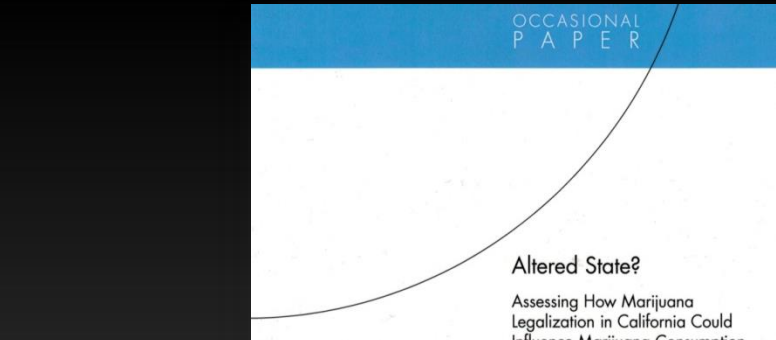


# *Design Considerations for Legalizing Cannabis: The 14 P's*

**Beau Kilmer, PhD**

Co-Director, **RAND Drug Policy Research Center**  
Interim Director, **RAND San Francisco Bay Area**  
Senior Policy Researcher, **RAND Corporation**  
Professor, **Pardee RAND Graduate School**





OCCASIONAL PAPER

### Altered State?

Assessing How Marijuana Legalization in California Could Influence Marijuana Consumption and Public Budgets

Beau Kilmer, Jonathan P. Caulkins, Rosalie Liccardo Pacula, Robert J. MacCoun, Peter H. Reuter



"Amazingly thoughtful and informative."  
—STEVEN D. LEVITT, author of *Freakonomics*

# MARIJUANA LEGALIZATION

WHAT EVERYONE NEEDS TO KNOW<sup>®</sup>

SECOND EDITION

JONATHAN P. CAULKINS,  
BEAU KILMER, MARK A. R. KLEIMAN

Addiction

FOR DEBATE

doi:10.1111/j.1360-0443.2011.03561.x

## Design considerations for legalizing cannabis: lessons inspired by analysis of California's Proposition 19

Jonathan P. Caulkins<sup>1</sup>, Beau Kilmer<sup>2</sup>, Robert J. MacCoun<sup>3</sup>, Rosalie Liccardo Pacula<sup>2</sup> & Peter Reuter<sup>4</sup>

<sup>1</sup>Carnegie Mellon University, Heinz College and Qatar Campus, Pittsburgh, PA, 1  
<sup>2</sup>University of California, Berkeley, CA

OCCASIONAL PAPER

## Reducing Drug Trafficking Revenues and Violence in Mexico

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Beau Kilmer, Jonathan P. Caulkins, Brittany M. Bond, Peter H. Reuter



The NEW ENGLAND JOURNAL of MEDICINE

Perspective  
FEBRUARY 23, 2017

## Recreational Cannabis — Minimizing the Health Risks from Legalization

Beau Kilmer, Ph.D.

The cannabis-policy landscape is undergoing dramatic change. Although many jurisdictions have removed criminal penalties for possessing small amounts of marijuana, the chemical in cannabis increases the risk of psychotic symptoms or panic attacks. Approximately 10% of people who use marijuana report psychotic symptoms.

RAND INTERNATIONAL PROGRAMS and DRUG POLICY RESEARCH CENTER

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# American Journal of PUBLIC HEALTH

than half of U.S. physicians to recommend that patients avoid marijuana. Legalizing the possession of cannabis for medical purposes is not public policy. Since the 2016 election, U.S. population growth has slowed, and many states that have passed bills to allow companies to sell recreational cannabis for any reason are older to purchase other states may not legalize. Uncertain because of the federal ban on cannabis, the Obama administration tolerated this. It's unclear what the administration will do. There is also true

## *Also based on interactions with decision makers*

- **Washington State Liquor Cannabis Board**
- **State of Vermont**
- **New York's Regulated Marijuana Workgroup**
- **Uruguay's Junta Nacional de Drogas**
- **Canada's Legalization Task Force**

