Wildlife Trade	\$5 billion to \$23 billion
Crude Oil Theft	\$5.2 billion to \$11.9 billion
Small Arms & Light Weapons Trafficking	\$1.7 billion to \$3.5 billion
Organ Trafficking	\$840 million to \$1.7 billion
Trafficking in Cultural Property	\$1.2 billion to \$1.6 billion
Total	\$1.6 trillion to \$2.2 trillion

The Wire (HBO Series 2002-2008)



Used at Harvard, Duke and Univ. Montreal to teach Urban Economics and Urban Sociology.

The Wire: Barksdale Organization – Fictional

- The Barksdale organization, led by Avon Barksdale with the help of his assistant, Stringer Bell.
- Confronted to wars over turfs, to the decreasing quality of their product, and to loss of their territory (the Franklin towers), the two characters react very differently. While Avon seeks to recruit hitmen to enforce control over West Baltimore at any price, Stringer Bell, on the other hand, embodies the “businessman.”
- Stringer Bell is taking an economics class in the show, in order to figure out how to boost the profits of his drug organization (gets an A- on his paper).

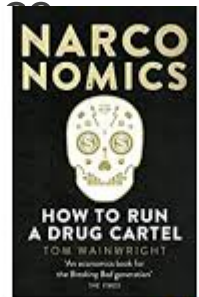
Freakonomics

During the crack cocaine boom of the 1990s, the image of the millionaire crack dealer implanted itself on the public consciousness.

But anyone who spent time around the Crips or Bloods or any other crack-selling gang might have noticed something odd: A great many crack dealers still lived at home with their moms. Why was that?

As it turned out, the gang worked a lot like most American businesses, though perhaps none more so than McDonald's. If you were to hold a McDonald's organizational chart and the crack gang's organizational chart side by side, you could hardly tell the difference.

Amazon Rank #11,386



★★★★★ (172 Reviews)

Freakonomics

1. So the top 120 men on the Black Disciples' (Chicago) pyramid were paid very well. But the pyramid they sat atop was gigantic. Using J. T.'s franchise as a yardstick -- three officers and roughly 50 foot soldiers -- there were about 5,300 other men working for those 120 bosses. Then there were the 20,000 unpaid rank-and-file members, many of whom wanted nothing more than a chance to become a foot soldier. And how well did that dream job pay? About \$3.30 an hour.
2. J. T.'s three officers didn't do much better: about \$7 an hour. So the answer to the original question -- if drug dealers make so much money, why are they still living with their mothers? -- is that, except for the top cats, they don't make much money. They have no choice but to live with their mothers.
3. A crack gang works pretty much like the standard capitalist enterprise: You have to be near the top of the pyramid to make a big wage. But selling crack is a lot more dangerous than most menial labor. Anyone who was a member of J. T.'s gang for the four years covered in the notebooks stood a 1-in-4 chance of being killed. That's more than five times as deadly as being a timber cutter, which the Bureau of Labor Statistics calls the most dangerous job in the United States.

Breaking Bad

Walt's fortune is built on the premise that he's selling his meth at the modest price of about \$60 a gram. That's spelled out in the fifth season episode "Hazard Pay," when Walt and his partners sell a 50 pound batch of their high quality blue meth for \$1,379,560, after the commission that goes to street dealers.

According to Weisheit, \$60 a gram "is not at all unreasonable, especially for meth of a very high quality."

"The price of meth varies wildly from one part of the country to another, and from one time a year to another, depending on supplies," he added. "It can go from \$50 a gram to \$150 a gram. It makes oil prices look stable."

