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# Ending the Drug Wars

Report of the LSE Expert Group on the Economics of Drug Policy

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# Foreword

**It is time to end the 'war on drugs' and massively redirect resources towards effective evidence-based policies underpinned by rigorous economic analysis.**

The pursuit of a militarised and enforcement-led global 'war on drugs' strategy has produced enormous negative outcomes and collateral damage. These include mass incarceration in the US, highly repressive policies in Asia, vast corruption and political destabilisation in Afghanistan and West Africa, immense violence in Latin America, an HIV epidemic in Russia, an acute global shortage of pain medication and the propagation of systematic human rights abuses around the world.

The strategy has failed based on its own terms. Evidence shows that drug prices have been declining while purity has been increasing. This has been despite drastic increases in global enforcement spending. Continuing to spend vast resources on punitive enforcement-led policies, generally at the expense of proven public health policies, can no longer be justified.

The United Nations has for too long tried to enforce a repressive, 'one-size-fits-all' approach. It must now take the lead in advocating a new cooperative international framework based on the fundamental acceptance that different policies will work for different countries and regions.

This new global drug strategy should be based on principles of public health, harm reduction, illicit market impact reduction, expanded access to essential medicines, minimisation of problematic consumption, rigorously monitored regulatory experimentation and an unwavering commitment to principles of human rights.

Signed:

*Professor Kenneth Arrow*, 1972 Nobel Prize in Economics.
*Luis Fernando Carrera Castro,* Minister of Foreign Affairs, Guatemala.
*Nick Clegg,* Deputy Prime Minister of the United Kingdom of Great Britain and Northern Ireland.
*Professor Paul Collier*, *CBE*, University of Oxford.
*Professor Michael Cox,* LSE IDEAS.
*Alejandro Gaviria Uribe,* Minister of Health and Social Protection, Colombia.
*Professor Conor Gearty,* London School of Economics.
*Aleksander Kwaśniewski,* President of the Republic of Poland (1995 – 2005).
*Professor Margot Light,* LSE IDEAS.
*Baroness Molly Meacher,* UK House of Lords.
*Professor Sir Christopher Pissarides,* 2010 Nobel Prize in Economics.
*Professor Danny Quah,* LSE IDEAS.
*Professor Dani Rodrik*, Institute for Advanced Studies, Princeton.
*Professor Jeffrey Sachs,* Columbia University.
*Professor Thomas Schelling,* 2005 Nobel Prize in Economics.
*George Shultz,* US Secretary of State (1982 – 1989).
*Professor Vernon Smith,* 2002 Nobel Prize in Economics.
*Dr Javier Solana*, EU High Representative for Common Foreign and Security Policy (1999 – 2009).
*Baroness Vivien Stern,* UK House of Lords.
*Professor Arne Westad,* LSE IDEAS.
*Professor Oliver Williamson,* 2009 Nobel Prize in Economics.

# Contributors ]

## LSE Expert Group on the Economics of Drug Policy*

**Professor Danny Quah** (Chair) is Senior Fellow at LSE IDEAS. He is also Professor of Economics and International Development and Kuwait Professor at LSE. He had previously served as LSE's Head of Department for Economics (2006 – 2009) and Council Member on Malaysia's National Economic Advisory Council (2009 – 2011). He is Tan Chin Tuan Visiting Professor at the National University of Singapore.

**John Collins** (Coordinator) is the International Drug Policy Project Coordinator at LSE IDEAS. He is also a PhD Candidate in the Department of International History at the London School of Economics. His research focuses on the history of international drug control. He edited the 2012 LSE IDEAS Special Report *Governing the Global Drug Wars*.

**Professor Laura H. Atuesta Becerra** is a Professor and Research Fellow in the Drug Policy Program at the Centro de Investigación y Docencia Económica (CIDE), Mexico. Her research focuses on the economics of illegal drugs and the effects of drugs on income inequality, internal migration and conflict. Previously she worked at the Inter-American Development Bank.

**Professor Jonathan P. Caulkins** is the H. Guyford Stever Professor of Operations Research and Public Policy at Heinz College, Carnegie Mellon University. His research focuses on modelling the effectiveness of interventions related to drugs, crime, violence, delinquency and prevention.

**Dr Joanne Csete** is Deputy Director for the Open Society Foundations' Global Drug Policy Program. Previously she was an Associate Professor of Public Health at Columbia University, the founding director of the HIV and Human Rights Program at Human Rights Watch, Executive Director of the Canadian HIV/AIDS Legal Network and a senior technical advisor at UNICEF.

**Professor Ernest Drucker** is an Adjunct Professor of Epidemiology at the Mailman School of Public Health, Columbia University. He is also a Scholar in Residence and Graduate Faculty at the John Jay College of Criminal Justice, City University of New York and a Professor Emeritus of Family and Social Medicine, Montefiore Medical Center/Albert Einstein College of Medicine.

**Dr Vanda Felbab-Brown** is a Senior Fellow with the Center for 21st Century Security and Intelligence in the Foreign Policy program at the Brookings Institution. She is an expert on international and internal conflicts and non-traditional security threats, including insurgency, organised crime, urban violence and illicit economies.

**Professor Mark A.R. Kleiman** is Professor of Public Policy in the UCLA School of Public Affairs. He is a leading expert in the field of crime control and drug policy. In addition to his academic work, he provides advice to local, state and national governments on crime and drug policy.

**Professor Alejandro Madrazo Lajous** is a Professor and Researcher in the Legal Studies Division of the Centro de Investigación y Docencia Económica (CIDE) in Mexico. His research focuses on measuring the legal-institutional costs of drug policies and their implications for socioeconomic development.

**Professor Daniel Mejia** is an Associate Professor in the Department of Economics at Universidad de los Andes and a Director of the Research Centre on Drugs and Security, Colombia. His research focuses on conducting econometric analysis of interdiction and eradication policies, with a particular emphasis on the outcomes of Plan Colombia.

**Pascual Restrepo** is a PhD candidate in economics at the Massachusetts Institute of Technology (MIT). Born in Colombia, his research focuses on empirical and theoretical analyses of the costs and benefits of policies implemented under the 'war on drugs'. In particular, his latest research quantifies the collateral costs in terms of violence created by drug markets in transit and production countries.

**Professor Peter Reuter** is a Professor in the School of Public Policy and the Department of Criminology at the University of Maryland. He founded and directed RAND's Drug Policy Research Center from 1989-1993. He also served as the founding President of the International Society for the Study of Drug Policy (ISSDP). Among his six books is (with Robert MacCoun) *Drug War Heresies: Learning from other Vices, Times and Places*.

**Jeremy Ziskind** is a crime and drug policy analyst with BOTEC Analysis. His work for BOTEC has included advising the Washington State Liquor Control Board on rules and regulations for its newly legalised cannabis industry. Jeremy previously held positions with the Office of National Drug Control Policy (ONDCP) and the Vera Institute of Justice.

* LSE IDEAS is responsible for the overall conclusions of this report. Each Contributor is responsible solely for the views expressed in his or her contribution.

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# Executive Summary

John Collins, Editor

**A major rethink of international drug policies is under way. The failure of the UN to achieve its goal of 'a drug free world' and the continuation of enormous collateral damage from excessively militarised and enforcement-led drug policies, has led to growing calls for an end to the 'war on drugs'. For decades the UN-centred drug control system has sought to enforce a uniform set of prohibitionist oriented policies often at the expense of other, arguably more effective policies that incorporate broad frameworks of public health and illicit market management. Now the consensus that underpinned this system is breaking apart and there is a new trajectory towards accepting global policy pluralism and that different policies will work for different countries and regions. The question, however, remains, how do states work together to improve global drug policies? This report highlights two approaches. First, drastically reallocating resources away from counterproductive and damaging policies towards proven public health policies. Second, pursuing rigorously monitored policy and regulatory experimentation.**

States appear set to push forward with a new variety of responses to this issue designed to meet their various national and regional needs. If multilateralism is to remain relevant it must evolve its role from that of global enforcer to global facilitator. The UN, in particular, must recognise that its role is to assist states as they pursue best practice policies based on science and evidence, not work to counteract them. If this occurs, a new and effective international regime based on the acceptance of policy pluralism can emerge. If not, states are likely to move ahead unilaterally and the international coordinating opportunities that the UN affords will be lost.

This report begins with John Collins examining the strategic logic underpinning drug policy over the last century. He argues that the 'drug free world' ideology that pervaded the recent international strategy was misguided and counterproductive and argues that a fundamental restructuring of national and international policies and strategies is required. Next Jonathan Caulkins suggests that current policy debates underestimate prohibition's success in drastically inflating drug prices and diminishing access to illicit drugs in consumer countries. He argues that the goal of prohibition should not be to eradicate mature drug markets completely, something which is not realistic. Instead the goal should be to drive the activity underground while controlling collateral damage created by the markets. His analysis does not, however, apply to producer and transit countries where many of the collateral costs of prohibition are displaced.

Taking up this discussion, Daniel Mejia and Pascual Restrepo examine the negative impacts of prohibitionist policies on producer and transit countries. They argue that Latin American governments are increasingly rejecting prohibitionist policies due to their poor 'operationalisation'. They conclude with a call for drug policies to be evaluated on the basis of their results, not their intentions. Peter Reuter examines the evidence on the 'balloon effect hypothesis' which posits that supply interdiction or eradication in one area merely displaces it to another, 'with no more than temporary inconvenience to the participants'. He argues that this hypothesis contains at least some element of truth and that effective international cooperation and management is required to mitigate its damages.

Vanda Felbab-Brown examines the evidence surrounding the supply-side policies aggressively pursued by the US and its partners in producer and transit countries over the past few decades, finding that blanket eradication and interdiction policies have not only failed, but have often proved highly destabilising for these countries. She argues for a shift towards focused-deterrence strategies, selective targeting and sequential interdiction efforts. These should be coupled with effective economic development and population security strategies. Laura Atuesta examines the plight of Internally Displaced Populations (IDPs) created by the drug wars in Latin America. She argues

that governments need to implement legislation to recognise the existence of IDPs and work to ensure their ability to return to their home regions, as well as economic restitution for their losses. She argues that legalisation alone will not solve this problem and that it would need to be accompanied by major reinvestments of current security expenditures in health, education and transport infrastructure.

Alejandro Madrazo examines the constitutional costs of the 'war on drugs,' finding that many of the legal changes aimed at better enforcing prohibition consist of major alterations to national constitutional systems. These include the creation of 'exceptional' legal regimes. He argues that once these regimes are created they tend to broaden and serve purposes different from those originally sought and are hard to reverse. Following on from this, Ernest Drucker examines the explosive growth of mass incarceration in the US following the declaration of the 'war on drugs'. He argues that its large-scale systems of punishment now represent an important determinant of broader population health. He warns that, although drug-related mass incarceration is largely a United States phenomenon, it is rising in many developing countries facing burgeoning drug markets.

Continuing this discussion of public health outcomes and turning to a basis for the post-'war on drugs' strategy, Joanne Csete examines the clear benefits of adopting public health policies to manage drugs. She highlights that public health services for people who use drugs provide substantial cost savings and positive outcomes, yet are grossly under-resourced. She argues for governments to scale up these services and ensure that law enforcement does not impede access to them. Finally, turning to the role of regulatory experimentation in a post-'war on drugs' strategy, Mark Kleiman and Jeremy Ziskind examine the case of cannabis, 'the drug for which serious legalisation efforts are now in motion'. They argue that, although key questions remain uncertain, it is important to allow jurisdictions to pursue their current initiatives with regulatory experimentation to determine what policies work and what policies need to be avoided. They also outline regulatory principles that can form the basis for states beginning to look at cannabis regulation.

The time has now come to develop an international strategy for the twenty-first century. This will take time to emerge. However the most immediate task is ensuring a sound economic basis for policies and reallocating international resources accordingly. This report sets out a roadmap for finally ending the drug wars. ■

# The Economics of a New Global Strategy

John Collins

**This contribution provides an overview of the evolution of the current international drug control system. It also highlights some of the contradictory forces built into the system since early in its genesis. It examines the microeconomic contradictions inherent in the supply-centric model of control. These contradictions have created a central policy paradox within the system and thereby help explain the latter's continued failure to achieve its goals as well as its active propagation of widespread policy harms. The contribution then looks at the systemic macroeconomic problems of the globally planned licit drug market and how this relates to the provision of essential medicines. The contribution concludes by outlining the core tenets for a new strategy for international efforts.**

**Summary**

- The current United Nations-governed global strategy of achieving a 'drug-free world' has failed. Pursuit of this unachievable goal has proved damaging to human security and socioeconomic development.
- Decades of evidence conclusively show that the supply and demand for illicit drugs are not something that can be eradicated. They can be managed, either well or badly. They are currently being managed badly.
- Multilateralism should not be geared towards bullying states into pursuing a 'one-size-fits-all' response to drugs. It should focus on facilitating and coordinating multifaceted responses based on a principle of policy pluralism.
- States should examine whether the failure of the International Narcotics Control Board (INCB) to guarantee access to essential pain medicines internationally is the result of a systemic regulatory design flaw or other factors.
- The interpretation and implementation of the conventions is often a fluid construction and a function of the politically dominant approach to policies within the UN framework at any given time. Over the period 1970-2008 the ideologically prohibitionist approach developed an unchallenged suzerainty over the drug issue at the UN. This leadership has now been broken as new approaches are openly supported.
- States should drastically re-prioritise resources away from law enforcement and interdiction, towards public health-based policies of harm reduction and treatment. The priority should be to ensure that treatment and harm reduction services are fully resourced to meet requirements.

## A SHORT HISTORY OF INTERNATIONAL DRUG CONTROL

International drug control efforts, currently governed through the United Nations, can be traced to 1909.[1] The world's powers met in Shanghai to devise an international response to the vast quantities of opiates washing around the global market. Following a moralistic and supply-centric vision of this issue, states attending resolved to eradicate 'drug abuse'. This aspiration became codified in the 1912 Hague Opium Convention which set the trajectory for the next hundred years of control efforts. Although no specific tools were initially created to implement this strategy, the institutional mechanisms that evolved over the following decades became almost entirely focused on supply minimisation and police enforcement as the means to achieve it.

The approach to and conception of the problem resulted in a system that was almost entirely supply-centric. All the early political and bureaucratic battles centred on controlling supply. Bureaucrats were hired to focus on supply; delegates arrived at international meetings to discuss supply; home governments then implemented supply-focused treaties and recommendations. An international machinery emerged, initially under the banner of the League of Nations and then transferred to the United Nations, to implement this treaty framework.[2] As such, the system was built largely upon the assumption that by controlling supply it could control and eventually eradicate 'non-medical and non-scientific' use of drugs.

1 For an historical overview, see 'The International Drug Control System,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Report, 2012).

2 William B. McAllister, 'Reflections on a Century of International Drug Control,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Report, 2012), 13.

Devising policies for dealing with issues of demand and consumption was more problematic and generally sidestepped. This was particularly important regarding the delicate question of opium smoking and the existence of opium monopolies in Europe's Asian colonies. The question of what to do with Asian populations living with addiction and the monopolies that supplied them, which didn't conform to the strict 'medical and scientific' interpretation of 'legitimate' drug use, plagued the system for the first four decades of its existence. Delegates tried to sidestep it by finding common ground between states willing to accept international regulation of narcotics, such as Britain, and those advocating an absolutist prohibitionist approach, such as the United States. Where these two strands intersected – around limiting the production and manufacture of opiates and cocaine via the creation of a global 'system of estimates'– political progress was possible. Where the two diverged – such as on the question of ending the opium monopolies – acrimony initially ensued.

A distinction between global licit and illicit markets was eventually formalised into treaty law in 1931, but a growing illicit market quickly accompanied this provision. Efforts to generate an enforcement response to this illicit market were mixed and political momentum stalled as the US adopted an absolutist prohibitionist approach to the colonial opium monopolies. By the end of the 1930s the system had become entwined in negotiations to control the production of opium at its source. By the outbreak of World War II it had largely lost forward political momentum. The US then used its wartime leverage, particularly over its allies, to push through major policy changes around the world and by 1945 the drug issue had been transformed. Previous impediments to accord, particularly the opium monopolies, faded from view and there emerged a more coherent supply-centric paradigm. This aspired towards a unified commodity control arrangement that would regulate drugs from production all the way to consumption. The questions of what to do with existing addiction and the illicit market, however, remained unanswered.[3]

The international political battles in the decades following World War II centred on the distribution of the regulatory burden between states that grew drug crops and states that manufactured narcotics. Eventually a compromise oligopolistic structure was created, which delineated a group of recognised producers to grow opium poppy for the global licit market.[4] These were traded through a set of international conduits administered by UN-affiliated technocrats, which eventually became the International Narcotics Control Board (INCB). The Single Convention of 1961 codified this approach – although it alienated the more hard-line US delegates who became partially estranged from the system until the early 1970s.

> "A global system which predominantly encourages policies that transfer the costs of prohibition onto poorer producer and transit countries, as the current system does, is an ineffective and unsustainable way to control drugs in the long term."

In the meantime, countries with previously low rates of illicit drug consumption began witnessing a rapid expansion in use. As they cast around for a method to deal with this the US-led prohibitionist bloc appeared to offer the only coherent model ready for adoption. Following the American lead, and supported by the UN treaty framework and agencies, states uniformly moved towards the criminalisation of use and doubled down on supply enforcement measures.

Thus began the trend of modern drug control characterised by a series of drug wars. In the 1970s the US took a reinvigorated lead on the issue, particularly at the UN and through INCB. This was reinforced by a domestic declaration of a 'war on drugs' under Richard Nixon and an aggressive batch of bilateral drug diplomacy. The 1971 Convention and the 1972 amendment to the Single Convention represented a strengthening of international drug control measures while states gradually ramped up their domestic control efforts. The 1988 Convention, aimed primarily at illicit trafficking, followed logically from these efforts. Ten years later, in 1998, states sought to reinvigorate international efforts by embarking on ambitious targets for demand and supply-reduction under the slogan 'a drug-free world, we can do it!'[5]

As the 2000s progressed it became clear that states would miss these targets and the international consensus around the current supply-centric and prohibitionist-oriented approach began to break apart.[6] There is now a new willingness among certain states, particularly in Latin America, to be vocal about the inherent problems within the system and to try to extricate themselves from the global drug war quagmires.[7] This contribution hopes to aid these debates by providing explanations for some of the fundamental policy paradoxes built into the system that render the supply-centric strategy not only unachievable, but in many cases actively damaging to human security and socio-economic development.

3 John Collins, 'Breaking the Monopoly System: American Influence on the British Decision to Prohibit Opium Smoking and End Its Asian Monopolies, 1939-1943,' Paper Presented at *Drugs and Drink in Asia : New Perspectives from History Conference,* Shanghai University, China, June 22, 2012.

4 For the debates around a closed list of producers see John Collins, 'Anglo-American Relations and International Drug Policy: The Diplomacy of Disunity from the 1953 Opium Conference to the 1961 Single Convention,' Paper Presented at the *Transatlantic Studies Association Annual Conference,* University College Cork, Ireland, July 12, 2012.

5 David R. Bewley-Taylor, 'The Contemporary International Drug Control System: A History of the UNGASS Decade,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Report, 2012), 49.

6 David R. Bewley-Taylor, *International Drug Control: Consensus Fractured* (Cambridge University Press, 2012).

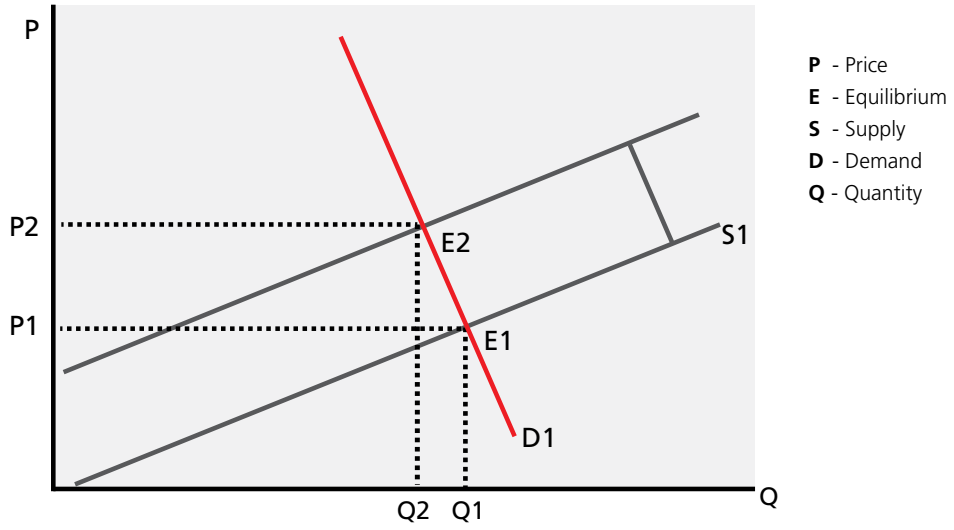
7 Juan Manuel Santos, 'Re-examining the Drug Problem Through a Fresh Lens,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Report, 2012): 2–3; Alfonso Serrano, 'Guatemala president to UN: Reform global drug policy,' *Al Jazeera America*, September 26, 2013, http://america.aljazeera.com/articles/2013/9/26/guatemalan-presidentcallsfordrugpolicyreformatungeneralassembly.html

## THE MICRO-ECONOMICS OF GLOBAL FAILURE

The pursuit of a 'drug-free world' is underpinned by the goal of eventually reducing illicit supplies to zero. One can argue whether policymakers pursue this as a genuine or merely an aspirational goal. Regardless, articulating such broad strategic goals has clear and substantial impacts on international bureaucracies when deciding priorities and allocating resources. This has resulted in a drastic overemphasis on policies aimed at suppressing the supply of illicit substances and encouraging the pursuit of highly repressive demand reduction policies. These extend a full spectrum of policy measures, from military intervention, through aerial spraying, alternative livelihoods, border enforcement and criminalisation of consumption (as a means to deprive supply of its demand). Underpinning this strategy, however, is a fundamental policy paradox. In a world where demand remains relatively constant,[8] suppressing supply can have short-run price effects.[9] However, in a footloose industry like illicit drugs, these price increases incentivise a new rise in supply, via shifting commodity supply chains. This then feeds back into lower prices and an eventual return to a market equilibrium similar to that which existed prior to the supply-reduction intervention.[10]

This effect is exacerbated for addictive substances. For example, a person addicted to heroin is far more likely to decrease outlays on other living expenses to meet marginally increased costs for heroin, as explained by the economic concept of elasticity.[11] Price elasticity of demand measures how much demand for a good changes in response to price changes. For a good with many substitutes (rice can be replaced by wheat) a rise in price brings a proportional decline in demand. For a good with few substitutes (e.g. a drug required to prevent the onset of withdrawal symptoms) and that is inelastic, increases in price lead to a proportionally smaller fall in demand (see Figure 1). It is also likely that the new equilibrium, although at a similar level of supply than before interdiction, may be punctuated by a higher level of violence as the least efficient and (potentially) less violent actors are cleared from the market.[12] This pattern can help explain the escalation of drug war violence over the past five decades. Market interventions by states disturb the political economy of the trade, cultivating more violent actors, in turn driving more aggressive state interventions which in turn drive more violent outcomes. This is a point highlighted by Paul Gootenberg with regard to the evolution of the cocaine trade in the Americas from an informal underground economy into the present state of acute violence.[13]

**Figure 1. Impact of a Supply-Side Enforcement with a Steep Demand Curve**




8 UNODC, *World Drug Report 2006* (Vienna: United Nations, 2006), http://www.unodc.org/pdf/WDR_2006/wdr2006_volume1.pdf.

9 These price effects are contingent on many factors, such as how far up the commodity chain interdiction occurs and where outcomes are measured. The general trend is for drug prices to grow exponentially as they move up the value chain towards final market consumer countries. As a result, interdiction and eradication close to production source have a minimal impact on consumer country prices. For example, eradication under the Taliban in the 2000s resulted in a ten fold increase in farm gate prices in Afghanistan. These price increases were largely absorbed by the profit margins of traffickers without significant impact on consumer country prices or demand. See Barnett R. Rubin and Jake Sherman, *Counter-Narcotics to Stabilize Afghanistan: The False Promise of Crop Eradication* (New York: NYU Center on International Cooperation, 2008), 19.

10 Vanda Felbab-Brown, in her contribution to this report, cites data that suggests a maximum of a two-year lag between successful interdiction and eradication policies and a return to previous levels of supply.

11 Peter Reuter has pointed out that elasticity varies across different drugs and is influenced by a variety of factors. See Peter Reuter, ed., *Understanding the Demand for Illegal Drugs* (Washington DC: National Academies Press, 2010), 20. As a generic example of supply interventions in this case we will assume a relatively inelastic demand for addictive drugs in a market where drug consumption is not saturating all consumers' income.

12 The escalation of violence as a result of 'undifferentiated targeting of organised crime groups' is highlighted in Vanda Felbab-Brown, 'Focused deterrence, selective targeting, drug trafficking and organised crime: Concepts and practicalities,' Modernising Drug Law Enforcement Report II (International Drug Policy Consortium, 2013), http://www.brookings.edu/~/media/research/files/reports/2013/03/drug%20law%20enforcement%20felbabbrown/drug%20law%20enforcement%20felbabbrown.pdf

13 Paul Gootenberg, 'Cocaine's 'Blowback' North: A Commodity Chain Pre-History of the Mexican Drug Crisis,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Report, 2012).

> ...the system was built largely upon the assumption that by controlling supply it could control and eventually eradicate 'non-medical and non-scientific' use of drugs.

This is not to say that a realistic and rational implementation of prohibitionist policies is without merit. Vastly inflating the price of goods which are deemed detrimental to macro-level public health outcomes can be viewed as highly beneficial for consumer countries through diminished accessibility.[14] However, these benefits often derive from the transfer of prohibition's externality costs to producer and transit countries.[15] A global system which predominantly encourages policies that transfer the costs of prohibition onto poorer producer and transit countries, as the current system does, is an ineffective and unsustainable way to control drugs in the long term.

Further, implementing prohibitionist-oriented policies requires an appreciation of what they can reasonably be expected to do, particularly at the margins. They cannot be expected to eradicate drugs. They can be expected to raise prices to a very high level and thereby dissuade consumption in final market countries.[16] However, in consumer countries with mature drug markets this policy reaches diminishing returns at a certain level.[17] Additional spending has little additional effect other than creating market interventions which are unpredictable and potentially violence-inducing, or increasing societal costs in the form of incarceration and negative public health outcomes.[18] Marginal spending in pursuit of these policies is therefore an ineffective and often counterproductive use of resources.

A more thorough cost-benefit analysis of the merits of prohibition relative to the costs of enforcement, which takes into account the cross-border spillovers, is required for a global cooperative framework. From this analysis a better appreciation of regulatory options and potential for experimentation and readjustment of resources can then be decided. This is not merely a case of numbers. There are intangible human rights and legal institutional costs which must also be weighed.[19]

## THE MACROECONOMICS OF REGULATORY FAILURE

The international drug control system, through the International Narcotics Control Board (INCB), is tasked with ensuring adequate supplies for licit scientific and medical uses.[20] This, however, by INCB's own admission, is something which it has failed to do.[21] As a 2013 GDPO Situation Analysis highlights, '[m]ore than 5.5 billion people (83 percent of the world's population) in over 150 countries have low to non-existent access to morphine and other controlled medicines for pain relief, palliative care or opioid dependency'.[22] While INCB has sought to lay the blame with countries for overly restricting national access, the international community must examine whether this failure is not instead the result of a systemic regulatory design flaw.[23]

The 'system of estimates' upon which the international licit market is based was created at a time when policymakers held far greater faith in centrally-planned commodity markets to ensure that supply met demand. As was remarked in 1964 of the international system:

> *'[it] pioneers new territory – that of a planned economy on a world-wide scale. It regulates a whole industry throughout the world'.*[24]

There is now a greater understanding of the regulatory problems associated with centrally-planned markets. In particular, the absence of a price mechanism creates major information asymmetries and obscures the actual levels of supply required to meet demand. Often estimates are extrapolated from previous years' statistics, resulting in a cumulative trend towards shortages where supply remains constant while demand is growing. This problem accurately predicts the severe shortages and large market distortions witnessed in the global pain medication market. At the international level this is rendered far more complex by the fact that a global market needs to engage in significant price differentiation practices to counteract the vast global income inequalities between nations and their populations. Further, the level of institutional capacity to physically supply 'medical and scientific' narcotics through legitimate channels varies drastically from country to country.

14 See Jonathan P. Caulkins' contribution to this report.
15 See Daniel Mejia and Pascual Restrepo's contribution to this report. For discussions of specific externalities see Laura Atuesta's and Alejandro Madrazo's contributions.
16 See Jonathan P. Caulkins' contribution to this report.
17 Jonathan P. Caulkins and Peter Reuter, 'Reorienting U.S. Drug Policy,' *Issues in Science and Technology*, XXIII/1 (2006), pp.79-85.
18 Joanne Csete's contribution to this report highlights some of the opportunity costs in terms of money not spent on proven and highly effective public health interventions. Ernest Drucker's contribution highlights the costs of over-incarceration on macro population health determinants.
19 See Alejandro Madrazo's contribution to this report and Damon Barrett, 'Reflections on Human Rights and International Drug Control,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Report, 2012).
20 Single Convention on Narcotic Drugs, 1961, Art. 9.4.
21 See Hamid Ghodse, 'Preface,' *Report of the International Narcotics Control Board on the Availability of Internationally Controlled Drugs: Ensuring Adequate Access for Medical and Scientific Purposes* (New York: United Nations, 2011), http://www.incb.org/documents/Publications/AnnualReports/AR2010/Supplement-AR10_availability_English.pdf.
22 Katherine Pettus, *Untreated Pain in the Lower and Middle-Income Countries* (Swansea: Global Drug Policy Observatory Situation Analysis, 2013), http://www.swansea.ac.uk/media/GDPO%20Situation%20Analysis%20Essential%20Med.pdf.
23 Ghodse, 'Preface'.
24 Bertil A. Renborg, 'The Grand Old Men of the League of Nations: What They Achieved. Who They Were,' *UN Bulletin on Narcotics* (1964), http://www.unodc.org/unodc/en/data-and-analysis/bulletin/bulletin_1964-01-01_4_page002.html.

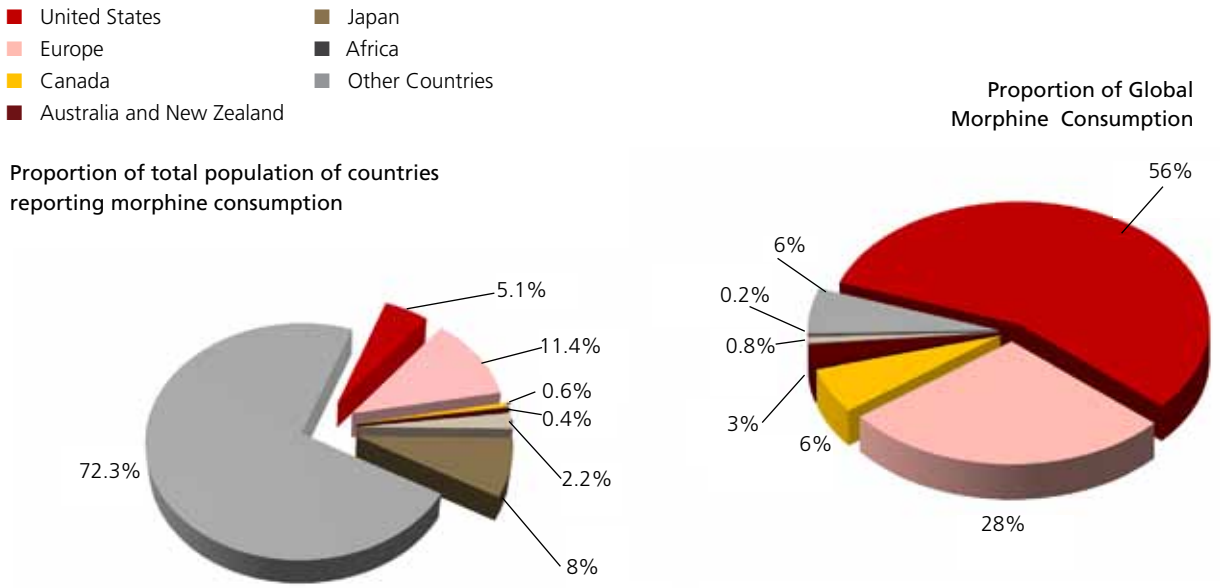
These design flaws have all been rendered more problematic by the intense politicisation of INCB's work. Soon after its creation in 1968, INCB succumbed to regulatory capture[25] by ideologically prohibitionist forces within the system.[26] It has since evolved into a proxy for states advocating an absolutist, prohibitionist-oriented approach to narcotics control, while appearing to command the legitimacy of a technocratic agency. Examples of the highly politicised work of the INCB have been highlighted elsewhere.[27] The 'system of estimates' should arguably have been designed to provide regulated and accessible forms of opiates globally. Poorer populations, in Asia in particular, had previously relied on traditional 'quasi-medical' uses of opiates, either by smoking or eating prepared opium. However, for ideological reasons the international goal instead became to suppress all opiate use. The indigenous traditional use of opiates was suppressed while the system of estimates had no way to provide fully legalised and 'medical' alternatives. This design flaw could initially be ignored out of a belief that medical innovations would soon render plant-based opioid medicines obsolete. As one of the chief architects of the international drug control system and lead US Delegate to the UN Commission on Narcotic Drugs (CND) Harry J. Anslinger stated at a UN meeting in 1965:

> *When it has been demonstrated, as is expected within the next few years, that opium is not essential for medical purposes, the United States would give very favorable consideration to discussions leading to an international agreement which would abolish legal opium production entirely.*[28]

The goal was therefore to stabilise and shrink supply until such innovations occurred. However, no such 'silver bullet' version of pain medication has been discovered while the goal of suppressing supplies of opioid-based medicines has remained.[29]

It is unlikely that these information and market asymmetries, not to mention the political weaknesses of the INCB structure, can be overcome. Nevertheless, the international community can take action to reform the current system. Rather than examining micro-oriented and state-level ways to counteract the vast inequality of access to medicines internationally (see Figure 2), it is time to examine seriously whether the model begun a century ago, and consolidated under the 1961 Single Convention, remains suitable to meet the needs of the current era.

**Figure 2. Global Inequality: Distribution of Morphine Consumption 2009[30]**




25 Regulatory capture describes an outcome where a regulatory agency becomes unduly influenced by a particular interest group. The interest group then uses the agency to advance their goals.

26 The INCB was established in 1968 in accordance with the 1961 Single Convention on Narcotic Drugs. It represented an amalgamation of its technocratic predecessors the Permanent Central Opium Board and the Drug Supervisory Body. Debates around the evolving conception of INCB are highlighted in David R. Bewley-Taylor, *International Drug Control Consensus Fractured* (Cambridge University Press, 2012), 266-7.

27 Joanne Csete, 'Overhauling Oversight: Human Rights at the INCB,' in *Governing the Global Drug Wars*, ed. John Collins (London: LSE IDEAS Special Reports 2012).

28 Statement by Harry Anslinger to the 20th Session of the UN CND, on the Review of the Commission's Work During its First Twenty Years, December 16, 1965, Federal Bureau of Narcotics Files, US National Archives, ACC 170-74-5, Box 124, File 1230-1 United Nations 20th Session (1965).

29 The idea of discovering a synthetic 'silver bullet' for pain medicine was a constant theme of drug policy discussions around the 1961 Single Convention. See William B. McAllister, *Drug Diplomacy in the Twentieth Century: An International History* (Routledge, 2000).

30 *Report of the International Narcotics Control Board on the Availability of Internationally Controlled Drugs: Ensuring Adequate Access for Medical and Scientific Purposes* (New York: United Nations, 2011), http://www.incb.org/documents/Publications/AnnualReports/AR2010/Supplement-AR10_availability_English.pdf.

The UN General Assembly Special Session on Drugs (UNGASS) in 2016 can and should be used as an opportunity to examine other global regulatory models.

States should also work to ensure that INCB:

1. Remains within its mandate and does not interfere with or prejudice states in their pursuit of public health interventions and domestic cannabis regulation. Excessive interference, outside facilitating CND discussion, is a symptom of politicisation of INCB, rather than a manifestation of the intent of the treaties governing the international drug control system. INCB was created, first and foremost, as a cooperative, technocratic and number-crunching body, not a policy advocacy or enforcement body. It has pursued these latter interests at the expense of its core technocratic function, to the detriment of the developing world.
2. Incorporates the basic principles of human rights, outlined by the United Nations Office on Drugs and Crime (UNODC) in its 2012 Guidelines.[31] For any drug control strategy to be effective it must be firmly grounded in adherence to and respect for principles of human rights. INCB should not be permitted to use UN Secretariat services, while claiming to be unbound by the UN's conventions in the field of human rights.[32]
3. Aggressively acts to expand access to essential pain medicines. Further it should work to expand the use of opioid substitution therapy (OST) through its mandate to provide adequate access to 'gold standard' treatment medicines such as methadone and buprenorphine.[33]

The issue of access to essential pain medicines is central to economic development, global public health and basic human rights. The 'planned' global market has not worked as intended. It is time to examine a new macroeconomic regulatory approach to meet international demand. Ideally this is an issue to be addressed at the UN level. If, however, the international drug control system fails to respond, national and regional institutions should unilaterally move towards addressing this issue. [34]

## TOWARDS A REGIME OF POLICY PLURALISM

These policy paradoxes and design flaws have resulted in the failure to realise the core goals of international drug control. A deep strategic re-evaluation is therefore required. This should be accompanied by clear alterations in funding allocation and policy priorities. Further there must be a far greater emphasis on measuring the relative cost and benefits of specific policies.

The immediate task is for international policymakers to accept that a more rational and humble approach to supply-centric policies is required. If prohibition is to be pursued as a means to suppress the supply of certain drugs deemed incompatible with societal well-being, care must be taken to ensure that enforcement is resourced *only* up to the point of drastically raising marginal prices to the point where consumption is measurably reduced. After this, additional spending is wasteful and likely damaging.

Further, there is a clearly emerging academic consensus that moving towards the decriminalisation of personal consumption, along with the effective provision of health and social services, is a far more effective way to manage drugs and prevent the highly negative consequences associated with criminalisation of people who use drugs.[35]

"...there is a clearly emerging academic consensus that moving towards the decriminalisation of personal consumption, along with the effective provision of health and social services, is a far more effective way to manage drugs and prevent the highly negative consequences associated with criminalisation of people who use drugs."

31 UNODC, *UNODC and the Promotion and Protection of Human Rights* (Vienna: UNODC, 2012), http://www.unodc.org/documents/justice-and-prison-reform/UNODC_Human_rights_position_paper_2012.pdf

32 In 2014, after years of condemnation by human rights groups, INCB finally adhered to international human rights norms by publicly dissuading states from pursuing the death penalty for drug-related offenses. Press Release: 'INCB encourages States to consider the abolition of the death penalty for drug-related offences,' *United Nations Information Service*, March 5, 2014, http://www.incb.org/documents/Publications/PressRelease/PR2014/press_release_050314.pdf

33 See Csete, 'Overhauling Oversight'.

34 Guatemala is an example of a country currently examining the potential of bringing illicit opium cultivation under regulatory control in order to supply medicinal requirements. Phillip Smith, 'Guatemala Considers Legalizing Opium Growing for Medicinal Market,' in *Drug War Chronicle*, December 19, 2013, http://stopthedrugwar.org/chronicle/2013/dec/19/guatemala_considers_legalizing_o.

