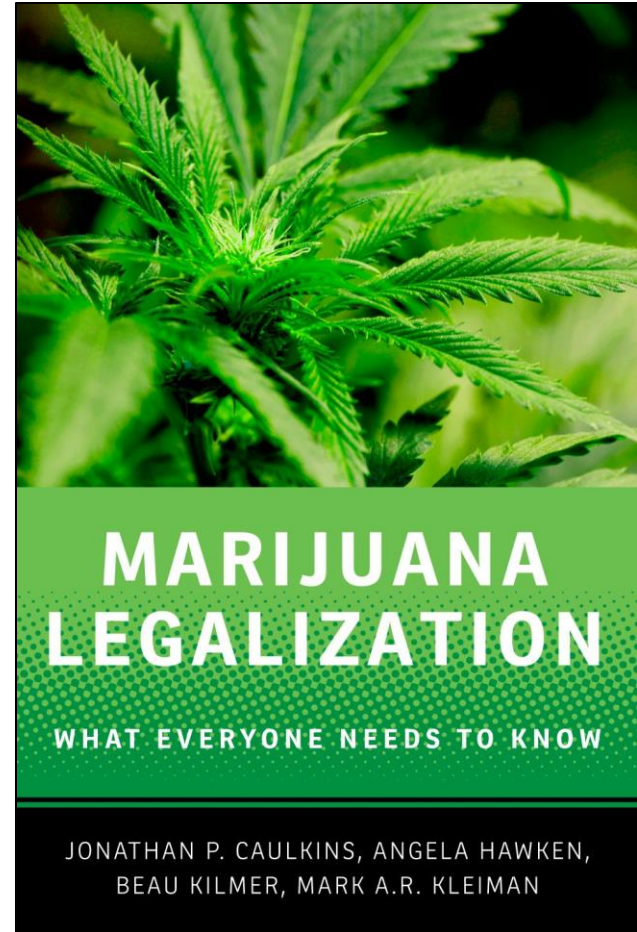
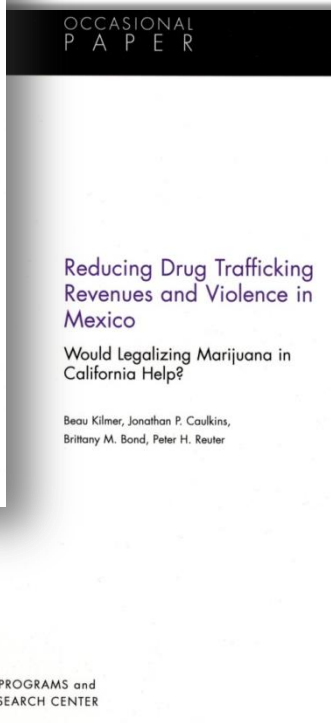
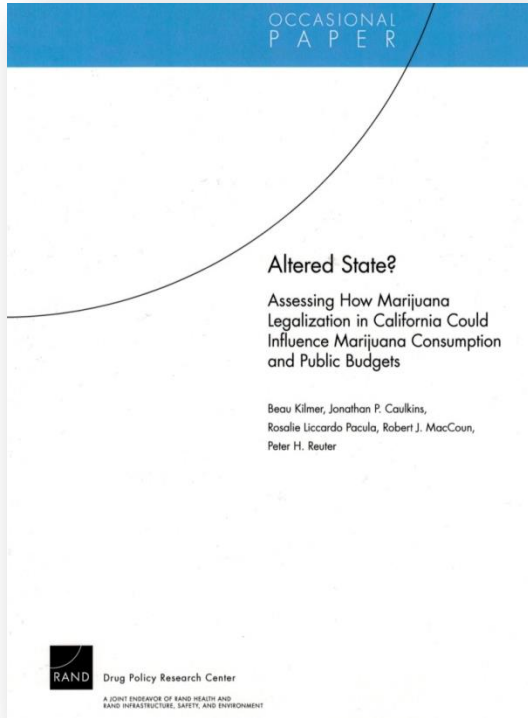


# Predicting the Uncertain Future of Legal Marijuana

Comments based on many collaborations



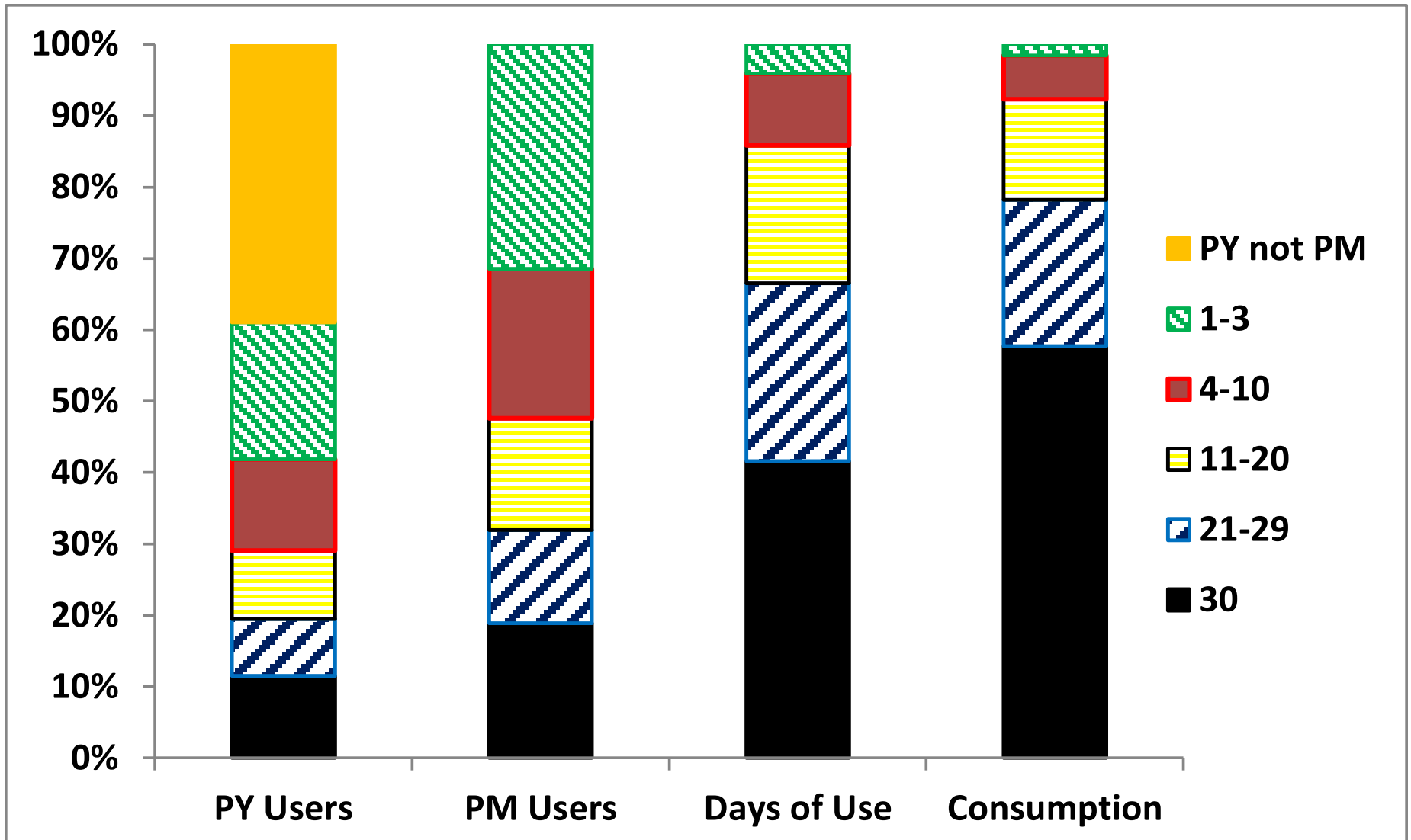
[dprc.rand.org](http://dprc.rand.org)

[www.MarijuanaLegalization.info](http://www.MarijuanaLegalization.info)