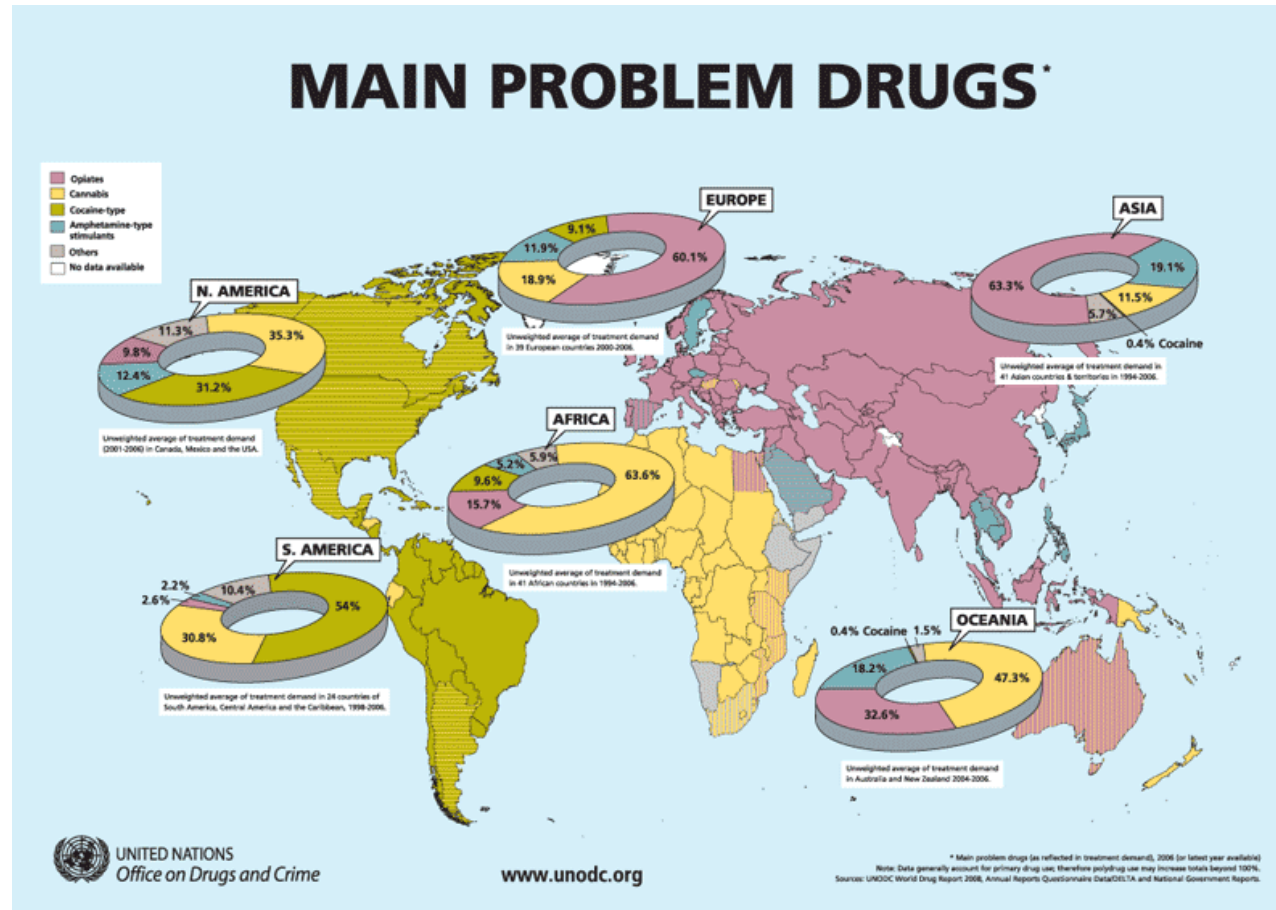
It's a long way from \$60 for a gram of meth to the seven, 55-gallon drums of cash Walt has holding \$80 million. But the volumes of meth on the show are enough to produce that mountain of cash. And the demand for the product is strong enough that Walt could move that much meth in less than a year, especially given his empire's expansion into eastern Europe this season.

Walt was able to make such a large volume of meth because he and his partners stole 1,000 gallons of the industrial chemical methylamine from a train. After the heist, Walt's partners want to sell the chemical for \$15,000 a gallon, instead of cooking it up into meth and selling it.