# *Design considerations: The 14 P's*

1. Production
2. Profit Motive
3. Power
4. Promotion
5. Prevention & Treatment
6. Potential for expungement
7. Policing & Enforcement
8. Penalties
9. Product Types
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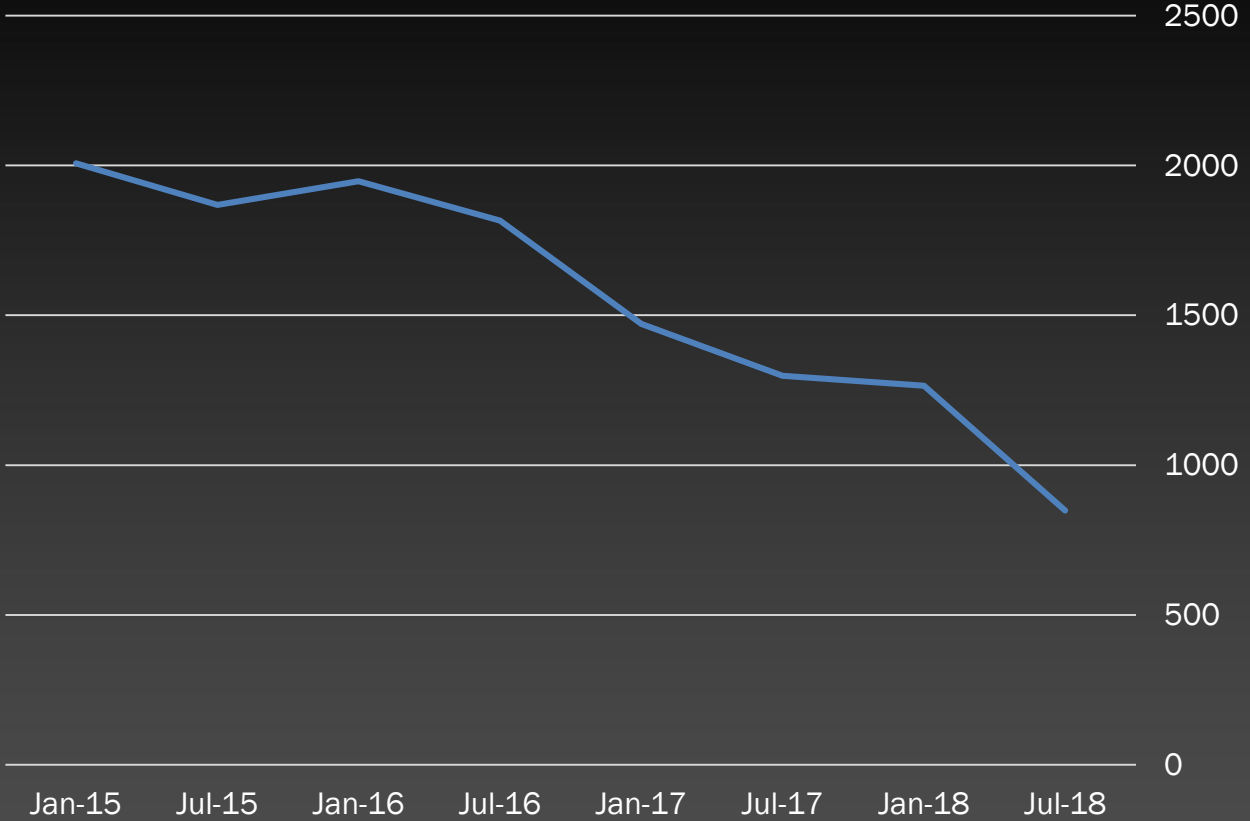
# *Price of cannabis matters for many outcomes*

- **Size of illicit market**
- **Consumption**
- **Tax revenues**
- **Profitability of licensed businesses**
  - Employment
  - Wealth generation

# *Production costs will plummet with legalization*

- **Reduce the risk of arrests and violence**
  - Reuter & Kleiman, 1986
- **Increasing returns to scale if large grows allowed**
  - Caulkins, 2010; Kilmer et al., 2010
- **Easier to leverage changes in technology**
- **Competition will drive down costs**