# Prediction #1

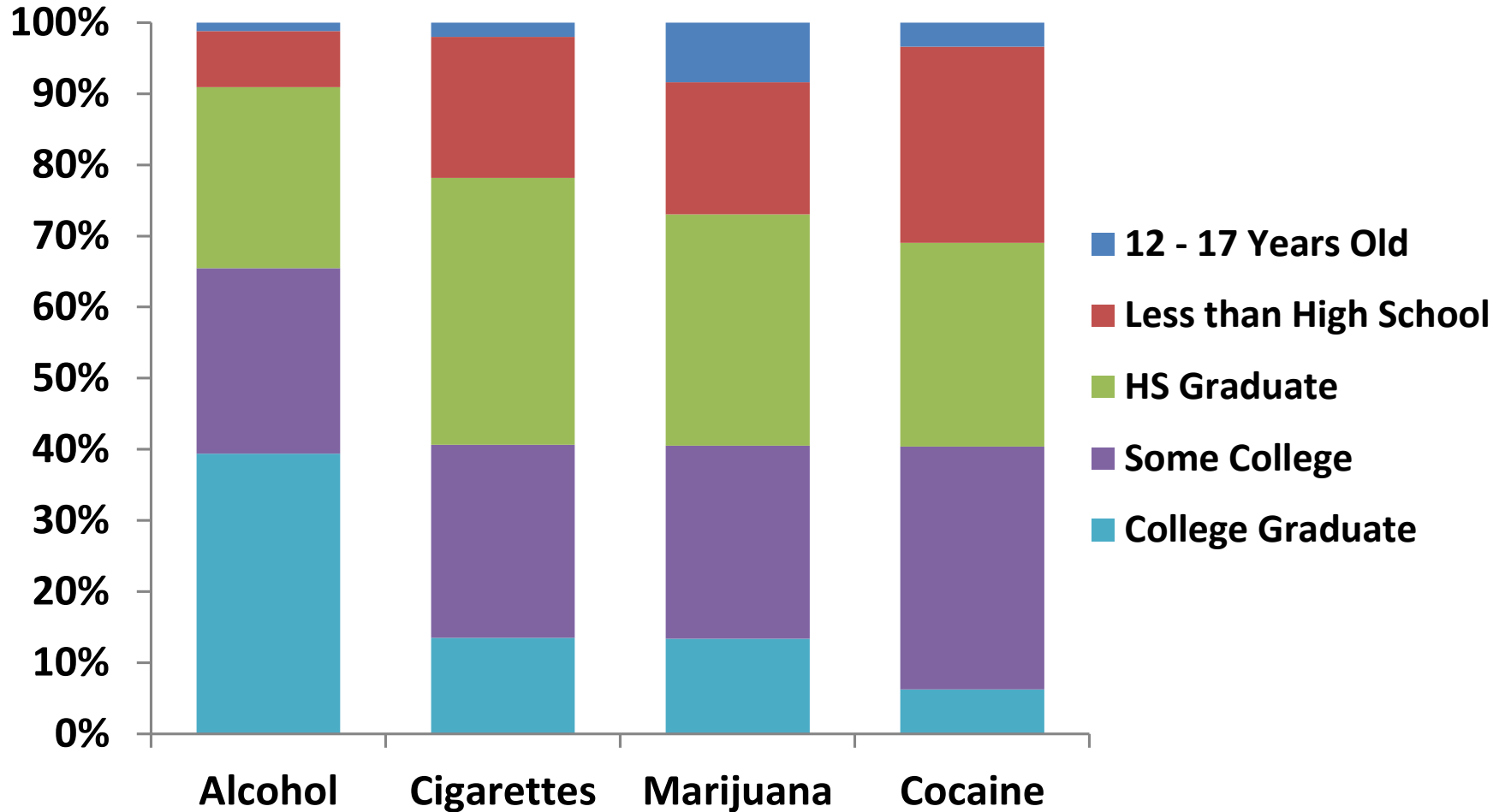
- Consumption will be concentrated among daily/near-daily “blue-collar” users, not among youth.

# Daily & Near-Daily Users Dominate Consumption



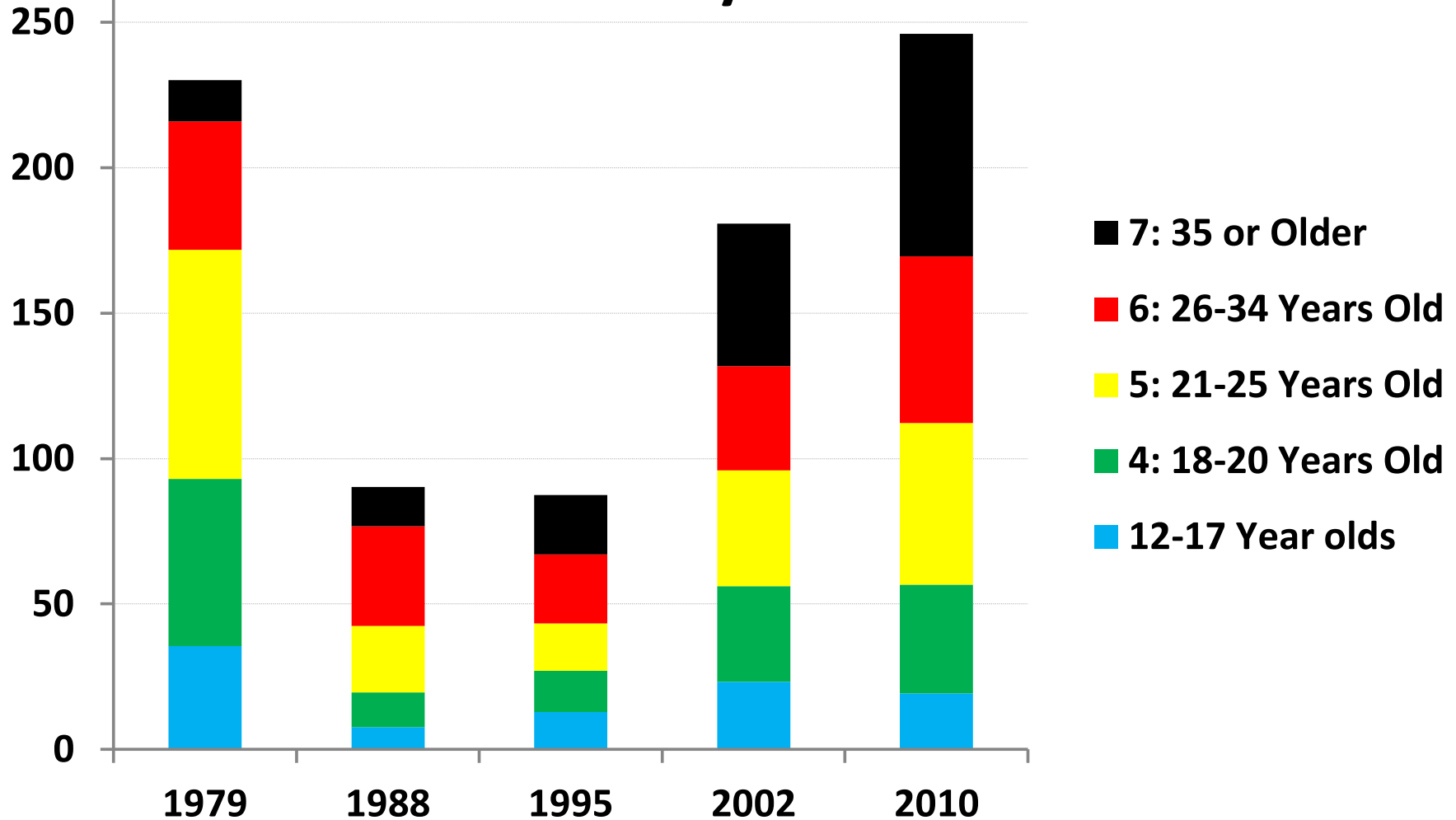
# Those with HS Education or Less Account for 60% of MJ Use Today