Cash Flow

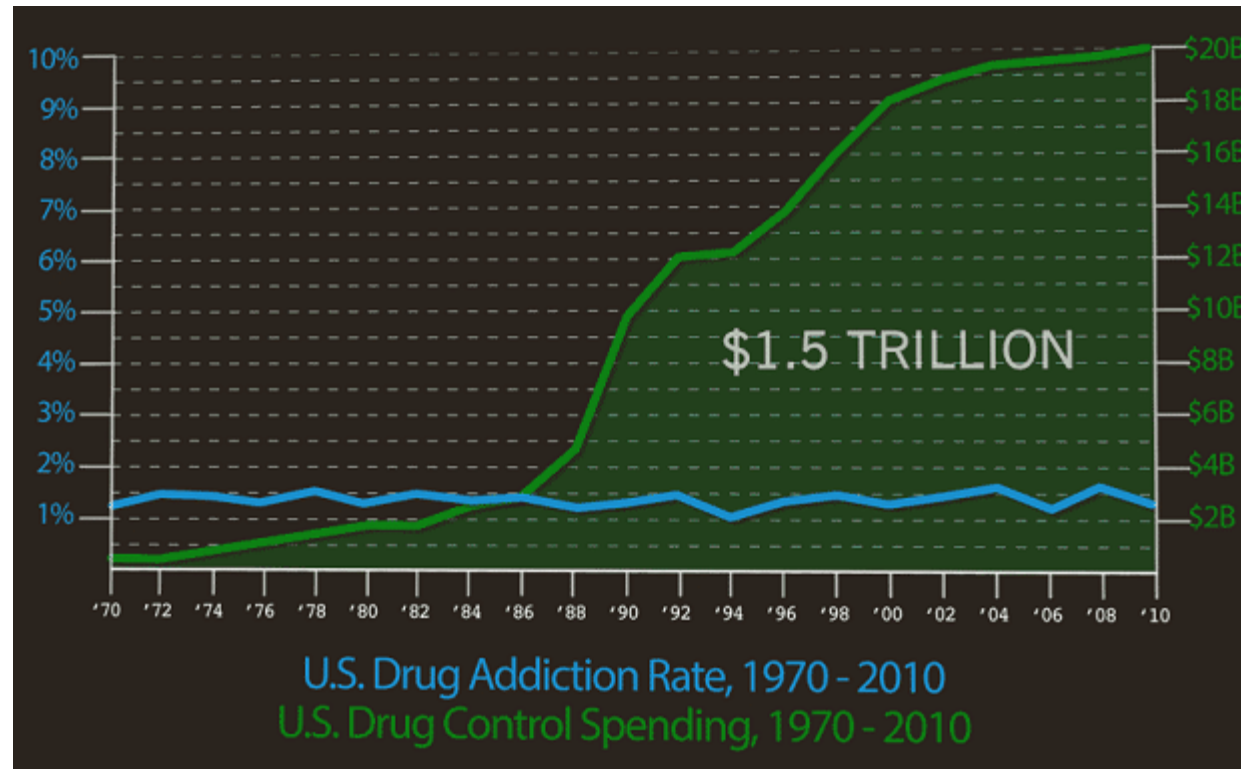


UN ODC Global Drug Trends

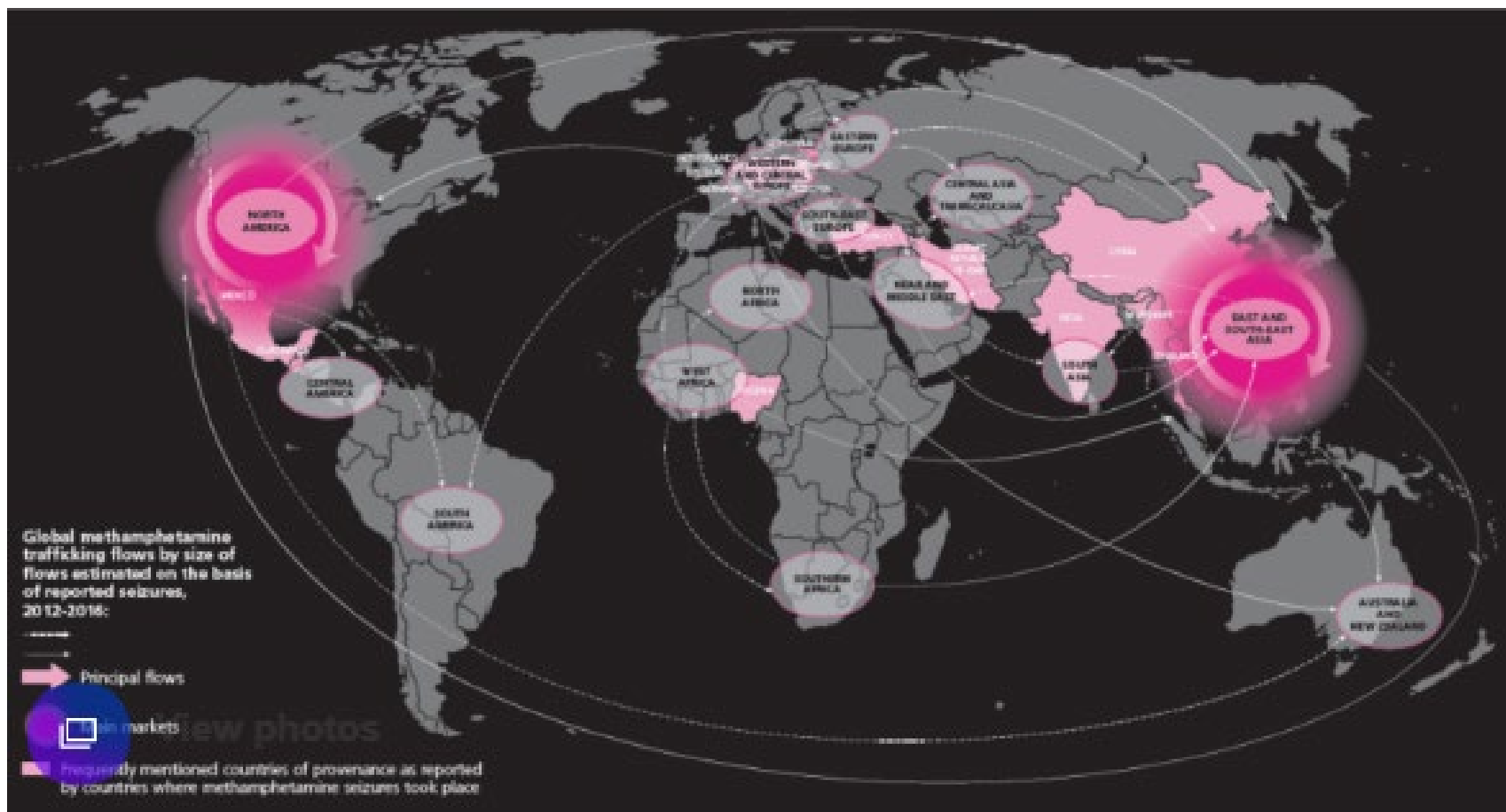


A “**compensating differential**” is the increment to wages that
A worker requires to leave him indifferent between performing
Two tasks, one which is more unpleasant than the other

*“Would you stand around here when all this shit is going on?