35 Caitlin Elizabeth Hughes and Alex Stevens, 'What Can We Learn From The Portuguese Decriminalization of Illicit Drugs?,' in *British Journal of Criminology* (50)6 (2010): 999-1022ma17

The failures of the war on drugs and the 'drug-free world' strategy shine a light on a more fortuitous response to the question of drugs and drug policy. An effective and rational drug policy should aim to manage drug harms via a multifaceted and evidence-based approach, *not* a one-size-fits-all, one-dimensional war strategy based on impossible targets. Managing this problem involves incorporating a broad spectrum of policies and indicators and making them work in tandem rather than in opposition to one another. An example of policies working in opposition to each other occurs where the criminalisation of users undermines their access to healthcare, justice and other social welfare services.[36]

*The downsides of prohibition can be minimised if combined with:*

- Properly resourced and strongly prioritised public health interventions.
- Policies aimed towards minimising the impact of illicit markets, rather than focusing on the supplies of illicit commodities, in producer and transit countries.
- The protection of human rights and access to justice of those caught up in the drug supply chain.
- Ensuring that people who use drugs are adequately protected from law enforcement activities and have access to justice, public health and social services.
- Limiting policing and enforcement tactics to more adequately reflect the strategic goals of prohibition: not eradicating but managing global drug markets. The goal of managing drug markets is to heavily raise prices and decrease consumption as far as possible, while minimising the accompanying violence and impact on user populations.
- Recognition that the goal of a 'drug-free world' is an impossible target, underpinned by flawed assumptions and a basic incoherence between tactical means and strategic goals. Further it results in policies which fail on a basic Hippocratic standard of 'first do no harm'.

*States can begin to embark on a new strategy by:*

- Drastically re-prioritising resources away from law enforcement and interdiction, towards public health-based policies of harm reduction and treatment. The priority should be to ensure that treatment and harm reduction services are fully resourced to meet requirements.[37]
- Accurately measuring and reporting total drug policy spending in national budgets and where this spending is directed.
- Scaling up harm reduction funding to a minimum of 10 percent of total drug policy spending in national budgets by 2020.
- Designing more effective ways to mitigate the harms of drug markets.[38]
- Engaging in widespread and vigorously monitored regulatory experimentation to develop the empirical evidence base around this topic and discern which policies work and which don't. The moves towards cannabis regulation in the US (at a subnational level) and Uruguay (at the national level) are a positive step in this regard. Regulatory experimentation around new psychoactive substances (NPS) will also prove useful.

*Multilateral forums should aim to:*

- Disseminate and discuss best practice evidence around public health policies of harm reduction, prevention of new use and problematic use and treatment.
- Disseminate and coordinate illicit market impact reduction policies for transit and producer countries.
- Ensure access to essential medicines.
- Protect and advocate for human rights.
- Coordinate international cooperation to minimise the cross-border externalities of increasingly varying national and regional policies under a new regime based on policy pluralism.

36 Switzerland and the Czech Republic provide two good examples of well-integrated and rigorously evaluated drug control strategies for states to consider emulating. See Joanne Csete, *From the Mountaintops: What the World Can Learn from Drug Policy Change in Switzerland* (New York: Open Society Foundations, 2010), http://www.opensocietyfoundations.org/sites/default/files/from-the-mountaintops-english-20110524_0.pdf; Joanne Csete, *A Balancing Act: Policymaking on Illicit Drugs in the Czech Republic* (New York: Open Society Foundations, 2012), http://www.opensocietyfoundations.org/sites/default/files/A_Balancing_Act-03-14-2012.pdf.

37 See Joanne Csete's contribution to this report.

38 See Vanda Felbab-Brown's contribution to this report.

*States should recognise that:*

- Too much debate centres around the legal technicalities of the international drug control conventions.
- These conventions represent an often (purposely) deeply ambiguous and vague articulation of a set of goals and aspirations.
- The interpretation and implementation of the conventions are often a fluid construction and a function of the politically dominant viewpoint of policies within the UN framework at any given time. Over the period 1970-2008 the ideologically prohibitionist approach developed an unchallenged suzerainty over the drug issue at the UN. This leadership has now been broken as new approaches are openly supported.
- The emergence of policy pluralism within the UN is a recent and positive phenomenon.
- Although certain aspects of the conventions should be seen as representing binding commitments – namely to minimise the impact of drug commodities flowing *between* states – in others they should not. The idea of an overarching, 'one-size-fits-all,' binding approach for regulation *within* states was never envisaged by those who drafted the conventions. It is a construction of the recent prohibitionist era.
- This 'one-size-fits-all' prohibitionist approach will not work in an era of policy plurality and should not be viewed as mandated by the Conventions.
- Individual states, subject to best practice human rights and global public health standards, remain the final arbiters and executioners of treaty provisions and are best placed to determine what policies can protect and improve the 'health and welfare' of populations within their territories.
- Regulatory experimentation, particularly in the case of cannabis and so-called new psychoactive substances (NPS), with close scientific scrutiny feeding back into policy, should be viewed as a positive thing. It should be pursued.
- States should view the drug conventions as one part of, and subservient to, a web of commitments that encompasses various human well-being and security issues.
- Existing international human rights norms can be clearly seen as militating against the pursuit of deeply repressive and unscientific policies based on, for example, compulsory detention of addicted populations, blanket criminalisation of individual consumption and the use of the death penalty.

A time will come when a new convention will encapsulate a reformed strategic orientation towards this issue and correct the inadequacies of the current convention structure. Now does not yet appear the time. A new consensus has not clearly emerged which dissatisfied states can rally around to ensure a successful convention process. Amendments to the existing conventions, however, can and should be countenanced in areas where international cooperation is required. This is perhaps most pressing in addressing the broken regulatory framework for ensuring access to essential medicines.

## CONCLUSION: CONTEMPLATING A NEW TRAJECTORY?

From 1909-1961 a highly imperfect regulatory system was created based on supply-centric tenets. This system was then used by prohibitionist forces after 1961 when they gained political ascendancy at the UN. The result was a regulatory overreach that assumed the illicit market could be tamed through enforcement and the diffusion of police measures internationally. This assumption proved to be incorrect, but the policy path determined by this view ensured the continuation of a failed approach for decades. Meanwhile, the system has enforced obligations for producer and transit countries to assume the costs of prohibitionist policies, while providing no clear obligation for consumer countries to share these costs.[39]

Now, it is clear that political forces within the system, particularly Latin American states, are pushing for a re-evaluation for perhaps the first time in the system's history. Furthermore, many human rights organisations are highlighting problematic aspects within the system as bodies such as INCB act without institutional checks and balances in pursuit of a failed supply-focused and prohibitionist paradigm.[40] This contribution has highlighted some of the policy paradoxes built into the current system which argue for an end to the current strategy. The UN General Assembly Special Session on Drugs in 2016 provides an excellent opportunity for states to break with the failed strategy of the past and pursue a more effective international approach to drug policy for the twenty-first century. ■

39 See Daniel Mejia and Pascual Restrepo's contribution to this report.
40 Joanne Csete, 'Overhauling Oversight'.

# Effects of Prohibition, Enforcement and Interdiction on Drug Use

Jonathan P. Caulkins[1]

**The alleged 'failure' of the 'war on drugs' is a standard point of departure for discussions of drug law reform,[2] but reports of prohibition's failure – like those of Mark Twain's death – may be exaggerated. Having a realistic understanding of what prohibition does and does not accomplish in final market countries is prerequisite to informed discussion of the relative merits of alternatives. Prohibition and its attendant enforcement drive drug prices up far beyond what they would be in a legalised market, and that (as well as reduced availability) constrain use and dependence. Applying cost-utility analysis from health economics provides a framework for roughly quantifying prohibition's benefits from reduced dependence. This contribution argues that plausible parameter values for the United States suggest those benefits may exceed prohibition's direct costs. Inasmuch as prohibition as implemented in the United States is something of a worst case, with toughness pursued far beyond the point of diminishing returns, this likewise suggests prohibition may bring net benefits to other final market countries. For those who nonetheless want to overturn prohibition, e.g. because prohibition harms source and transshipment countries and/or is unsustainable in the long-run given globalisation's erasing of international borders, the possibility that prohibition may not simply be a mistake implies a need to adjust rhetoric accordingly.**

**Summary**

- The alleged failures of prohibition in consumer/final market countries may be overstated in current drug policy discourses.
- Having realistic goals for prohibition in final market countries is a prerequisite to informed discussion of the relative merits of alternatives.
- The goal of prohibition should not be to eradicate mature drug markets completely; that is not realistic. The goal should be to drive the activity underground while controlling collateral damage created by the markets.
- Higher prices and greater inconvenience can reduce use and use-related consequences, even if it remains physically possible for a determined customer to procure.
- Even granting that prohibition's costs are enormous, it does not automatically follow that those costs outweigh potential benefits from reduced dependence, because the benefits may also be very large.
- This analysis does not apply to source or transshipment countries.

None of this gainsays prohibition's costs or limitations. Prohibition clearly fails if it is saddled with the impossible aspiration of eliminating all drug use, but it clearly succeeds at constraining supply and use to an extent. The common drugs (cocaine, heroin, cannabis) are merely semi-refined agricultural products, yet they are extraordinarily expensive in final market countries. The only illegal drug that is used nearly as widely as are the legal drugs (alcohol, nicotine, caffeine) is the one (cannabis) whose prohibition is arguably not taken too seriously.

Prohibition is extraordinarily expensive on multiple dimensions, including budgetary costs, enrichment of criminal gangs and deprivation of liberty. So that prohibition reduces use and abuse does not imply it is good or that it could not benefit from fundamental reform. However, an honest discussion must look fairly at prohibition's benefits as well as its costs.

Other contributions in this report deal ably with prohibition's effects on source and transshipment countries,[3] so the perspective here is that of final market countries. The focus is on the United States, both for convenience (data availability) and logic; prohibition is implemented in a particularly pigheaded way in the United States, so its performance in the US is something of a worst case.

1 The author would like to thank GiveWell and Good Ventures for supporting his work on cannabis policy. The views expressed are the author's and should not be attributed to Carnegie Mellon, GiveWell or Good Ventures, whose officials did not review this article in advance.

2 See, for example, Global Commission on Drug Policy, 'War on Drugs,' 2011, http://www.globalcommissionondrugs.org/Report.

3 See, for example, Daniel Mejia and Pascual Restrepo's contribution to this report.

Drugs differ, and so policies should differ across drugs accordingly. At a minimum, intelligent discussions ought to distinguish between (1) the expensive majors (cocaine/crack, heroin and methamphetamine), (2) cannabis, (3) diverted pharmaceuticals and (4) the minor drugs (LSD, PCP, GHB, etc.). In the interests of space, I address only the first two, paying particular attention to cocaine (which has historically dominated drug problems in the US) and cannabis (which offers the only historical examples of legalisation in the contemporary era).

I discuss evidence concerning prohibition's effects on those drugs' supply and price, after first discussing metrics upon which prohibition should be evaluated. I then connect price to consumption, and provide a rough quantification of possible benefits of prohibition in terms of reduced dependence.

> Having a realistic understanding of what prohibition does and does not accomplish in final market countries is prerequisite to informed discussion of the relative merits of alternatives.

## WHAT WOULD COUNT AS A 'SUCCESSFUL' PROHIBITION?

Most countries allow most goods to be produced and distributed by private enterprise through markets. The markets are almost never completely free. Firms have to comply with regulations but, in general, everyone who wants to start a business can. There are exceptions, however, and selling a range of goods is prohibited, including products from endangered species, certain weapons and human organs. Likewise certain services may be prohibited, including the sale of votes and sexual favours.

The goal of prohibition is not and should not be to eradicate the corresponding markets completely; that is not realistic. Rather, the goal should be to drive the activity underground, making it less efficient or, equivalently, driving up the cost of providing the good or service. The combination of higher prices and greater inconvenience can reduce use and use-related consequences, even if it remains physically possible for a determined customer to procure the good or service in question.

Prohibitions generate three categories of cost: (1) costs of enforcement; (2) greater harms per unit of consumption that does occur; and (3) foregone benefits of consumption that does not occur.[4] The first two are obvious; enforcement is intrusive and imprisonment is expensive to both taxpayers and those imprisoned, and consumption of street heroin is riskier than is consumption of medical-grade heroin delivered through heroin maintenance programmes.[5] The third pertains to the idea of a 'consumer surplus'. Standard economics presumes that customers buy whatever brings them the greatest joy. If that product is not available, they will buy something else. The difference between the joy they could have felt if the banned good were available and what they actually feel consuming their second-favourite object counts as a cost of prohibition.

So if a group of friends would like to get stoned and listen to jazz, but prohibition induces them to go to the movies instead, the difference between how much they would have enjoyed getting stoned and how much they actually enjoyed going to the movies is a loss whose value should be charged to prohibition.

The benefits of prohibition are reduced 'externalities' and reduced 'internalities'. Externalities are costs one person's consumption imposes on another. For example, to the extent that alcohol prohibition reduces drunkenness, it might count fewer assaults, greater road safety and less domestic violence among its benefits.

'Internalities' are costs that one person's consumption imposes on oneself. Extreme 'Chicago School' economists generally deny the possibility of internalities, assuming perfect consumer foresight. An alternative model of human behaviour holds that people are heuristic decision-makers who muddle through life following rules of thumb that work most of the time for most products, but which can be defeated by certain products whose effects bundle immediate gratification with some non-negligible but modest probability of deep pain in the future. Cocaine may fit that description. So might Krispy Kreme doughnuts, as in the adage 'a moment on the lips, a lifetime on the hips'. Opinions differ sharply and perhaps intractably about whether a paternalistic intervention to limit someone's freedom can ever make that person better off. Parents routinely limit their teenagers' freedom, ostensibly out of love and concern for their welfare, and modern neuroscience amply demonstrates that the brain's prefrontal cortex and associated executive control does not reach maturity until around age 25. (And few who are not already polydrug abusers initiate use of a new intoxicant after age 25, so almost all drug-using careers are launched by immature brains.[6])

4 Mark Kleiman (personal communications) argues that lost consumer liberty or option-value is a fourth category, over and above the foregone consumer surplus.

5 For a discussion of these costs see Ernest Drucker's and Joanne Csete's contributions to this report.

6 For example, 98 percent of those reporting current cannabis use in the US national household survey report initiating that use by age 25. The corresponding proportions for other drugs are cigarettes 97 percent, alcohol 98 percent, cocaine 87 percent.

Liberal democratic societies assume that people generally do a fine job of looking out for themselves, or at least a much better job than the government would do. Hence, government paternalism is usually limited to suasion (e.g. the FDA's advice on healthy eating), 'nudges' and quality standards (e.g. it is illegal to sell lawnmowers that lack a kill switch).[7] Outright bans are less common, but do exist. For example, some countries and some US states prohibit production and purchase of larger firecrackers, mostly to prevent internalities (people harming themselves), not externalities.

> Prohibition clearly fails if it is saddled with the impossible aspiration of eliminating all drug use, but it clearly succeeds at constraining supply and use to an extent.

Dependence-inducing substances pose a special challenge to the presumption that consumers consistently act in their own self-interest. Repeated administration of artificial neuro-transmitters creates lasting changes in the brain. Dependence is therefore a central consideration. Even though most consumers do not become dependent, dependent users account for a disproportionate share of consumption. Likewise, intoxicants pose special challenges because many decisions to consume intoxicants are made while intoxicated, particularly when 'bingeing' is common, as with crack.

That holds even for cannabis. According to the 2011 US household survey, about 42 percent of all days of cannabis use are by people who self-report enough problems to meet DSM-IV criteria for substance abuse or dependence (not always dependence on cannabis; the 42 percent figure includes cannabis consumed by alcoholics). For heroin the proportion is likely much higher;[8] about 83 percent of heroin in the US is consumed by people who use heroin daily or near-daily, and most of them are dependent.[9] I will not attempt to resolve here what value, positive or negative, to attach to drug use in social welfare calculations; that is more of a philosophical debate. Rather, I will look only at prohibition's effect on consumption, and will remember that for all drugs – legal and illegal – the majority of consumption is attributable to the minority of users who consume on a daily or near-daily basis, many of whom have a clinically diagnosable problem of abuse or dependence.

## EMPIRICAL EVIDENCE CONCERNING PRICE INCREASES ALONG THE SUPPLY CHAIN FOR COCAINE

The prices of illegal drugs increase enormously as they move down the supply chain; those price increases are almost entirely due to prohibition.[10] I illustrate this by comparing two agricultural-based psychoactive substances, one legal (caffeine in the form of coffee) and one prohibited (cocaine), and contemplate what the price of cocaine might be if its distribution costs were comparable to those of coffee.

There is sometimes debate about whether distribution costs should be thought of in terms of percentage or cost per unit weight, so I provide comparable data for silver, a legal product whose value per unit weight approaches that of cocaine in South America. The silver data show that when a good's value to weight ratio is high, the mark-ups in percentage terms are much lower.

Their geography of production is broadly similar. Cocaine bound for the United States is produced primarily in Colombia, with Peru and Bolivia being other major producers. Colombia is the world's second-largest producer of Arabica coffee – albeit a distant second to Brazil, with Peru also in the top five. Peru has the world's largest silver reserves and, with Mexico, is either the largest or second largest producer depending on the year (Bolivia is seventh).

I focus on cocaine 'salt' (meaning powder), so the product at export is already in final form; there is very little processing between export and retail sale (just some repackaging and perhaps dilution, but diluents' value is trivial compared with that of the cocaine). I likewise consider the prices of silver bullion and rounds, not jewellery or flatware.

The bottom line is clear. The increase in price as cocaine moves down its distribution chain utterly dwarfs that of coffee or silver. Cocaine prices increase by more than $100 per gram. Silver and coffee bean prices increase by less than $0.10 per gram – a difference of three orders of magnitude.

Even if legalisation meant cocaine prices increased along the distribution chain by ten times that much, or $1.00 per gram, the resulting retail prices would still be less than five percent of their current levels.

7 Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (Yale University Press, 2008); see Code of Federal Regulations, Title 16, Part 1205, http://cfr.regstoday.com/16cfr1205.aspx.

8 The household survey-based calculation is not informative for heroin, as most heroin is consumed by people who do not complete the household survey.

9 The author's side calculation is based on B. Kilmer, S. Everingham, J. Caulkins, G. Midgette, R. Pacula, P. Reuter, R. Burns, B. Han and R. Lundberg, *What America's users spend on illicit drugs: 2000-2010* (Washington, DC: Executive Office of the President, 2014). For cannabis in the US, daily and near-daily users account for about two-thirds of days-of-use and 80 percent of the quantity consumed.

10 UN Office on Drugs and Crime, World Drug Report 2013 (Vienna: United Nations, 2013), http://www.unodc.org/unodc/secured/wdr/wdr2013/World_Drug_Report_2013.pdf.

**Table 1. Mark-ups Along the Distribution Chain for Legal and Illegal Commodities**

| PRICES ALONG DISTRIBUTION CHAIN | COFFEE | SILVER | COCAINE | CANNABIS RESIN | HEROIN |
|---|---|---|---|---|---|
| Units | Pound | Troy Ounce | Gram | Gram | Gram |
| Source Country | $3-$6,Colombia | $21.80, spot price | $2.44, Colombia (87-95% pure) | $0.75, Morocco | $2.23, Afghanistan |
| In Transit (multi kg) | N/A | N/A | $7.00, Bahamas | $2.04, Spain | Various |
| Final Market Country | US | US | US prices per pure g | Netherlands | UK |
| Wholesale price | $6.75-$8.55 | $1 over spot + delivery (cash price) | $37 EPH for 50 + g, 2007 | $2.60 multi-kg loads | $54 Adjusted to 56% purity |
| Retail price, bulk | $3.99-$10.19 Grocery store, 3/4 pound bag | $1.50-$2 over spot Coin Store, 20+ rounds | $71 Street Dealer, 5g | | |
| Retail, single serving | $1.25, medium cup brewed Convenience store | $2 over spot Coin store, single round | $175 Street Dealer, 0.25g | $8.60 | $86 Adjusted to 56% purity |
| **DRIVERS OF DISTRIBUTION COSTS** | | | | | |
| Price/g.export | $0.01 | $0.77 | $2.68 | $0.75 | $2.23 |
| Legal | Yes | Yes | No | No | No |
| **MARK-UPS** | | | | | |
| Serving size (grams) | 17 | 0.5 | 0.2 | 0.4 | 0.2 |
| Piece per serving | | | | | |
| Export | $0.17 | $0.38 | $0.54 | $0.30 | $0.45 |
| Wholesale | $0.29 | $0.40 | $7.40 | $1.04 | $10.71 |
| Retail, bulk | $0.35 | $0.42 | $14.20 | | |
| Retail, as sold | $1.25 | $0.42 | $35.00 | $3.44 | $17.15 |
| | | | | | |
| % Increase over export | | | | | |
| Wholesale | 69% | 5% | 1280% | 247% | 2302% |
| Retail, bulk | 108% | 8% | 2548% | | |
| Retail, single serving | 635% | 9% | 6427% | 1047% | 3745% |

Sources: Cocaine prices within the US are from Fries et al.[11] Other prices for illegal drugs are from the World Drug Report, with UK heroin prices multiplied by 1.33 to adjust for dilution along the distribution chain (e.g. average purity in the UK is 56 percent vs. 42 percent in Turkey).[12] Likewise, cocaine percent increases over export factor in that US cocaine prices are given per pure gram.

11 Arthur Fries, Robert W. Anthony, Andrew Cseko Jr., Carl C. Gaither and Eric Schulman, *The Price and Purity of Illicit Drugs: 1981-2007* (Institute for Defense Analysis, 2008).

12 UN Office on Drugs and Crime, World Drug Report 2013 (Vienna: United Nations, 2013), http://www.unodc.org/unodc/secured/wdr/wdr2013/World_Drug_Report_2013.pdf.

Some who argue that prices wouldn't fall so much look at the percentage increases, e.g. between wheat and the price of breakfast cereal containing wheat.[13] I would argue that is an incorrect comparison. Converting wheat into breakfast cereal involves significant processing, and distribution costs loom much larger, in percentage terms, for products with a low value-to-weight ratio. But even if cocaine increased by as much in absolute terms as silver ($0.07 per gram) and also by as much as coffee in percentage terms (635 percent), then its retail price would still only be $20 per pure gram, not $175 per pure gram as it is today.

Table 1 also gives mark-ups for cannabis resin (moving from Morocco to the Netherlands) and heroin (from Afghanistan to the UK) to show that the broad outlines of these observations are not specific to cocaine or to the Western Hemisphere.

An amount equivalent to one 'serving' of cannabis resin, heroin and cocaine all cost about the same in the source country, roughly $0.30 - $0.50, so we define a 'serving' of silver as 0.5 grams so its price also falls in that range. But despite similar prices in the source countries, the retail prices are radically different. Distribution of legal commodities is cheap, so their prices increase by far less than do the three commodities whose distribution is prohibited. Traffickers demand $10,000 or more per kilogram to move cocaine from South America to the US; FedEx will ship a kilogram of anything else for $60. While prohibition cannot seal the borders, it succeeds in making drugs extraordinarily expensive. Legalisation might drive source country prices down sharply, and that would lead to a larger percentage increase along the distribution chain, but also to even lower final prices than are described here. Production of all three illegal drugs with current methods is highly labour-intensive. If legalisation allowed producers to own and employ labour-saving capital equipment, production costs might fall appreciably. The differences in price increases across the three illegal commodities are instructive. Cannabis, for which the prohibition is enforced least intensively, shows by far the smallest increase.[14] The price increases from export country to final market wholesale price for cocaine and heroin are similar, but the increase from wholesale to retail is much greater for cocaine in the US than for heroin in the UK, which makes sense inasmuch as the US pursues drug enforcement much more aggressively than does almost any other developed country, so the risks and other distribution costs are higher.

## CANNABIS

Cannabis accounts for a modest share of the enforcement effort and other costs of prohibition. Even though it is the most widely used of the illegal drugs, fewer than 10 percent of drug law violators imprisoned in the United States were involved only with cannabis, and incarceration for cannabis offences is even less common elsewhere.[15] Nevertheless, cannabis is of interest because there is much better empirical evidence concerning how prohibition affects production costs and wholesale prices, for two reasons. First, there are well-established regimes of partial legalisation. The Netherlands has *de facto* legalised retail sales of up to five grams.[16] Alaska has legalised personal possession and home growing of up to 25 plants. And a number of western US states, including California, Colorado, Oregon and Washington, have legalised medical cannabis production and sale, including via bricks-and-mortar 'dispensaries,'[17] with rules about medical eligibility so broad that effectively anyone can buy a medical recommendation from a 'Doctor 420'.[18]

13 Jeffrey Miron, 'The Effect of Drug Prohibition on Drug Prices: Evidence from the Markets for Cocaine and Heroin,' The Review of Economics and Statistics, 85/3 (2003): 522-530.

14 For a detailed analysis of cannabis price increases along the distribution chain from Morocco to final market countries in Europe, see Beau Kilmer and J. Burgdorf, 'Insights about cannabis production and distribution costs in the EU,' in *Further Insights Into Aspects of the Illicit EU Drugs Market*, ed. F. Trautman, B. Kilmer and P. Turnbull (Luxembourg, Publications Office of the European Union: 2013), 389-404.

15 Jonathan P. Caulkins and Eric Sevigny, 'How Many People Does the US Incarcerate for Drug Use, and Who Are They?' *Contemporary Drug Problems*, 32/3 (2005): 405-428.

16 Robert J. MacCoun, 'What Can We Learn from the Dutch Cannabis Coffee Shop System?,' *Addiction*. 106 (2011): 1899–1910.

17 See Rosalie Pacula, David Powell, Paul Heaton and Eric Sevigny, 'Assessing the Effects of Medical Marijuana Laws on Marijuana and Alcohol Use: The Devil Is in the Details,' *National Bureau of Economic Research*, Working Paper 19302 (2013), http://www.nber.org/papers/w19302. The paper finds that dispensaries are a particularly important component of medical cannabis's effect on use.

18 O'Connell and Bou-Mater and Nunberg et al. provide data showing that most of those obtaining cannabis recommendations in California do not have serious diseases such as cancer, HIV, MS or glaucoma. T. O'Connell and C. Bou-Mater, 'Long term marijuana users seeking medical cannabis in California,' *Harm Reduction Journal*, 4/16 (2007); Helen Nunberg , Beau Kilmer, Rosalie Liccardo Pacula, James R. Burgdorf, 'An analysis of applicants presenting to a medical marijuana specialty practice in California,' *Journal of Drug Policy Analysis*, 4/1 (2011).

Second, two US states (Colorado and Washington) recently legalised large-scale commercial production and distribution of cannabis for recreational, not just medical, purposes. Licensed commercial operation has only just commenced as of this writing in early 2014, so market conditions are still years from reaching a new equilibrium, but considerable effort has gone into estimating what production costs and prices will be in the long-run, because the regulatory agencies need to estimate tax revenues and reach various administrative decisions. These sources provide a range of estimates of production costs and wholesale prices.[19] The relevant analyses are summarised in Figure 1. All figures pertain to the wholesale price per pound for high-potency sinsemilla or its equivalent. The red bar on the left was the former price under prohibition ($3,500) in the western states where prices have subsequently fallen.

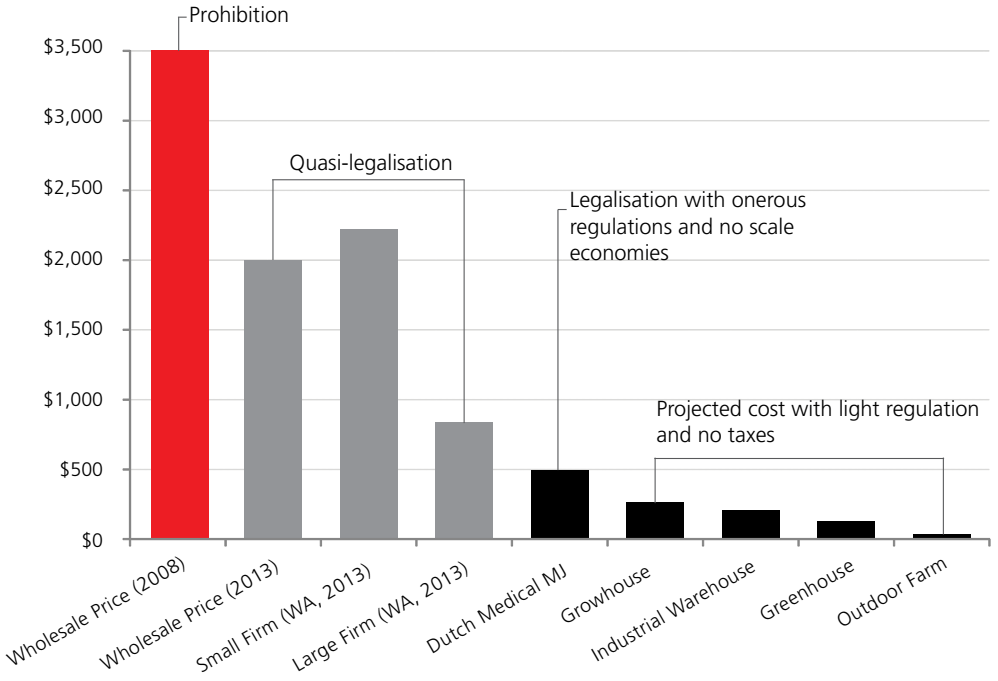
The grey bars show how wholesale prices fell as the medical industry achieved formal regulatory status under state law.[20] It should be noted that federal prohibition remained in place, and both producers and dispensaries were subject to occasional federal enforcement action. These grey bars therefore represent the effect of only a partial lifting of prohibition.

The second bar ($2,000 per pound) is a typical farmgate price quoted by media sources. The third and fourth bars are production cost estimates for existing small and large firms, based on data collected for BOTEC's work advising Washington State's Liquor Control Board on its implementation of cannabis legalisation. Small and large in this context means production on 100 vs. 1,000 square metres, respectively. Washington State allows production on up to 2,800 square metres, so some further economies of scale may be realised in the future.

The black bars pertain to legalisation. The first ($490 per pound) is for the supplier of Dutch medical cannabis. It reflects (1) low-volume production, therefore not realising economies of scale (2) of medicine, and so is subject to greater quality control and inspection costs than one would expect for recreational cannabis.[21]

The next three bars are refinements on the estimates that pertain to a situation in which a state has legalised cannabis, but growers need to remain discreet in order to avoid attracting attention from federal enforcement.[22] The last bar, for outdoor farming, assumes full legalisation and production costs comparable to other crops that are transplanted, rather

**Figure 1. Production Costs and Wholesale Prices for Cannabis Under Various Scenarios**




19 Retail prices are harder to project because retailer mark-ups can vary enormously by industry, from lows of 14 percent for gasoline and new cars to 139 percent for optical goods, and it is not clear which existing industries provide the best comparators for the future cannabis retailing industry. See Jonathan Caulkins, Susan Andrzejweski and Linden Dahlkemper, 'How Much Will the 25/25/25 Tax Scheme Actually Impact the Price of Cannabis?' *Supplement: Retailer and Processor Markup BOTEC Analysis Corp.*, I-502 Project Report 430-81, 28 June 2013, http://lcb.wa.gov/publications/Marijuana/BOTEC%20reports/8a_Impact_of_tax_schemes_Appendix_A_on_Markups-Final.pdf.

20 The price decline was apparent in both official reports and user-contributed websites tracking prices. For a colourful description of how the supply expansion affected producers see Walter Hickey, 'The True Story of the Great Marijuana Crash of 2011,' *Business Insider*, 25 September 2013 , http://www.businessinsider.com/the-great-marijuana-crash-of-2011-2013-9.

21 Beau Kilmer and J. Burgdorf, 'Insights about cannabis production and distribution costs in the EU' in *Further Insights Into Aspects of the Illicit EU Drugs Market*, ed. F. Trautman, B. Kilmer, and P. Turnbull (Luxembourg, Publications Office of the European Union: 2013), 389-404.

22 Beau Kilmer, Jonathan P. Caulkins, Rosalie Liccardo Pacula, Robert MacCoun and Peter Reuter, *Altered State? Assessing how marijuana legalization in California could influence marijuana consumption and public budgets* (RAND, 2010).

than grown from seed (i.e. it allows for production costs 10-20 times greater than those currently observed for industrial hemp).

We would expect national legalisation in the US to bring production costs below those currently achieved by Dutch medical growers, but how low depends on the dominant form of THC consumption. More expensive indoor growing may be necessary for standard usable cannabis that is sold loose and rolled by the user. Outdoor production may be limited to butane hash oil and other extracts (for vaporisation, direct consumption via 'dabbing' or infused in edibles and beverages) and pre-rolled cigarettes, for which appearance matters less, and 'fortifying' THC content by adding oils should be possible.

Any of these scenarios, though, involves a decline of over 90 percent in pre-tax wholesale prices relative to prohibition, and taxes large enough to make up the difference would be unprecedented in terms of value-per-unit weight, and would thus be expected to invite large-scale evasion unless the entire regime were designed around the goal of facilitating tax collection.[23]

## ELASTICITY OF DEMAND

The two previous sections argued that prohibition drives prices up substantially, but driving up prices is just a means to an end; the ultimate goal is to reduce use and abuse.

Economists characterise the effect of price on consumption via the 'elasticity of demand,' which measures the percent change in consumption associated with a one percent increase in price. (Elasticities are almost always negative, since price increases suppress consumption, so a 'bigger negative' number indicates a greater responsiveness of consumption to price.)

Two recent reviews are relevant: Rosalie Pacula reviews the literature specific to cannabis and Craig Gallet offers a meta-analytic survey of the literatures also concerning cocaine and heroin.[24] Both note complexities. Different studies do not always agree, and there are important distinctions. For example, youths tend to be more price-responsive than older users, and the long-run price response is greater than the short-run response. Also, the overall or total elasticity is greater (in absolute value) than are participation elasticities; the latter encompass only prices' effects on prevalence. However, Pacula concludes that the total elasticity of demand for cannabis is likely to be between -0.4 and -1.25, based on which Kilmer et al. use -0.54 as the single best point estimate;[25] Gallett finds somewhat larger values for cocaine and heroin. There are, however, unavoidable challenges when trying to translate an elasticity of demand and a legalisation-induced price change into a projected effect on consumption. First, all historical evidence underpinning elasticity estimates comes from relatively modest price changes within a prohibition regime, and the relationship between price and consumption may be different after legalisation.[26] Second, legalisation can affect consumption through a half-dozen or so mechanisms besides price.[27] Robert MacCoun estimates these might have bumped up consumption by an additional five to 50 percent if California had legalised cannabis in 2010.[28] Third, legalisation-induced price declines would be large enough that assumptions about the shape of the demand curve well away from current prices can radically affect the projected effects on consumption. If one sticks to the linear demand curves drawn on chalkboards in an 'Introduction to Economics' class, then the projected effects on consumption will be much smaller than if one believes the demand curve actually curves, as with a constant-elasticity curve.[29]

Hence, even if one somehow knew that legalisation would reduce retail prices by 75 percent for cannabis and 90 percent for cocaine, and even if one knew those drugs' elasticities over modest prices changes in the past were -0.5 and -0.75, respectively, it would almost certainly be wrong to project a price-induced increase in consumption of only 0.75*0.5 = 37.5 percent and 0.9*0.75 = 67.5 percent, respectively. Indeed, Caulkins and Kilmer et al. show that one cannot rule out the possibility that the actual increases could be very much larger.[30]

The next section works through estimates of prohibition's benefits using arbitrary assumptions that legalisation would double the amount of cannabis use and abuse, and triple those for cocaine, heroin and methamphetamine. Those are plausible and conveniently round numbers, but they should be thought of as place-holders for quite broad uncertainty ranges.

23 Jonathan P. Caulkins and Michael A.C. Lee, 'The Drug-Policy Roulette,' *National Affairs*, 12 (2012): 35-51.

24 Rosalie L Pacula, *Examining the Impact of Marijuana Legalization on Marijuana Consumption: Insights from the Economics Literature* (RAND, 2010) WR-770-RC; Craig A. Gallet, 'Can price get the monkey off our back? A meta-analysis of illicit drug demand,' *Health Economics* (2013).

25 Beau Kilmer, Jonathan P. Caulkins, Rosalie Liccardo Pacula, Robert MacCoun and Peter Reuter, *Altered State? Assessing how marijuana legalization in California could influence marijuana consumption and public budgets* (RAND, 2010).

26 Caulkins and Lee, 'The Drug-Policy Roulette,' 35-51.

27 Robert J. MacCoun, 'Drugs and the Law: A Psychological Analysis of Drug Prohibition,' *Psychological Bulletin*, 113(3) (1993): 497-512.

28 Robert J. MacCoun, *Estimating the Non-Price Effects of Legalization on Consumption* (RAND, 2010).

29 Jonathan P. Caulkins, 'Do Drug Prohibition and Enforcement Work?' White paper published in the 'What Works?' series (Lexington Institute, 2000); Caulkins and Lee, 'The Drug-Policy Roulette,' 35-51; Kilmer, Caulkins, Pacula, MacCoun and Reuter, *Altered State?*.

30 Caulkins, 'Do Drug Prohibition and Enforcement Work?'; Kilmer, Caulkins, Pacula, MacCoun and Reuter, *Altered State?*.

## THE BENEFIT OF PROHIBITION-INDUCED REDUCTIONS IN DEPENDENCE

*Dependence*

Based on responses to the 2011 household survey, about 2.6 million Americans meet DSM-IV criteria for cannabis dependence (4.1 million for abuse or dependence), with about 400,000 also dependent on some other illicit drug.[31] The true rates may be larger, since household surveys miss some users, and denial is a hallmark of addiction. Nevertheless, if legalisation would double cannabis abuse and dependence, then prohibition should get credit for preventing something like 2.2 million instances of cannabis dependence above and beyond those who are also dependent on other illicit drugs.

The number meeting DSM-IV critieria for abuse or dependence on cocaine, heroin and methamphetamine is harder to know, since so many of them are missed by a household survey. There are, however, new estimates of the number using these substances on a daily or near-daily basis, which we will use as an imperfect proxy for dependence. Kilmer et al. estimate that there were 0.6 million, 1.0 million and 0.3 – 0.6 million daily or near-daily users of cocaine, heroin and methamphetamine, respectively.[32] There is some overlap, particularly between cocaine and heroin, so the total number of individuals who are daily or near-daily users of one of these 'hard drugs' is about 90 percent of the individual sums.[33] Not all daily or near-daily users are dependent, but conversely some of the nearly 1 million additional people who use hard drugs roughly every other day (but not daily or near-daily) are dependent, so there are probably something on the order of 2-2.5 million frequent users of hard drugs in the US who are dependent. If legalisation would triple rates of hard drug use and dependence, then prohibition gets credit for averting something like 4-4.5 million instances of dependence on hard drugs.

*Valuation of Dependence*

In the international health literature, the most common method for quantifying the loss in well-being associated with disease and other health conditions is quality-adjusted life-years (QALYs) lost. QALYs measure both survival probability and the degree of impairment when living with the illness relative to a scale on which 1.0 represents perfect health.

Several studies have estimated the QALY loss caused by dependence itself, as opposed to the various other physical ailments that are often associated with dependence. For example, Mather et al. suggest losses of 0.113 and 0.184 per year of dependence and harmful use of cannabis and benzodiazepines.[34] For heroin or polydrug dependence they suggest 0.27 as a '[l]ocally derived weight, [that is] slightly larger than GBD weight [of] 0.252,' referring to Murray and Lopez's (1996) global burden of disease (GBD) study. Zaric et al. assumed a loss of 0.2 QALY per year spent by injection drug users not in methadone maintenance treatment and 0.1 QALY loss per year in treatment.[35] Pyne et al. tried to assess the QALY state of drug dependent individuals directly.[36] The 390 subjects with a lifetime history of drug dependence and who had current problems had

**Table 1. Very Rough Quantification of the Benefits of Prohibition in the United States from Reduction in Dependence on the Drugs that are now Prohibited**

| | Number dependent now (millions) | Possible increase due to legalisation | QALY loss per case | Possible additional QALYs lost (millions) |
|---|---|---|---|---|
| Cannabis | 2.2 | 100 percent | 0.1 | 0.22 |
| Hard drugs | 2.25 | 200 percent | 0.2 | 0.9 |
| Total | | | | 1.12 |
| | | | Value per QALY | $100,000 |
| | | | Value of dependence averted ($B) | $112 |

31 SAMHDA, 'National Survey on Drug Use and Health,' 2011, http://www.icpsr.umich.edu/icpsrweb/SAMHDA/.
32 Kilmer et al., *What America's users spend on illicit drugs*.
33 Jonathan P. Caulkins, Susan Everingham, Beau Kilmer and Greg Midgette, 'The whole is just the sum of its parts: Limited polydrug use among the "big three" expensive drugs in the United States,' *Current Drug Abuse Reviews* (forthcoming).
34 Colin Mathers, Theo Vos and Chris Stevenson, *The Burden of Disease and Injury in Australia* (Australian Institute of Health and Welfare, 1999), AIHW Cat. No. PHE 17: 195.
35 G.S. Zaric, P.G. Barnett and M.L. Brandeau, 'HIV transmission and the cost-effectiveness of methadone maintenance,' *American Journal of Public Health*, 90 (2000): 1100–11.
36 J. M. Pyne, T.L. Patterson , R.M. Kaplan, J.C. Gillin, W.L. Koch and I. Grant, 'Assessment of the quality of life of patients with major depression,' *Psychiatric Services*, 48 (1997): 224–30.

average QALY scores of only 0.58 and 0.681 out of 1.0, but in a multivariate regression controlling for socio-demographic variables, the effect of lifetime dependence with current problems relative to a 'control group' of those in the study who did not have a history of dependence was 0.125. Arguably that is a conservative estimate because the control group met the diagnosis for drug abuse and need for treatment (but not dependence). On the other hand, the list of socio-demographic controls was limited, so the 0.125 figure is not a lower bound. We will use values of 0.1 for cannabis dependence and 0.2 for dependence on cocaine, heroin and methamphetamine.