Proportion of Past-Month Days of Use



# Use Is No Longer Concentrated Among Youth

Millions of Days of MJ Use



# Can Marijuana Be Branded as a Baby Boomer Drug (so Millennial's Shun It?)



## Prediction #2

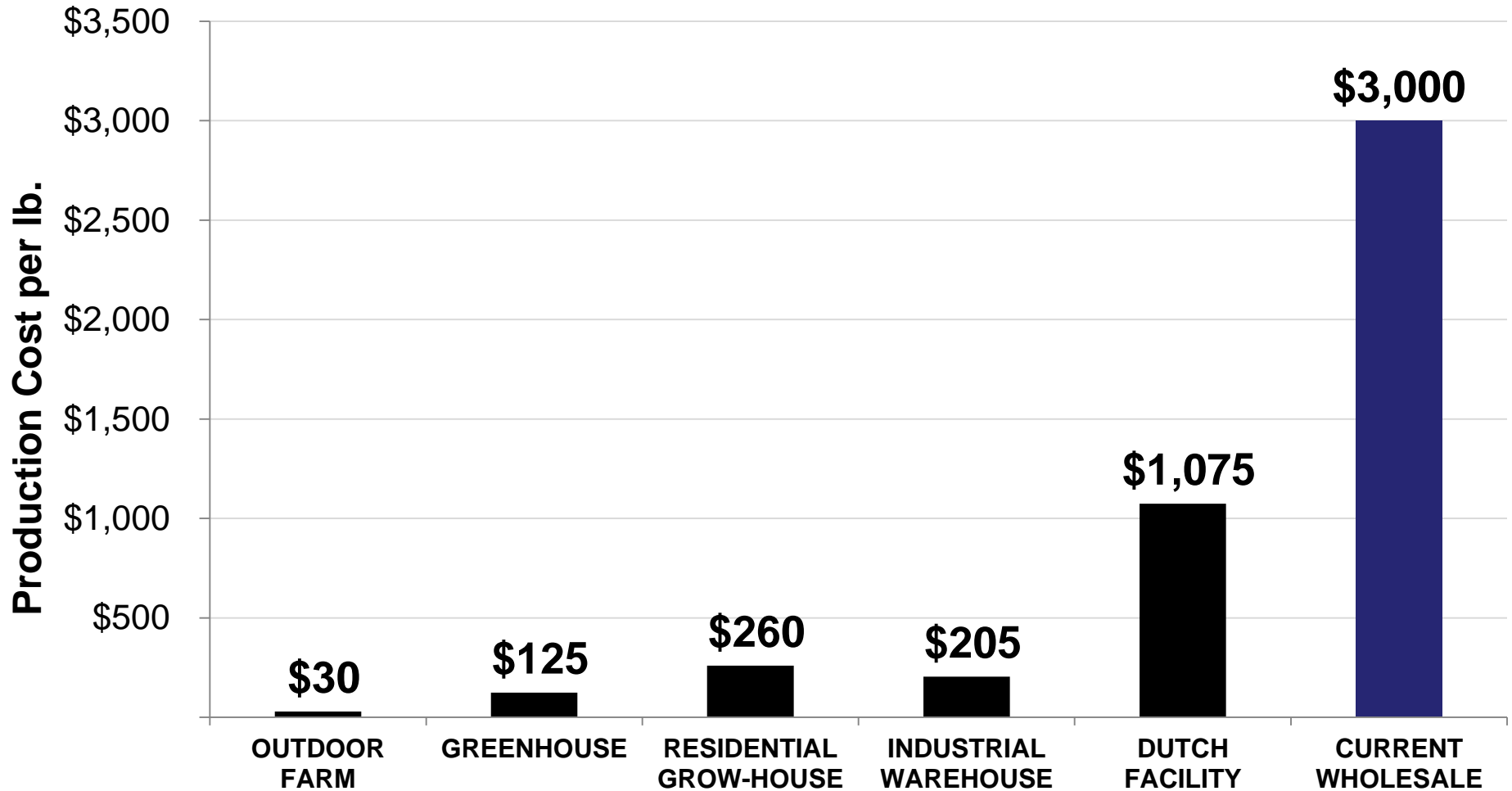
- Production costs will fall sharply.

# Professional “Industrial” Farming Could Produce Marijuana for Almost \$0

- Production costs for comparable plants
  - No more than \$5,600 - \$18,500 per acre per year
- Yield
  - Sinsemilla equivalent weight: ~1,000 lbs per year
- Processing costs w/ scale-economies very low
- $\$20,000 / 1,000 \text{ pounds} = \$20 \text{ per pound}$ 
  - < 1% of current price**
  - ~5 cents per day for a fairly heavy user**
- Distribution, marketing, regulatory, & retailing costs would swamp production costs



# Legal Production Far Cheaper than Current Wholesale Prices



Sources: *Altered State?* (RAND 2010), interview with medical marijuana cultivator, Kilmer (2012)

# (Corollary: Expect Product Differentiation)

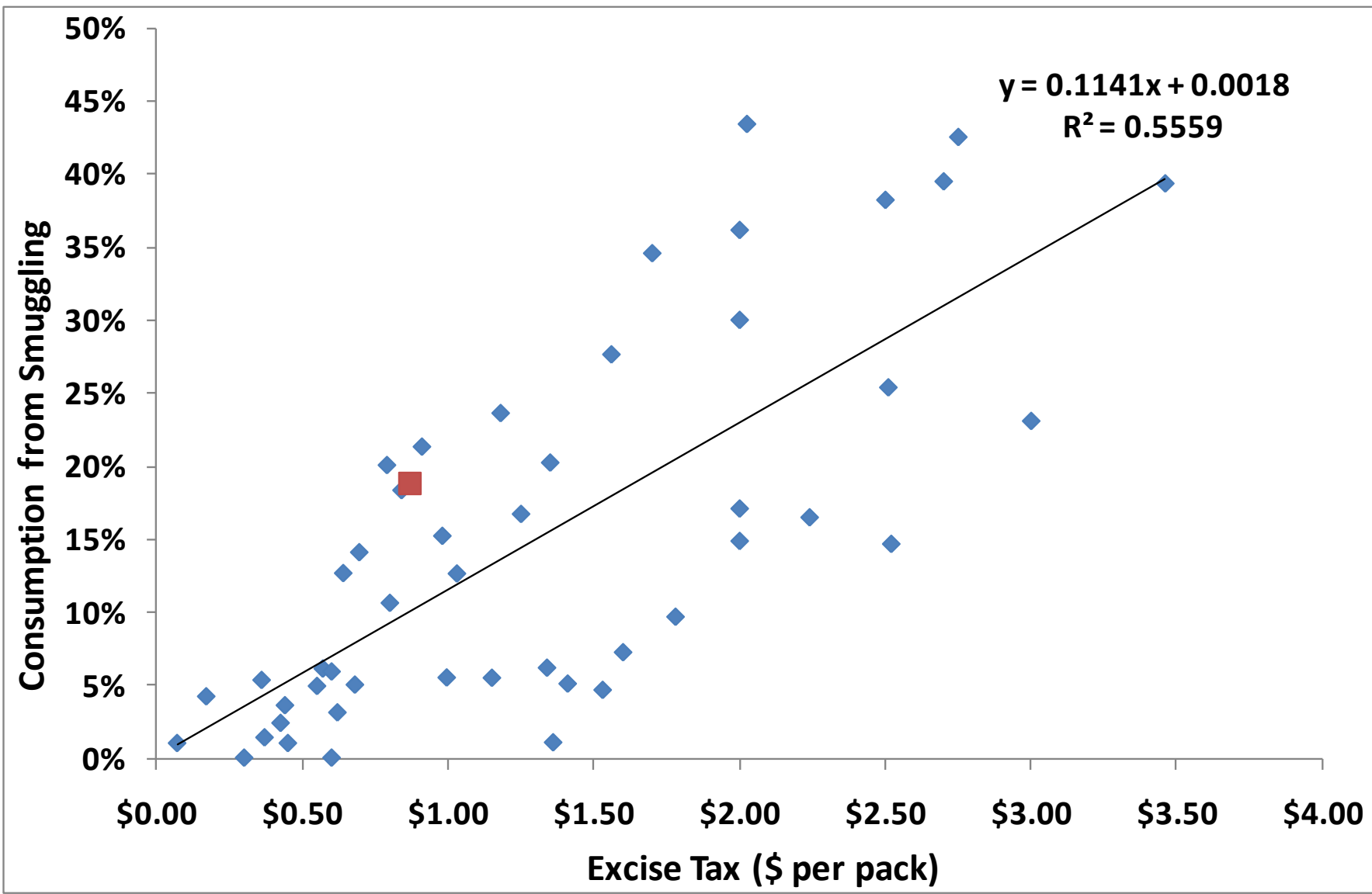
- Will be hard to make money on basic intoxicant
- Think organic vs. generic vegetables