No, right? So if I gonna be asked to put my life on the line,
then front me the cash man”*



Methamphetamine Production & Distribution



Malaysian Customs 1187 kg (2600 lbs) of meth

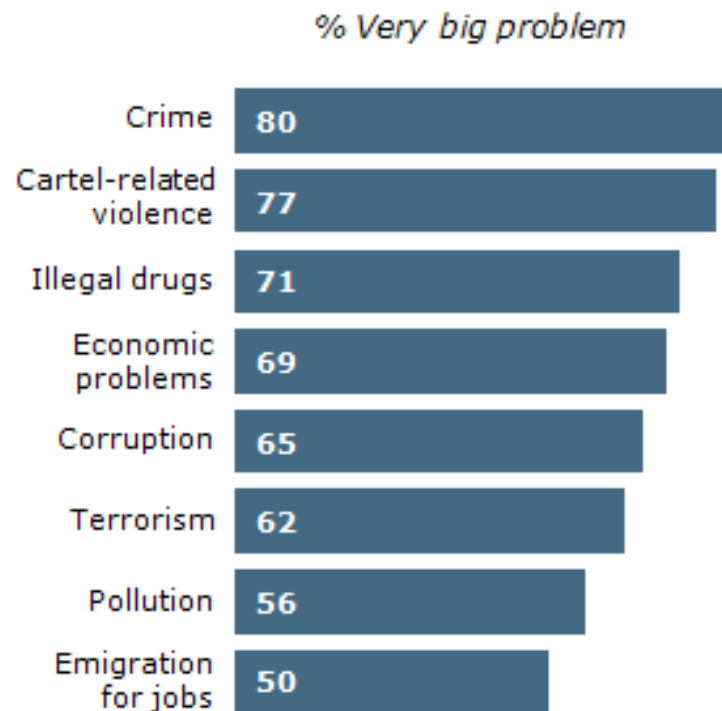


\$17.8 Million

Nilai, Malasia 2018

Its not just drugs

How Big of a Problem Is...



PEW RESEARCH CENTER Q12a-b, Q12d-g, & Q12k-l.