A common threshold test when assessing health interventions is that programmes which save a QALY for $50,000 or less are cost-effective, although this figure may be out of date. One would expect the threshold to increase with inflation and growth in real GDP per capita, but the $50,000 figure dates to the mid-1980s when valuations were $1 million dollars per life.[37] If $50,000 was the right figure in 1985, today the right figure might be more like $100,000. Furthermore, the economics literature now favours the so-called 'revealed-preference approach' which can yield substantially higher valuations on human life. Viscusi and Aldy review revealed-preference studies and conclude that estimates fall within the range of $4 million to $9 million per statistical life in 2000 dollars, which would suggest $400,000 per QALY in today's dollars.[38] I will use $100,000, but understand that figures half as large or two or even four times as great can be defended.

Table 1 translates these parameter values into a point estimate that prohibition may prevent enough drug dependence to warrant spending as much as $112 billion per year, well in excess of the roughly $50 billion per year now spent on drug control.

This quantification is *extremely* rough, but it has the virtue of being parsimonious, involving only seven parameters. Any reader with a calculator can quickly compute how the $112 billion figure would change if one or more of the parameters were varied. Clearly one can produce benefit valuations below $50 billion. Notably, those who reject the idea that legalisation will have any effect on dependence and/or that dependence involves any loss in quality of life would compute that prohibition offers zero benefit.

Likewise, the $50 billion cost figure pertains to monetary spending. Some might argue that imprisonment causes a loss in quality of life. If the almost 500,000 drug law violators behind bars suffer a QALY loss of 0.5, that is 250,000 QALY lost per year, whose monetised value of $25 billion ought to be added to the $50 billion in financial outlays. Likewise prohibition increases drug-related crime and violence, since the economic-compulsive and systemic crime it creates exceeds the psychopharmacological crime it averts.[39] Prohibition also reduces labour productivity (e.g. when a criminal record blocks someone from getting a particular job), although drug abuse does as well, so it is not immediately clear which effect is greater. Similarly, prohibition exacerbates some medical conditions (e.g. from HIV) but averts others. (The QALY calculation above considered only dependence *per se*, not the physical sequelae of substance abuse, such as heart problems or stroke caused by stimulant abuse.)

An optimist might also argue that legalisation would provide competition for alcohol and tobacco, siphoning users away from those substances, and thereby creating additional benefits. Of course a pessimist might worry that the hard drugs are complements not substitutes for alcohol, at least in the long run, and that increases in cannabis smoking might increase, not reduce, tobacco smoking.

So the purpose of this calculation is certainly *not* to argue that prohibition offers a net benefit of $112 billion - $50 billion = $62 billion. For many reasons it is not possible to make such a calculation. However, this arithmetic exercise does challenge the presumption that prohibition has failed to serve the interests of the United States and, by extension, other final market countries. Even granting that prohibition's costs are enormous, it does not automatically follow that those costs outweigh potential benefits from reduced dependence, because the benefits may also be very large.

Furthermore, there is a broad consensus among researchers and increasingly among policymakers that enforcement intensity in the United States has gone beyond the point of diminishing returns. Peter Reuter and I have argued that the United States could cut sanctioning by 50 percent across the board and suffer only a very modest increase in use and dependence, even though eliminating prohibition altogether would lead to a doubling or tripling of dependence.[40] If that is correct, then such a kinder, gentler prohibition would look even better relative to legalisation than the table above suggests, and that may be a caricature of the spirit of prohibition as implemented in many final market countries in Europe and Australasia.

37 For a discussion, see W.G. Manning, E.B. Keeler and J.P. Newhouse, 'The Taxes of Sin: Do Smokers and Drinkers Pay Their Way?,' *Journal of the American Medical Association,* 261 (1989): 1604-1609.

38 W.K. Viscusi and J.E. Aldy, 'The value of a statistical life: A critical review of market estimates throughout the world,' *Journal of Risk and Uncertainty*, 27 (2003): 5–76.

39 Jonathan P. Caulkins and Mark A.R. Kleiman, 'Drugs and Crime,' in *Oxford Handbook of Crime and Criminal Justice*, ed. Michael Tonry. (Oxford University Press, 2011), 275-320.

40 Jonathan P. Caulkins and Peter Reuter, 'Reorienting U.S. Drug Policy,' *Issues in Science and Technology*, XXIII/1 (2006), 79-85.

## CONCLUSION

The central point of the analysis above is that the benefits of drug prohibition in the US – in terms of reduced dependence – may well exceed prohibition's combined costs in terms of financial outlays and loss of freedom from incarceration. There is enormous uncertainty surrounding every component of the calculations, and intelligent people can disagree about what value to place on averting a year of dependence vs. a year of incarceration, but it is at least plausible that prohibition is actually succeeding from a US perspective. And if the rather extreme and inefficient version of prohibition implemented in the US has merits, the same may be true for prohibition as implemented in other final market countries. Furthermore, one cannot readily 'experiment' with legalisation; more likely than not, it is an irreversible step.[41]

What does this imply for the debate over drug policy reform? Even if one were persuaded by the analysis here, it does not apply to source or transshipment countries. If there were a country whose people would have no interest in using a drug, and that country were beset by violence, corruption and other ills from hosting production or international trafficking, then that country might benefit from legalisation, even if final market countries would not. That, simply put, is what some other contributions in this report argue.

There are at least three reactions to the possibility that prohibition benefits final market countries but hurts production and transshipment countries. The first is that the final market countries ought to subordinate their interests to those of source and transshipment countries; that seems far-fetched, as nations tend to put their own interests first. The second is that the final market countries ought to compensate production and transshipment countries for the harms caused, in proportion to their share of consumption. Arguably, that is part of what has motivated some US aid to Colombia, which in recent years has stressed institution-building, not just crop eradication.

Another possibility is that the present international prohibition regime is unsustainable in the long run even if there were some such compensation; over time, footloose international trafficking may migrate to the nations least able to defend themselves, leading to failed states and *de facto*, if not *de jure* legalisation. Failed narco-states are in nobody's interests, so an alternative would be for states that are net losers under prohibition to withdraw from the international control regime, in hopes of being able to control, regulate and even tax legal production.

The country that moves first will bear unusual risks. It may quickly attract production activity from other countries. And its people would be exposed to low prices and high availability before the global society has learned how to nurture anti-use norms that can (partially) take the place of official prohibition. Nevertheless, it seems plausible that some state will become sufficiently desperate that they may take the plunge. If so, then the self-interested policy for other states, particularly distant states, may be to encourage that other country to jump first, and then learn from its tribulations. In legalisation as in software development, it may be prudent to distinguish between aspiring to be on the cutting edge vs. the bleeding edge of reform. ■

41 Caulkins and Lee, 'The Drug-Policy Roulette,' 35-51.

# Why Is Strict Prohibition Collapsing? A Perspective from Producer and Transit Countries

Daniel Mejia and Pascual Restrepo

**In this contribution we lay out a simple political economy theory that helps explain the current debate on prohibitionist drug policies in Latin America and their slow but sustained collapse as a strategy to confront illegal drug production and trafficking. Viewed from the perspective of producer and transit countries, prohibitionist drug policies are a transfer of the costs of the drug problem from consumer to producer and transit countries, where the latter are pushed to design and implement supply-reduction policies. The contribution shows how the low effectiveness and high costs of these policies have led the region to ask for an urgent and evidence-based debate about alternatives to strictly prohibitionist drug policies.**

**Summary**

- Latin American governments have recently pushed back against continuing prohibitionist drug policies.
- This is due to a poor 'operationalisation' of prohibitionist drug policies that has ended up transferring a large proportion of the costs of the drug problem to producer and transit countries.
- There are three main reasons why:
  (1) Poor effectiveness of supply-reduction efforts in reducing the flow of drugs to consumer countries.
  (2) A high cost of implementing supply-reduction efforts (violence, corruption and institutional instability).
  (3) A decreased willingness of producer and transit countries to mortgage their national security interests in exchange for receiving partial funding to implement supply-reduction efforts.
- Drug policy, like any policy, must be judged by results not intentions.
- Evidence is clear highlighting very high costs and ineffectiveness of many prohibitionist policies implemented under the 'war on drugs'.

Only a couple of years ago not even the most radical advocates for a change in drug policy felt that the international drug debate would evolve as quickly as it has. In an important way, the debate began to intensify four years ago, with the publication of the report of the Latin American Commission on Drugs and Democracy, headed by former Latin American presidents Fernando Henrique Cardoso, Cesar Gaviria and Ernesto Zedillo.[1]

Then, about two years ago, other world leaders and international figures, such as Kofi Annan, George Schultz, Paul Volcker and Richard Branson, joined the three former Latin American presidents and published the report of The Global Commission on Drug Policy. Both reports made an urgent call for a revision of prohibitionist drug policies and advocated treating drug consumption as a public health issue, not as a criminal offence. The reports advocated including 'not just alternatives to incarceration and greater emphasis on public health approaches to drug use, but also decriminalisation and experiments in legal regulation'.[2]

Only a few months after the publication of the report of the Global Commission, Colombian President Juan Manuel Santos (quite courageously) encouraged the international community, other presidents in the region and especially the United States government to engage in an informed and honest discussion, based on the best available empirical and academic evidence, about the effectiveness and costs of the current global regime on drugs.[3] President Santos was followed by other Latin American presidents, like Otto Pérez Molina, who introduced the issue of drug legalisation into the debate.

1 Latin American Commission on Drugs and Democracy, 'Drugs and Democracy: Towards a Paradigm Shift,' 2009, http://www. drogasedemocracia.org/Arquivos/declaracao_ingles_site.pdf.
2 See Global Commission on Drug Policy, 'War on Drugs,' 2011, http://www.globalcommissionondrugs.org/Report.
3 See also Juan Manuel Santos, 'Re-examining the Drug Problem Through a Fresh Lens,' in *Governing the Global Drug Wars*, ed. John Collins, (London: LSE IDEAS Special Report, 2012), 2–3.

In the Summit of the Americas held in Cartagena in 2012, the Organization of American States (OAS) received the mandate to produce a report about the Drug Problem in the Americas. This thorough report was released in May 2013, making a special emphasis in five areas: the relationship between drugs and public health; the relationship between drugs and economic and social development; security challenges as reflected in the nexus between drugs, violence and organised crime; the production and supply of drugs, pharmaceuticals and chemical precursors; and the legal and regulatory approaches to the drugs problem. All in all, the two Commissions, the statements by former and acting Latin American presidents and the OAS report reflect the frustration of many countries in the region with the 'war on drugs' as we know it and its high costs.

But how did all this movement start? And why in Latin America? This contribution aims at answering these two questions by providing a simple political economy theory of the war on drugs in producer and transit countries and the main reasons why the region is making an urgent call for an evidence-based debate on the costs and benefits of this war.

Before laying out the theory, it is useful to provide some definitions of prohibition and how it has been operationalised in practice. According to different sources, prohibition is 'the action of forbidding something, especially by law' or 'a law or rule that stops people from doing something'. Policies to deal with the production, trafficking, sale and consumption of psychoactive substances such as cannabis, cocaine and heroin have been dominated for decades by a so-called 'prohibitionist' approach. That is, by policies that restrict or ban the production, trafficking, sale and consumption of these substances. More importantly, however, these policies have been operationalised using criminal policy tools such as arrest, prosecution and imprisonment. But beyond a grammatical or even operational definition of prohibition, it is worth understanding prohibitionist drug policies from an international political economy perspective.

> '...the recent Latin American experience shows that when a country is (locally) successful in the fight against drug production and trafficking – which is the exception rather than the rule – DTOs are displaced to other countries where they find more favourable environments to run their operations.'

The rest of the contribution is organised as follows. First, it lays out a simple international political economy theory of prohibition. It then explains in detail the three main reasons why, in our view, the operationalisation of this theory is collapsing as a strategy to confront the drugs problem in Latin America. Finally, it presents some concluding remarks.

## A SIMPLE POLITICAL ECONOMY THEORY OF PROHIBITION

From the perspective of producer and transit countries, prohibitionist drug policies can be understood as a transfer of the costs of the 'drugs problem' faced by consumer countries to producer and transit countries. On the one hand, under complete legalisation, consumer countries would end up bearing most of the costs associated with drug consumption. Among others, these are the costs that the health systems in consumer countries would have to pay for treating dependent users and problematic drug consumers, the productivity losses associated with problematic drug consumption and the costs of implementing policies to reduce drug consumption (prevention, treatment and rehabilitation, among others), among others.

With full prohibition, on the other hand, consumer countries end up transferring a significant part of these costs to producer and transit countries by pushing them (through international norms such as the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 or the US annual certification process[4]) to implement supply-reduction efforts aimed at making the price of drugs reaching consumer countries higher and their availability lower. Examples of supply-reduction efforts that have been implemented in different countries in the region are the eradication campaigns of illicit crops; the interdiction of drug shipments; the detection and destruction of drug producing labs; and the arrest of leaders of Drug Trafficking Organisations (DTOs).

With less drug supply and higher prices, the argument follows, the use of these substances in consumer countries should decrease, as should the costs that these countries have to pay to confront their drug problem.[5] In summary, from an international political economy point of view, the current operationalisation of prohibition is little more than the transfer of a major part of the costs of the drug problem from consumers to producer and transit nations.

In theory, at least, this operationalisation of prohibition (e.g. the pressure on producer and transit countries to implement supply-reduction policies) sounds like a reasonable option, and should not then be a surprise that major consuming countries partially fund these supply-reduction efforts through initiatives such as Plan Colombia or the Merida Initiative (or, in a different region, crop eradication programmes in Afghanistan). Ultimately, it is about some consumer countries compensating others for having transferred an important part of the costs of their drug problem.

4 The US certification process rates the anti-narcotics efforts of other countries, imposing sanctions on countries that do not meet certain standards of drug control. Sanctions range from the suspension of US foreign aid and preferential trade benefits to curtailment of air transportation.

5 For this argument see Jonathan P. Caulkins' contribution to this report.

> Recent research has shown how the increase in the size of illegal drug markets observed between 1994 and 2008 (about 200 percent) explains roughly 25 percent of the current homicide rate in Colombia. This translates into about 3,800 more homicides per year on average that are associated with illegal drug markets and the war on drugs.

Under the current prohibitionist approach to drug policy, producer and transit countries have ended up paying a very high cost in terms of violence, corruption and the loss of legitimacy of state institutions, among many others.

Consider the following thought experiment.[6] Suppose for a moment that all cocaine consumption in the US disappears and goes to Canada. Would the US authorities be willing to confront drug trafficking networks at the cost of seeing the homicide rate in cities such as Seattle go up from its current level of about five homicides per 100,000 individuals to a level close to 150 in order to prevent cocaine shipments from reaching Vancouver? If your answer to this question is 'perhaps not,' well… this is exactly what Colombia, Mexico and other Latin American countries have been doing over the last 20 years: implementing supply-reduction policies so that drugs don't reach consumer countries at the cost of very pronounced cycles of violence and political corruption, with the consequent losses of legitimacy of state institutions.

## THE THREE MAIN REASONS BEHIND THE SLOW BUT SUSTAINED COLLAPSE OF PROHIBITIONIST DRUG POLICIES

What was it that failed with the operationalisation of prohibition in Latin America if it seemed like a reasonable policy (in theory, at least)? This section argues that three main assumptions on which the theory rested have failed to be true: first, a high effectiveness of supply-reduction efforts in reducing the flow of drugs to consumer countries; second, a low cost of implementing supply-reduction efforts; and third, a sustained willingness of producer and transit countries to mortgage their national security interests in exchange for receiving partial funding to implement supply-reduction efforts.

First, the theory assumed that if sufficiently large amounts of resources were invested in supply-reduction efforts in producer and transit countries, it was possible to restrict, or at least to control, the flow of drugs to consumer countries. However, the available evidence shows that there are very few success stories in the fight against drug production and trafficking in the region. And what is even more worrying is that of the few success stories, these have just ended up transferring or displacing production and trafficking activities somewhere else.

The most emblematic case study of the 'war on drugs' in the region is Plan Colombia, a joint initiative implemented by Colombia and the US to fight against cocaine production and trafficking. Under Plan Colombia, the two countries have invested more than one percent of Colombia´s GDP each year (about $1.2 billion per year) to curtail cocaine production and trafficking and to fight against criminal organisations linked to these activities. The available evaluations of anti-drug strategies implemented under Plan Colombia show that these policies tend to be very ineffective – and costly – in reducing the cultivation of coca crops and cocaine production.

First, aerial spraying campaigns of coca crops (the most used strategy to combat cocaine production in Colombia) have been shown to have very small (or no) effects in quantities produced and prices.[7] According to the most conservative estimates derived from a quasi-experimental evaluation of this strategy, for each additional hectare sprayed with herbicides, coca cultivation is reduced by about 0.1 to 0.15 hectares.[8] Furthermore, spraying campaigns have been shown to generate health problems in rural populations exposed to the herbicides used in these campaigns,[9] to damage the environment[10] and to cause loss of confidence in state institutions.[11]

6 This thought experiment is based on a conversation between the authors and Benjamin Lessing.

7 Luis C. Reyes, 'Estimating the Causal Effect of Forced Eradication on Coca Cultivation in Colombian Municipalities,' unpublished manuscript, Department of Economics, Michigan State University, 2011; Sandra Rozo, 'On the Effectiveness and Welfare Consequences of Anti-drug Eradication Programs,' unpublished manuscript, UCLA, 2013; Daniel Mejía, Pascual Restrepo and Sandra Rozo, 'On the Effectiveness of Supply Reduction Efforts in Drug Producing Countries: Evidence from Colombia,' unpublished mansucript, Universidad de los Andes, 2013; Jorge Gallego and Daniel Rico, 'Manual Eradication, Aerial Spray and Coca Prices in Colombia,' unpublished manuscript, UNODC-Colombia, 2013.

8 Mejía et al., 'On the Effectiveness of Supply Reduction Efforts'.

9 Adriana Camacho and Daniel Mejia, 'Consecuencias de la aspersión aérea en la salud: evidencia desde el caso colombiano,' in *Costos económicos y sociales del conflicto en Colombia: ¿Cómo construir un postconflicto sostenible?* ed. Ibañez et al., (Universidad de los Andes 2014).

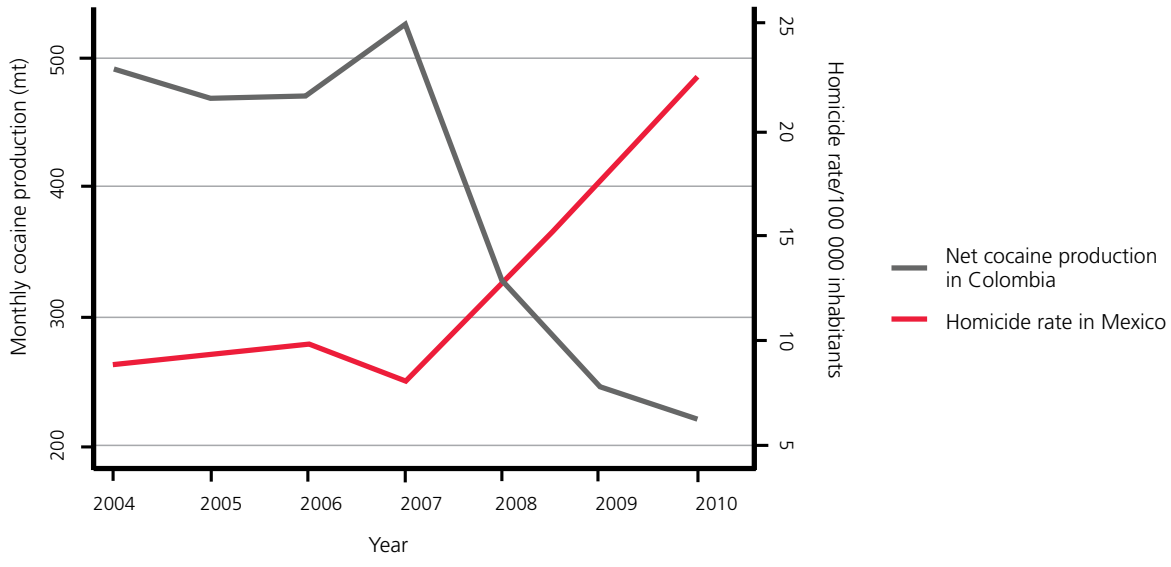
10 Rick A. Relyea, 'The Impact of Insecticides and Herbicides on Biodiversity and Productivity of Aquatic Communities,' Ecological Society of America (2005): 618-627; Carolina Navarrete-Frías and Connie Veillete 'Drug Crop Eradication and Alternative Development in the Andes' Congressional Research Service (2005), http://fpc.state.gov/documents/organization/61022.pdf.; L. Dávalos, A. Bejarano and H. Correa 'Disabusing Cocaine: Pervasive Myths and Enduring Realities of a Globalized Commodity,' International Journal of Drug Policy, 20 (5) (2009): 381-386; L. Dávalos, A. Bejarano, M. Hall, H. Correa, A. Corthals and O. Espejo, 'Forests and Drugs: Coca-Driven Deforestation in Tropical Biodiversity Hotspots' Environ. Sci. Technol., 45 (4) (2011): 1219-1227.

11 M. García, 'Cultivos ilícitos, participación política y confianza institucional,' in *Políticas antidroga en Colombia: éxitos, fracasos y extravíos* ed. A. Gaviria and D. Mejía, 2011, 357-386.

Second, interdiction efforts aimed at disrupting cocaine shipments en route to consumer markets have been shown to be more effective when compared to aerial spraying campaigns,[12] but have only ended up displacing the bases of operation of DTOs to other countries in the region instead of leading to regional decreases in the amount of drugs transacted. This was the case, for instance, after successful interdiction policies in Colombia were implemented in 2007 and cocaine production activities in this country were reduced significantly. With the shift to more interdiction and less eradication in Colombia, coca crops started to move back to Peru and Bolivia; cocaine processing facilities moved to Venezuela and Ecuador (where lower prices for some of the chemical precursors used in the production of cocaine such as gasoline and cement make this activity more lucrative); and the bases of operation of the main trafficking organisations were displaced to Mexico and Central America. All in all, the recent Latin American experience shows that when a country is (locally) successful in the fight against drug production and trafficking – which is the exception rather than the rule – DTOs are displaced to other countries where they find more favourable environments to run their operations. The displacement of drug trafficking activities to other countries after successful interdiction strategies are implemented in one country leads to cycles of violence and instability in the receiving countries. A recent example is Mexico, where drug trafficking activities and violence have sky-rocketed since 2006.

Although many political analysts have put all the blame of the recent situation in Mexico on the strategies implemented by Felipe Calderon, recent research shows that part of the increase of violence and drug trafficking activities in Mexico can be explained by successful interdiction policies implemented in Colombia starting in 2007 (Figure 1). This research finds that high-frequency shocks in the supply of cocaine created by higher cocaine seizures in Colombia increased the levels of violence in Mexico. According to this study, 'scarcity created by more efficient cocaine interdiction policies in Colombia may account for 21.2 percent and 46 percent of the increase in homicides and drug related homicides, respectively, experienced in the north of Mexico'.[13] In most cases, however, anti-drug policies implemented to reduce supply are unsuccessful, even at the local level. The second assumption of the theory that failed to hold relates to the costs that producer and transit countries had to pay for implementing supply-reduction efforts. The theory clearly underestimated both the direct and the collateral costs that had to be paid by countries in Latin America for implementing anti-drug strategies aimed at reducing the supply of drugs and fighting against DTOs.[14] The recent case of Mexico is the most salient one. When President Felipe Calderon declared an open war against DTOs and decided to send the army to confront these organisations at the beginning of his term (December 2006), what can only be described as an 'epidemic' of violence was unleashed.

**Figure 1. Net cocaine supply from Colombia and homicide rate in Mexico**




Source: author's calculations based on data from INEGI, UNODC and the Colombian National Police.

12 D. Mejía and P. Restrepo, 'The Economics of the War on Illegal Drug Production and Trafficking,' Documento CEDE no. 54, Universidad de los Andes, 2013.

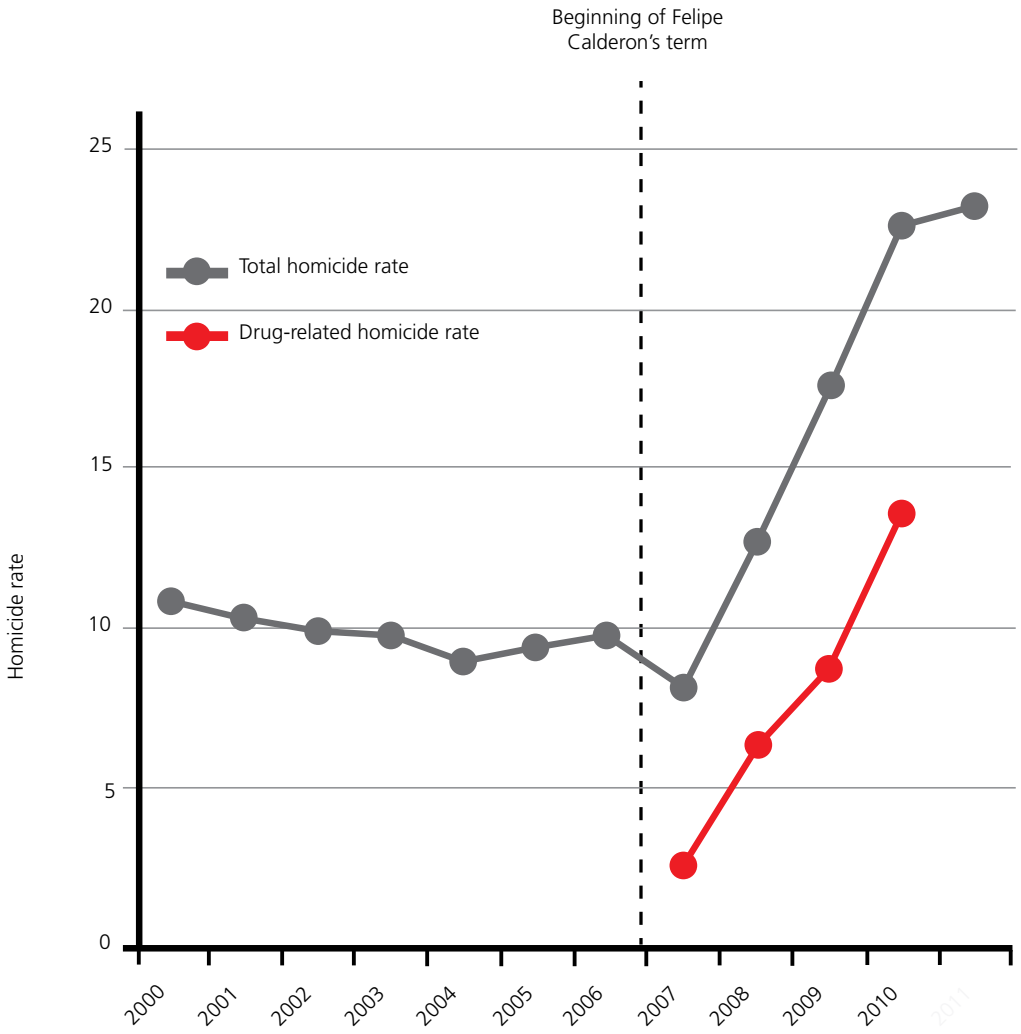
13 J. Castillo, D. Mejía, and P. Restrepo, 'Scarcity without Leviathan: The Violent Effects of Cocaine Supply Shortages in the Mexican Drug War,' Center for Global Development WP # 356, February (2014).

14 For other examples of these collateral costs see Laura Atuesta's contribution to this report examining the creation of 'internally displaced populations' (IDPs) in Colombia and Mexico or Alejandro Madrazo's contribution on the 'constitutional costs' of the war on drugs.

The total homicide rate in Mexico increased threefold within a period of just four years, from about eight homicides per 100,000 individuals in 2006 to more than 23 in 2010 (see Figure 2). Several studies have tackled this issue, confirming that the crackdowns on drug cartels had a significant effect on the levels of violence experienced in Mexico.[15]

Another well-known case where both illegal drug markets and the war against them have led to pronounced cycles of violence is that of Colombia during the last 30 years. Figure 3 presents the evolution of the homicide rate in Colombia during the last three decades. The first wave of violence (during the late 1980s and the beginning of the 1990s) is clearly associated with the war against the Medellin cartel, which ended in 1993 with the killing of Pablo Escobar in a populous neighbourhood in Medellin. In that year, the homicide rate in Colombia reached a level of 72 homicides per 100,000 inhabitants. Although this level is very high, it pales when compared with the level of the homicide rate reached in that year in Medellin: 420. The second wave of violence in Colombia occurred during the late 1990s, and is mainly explained by FARC´s increasing involvement in the drug trade and the strengthening of their military capacity afterwards (Figure 3). Recent research has shown how the increase in the size of illegal drug markets observed between 1994 and 2008 (about 200 percent) explains roughly 25 percent of the current homicide rate in Colombia. This translates into about 3,800 more homicides per year on average that are associated with illegal drug markets and the war on drugs.[16] Although violence is the clearest, crudest and most visible example of the high costs that producer and transit countries

**Figure 2. Homicide rate in Mexico**




15 Melissa Dell, 'Trafficking networks and the Mexican drug war,' unpublished manuscript, Harvard University, 2012; G. Calderón, A. Diaz-Cayeros and B. Magaloni 'The Temporal and Spatial Dynamics of Violence in Mexico,' unpublished manuscript, Stanford University, 2012.

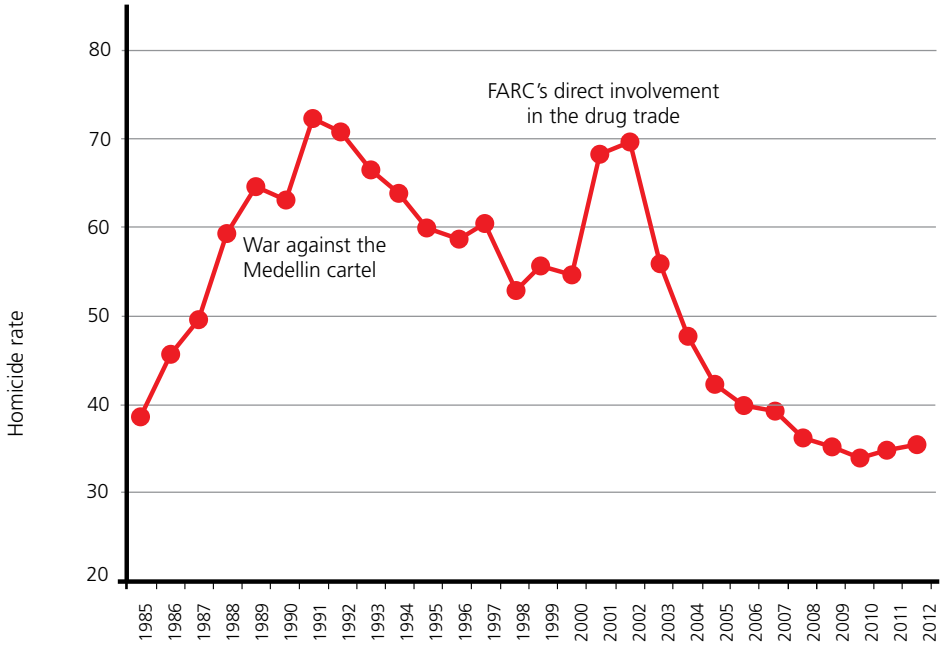
16 D. Mejía and P. Restrepo, 'Bushes and Bullets: Illegal Cocaine Markets and Violence in Colombia,' Documento CEDE no. 53, Universidad de los Andes, November 2013.

have had to pay for waging a war on illegal drugs, they are, unfortunately, not limited to it. A less visible but equally important obstacle to socioeconomic development caused by the high rents associated with drug trafficking are the levels of corruption observed in the region. Drug cartels have funded political campaigns, have penetrated (and intimidated) media outlets and have corrupted the most remote corners of society (including beauty contests and football teams, the two preferred hobbies of Latin American drug traffickers). The costs of violence, crime and corruption caused by the high rents associated with the illegal drug trade are very difficult to quantify, but for countries like Mexico, Colombia and many small countries in Central America, they undoubtedly account for a non-negligible fraction of GDP and for a few percentage points in terms of lower growth rates in these economies.

The third pillar of the theory of prohibition, which only began to fail more recently, is the assumption that producer and transit countries in the region would continue mortgaging their security interests and institutional stability in exchange for $400-500 million per year in aid to confront illegal drug trafficking. Increasingly, countries in the region are beginning to realise that the funding they receive from governments of consumer countries to help finance supply-reduction efforts are not sufficient to compensate the high costs they have to pay for waging this war on drug trafficking and drug cartels. In order to have full control of the policies, some countries, like Colombia, have begun a process of nationalisation of the costs of the 'war on drugs'. This will ensure these countries have full control over which policies are and are not implemented. This does not mean that all forms of aid to the countries in the region risk national and institutional security interests. However, there is no doubt that they reduce the space and independence to decide which policies are more effective and less costly for their own national interests rather than the interests of funding countries.

Such is the case, for example, of aerial spraying campaigns of illicit crops with herbicides in Colombia, where a sizeable proportion of US aid under Plan Colombia has been tied to the use of small aircraft, contractors and herbicides to carry out these campaigns. Only recently, the government of Colombia has started to realise that this form of funding for the war on drugs brings about more costs than returns, and it is starting to question the benefits of continuing these fumigation campaigns. The same realisation has occurred in Mexico, where the government has preferred, in some cases, to give up substantial aid packages in order to keep full control of the policies that are implemented and the operations that are carried out against cartel leaders.

**Figure 3. Homicide rate in Colombia**




Source: author's calculations based on data from the Colombian National Police.

These are three main reasons why, in our view, strictly prohibitionist policies are being subjected to increasing public scrutiny in Latin America. Several leaders (including several acting presidents) in the region have asked respectfully but urgently for an honest and informed debate about which policies work, which don't and what their costs are. The urgent call of Latin American leaders for a debate on the drug problem is a desperate plea to consumer countries to start carrying their own burdens, treating their own ills and fighting their own wars.

## CONCLUSION

The recent history of countries affected by drug production and trafficking in the region has been repeated again and again: violence, corruption, overstretching the capacity of state institutions, etc. In its initial stages, drug trafficking organisations infiltrated traditional political parties. Then, the increase in drug-related violence overwhelmed the capacity of the judicial system to confront these criminal organisations, thus making the countries in the region shift to a new equilibrium characterised by high levels of crime and violence and low state capacity. Organised criminal groups waged an open war against the state and the media, and later funded the expansion of guerrilla and paramilitary groups.

The current debate on drug policy should not be based on simplistic solutions derived from preconceived ideological positions, but on analysis and research that takes into account all the available evidence about the effectiveness, efficiency and costs of alternative drug policies. Drug policy, like any other public policy, must be judged by its results, and not by its intentions, and although in theory prohibition sounds like a reasonable choice, the available evidence is clear in pointing out the very high costs and ineffectiveness of many of the policies that have been implemented so far under the so-called war on drugs. ■

# The Mobility of Drug Trafficking

Peter Reuter[1]

**It is widely believed that pressing down on one trafficking route simply leads to a shift in drug traffic. This contribution reviews the evidence for this proposition, focusing on cocaine and heroin. Theory suggests that smugglers choose the low-cost method for moving from the source country to the final market country. However, interdiction risks are only one among many factors that determine that cost and substantial changes in interdiction intensity on one route may not induce change. A small number of episodes do suggest that the balloon effect, if not universal, can apply. In particular, the emergence of a West African route for cocaine to Europe may have been in response to a Dutch crackdown on an existing route from the Netherlands Antilles to Amsterdam's Schiphol airport. The poor quality of data on either interdiction intensity or on the distribution of drug traffic across routes makes it difficult to find counter-examples, such as crackdowns that did not induce shifts. Though the balloon effect is not perhaps as universal as claimed, it is real enough that policymakers contemplating a major crackdown need to consider effects on other nations.**

**Summary**

- The balloon effect hypothesis advances that if authorities get tougher on producing, trafficking or dealing in one location then the targeted activity will be displaced to another location with no more than temporary inconvenience to the participants.
- The hypothesis further advances that the long-term consequences of supply interventions in terms of availability and price to users will be slight, particularly if the intervention is close to the production site.
- Surely the balloon effect contains at least a grain of truth, even if it is not the whole story. But the question is how much increased interdiction can erode the competitive advantage of existing routes, and that remains in the domain of pure speculation.
- Interdiction crackdowns by one country may well affect others. Co-ordinating decision-making internationally will be extremely difficult both institutionally and operationally but without such co-ordination, negative outcomes may continue to be displaced across borders.

The balloon effect hypothesis has become part of the conventional wisdom about the illegal drug trade. Simply put, this hypothesis advances that if authorities get tougher on producing, trafficking or dealing in one location then the targeted activity will be displaced to another location with no more than temporary inconvenience to the participants.[2] The long-term consequences, in terms of availability and price to users, will be slight, particularly if the intervention is close to the production site.

This contribution reviews the evidence in support of that proposition with respect to international drug trafficking. To what extent has such trafficking, as opposed to production, proven mobile in response to interdiction activities? Interdiction is broadly defined as any activity aimed at apprehending drugs or couriers. The contribution begins with a brief conceptual framework as to how smugglers choose routes. It then reviews what is known about the major routes chosen for cocaine and heroin. The third section examines a small number of instances of crackdowns on specific routes and what happened in response. The final section identifies the principal caveats and draws conclusions.

Cocaine and heroin are the principal focus of the review. They are the drugs thought to be the most valuable in terms of revenues and certainly have caused great harm. Amphetamine Type Stimulants (ATS) are also internationally trafficked and cause harm but very little is known about the trafficking itself. The review's emphasis is on effects in the trafficking countries rather than in final markets; in that sense it looks at interdiction from the point of view of the transshipment countries, not the final consumer countries that are so often the financiers and instigators of interdiction crackdowns.

1 The author wishes to acknowledge the valuable research assistance of Rafael Alencar and Daniel Rico in preparing this paper. Financial support for this research was provided by the Open Society Foundations.

## THE THEORY BEHIND THE BALLOON EFFECT

What explains the geographic configuration of international drug trafficking, in particular which countries serve as the principal transit countries? The obvious model for understanding smuggler choices, used in the few attempts to formally model drug trafficking, assumes that the smuggler's goal is to minimise the cost of smuggling the drug from the source country to the final market country.[3] The difficulty is to specify the components of the cost function. The consequences of interception (weighted by the probability of occurrence) are presumably a large, perhaps dominant, component of that cost. Interception imposes a variety of costs: loss of the drugs; loss of the transportation vehicle if the drug is being carried in a specialised vessel, such as a go-fast boat or small plane; and perhaps incarceration of those bringing the drugs.[4] The latter shows up as a cost in terms of the compensation paid to couriers for incurring the risk of incarceration and perhaps also compensation to their families while the courier is in prison.[5] The costs may also include paying government officials for allowing shipments and couriers through.[6]

In this model, the effect of intensified interdiction in a specific transshipment country is straightforward. Costs are now higher, making other countries relatively more attractive. Depending on the difference between the costs associated with the current transshipment country and the next cheapest, the traffic will shift to the latter when the differential is eliminated. Given that the smugglers have imperfect knowledge about costs and risks associated with a particular route, the shift may be partial and lagged.[7]

So what determines the smuggling risk cost associated with any country for a given set of smugglers? First note that the risks are not unidimensional. There is the risk of smuggling from source country A (Colombia) to transshipment country B but then also the risk associated with smuggling from B to (in this simplified example) final country C (the US). Assume that Honduran colonels offer cheaper protection for cocaine importers than Costa Rican customs officials (given that the latter country lacks a military). However, if the probability of search and apprehension is higher for Honduras-US shipments than for Costa Rica-US shipments, then Costa Rica may be a preferred transshipment country, because total smuggling costs are lower. It is this complexity that helps explain the surprising observation, documented below, that some drug shipments travel through multiple countries rather than going by the most direct route from source to consumer country.