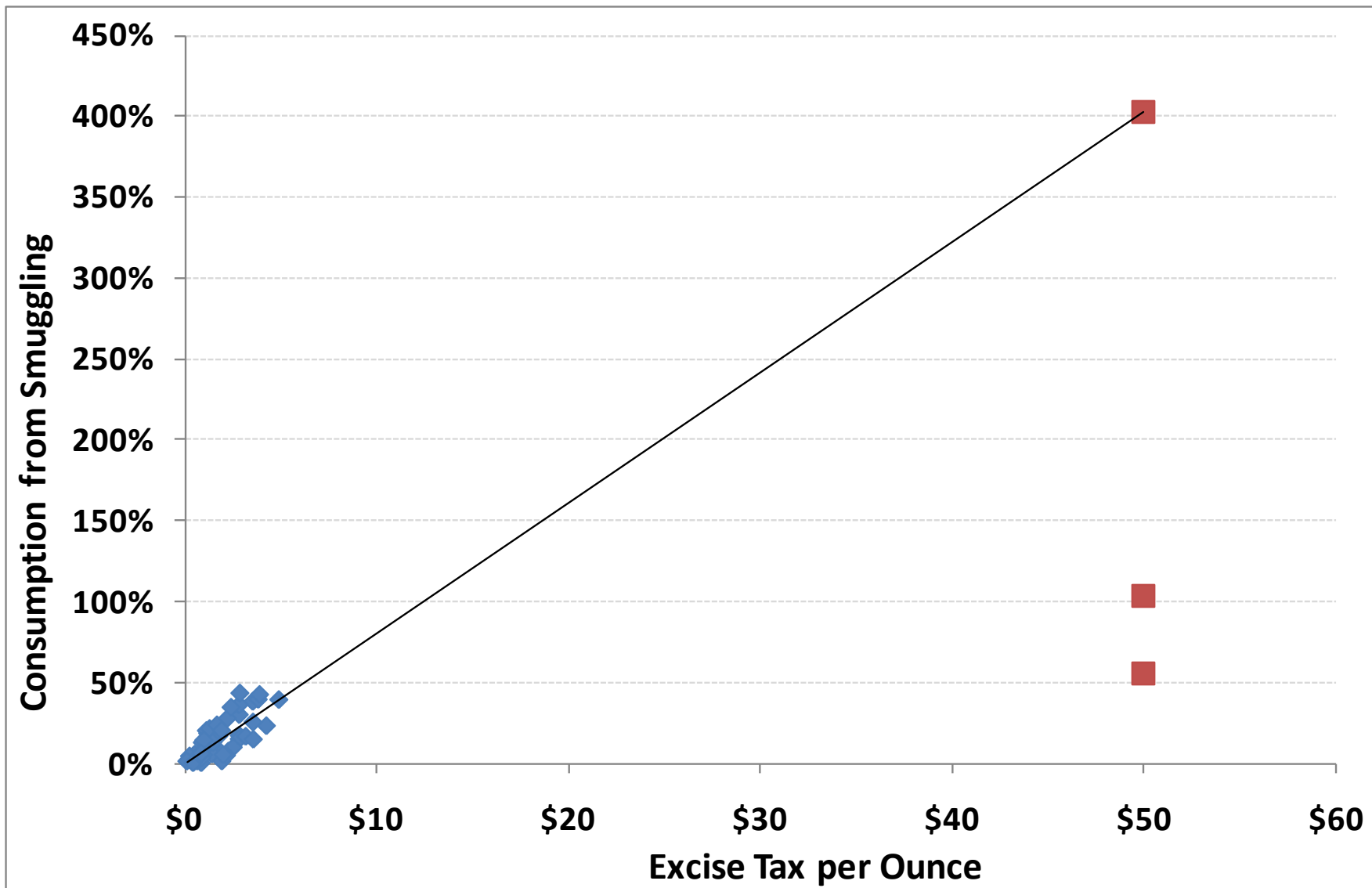
# Prediction #3

- Taxes cannot offset full decline in price.
  - If taxes are too high, there will be evasion
    - In CA, pay ~\$2/oz in tobacco taxes
    - BOE (2007) estimates evasion >14%
  - Need something akin to a state monopoly to stay close to black market prices

# Cross Sectional Relationship Between Tobacco Tax and Evasion; CA is Red Square



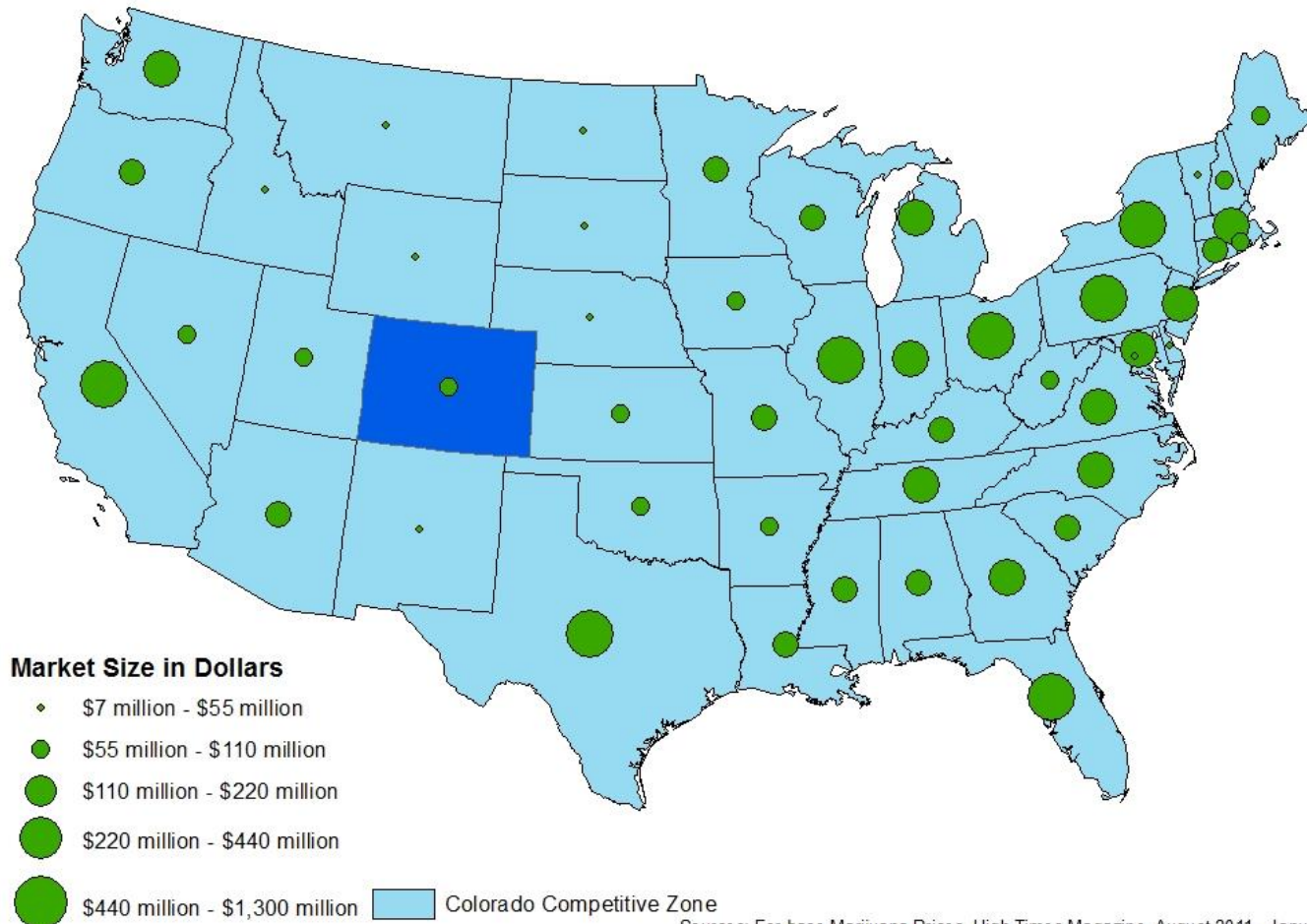
# Placing a \$50 per Ounce MJ Tax on the Same Scale



# Prediction #4

- Status Quo is not stable.
  - No state is an island unto itself for products with high value to weight ratio.