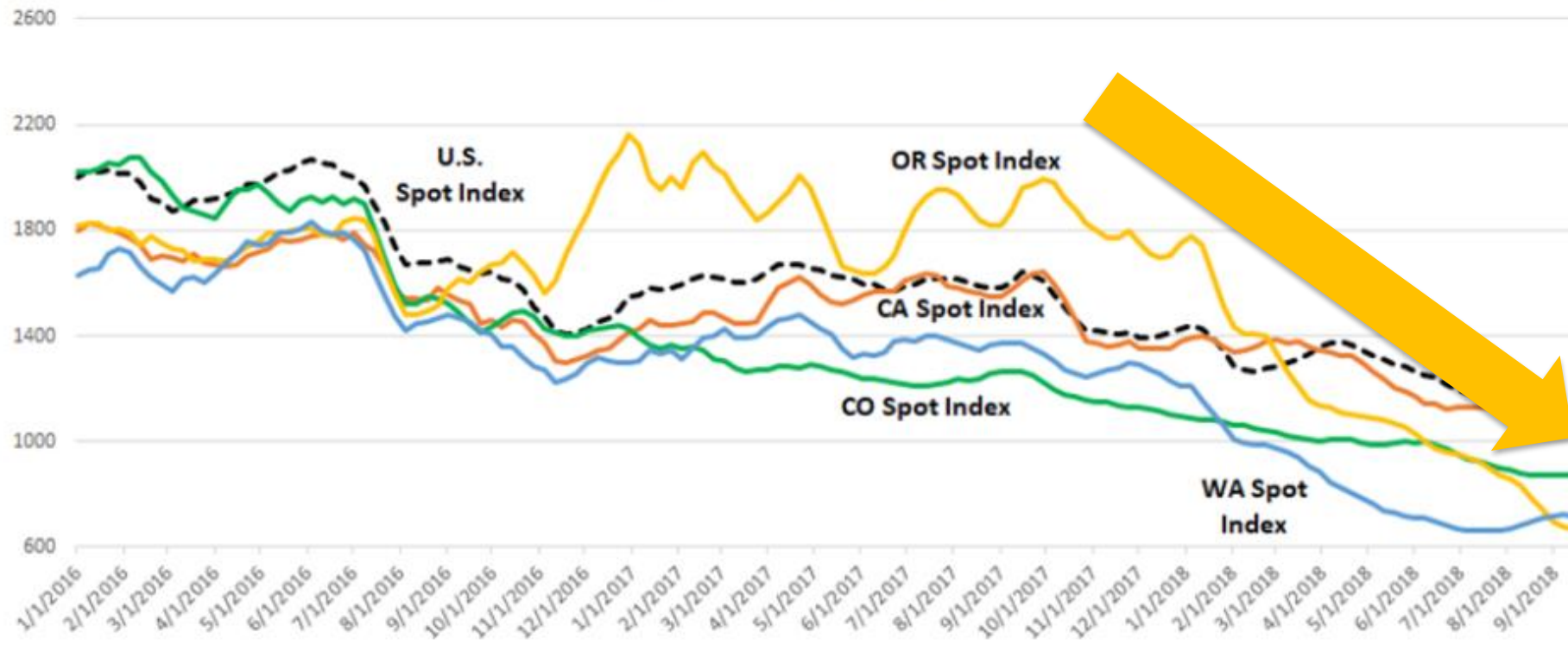
# Colorado prices for pound of cannabis dropping