Medellin Cartel

Cocainenomics WSJ & Netflix

At height of power
\$4 Billion in sales
80% of US supply

<https://www.wsj.com/ad/cocainenomics>

Interesting presentation on illegal Drug trade
from the 1960's to the 2000's.

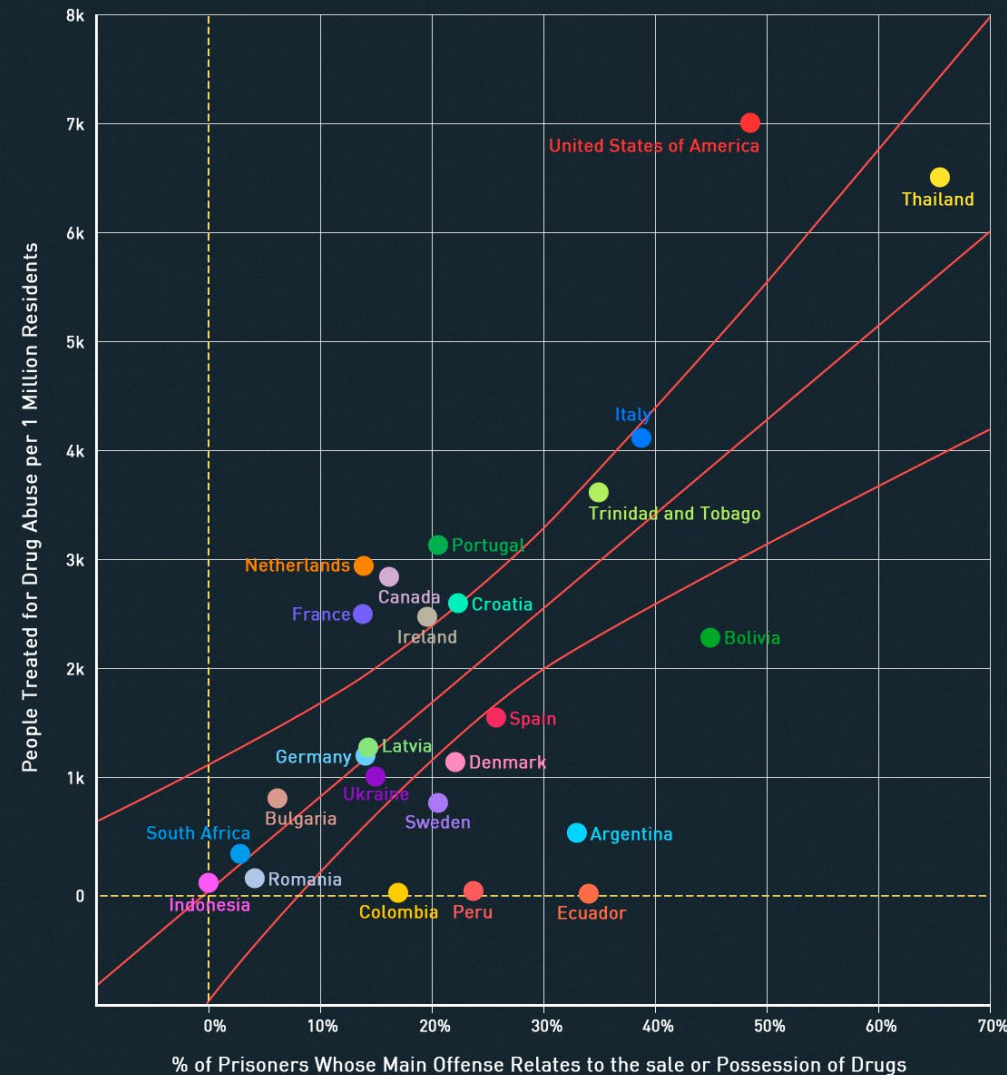
Cocaine and the Medellin Cartel

At its height, the Medellin Cartel was making \$60 million dollars a day.

- Escobar employed a trusted team of local accountants to count, record and distribute incoming cash to his cartel partners.
- They spent \$2,500 a month on rubber bands alone to carefully wrap the stacks of U.S. currency

Treatment v Incarceration

TREATMENT VS. INCARCERATION EXCLUDING NEW ZEALAND, ICELAND, AND AUSTRALIA



Source: <https://data.unodc.org>

RecoveryBrands.com

Illicit Drug Trade has a Major impact on Lives

1. Economy
2. Health (personal and public)
3. Crime and punishment
4. Social Impact

Just say No!



-Its not that easy-



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