# “Exports” market could be 50 times greater than in-state sales



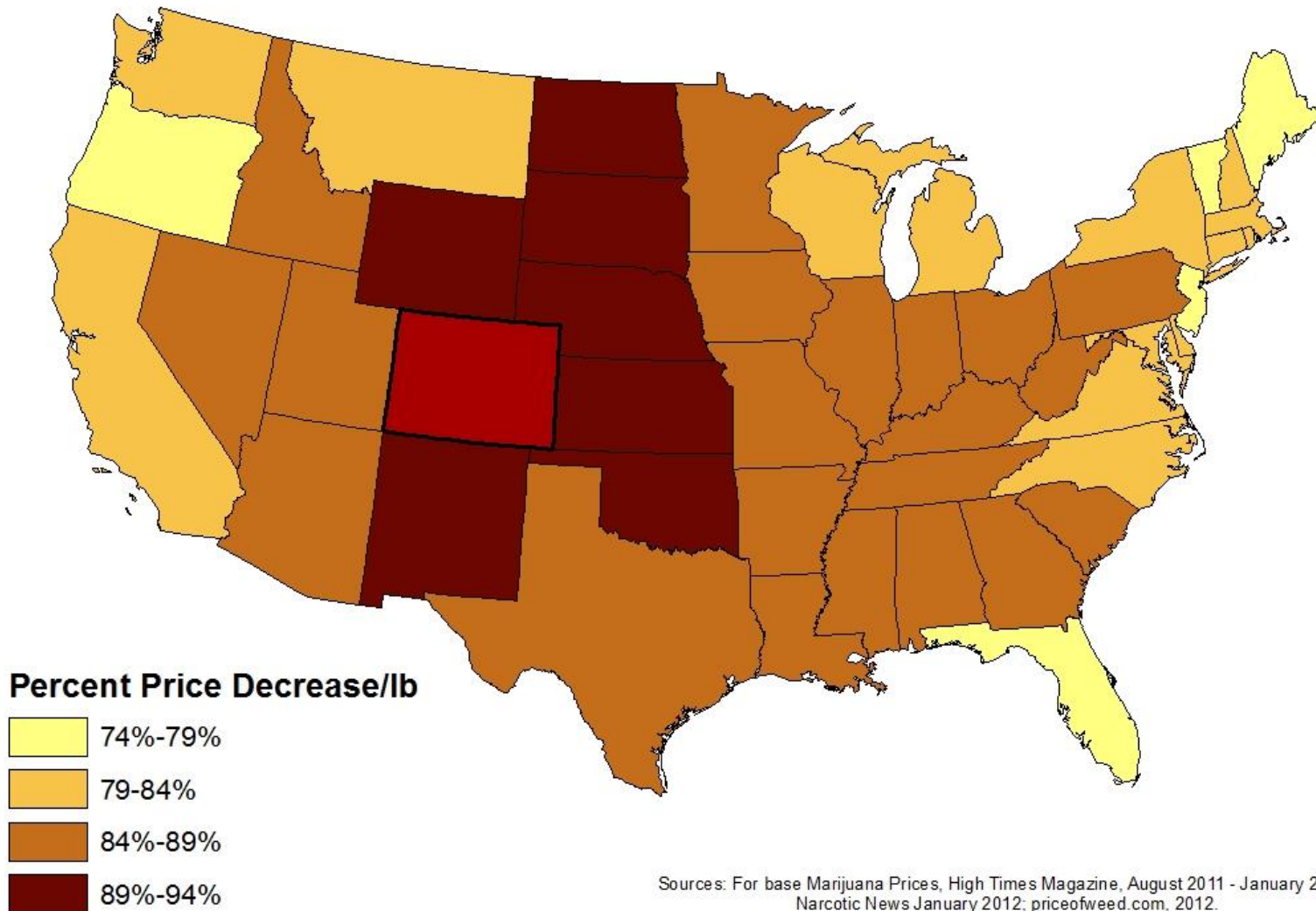
Sources: For base Marijuana Prices, High Times Magazine, August 2011 - January 2012; Narcotic News January 2012; priceofweed.com, 2012.

# How Would Legalization in Colorado Affect Prices in New York?

- Sinsemilla diverted from CO production could be sold in NY for a little over \$1,000 per pound
- Current prices 2 – 5 times higher than that
  - \$2,500 - \$6,000 in New York City
  - \$3,250 - \$5,000 in Albany
- CO Amendment #64 has a “smurf protection clause” – retailers banned from recording IDs



# Over Time, Trafficking Diverted MJ Could Depress Prices Across U.S.

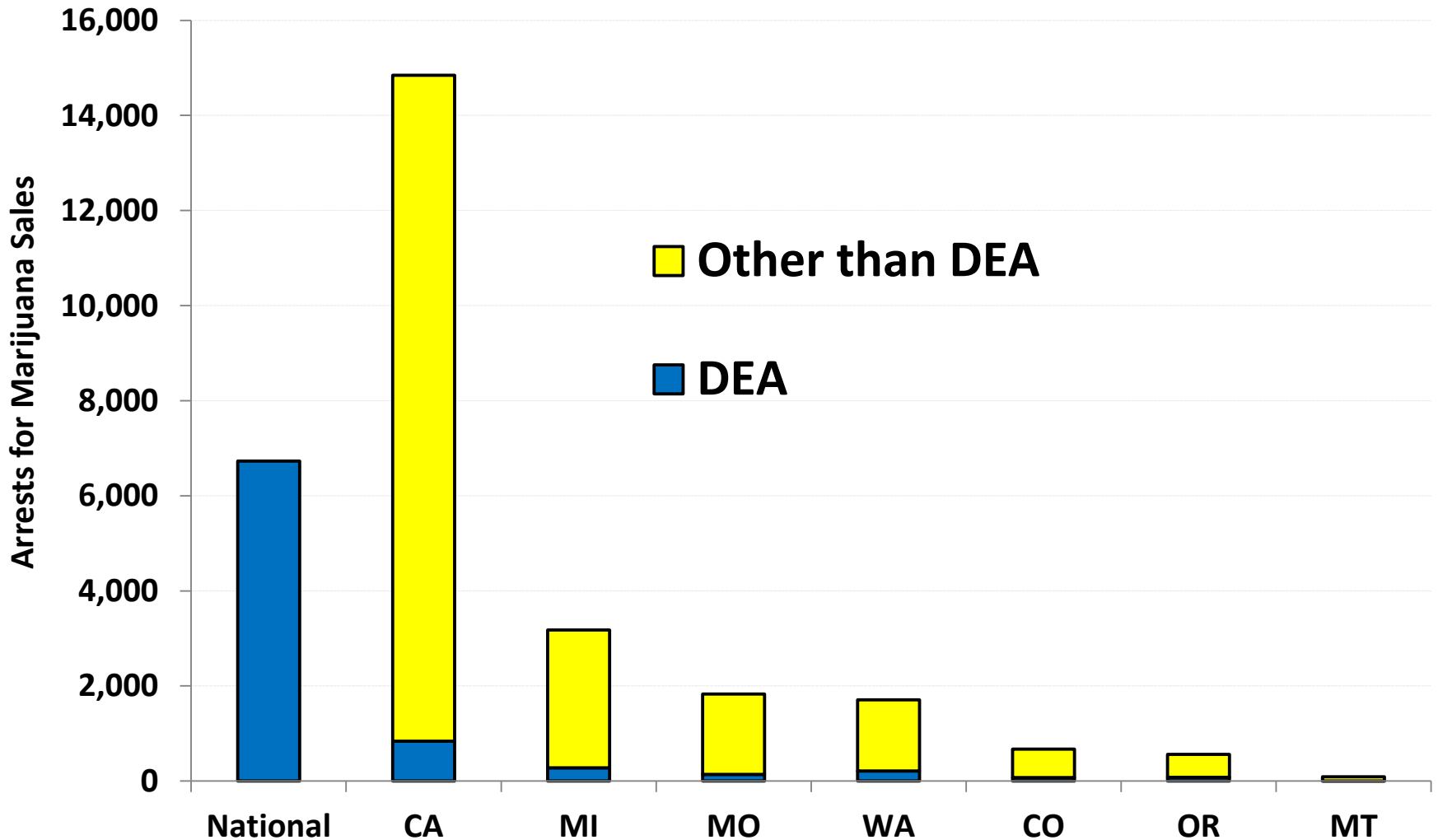


Sources: For base Marijuana Prices, High Times Magazine, August 2011 - January 2012; Narcotic News January 2012; priceofweed.com, 2012.