The costs are also state-dependent. Learning which Honduran colonels can be trusted and which cannot is a valuable experience-dependent asset. Assume that the Honduran government increases the expected prison sentence for convicted traffickers or creates an elite unit that raises the risk of apprehension.[8] Even then the investment in relations with corrupt Honduran colonels may enable established traffickers to smuggle more cheaply there than in other Central American nations. Knowing which Honduran transportistas are reliable is similarly a cost-reducing asset that may reduce willingness to seek alternative routes. Thus route choice responses to higher interdiction intensity may be lagged and incomplete.

Moreover, different types of smugglers may face different risks in a given country, dependent on such factors as extended family links and linguistic familiarity. For example, a Mexican smuggler may have cross-border family ties to Honduran officials that are unavailable to Colombian smugglers and which can largely negate a Honduran crackdown on cocaine trafficking.

*Geography and Route Choices*

Being close reduces the exposure time of the shipment and the pure transportation cost, though the latter is surely a small part of the total cost. Neighbouring major producer or consumer countries are plausibly important risk factors for a country becoming a transshipment country. A land border allows for use of routes which are usually harder to monitor than those by air or sea.

*Consumer countries (e.g. US, Western European countries)*

Mexico is perhaps the nation for which geographic destiny is strongest; it has been called a 'natural smuggling platform' for the United States, though it was less important than Canada for alcohol smuggling during Prohibition.[9] Mexico serves as the principal entry country for cocaine, heroin, cannabis and methamphetamine imported by the United States. For cocaine its proximity to Colombia also helps. Caribbean nations serve

2 Perhaps the most prominent early articulation of the proposition is Ethan Nadelmann (1989) 'Drug Prohibition in America: Costs, Consequences and Alternatives,' *Science* 253,1989: 949-957

3 Jonathan P. Caulkins, Gordon Crawford and Peter Reuter 'Simulation of Adaptive Response: A Model of Interdictor-Smuggler Interactions,' *Mathematical and Computer Modelling* 17 (2) 1993: 37-52; Daniel Mejia and Pascual Restrepo 'The Economics of the War on Illegal Drug Production and Trafficking,' working paper (2013), http://crimelab.stanford.edu/clftp/uploads/183/5838.pdf

4 Money laundering charges may arise as well if the interdiction is intelligence determined but there are not many such charges.

5 There are occasional reports of such payments. See for an earlier period J. R. Fuentes, *The Life of a Cell: Managerial Practice and Strategy in a Colombian Cocaine Distribution System in the United States* (City University of New York, 1998).

6 One could imagine a race to the bottom. Officials of different countries might compete to offer the lowest price for their services. There is, however, no evidence of anything approaching an international market for corruption services; the barriers to dissemination of information may be too substantial for a market to form.

7 This indeed was the result in Caulkins, Crawford and Reuter, 'Simulation of Adaptive Response'.

8 The D.E.A has developed special units in the enforcement agencies of Guatemala, Dominican Republic, Haiti, Honduras and Belize. The squads are part of a programme called Foreign-deployed Advisory Support Team (FAST). Charlie Savage, 'D.E.A. Squads Extend Reach of Drug War,' *New York Times*, November 6, 2011, http://www.nytimes.com/2011/11/07/world/americas/united-states-drug-enforcement-agency-squads-extend-reach-of-drug-war.html?pagewanted=all

9 This may have simply reflected the relatively low value of bootlegged alcohol per unit volume. Transportation costs themselves were an important component of total costs. The major US city markets for alcohol in the 1920s were much closer to the Canadian border than to Mexico.

as transit countries for cocaine, again reflecting geography. At various times Central American nations have also served as transshipment countries to Mexico; they are way stations to Mexico, with minimal direct entry to the United States.[10]

Western Europe, unlike the United States, has a complex set of borders. The many nations of the Western Balkans, hewn out of the artificial monolith Yugoslavia, have become, along with Albania, an important set of transshipment countries for heroin.[11] Proximity in this case is artificial – the major markets are far west of the Balkans but these countries border the European Union and once inside the EU, the risk of interception is significantly reduced. Morocco almost neighbours Spain, with a sea separation of less than 10 miles. While Morocco, a traditional producer of cannabis, is the major foreign source of cannabis to Western Europe, it does not appear to have an important role in the importation of cocaine or heroin.

*Producer countries (e.g. Andean countries, Afghanistan)*

Looking at proximity to production, Colombia itself can be seen as a transit country; from the late 1970s to the early 1990s Bolivia and Peru were the principal producers of cocaine base, but that product went to Colombia for processing into cocaine hydrochloride and then on to the US.[12] Venezuela, as Colombia's neighbour but with a government more tolerant of the cocaine trade in recent years, has become an important transshipment country.[13]

Over time, Afghanistan's neighbours have served in varying degrees as major routes for the export of heroin from the nation that has dominated world production for almost 20 years. Indeed, given that Afghanistan is land-locked and poorly connected to Western Europe by either commerce or traffic, it is almost inevitable that some of its six neighbours (i.e. China, Iran, Pakistan, Uzbekistan, Tajikistan, Turkmenistan) would be involved in transshipment.

Though the data available are indicative rather than quantitative, it appears that Iran has consistently been a major trafficking route, reflecting both its historic importance as a market for Afghan-origin heroin and its relatively good connections to European markets via Turkey. The emergence of a Central Asia route (particularly through Tajikistan) came only after the break-up of the Soviet Union and the development of a large Russian heroin market, separate but related phenomena.[14] The extent to which Pakistan has served as a route to major European markets is hard to determine but there have been more reports of that connection in recent years. Seizure quantities are the standard indicator, though with well-known flaws. Pakistan's heroin seizures are regularly second amongst Afghanistan's neighbours but generally between one-tenth and one-third as large as those of Iran, which has always had the highest heroin seizure total since 2004. The Taliban ban year and the two immediately after showed a different pattern with more seized in Pakistan. The table below records seizures for the period 2001-2011.

**Table 1. Heroin Seizures in Central Asian Nations, 2001-2011** [15]

| Heroin Seizures | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iran | 4001 | 3977 | 3327 | 4715 | 5554 | 10665 | 15899 | 23129 | 24926 | 27141 | 23096 |
| Pakistan | 6931 | 5870 | 6363 | 3487 | 2144 | 2819 | 2873 | 1900 | 2061 | 4236 | 7651 |
| Afghanistan | n.r. | 1291 | 815 | 2388 | 7112 | 4052 | 5038 | 2782 | 2188 | 9036 | 10235 |
| Tajikistan | 4239 | 3958 | 5600 | 4794 | 2344 | 2097 | 1549 | 1632 | 1132 | 985 | 509 |
| Turkmenistan | 131 | 53 | 76 | 258 | 172 | 201 | 325 | 244 | 419 | 133 | 39 |
| Uzbekistan | 466 | 256 | 336 | 591 | 466 | 537 | 479 | 1471 | 754 | 1004 | 622 |

10 There are occasional maritime shipments directly from Honduras to the US coast. See Julie Marie Bunck and Michael Ross Fowler, *Bribes, Bullets, and Intimidation: Drug Trafficking and the Law in Central America* (Penn State Press, 2012).

11 UNODC, *World Drug Report 2013* (New York: United Nations, 2013), http://www.unodc.org/unodc/secured/wdr/wdr2013/World_Drug_Report_2013.pdf.

12 Patrick Clawson and Rensselaer Lee *The Andean Cocaine Industry* (New York: St. Martin's Press, 1996).

13 UNODC, *Transnational Organized Crime in Central America and the Caribbean* (Vienna: UNODC, 2013), http://www.unodc.org/documents/data-and-analysis/Studies/TOC_Central_America_and_the_Caribbean_english.pdf

14 Letizia Paoli, Victoria A. Greenfield and Peter Reuter, *The World Heroin Market: Can Supply be Cut?* (Oxford University Press, 2009).

15 UNODC, *World Drug Report 2013*.

Proximity, indeed even being on a sensible geometric path between source and destination, is not necessary for a nation to become a transshipment country. Nigeria illustrates the issue most vividly, a nation that seems to have little potential for a role in the international drug trade but is definitely a significant player.

Nigeria is isolated from any of the principal producer or consumer countries and lacks a significant base of traditional domestic production or consumption.[16] Nonetheless, Nigerian traffickers, including many in the substantial Nigerian diaspora of roughly 3 million, have come to play a substantial role in the shipping of heroin between Southeast Asia and the United States as well as to Europe. More recently these traffickers have even entered the cocaine business, although the cocaine production centres are even more remote from their home country. For example, Nigerians accounted for more than half of all those arrested for cocaine trafficking in Switzerland in 2011.[17] In 2012 there were 450 Nigerians in Brazilian jails for drug trafficking. When police searched all passengers on two flights from São Paulo to Luanda, Mozambique, they found over 20 passengers, mostly Nigerians, in each flight carrying cocaine.[18] Nigeria itself is an important hub as well. For example, 57 percent of those arrested for cocaine trafficking on flights from West Africa into Europe from 2004-2007 were Nigerians. There have been substantial seizures in Nigeria itself.[19]

The explanation for Nigerian resident and diaspora involvement surely involves a multiplicity of factors. Nigerians are highly entrepreneurial, have been misruled by corrupt governments over a long time and have large overseas populations, weak civil society, very low domestic wages and moderately good commercial links to the rest of the world. Thus, it is relatively easy to buy protection for transactions in Nigerian airports (due to corruption and a weak governmental tradition) to establish connections in both the source and the rich consuming nations (due to large overseas populations); and to use existing commercial transportation (note that the drugs travel with passengers rather than cargo since Nigerian exports, apart from oil, are modest) and smuggling labour is cheap due to low domestic wages. Moreover, Nigeria's entrepreneurial tradition produces many competent and enthusiastic smuggling organizers. Nigeria is not unique in most of these dimensions; however, its size and connections with the rest of the world distinguish it from other West African nations. Perhaps accident played a role in that country's initiation into the trade, but these other factors plausibly play a major role.

> "Crossing more borders would seem to increase the risk of interception of the drugs. However, borders represent varying levels of risk."

Drugs travel in the pipelines of regular commerce and traffic. Thus some aspects of the distribution of routes between a producer and consumer region can be easily explained. Consider for example two of the major portals for cocaine coming into Western Europe. The UNODC reports that for the period 2006-2011, between 40 and 70 percent of the seizures of cocaine in Portugal come from Brazil, with another 20 percent usually coming from Lusophone Africa.[20] In contrast, during the same period, Brazil accounted for less than 10 percent of seizures headed for Spain; the bulk there came from Spanish-speaking Latin America. These patterns reflect the trading partnerships of the two Iberian countries.

Patterns of immigration may be particularly important for trafficking. The causal direction can be difficult to disentangle; the immigrant group in the consumer countries may make their home country an attractive transshipment site or the fact of being a transit country may increase the attractiveness of migrating to the destination country.

The large Albanian diaspora in Western Europe is a post-Cold War phenomenon.[21] Albania is just one of many potential routes from Turkey to the richer Western markets. The diaspora, including many poorly-educated and poorer workers, may have made that country an attractive route.

Western Europe is home to an estimated 5 million Turkish citizens, many of whom are the children or grandchildren of the original immigrants.[22] In the constant flow of communication and exchanges linking them to relatives and friends in their home country, heroin loads can be easily disguised. Whether the diaspora benefits from Turkey being a transit country or whether Turkey's transit role is a function of the existence of many potential traffickers in Western Europe again cannot be determined.

Immigrants in the destination country who are from the producing and trafficking countries have advantages in managing the smuggling sector, with better knowledge of potential sellers and corruption opportunities. Paoli and Reuter examined the heroin trade in Western Europe and found that it was indeed dominated by immigrants from the transit countries; on the other hand, natives dominated the trade in synthetics and other domestically-produced drugs.[23]

16 Gernot Klautschnig, 'West Africa's drug trade: reasons for concern and hope,' *Addiction* 108 (11) 2013, 1871–1872.
17 UNODC, *Transnational Organized Crime in West Africa, A Threat Assessment* (Vienna: UNODC, 2013): 15, http://www.unodc.org/documents/data-and-analysis/tocta/West_Africa_TOCTA_2013_EN.pdf
18 Ibid., 5.
19 Ibid.
20 Ibid., 44.
21 Pino Arlacchi, *Addio Cosa Nostra* (Biblioteca Univerzale Rizzoli, 2004): 6-7.
22 Stiftung Zentrum für Türkeistudien, *The European Turks: Gross domestic product, working population, entrepreneurs and household data*. (Essen: Centre for Studies on Turkey, 2013).
23 Letizia Paoli and Peter Reuter 'Drug trafficking and ethnic minorities in Europe,' *European Journal of Criminology* 5 (2008): 13-37.

The drug trade also readily uses indirect paths for smuggling. Drugs seized in Germany sometimes turn out to have travelled through Scandinavia into Russia and then exited through Poland to their final market. Ruggiero and South describe

> *'a joint Czech-Colombia venture to ship sugar, rice and soya to Czechoslovakia….This operation was used to smuggle cocaine, destined for Western Europe. In 1991, police say that 440 lbs. of cocaine were seized in Bohemia and at Gdansk in Poland, which would have been smuggled onward to the Netherlands and Britain.'* [24]

Crossing more borders would seem to increase the risk of interception of the drugs. However, borders represent varying levels of risk. A plane from Bogota landing in New York is likely to be subject to an intense search. Doing the same trip via Santiago, Chile will probably generate less vigorous scrutiny even when adding together the customs inspection at both airports. Of course there are other costs associated with the intermediate stop that have to be weighed in the calculation but complex routes, perhaps many such routes, is one possible response to interdiction.

## THE IMPACT OF INTERDICTION ON TRAFFICKING ROUTES

As noted above, it is not hard to explain why interdiction might shift trafficking routes. By increasing the risk of seizures along one particular route, interdiction makes alternative routes relatively more attractive. Perhaps with a lag, the traffic then moves partially or completely from its original routes. That leaves many questions – for example, how intense does interdiction have to become to have this effect? And how permanent is the shift?

We begin by illustrating some important instances of interdiction-generated shifts. The claim of causality, that a particular change in trafficking routes is a consequence of a specific interdiction event, is never tightly supported by empirical evidence; only rarely is the interdiction itself precisely enough described and data on the distribution of trafficking volumes across routes are never well-documented. High plausibility is all that can ever be offered.

Note an important information asymmetry. Because more is known, or at least publicly disseminated, about route shifts than about interdiction itself, we only rarely learn of unsuccessful interdiction intensification. Nations or alliances (particularly NATO) do not provide enough specifics of an intensified effort at disrupting some specific route and then follow-up information, such as whether one can identify instances of the traffic *not* moving in response two or three years later. Thus, all that we can establish is that there are instances of movements in response to interdiction.

*Netherlands Antilles and the West African route*

At the beginning of the last decade, authorities at Schiphol Airport in Amsterdam began to make many seizures of cocaine on passengers flying in from the Netherlands Antilles. The Netherlands Antilles was conveniently located close to the coast of Venezuela which has for at least a decade been used for exporting Colombian processed cocaine to both North America and Western Europe.[25] By 2001, the total number of Schiphol seizures and the quantity seized rose to levels regarded as representing a crisis; some of the arrested had to be released because of inadequate detention capacity. Moreover it was estimated that the 1300 arrested in 2001 were only about five percent of the total number of couriers.[26]

As a consequence, the Dutch government in December 2003 imposed a policy of searching all passengers suspected of possessing cocaine coming off the plane from the Antilles. Anyone detected with less than three kilograms of cocaine was not arrested. Instead, the cocaine was seized, the courier's name was added to a list of persons not eligible for flights and/or his or her passport was confiscated for three years. This was labelled a 'substance-oriented' rather than an 'offender-oriented' approach.

The results were exactly what the Dutch authorities hoped for. The number of detected couriers in the first quarter of 2004 was 343 and actually rose in the following quarter to a peak of 483; it then fell rapidly to 40 by the third quarter of 2005. In the third quarter of 2006 it had fallen further to only 17. The authorities felt confident enough of the criminal justice system's capacity to handle these new numbers through conventional processing; the three kilogram limit was dropped to 1.5 kilograms and the sentencing regime moved back to what had conventionally been applied.

There were claims that this made little difference to the total quantity of cocaine imported into the Netherlands – and certainly into Europe – and that it simply diverted trafficking to new routes. In particular for the first time substantial quantities of cocaine were detected entering West Africa, exiting then to Western Europe. Whereas in 2003 only 1.1 tons of cocaine were seized in Africa, by 2007 that number had risen to 5.5 tons, mostly from West Africa. Figure 1 provides UNODC estimates of the quantities of cocaine trafficked to Western Europe through West Africa, 2004-2010.

The nation of Guinea-Bissau became a transshipment country.[27] This tiny and impoverished country has no military or police capacity to deal with smugglers; the government is easily corrupted. Smugglers started using landing strips there for large shipments.

24 Vincenzo Ruggiero and Nigel South, *Eurodrugs: Drug use, markets, and trafficking in Europe* (UCL Press, 1995): 75.

25 Bruce Bagley, *Drug Trafficking and Organised Crime in the Americas*: Major Trends in the Twenty First Century, (Woodrow Wilson Center for International Scholars, 2012), http://www.wilsoncenter.org/sites/default/files/BB%20Final.pdf.

26 For an excellent account of the implementation of the 100 percent search policy and its consequences see Ernestien Jensema, *Fighting Drug Trafficking With a Substance–Oriented Approach:A Matter of Substance* (Transnational Institute, 2010).

27 UNODC, *Cocaine Trafficking in West Africa: A threat to stability and development (with special reference to Guinea Bissau)* (Vienna: 2007), *http://www.unodc.org/documents/data-and-analysis/west_africa_cocaine_report_2007-12_en.pdf.*

In 2007 there was one seizure of three quarters of a ton and it is believed that an even larger quantity from that shipment made it out of the country.[28]

Ghana, a larger nation than Guinea-Bissau but one also with fragile institutions, saw a sudden influx of cocaine traffickers; in 2005 Accra accounted for more seized cocaine at London's Heathrow than did any other city.[29] Until about 2010 there were regular reports of multi-kilo seizures of the drug either in Ghana itself or at airports after flights from Ghana.

Was the opening of the West African route a response to the closing of the Netherlands Antilles smuggling channel? The timing is roughly right. Venezuela was once again identified as the principal source of the cocaine for the African route as it had been for the Antilles. That is about all one can offer in the absence of interviews with traffickers.

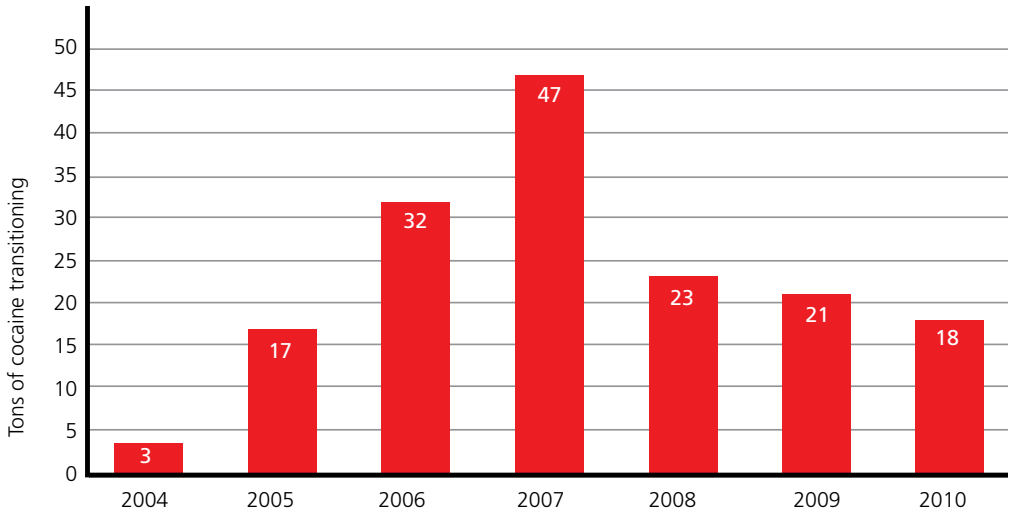
*Mexico and its Central American neighbours*

For 25 years, from about 1985 to 2010, Mexico was the principal transshipment country for Colombian cocaine entering the United States. The Caribbean, which served as the principal transshipment region in the early 1980s when the cocaine trade first became important, accounted for 75 percent of US cocaine seizures in 1982; five years later it was less than half that.

In recent years, some cocaine has entered directly from Colombia, via both planes[30] and small boats, but the US government consistently claimed that 90 percent entered via Mexico.[31] Until about 2007 it was thought that the countries between Colombia and Mexico (the seven nations of Central America) served as transshipment countries only in the passive sense that the drug passed through their territory; no transactions were thought to take place there.[32]

At the end of 2006 the newly-elected Mexican president Felipe Calderón launched an intense campaign against his nation's major Drug Trafficking Organisations (DTO). This resulted in major conflict within the cocaine-smuggling sector; violence reached extraordinary levels, with over 60,000 drug-related homicides in the six years of the Calderón presidency.

**Figure 1. Tons of Pure Cocaine Transiting West Africa on their way to Europe.**




Source: UNODC estimates.

28 K. Sullivan, 'Route of Evil: How a Tiny West African Nation Became a Key Smuggling for Colombian Cocaine and the Price it is Paying' *Washington Post,* 25 May 2008, A1.

29 European Commission, 'A report on Global Illicit Drugs Markets 1998-2007, 2009, 50, http://ec.europa.eu/justice/anti-drugs/files/report-drug-markets-short_en.pdf.

30 The film *Maria, Full of Grace* provides a heart-rending and persuasive portrayal of the work conditions of those who carry the drugs by swallowing condoms stuffed with the powder.

31 For example, US Office of National Drug Control Policy, *National Drug Control Strategy,* 2011, http://www.whitehouse.gov/sites/default/files/ondcp/ndcs2011.pdf shows that 95 percent of flows in 2010 were across the Mexico border.

32 Kazakhstan serves the same role for Central Asian heroin traveling to Russia. None of Tajikistan, Kyrgizstan or Uzbekistan have borders with Russia, so heroin trafficked through those countries have to pass through Kazakhstan or (less frequently) Turkmenistan to reach Russia. There are no claims that Kazakhstan-resident individuals or organisations play an important role in the trade.

By 2007 there were signs that the northern triangle of Central America (El Salvador, Guatemala and Honduras) had become an area of much greater drug smuggling activity. Seizures became substantial for the first time (see Table 2) and there was a very large increase in homicides, many of which were thought to be drug-related. It is now claimed that Guatemalan gangs were actively involved in smuggling itself, paid by either Colombian or Mexican DTOs in cocaine rather than cash. Oddly enough, the largest seizures have been farther south, particularly in Panama, but there is some question as to whether these are double counting of Colombian seizures.

The suggestion here is that the intensification of enforcement in Mexico has led to a shift of some trafficking activities to countries lying between Colombia and Mexico. There does indeed seem to be more such activity.[33] What is unclear though is what exactly has shifted from Mexico, since there are almost no direct deliveries to the United States from Central America. It may simply be that the Mexican government crackdown makes it sensible to hold inventory further south, where government protection is more cheaply bought, a reminder that smuggling is not a single event but a combination of activities. Alternatively, it may be that what has shifted across Mexico's southern border is safe operating space for the principals.

For the purposes of this contribution, this may be a counter-example to the balloon effect hypothesis. Mexico has cracked down but the result has been a relatively minor displacement of certain activities rather than a large-scale shift of routes.

*Interdiction around Afghanistan*

As already noted, there have been shifts in the routes from Afghanistan, now 15 years into its dominance as the world's leading producer of opium and heroin, and to the major wealthy markets in the West. Seizure data, presented earlier, show such shifts. Unfortunately, there are no data about interdiction programmes that would permit testing of the balloon effect hypothesis. Iran always notes the intensity of its efforts to deter trafficking and to suppress its domestic heroin market, but there are no figures on how the intensity of interdiction has varied over time. The same is true for the countries of Central Asia.

**Table 2. Cocaine Seizures in Central American nations, 2001-2011[34]**

| Cocaine Seizures | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Belize | 3854 | 7 | 56 | 735 | 244 | 90 | 32 | 16 | 0 | 2600 | 0 |
| Costa Rica | 1748 | 2955 | 4291 | 4590 | 7049 | 22909 | 32435 | 16167 | 20875 | 11265 | 8952 |
| El Salvador | 31 | 2075 | 2044 | 2710 | 38 | 107 | 4075 | 1347 | 442 | 150 | 0 |
| Guatemala | 4107 | 2934 | 9200 | 4481 | 5085 | 287 | 711 | 2214 | 6936 | 1458 | 3960 |
| Honduras | 717 | 79 | 5649 | 3934 | 472 | 2714 | 0 | 6468 | 0 | 0 | 13904 |
| Nicaragua | 2717 | 2208 | 1110 | 3703 | 6951 | 9720 | 13 | 19500 | 9800 | 17500 | 0 |
| Panama | 2660 | 2587 | 9487 | 7068 | 18314 | 36000 | 60000 | 51000 | 52443 | 52429 | 34132 |

33 An excellent source for this is the website *Insight Organized Crime in the Americas,* http://www.insightcrime.org.

34 The years with zero entries should be taken to be years of missing data.

## CONCLUSION

The balloon effect can be seen as a simplifying metaphor; after all interdiction is just one contributing factor to the observed shifts of trafficking.[35] To test the balloon effect hypothesis properly requires a kind of data that is never likely to be available: estimates of the intensity of interdiction along specific routes and the flow of drugs along those same routes over a period of time. Even the most basic data, drug flows along routes, are hard to obtain. For instance 'US drug officials claim that 70 percent of cocaine consumed in Europe was shipped through West Africa in 2007, while the United Nations Office on Drugs and Crime (UNODC) estimate that 25 percent of Europe's cocaine transits through the sub-region'.[36] There is simply no systematic methodology for making such estimates.[37] We rely on impressions, weakly reinforced by seizure data. It is probably asymmetric, with false positives less likely than false negatives but with a delay in knowledge about the shift in routes, particularly in countries around Afghanistan.

Surely the balloon effect contains at least a grain of truth, even if it is not the whole story. Smugglers, like other profit-making enterprises, have incentives to respond to changes in costs. The trope of a globalised world is true for illegal drugs as it is for legal trade. But the question is how much increased interdiction can erode the competitive advantage of existing routes, and that remains in the domain of pure speculation.

What should decision-makers do in light of this uncertainty about the mobility of trafficking? One response of interdiction agencies is to cheer what appears to be good news. If the balloon effect is punctured, then the justification for intense interdiction is strengthened; it is not merely moving traffic around but has some prospect of actually reducing total world consumption. However, that flies in the face of the macro-evidence against interdiction's effectiveness.

Fluctuations in the share of cocaine seized in recent years has not been reflected in estimated global consumption. The quantitative basis for clear statements is weak; seizure estimates are hampered by lack of purity data, while consumption estimates are notoriously fragile in the few countries where they exist. Nonetheless, it has been consistently difficult to find any connection between interdiction success and final market outcomes; Pollack and Reuter provide a brief review of the available evidence. [38]

An alternative response is to note that there are some instances in which the balloon effect does indeed occur. The Dutch decision to crack down in the Netherlands Antilles has cost West African development dearly. Globalisation is not just a phenomenon to be observed; it is a fundamental aspect of decision-making. Interdiction crackdowns by one country may well affect others. Co-ordinating this element of decision-making internationally will be extremely difficult both institutionally and operationally but without such co-ordination, this kind of immiserating effect will no doubt occur again. ■

35 Cornelius Friesendorf, 'Squeezing the balloon? United States Air Interdiction and the Restructuring of the South American Drug Industry in the 1990s,' *Crime, Law and Social Change* 44 (2005): 45-78.

36 Gernot Klautschnig, (2012) 'Africa and the war on drugs fighting ahistorical analysis,' 2012, http://africanarguments.org/2012/10/18/africa-and-the-war-on-drugs-fighting-a-historical-analysis-of-the-west-african-trade-%E2%80%93-by-gernot-klantschnig/

37 Beau Kilmer, Jonathan P. Caulkins, Brittany Bond and Peter Reuter *Reducing Drug Trafficking Revenues and Violence in Mexico: Would Legalizing Marijuana in California Help?* (RAND Occasional Paper, 2010) http://www.rand.org/pubs/occasional_papers/2010/RAND_OP325.pdf

38 Harold Pollack and Peter Reuter, 'Does tougher enforcement make drugs more expensive,' *Addiction* (forthcoming).

# Improving Supply-Side Policies: Smarter Eradication, Interdiction and Alternative Livelihoods – and the Possibility of Licensing

Vanda Felbab-Brown

**Summary**

- The past three decades of US counternarcotics efforts abroad have strongly emphasised eradication of crops, interdiction and dismantling of drug trafficking organisations (DTOs).
- Policies were aimed at reducing US drug consumption and weakening militant groups. The cumulative evidence has proven these basic assumptions wrong.
- Successful cases of eradication and interdiction have at most succeeded in generating a two-year lag before production and supply recovered.
- In poor countries eradication strengthens the political capital of the belligerents.
- This is not to say that eradication should never be used. Rather, eradication needs to be well-crafted, used judiciously and, crucially, properly sequenced with other measures.
- Just like eradication, alternative livelihoods can only shift production from one area to another (the 'balloon effect'). But, when designed as broader development efforts, they make enforcing the law, including eradication, politically and socially acceptable, preventing dangerous instability.
- Focused-deterrence strategies, selective targeting and sequential interdiction efforts are often more promising law enforcement alternatives than flow-suppression or zero-tolerance approaches.
- States should move law enforcement forces away from random non-strategic strikes and blanket 'zero-tolerance' approaches against lowest-level offenders, and toward strategic selectivity to give each counter-crime operation enhanced impact.
- Governments and international organisations need to thoroughly consider to which locales the illicit economy will shift if suppression efforts in a particular locale are effective and whether such a shift is desirable.

## THE GLOBAL COUNTERNARCOTICS MOOD: THE EMERGING DISSENSUS

Over the past three decades, US counternarcotics efforts abroad have strongly emphasised eradication of illicit crops, interdiction of drug flows and dismantling of drug trafficking organisations (DTOs). At the core of these policies lay the assumption that such drug suppression policies not only accomplished the key US objective of reducing US drug consumption by reducing the volume of drug flows to the United States, but also fostered other crucial US goals of weakening, if not outright defeating, terrorist and militant groups involved in the highly lucrative drug trade. Yet the cumulative evidence of the outcomes of these policies over the past three decades has proven these basic assumptions of US counternarcotics policies wrong. Premature forced eradication, unfocused interdiction and nonstrategic break-up of DTOs – policies often exported and force-fed to supply-side and transshipment countries – came with a host of negative side-effects. These include: extensive human rights violations; further political, economic and social marginalisation of illicit crop farmers; destabilisation of local governments; alienation of local populations; strengthening of bonds between militant groups and local populations; and increases in violence perpetrated by DTOs and other criminal groups.

Frustration and strong dissatisfaction with US-supported policies have stimulated increasing debates in Latin America about how to redesign policies toward the drug trade, including various forms of decriminalisation and legalisation of at least some narcotics, such as cannabis.

Such calls for reform have not been echoed in other parts of the world, however. Russia in particular has been at the forefront of calls for toughening policies. China has also embraced existing policies and many countries in Asia and the Middle East continue to defend their harsh punishments of users as well as local dealers.

Among many drug policy reformers, there is an emerging consensus that decriminalisation, public health, treatment and harm reduction-based policies and even legalising some drugs (such as cannabis in Uruguay) are more appropriate than punitive policies for controlling consumption.

There is, however, no equivalent consensus among reformers on how to restructure supply-side policies and how to mitigate the multiple threats that the drug trade poses, including threats to public safety from violent drug trafficking organisations and to national security from the nexus of militancy and drug trafficking.

Many proponents of legalisation argue that legalisation by itself will eliminate violence, criminality and the militancy nexus. This contribution does not support that contention. Instead, it argues that even in markets of legal commodities, law enforcement plays a key role. Thus, rather than jettisoning eradication, interdiction and alternative livelihoods efforts altogether, there is a great and urgent need to make them smarter.

## THE FAILURES OF ERADICATION AND HOW TO IMPROVE IT

A key premise of counternarcotics strategies that emphasise the eradication of drug crops is that the reduction in supply will reduce consumption by increasing street prices. Yet although eradication efforts have been extensive and occasionally have succeeded (for example China in the 1950s and 1960s and Vietnam in the 1990s and 2000s), they have failed to dramatically increase overall prices, including in key consumption markets.

In the US, consumption of cocaine has been declining steadily mainly because hardcore users have been aging. At the same time, consumption of methamphetamines and of synthetic and prescription drugs has increased. Cocaine consumption has meanwhile been on the rise in Western Europe. Iran and Pakistan remain extensive markets for heroin and other opiates. Russia and Brazil have an illicit drug consumption problem that rivals the West and continues to expand.[1] In localities where traditional drug production and traffic have been suppressed, such as in Burma or Laos, people have not abandoned use. Instead, they frequently switch to home-cooked synthetic drugs that often cause even more health damage than traditional alkaloid-based substances.[2]

Indeed, despite determined eradication efforts over the past thirty years, drug prices in the West have been for the most part falling. In the United States, retail heroin prices fell from $1896 per gram at 11 percent purity in 1981 to $408 per gram at 28 percent in 2011, with the lowest price of $378 at 34 percent purity in 2008.[3] Cocaine prices fell from $669.18 per two grams at 40 percent in 1981 to $177.26 at 42 percent purity level in 2011, with the lowest recorded price of $132.89 at 64 percent purity in 2007.[4] US heroin prices are thus 21 percent in nominal terms of what they were in the early 1980s, and cocaine prices are at 26.5 percent.

A counterargument could be raised that in the absence of such intense supply-side suppression measures, prices would be far lower and availability far greater, with accompanying expansion in consumption.[5] Such a counterargument reveals the inherent difficulties of drawing inferences without analytic control comparisons of alternative policies. Imagine the following scenario: a sick patient has been taking a pill as treatment, but is not getting better.

Does that justifiably imply that the pill is not effective treatment? Possibly. But there are several other possibilities:

(1) The dosage needs to be higher, for example more intense eradication campaigns.
(2) The pill is at least partly effective, and without it, the patient would be much sicker.
(3) Not only is the pill ineffective, but is in fact counterproductive – like the eradication programmes detailed below which have complicated efforts to suppress militancy and terrorism.
(4) The treatment is effective in attacking the disease (analogous to wiping out the poppy crops in a particular locale), but is killing the patient at the same time – worsening human rights and complicating counterinsurgency and counterterrorism efforts.

Indeed, counternarcotics suppression efforts have consistently failed in their second key promise: to diminish militants' and terrorists' physical capabilities by bankrupting them. Suppression efforts raise the price of illicit commodities – thus, in the cases of only partial suppression of production, frequently resulting in little change in the belligerents' income. Given fairly stable or increasing international demand, full and permanent suppression of supply is extraordinarily hard to achieve. The extent of the belligerents' financial losses from suppression of illicit economies depends on the adaptability of the belligerents, traffickers and peasants. Adaptation methods are frequently plentiful, especially in the case of illicit drugs. Belligerents can store drugs, which are essentially nonperishable. Belligerents can put some money away. Farmers can replant after eradication and offset losses from areas eradicated. Farmers, traffickers and belligerents can shift production to areas where the crops are not being eradicated and where detection is difficult. Traffickers can switch their trafficking, their means of transportation or take various other evasion adaptations.

Successes of law-enforcement and counter-narcotics supply-side policies frequently last only briefly. Without reductions in global demand, they inevitably give way to supply recovery in the same locale, or elsewhere (the so-called 'balloon effect'[6]). Coca and

1 United Nations Office on Drugs and Crime, *2006 World Drug Report,* http://www.unodc.org/pdf/WDR_2006/wdr2006_volume1.pdf.
2 See, for example, Tom Kramer, Martin Jelsma and Tom Blickman, *Withdrawal Symptoms in the Golden Triangle: A Drugs Market in Disarray* (Amsterdam: Transnational Institute, January 2009).
3 Office of National Drug Control Policy, *National Drug Control Strategy: Data Supplement 2013,* http://www.whitehouse.gov/sites/default/files/ondcp/policy-and-research/2013_data_supplement_final2.pdf: 76.
4 Ibid., 75. Note that in US databases, and this report, cocaine prices are given per two grams while heroin prices are given per gram.
5 See, for example, Jonathan P. Caulkins' contribution to this report.
6 See Peter Reuter's contribution to this report.

opium cultivation and processing are archetypal footloose industries: they require little capital, few labour skills and the necessary technologies are simple and well-known. Source country suppression policies – eradication and interdiction – have at most succeeded in generating a two-year lag before production and supply recovered.[7]

There is not one single case over the past five decades where eradication policies succeeded in bankrupting or defeating belligerents. Even in Colombia, eradication hampered governmental efforts to defeat the FARC.[8] Indeed, suppression of narcotics crops has proved outright counterproductive to defeating militants, obtaining actionable intelligence on terrorists and ending violent conflict. This is because belligerents often obtain not only financial resources, but also political capital from their involvement in the illicit economies such as the drug trade. The increases in the belligerents' political capital are especially pronounced if they are involved in labour-intensive illicit economies, such as sponsoring illicit crop cultivation in poor regions where legal job opportunities are lacking. There, local populations, over whose allegiance terrorists, militants and governments compete, are fully dependent on cultivation of drug crops for basic economic survival, human security and any social advancement.

Belligerents who use their sponsorship of illicit economies and the income they derive from them to provide otherwise-lacking public goods and socio-economic benefits, such as schools, clinics and roads – and who protect the population against abusive traffickers and particularly against government eradication efforts – obtain the strongest political capital. The population bonds with them, often providing them with material benefits, such as food and shelter, and critically denying intelligence on the belligerents to the government and counterinsurgent forces. In poor countries or regions, eradication of illicit crops thus critically strengthens the political capital of the belligerents.

On the other hand, during periods and in places where interdiction has been undertaken without eradication, and especially during periods and in locales where laissez-faire toward narcotics crop cultivation or non-prosecution of illicit crop farmers have been the policy, the belligerents' political capital has declined and the population has been more inclined to cooperate with and provide intelligence to the governing authorities, strengthening counterinsurgency and anti-militant efforts.[9]

> "All of the above are not to say that eradication should never be used as a counternarcotics policy tool. Rather, eradication needs to be well-crafted, used judiciously and, crucially, properly sequenced with other measures."

*Conditions necessary for eradication to be effective in reducing cultivation in specific areas:*

1) First and foremost, *if a government's goal is to suppress production in the entire country, then it needs to have control over the entire country*. It must have detailed knowledge of where production is shifting as a result of eradication and be able to counter this trend. It must also have a continuing presence on the ground to prevent replanting. It cannot face an armed opposition able to exploit the popular anger against eradication.

In addition to firm government control throughout the country, either one of the two following conditions needs to be present:

2) *The government has the will and capacity to be very harsh* to the population – ignoring their economic plight that is worsened by eradication; cracking down on protests and rebellions against eradication; and removing any opposition leaders who embrace the counter-eradication cause and could effectively mobilise against the government. And the government has to be prepared to carry out such repression on a repeated basis for years to come. Needless to say, such a policy is inconsistent with democracy and human rights – and *not recommended by this author.*

3) *Alternative economic livelihoods are in place* – not simply promised to take place in the future, but already generating legal economic alternatives. Like eradication, alternative livelihoods will not eliminate the world's production of illicit crops or the world's illicit economies. However, like eradication, they can be effective in reducing or even eliminating the illicit production in particular regions or countries – if they are well-designed, integrated into overall poverty reduction strategies and enjoy broader auspicious economic growth contexts. Often, however, they are not designed and implemented effectively and produce disappointing results. How to improve their effectiveness is discussed below.