Source: Colorado Department of Revenue, 2018

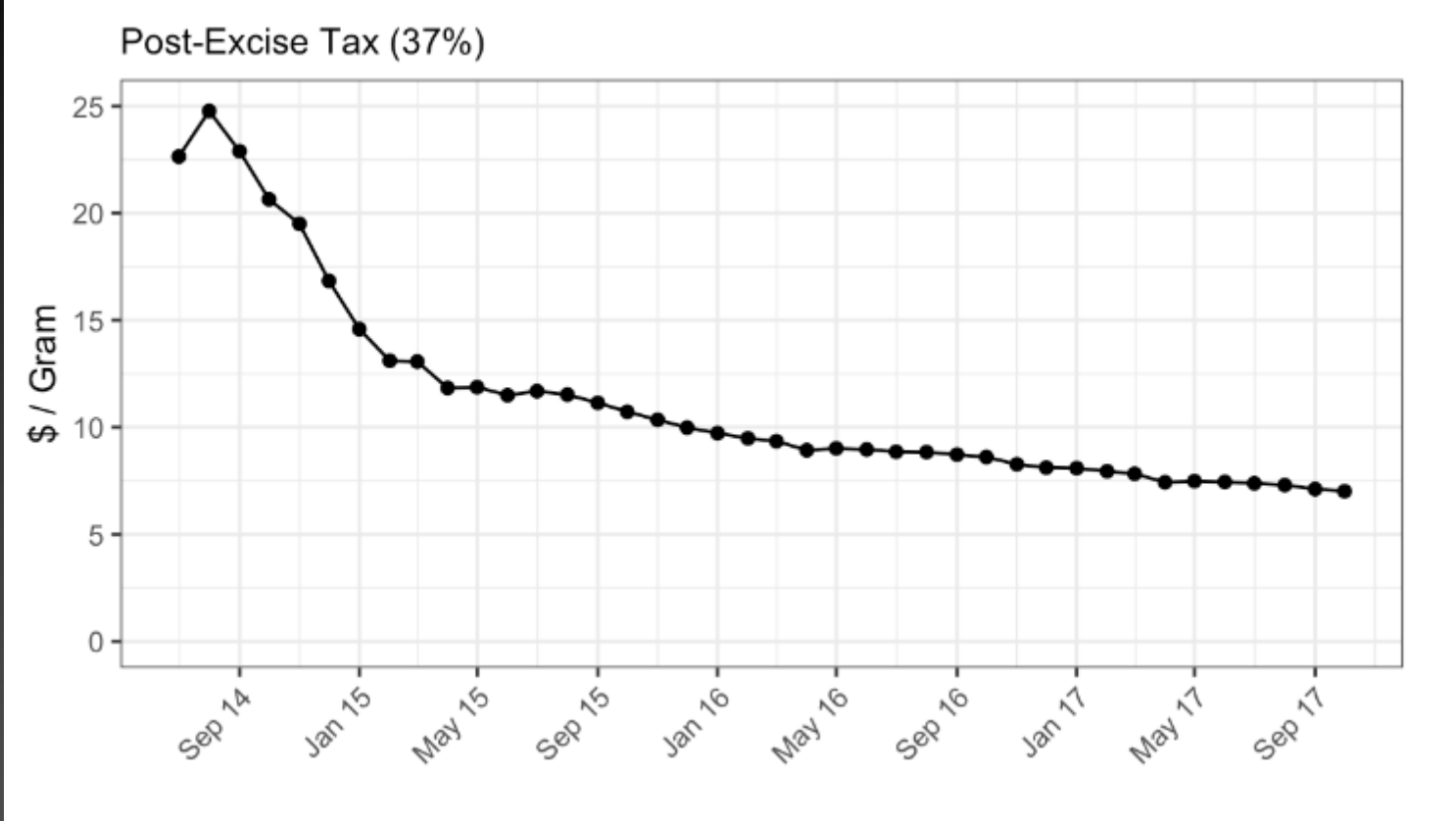
# Price drop is especially severe in Oregon

Cannabis Benchmarks® Spot Price Indices - The Big Four vs. The U.S. Vol. Wtd. Avg.  
(Trailing 4-Week Average \$/Pound)



Source: Cannabis Benchmarks, September 2018

# Retail prices falling in Washington



Source: RAND analysis of Washington's Traceability System

## *Federal legalization = Dramatic market changes*

- **Federal prohibition creates headaches for cannabis companies, but it keeps many in business**



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- **. . . or in another country**
- **And if Amazon is eventually allowed to distribute . . .**

# *Options to elevate price*



## *Concluding thoughts*

- Many choices, must acknowledge the tradeoffs
- Overall consequences of changes in cannabis policy will depend on the use of other substances as well
- Reasonable people can disagree about cannabis policy