## Prediction #5

- Federal government will not fill in for all state & local enforcement???
- State & local police make
  - 90+% of MJ sales arrests
  - 99% of all MJ arrests

# Can/Will DEA Make Up for Eliminated State and Local Arrests?



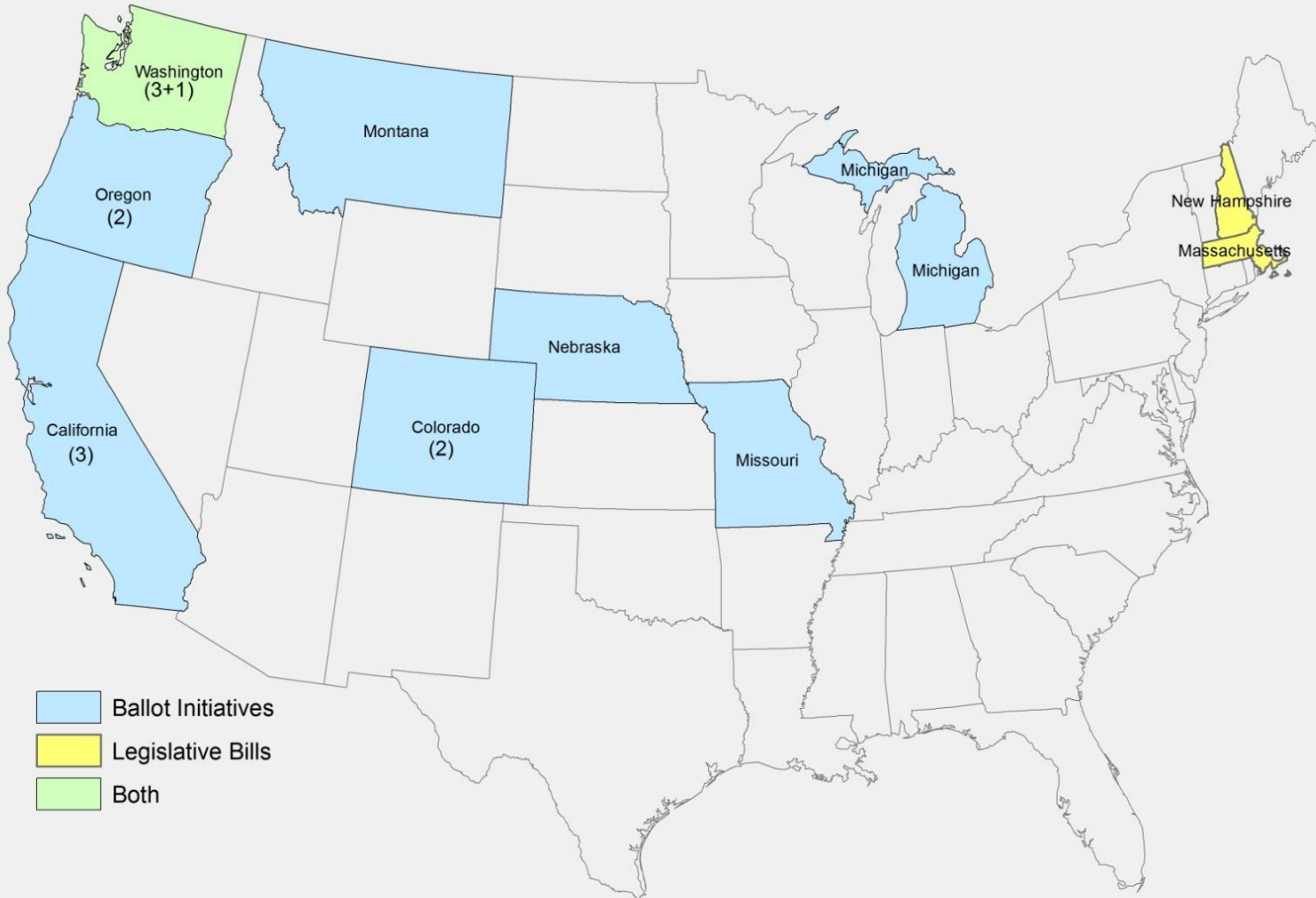
# Federal Dilemma: Attacking Regs Could Be a “Double-Edged Sword”

- Quashing a regulatory structure would be easier than replacing missing enforcement, but
  - Exacerbate price decline by eliminating taxes
  - Shift profits from regular business to illegal businesses
  - Undermine public health aspects regulations
  - **Encourage advocates to focus on *Repeal Only* propositions**

## Prediction #6

- More states will legalize
- Some may do so less “responsibly”

# 10 States Considered Legalization in 2012



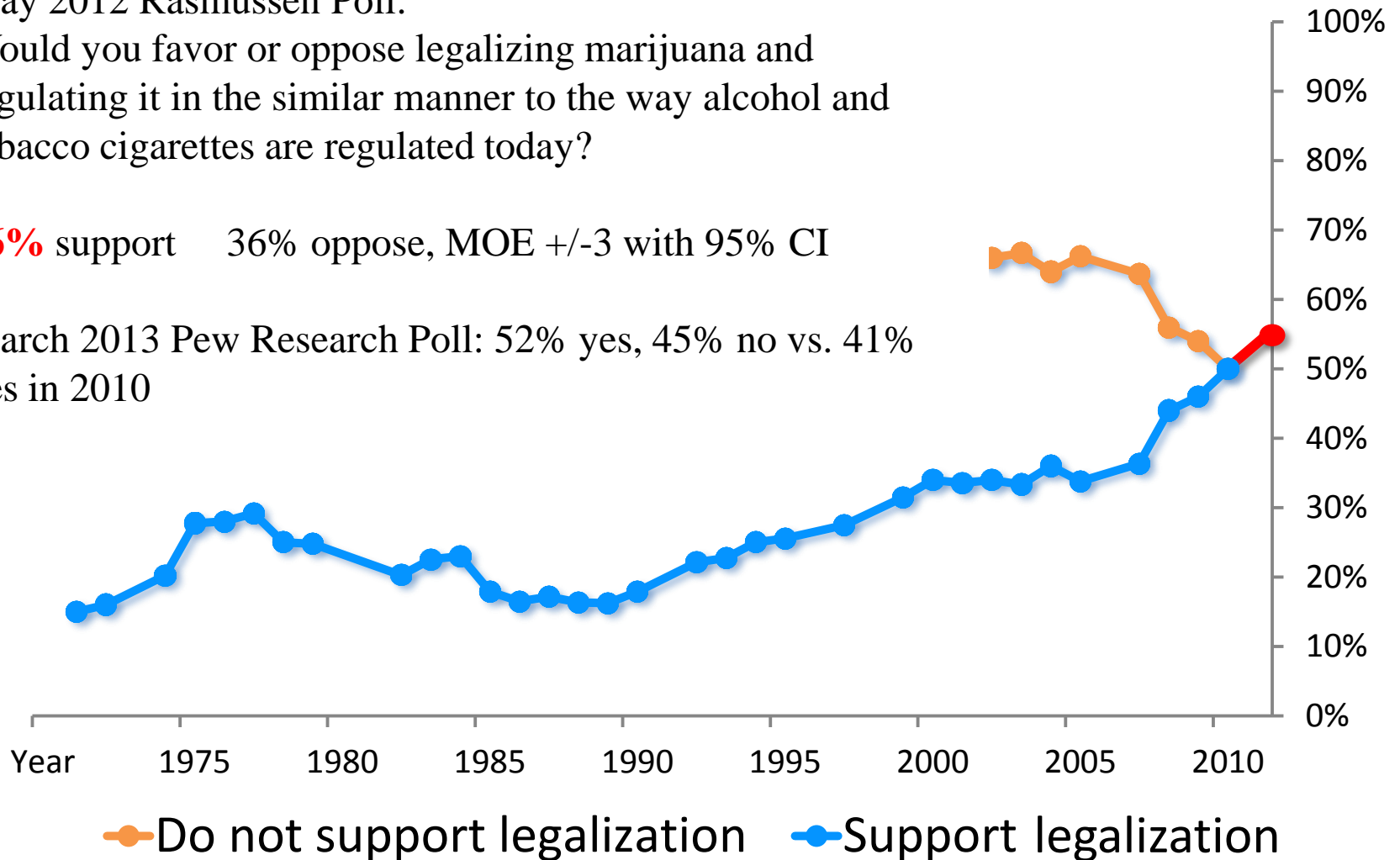
# National Support Exceeds 50%

May 2012 Rasmussen Poll:

Would you favor or oppose legalizing marijuana and regulating it in the similar manner to the way alcohol and tobacco cigarettes are regulated today?