The harsh repression model has so often been successful only on a temporary basis, and has mostly broken down within a few years. Poppy cultivation in Afghanistan picked up within one year after the Taliban's 2000 prohibition. Despite a combination of repression and localised alternative development programmes in Bolivia, production increased there since 2000.[10] Mao's eradication of opium poppy cultivation in China in the 1950s and 1960s has been the most effective and lasting eradication campaign ever; but it involved levels of brutality that would be, appropriately so, intolerable in most countries.

7 Kevin Jack Riley, *Snow Job?* (New Brunswick: Transaction Publishers, 1996), 93.
8 For the case of Colombia as well as Afghanistan, Peru, Burma and Thailand, see Vanda Felbab-Brown, *Shooting Up: Counterinsurgency and the War on Drugs* (Washington, DC: Brookings, 2010).
9 Ibid., 'Chapter 3: Peru,' 35-68.
10 See, for example, Francisco Thoumi, *Illegal Drugs, Economy, and Society in the Andes* (Baltimore: John Hopkins University Press, 2003); Kathryn Ledebur, 'Bolivia: Clear Consequences,' in *Drugs and Democracy in Latin America,* eds. Coletta A. Youngers and Eileen Rosin, (Boulder: Lynne Rienner, 2005), 143-182.

All of the above are not to say that eradication should never be used as a counternarcotics policy tool. Rather, eradication needs to be well-crafted, used judiciously and, crucially, properly sequenced with other measures.

Using eradication to prevent the cultivation of illicit crops in national parks, for example, might be highly appropriate. Such a policy, however, will only be effective if suppression measures are less intense outside of national parks.

Similarly, once alternative livelihoods efforts have generated the necessary and sufficient resources for illicit crop farmers to switch to sustainable licit livelihoods, eradication may well be an important tool to catalyse such an economic switch. Such smart eradication will be socially viable and will strengthen the rule of law. But premature eradication – in the context of insurgency and without alternative livelihoods in place – will be counterproductive with respect to improving the security situation in the country and also ineffective with respect to suppressing the illicit crops.

In sum, governments should not rely on suppression of illicit economies to defeat or even substantially weaken belligerents. Most likely, belligerents will find a host of adaptations to escape from the resource-limitation trap, making the focus on limiting the belligerents' resources a highly risky strategy for the government. If a government seeks to achieve a preponderance of military power, it needs to do so through strengthening its own military resources. In the case of labour-intensive illicit economies in poor countries, governments should postpone suppression efforts toward the illicit economy, which target the wider population, until and after belligerents have been defeated or have negotiated an end to the conflict. Premature suppression efforts, such as eradication, will alienate the population and severely curtail intelligence flows from the population. It will lose hearts and minds and severely hamper the military effort against the belligerents. Nor will eradication be effective in the context of violence because traffickers and producers will find a way to adapt in the context of limited state presence. Interdiction at borders and destruction of labs do not target the population directly.

Consequently, it does not alienate the population to the same extent as eradication and is thus more easily compatible with the counterinsurgency and counterterrorism effort.

Military forces – whether domestic or international – should focus on directly defeating the belligerents and protecting the population. They do have an important role to play in counternarcotics policy and in suppressing other illicit economies, namely to provide security. Without such security, efforts to suppress illicit economies will not be effective. But they should not engage in eradication themselves.

If belligerents have not yet penetrated an illicit economy in a country – for example, narcotics cultivation in a particular region – governments should make every effort to prevent the belligerents from penetrating the economy, such as by establishing a cordon sanitaire around the region.

If the belligerents themselves undertake suppression of a labour-intensive illicit economy the government should immediately step in and provide economic relief to the population. It should also intensify the military effort against the belligerents at that time as they will be extremely vulnerable politically and not have a robust population support base. Most likely, belligerents will themselves undertake eradication only when they first encounter the illicit economy – which could be a highly auspicious moment for the government to undertake a robust offensive against the belligerents. But such an opportunity could also arise as a result of a change in leadership, intensified ideological fervour, or the need to appease some outside patron.

Efforts to limit the belligerents' resources should focus on mechanisms, such as those targeted against money laundering, that do not directly harm the wider population. Such measures cannot remain localised but need to be strengthened on the global level. It is important to recognise, however, that anti-laundering measures are no panacea and will remain of limited effectiveness.

If the government itself undertakes suppression efforts toward a labour-intensive illicit economy — efforts which target the wider population – it should at least complement such a dangerous policy by providing immediate relief to the population by way of humanitarian aid and alternative livelihoods programmes. Alternative livelihoods programmes will not have a chance to really take off until conflict has ended and security has been established; but the government needs to demonstrate to the population right away that it is not indifferent to its plight.

Even after the conflict has ended, eradication of illicit crops should only be undertaken once the population has access to alternative livelihoods that address the entire scope of structural drivers of illicit crop cultivation. That may well entail delaying eradication for several years while alternative livelihoods efforts are being implemented; eradication should only be undertaken when the household is receiving sufficient legal income. However, a well-sequenced eradication may well be undertaken in areas where households are not economically dependent on drug crop cultivation. The so-called uno-cato policy that President Evo Morales adopted in Bolivia, permitting households to cultivate a small area of land with coca, provides many lessons.[11]

A failure to actually provide such comprehensive alternative development – only promising it for the future and undertaking eradication prematurely – will result in social instability, critically destabilising the government immediately after conflict. In that case, the government will only be able to maintain eradication by resorting to very harsh measures toward the population and will have to maintain such repression for many years.

11 For a review of how Bolivia's *uno-cato* policy and the broader strategy of 'yes to coca, no to cocaine' has evolved and the many difficulties it has run into, see Coletta Youngers, 'Shifts in Cultivation, Usage Put Bolivia's Coca Policy at the Crossroads,' *World Politics Review*, December 5, 2013, 1-3.

> ...the absolutist goal of a complete suppression of drug trafficking (or organised crime overall) will mostly be unachievable, and will be particularly problematic in the context of acute state weakness where underdeveloped and weak state institutions are the norm.

## THE FAILURES OF ALTERNATIVE LIVELIHOODS EFFORTS AND WAYS TO IMPROVE THEM

Even if smart alternative livelihoods efforts were undertaken globally, they would not eliminate the global drug trade. Some people with plentiful legal economic options would be tempted to make a high income from breaking the law. Just like eradication, alternative livelihoods can only shift production from one area to another. But alternative livelihoods efforts when designed as broader development efforts make enforcing the law, including eradication, politically and socially acceptable, preventing dangerous instability. However, in order to accomplish these goals, they need to be properly sequenced and well-designed.

In their current design, alternative livelihoods programmes have been no more successful than eradication on a country-wide scale (although they have been relatively more successful at local levels). This is partially because alternative livelihood programmes have been neither sufficiently long-lasting nor well-funded and well-managed. Thailand provides the most significant example of success. There, three decades of multi-faceted, comprehensive, well-funded and well-managed rural development since the 1970s – *significantly* accompanied by very impressive and crucial economic growth and industrialisation that generated extensive new employment opportunities outside of drug areas led to the elimination of poppy cultivation.[12] Thus cultivation fell from17,920 hectares at its peak in 1965-1966 to 209 hectares in 2012.[13]

It is important to point out that even at its peak, cultivation was about a tenth of the size of the problem in Afghanistan today or (in the case of coca) in Latin America. Moreover, Thailand continues to have flourishing traffic in synthetic drugs as well as in opiates from other countries.[14]

For alternative livelihoods programmes to be effective in reducing illicit crop cultivation in a lasting way, good security needs to be established in the rural regions. In other words, military conflict needs to be ended.[15]

Moreover, alternative livelihoods programmes cannot be construed as only crop substitution. Price profitability is only one factor. Even in rich Western countries, cultivation of illicit cannabis is more profitable than the many legal jobs, yet the vast majority of the population chooses to obtain legal employment. The key for alternative livelihoods should not be to match the prices of the illicit commodity – a losing game – but rather to create such economic conditions that allow the population to have a decent livelihood without having to resort to the illicit economy.

Other drivers of illicit economies, such as insecurity and a lack of access to necessary productive resources, value-added chains and markets are frequently far more important determinants of the decision to participate in illicit economies. Thus, farmers, such as those in the Shinwar and Achin regions of Afghanistan or the Shan hill areas of Burma, continue to cultivate illicit crops even though legal crops, such as vegetables, fetch greater prices and would bring a greater profit.[16] Risk-minimisation in a high-risk environment is often more important than profit-maximisation. A mixture of many other factors also matters: security, rule of law, assured property rights and moral considerations, as well as other economic structural drivers.[17]

*For alternative livelihoods to have any chance to take off and be sustained, they must address all the structural drivers of illicit economies.* They must encompass the generation of sufficient employment opportunities (such as through the promotion of high-value, labour-intensive crops), infrastructure building, distribution of new technologies (including fertilizers and better seeds), marketing help and the development of value-added chains, facilitation of local microcredit, establishment of access to land without the need to participate in the illicit economy and development of off-farm income opportunities, to name a few.

12 For a good overview, see Ronald D. Renard, *Opium Reduction in Thailand, 1970-2000: A Thirty-Year Journey* (Bangkok: UNDCP Silkworm Books, 2001).

13 Ibid., 36 and UNODC, *Southeast Asia: Opium Survey 2012*, December 2008, 5.

14 Pierre-Arnaud Chouvy, 'Drugs and War Destabilize Thai-Myanmar Border Region,' *Jane's Intelligence Review*, April 1, 2002; and Pierre-Arnaud Chouvy, *Opium: Uncovering the Politics of Poppy* (Cambridge: Harvard University Press, 2010).

15 For a discussion of how, in the context of insecurity and ongoing military conflict, alternative livelihoods efforts will be of limited effectiveness and can be even counterproductive, see Paul Fishstein and Andrew Wilder, *Winning Hearts and Minds? Examining the Relationship between Aid and Security in Afghanistan* (Tufts University, Feinstein International Center, January 2012); and Vanda Felbab-Brown, *Aspiration and Ambivalence: Strategies and Realities of Counterinsurgency and State-building in Afghanistan* (Washington, DC: Brookings Institution Press, 2013).

16 David Mansfield, 'The Economic Superiority of Illicit Drug Production: Myth and Reality—Opium Poppy Cultivation in Afghanistan,' paper prepared for the International Conference on Alternative Development in Drug Control and Cooperation, Feldafing (Munich), January 7–12, 2002.

17 David Mansfield and Adam Pain, 'Alternative Livelihoods: Substance or Slogan?' AREU Briefing Paper, October 2005, http://areu.org.af/UpdateDownloadHits.aspx?EditionId=187&Pdf=524E-Substance or Slogan BP.pdf.

Alternative livelihoods efforts will be ineffective if they are conceived as discreet handouts and isolated interventions, as is indeed often the case in both rural settings, where the goal is to suppress drug cultivation, and in urban environments where socio-economic policies are meant to reduce drug trafficking and other criminality.[18] Alternative livelihoods really mean comprehensive rural and overall economic and social development. As such, the programmes require a lot of time, the politically difficult willingness to concentrate resources and lasting security in the area where they are undertaken.

> Focused-deterrence strategies, selective targeting and sequential interdiction efforts should often be considered as more promising law enforcement alternatives than flow-suppression measures or zero-tolerance approaches.

## THE FAILURES OF INTERDICTION AND HOW TO MAKE INTERDICTION MORE EFFECTIVE

Over the past several decades, interdiction policies have been predominantly designed to stop or minimise the volume of illicit flows. Occasionally, but rarely, they have succeeded in disrupting trafficking and rerouting it from particular regions, or in reshaping the structures of criminal markets. Interdiction efforts were, for example, successful in destroying the so-called 'French connection' and disrupting heroin smuggling from Asia through Turkey in the 1970s (attributable to successful interdiction plus the licensing of Turkish opium cultivation for medical purposes). But the outcome of disrupting the 'French connection' also included the emergence of substantial heroin production elsewhere—namely Mexico. During the 1990s, the United States was highly effective in disrupting the drug trade through the Caribbean, pushing trafficking into Central America and Mexico. With US assistance, Colombia ultimately prevailed against the Medellín and Cali cartels and broke up large cartels into smaller, less threatening ones – but those successes also empowered the Mexican drug trafficking groups.

Indeed, interdiction measures preoccupied with the suppression of flows or otherwise mis-designed have often turned out to produce a set of undesirable effects. In Mexico, premature and nonselective frontal assault by the state on Mexico's drug trafficking groups during the administration of President Felipe Calderon broke up the groups, but also provoked extremely violent turf wars among and within the crime groups over territory and access to corruption channels. In Afghanistan, interdiction efforts of the mid-2000s that focused on the least powerful small traders led to a vertical integration of the illegal and gave rise to powerful and well-connected drug capos and enabled the Taliban to reintegrate itself into Afghanistan's drug trade. Similarly, zero-tolerance approaches to drugs and crime, popular around the world since the late 1980s, have often proven problematic. They have frequently failed to suppress criminality while increasing human rights violations and police abuses. And the absolutist goal of a complete suppression of drug trafficking (or organised crime overall) will mostly be unachievable, and will be particularly problematic in the context of acute state weakness where underdeveloped and weak state institutions are the norm. Yet well-crafted interdiction efforts remain a crucial policy tool – but not because they will significantly reduce the income of belligerents or significantly limit supply. Rather, they are an important tool because they allow the state to prevent criminal groups from cooperating with militant actors. They also allow the state to prevent criminal groups from accumulating extensive coercive and corruptive power which threatens the security, rule of law and political integrity of the country. They further help the state in minimising the violence associated with criminal markets.

*Smart interdiction policies for achieving the above goals include the following measures:*

(1) *Governments should avoid unnecessarily strengthening the bond between the criminal traffickers and the belligerents by treating the two as a unified actor and should explore ways to pit the two kinds of actors against each other.* Far from being comrades in arms, they have naturally conflicting interests, and governments should avoid helping them to align their interests. One way may be to temporarily let up on the group that represents a smaller threat to the state and to exploit that group for intelligence acquisition.

But it is also important to be conscious of the possibility that such efforts may set up perverse incentives to corrupt the state. Selectively targeting only traffickers linked to belligerents, for example, will send a signal that the best way to be a trafficker is to be a part of the government. That may well be beneficial in the short run with respect to counterinsurgency objectives, but it may generate long-term problems of corruption. Thus planning needs to be taken as to how to reclaim state dominance and limit corruption once the security threat from the belligerents has subsided.

(2) *Interdiction efforts need to be designed carefully with the objective of limiting the coercive and corruption power of crime groups.* The goal of interdiction should thus be to have the illicit economy populated by many small traders, rather than a few vertically integrated groups. Although the former will likely require an intensification of intelligence resources

18 Vanda Felbab-Brown, 'Bringing the State to the Slum: Confronting Organized Crime and Urban Violence in Latin America,' *Brookings Latin America Initiative Paper Series,* December 2011, http://www.brookings.edu/~/media/research/files/papers/2011/12/05%20latin%20america%20slums%20felbabbrown/1205_latin_america_slums_felbabbrown.pdf.

devoted to keeping track of the many small actors, such an outcome will benefit public safety because small traders will not have the power to systematically corrupt or threaten the state.

Focused-deterrence strategies, selective targeting and sequential interdiction efforts should often be considered as more promising law enforcement alternatives than flow-suppression measures or zero-tolerance approaches. These former approaches seek to minimise the most pernicious behaviour of criminal groups, such as violence or engagement with terrorist groups, and help law enforcement institutions overcome resource deficiencies.[19]

Defining 'the most harmful' behaviour can vary. The broad concept is to move law enforcement forces away from random non-strategic strikes and blanket 'zero-tolerance' approaches against lowest-level offenders, and toward strategic selectivity to give each counter-crime operation enhanced impact. The decision whether to focus selective interdiction on high-value targets or the middle layer of criminal groups is importantly related to whether incapacitation or deterrence strategies are privileged.[20]

Meanwhile, before the state takes on extensive and powerful crime networks, it needs to have the law enforcement and intelligence resources ready to prevent and suppress violence resulting from turf wars over illicit markets.

(3) *The state and international partners sponsoring interdiction and suppression measures in source countries keenly need to watch the watchdogs.* Organisations and individuals tasked with eradication and interdiction are ideally placed to become the top traffickers in a country because they have access to intelligence and can manipulate suppression efforts to augment their power and target political or ethnic rivals. In many source countries subjected to intense suppression efforts, the top law enforcement officials became the top traffickers. Consequently, relentless internal monitoring is critical.

(4) *Governments and international organisations also need to thoroughly consider to which locales the illicit economy will shift if suppression efforts in a particular locale are effective and whether such a shift is desirable.* Suppression will only shift production elsewhere – for example, where a major terrorist group operates. Such a group consequently would receive a major windfall, both in terms of military capabilities and political capital. The mere fact of relocation will be highly disruptive to the new recipient region with respect to public safety, national security and political, judicial and law-enforcement institutions. Moreover, governments and international organisations need to consider what illicit economy will replace the existing one and whether it is potentially even more pernicious.

## THE PROMISE OF LICENSING AND LEGALISATION AND WHY THEY ARE NOT A PANACEA

Source-country policies toward illicit economies can also encompass licensing of the illicit economy for legal purposes. For example, the licensing of opium poppy cultivation for medical opiates (morphine, codeine and thebaine) in Turkey eliminated the illegal cultivation of poppy there. The fact that some form of licensing is feasible and effective in one context does not mean it would be equally effective in other contexts. Turkey had a strong state that had firm control over the territory concerned. Furthermore, Turkey was able to utilise a particular technology, the so-called poppy straw method, that makes diversion of morphine into the illicit trade very difficult. India's licensing system for the cultivation of opium poppy for medical opiates proved considerably less effective in preventing diversion of opium into illicit uses, as India never adopted the poppy-straw method.[21] Although both India and Turkey have a guaranteed market in the United States under the so-called 80/20 rule, both are being displaced from the licit market by new industrial suppliers of medical opiates, such as Australia. Trying to apply such a licensing scheme, say to Afghanistan today, would face a host of legal, political, economic and efficacy obstacles, foremost among them the lack of security and state presence, but also the lack of a guaranteed market and stiff international competition.[22]

In addition to opiates, licensing of limited production can and has also been adopted in the case of the illicit logging of tropical forests, mining or wildlife trafficking. In some cases, such as in the case of farming of crocodeleans, licensing turned out to be a highly effective policy, saving many species from extinction.

In many other cases, however, licensing of wildlife trade, logging and mining merely turned out to be a white-wash of consumer consciousness, masking undesirable practices, complicating law enforcement and increasing demand.[23]

19 For details on focused-deterrence strategies and selective targeting, see David Kennedy, Daniel Tompkins and Gayle Garmise, 'Pulling Levers: Getting Deterrence Right,' *National Institute of Justice Journal* (236), 1998, 2-8; Mark Kleiman, *When Brute Force Fails: How to Have Less Crime and Less Punishment* (Princeton: Princeton University Press, 2009); Vanda Felbab-Brown, 'Targeted Deterrence, Selective Targeting, Drug Trafficking and Organized Crime: Concepts and Practicalities,' IDPC-IISS-Chatham House, *Modernizing Drug Law Enforcement*, Report No. 2, February 2013.

20 Vanda Felbab-Brown, 'Despite Its Siren Song, High-Value Targeting Doesn't Fit All: Matching Interdiction Patterns to Specific Narcoterrorism and Organized-Crime Contexts,' The Brookings Institution, October 1, 2013.

21 For analysis of licensing efficacy in India and Turkey, see David Mansfield, 'An Analysis of Licit Opium Poppy Cultivation: India and Turkey,' author's copy.

22 For a detailed analysis, see Vanda Felbab-Brown, 'Opium Licensing in Afghanistan: Its Desirability and Feasibility,' *Foreign Policy Studies Policy Paper*, No. 1, Brookings Institution Press, August 2007, http://www3.brookings.edu/fp/research/felbab-brown200708.pdf.

23 See Vanda Felbab-Brown, 'The Disappearing Act: Species Conservation and the Illicit Trade in Wildlife in Asia,' *Brookings Foreign Policy Working Paper No. 6*, Brookings Institution, June 2011, http://www.brookings.edu/papers/2011/06_illegal_wildlife_trade_felbabbrown.aspx; Vanda Felbab-Brown, 'Not as Easy as Falling off a Log: The Illegal Timber Trade in the Asia-Pacific Region and Possible Mitigation Strategies,' Brookings Foreign Policy Working Paper No. 5, Brookings Institution, March 2011.

> Smartening the design of supply-side policies – eradication, interdiction, alternative livelihoods – and carefully monitoring and adjusting the design of licensing and legalisation measures will go a long way to improving the effectiveness of policies toward the drug trade and minimising their often intense negative side-effects.

Proponents of legalisation as a mechanism to reduce organised crime often make two arguments: that legalisation will severely deprive organised crime groups of resources; and that legalisation will also free law enforcement agencies to concentrate on other types of crime, such as murders, kidnappings and extortion. A country may have good reasons to want to legalise the use and even the production of some addictive substances and ride out the consequences of possible greater use. Such reasons could include providing better health care to users, reducing the number of users in prison and perhaps even generating greater revenues and giving jobs to the poor.

Yet without robust state presence and effective law enforcement, there can be little assurance that organised crime groups would be excluded from the legal drug trade. In fact, they may have numerous advantages over legal companies and manage to hold onto the trade, including through violent means.

Further organised crime groups may intensify their violent power struggles over remaining illegal economies, such as the smuggling of other illegal commodities or migrants, prostitution, extortion and kidnapping.

Nor does legalisation imply that law enforcement would be liberated to focus on other issues or become less corrupt: the state would have to devote substantial resources to regulating, monitoring and enforcing the legal economy, with the legal economy potentially serving as a mechanism to launder illegally produced drugs.

Additionally, a grey market in drugs would likely emerge: the higher the tax on the legal drug economy imposed to deter use and generate revenue, the greater the pressures for a grey market to emerge. Organised crime groups could set up their own fields with smaller taxation, snatch the market and the profits and the state would be back to combating them and eradicating their fields. Such grey markets exist alongside a host of legal economies, from cigarettes to stolen cars.

Thus there is no guarantee either that marginalised groups, such as farmers of illicit crops, would retain their jobs in a legal drug economy: The legal drug cultivation would likely shift to other more developed areas of agricultural production which are inaccessible to the marginalised groups to begin with, being the result of exclusionary political-economic institutional arrangements. Indeed, redesigning political and economic institutions to achieve greater equity of access and accountability to the overall population, and hence dismantling state institutional capture by powerful economic and political elites, are often the necessary prerequisites to make licensing and alternative livelihoods work.

## CONCEPTUALISING COUNTERNARCOTICS POLICIES AS STATE-BUILDING EFFORTS

Without capable and accountable police that are responsive to the needs of the people – from tackling street crime to suppressing organised crime – and that are backed-up by an efficient, accessible and transparent justice system, neither legal nor illegal economies will be well-managed by the state. Smartening the design of supply-side policies – eradication, interdiction, alternative livelihoods – and carefully monitoring and adjusting the design of licensing and legalisation measures will go a long way to improving the effectiveness of policies toward the drug trade and minimising their often intense negative side-effects. Reducing the violence associated with drug trafficking should be a priority for law enforcement agencies. Governments that effectively reduce the violence surrounding illicit economies often may not be able to *rid* their countries of organised crime; they can, however, lessen its grip on society, thereby giving citizens greater confidence in government, encouraging citizen cooperation with law enforcement and aiding the transformation of a national security threat into a public safety problem. That can well be accomplished – and many countries have succeeded in doing so – in the absence of legalisation. Counternarcotics policies as well as other anti-crime measures should therefore be conceived as a multifaceted state-building effort that seeks to strengthen the bonds between the state and marginalised communities dependent on or vulnerable to participation in illicit economies for reasons of economic survival and physical security. Efforts need to focus on ensuring that peoples and communities will obey laws – by increasing the likelihood that illegal behaviour and corruption will be punished via effective law enforcement, but also by creating a social, economic and political environment in which the laws are consistent with the needs of the people so that the laws can be seen as legitimate and hence be internalised. ■

# Addressing the Costs of Prohibition: Internally Displaced Populations in Colombia and Mexico

Laura H. Atuesta Becerra

**The creation of internally displaced populations (IDPs) is one of the indirect costs of the drug prohibition policies implemented in Colombia and Mexico during the 2000s. Although in Colombia the problem has been quantified and recognised, and the government has changed the legislation in order to provide the IDPs with humanitarian assistance, in Mexico policies are inexistent, there is no registry for quantifying them and the government has not recognised its responsibility for the problem. Currently, the discussions about the failure of the 'war on drugs' are taking place at various national and international levels. Experts have argued that new drug policies should be focused more on addiction treatments, consumption prevention and health programs. However, some important questions should be kept in mind while discussing these new policies. What would happen to peasants in Colombia who abandoned their land and to civilians in Mexico who moved to safer places because their lives were threatened? Would these drug policies focused on health issues, consumption and treatments cover the humanitarian assistance these IDPs need? Would the cartels stop their extortion practices just because currently illicit drugs were legalised and their main source of income taken away? Would rebel groups in Colombia do the same? This article uses a simulation analysis of the legalisation of drugs in Colombia and a migration analysis in Mexico to answer some of these questions.**

**Summary**

- The creation of internally displaced populations (IDPs) is one of the indirect costs of the drug prohibition policies implemented in Colombia and Mexico during the 2000s.
- There is a need for national governments to recognise and work to ameliorate the problems associated with the creation of IDPs.
- This article concludes that the legalisation or regularisation of illegal drugs would not by itself ameliorate the IDP problem.
- If the legalisation of drugs ends the armed conflict in producer and transit countries, the welfare of households is improved only when the government reinvests the security expenditures in other productive sectors such as health, education and transportation.

Colombia and Mexico face challenges in order to solve the humanitarian crisis created by IDPs' living conditions. Although Colombia has approved the Victims' Law to protect IDPs, its implementation has been difficult and the rebel groups keep resisting the return of victims to their hometowns. In Mexico, the situation is exacerbated because of the inexistence of academic research that quantifies the size of the IDP, the lack of public policies to address the situation and the increasing insecurity for the civilian population in areas with high levels of drug-related violence.

This contribution concludes that the legalisation or regularisation of illegal drugs would not by itself ameliorate the IDP problem. In Colombia, the creation of new rebel groups after the demilitarisation of the paramilitary groups are enough evidence to suggest that, even if illegal drugs were legalised, and the rebels' main source of income were taken away, they would find new financial sources through extortion or other illegal activities. Results from a computable general equilibrium (CGE) model[1] using data from Colombia suggest that the economic welfare of households would be improved only if the government reassigned the military budget to other

1 CGE models are a type of economic analysis that use real world data to estimate the economic impacts resulting from changes in policy, technology or other factors.

> Between 2000 and 2010, Colombia had the second-largest IDPs (after Sudan) with a proportion of displaced over the total population of 7.8 percent.

economic activities. The legalisation of drugs, without such reinvestments, would only produce 'some' return migration from urban to rural areas and a very small revival or regeneration of the countryside. Further, if new rebel groups were subsequently created, the government would be unlikely to reduce its military spending to reinvest it into other economic activities.

In the case of Mexico, the country needs first to recognise and quantify the IDPs in order to design public policies to address their needs. Congress approved the Victims' Law in January 2013, which includes the creation of a Victims' National System and restitution for the victims of up to 500 days' worth of minimum wages, depending on the damage they suffered.[2] However, the Law does not have any budget assigned for its implementation and it has not found an equilibrium between the local support offered to the victims by some of the states and the federal jurisdiction.[3] The results of an internal migration economic model that includes as a determinant the drug-related violence differential between origin and destination suggest that violence is a determinant of migration. Further, they suggest that the relationship is stronger when the place of origin is a high-violence state. These results suggest that people fled from violence in Mexico, even if economic opportunities were not better at their destination point.

Given the role played by the drug cartels in provoking this migration in Mexico, one could ask if these migrants would be willing to return to their hometowns if illegal drugs became legal or regularised. Using the experience of Colombia and the evidence of the creation of new rebel groups there, this return-migration scenario does not seem likely. The drug cartels in Mexico are already extorting migrants from Central America passing through on their way to the US. Further, the fact that they already control territory, mostly in the northern states, makes it probable that current clashes with the military forces would continue. This situation of violence and extortion would generate a *pull effect* for migrants who would consider returning to their places of origin. If return migration is difficult, it becomes evident that we need more immediate and integrated approaches to this issue while discussions on the future of drug policies take place. Meanwhile, although much of the current discourse about reversing the damage caused by the 'war on drugs' centres on issues of consumption and treatment, it must be recognised that these changes will have limited impacts in countries such as Mexico and Colombia which suffer systemic illicit drug-related violence, homicides and IDPs.

This contribution continues as follows. The second section below briefly describes the forced displacement situation in Mexico and Colombia. Following this the contribution will examine a Colombian CGE model and a welfare analysis under a potential scenario of drugs being legalised. Next it will look at the migration model and its estimates for Mexico including the drug-related violence differential as a determinant of the migration decision. This contribution concludes with an analysis of the costs associated with the IDP and examines new approaches for the future of drug policies in the Americas.

## INTERNALLY-FORCED DISPLACEMENT AS AN INDIRECT COST OF PROHIBITION

Between 2000 and 2010, Colombia had the second-largest IDPs (after Sudan) with a proportion of displaced over the total population of 7.8 percent.[4] Forced displacement is associated with the internal armed political conflict. During the 1990s the conflict was intensified by the strengthening of the guerrillas and the paramilitaries being financed by the illegal drug business. Colombia is considered one of the countries in the region with the most advanced legislation to protect IDPs. These efforts started in 1997 with the creation of the National System for Attending the Displaced Population and were strengthened in 1999 with the creation of the Displaced Population Registry (RUPD). In 2005, with the approval of the Justice and Peace Law, the government established the right for victims to seek truth, justice and reparations. Later on, in 2007, the Constitutional Court recognised land restitution as a fundamental right for IDPs. This was based on the principle of ensuring victims could attain the same situation he or she had before the displacement.[5] Finally, in 2011, Congress approved the Victims' Law with the purpose of providing reparation to the victims through land restitution.

Mexico, on the other hand, has had three waves of displacement:[6] (1) during the Mexican Revolution (with no data available); (2) during the uprising of the Zapatista movement in Chiapas (with around 35,000 people displaced);[7] and (3) during the current 'war

2 'Decreto por el que se expide la Ley General de Víctimas,' Diario Oficial de la Federación, January 9, 2013, http://dof.gob.mx/nota_detalle.php?codigo=5284359&fecha=09/01/2013

3 'La Comisión de Víctimas queda fuera del presupuesto 2014,' Animal Político, 2013, http://www.animalpolitico.com/2013/11/la-comision-de-victimas-queda-fuera-del-presupuesto-2014/#axzz2mzouOxoO.

4 Ana M. Ibañez, *El desplazamiento forzoso en Colombia: un camino sin retorno hacia la pobreza* (Universidad de los Andes, 2009).

5 'Protección de tierras y patrimonio de población desplazada: Síntesis de la experiencia del Proyecto Protección de Tierras y Patrimonio de la Población Desplazada,' Acción Social, 2010, http://restituciondetierras.gov.co/media/descargas/publicaciones/resumen_ejecutivo.pdf

6 Luis Benavides and Sandra Patargo, 'México ante la crisis humanitaria de los desplazados internos,' *Foreign affairs: Latinoamérica*, *12/4* (2012): 77-88.

7 Although some already returned to their places of origin, it is estimated by the local government that, as of May 2012, 25,000 people remained displaced in Chiapas (IDMC, 2012).

on organised crime' in which thousands of households have fled from the violence generated by clashes between the drug cartels and the military forces, mainly in the northern states.[8] The numbers are unclear: while IDMC reported that 160,000 people have been displaced since 2007,[9] a private consultant firm reported that the number of IDPs is more than 1.5 million people.[10] In contrast to the efforts made by Colombia to recognise the existence of IDPs, the Mexican government has not yet recognised the problem, despite the approval of the Victims' Law in early 2013.

> The latest Human Rights Watch report on displacement in Colombia documented 21 cases where individual IDPs have lost their lives since 2008, 80 cases where they have received serious threats and 30 cases where they have been displaced again.

Since Mexico does not have an official registry to provide assistance to IDPs, no one really knows the number of displaced households, or the causes of their displacement. The most informative survey was conducted by the Universidad Autónoma de Ciudad Juárez in 2010, reporting that 220,000 people have abandoned Ciudad Juárez since 2007 as a result of violence. From this figure, half have remained in the country as IDPs and the rest have migrated to the US.[11]

Several organisations in Colombia have provided assistance to this vulnerable group. One of the most recognised is CODHES (Consultant firm for Human Rights and Displacement), an NGO that promotes the protection of human rights of IDPs and refugees. On the other hand, the Universidad de los Andes, in collaboration with the Conferencia Episcopal, conducted a survey in 2004 of 2,342 displaced households located in 48 municipalities in 21 departments.[12] This survey has been used in several academic studies with the purpose of estimating the costs of displacement.

The implementation of the Victims' Law in Colombia has been extremely difficult. The insecurity faced by IDPs and their leaders is still one of the main problems, not only for the implementation of the Law but for ensuring the return of the victims to their places of origin. The latest Human Rights Watch report[13] on displacement in Colombia documented 21 cases where individual IDPs have lost their lives since 2008, 80 cases where they have received serious threats and 30 cases where they have been displaced again. From December 2005, more than 500 IDPs who claimed their land have received threats, and more than 360 IDPs and leaders are considered at 'extreme risk'. The Attorney General's Office is investigating more than 56 homicides committed in activities related to land restitution since 2000.[14] The safe return of IDPs often cannot be guaranteed because of the existence of new rebel groups conducting illegal activities in the abandoned land (mainly the production of illegal crops and illegal mining).[15]

Colombia still has a long way to go. The implementation of the Victims' Law has been complicated and the insecure conditions have jeopardised land restitution. Mexico, on the other hand, has not yet even officially recognised these victims of the 'war on drugs'. Comparing both situations, can we use the Colombian experience to forecast what could happen in Mexico? Is it possible that drug cartels could jeopardise return migration, even if they stop receiving funding from narco-trafficking? Drug cartels in Mexico are already involved in other criminal activities such as human trafficking, extortion and kidnappings. Further, controlling territories is crucial for conducting these activities. Return migration for IDPs will therefore be problematic, with or without either narco-trafficking or changes in drug policy. The next two sections of this contribution describe two quantitative studies, one in Colombia and the other in Mexico, to understand the costs of the current drug policy on household welfare and population movements. Understanding these costs is crucial to analyse the potential impact of changing drug policies on households.

8 Baja California, Chihuahua, Coahuila, Durango, Guerrero, Michoacán, Nuevo León, San Luis Potosí, Sinaloa, Sonora, Tamaulipas and Veracruz.

9 'Global Overview 2012: People internally displaced by conflict and violence, Norwegian Refugee Council,' Internal Displacement Monitoring Centre, 2012, http://www.internal-displacement.org/publications/global-overview-2012.

10 *Parametría* estimates are approximations based on a household survey, on which 2 percent of households reported having fled their homes due to violence related to the war on organised crime.

11 'MEXICO: Displacement due to criminal and communal violence. A profile of the internal displaced situation,' Internal Displacement Monitoring Centre, 2013, http://www.internal-displacement.org/8025708F004BE3B1/(httpInfoFiles)/59056C1DECFC954BC1257953004FDFA2/$file/Mexico+-+November+2011.pdf

12 Ana Ibáñez and Andrea Velásquez, *El proceso de identificación de víctimas de los conflictos civiles: una evaluación para la población desplazada en Colombia* (Universidad de los Andes, CEDE, 2006).

13 *El riesgo de volver a casa: Violencia y amenazas contra desplazados que reclaman restitución de sus tierras en Colombia* (Human Rights Watch, September 2013).

14 'Actos de violencia amenazan el éxito de la Ley de Víctimas: HRW,' El Tiempo, September 2013, http://www.eltiempo.com/politica/ARTICULO-WEB-NEW_NOTA_INTERIOR-13067095.html.

15 'Nuevo caso de amenaza contra líderes de restitución de tierras,' Noticias Caracol, May 2013, http://www.noticiascaracol.com/nacion/video-293532-nuevo-caso-de-amenaza-contra-lideres-de-restitucion-de-tierras. 'Alerta en Colombia: Águilas Negras amenazan nuevamente a la Liga de Mujeres Desplazadas,' Red Latinoamericana y del Caribe para la Democracia, November 2012, http://www.redlad.org/alerta-en-colombia-%C3%A1guilas-negras-amenazan-nuevamente-la-liga-de-mujeres-desplazadas.

## AN ECONOMIC WELFARE ANALYSIS OF THE LEGALISATION OF DRUGS IN COLOMBIA

Results from a CGE model used to simulate the Colombian economy after legalisation of illegal drugs suggest that government reinvestments of military expenses are crucial in determining changes in household welfare. Without these reinvestments, the benefits of legalisation are not significant, and the economic welfare of rural and urban households is only slightly improved.

For the simulations, the analysis uses data from 2006 with 10 legal sectors and one illegal sector on the production side, and a disaggregated demand by income deciles and by geographic location (urban and rural). Because of legalisation, the government receives more money from taxes, rural households receive most of the gains of the drug market and money laundering is reduced to zero. In terms of security, the military aid received from the US to finance the 'war on drugs' is reduced, and the government has the option to distribute military expenses in other productive sectors if the armed conflict is terminated.

The results of the simulation suggest that the economic welfare of rural and urban households is slightly improved with legalisation. However, the results change significantly depending on whether there is continuity of the armed conflict and whether there is reinvestment of military expenses. With the perpetuation of the armed conflict (through the creation of new rebel groups or the generation of new illegal activities), the economy continues in an 'economy of war' situation. The increasing drug production in rural areas, the higher taxes received by the government and the linkages between the security sector and other productive sectors are reflected in a welfare increase for all income deciles. However, this economic model does not consider the losses on welfare generated by the indirect costs of the conflict such as homicides, extortion, threats and the impossibility of the displaced households to return to their hometowns.

> "In contrast to the efforts made by Colombia to recognise the existence of IDPs, the Mexican government has not yet recognised the problem, despite the approval of the Victims' Law in early 2013."

Under the other scenario, if the legalisation of drugs ends the armed conflict, the welfare of households is improved only when the government reinvests the security expenditures in other productive sectors such as health, education and transportation. With this reinvestment, welfare increases, with the gains being higher for the lowest deciles both in rural and in urban areas.

## INTERNAL MIGRATION IN MEXICO: ARE POPULATION MOVEMENTS DETERMINED BY DRUG-RELATED VIOLENCE?

The results of an econometric model of migration in Mexico suggest that wage differentials are an important determinant of migration. However, when migrants are coming from a state with high levels of drug-related violence, the violence differential is also significant in explaining migration decisions. Some studies of forced migration due to internal conflicts have been conducted in other countries. These have shown that political violence was a dominant motivation for explaining international migration,[16] but only when some critical level of violence is reached.[17] This suggests a non-linear effect between violence and migration: moderate levels of violence reduce the likelihood of movement, while high levels increase it.[18] Using data from the 2010 Mexican Census to identify migrants (if they lived in a different state in 2005), wages in different locations are estimated by comparing the pool of migrants to the residents of each state. Then, using an econometric model of migration, we calculate how relevant the violence and the wage differentials are for explaining migration. For the violence differentials, we use the rate of alleged homicides related to organised crime from 2006-2010 as a proxy.[19]

The results show that migrants coming from states with high levels of violence have potential wages lower than migrants coming from states with low levels of violence. On average, if a migrant from a high-violence state decides to migrate to a low-violence state, his or her wage would be 3.65 percent lower than the wage of a migrant from a low-violence state deciding to migrate to another low-violence state. Moreover, migrants coming from violent states are willing to lose money in order to gain 'safety,' and migrants moving to violent states from non-violent states are demanding significant economic gains in order to compensate for their 'safety' losses.