**56%** support 36% oppose, MOE +/-3 with 95% CI

March 2013 Pew Research Poll: 52% yes, 45% no vs. 41% yes in 2010



Sources: Gallup <http://bit.ly/olrSEQ> and GSS, Rasmussen <http://bit.ly/JVLlij>

# Not All Legalization Proposals Are Alike: There Are Three Broad Categories

## Repeal Only

- Repeals state laws pertaining to marijuana
- OR, MT and CA explicitly allow the legislature to regulate
- All set an age limit

## Repeal and Delegate

- A regulatory body “shall” develop specific regulations
- NE delegates to the legislature, OR and CA to a new body and MO to an existing body
- Few details

## Repeal and Regulate

All Specify

- Regulatory body
- Tax/fee structure
- Licensing Process
- Personal growing limits
- Model regulations (alcohol)
- Workplace rules
- DUI regulations
- Penalties for violations



# Examples of WA 502's Good-Faith Efforts to Regulate Responsibly

- Allows for quality control testing
- Restricts storefront advertising to simple signage
- Regulates other advertising
- Requires employees to be 21 or older
- Forbids establishments from locating within 1,000 feet of a school, park, or daycare center
- LCB empowered to limit the # of retail outlets and regulate many aspects of production and sale
- Earmarks money to evaluate effects and costs

# Oregon's Cannabis Tax Act Differed

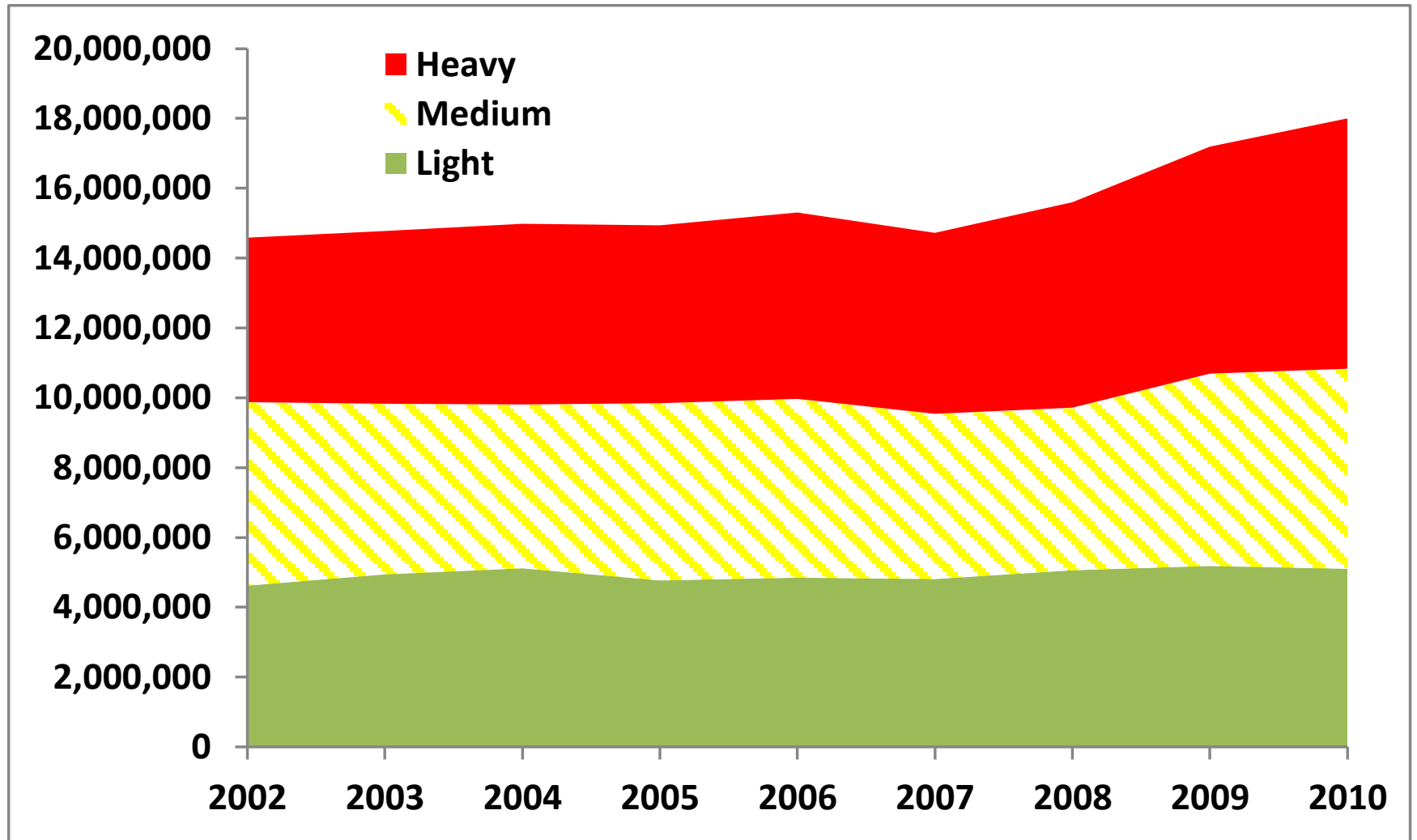
- OR Cannabis Commission (OCC) regulates industry
  - Regulatory capture built in: 5 of 7 members elected by growers
- State stores monopoly on non-medical sales
  - Licensed private contractors would be paid 15% of the OCC store's gross sales to produce & sell to OCC
  - Pharmacies could sell medical marijuana at cost
- OCTA would not allow local opt out
  - “fully replace and supersede all statutes, municipal charter enactments, and local ordinances”
- AG “shall vigorously defend this Act and any person prosecuted for acts licensed under it”

# One Final Prediction

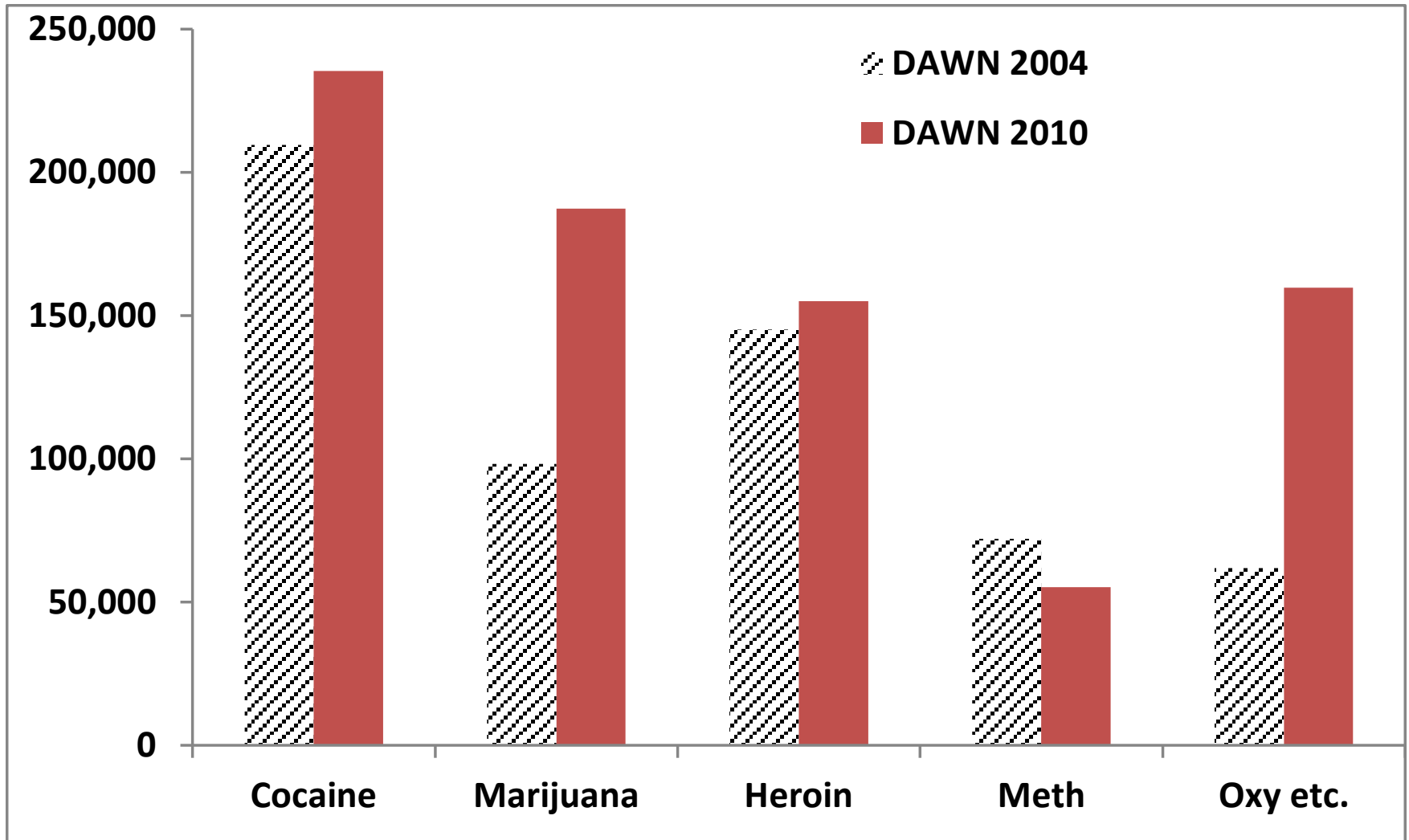
- **Time Will Prove Me Wrong**  
–(on at least some of this)
- “Prediction is very hard, especially about the future.” Yogi Berra
- “Prediction is very hard, especially about marijuana legalization.” JPC

# Back up Slides

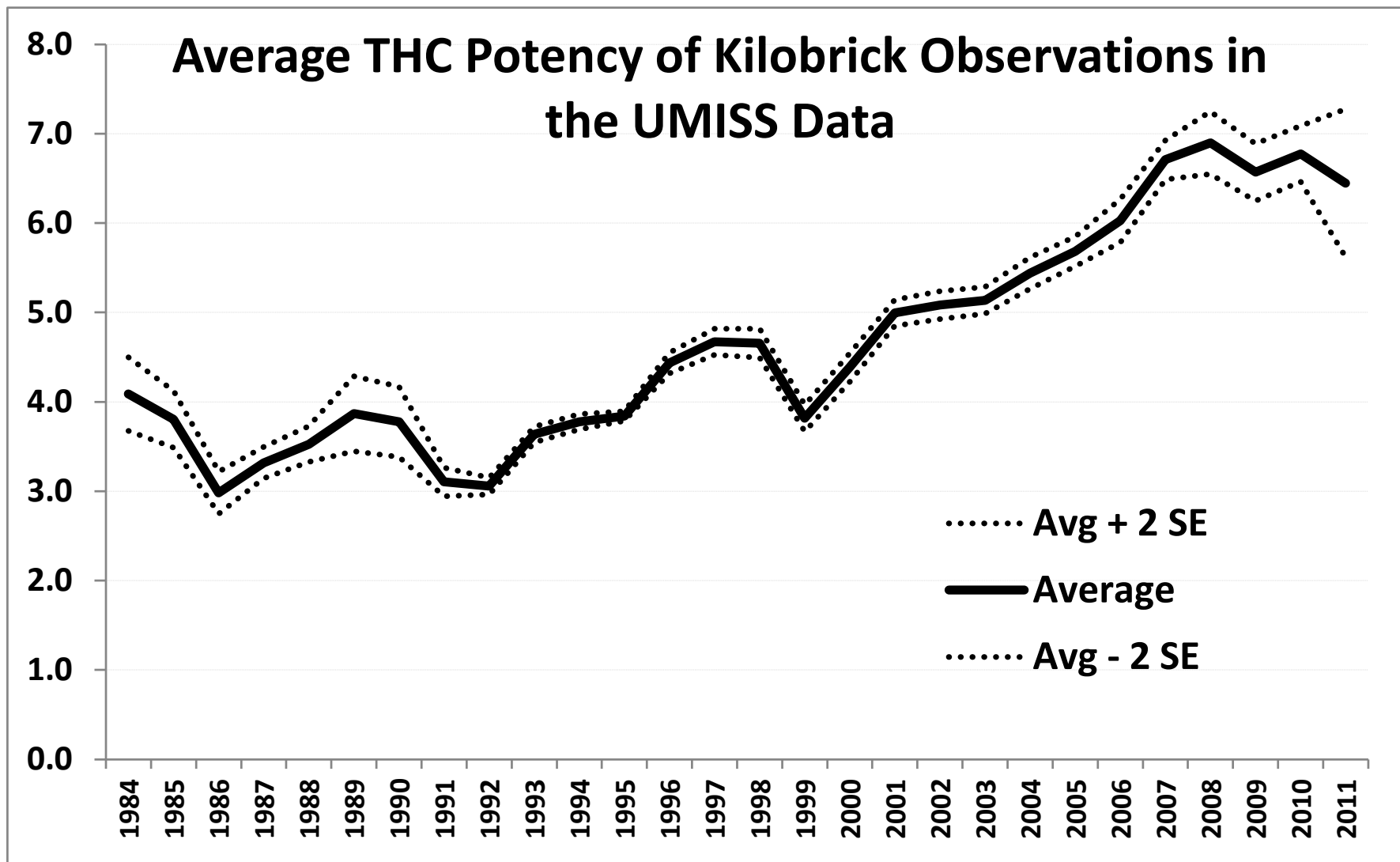
# Number of Past Month Users



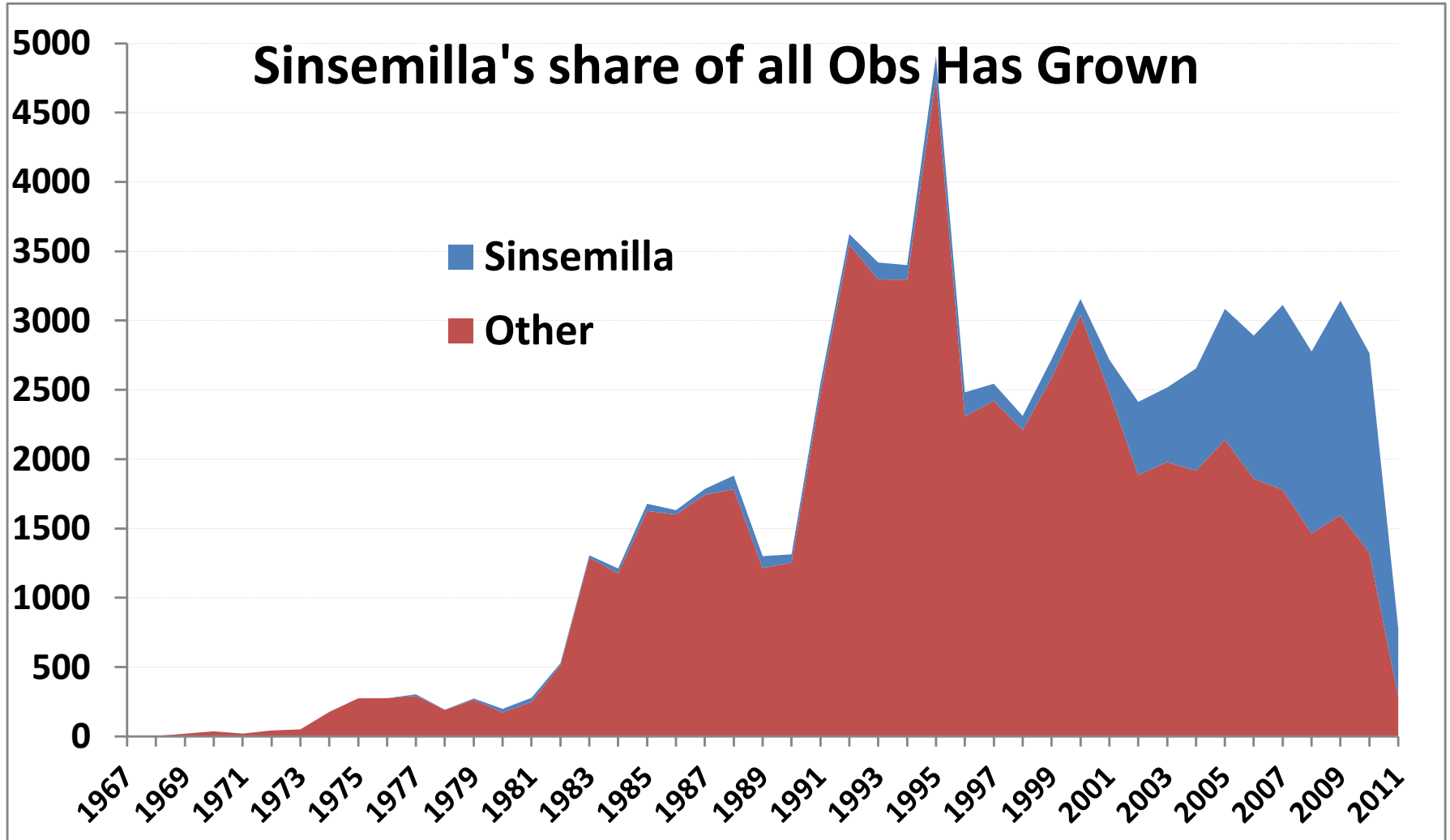
# Emergency Department Mentions



# Mexican Imports Getting More Potent



# Sinsemilla's Market Share Appears to Be Rising





# Commonalities of CO & WA props

- Embrace a free market approach
  - Govt. regulates but does not participate in trade
- Regulators making a “good faith effort”
  - E.g., WA
    - Restricts storefront advertising to simple signage
    - Forbids establishments from locating within 1,000 feet of a school, park, or daycare center
- Ad valorem taxes
  - CO: 15% at wholesale (excluding medical MJ)
  - WA: Three 25% taxes at different market levels
- Earmark tax revenue for popular causes
  - CO: Public schools
  - WA: Prevention, research, ed, and health care