16 William Stanley, 'Economic migrants or refugees from violence? A time-series analysis of Salvadoran migration to the United States,' *Latin American Research Review,* 22/1 (1987): 132-154.

17 Andrew Morrison and Rachel May, 'Escape from terror: Violence and migration in post-revolutionary Guatemala,' *Latin American Research Review,* 29/2 (1994): 111-132.

18 Pratikshya Bohra-Mishra and Douglas Massey, 'Individual decisions to migrate during civil conflict,' *Demography,* 48/2 (2011): 401-424.

19 The data was collected by the Consejo de Seguridad Nacional, and obtained from the El Universal webpage, 'El detalle mes a mes de los homicidios del narco,' January 2013, (http://www.eluniversal.com.mx/notas/736970.html).

Migration from high-violence states does not behave like traditional economic migration. These migrants are willing to earn lower wages just to flee from violence. In most cases, their wage differential between current wages and the wages they would have earned had they remained in the same state as in 2005 is zero or negative. Educational attainment, a determinant factor for explaining migration, is not useful in determining migration from and to high-violence states: while more educated migrants from low-violence states are more willing to migrate to low-violence states, more educated migrants from high-violence states are *not* willing to migrate to high-violence states.

Without knowing the reason for migration or the conditions in which this migration took place, it is not possible to identify which ones are IDPs and which ones are economic migrants. However, if these people migrate because of security reasons, one could expect that they would want to come back, but this return migration is not guaranteed if the security conditions are not improved in their hometowns.

The results of this statistical analysis are in line with the anecdotal evidence already existent in Mexico. People living in high-violence states fled from violence looking for safety, and some of them migrate without any economic opportunity in the state of destination. Animal Político,[20] in collaboration with Insight Crime, prepared three case studies about forced displacement in Sinaloa, Tijuana and Ciudad Juárez, reporting the existence of the phenomenon by interviewing several families that leave their homes looking for safety. In the three cases, the rises in crime and homicide rates were accompanied by an increase of IDPs; however, when governmental authorities were asked about the topic, they denied its existence, or simply said that there was not enough evidence on displacement to recognise it as a problem.

> ‘...if the legalisation of drugs ends the armed conflict, the welfare of households is improved only when the government reinvests the security expenditures in other productive sectors such as health, education and transportation.’

## CONCLUSION

The blog *Foco Económico* posted an analysis of the costs of prohibitionist drug policies.[21] According to the article, one of the reasons prohibition did not work is that the collateral costs and the indirect costs of the ‘war on drugs’ were too expensive for producer and transit countries. The increasing drug-related violence, in both Colombia and Mexico, was accompanied by thousands of families who left everything behind to migrate to safer places.

There are two main costs associated with IDPs. The first is the humanitarian crisis generated by the poor living conditions they face in their destinations. In Colombia, they have arrived in the big cities and have become homeless, begging for money at traffic intersections. In Mexico, they generally do not receive humanitarian assistance from the government, and when they do, it is under deplorable conditions. According to testimonies of displaced families from Ciudad Juárez,[22] they were placed in warehouses (often without air conditioning) by the city government in Mexico City, where they had to stay 24 hours per day for several months while fighting for every inch of space.

The second cost is associated with ensuring their return to their hometowns. Given the humanitarian crisis created by their poor living conditions as IDPs, the main solution, both for them and for the government, would be to provide a safe return. However, as discussed above, even if legislation guarantees this return, in practice the situation is more problematic. The creation of new rebel groups, the perpetuation of violence and the absence of state presence are just a few of the many obstacles to ensuring security for the returning IDPs.

In the final assessment, prohibition did not work. It generated enormous costs both in producer and transit countries. The main question is therefore: what are we going to do about these costs and with policies going forward? The new debates on alternative drug policies are focused on addiction treatments, consumption prevention, regularisation of the drug market and in some cases, ‘legalisation’ is on the agenda. However, for countries such as Mexico and Colombia, it is too soon to think about these alternative policies. The drug policy based on prohibition and the ‘war on drugs’ left these countries with serious problems that we cannot ignore just by approving a drastic change in drug policies. It was because of prohibition that the guerrillas, paramilitaries and drug cartels were able to finance their criminal activities. However, it is naïve to expect that if prohibition is ended and the earnings of the illicit drug market are reduced, these organisations are going to become legal, conditions are going to be safer and IDPs are going to return to their hometowns. Colombia has been an important case study in this regard. Although the paramilitaries were demilitarised and the Victims’ Law was approved, new rebel groups have been created that conduct new illegal activities and leaders of IDPs risk being killed if they decide to go back and participate in the land restitution project.

20 ‘Desplazados del narco en México,’ Animal Político, September 2013, http://www.animalpolitico.com/2013/09/nota-especial-desplazados-del-narco-en-mexico/#axzz2hEaz23tQ.

21 Daniel Mejía, ‘Qué falló con la prohibición?,’ *Foco Económico*, October 2013, 2013, http://focoeconomico.org/2013/10/08/que-fallo-con-la-prohibicion/.

22 Ibid., Animal Político.

Drug policies in Mexico and Colombia should go through a transition period in which the security component is also present. The costs of prohibition were too extensive and they generated long-term consequences that we cannot ignore. In the short and medium term, drug policies should advance solutions to reverse these consequences. Thinking about drug legalisation, addiction treatment and consumption prevention as the only new alternatives for the current drug policies would leave Mexico and Colombia with a security problem that sooner or later would be translated into other repressive, prohibited and 'war on *something*' policies.

Colombia and Mexico have a big challenge ahead. Asking 'what next?' and proposing a single solution is impossible and unrealistic. Drug policies in the Americas have been a trial-and-error exercise, and it would be a mistake to presume that legalisation by itself would solve all problems. The political, social and economic implications of the 'war on drugs' are so broad that it is not possible to reverse them in just a few years. This contribution refers only to the IDP phenomenon and the welfare losses caused by prohibition, but the drug-related violence is too embedded in Latin American societies and political systems for it to be ignored. In the end, it is worth analysing the beginning of the problem to understand different actors' motiviations. Why do youths decide to be members of drug cartels and rebel groups? What has been the role of the government in these decisions? Which policies have been effective and which ones have been counterproductive in fighting organised crime? What has been the experience of countries facing similar situations? What is next would still be a trial-and-error process, but the more information we have, the better our chances of minimising error. ■

# The Constitutional Costs of the 'War on Drugs'

Alejandro Madrazo Lajous[1]

**The war on drugs has had many and diverse consequences internationally. Increased violations of human rights, violence, corruption, direct economic costs, economic divestment from certain regions affected by violence, mass displacement of population,[2] increased risk and harm of consumption, massive budget allocations to security forces, etc. have all been documented as costs that need to be included when assessing the results of the war on drugs. To these we must add one more type of cost: the impact the drug war has had on the constitutional commitments of countries. Constitutional texts, interpretations and practices have been transformed in order to, in theory, better tackle drugs. Many of these changes undermine long-standing commitments to specific constitutional principles, values and rights. These are not problems of unconstitutional behaviour on the part of authorities, but rather an alteration in what is deemed constitutional so as to accommodate the policies and practices deployed by authorities in order to better enforce prohibition. This contribution will make this phenomenon visible and offer an initial analytical framework through which to explore it. It offers three preliminary case studies drawn from the three key countries engaged in the war on drugs in the Americas: Mexico, Colombia and the US.**

**Summary**

- To the list of costs of the war on drugs we must add the impact the drug war has had on the constitutional commitments of countries.
- Many of the legal changes aiming to better enforce prohibition consist of major alterations to the constitutional system. Such alterations, when they run counter to previously held normative and political commitments, should be understood as the 'constitutional costs' of the 'war on drugs'.
- Creating an 'exceptional' regime of diminished fundamental rights goes against the logic of fundamental rights: that they be universal.
- Once regimes of exception are admitted, they tend to broaden and serve purposes different from those originally sought.
- The structural design of constitutional government should not be adjusted in function of specific, purportedly transitory policies.
- The blurring of previously clear distinctions of government agencies' roles makes citizens more vulnerable to arbitrariness and authorities less accountable for their actions.

The current prohibitionist drug policy has several and different costs, among which are violence, discrimination and human rights violations. Yet the war on drugs carries with it another important type of cost: constitutional costs. By this, I refer to changes in legal systems (texts, interpretations and/or practices) of countries engaged in the war on drugs, which run counter to previously held substantive normative commitments (that is, constitutional commitments) of the polity. The usual stated purpose of adopting such changes is to adapt the legal and institutional framework so as to better enforce drug prohibition and pursue crime. This type of statement, however, is seldom accompanied by an attempt to flesh out the impact of such changes on preexisting constitutional commitments. This contribution seeks to evaluate precisely that impact. Many of the legal changes adopted so as to better enforce prohibition consist of major alterations to the constitutional system as a whole. Such alterations, when they run counter to previously held normative and political commitments which are not explicitly renounced, should be understood as the 'constitutional costs' of the war on drugs.

My aim is to offer, through an overview of the Mexican case, a preliminary analytic framework that simultaneously allows us to visualise the constitutional costs of the war on drugs and begin to devise the analytical tools with which to understand these phenomena. This text builds on a previous effort to identify and categorise the constitutional costs of Mexico's recent efforts to enforce prohibition (2005-2012) and then turns to other countries – namely Colombia and the US – so as to test the usefulness of an analytic framework developed around the Mexican experience and as an initial attempt to explore whether this is, in fact, a phenomenon that crosses borders and which manifests itself in similar ways across borders.

1 This text is based on an ongoing project called 'The Constitutional Costs of the War on Drugs'. The first version was presented at the ISSDP Conference, Bogota, 2013.

2 See Laura Atuesta's contribution to this report.

By 'constitutional costs' of the 'war on drugs,' I mean the permanent curtailment, abandonment, impingement, carving out from or any other affectation to long-held values – principles, rights or institutions – that inform our systems of government and which is justified not in and of itself, but rather as a means to achieve a very specific objective: to better enforce the prohibition of illicit drugs and/or confront criminal organisations involved in drug trafficking. Such costs have political as well as legal effects, for constitutions are not only legal but also political documents which reflect the values on which a political community is founded.

The constitutional costs are generated in different ways. First, many of the legal changes adopted *change* the constitution by becoming a part of it (i.e. formal constitutional amendments) – they cannot technically be charged with impinging or violating the constitution. The difference between the rights, principles, values or institutions as they were *prior* to a 'war on drugs' amendment and the way they come out of the amendment process is the constitutional cost of a constitutional amendment. Second, other constitutional costs need not take this approach: legal changes, with no constitutional amendment that explicitly accommodates them, can impinge upon the constitutional commitments. Finally, interpretations of legal texts – whether constitutional or otherwise – without formal amendment can also be considered a change that can represent a constitutional cost.

I propose we consider at least three types of constitutional costs, a classification that stems from studying the case of Mexico in recent years:

(1) The curtailment of fundamental rights;
(2) The restructuring of our forms of government; and
(3) The undermining of legal security, by conflating legal concepts and state functions.

Most likely, these categories will be either insufficient or inadequate for studying other countries. Nevertheless, this contribution makes a first attempt at trying them out in countries other than Mexico, which was used as the initial case study.

*Fundamental rights* are, in theory, the core value commitments of the political community which governments are bound to respect or even guarantee or foster.[3] They are universally attributed. So, curtailment of fundamental rights can mean one of two things: (i) the restriction of fundamental rights across the board, or (ii) the carving out of a regime of reduced rights for certain people. I want to focus on the phenomenon of carving out 'special' regimes of *reduced* rights. A recurrent argument that exceptional powers be granted to authorities so they can effectively pursue the 'war on drugs' has had important corrosive effects on the system of fundamental rights, but that was not the stated objective of the war on drugs. The exceptions can be temporary or can affect only one group – e.g. drug dealers, drug users, organised crime – but in and of itself creating an 'exceptional' regime of diminished fundamental rights cuts against the logic of fundamental rights: that they be universal. Furthermore, there is a risk that, as exceptions are admitted, they can broaden.

"A recurrent argument that exceptional powers be granted to authorities so they can effectively pursue the war on drugs has had important corrosive effects on the system of fundamental rights...."

*Restructuring government* can be defined as substantive adjustments to arrangements under which the powers and responsibilities are distributed between branches and/or levels of government. The reconfiguration of federalist relationships, for instance, is one such adjustment. The delegation of legislative or judicial functions to the executive could be another. What matters is the way in which power distribution between various authorities is altered. That powers and responsibilities be redistributed in order to effectively enforce a specific policy should grab our attention. That is, it is counterintuitive, when thinking about the structural design of constitutional government that it should be adjusted in function of specific policies, which are contingent on the circumstances and the specific objectives which they aim to address. This, however, seems like a phenomenon that is easily expected or at least accepted in the context of the war on drugs.

The *conflation of state functions* can be defined as the blurring of distinctions between legal definitions or of powers and functions which results in diminished clarity and legal security for citizens when facing state action. This can be understood as an *indirect* constitutional cost, as opposed to the *direct* changes to the constitutional system that diminished rights or undermined principles such as those described in the previous two sections. This type of constitutional cost is indirect because in blurring distinctions or conflating state functions, legal uncertainty is fostered. Thus the principle of legality – a central constitutional commitment by which repressive state action should have clear and explicit legal grounding – is undermined. The distinction itself is not necessarily a constitutional value, but its blurring affects a core constitutional commitment: legal security. The blurring of previously clear (or comparatively clear) distinctions makes citizens more vulnerable to arbitrariness and authorities less accountable for their actions.

3 Victor Abramovich and Christian Courtis, *Los derechos sociales como derechos exigibles*, (Trotta: 2004).

## MEXICO

Mexico adopted a prohibitionist regime long ago, but it was in the early years of this century, particularly during the presidency of Felipe Calderón (2006-2012), that a 'war on drugs' was pursued as a government priority. In these years, starting in 2005, but especially during the Calderon administration, a series of major constitutional and legal changes have been adopted in the context of – and motivated by – the war on drugs. Between 2005 and 2012, seventeen amendments to various legal texts, including the Constitution, were made.[4] Most are related to the punitive activities of the state: either to the criminal justice system or to the functioning of the security apparatus. Some measures included in these amendments represent constitutional costs that can be grouped into the three main types proposed above:

(1) The *curtailment of fundamental rights* through the carving out of a regime of exception. In 2008 Mexico bifurcated its criminal procedure: it amended the constitutional text so as to include notions such as the presumption of innocence, oral and public trials, victims' rights and an adversarial structure to criminal trials, to make it more transparent and adversarial.[5] At the same time, an exceptional regime of reduced rights and extraordinary police powers was imbedded in the constitution for 'organised crime' delinquency (of which drug crimes are the main cohort by far). In addition, it defined organised crime loosely ('three or more people who organise to commit crimes in a permanent or repeated manner as specified in law'[6]). All measures adopted under the exceptional regime of reduced rights are, of course, constitutionally banned under the 'ordinary' criminal justice process. This exceptional regime included: the possibility of being held incommunicado and without formal charges for up to 80 days if it is deemed instrumental to *any* 'organised crime' investigation (*arraigo*); a doubling of the time period allowed for police detention prior to presentation before judicial authority (from two days to four days); incommunicado while in prison (legal counsel excepted); incarceration in 'special' prisons separate from the general population; a blank authorisation to apply 'special' and unspecified 'security measures' within prisons; and the possibility of being charged anonymously.

The case of the *arraigo* is particularly illustrative of the 'constitutional costs' Mexico is willing to pay to continue a war on drugs. The *arraigo* – theoretically a form of house arrest, but in practice detention at an undisclosed location – was deemed unconstitutional by the Supreme Court in 2005, but the 2008 amendment overrode the impediment of constitutional incompatibility by inserting the policy of *arraigo* directly in the text of the constitution. The use of *arraigo* expanded enormously

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during Mexico's recent 'war on drugs' – from 42 *arraigos* in 2006, to over 1600 by 2011 – without a direct substantive effect on organised crime convictions.[7]

Limits and exceptions to other rights, such as privacy of communications and property rights, have also been carved out in recent years. For instance, a 2012 law allowed for prosecutors to demand from mobile phone providers, without a court order, the geographic location in real time of users.[8]

(2) The *restructuring of forms of government* refers specifically to the curbing of federalism and state powers. In recent years, the relationships between national, state and city governments in Mexico have been rearranged as security measures have been adopted in order to face 'the threat of narco-trafficking'. Mexico's *Ley de Narcomenudeo* illustrates this phenomenon of government restructuring.[9] Approved in 2009, it was the first occasion in over a century and a half in which the federal government formally intervened in state criminal policy. Since the toppling of the Santa Anna dictatorship in 1855 and the definitive establishment of Mexico as a federal (as opposed to centralist) republic with the 1857 Constitution, states had maintained complete autonomy regarding their internal criminal law (except for the limits established through federal constitutional rights).

In 2005, the Constitution was amended empowering the federal Congress to dictate 'the manner in which federal entities may participate in the persecution of crimes in concurrent matters'. Concurrent matters are those in which the Constitution

4 Alejandro Madrazo, 'The Constitutional Costs of the War on Drugs'.
5 'Decreto que reforma, adiciona y deroga diversas disposiciones de la Constitución,' *Diario Oficial de la Federación (DOF),* June 18, 2008.
6 Constitución Política de los Estados Unidos Mexicanos (art. 16).
7 Alejandro Madrazo and Angela Guerrero, 'Más caro el caldo que las albóndigas' in *Nexos*, December 2012; Catalina Pérez Correa and Elena Azaola, *Resultados de la Primera Encuesta realizada en los Centros Federales de Readaptación Social*, (México: CIDE, 2012).
8 'Decreto por el que se reforman, adicionan y derogan diversas disposiciones del Código Federal de Procedimientos Penales, el Código Penal Federal, la Ley Federal de Telecomunicaciones, de la Ley que Establece las Condiciones Mínimas Sobre Readaptación Social de los Sentenciados y de la Ley General del Sistema Nacional de Seguridad Pública,' *Diario Oficial de la Federación (DOF)*, April 17, 2012; Alejandro Madrazo, 'The Constitutional Costs of the War on Drugs,' forthcoming.
9 'Decreto por el que se expide la Ley de la Policía Federal,' Diario Oficial de la Federación (DOF), June 2009.

establishes the concurrent jurisdiction of the federation and the states, one of which is health, and drug crimes are formally categorised as 'crimes against health'. Thus drug crimes were, until 2009, exclusively the jurisdiction of the federal government. With the *Ley de Narcomenudeo* they also became a matter of state jurisdiction. The thrust of the reform established that possession and petty-dealing – up to a specified amount – were to fall under state authority and, beyond that, under federal jurisdiction, effectively forcing the hand of state governments to join the Calderón Administration's 'war on drugs'. This was consistent with one of President Calderón's key programatic objectives: to bring state and local governments on board with the 'war on drugs' which he claimed was being fought single-handedly by the federal government.[10]

State criminal law as a matter to be decided by state governments was, until 2005, a long-standing constitutional arrangement and one of the most important powers reserved for the states in Mexico's federal system. So, an exception to that principle was carved out in the context of the 'war on drugs'.

(3) *The undermining of legal security by conflating legal concepts and state functions.* Historically in Mexico, there has been a sharp formal distinction between three different spheres: (i) national security, (ii) public security and (iii) criminal investigation and prosecution. Each of these concepts referred to a distinct area that a state organ was charged with: national security was the realm of the armed forces; public security the realm of police bodies; and criminal investigation and prosecution the realm of the (federal and state) Attorney General's Office. Starting in 2005, again in a purported effort to better vest authorities with the legal tools to enforce drug prohibition and fight organised crime (always emphasising narco-trafficking as the quintessential form of organised crime), with the novel National Security Law, these distinctions rapidly collapsed.[11]

The result of these conflations – between national security, public security and criminal investigation – has been a confusing situation in which it is unclear what each of the bodies involved – Army, Navy, Federal Police and Attorney General's Office – does and what each is responsible for (e.g. who can detain, investigate, question and charge whom). This translates into a context of enormous legal uncertainty for the civilian population. When everyone can do anything and nobody is responsible for actually getting things done, the result is deepened insecurity and uncertainty for everyone except empowered authorities.

## COLOMBIA: EXCEPTIONAL CRIMINAL JUSTICE[12]

The constitutional costs of the war on drugs in Colombia follow somewhat similar lines, but over a more prolonged period of time and in a more complex political scenario. Manuel Iturralde explains how, during the second half of the twentieth century, Colombia suffered from both the presence of illegal armed groups (guerrillas and paramilitaries) and organised crime (drug cartels).[13] In response, the Colombian government took measures to facilitate the use of state force. The central thrust of these measures has been the creation of exceptional regimes outside the ordinary criminal justice system. In the case of Colombia, in contrast with Mexico, we need to keep in mind that a political conflict – a long-standing civil war – predates the war on drugs and is the context in which drug policy is deployed and understood. Nevertheless, the war on drugs is a core component of the conflict and one of the central purposes of many of the legal reforms with which we are concerned.

The exceptional criminal justice regime has been perpetuated over three decades and has changed through this period. From the 1950s to the 1980s, social protest was criminalised and repressed through an overt regime of exception controlled by military courts. This repression contributed to the rise of leftist guerrillas and armed conflict in the 1960s. In the 1980s, with the involvement of guerrillas and paramilitaries in drug trafficking as part of their funding sources, government efforts focused on the war on drugs. In 1984 drug crimes came under military jurisdiction.[14] Thus, government deemed the problem of drugs both a criminal matter and a national security matter, conflating functions between criminal and military jurisdictions.

> Features of this regime of exception which processes drug crimes include: increased sentences and reduced benefits; investigation, arrest and house searches of civilians without judicial authorisation; restrictions to *habeas corpus* for drug cases; detention and complete isolation without charges for up to seven days; expedition of extradition to the US; and wiretapping authorised by military justice.

10 Plan Nacional de Desarrollo 2007.
11 'Decreto por el que se expide la Ley de Seguridad Nacional,' Diario Oficial de la Federación (DOF), January 3, 2005.
12 The information in this section is based on Manuel Iturralde, *Castigo, liberalismo autoritario y justicia penal de excepción*, (Columbia: Universidad de los Andes, 2010).
13 Ibid.
14 Ibid.

The exceptional criminal justice regime remained under military control until 1987 when it was carved out as a new special jurisdiction. By 1990, most of the exceptions were systematised and recognised as permanent with the publication of the *Statute for the Defense of Justice*.[15] Paradoxically, during the late 1980s and early 1990s, legal and constitutional amendments (including a new constitution in 1991) sought to strengthen democratic institutions and the rule of law. Nevertheless, Colombian governments continued to use the exceptional criminal justice regime to combat the guerrillas, paramilitaries and drug trafficking. During the 1990s, exceptional criminal justice was expanded and became permanent as a branch of ordinary criminal justice and remains in force to this day.

Features of this regime of exception which processes drug crimes include: increased sentences and reduced benefits; investigation, arrest and house searches of civilians without judicial authorisation; restrictions to *habeas corpus* for drug cases; detention and complete isolation without charges for up to seven days; expedition of extradition to the US; and wiretapping authorised by military justice.[16] The development and content of the exceptional criminal justice system has been cumulative and has varied depending on the government in power and the stage of the conflict. In general, however, many measures included in these exceptional regimes consistently represent constitutional costs of some form. Most of the measures that constitute the regime of exception can be classified, extrapolating the categories drawn from the Mexican case, into a specific type of constitutional cost: the curtailment of fundamental rights. However, it must be kept in mind that much of this has occurred in a context of conflation of functions between military and civil jurisdictions and so the indirect constitutional cost of engendering legal uncertainty is also a useful category in this case. Furthermore, the exceptions tend to identify specific groups, such as paramilitaries, drug cartels and guerrillas. Under these regimes, however, the repressive action of the State can be directed against a larger number of crimes, situations and people.

> In 1984 drug crimes came under military jurisdiction. Thus, government deemed the problem of drugs both a criminal matter and a national security matter, conflating functions between criminal and military jurisdictions.

## THE UNITED STATES[17]

The war on drugs in the US has also engendered constitutional costs. Michelle Alexander has famously studied its costs in terms of antidiscrimination law. Her central claim is that the war on drugs has provided a complex mechanism for reinstating a legal regime of discrimination, which disproportionately affects the African American communities in the US. If this is true, the war on drugs is a vehicle that undermines one of the most valued commitments of the American constitutionalism of the twentieth century: anti-discrimination, famously crystalised in *Brown vs. Board of Education* as the foundational case of modern American constitutional law. If so, then the war on drugs as a whole is a major constitutional cost for the United States.

Even if we do not share Alexander's interpretation of prohibition, her research documents many measures – both through statutory changes and judicial rulings – that should be deemed constitutional costs of the war on drugs. In 1988 the US Congress established the Anti-Drug Abuse Act, by all accounts an extraordinarily and intentionally punitive piece legislation. It included new 'civil penalties' for drug offenders extending beyond traditional criminal punishments. For instance, it authorised public housing authorities to evict any person who allows any drug-related criminal activity to take place on or near public housing; it eliminated federal benefits (for example, student loans) for those sentenced for a drug offence; it expanded the use of the death penalty for serious drug-related offences and created new mandatory minimum sentences for drug offences. According to Alexander the legislation marked a legal watershed. As she wrote: 'Remarkably, the penalty would apply to first-time offenders. The severity of this punishment was unprecedented in the federal system. Until 1988, one year of imprisonment had been the maximum for possession of any amount of any drug'.[18] Such measures carve out a *civil* regime of reduced rights for certain people – drug offenders – through the criminal justice system.

The Supreme Court should, in theory, protect against such curtailment of rights. But some precedents suggest otherwise. In 1996, for instance, in *Whren vs. US,* the US Supreme Court ruled that the use of traffic violations by the police as a means to take arrests for drug offences did not violate equal protection. In *McCleskey vs. Kemp,*[19] they ruled that racial bias in sentencing, even if shown through credible statistical evidence, could not be challenged under the 14th Amendment in the absence of clear evidence of conscious, discriminatory intent. In May 1996, in *Armstrong vs. US*,[20] the Supreme Court reversed its previous decision about the recognition that racially selective enforcement violates equal protection of the law.[21] Finally, in 1995, in *Purkett vs. Elm*, the Court supported the exclusion of black jurors, another

15 Decreto 2790 of 1990
16 Ley 365 of 1997; Ley 884 of 2001; Decreto 182 of 1998; Decreto 1859 of 1989; Decreto 1860 of 1989, later repealed by the Constitution of 1991; Decreto 2103 of 1990.
17 The information of this section was based on Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (USA: The New Press, 2010).
18 Ibid., 53.
19 McCleskey v. Kemp, 481 US 279 (1987)
20 517 US 456, 116 S. Ct. 1480, 134 L. Ed. 2d 687, 1996 US
21 Yick Wo v. Hopkins, 118 U.S. 356 (1886)

case that seems to go against fundamental rights. In *Florida vs. Harris*, the Supreme Court ruled that an alert by a dog trained to detect drugs could be deemed probable cause to carry out a warrantless search in private property, regardless of the accuracy of the dog's performance in the past, thus reducing the standards for state intrusion in the private sphere in the case of drug searches.[22]

> Many countries and societies have undertaken profound restructuring of some of their key normative and political commitments so as to wage a more effective war on drugs.

## CONCLUSION

The costs of the prohibition of drugs – or, in its more bellicose version, the 'war on drugs' – are many and significant. The war on drugs consistently demands great sacrifices from societies around the world. Among them we need to take into consideration what fundamental changes political communities should be willing to undergo. Further, the sacrifices we *as political communities* accept must be tallied among the other many costs of the war on drugs. So, to the list costs, we need to add a new category: the constitutional costs of the war on drugs.

Many countries and societies have undertaken profound restructuring of some of their key normative and political commitments so as to wage a more effective war on drugs. In order to face the purported threat drugs and drug trafficking represent to our societies, our leaders and governments have time and again requested and obtained broader powers and/or the evisceration of constitutional barriers to state power. In the Mexican case these changes affected important aspects of the Mexican legal system: fundamental rights (related to the creation of a special criminal system), distribution of functions (the curbing of federalism and state powers through the modification of concurrent matters) and legal uncertainty (the conflation of functions) based on this analysis of the Mexican experience, we can identify three categories of constitutional costs: (a) the curtailment of fundamental rights by either (i) the restriction of fundamental rights across the board, or (ii) the carving out of a regime of reduced rights for certain people); (b) the restructuring of forms of government; and (c) the undermining of legal security.

In the Colombian case, we see that for several decades, subsequent governments have established exceptional criminal process regimes in order to support the war on drugs.

The contents of these have changed over time, but in all cases it is possible to find a common thread in the curtailment of fundamental rights for drug offenders. In Colombia, the exceptional criminal justice system is not temporary or exceptional, but has coexisted for five decades with ordinary criminal justice.

Consequently, in the Mexican and Colombian cases, the constitutional costs appear as statutes, constitutional amendments or both. The case of the United States is somewhat different. We can find legislative changes, but the affectation of constitutional commitments manifests itself most importantly in judicial opinions. Some measures of the war on drugs imply the curtailment of fundamental rights. These are apparently neutral, but in fact have deep discriminatory implications, as Michelle Alexander has famously argued.

When we sacrifice the core values we hold collectively and renounce core commitments previously held by a political community, we must be sure that it is for good reason. So far, these constitutional costs are most often not understood as such but as extraordinary and exceptional measures we must adopt to achieve our objective. But these measures are fundamentally reshaping political communities and if we continue to accept them without understanding them as costs in terms of the way we exist as communities, we will soon find that we no longer recognise our polities. ■

22 Andrew Claycroft, *Something Smells Rotten in the State of Florida: Harris, Jardines And the Inequitable Landscape of Canine Sniff Jurisprudencie*, final paper presented for *Drug Policy in the Americas: a Critical Appraisal*, at Georgetown Law Center, 2013.

# Mass Incarceration as a Global Policy Dilemma: Limiting Disaster and Evaluating Alternatives

Ernest Drucker

**Summary**

- Modify drug laws to end long mandatory sentences – something that's already beginning in the US.
- Declare a blanket amnesty for drug users serving long terms that no longer apply to their original offences.
- Identify and release populations that pose little or no risk to public safety. These include non-violent drug offenders and older prisoners serving out long mandatory sentences.
- End the long, restrictive parole arrangements that often re-incarcerate drug users for administrative and drug violations.
- Replace punitive parole programmes with community-based support services not linked to corrections.
- Expand voluntary access to evidence-based drug treatment services , uncoupled from court mandates.
- Convert prison-based drug programmes to residential schools and mental health facilities, staffed with well-trained medical and mental health personnel.
- Revise international treaties to develop a single convention for the control of all psychoactive drugs, both licit and illicit.
- Publicly monitor progress using sentinel metrics of drug use and drug policies such as overdose and drug treatment outcomes. These should assist with re-examining the entire spectrum of public health and clinical responses to changing patterns of drug abuse.

**With over 9 million in prisons worldwide (25 percent of these in the US), large-scale systems of punishment now represent an important determinant of population health. This has particular relevance for the harms of drug use and the many new challenges facing global drug policies. The measures used to punish individuals involved in drug use include hard labour, severe mental and physical conditions, long periods of punitive isolation, bodily mutilation and execution. These all have profound effects on the trajectory of individual drug use, the social construction of addiction and the human rights of drug users. As penal systems expand their roles, so too do their public health impacts on drug use in society – including collateral effects upon families and communities of those imprisoned.**

Any public health analysis of drug use and its relationship to criminal justice policies has to take account of both individual and population effects. These include the patterns of morbidity and mortality (i.e. suicide and homicide). They also include the course and outcomes of addiction treatment methods along with their relationship to individual health and psychopathology. Each of these impacts the lives of former prisoners and their families – including prospects for successful marriage, family life and employment. Aggressive drug criminalisation also has intergenerational impacts upon the children of incarcerated parents – affecting mortality, risks for drug use and health problems resulting in decreased life expectancy and elevated infant mortality rates.

Some limited international comparative data are available on the public health impact of drug policies. However, it is the American experience with mass incarceration that most clearly highlights the 'dose relationship' of punitive drug policies to many of these phenomena. While the US is atypical in its scope and severity, it is still instructive as a case study given that it is the nation with the world's largest number of prisoners and highest rate of imprisonment. And while mass incarceration of drug

users is not seen in most other developed democratic nations, it is on the rise in many developing countries facing burgeoning drug markets such as those in Sub-Saharan Africa. The case of America demonstrates how high rates of imprisonment can become socially 'toxic' – damaging population health, deforming vital family, community and societal structures and compromising human rights on a massive scale.

## LESSONS IN DISASTER: MASS INCARCERATION AND GLOBAL PUBLIC HEALTH

The two main premises of this section are (1) that drug use may be usefully understood as a public health issue; and (2) that any public health analysis of drug use must therefore now include serious consideration of criminal justice systems and drug-related incarceration (as well as the dangers of drug use *per se*) as major determinants of population health. In addition to the value of employing a public health lens to examine drug use and addiction, these tools are especially relevant to understanding the breadth and depth of the serious and negative consequences of criminal justice polices based on global drug prohibition. Measuring the intended and unintended outcomes of drugs and drug policies, we must examine immediate and long-term health and social consequences of incarceration. This requires common public health metrics and methods. The US system (admittedly an extreme case) can provide the initial data set by which we can demonstrate the value of applying public health and epidemiological principles to incarceration.

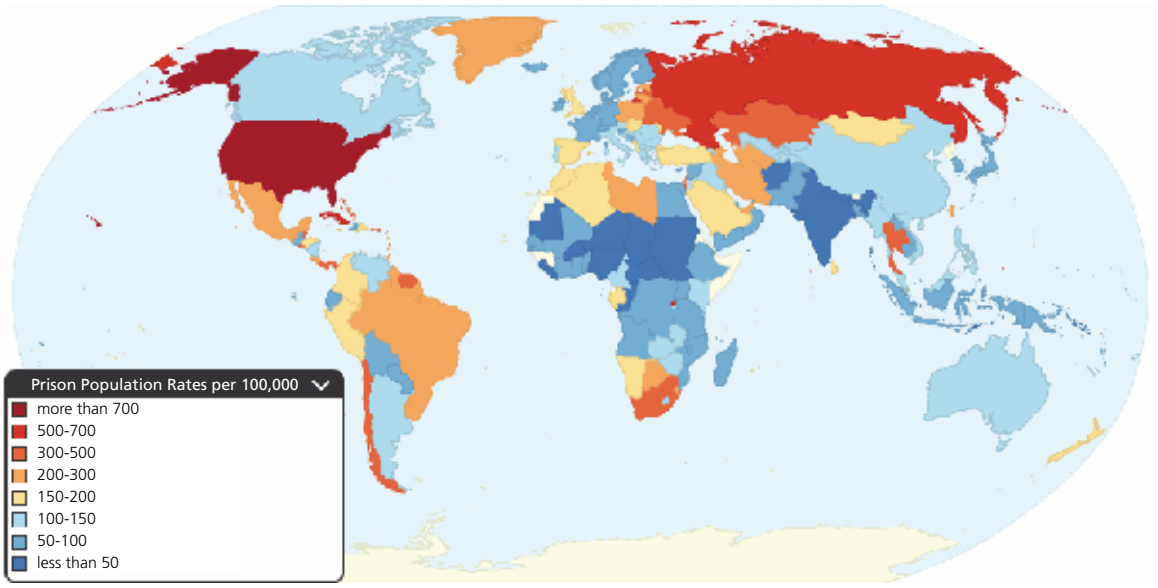
As state systems of punishment expand, they become a determinant of macro population health outcomes. Therefore, we are drawn first to *mass or hyper-incarceration* and its health and 'dosage effects' upon populations in terms of health and social outcomes.[1]

The prevalence of imprisonment at national levels ranges by a full order of magnitude from less than 50 to over 700 per 100,000 population. Drug offences are estimated at 40 percent of the 9 million individuals incarcerated globally. Such wide variations in the magnitude and methods of punishment for drug use between societies enable a closer examination of their specific consequences and population impacts.

### *The Prisons' Revolving Door: Re-entry and Recidivism*

Most of those who are incarcerated are 'incapacitated' by removal from society (considered by criminologists as one of the ways imprisonment increases 'public safety'), but only temporarily. Most eventually return to their communities – usually worse for the experience.[3] Recidivism (readmission to prison), due to new offences or (more commonly) due to administrative parole violations (e.g. relapse into drug use), can be viewed as a failure of the rehabilitation potential of arrest and imprisonment. An analysis of US recidivism patterns of 40,000 offenders released from state prisons in 1994 discovered that 56.2 percent resumed their pre-incarceration

**Figure 1. Global Rates of Imprisonment [2]**




1 Ernest Drucker, *A Plague of Prisons: The Epidemiology of Mass Incarceration in America* (The New Press, 2013).
2 Map of World Prison Population Rates per 100,000 of the national population. Charts Bin 2013 http://chartsbin.com/view/eqq.
3 Jeremy Travis, *But They All Come Back: Facing the Challenges of Prisoner Reentry* (Urban Institute Press, 2005).

**Figure 2. Lifetime Imprisonment Rates for US Birth Cohorts by Race and Age.[4]**

| Risk of imprisonment by age 30-34: Men born 1945-49, 1970-74 | | |
|---|---|---|
| **Percent** | **Born 1945-49** | **Born 1970-74** |
| **White men** | 1.2 | 2.8 |
| All non-college | 1.8 | 5.1 |
| High school dropouts | 4.2 | 14.8 |
| High school only | 0.7 | 4.0 |
| Some college | 0.7 | 0.9 |
| **Black men** | 9.0 | 22.8 |
| All non-college | 12.1 | 30.9 |
| High school dropouts | 14.7 | 62.5 |
| High school only | 10.2 | 20.3 |

| Percent | 1945-49 | 1950-54 | 1955-59 | 1960-64 | 1965-69 | 1970-74 | 1975-79 |
|---|---|---|---|---|---|---|---|
| **White men** | | | | | | | |
| High school dropouts | 4.2 | 7.2 | 8.0 | 8.0 | 10.5 | 14.8 | 15.3 |
| High school only | 0.7 | 2.0 | 2.1 | 2.5 | 4.0 | 3.8 | 4.1 |
| All non-college | 1.8 | 2.9 | 3.2 | 3.7 | 5.1 | 5.1 | 6.3 |
| Some college | 0.7 | 0.7 | 0.6 | 0.8 | 0.7 | 0.9 | 1.2 |
| All men | 1.2 | 1.9 | 2.0 | 2.2 | 2.8 | 2.8 | 3.3 |
| **Black men** | | | | | | | |
| High school dropouts | 14.7 | 19.6 | 27.6 | 41.6 | 57.0 | 62.5 | 69.0 |
| High school only | 10.2 | 11.3 | 9.4 | 12.4 | 16.8 | 20.3 | 18.0 |
| All non-college | 12.1 | 14.1 | 14.7 | 19.9 | 26.7 | 30.9 | 35.7 |
| Some college | 4.9 | 3.5 | 4.3 | 5.5 | 6.8 | 8.5 | 7.6 |
| All men | 9.0 | 10.6 | 11.5 | 15.2 | 20.3 | 22.8 | 20.7 |

Source: Bruce Western and Christopher Wildeman, 'The Black Family and Mass Incarceration,' *Annals of the American Academy of Political and Social Science* 621, no.1 (2009): 231.

4 http://muse.jhu.edu/journals/future_of_children/v020/20.2.wildeman_tab01.html

offending trajectories after release, with no apparent effect of imprisonment on future risk of re-incarceration.[5] Another meta-analysis concluded that the absolute impact of incarceration is, 'at best, marginal and at worst, iatrogenic' in predicting recidivism.[6] Complementing these patterns, other studies have found that shorter sentences or early release pose no added risk – with equal or decreased rates of arrest for new crimes after release.

*Incarceration as population exposure*

We can now view the consequences of involvement with the criminal justice system as we would the long-term effects of a toxic exposure – in this instance to punishment. The US data for lifetime risks of imprisonment (Figure 2) clearly show the wide disparities in this exposure by race and its powerful association with educational attainment – a marker for future economic and social outcomes (such as marriage) and for life expectancy itself.

The graphic representation of these same data (Figure 3) illustrates the exposure history of the entire US population to imprisonment – showing its tripling over successive birth cohorts between 1940 and 1980.

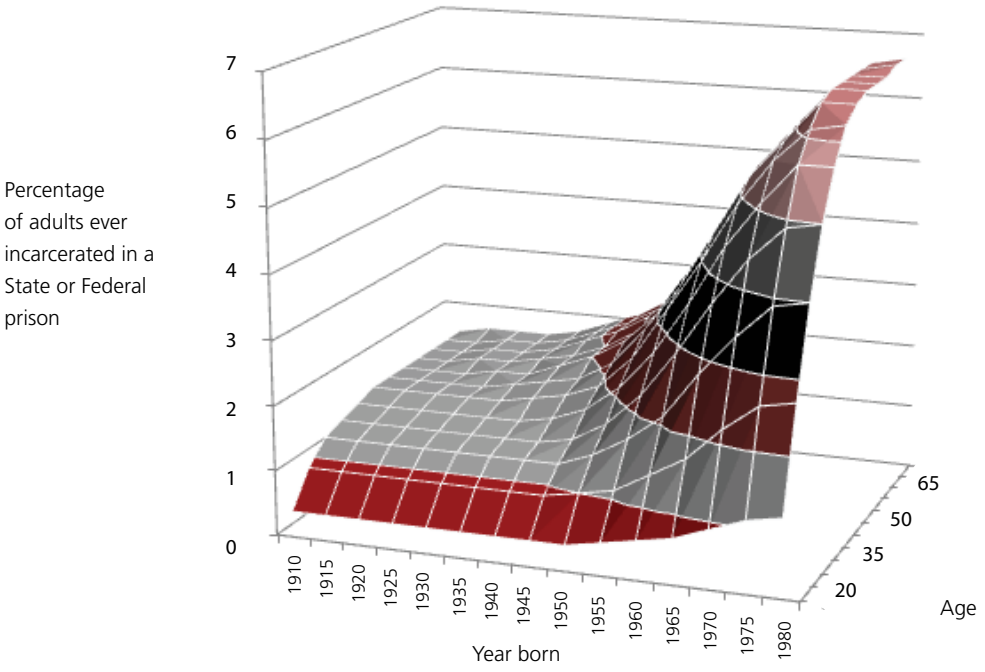
*Drugs, Addiction and Their Treatment in Prisons*

Significant problems with drug use and alcoholism are ubiquitous in US prison populations.[7] US studies estimate that 60 to 83 percent of the nation's correctional population has used drugs at some point in their lives, twice the estimated drug use of the total US population (40 percent). Drug offenders accounted for 21 percent of the US state prison population in 1998 (up from six percent in 1980), 59 percent of the federal prison population in 1998 (up from 25 percent in 1980) and 26 percent of all jail inmates, mirroring the steady increase in arrests for drug offences over this period.

Women in US prisons are more likely than males to be involved in problematic drug use (62 percent versus 56 percent in the month before their offence) and more likely to have committed their offence under the influence of drugs or while engaging in petty theft or prostitution to get cash for drugs.

While the US has generally opposed substitution treatment in prison for those addicted to opiates, there is clear data on the benefits of such treatment globally.[8] Further, a programme recently instituted in Baltimore provided methadone maintenance for prisoners who were soon to be transferred to community-based methadone programmes at release. These

**Figure 3. Percentage of Adults Ever Incarcerated in State or Federal Prison, by year of birth and age[9]**




5 T. Loughran, E. P. Mulvey, C. A. Schubert, J. Fagan, S. H. Losoya and A. R. Piquero, 'Estimating a Dose-Response Relationship between Length of Stay and Future Recidivism in Serious Juvenile Offenders,' *Criminology* 47(3) (2009): 699-740. See also *Pathways to Desistence,* http://www.pathwaysstudy.pitt.edu/publications.html.

6 F. T. Cullen, C. L. Jonson and D. S. Nagin, 'Prisons Do Not Reduce Recidivism: The High Cost of Ignoring Science,' *The Prison Journal* 91(3) (2011).

7 Christopher J. Mumola and Jennifer C. Karberg, 'Drug Use and Dependence, State and Federal Prisoners, 2004,' *US DOJ, Bureau of Justice Statistics*, (Washington, DC, 2006).

8 E, Drucker, R. G. Newman, E Nadelmann, A. Wodak et al., 'Harm Reduction: New Drug Policies and Practices,' in *Substance Abuse: A Comprehensive Textbook,* Fifth Edition, ed. Pedro Ruiz and Eric Strain, (Williams and Wilkins, New York, 2011).

9 T. P. Bonczar and A. J. Beck, 'Lifetime likelihood of going to state or federal prison,' *US DOJ, Bureau of Justice Statistics* (Washington, DC, 1997).

prisoners had significantly better outcomes than a control population provided only counselling and passive referral after discharge. Results included more time spent in treatment during the twelve-month post-release period and far fewer positive urine tests for heroin and cocaine.[10]

However, because of hostility toward the use of methadone in correctional settings in the US (it is also barred in almost all drug courts), such programmes are rare. Accordingly, the first thing many released prisoners do on getting out is seek relief by injecting heroin – often with lethal results. Over 25 percent of drug fatalities due to overdose are now thought to stem from this phenomenon. Multiple studies have confirmed that overdose deaths among people who used heroin prior to incarceration are increased tenfold in the two weeks after release from prison, as compared to the usual overdose rate.[11]

Meanwhile, the failure to address addictions in the criminal justice system is the single most significant reason for re-arrest and recidivism once released.[12]

Internationally many other countries now also have large proportions of drug users in prison, but many now also offer a wide range of treatments (including methadone) to incarcerated drug users.[13] Many also have employed harm-reduction strategies to reduce HIV and Hepatitis C (HCV) transmission in prisons (e.g. methadone substitution treatment and access to clean injecting equipment) and now also seek to avoid imprisonment for those with addictions.[14]

> ‘There is now growing evidence that mass incarceration is contributing to the continued high incidence of HIV in the US, particularly among racial minorities.’

Most US prisons have been resistant to this approach. While there are many very dedicated peer drug counsellors in prisons, their efforts to rebuild self-esteem and equip inmates to deal with dependency and the high risk of relapse are often thwarted by anti-therapeutic environments dominated by punishment. There is little incentive to offer effective drug treatment in modern American prisons and most adopt a moralistic tone, depicting addiction as evidence of personal weakness. The treatment of drug addiction in US prisons has become an extension of the moral crusades of America’s ‘war on drugs’ – where legitimate questions of how best to minimise the harm from drugs are subordinated to the goals of zero tolerance – even for therapeutic drugs that soften the pains of withdrawal.

This result has been seen in the United Kingdom, Canada and Australia, which all have drug problems similar to that in the United States but incarceration rates of drug users that are only about one quarter of US rates. Opiate overdoses are thought to be due to the loss of tolerance associated with the greatly reduced use of opiates in prison. In the United States, the most significant reason for this can be found in the failure to treat opiate dependency adequately in prisons, for example, through methadone or buprenorphine substitution, which are known to be the most effective methods available to treat opiate addiction.[15] When there is drug treatment (consisting mostly of prisoners talking in groups), it is usually modelled after the drug-free therapeutic communities that philosophically dominate American drug treatment – generally to the exclusion of approaches that employ medications such as methadone or buprenorphine.

The high rate of drug incarcerations ensures that drug problems will be very common in prison populations worldwide. In the US, state correctional officials estimate that between 70 and 85 percent of inmates need some level of substance abuse treatment. But sustained, professional, supervised drug and alcohol treatment is currently available in fewer than half of federal, state and local adult detention facilities. Juvenile correctional facilities are also staffed to serve only a fraction of those who need treatment services. In approximately 7,600 correctional facilities surveyed, 172,851 inmates were in drug treatment programmes in 1997, less

10 M. S. Gordon, T. W. Kinlock, R. P. Schwartz and K. E. O’Grady, ‘A randomized clinical trial of methadone maintenance for prisoners: findings at 6 months post-release,’ *Addiction* 103(8) (2008): 1333–1342.

11 I. A. Binswanger, M. F. Stern and J. G. Elmore, ‘Mortality after Release from Prison,’ *New England Journal of Medicine* 356 (2007).

12 E. Drucker, ‘Prisons: From Punishment to Public Health,’ in *Oxford Textbook of Public Health*, Sixth Edition, ed. R. Detels, M. Gulliford, Q. A. Karim and C. C. Tan, (OUP, 2014).

13 United Nations Office on Drugs and Crime, ‘Drug Treatment and Rehabilitation in Prison Settings,’ (Vienna: UNODC, 2013), http://www.unodc.org/docs/treatment/111_PRISON.pdf.

14 Kate Dolan, Wayne Hall and Alex Wodak, ‘Methadone Maintenance Reduces Injecting in Prison,’ letter to the editor, BMJ 312(7039) (1996): 1162; Kate Dolan, Scott Rutter and Alex D. Wodak, ‘Prison-based syringe exchange programmes: a review of international research and development,’ *Addiction* 98 (2) (2003): 153–158.

15 Drucker et al., ‘Harm Reduction’.

than 11 percent of the inmate population and less than 20 percent of those with addiction histories.[16] While some state prison systems expanded drug treatment programmes in the 1990s, these have now been cut severely in most systems – for example, a 40 percent reduction in California in 2009 alone.[17]

The injection of heroin within correctional facilities persists worldwide despite vigorous attempts to deter. Although drug injecting inside these facilities is generally far less frequent than in the community, adverse consequences (including HIV infection) are well-documented.[18] While the use of methadone or buprenorphine maintenance for addiction treatment is prohibited in US state and federal prisons, a small number of local jails do offer brief detoxification programmes using these medications. In the past decade, some jail facilities have begun to offer methadone maintenance treatment as well.

A large-scale methadone maintenance treatment programme, serving two thousand patients per year, was established in New York City's Riker's Island Correctional Facility in the 1970s – operated by the Montefiore health service – the first jail programme to offer this treatment in the United States. This programme paved the way for several small pilot methadone programmes in prisons and jails in Maryland, Puerto Rico and New Mexico. But all face formidable struggles to maintain their modest gains in the face of widespread correctional hostility to this approach, despite the powerful evidence of its benefits elsewhere in the world. [19]

By contrast, as of January 2008, methadone maintenance has been implemented in prisons in at least 29 other countries or territories, with the proportion of prisoners in care ranging from less than one percent to over 14 percent. In Canada, prisoners have access to methadone maintenance throughout their incarceration and many heroin users are started on methadone during federal incarceration. Further, in Eastern Europe and Central Asia, some prisons now offer methadone maintenance or a short course of methadone-to-detoxification in some pretrial detention facilities.[20]

**Policy Implications**

Maintenance programmes have proven efficacy in treating drug addiction – particularly opiate dependency – but are not widely available in US prisons and remain under-resourced and underutilised in prison environments worldwide. Governments should drastically scale up their implementation and ensure supportive cultural and organisational changes are fostered.

*AIDS and Incarceration*

Due to its powerful linkages to injection drug use and sex work, the global HIV epidemic now directly implicates national criminal justice policies and imprisonment. Policies which involve large-scale arrests and the disproportionate incarceration of impoverished marginal populations drive HIV before them.[21] Case incidence patterns are shifting rapidly as HIV enters new human populations and selects new channels of transmission.

While sexual transmission remains the principal mode of transmission worldwide, injecting drug use continues to spread to new regions (most recently Sub-Saharan Africa) and remains a major vector of infection.[22] These factors are allied to increased imprisonment of these populations, particularly in those nations addressing burgeoning drug markets with harsh punitive criminal justice responses. Once again the US is an unhappy poster child for this modern plague and in 2008, the US Center for Disease Control (CDC) estimated that approximately 56,300 Americans are newly infected with HIV annually.[23]

There is now growing evidence that mass incarceration is contributing to the continued high incidence of HIV in the US, particularly among racial minorities. While constituting 12 percent of the US population, African Americans account for 45 percent of all new HIV diagnoses and have an incidence rate eight times that of whites.

For African American women, the magnitude is even more pronounced – their HIV rates are nearly 23 times the rate for white women. Discovering the causes of such dramatic disparities is crucial for efforts to control the epidemic. Research on HIV risk is now examining the social conditions and structure of this group's community networks, especially within African American populations. These data suggest a strong correlation between high incarceration rates and high HIV prevalence within many African American subpopulations and their communities.[24] Further, the US association of incarceration and the HIV epidemic is now very strong: between 17 and 25 percent of all people in the United States who are estimated to be infected with HIV disease will pass through a correctional facility each year, roughly 190,000 to 250,000 of the country's estimated total of 1 million HIV-positive individuals.[25]

16 Mumola and Karberg, 'Drug Use and Dependence'.
17 Michael Rothfeld, 'State to Eliminate 40% of Funding Designed to Turn Prisoners' Lives Around,' *Los Angeles Times*, October 17, 2009, http://articles.latimes.com/2009/oct/17/local/me-rehab17.
18 Drucker et al., 'Harm Reduction'.
19 Ibid.
20 Ibid.
21 P. Spiegel 'HIV/AIDS among Conflict-affected and Displaced Populations: Dispelling Myths and Taking Action,' *Disasters* 28(3) (2004): 322–339.
22 B. M. Mathers, L. Degenhardt, H. Ali et al., 'HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage,' *The Lancet,* 375(9719) (2010): 1014-1028.
23 H. Irene Hall et al., 'Estimation of HIV Incidence in the United States,' JAMA 300(5) (2008): 520-29.
24 Thomas A. Peterman, Catherine A. Lindsey and Richard M. Selik, 'This Place Is Killing Me: A Comparison of Counties Where the Incidence Rates of AIDS Increased the Most and the Least,' *Journal of Infectious Diseases* 191 (2005): 123-26.
25 Anne C. Spaulding, Ryan M. Seals, Matthew J. Page, Amanda K. Brzozowski, William Rhodes and Theodore M. Hammett, 'HIV/AIDS Among Inmates of and Releasees from US Correctional Facilities, 2006: Declining Share of Epidemic but Persistent Public Health Opportunity,' PLoS ONE 4(11) (2009): e7558.

The cost of care of HIV-infected inmates is a major issue in nations with high rates of HIV. Thus New York State (with over 53,000 prisoners in 2010) has about 1,700 HIV-infected inmates receiving medical care using antiretroviral drugs, at an annual cost of more than $25 million. But best estimates are that these 1,700 are only about one-third of those infected; most do not know they are infected and there is no routine testing. There is great need for testing programmes to identify infection and initiate treatment as early as possible – both for the individual's benefit and for reducing transmission risk in the broader communities.

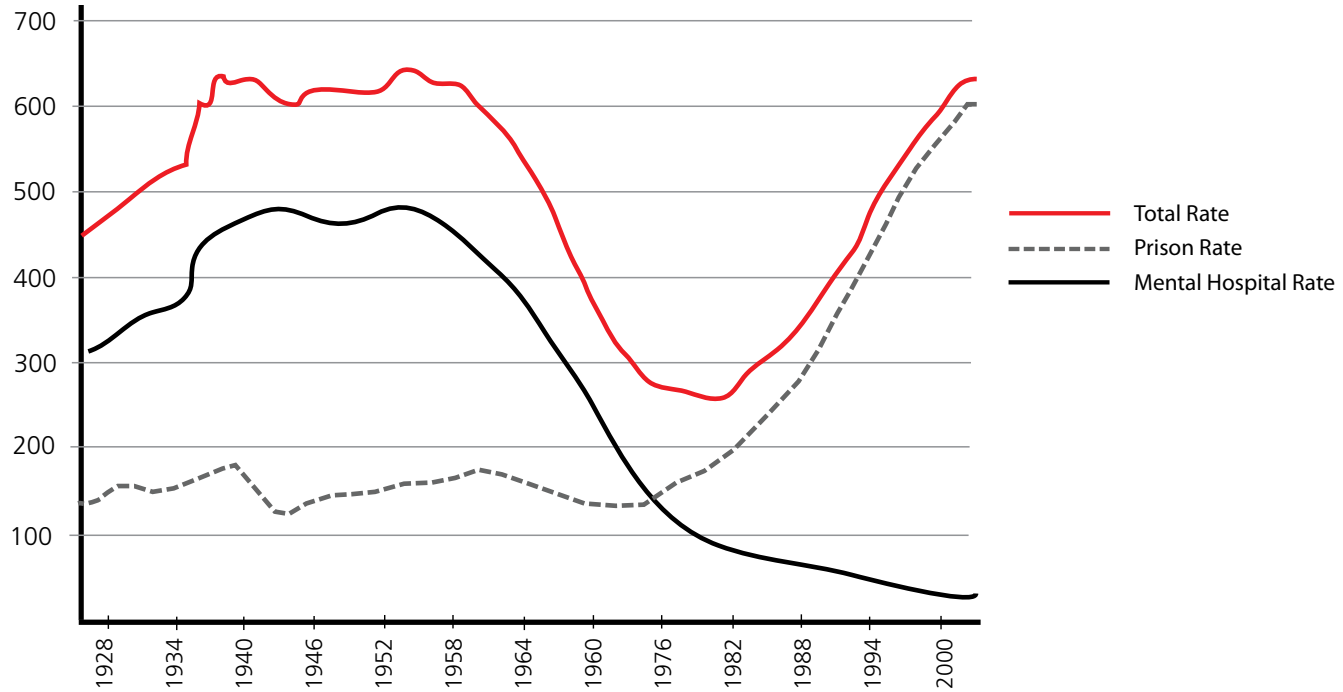
HIV rates among African Americans in New York state prisons are estimated at five to seven percent among men and seven to nine percent among women, and the risk appears to carry over to their sexual partners in their home communities.[26] Recent evidence also suggests that cyclical patterns of release and re-incarceration may foster instability in sexual and social networks. In conjunction with unstable housing, untreated drug addiction and recurrent imprisonment, a 'churn' in social networks occurs. These destabilising effects act within the social networks established in the prison feeder communities of many cities to produce increases in risk for HIV transmission both by sex and by drug use. This pattern of serial disruption spreads risk across these communities, with 'risk networks' extending to sexual partners of ex-prisoners, who may form a bridge to the surrounding population. This connection between the widespread incarceration of African American males and high rates of HIV in many urban communities dramatically demonstrates an important long-term community health impact of the criminal justice system.

## MENTAL HEALTH

Mental health problems represent another source of the mounting toll of lifelong disabilities that incarceration imposes. In the US, 400,000 to 600,000 prison inmates (15–20 percent of all prisoners) have a major acute or chronic psychiatric disorder. In addition to failing to treat many pre-existing mental health problems, incarceration itself, and especially new practices of isolation and solitary confinement, often create new mental health issues that handicap individuals long past the end of their prison sentences.[28]

Following the US 'deinstitutionalisation' from psychiatric hospitals for the chronically mentally ill (from the 1950s through the 1970s), the criminal justice system became the default response for these former hospital patients – most dramatically among the poor and homeless (see Figure 4). Chicago political scientist Bernard Harcourt notes that a growing number of individuals 'who used to be tracked for mental health treatment are now

**Figure 4. Institutionalisation in the United States (per 100,000 adults)[27]**




26 Adaora A. Adimora and Victor J. Schoenbach, 'Social Context, Sexual Networks, and Racial Disparities in Rates of Sexually Transmitted Infections,' *Journal of Infectious Diseases* 191 (2005): 115-22.

27 Source: Harcourt http://www.law.uchicago.edu/files/files/institutionalized-final.pdf

28 Atul Gawande, 'Hellhole,' *New Yorker*, March 30, 2009; Jeffrey L. Metzner and Jamie Fellner, 'Solitary Confinement and Mental Illness in U.S. Prisons: A Challenge for Medical Ethics,' *Journal of the American Academy of Psychiatry and the Law* 38(1) (2010).

getting a one-way ticket to jail.'[29] A US Justice Department study released in September 2006, found that 56 percent of those in state prisons (and a higher proportion of those in local jails) reported mental health problems within the past year.[30] Harcourt writes that, 'over the past 40 years, the United States dismantled a colossal mental health complex and rebuilt – bed by bed – an enormous prison'. [31] However there is a growing movement in the US and elsewhere to establish mental health courts to deflect these cases (often with dual diagnosis of substance abuse) to alternatives to prisons, with some positive results now being seen.[32] But this system is also very limited due to severe shortages of properly trained and supervised mental health personnel and inadequate budgets.

## MINIMISING THE PROBLEMS OF INCARCERATION

A number of trends in US mass incarceration are important to consider in any prescriptive approach to policy in other countries and serve as a guide to those prison and incarceration policies for drugs offences that can be extrapolated across borders so other countries don't make the same mistakes.

*Punitive Isolation and Solitary Confinement*

The United States, with only five percent of the world's population (and 25 percent of its prisoners) now has over half of all the world's prisoners who are in long-term solitary confinement. More than 25,000 inmates are permanently in isolation in US 'supermax' prisons (short for 'super-maximum security'), where they may spend years locked in small, often windowless cells with solid steel doors, let out for showers and solitary exercise in a small, enclosed space once or twice each week. A report by Human Rights Watch found that supermax prisoners have almost no access to educational or recreational activities and are usually handcuffed, shackled and escorted by two or three correctional officers every time they leave their cells.[33] Supermax prisons were ostensibly designed to house the most violent or dangerous inmates – 'the worst of the worst'.

In the US the trend toward more long-term solitary confinement is inseparable from the explosive growth of mass incarceration. In 2009, Harvard surgeon Atul Gawande published a startling article about the use of solitary confinement in American prisons, noting that in the US '[t]he wide-scale use of isolation is, almost exclusively, a phenomenon of the past twenty years'.[34] Indeed, sustained isolation has now become institutionalised as a cornerstone of America's criminal justice system and its requirement for extreme sanctions to handle the huge population of prisoners.

*Women and Prisons*

Women's healthcare needs, always more prominent than those of young males, are also typically inadequately addressed in prisons. In addition to facing all the routine gynaecological, reproductive and nutritional issues of all women, the overwhelming majority of women in prisons are survivors of violence and trauma.[35] Further, more than 60 percent of incarcerated women are parents, who must deal with separation from their children and families, along with depression, anxiety and low self-esteem. Not surprisingly, incarcerated women suffer from serious mental illnesses at much higher rates than male inmates.

In the US over the last 25 years the number of women and girls caught in the criminal justice system has risen dramatically – with more than 200,000 women behind bars and more than 1 million on probation and parole. The percentage of women behind bars increased by 757 percent between 1977 and 2004, twice the increase of the incarcerated male population during the same period. The number of women in prison – along with the number of women giving birth in prison – continues to rise each year. Few get the services they need. Notably, despite the persistence of racial disparities, white women are the now among the US groups with the fastest growth rate in US prison systems**.** The increased incarceration of women for drug offences has, in some states, also served as a proxy for efforts to ban abortions.[36]

29 Bernard E. Harcourt, 'Cruel and Unusual Punishment,' in *Encyclopedia of the American Constitution*, Supplement II, ed. Leonard Levy, Kenneth Karst and Adam Winkler (New York: Macmillan, 2000); Bernard E. Harcourt, 'The Mentally Ill, Behind Bars,' *New York Times*, January 15 , 2007, http://www.nytimes.com/2007/01/15/opinion/15harcourt.html?_r=0.

30 D. J. James and L.E. Glaze, 'Mental Health Problems of Prison and Jail Inmates,' US DOJ, *Bureau of Justice Statistics* (Washington, DC, 2006), http://www.bjs.gov/content/pub/pdf/mhppji.pdf.

31 Harcourt, 'The Mentally Ill, Behind Bars'.

32 V.A. Hiday, H. W. Wales and B. Ray, 'Effectiveness of a Short-Term Mental Health Court: Criminal Recidivism One Year Postexit,' *Law and Human Behavior* (2013).

33 *Supermax Prisons: An Overview* (Human Rights Watch Report, 2000), http://www.hrw.org/reports/2000/supermax/Sprmx002.htm.

34 Gawande, 'Hellhole'.

35 Diane C. Hatton and Anastasia A. Fisher, eds. *Women Prisoners and Health Justice: Perspectives, Issues, and Advocacy for an International Hidden Population* (Oxford: Radcliffe, 2009); Pamela M. Diamond et al., 'The Prevalence of Mental Illness in Prison,' *Administration and Policy in Mental Health and Mental Health Services Research* 29 (1) (2001).

36 Lynn M. Paltrow, '*Roe v Wade* and the New Jane Crow: Reproductive Rights in the Age of Mass Incarceration,' *American Journal of Public Health* 103(1) (2013): 17-21.

*The Privatisation of Correctional Services*

The use of privately contracted security corporations is growing worldwide.[37] The UK was Europe's first country to establish prisons run by the private sector (Wolds Prison opened in 1992) under the government's Private Finance Initiative contracts.[38] There are now 14 prisons in England and Wales operated under contract by private companies with a total combined capacity of about 13,500 prisoners or approximately 15 percent of the entire prison population. There are also two privately run prisons in Scotland and nine contracts to run private prisons are currently under consideration in England and Wales.

The US led the movement to employ private firms to operate state prisons and, with the world's largest prison system, now leads in the proportion of its facilities contracted to private firms. While 50 percent of the US state prison systems (with a total of 1.2 million inmates) currently use no privately-operated prison services, the 25 states that do now rely on private services for over 25 percent of their operations are located mainly in Southern and Western states. As of December 2000, there were 153 private correctional facilities operating in the US with a capacity of over 119,000.[39] Prison privatisation is an aggressively entrepreneurial business – working to increase its market and buying entire prisons from cash-strapped states in exchange for 20-year management contracts and a guaranteed occupancy rate of 90 percent. Critics argue that the contractual obligations of states to fill the prisons to 90 percent occupancy are poor public policy and end up costing taxpayers more than state-run prisons would.[40]

## CONCLUSION

The rapid rise in incarceration in the US and several other countries from the 1970s through the 2000s has often been driven by the incarceration of drug users. As discussed above, these policies have had very broad effects. They have impacted those imprisoned but also their families and communities. The expansive reach of 'mass incarceration' and its collateral effects has been accompanied in many cities by increased contact between citizens and law enforcement, increases in the time and financial impositions on individuals awaiting trial, a decline in the quality of correctional health care and a reduction in available services for formerly incarcerated individuals. These complex and inter-related patterns show the ways in which imprisonment, human rights and public health are now intimately related. With their growing concentration of vulnerable populations and their relationship to drug markets, immigration, human trafficking, border security and global pandemics associated with sex and drugs (HIV), the international public health significance of criminal justice systems and prisons grows apace.

This examination of prisons through the lens of public health has documented the long- and short-term implications of criminal justice involvement, particularly incarceration, for public safety as well as their economic, social and health effects on society.[41] With this new public health basis of concern, there is renewed professional interest in the possibilities for families, schools and neighborhood institutions to divert individuals from criminal offending, recidivism and the continued risks of jail and prison. The fiscal burdens of incarceration in the US and elsewhere have also animated new efforts to develop and strengthen community-based sanctions as alternatives to custodial ones. These challenges, their individual and collective effects and their concentration within the most vulnerable racial and ethnic minority communities in many nations have motivated an intense re-examination of the 'carceral continuum,' now viewed across the multiple domains of public health, health care and social services. [42] Most recently, there is renewed interest in sweeping reform of drug criminalisation and ending the continued criminalisation of drug users – including developing programmes of general amnesties for prisoners of the drug wars.[43] ■

37 http://www.justice.gov.uk/publications/corporate-reports

38 Alan Travis, 'Nine prisons put up for tender in mass privatisation programme,' The Guardian, July 13, 2011, http://www.theguardian.com/society/2011/jul/13/nine-prisons-tender-privatisation-programme.

39 American Civil Liberties Union Report : *Banking on Bondage: Private Prisons and Mass Incarceration*, November 2, 2011, https://www.aclu.org/prisoners-rights/banking-bondage-private-prisons-and-mass-incarceration

40 Chris Kirkham 'With States Facing Shortfalls, Private Corporation Offers Cash For Prisons,' *Huffington Post*, February 14, 2012, http://www.huffingtonpost.com/2012/02/14/private-prisons-buying-state-prisons_n_1272143.html; 2012 Solicitation letter from CCA http://big.assets.huffingtonpost.com/ccaletter.pdf

41 Ernest Drucker, 'Prisons: From Punishment to Public Health' in *Oxford Textbook of Public Health*, 6th Edition, 2014.

42 C. Shedd, 'Countering the carceral continuum. The legacy of mass incarceration,' *Criminology and Public Policy - Special Issue on Mass Incarceration* 10 (3) (2011): 865–871.

43 E. Drucker and M. Trace, 'An Amnesty for Prisoners of the War on Drugs,' *Huffington Post*, September 22, 2013, http://www.huffingtonpost.com/ernest-drucker/an-amnesty-for-prisoners-_b_3957493.html.

# Costs and Benefits of Drug-Related Health Services

Joanne Csete

**Health services for people who use drugs are important on many levels. In addition to the clinical benefits to the individual and the benefit to the community of reducing drug-related harms such as HIV and drug-related crime, they represent an alternative to arrest and detention for some offenses and thus are a possible starting point for developing less repressive drug policies. In spite of a significant body of evidence that drug-related health services are a very good investment for society, they remain woefully underfunded and unavailable.**

**Summary**

- Governments should ensure that health services for people who use drugs (at adequate scale) are a priority for public resource allocation. These services currently have a very low availability relative to need.
- Governments should develop standards and monitoring systems to ensure good-quality health services for people who use drugs in both public and private sector facilities. Further, they should not impede those services.
- Governments should ensure that police do not interfere with health service provision. They should, for example, not use numbers of arrests of drug users as a basis for police compensation or performance review. Police, prosecutors and judges should be trained on the importance of basic health services for people who use drugs.
- Governments may find it useful to invest in benefit-cost studies of these services and should inform the public and legislators in user-friendly ways of their benefits.
- In multilateral bodies, health services for people who use drugs are in dire need of member state champions. United Nations agencies, especially WHO and UNAIDS, have commissioned research and made statements in support of most of these services, but international debates remain dominated by positions based on fear and ideology rather than evidence.

The policy approach to drug control in most countries features heavy spending on policing, interdiction of drugs, judicial processes and incarceration. In the United States, for example, it is estimated that about $50 billion a year from state and federal budgets goes to drug control, of which the majority is devoted to law enforcement and interdiction.[1] One estimate of drug-related law enforcement expenses globally puts the figure at about $100 billion per year.[2] Drug-related health and social services are nonetheless often underfunded and inadequate to meet the need. Treatment for drug dependence, for example, is frequently inaccessible or unaffordable to people who need it, and this service may not exist without (often grudging) public sector support. Millions of people who need them are without services to protect themselves from injection-related harms, such as provision of sterile injecting equipment and medicines, such as methadone, that stabilise cravings and do not require injection.[3]

Good-quality treatment for drug dependence and drug-related harm reduction services have been widely studied and can be life-saving for those fortunate enough to have access to them. The clinical evidence for effectiveness of these measures, particularly with respect to outcomes such as averting HIV or hepatitis C transmission, is very strong. The purpose of this contribution is to review the evidence that they also have a larger economic and social value – that is, to assess their costs and benefits in a broad sense, including with respect to social outcomes such as crime reduction.

1 See US Office of National Drug Control Policy, 'The National Drug Control Budget FY 2103 Funding Highlights' and Drug Policy Alliance, 'The Federal Drug Control Budget: New Rhetoric, Same Failed Drug War,' 2013, http://www.drugpolicy.org/sites/default/files/DPA_Fact%20Sheet_Federal%20Drug%20War%20Budget.pdf

2 Count the Costs, 'The war on drugs: Wasting billions and undermining economies,' http://www.countthecosts.org/sites/default/files/Economics-briefing.pdf.

3 Bradley Mathers, Louisa Degenhardt, Hammad Ali, Lucas Wiessing et al., 'HIV prevention, treatment and care services for people who inject drugs: a systematic review of global, regional and national coverage,' *Lancet* 375 (2010): 1014-1028.

## BASIC IDEAS: COST OF DRUG USE AND PROMISE OF TREATMENT

Not all drug use is problematic, and thus not all drug use requires a health service response. The most recent annual report of the UN Office on Drugs and Crime (UNODC) uses the rough estimate that globally 167 to 315 million persons aged 15-64 used illicit substances.[4] The large range of the estimate reflects the paucity of countries with population-based surveys that would allow more precise estimates and the fact that people who use drugs are highly criminalised in many places and thus may be hidden from surveys. UNODC defines 'problem drug use' to include people who inject drugs and people who are diagnosed with drug dependence or other drug-related disorders. It estimated that in 2011 there were 16 to 29 million persons whose drug use was problematic, less than 10 percent of the total of people who use drugs.[5] Thus, part of the challenge of drug-related health services is to target those most in need of services and ensure that the services are effective and readily accessible. (A corresponding challenge of economic importance is to ensure that people who use drugs but do not have problematic use are not obliged or otherwise directed into services that they do not need.)

Treatment for drug addiction takes many forms – residential and non-residential, assisted by medications such as methadone or not, '12-step' programmes and other group support approaches, behavioural and cognitive therapies, and many others. It is plain from clinical experience, as noted by the World Health Organization (WHO) and UNODC, that while all of these have some record of success for some people, none is effective 100 percent of the time.[6] It is common for people with drug dependence, if they have varied services available to them, to attempt several forms of therapy before finding the one that succeeds for them, whether 'success' is judged as complete abstinence or less problematic drug use. There is also evidence from many settings to suggest, not surprisingly, that drug treatment combined with support in the form of stable housing, food assistance and support to family members has the greatest chance of success.[7] Based on evidence to date, it is safe to say that drug treatment (combined or not with some form of social support) can reduce problematic drug consumption and thus the costs associated with it, and we take that as a point of departure in this contribution.

Cost-benefit analysis – comparison of the cost of an intervention or programme to a monetary estimate of its benefit – is an essential tool for evaluation of health interventions. (The technique of cost-benefit analysis produces results usually expressed as benefit-cost ratios – that is, an estimate of the benefits derived divided by the cost incurred. Positive net benefits are indicated by benefit-cost ratios greater than one.) It is important to assess costs and benefits of treatment of drug dependence, not least because many of the people needing this intervention are reliant on publicly supported treatment, thereby making it particularly susceptible to political controversy.[8] While many studies demonstrate the clinical benefit to the individual of various forms of treatment for drug dependence, consideration of social and economic costs has generated a smaller literature. Indeed, the multifaceted nature of the costs of drug dependence and benefits of reducing it pose considerable methodological challenges, a full treatment of which is beyond the scope of this contribution. For our purposes, it is useful to note that WHO, recognising these challenges, has established guidelines suggesting that quantifying the economic impact of drug use on society should include assigning monetary value to the following costs:

**WHO: 'Tangible' elements of economic impact of problematic drug use**

- Health, social and welfare services (i.e. reduced drug dependence should result in a lower burden of health and social services related to drug dependence).
- Productivity loss in the workplace and the home.
- Drug-related crime, law enforcement and criminal justice.
- Road accidents.
- Cleaning up the environment (e.g. of unsafely discarded injection equipment).
- Research and prevention activities.[9]

These are the categories of 'tangible' cost; loss of life, pain and suffering are noted by WHO as intangible costs. WHO's guidelines then seek to consider the various measurement challenges, necessary simplifying assumptions and other elements of putting cost figures on the tangible items in an effort to enable national governments to make estimates that will be comparable to some degree.

For some of these items, methodological debates will possibly never be completely settled. Quantifying crime-related costs, for example, includes obvious criminal justice activities, including incarceration (though drug-related activities may not always be distinguished); costs of drug-related crime to individuals, including material loss and loss of time and productivity; and the 'esoteric and ephemeral' costs to the legitimate economy of the human resources represented by people who are involved with drug trafficking or other drug-related crimes.[10] It is recognised that for many of these elements, there will not be good data

4 UN Office on Drugs and Crime, *World Drug Report 2013* (Vienna: United Nations, 2013), appended fact sheet, http://www.unodc.org/doc/wdr/Fact_Sheet_Chp1_2013.pdf
5 Ibid.
6 WHO and UNODC, 'Principles of drug dependence treatment: discussion paper.' (Vienna: United Nations, 2008), https://www.unodc.org/documents/drug-treatment/UNODC-WHO-Principles-of-Drug-Dependence-Treatment-March08.pdf.
7 Ibid.
8 Susan L. Ettner, David Huang, Elizabeth Evans, Danielle Rose Ash et al., 'Cost-benefit in the California Treatment Outcome Project: does substance abuse treatment 'pay for itself?,' *Health Research and Educational Trust* 41 (2005):193-194.
9 Eric Single et al., *International guidelines for estimating the costs of substance abuse*, 2nd ed. (Geneva: World Health Organization, 2004).
10 Single et al., 59-62.

in even the best-organised jurisdictions, and simplifying assumptions will be necessary. In addition, WHO experts note that many drug-related crimes, particularly assaults and thefts, are habitually under-reported by victims and thus not captured in official data.[11] Ideally, moreover, these factors should be studied over a long period, which is rarely possible in practice.

## METHODS

This contribution benefits from a number of careful reviews of cost-benefit and cost-effectiveness studies of health services for people who use drugs, particularly of treatment for drug dependence, which were complemented with an updated search of cost-benefit and cost-effectiveness studies of drug-related health services.[12]

## COSTS AND BENEFITS OF TREATMENT OF DRUG DEPENDENCE

An important review of 11 cost-benefit analyses published before 2003, all of them conducted in the United States, included only published peer-reviewed studies that attempted cost-benefit analyses of one of more of these factors: crime, health services utilisation, employment earnings and expenditure on illicit drugs and alcohol.[13] The authors note, in sum:

- The average total net benefit accruing from all categories of cost reductions estimated over the 12-month period was $42,905. The average benefit-cost ratio for studies in which it was calculated was 8.9, ranging from 1.33 to 23.33.
- The greatest economic benefit was in reduced criminal activity, over half of the total.
- The economic benefit of savings on health services averted was about 15 percent of the total, and of increased employment earnings was about 13 percent. The authors note that the latter, measured only as actual in-pocket earnings, probably underestimates the importance of having any kind of stable employment as a determinant of long-term 'success'.[14]

Since that review, there have been a number of interesting attempts to estimate social costs and benefits of treatment. Using data from 43 treatment facilities in the state of California supplemented by surveys, Ettner and colleagues used WHO guidelines to assess the benefits of treatment with respect to medical care, criminal activity, earnings of people treated and welfare programme (government transfer) payments.[15] Their finding was that treatment cost an average $1,583 per person but benefited society at the level of $11,487, a 7:1 ratio.[16] As in the earlier review, the authors estimate that the greatest savings – 65 percent – were in lower crime-related costs, with 29 percent attributable to increased earnings and six percent due to reduced medical costs. They suggest that the actual benefit-cost ratio is probably closer to 9:1 because of the use of arrests as a proxy for crime, given that many crimes do not ever result in an arrest.[17]

A study that focused narrowly on costs related only to robbery looked at several forms of treatment for drug dependence in the United States.[18] Across all forms of treatment, being in treatment was associated with a reduction in robbery incidence of at least 0.4 robberies per patient per year. The authors conclude: 'Given reasonable valuations associated with averting, at the margin, a single armed robbery, this one component of benefit may be large enough to offset the economic costs' of drug treatment.[19] They further note that while residential treatment is generally considerably more expensive than outpatient care, the greater benefit of residential programmes in averting crime may 'more than offset' the added cost.[20] Policymakers and service providers alike may tend to favour support for drug treatment programmes that admit older, more educated patients with no criminal record and no psychiatric disorders, but the results of this study suggest that much greater social benefits would derive from expanding treatment access for those patients with a propensity to commit crimes.[21]

11 Ibid., 60-61.
12 Kathryn E. McCollister and Michael T. French. 'The relative contribution of outcome domains in the total economic benefit of addiction interventions: a review of first findings,' *Addiction* 98 (2003): 1647-1659; Louisa Degenhardt, Bradley Mathers, Peter Vickerman, Tim Rhodes et al. 'Prevention of HIV infection for people who inject drugs: why individual, structural and combination approaches are needed,' *Lancet* DOI:10.1016/S0140-6736(10)60742-8; Daniel Wolfe, M. Patrizia Carrieri and Donald Shepard, 'Treatment and care for injecting drug users with HIV infection: a review of barriers and ways forward,' *Lancet* DOI:10.1016/S0140-6736(10)60832-X; Center for Health Program Development and Management, 'Review of cost-benefit and cost-effectiveness literature for methadone or buprenorphine as a treatment for opiate addiction,' Baltimore, 9 May, 2007.
13 McCollister and French, op. cit.
14 Ibid., 1655.
15 Ettner et al., 196.
16 Ibid., 205.
17 Ibid., 204, 206.
18 Anirban Basu, A. David Paltiel and Harold A. Pollack, 'Social costs of robbery and the cost-effectiveness of substance abuse treatment,' *Health Economics* (2008): 927-946.
19 Ibid., 939.
20 Ibid., 939-940.
21 Ibid., 940.

*Opioid Substitution Therapy (OST)*

In part because of its link to HIV prevention and its long clinical track record, one of the most widely studied forms of treatment for drug dependence is medication-assisted therapy for opiate addiction, also called opioid maintenance treatment or opioid substitution treatment (OST hereinafter). Opium-derived medicines, especially methadone and buprenorphine, can be administered daily by mouth – thus obviating injection – and can stabilise cravings of people with opiate dependence. As UN agencies have noted, this therapy can enable people to hold jobs and eliminate the need to commit crimes to obtain illicit opiates, as well as reducing heroin use, heroin overdose, overdose mortality and reducing other injection-related harms.[22] UN agencies have promoted OST as a central element of HIV prevention where illicit opiate use is significant because OST 'can decrease the high cost of opioid dependence to individuals, their families and society at large by reducing heroin use, associated deaths, HIV risk behaviours and criminal activity'.[23] They also note that it may be optimal for some patients to continue OST indefinitely,[24] a response to the misinformed but still widely held view that methadone therapy should always be of limited duration as a bridge to abstinence from all opiates.[25]

OST is limited and stigmatised in many countries and banned outright in a few (notably the Russian Federation).[26] In spite of OST's track record of successful treatment of heroin addiction that dates from the late 1960s, some practitioners and policymakers deride it as substituting one addiction for another. The potential for diversion of methadone and buprenorphine to illicit markets also means that their medical use must be carefully controlled and the costs of that control figured into assessments. In many countries, including the US, the administration of methadone must be directly observed – that is, patients must come to a health facility every day and take their medicine in front of a health professional – an enormous inconvenience to the patient and a practice with considerable other costs. Buprenorphine, particularly in a formulation in which it is combined with the opioid antagonist naloxone, is considered to have a lower potential for diversion to illicit use, and in many places it is possible to receive take-home doses rather than requiring daily direct observation.

> '...for every one dollar invested in NSPs (2000-2009), $27 is returned in cost savings. This return increases considerably over a longer time horizon.'

Because drug injection is associated with high risk of transmission of HIV, a very expensive disease to treat, some cost-benefit studies of OST count benefits mainly in savings from HIV cases averted. In spite of hard-won victories in lowering the cost of HIV treatment, HIV remains quite expensive to treat.[27] In addition, HIV transmission through injection with contaminated equipment is much more efficient than sexual transmission; even a very small number of injections poses a high risk.[28] Given the high cost of HIV treatment, as some experts have noted, OST expansion carries a benefit so substantial as to be self-justifying 'regardless of what assumptions are made about the effect of opiate dependence or methadone prescription on the quality of life'.[29] Reviewing the research on OST in 2004, WHO, UNAIDS and UNODC summarised it as follows:

> *According to several conservative estimates, every dollar invested in opioid dependence treatment programmes may yield a return of between $4 and $7 in reduced drug-related crime, criminal justice costs and theft alone. When savings related to health care are included, total savings can exceed costs by a ratio of 12:1.*[30]

Most studies of the cost and benefit of OST have been undertaken in countries of the global North. Recently, however, a number of studies from Asia have made cost-benefit calculations of OST, though generally only of benefits related to averting cases of HIV. A 2012 study in Dehong (Yunnan), China estimated that against a per-patient cost of OST of $9.10-16.70 per month over the 30-month period followed, methadone programmes averted HIV cases of which the cost would have been a net $4600 per

22 World Health Organization, UN Office on Drugs and Crime and UNAIDS (UN Joint Programme on HIV/AIDS), 'WHO/UNODC/UNAIDS position paper: Substitution maintenance therapy in the management of opioid dependence and HIV/AIDS prevention,' Geneva, 2004, http://www.unodc.org/documents/hiv-aids/Position%20Paper%20sub.%20maint.%20therapy.pdf

23 Ibid., 1.

24 Ibid.

25 See, for example, Charles Winick, 'A mandatory short-term methadone-to-abstinence program in New York City,' *Mount Sinai Journal of Medicine* 68(2001): 41-45; the Manhattan and Brooklyn drug treatment courts in New York City as of 2013 require participants to use methadone only as a short-term bridge to abstinence.

26 Mathers et al., op.cit.

27 HIV treatment costs vary considerably based on the percentage of patients who may have developed resistance or intolerable side effects to generic first-line medicines, as well as whether countries have access to generic forms of some medicines. The cost of a WHO-recommended first-line regimen was about $112 per patient per year in 2012. Second-line regimens cost on average about $450 per person per year in 2012, but much more in the US and other high-income countries. The cost of third-line treatments was $13,225 per person per year in Georgia, $7,782 in Paraguay, $8,468 in Armenia, and $4,760 in Thailand. See World Health Organization, 'Global update on HIV treatment 2013: results, impacts and opportunities,' Geneva, United Nations, 99-100, http://apps.who.int/iris/bitstream/10665/85326/1/9789241505734_eng.pdf.

28 One review of the research indicates that HIV risk from one episode of vaginal (male-female) sex is as low as 0.05 percent (or 1 in 2000) while injection with contaminated equipment carries a risk of about 0.7 percent or 0.8 percent. Government of Canada, Public Health Agency, 'HIV transmission risk: a summary of evidence,' Ottawa, 2013, http://www.phac-aspc.gc.ca/aids-sida/publication/hivtr-rtvih-eng.php.

29 Paul G. Barnett and Sally S. Hui, 'The cost-effectiveness of methadone maintenance,' *Mount Sinai Journal of Medicine* 67 (2000): 371.

30 World Health Organization, Joint UN Programme on HIV/AIDS (UNAIDS) and UN Office on Drugs and Crime. 'Position Paper: Substitution Maintenance Therapy in the Management of Opioid Dependence and HIV Prevention,' Geneva, United Nations, 2004.

case to treat.[31] A similar study over a five-year period estimated that OST programmes in the Xinjiang, China averted over 5600 HIV infections that would have incurred a cost to the health system of over $4.4 million in the same period.[32] These studies obviously rely on assumptions about risks of HIV transmission faced by people who inject drugs, mostly extrapolations from previous periods. They notably did not calculate the costs of sexual transmission of HIV to people who do not inject drugs and so probably underestimate the benefits accrued.

A special category of treatment of drug dependence is the legal administration of medicinal heroin available in a few countries, generally only for small numbers of people with long-standing addictions who, for various reasons, have not benefited from other therapies. A review of evaluations of heroin-assisted treatment in Switzerland, Germany, the Netherlands, Spain, Canada and the UK concluded that these programmes have generally demonstrated considerable benefits through the reduction of criminal activities among these patients, decline in use of illicitly obtained drugs and decline in risky injection.[33] One study of the Swiss experience indicated that the incidence of the crimes of burglary, muggings and drug trafficking declined between 50 to 90 percent among people in the prescription heroin programme, depending on the crime, but did not attempt to assign costs to this reduction.[34] It is not expected that this intervention would ever be offered on a mass scale, but it illustrates the principle of achieving significant benefits by reaching those associated with the most problematic use.

## OTHER SERVICES FOR PEOPLE WHO USE DRUGS

*Needle and Syringe Programmes (NSPs)*

Programmes that furnish clean injection equipment to people who inject drugs are proven to be extremely effective with respect to prevention of HIV. The review commissioned by WHO of the extensive research on this subject shows, in fact, that these programmes, most often established as needle exchanges (whereby used injection equipment can be exchanged for sterile equipment), are among the most effective and cost-effective programmes in the HIV prevention arsenal.[35] These programmes should not be expected to have the range of potential social benefits that are associated with treatment of drug dependence since they do not necessarily reduce drug use or addiction, though they may present important opportunities for referral to treatment services and other social support – an element that has not been extensively evaluated economically in the published literature.

A 2010 review of cost studies – mostly cost-effectiveness rather than cost-benefit – concluded that if averting HIV cases could be demonstrated, as they were convincingly in a number of studies, the benefit-cost ratio of these programmes should be expected to be very high because the programmes tend to cost little, and HIV care is expensive.[36] A widely cited study by the government of Australia drew the following conclusion about these programmes across the country:

> As of 2012, there were about 500 overdose episodes that occurred among people using Insite but no deaths, whereas the neighbourhood of Insite was previously known for frequent overdose-related incidents and deaths on the street.

> *For every one dollar invested in NSPs, more than four dollars were returned (additional to the investment) in healthcare cost-savings in the short term (10 years) if only direct costs are included; greater returns are expected over longer time horizons….If patient/client costs and productivity gains and losses are included in the analysis, then…for every one dollar invested in NSPs (2000-2009), $27 is returned in cost savings. This return increases considerably over a longer time horizon.*[37]

As noted above, NSP programmes reach people who are actively injecting and who are more likely than non-injectors to have drug-related health problems, and NSP staff can provide a link to other health services and counselling. A 2010 review in *The Lancet* concluded that if the desired outcome is HIV control, the greatest cost-effectiveness and benefit-cost will be achieved by high coverage of both these interventions in combination with high coverage of HIV treatment, even though the last element

31 Yan Xing, Jiangping Sun, Weihua Cao, Liming Lee et al., 'Economic evaluation of methadone maintenance treatment in HIV/AIDS control among injection drug users in Dehong, China,' *AIDS Care* 24 (2012): 756-762.
32 Mingjian J. Ni, Li Ping Fu, Xue Ling Chen et al., 'Net financial benefits of averting HIV infections among people who inject drugs in Urumqi, Xinjiang, People's Republic of China (2005-2010),' *BMC Public Health* 2012, 12:572, http://www.biomedcentral.com/1471-2458/12/572.
33 Benedikt Fischer, Eugenia Oviedo-Joekes, Peter Blanken, Christian Haasen et al., 'Heroin-assisted treatment (HAT) a decade later: a brief update on science and politics,' *Journal of Urban Health* 84 (2007): 552-562.
34 Martin Killias, Marcel F. Aebi and Denis Ribeaud, 'Key findings concerning the effects of heroin prescription on crime,' in *Heroin-assisted treatment: work in progress* eds. Margret Rihs-Middel, Robert Hämmig and Nina Jacobshagen (Bern: Verlag Hans Huber, 2005).
35 Alex Wodak and Annie Cooney, 'Effectiveness of sterile needle and syringe programming in reducing HIV/AIDS among injection drug users – Evidence for Action Technical Paper,' Geneva, World Health Organization, 2004, http://whqlibdoc.who.int/publications/2004/9241591641.pdf
36 Degenhardt et al., 35-36.
37 Government of Australia, National Centre in HIV Epidemiology and Clinical Research' 'Return on investment 2: evaluating the cost-effectiveness of needle and syringe programs in Australia,' 2009, http://www.health.gov.au/internet/main/publishing.nsf/Content/C562D0E860733E9FCA257648000215C5/$File/retexe.pdf.
38 Degenhardt et al., 30.

is very costly in most places.[38] The authors bemoan the low availability of all these services for many people who use drugs, which is linked to the stigma they face and their fear of using services that may result in their drug use being brought to the attention of the police.[39]

Needle and syringe programmes may yield particularly high returns in prison settings. Countries including Germany, Switzerland, Spain, Moldova, Belarus, Luxembourg, Romania and Kyrgyzstan have programmes that furnish clean injection equipment in prison,[40] an intervention that requires the politically courageous recognition that in spite of even the best efforts to stop it, drug injection occurs in prisons. All of those programmes studied have had dramatic results in reducing transmission of HIV and in some cases hepatitis C, though benefit-cost ratios have not been calculated.[41] Since treating HIV among prisoners is the responsibility of the state and could be a long-term responsibility, the cost savings from HIV and hepatitis cases averted are likely to be considerable. OST is offered in prison in some countries, where it has an excellent track record (directly observed administration is facilitated by the prison environment), but many countries that offer OST in the broader community still do not offer it in prisons.[42]

*Supervised Injection Facilities*

Some countries committed to comprehensive HIV services for people who use drugs also authorise so-called supervised or safe injection facilities, places where people can inject illicit drugs with clean equipment in the presence of health professionals. These facilities exist in many western European countries – Germany, the Netherlands and Switzerland were pioneers – as well as Canada and Australia.[43] The facility in Vancouver, Canada, called Insite, has been extensively studied by public health and social science researchers. As of 2012, there were about 500 overdose episodes that occurred among people using Insite but no deaths,[44] whereas the neighbourhood of Insite was previously known for frequent overdose-related incidents and deaths on the street. In addition, a 2011 study found that not only was overdose mortality averted in the facility itself, but in a 500-metre radius of Insite, overdose episodes dropped by 35 percent in the first years of the facility's operation, compared to a nine percent decline in the rest of the city.[45] In benefit-cost terms, a 2010 study that made conservative assumptions about overdose mortality, other overdose complications and HIV cases averted estimated a benefit-cost ratio for Insite of about 5:1 or in monetary terms about $6 million a year.[46]

*Drug Treatment Courts*

A number of countries, particularly the US and Canada, have invested in specialised drug courts or drug treatment courts in which some alleged offenders can be diverted to court-supervised treatment programmes as an alternative to incarceration. Drug courts in the US have been extensively evaluated, mostly on the criterion of criminal recidivism. The US model of courts raises a number of questions, including the due process issue of requiring people to plead guilty to whatever charge is before them as a condition of being diverted to treatment, the question of whether treatment should ever be coercive in any sense, and the fact that many courts refuse OST as a treatment option in spite of great need for it.[47] An extensive drug court evaluation supported by the US Department of Justice included a cost-benefit calculation that assigned monetary values to components of a broad definition of benefits, including social and economic productivity of drug court participants, welfare programme savings, and criminal justice and health service savings and compared them to drug court costs, which are generally well documented.[48] Their sophisticated analysis, involving many well-specified assumptions, concluded that drug courts in the US carry a benefit-cost ratio of 1.92:1.[49] At this writing, the US is promoting drug courts heavily as part of its international drug control programmes.

Drug treatment courts have potentially large economic benefits in theory from incarceration costs averted, but not if their rules

39 Ibid.

40 See Rick Lines, Ralf Jürgens, Glenn Betteridge et al., 'Prison needle exchange: lessons from a comprehensive review of international evidence and experience,' (Toronto: Canadian HIV/AIDS Legal Network, 2006), http://www.aidslaw.ca/publications/interfaces/downloadFile.php?ref=1173;
and Ingo Ilya Michels and Heino Stöver, 'Harm reduction – from a conceptual framework to practical experience: the example of Germany'. *Substance Use and Misuse* 47 (2012): 910-922.

41 Lines et al., ibid.

42 Kate Dolan, Ben Kite, Emma Black et al., 'HIV in prison in low-income and middle-income countries,' *Lancet Infectious Diseases* 7 (2007): 32–41.

43 Harm Reduction International, *Global state of harm reduction 2012: toward an integrated response,* London, 2012, http://www.ihra.net/files/2012/07/24/GlobalState2012_Web.pdf.

44 Vancouver Coastal Health, 'Supervised Injection Site – User Statistics,' http://supervisedinjection.vch.ca/research/supporting_research/user_statistics

45 Brandon D.L. Marshall, M-J Milloy, Evan Wood, Julio Montaner and Thomas Kerr, 'Reduction in overdose mortality after the opening of North America's first medically supervised safer injection facility: a retrospective population-based study,' *Lancet* 377 (2011): 1429-1437.

46 Martin A. Andresen and Neil Boyd, 'A cost-benefit and cost-effectiveness analysis of Vancouver's supervised injection facility,' *International Journal of Drug Policy* 21 (2010): 70-76.

47 Ryan S. King and Jill Pasquarella, 'Drug courts: a review of the evidence,' (Washington, DC: The Sentencing Project, 2009), http://www.sentencingproject.org/doc/dp_drugcourts.pdf; and Drug Policy Alliance, 'Drug courts are not the answer: toward a health-centered approach to drug use,' New York, 2011, http://www.drugpolicy.org/sites/default/files/Drug%20Courts%20Are%20Not%20the%20Answer_Final2.pdf.

48 P. Mitchell Downey and John K. Roman, 'Chapter 9 – Cost-benefit analyses,' in Shelli B. Rossman, John K. Roman, Janine M. Zweig et al., eds. *The multi-site adult drug court evaluation: the impact of drug courts. (*Washington, DC: Urban Institute, 2011), 228-250.

are so onerous or their protection of due process so flawed as to make them unattractive to a significant percentage of those who might benefit from them. In places where opiate addiction is a public health problem, drug courts should follow the recommendation of the board of the US National Association of Drug Court Professionals and allow OST as a treatment alternative likely to be essential for many participants.[50]

## CONCLUSION

In spite of methodological challenges, a significant body of evidence shows that health services for people who use drugs have significant social and economic benefits, including reduction of crime and increasing the ability of people who have lived with addiction to be economically productive. This evidence has figured insufficiently in policy and resource allocation decision-making on drugs, apparently frequently overshadowed by political factors. These services should be a high priority for fiscally-minded governments, which should especially ensure that they are not undermined, for example, by policing that targets health or needle exchange facilities to find drug users to fill arrest quotas, or by undue 'not in my backyard' neighbourhood opposition to the placement of drug treatment clinics. Moreover, drug-related health services derive the greatest benefits when they target marginalised people with a propensity to commit crime, in spite of the obvious political challenges posed by directing funding toward these individuals. ■

49 Ibid., 247.

50 National Association of Drug Court Professionals: *Resolution of the Board of Directors on the availability of medically assisted treatment (M.A.T.) for addiction in drug courts,* 17 July 2011, http://www.nadcp.org/sites/default/files/nadcp/NADCP%20Board%20Statement%20on%20MAT.pdf

# Lawful Access to Cannabis: Gains, Losses and Design Criteria

Mark A.R. Kleiman[1] and Jeremy Ziskind

**Much of the current argument about whether to legalise various currently illicit drugs is conducted at a high level of abstraction (morality and health vs. liberty and public safety). The details of post-prohibition policies are barely mentioned and concrete outcomes are either ignored or baldly asserted without any careful marshalling of fact and analysis. But it is possible to try to predict and evaluate – albeit imperfectly – the likely consequences of proposed policy changes and to use those predictions to choose systems of legal availability that would result in better, rather than worse, combinations of gain and loss from the change.**

The analysis below focuses on cannabis, the drug for which serious legalisation efforts are now in motion. The difficulty of that analysis will provide some indication of how much more difficult it would be to evaluate the question for 'drugs' more generally. Cannabis is the most widely used illicit drug, so its legalisation would influence the largest number – in some countries an absolute majority – of all users of illicit drugs, and eliminate a large number of arrests. But since other drugs dominate drug-related violence and incarceration, many of the costs of the 'war on drugs' would remain in place after cannabis legalisation:

**Summary**

- *Adopt policies that learn.* Policymakers should try out ideas, measure their outcomes and make mid-course corrections accordingly. One extreme version would be to incorporate a 'sunset' clause into the initial regulation, requiring a legislative or popular re-authorisation of legal availability after a trial period.
- *Beware commercialisation.* The commercial interest in promoting heavy use will prove difficult to control through taxes and regulations. Not-for-profit-only production and sale on the one hand, and state monopoly on the other, are options to consider before rushing headlong into a replication for cannabis of something resembling the existing alcohol industry.
- *Consider incremental approaches.* Not all initial policies are equally easy to change. In particular, the greater the financial (and therefore political) power of a commercial, for-profit cannabis industry, the harder it will be to make policy adjustments that might reduce the revenues of that industry. Thus, pioneering jurisdictions may want to consider incremental approaches that begin – and might end – with non-profit regimes.
- *Let the experiments run.* The places that legalise cannabis first will provide – at some risk to their own populations – an external benefit to the rest of the world in the form of knowledge, however the experiments turn out. Federal authorities in the United States and other places where states or provinces try to innovate and the guardians of the international treaty regimes would be well advised to keep their hands off as long as the pioneering jurisdictions take adequate measures to prevent 'exports'.[2]
- *Prevent price decreases.* Any consumer concerned about cannabis prices is probably using too much.
- *Plan for prevention and treatment.* Abuse will almost certainly go up under legal availability, but prevention and treatment efforts can help to limit the size of that increase and the suffering it creates.
- *Consider user-set quotas and other 'nudge' options.* If substance abuse is a 'disorder of choice,'[3] then managing the choice architecture might be one mechanism for preventing and managing that disorder.

1 Mark Kleiman would like to thank GiveWell and Good Ventures for supporting his work on cannabis policy. The views expressed are the author's and should not be attributed to UCLA, GiveWell or Good Ventures, whose officials did not review this article in advance.

2 James M. Cole, 'Guidance Regarding Marijuana Enforcement,' US Department of Justice, Office of the Deputy Attorney General, 29 August 2013, http://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf.

3 Gene M. Heyman, *Addiction: A Disorder of Choice* (Harvard University Press, 2010).

a point often omitted by proponents of legalisation as they skip directly from mass incarceration and illicit-market violence as problems to the legalisation of cannabis as a solution. The claims of advocates might be more convincing if they were more restrained.

At the opposite pole from bare assertion either of moral claims (e.g. that drug-taking is inherently wrong, or alternatively that any drug prohibition violates basic human rights) or of factual predictions (about drug abuse or incarceration) lies the project of formal cost-benefit analysis, which aims to weigh all of the gains and losses from a proposed policy change on the same scale: the valuations of the individual gainers and losers, measured by their (hypothetical) willingness to pay to enjoy the gains or avoid the losses. It is possible to imagine doing an elaborate cost-benefit analysis of legalising cannabis,[4] but doing so in practice would require one to predict the extent of changes in variables that cannot even be accurately measured in the present, and to perform implausible feats of relative valuation (e.g. comparing person-years of incarceration with person-years of cannabis dependency).

The size of the gains from legalisation, and in particular the reduction in the extent of illicit activity and of enforcement effort, would be greater in high-consumption countries such as the United States than it would in the lower-consumption conditions characteristic of most other advanced economies.

Key uncertainties include:

- The demand-side responses to price changes after legalisation, more convenient access, the removal of legal sanctions and the diminution of social stigma.
- The size and direction of changes in abuse risk (the probability of proceeding from casual to problem use).
- Changes in product choice (to more or less risky forms of the drug).
- Effects on the abuse of alcohol and other drugs.

This last set of effects is both important and unknown. In particular, whether alcohol is a substitute for, or instead a complement to, cannabis remains to be ascertained, and the answer might not be the same for all populations and may differ in terms of short-run and long-run effects.

Since the alcohol problem in all countries is much bigger than the cannabis problem, indirect effects on alcohol could overwhelm the direct effects, converting the results of cannabis legalisation from a net gain to a net loss or *vice versa*.

Thus reasonable ranges of difference over valuations and predictions will probably span the break-even point. Moreover, the outcomes of legalisation depend very sharply on details of policy that are usually not specified in the debate.

Thus it seems hard to justify any dogmatic statement that cannabis legalisation would, or would not, be beneficial on balance, without reference to a specific locale and a specific set of post-prohibition policies.

If legalisation is to be tried – as now in Colorado, Washington State and Uruguay, very likely soon in other US states and quite possibly within the next decade in the US on a national level – it ought to be tried in an experimental spirit. Given the huge range of potential gains and losses, and of policy options, the probability of finding the perfect combination right from the start must surely be near zero. Thus the best initial policy will not be the one that comes closest to some calculated optimum, but instead the one easiest to adjust in light of experience, which among other things means building in evaluation and policy feedback mechanisms. The pioneers of cannabis legalisation are all too likely to experience in practice the validity of von Moltke's maxim that no battle plan survives first contact with the enemy.

That is not, of course, a reason not to analyse and to plan, but some of that analysis and planning should involve building in to the process the capacity to improvise in the face of the predictable appearance of unpredicted phenomena.

## CATEGORIES OF GAIN AND LOSS

One way to start the analysis would be by cataloguing the categories of personal and social gain and loss that might arise from legalisation. The following list – far from exhaustive – suggests the range of possible considerations.

Potential Gains:

- Reduce the size and revenue of illicit trade, the associated violence and disorder and the harm done by arrests and incarceration.
- Increase somewhat the range of licit economic opportunity and generate public revenue.
- Either reduce public expenditure on law enforcement or free enforcement resources for other uses.
- Reduce the risks of cannabis consumption by replacing untested, unlabelled and unregulated product with tested, labelled and regulated product.
- More speculatively, it might encourage consumption using less health-damaging means (e.g. vaporisation rather than smoking) or new cultural practices, such as cannabis use short of intoxication.
- All consumers would face lower prices and a wider choice of products, generating increased consumers' surpluses among all whose consumption is well-informed and not the result of substance-abuse disorder, and even among some unwise or dependent consumers.

4 Stephen Pudney, Mark Bryan and Emilia DelBono, 'Licensing and Regulation of the Cannabis Market in England and Wales: Towards a Cost/Benefit Analysis,' Beckley Foundation, 14 September, 2013.

Potential Losses:

- Increased consumption for those consumers whose consumption is, on balance and at the margin, damaging rather than beneficial to themselves. That might be especially true of dependent users (including those not now dependent who might become so under conditions of legal access) and of minors. But as the examples of tobacco, alcohol, gambling and food all illustrate, fashion and present-orientation can lead even non-dependent adults to make self-harming decisions.
- Losses to those whose welfare is interdependent (materially or emotionally) with self-harming users who are their kin or friends and to those harmed by accidents, crimes or derelictions of duty caused by cannabis intoxication or dependency. There would be analogous gains related to users whose lives or social performance improves from using licit cannabis or who avoid legal penalties for using or selling it due to the repeal of prohibitory laws.

There might also be, as noted, either gains or losses from decreased or increased self-harming or socially harmful use of alcohol and other drugs.

## POLICY DETAILS

The actual outcomes of any scheme of legal access would depend strongly on details rarely mentioned in the abstract pro-and-con discussion of whether to legalise. The risk of a large increase in damaging forms of consumption would be greater at a lower price; the need for enforcement against illicit production and sale, or tax evasion by licensed producers and sellers, would be higher.

Another central decision is whether to allow private for-profit enterprises to produce and sell cannabis, or instead to restrict licit activity to:

(1) Production for personal use and free distribution only.

(2) Production and sale by not-for-profit enterprises such as consumer-owned cooperatives like the Spanish 'cannabis clubs'

(3) Some variety of state monopoly, perhaps of retail sales only, leaving production to private enterprise.

If the private enterprise model is chosen, an additional choice must be made about whether to limit market concentration to ensure the existence of a variety of competing firms (thus perhaps limiting the marketing and political power of the industry as a whole and – again perhaps – increasing the rate of product innovation and the range of products easily available) or instead to allow the likely development of oligopolistic competition, as in the markets for cigarettes and beer. A potential advantage of legalisation would be the provision of consumer information superior to that available on the illicit market. The corresponding disadvantage might be the application of powerful marketing techniques to making excessive consumption seem desirable and fashionable.

Cannabis is a more complex product than beer, with at least two and perhaps dozens of significantly psychoactive chemicals and, to date, only limited scientific knowledge about their actions and interactions. Requiring accurate label information about chemical content seems a sensible approach, but not all consumers will be able to make good use of a collection of chemical names and percentages. Industry participants could be given the responsibility of providing sound consumer information, including due warnings about the risks of habituation, at the point of sale or via websites, or that responsibility could be assigned to NGOs or public agencies, perhaps financed by cannabis taxation. It seems at least arguable that cannabis sales personnel should have extensive training both about the pharmacology of the drug and about offering good advice to consumers, making their role closer to that of a pharmacist or nutritionist than of a mere sales clerk or bartender.

By the same token, decisions would have to be made and executed about whether and how to limit marketing efforts. To some eyes at least, the alcohol industry provides a warning by example of what could go wrong. In the United States, the doctrine of 'commercial free speech' might gravely impair the capacity of the state to allow private enterprise but restrain promotion.

Again as with alcohol, rules would have to be set and (imperfectly) enforced about public intoxication, workplace intoxication, operating a motor vehicle under the influence and provision to or use by minors.

A central fact about cannabis – as about alcohol and many other activities that form a persistent bad habit in a significant minority of their participants – is that the problem minority consumes the dominant share of the product. (A generalisation often cited as 'Pareto's Law' holds that 20 percent of the participants in an activity account for 80 percent of the activity.) As a result, a commercial industry, or a revenue-oriented state monopoly, would depend for much if not most of its sales on behaviour that is self-harming. In the case of cannabis in the United States, something like four-fifths of total product currently goes to consumers of more than a gram of high-potency cannabis per day; about half of those daily users, according to their own self-report, meet clinical criteria for abuse or dependency. That would create a commercial incentive directly contrary to the public interest, and potentially great political pressure to do away with any restriction that promises to be efficacious in reducing the frequency of drug misuse. Under contemporary conditions in advanced Western countries, it is difficult to make any commodity available to adults without increasing access to minors, since every adult is a potential point of 'leakage' across the age barrier. Teenagers are not merely an important current market segment; in the eyes of companies trying to increase their 'brand equity,' they are the future. Within legal constraints, the alcohol and tobacco industries do their utmost to compete for teenage market share, even where that consumption is illegal. There is no reason to think that formal bans on marketing to minors would have more than a trivial impact on the efforts of participants in a legal cannabis industry to penetrate the youthful demographic.

## TAXATION AND REVENUE

Cannabis, even under illegal conditions, is a highly cost-effective intoxicant. At prevailing prices in the United States, a drinker who has not built up a tolerance for alcohol might need about $5 worth of store-purchased mass-market beer to become drunk; a similarly fresh smoker could become intoxicated on perhaps $2 worth of cannabis, or even less. Medical dispensaries in Colorado already offer 'weekly special' strains of sinsemilla cannabis at $5 per gram (with volume discounts), where a gram represents more than two standard 'joints' (cannabis cigarettes), each more than adequate to intoxicate a non-tolerant user. Vaporisation seems likely to lower the effective cost substantially, both because concentrates trade at discount to herbal cannabis on an intoxicant-equivalency basis and because the vaporisation process loses fewer of the active chemicals to combustion or as sidestream smoke.

Thus there seems to be no strong argument for letting prices fall much from existing levels; even a user of modest means will reach the point where his or her cannabis use is self-harming before reaching the point where it becomes a budget problem. But since production costs under legal conditions would be negligible (Jonathan P. Caulkins and his colleagues have estimated costs in the pennies-per-joint range[5]) maintaining current prices would require very heavy taxation, whether measured in terms of the tax share of the final price (more than 95 percent) or in terms of tax-per-unit-weight (roughly $300 per ounce). Collecting such taxes would pose a daunting challenge; in New York City, where a pack (roughly one ounce) of cigarettes bears a tax burden of approximately $8, full tax has not been paid on more than one-third of all cigarettes consumed.[6]

This suggests that taxation be a specific excise (perhaps per unit of THC) rather than on an *ad valorem* (percentage-of-market-price) basis. Taxation levels might also be varied with product composition to encourage the sale of less hazardous (e.g. lower-THC, higher-CBD) forms of the drug. Alternatively, annual production quotas could be set to restrict production to achieve some desired price level, and producers could be required to bid at auction for quota rights. A properly-designed auction ought to be able to capture for the state almost all of the producers' surplus in the commodity cannabis market.

With taxes (or quota prices) high enough to maintain illicit prices, cannabis could be a significant, though not a major, source of public revenue, on about the same scale (low double digits of billions of dollars per year in the United States) as alcohol and tobacco. How to keep even a state monopoly from encouraging problem use to hit revenue targets – as American state lotteries notoriously do – would remain a problem.

## CULTURE AND CANNABIS CONSUMPTION

Though a very large share of all alcohol – in the United States, approximately 50 percent – is consumed as part of intoxication events ('drinking binges'), the vast majority of drinking occasions do not involve the user becoming intoxicated. The opposite seems to be true now for cannabis, where 'getting high' is the socially understood purpose of using the drug. But it is possible – and might be easier with clearly labelled products and more controllable means of administration, such as vaporisation rather than smoking – to have the cannabis equivalent of a single alcoholic drink, and it is conceivable that, under legality, norms of using cannabis not to intoxication might establish themselves at least in some social circles. Doubtless some policies would be more favourable than others to such a development, but too little is yet known to allow more than mere speculation about what might, or might not, work in that regard.

## ENFORCEMENT

In the long run, a legal market should require less enforcement attention than an illegal market. But regulations and taxes do not enforce themselves, and an untaxed and unregulated illegal market has some natural advantages over a taxed and regulated legal market, especially when the legal market is new and competitive pressures and technological advances have not yet driven prices down. Just as the first step in making rabbit stew is catching a rabbit, the first step in running a controlled market is to draw customers in from the uncontrolled markets. That will require mounting sufficient enforcement efforts to shift the balance of competitive advantage toward licit activity.

## PREVENTION AND TREATMENT

Drug consumption has risks, including the risk of progressing to problem use. 'Just-say-no' prevention efforts have limited efficacy.[7] But the natural effect of legal availability, bringing lower prices and decreased non-price barriers to use, is to increase consumption, including problem consumption. Therefore a legalisation scheme ought, ideally, to include a comprehensive information and persuasion strategy, aimed at potential as well as current users, and designed to minimise the number of people who find themselves in the grip of a substance abuse disorder. There are lessons to be learned from both the successes and the failures of current efforts to prevent alcohol and tobacco misuse.

For those who do find themselves with harmful patterns of drug use that prove resistant to efforts at self-management, services directed at ameliorating the harm they do to themselves and others, and if possible to restoring normal volitional control. It would be wrong to expect that expanded drug treatment services would be capable of preventing a rise in the number

5 Jonathan P. Caulkins, 'Estimated Cost of Production for Legalized Cannabis,' RAND Corporation, July 2010; Beau Kilmer, Jonathan P. Caulkins, Rosalie Liccardo Pacula, Robert J. MacCoun and Peter H. Reuter, 'Altered State? Assessing How Marijuana Legalization in California Could Influence Marijuana Consumption and Public Budgets,' RAND Corporation, 2010; Jonathan P. Caulkins and Peter Reuter, 'What Can We Learn from Drug Prices?,' *Journal of Drug Issues* 28 (1998): 593–612.

6 Paul McGee, 'Fact Sheet: NYS Cigarette Tax Evasion,' American Cancer Society (accessed Nov. 11, 2013)

of persons currently suffering from cannabis abuse disorder, but the need for those services will increase. Designing ways to meet that need – to identify problem users, persuade them to seek help, and ensure an adequate supply of services and a means of paying for them – ought to enter into the legalisation planning process.

## USER-SET QUOTAS: A 'NUDGE' STRATEGY

Problem drug-taking can be thought of as a problem of impaired volition, in which the easy and natural thing for the user to do is not the most beneficial thing to do – even as the consumer would understand it if approaching the question thoughtfully. (Someone once said that if the pain of the hangover came before the pleasure of the intoxication, heavy drinking would be a virtue rather than a vice.) If that is the case, then one way to deal with addiction would be to change the 'choice architecture' – the decision problem presented to the consumer – in ways more conducive to choices consistent with the consumer's goals and values and less dominated by impulse.[8] In one of his 'self-command' essays, Thomas Schelling tells the story of a firm alarmed by spreading waistlines among its executives, who seemed to have a hard time restraining their caloric intake in the company dining room.[9] The elegant – and, apparently, effective – solution was to have everyone order lunch at 9:30 in the morning, when the executives were not hungry and when the decision to order the brownie sundae did not result in having a brownie sundae immediately. Once it got to be lunchtime, when the temptation to overeat was stronger and more immediate, the option was no longer available: everyone was stuck with whatever he or she ordered at 9:30. Now of course no one was being fooled; the executives knew perfectly well that at 1 pm they would desire more, and different, food than they ordered at 9:30. But, at 9:30, that forgone future – rather than current satisfaction – seemed like a perfectly reasonable sacrifice for a smaller shirt or dress size.

That suggests a policy intervention for cannabis (or alcohol or gambling): a system of user-set personal quotas. Under such an approach, any adult might purchase cannabis from a set of competing outlets offering a variety of products at a variety of prices, just as in any normal market, and do so without any externally-imposed limit on quantity. But every user would be required to register, with the registration information treated as personal health information and thus strongly privacy-protected. (Given the somewhat complex and risky nature of cannabis-taking as an activity, it might be reasonable to require every new user to go over some educational material and pass a simple test, like a driver's license exam, but that is a different issue.)

At registration – which could take place in any retail establishment or at a state office – the new user would be asked to establish a personal monthly or weekly purchase quota, perhaps denominated in multiples of some standard dosing unit: for example, 40 mg of THC, roughly the content of the average joint. A request for a very large quota might call for some counselling (or even lead to suspicion that the consumer intended to purchase for resale to minors or other unlicensed buyers), but the consumer's final decision would stand, whatever it turned out to be.

But that choice, once made, would then be binding; every purchase would have to be centrally tracked against the consumer's personal limit, just as every credit card transaction is tracked against the cardholder's credit limit. Once the weekly or monthly quota had been reached, no retail outlet would be allowed to sell any more cannabis to that consumer in that time period. The consumer would have the right to modify his or her quota, but while a request for a decrease would take immediate effect, a request for an increase would not become effective until after some delay, perhaps two weeks.

That system would not interfere with anyone who really *wanted* to be chronically intoxicated. But it would allow someone who really wanted to be an occasional user from slipping insensibly into a bad habit, and someone who really wanted to cut back to protect that desire from his or her own transient impulses. At minimum, it would make every cannabis user aware of his or her consumption pattern.

Of course, the limit would not really bind any sufficiently determined user, even in the short term: it would always be possible, with some amount of effort, to find a friend, or even a stranger, willing to share supplies or to make a 'straw' purchase. But just having that barrier in place might prevent some fraction of the substance abuse disorder that would otherwise result from free access to cannabis.

It seems likely that most users would set moderate quotas for themselves and never run into those limits, and that a smaller number would either start with a very high quota or start with a moderate quota, hit the limit a few times, increase the limit, start hitting the limit again, increase the limit again, and find themselves with bad cannabis habits. But – and this is the empirically open claim – it is also possible that a substantial number would set a limit, hit it repeatedly, and *never increase it*, and that a non-trivial number would voluntarily cut back their personal quotas or take themselves off the rolls entirely. That surely would not eliminate cannabis abuse and dependency, but it would give the potential problem user a fighting chance to overcome the joint forces of his or her own weakness of will and the cleverness of the cannabis

7 Jonathan P. Caulkins, Susan S. Everingham, C. Peter Rydell, James Chiesa and Shawn Bushway, *An Ounce of Prevention, a Pound of Uncertainty. The Cost of School-Based Drug Prevention Programs*, RAND, 1999.

8 Richard Thaler and Cass Sunstein, *Nudge: Improving Decisions and Health, Wealth, and Happiness* (Yale University Press: 2008).

9 Thomas Schelling, 'Self-Command in Practice, in Policy, and in a Theory of Rational Choice,' *The American Economic Review*, Vol. 74, No. 2, May 1984, 1-11.

industry marketing experts who would be doing their utmost to turn him into a 'good' – that is, addicted – customer. Imperfect self-command is not a disease; it is part of the human condition. Virtually all of us need, at some times and with respect to some behaviours, what Herbert Kleber has called 'prosthetic support for weak will'. 'Nudging' in the form of self-set but externally enforced quotas is one possible way to help deal with the self-command problem when the problem is quantitative and involves a well-defined salable product. It would not solve the problem, which is after all not soluble. But it might diminish its extent without the well-known side-effects of dealing with cannabis (and perhaps other habit-forming drugs) by making sale and use illegal.

## CONCLUSION

The debate over how to legalise cannabis tends to assume that for-profit commercial enterprise is the default option. Legalising cannabis on the alcohol model may, however, be the second-worst option (behind only continued prohibition); commercialisation creates an industry with a strong incentive to promote heavy use and appeal to minors through aggressive marketing.No system of legal availability is likely to entirely prevent an increase in problem use. But pioneering jurisdictions should consider alternative approaches including non-profit regimes and state monopoly. Both sides of the legalisation debate should acknowledge that the question is complex and the range of uncertainties wide. Such modesty, alas, is in short supply. ■

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**CONTACT US**

Email: ideas.strategy@lse.ac.uk
Phone: +44 (0)20 7107 5353
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