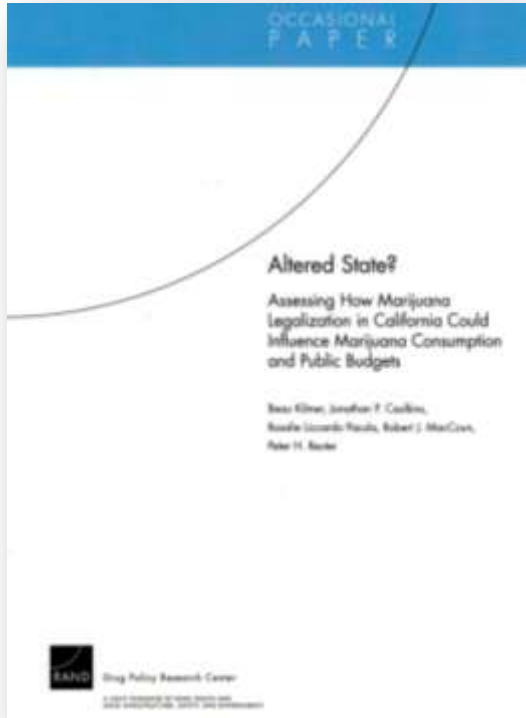


Predicting the Uncertain Future of Legal Marijuana

Comments based on many collaborations



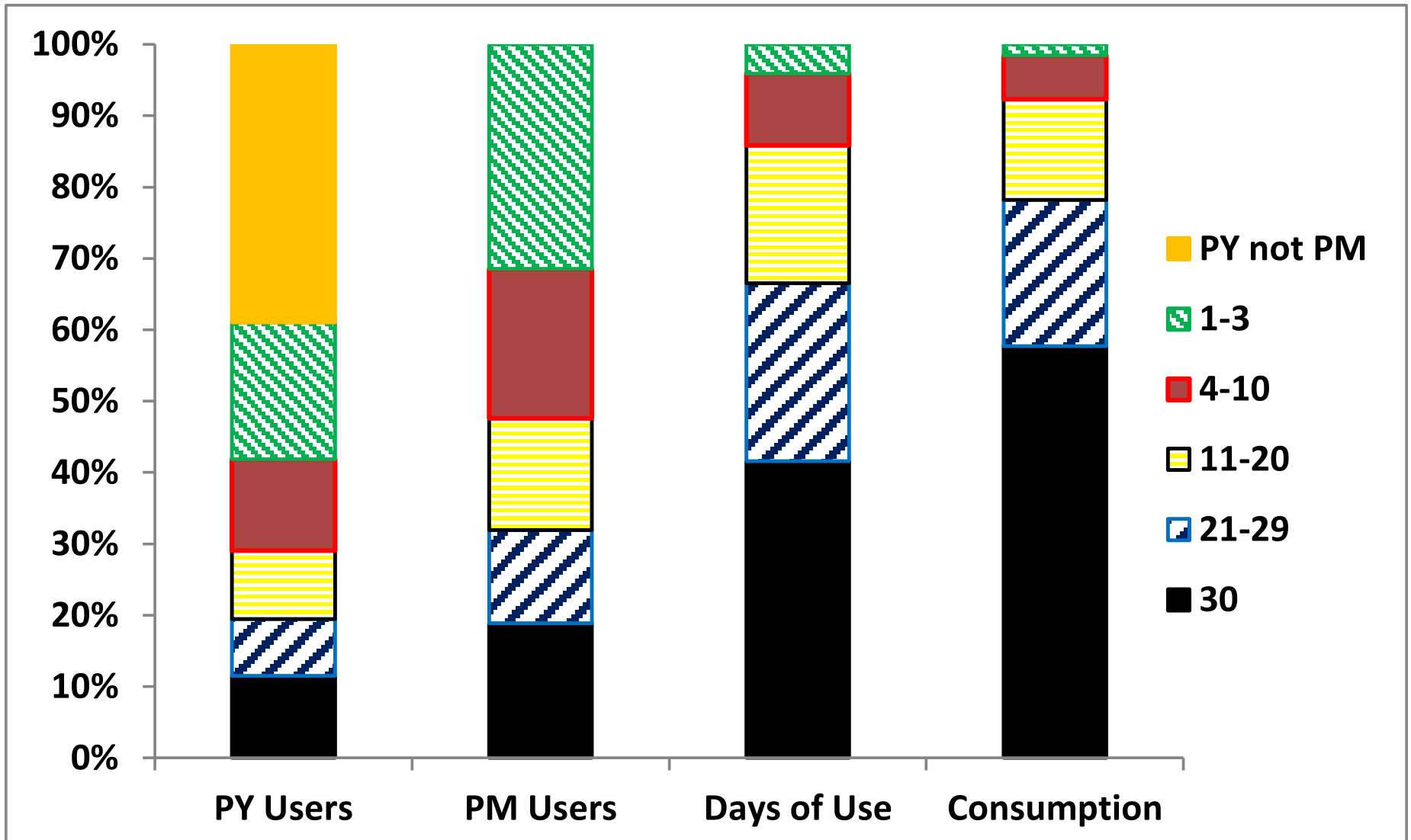
dprc.rand.org

www.MarijuanaLegalization.info

Prediction #1

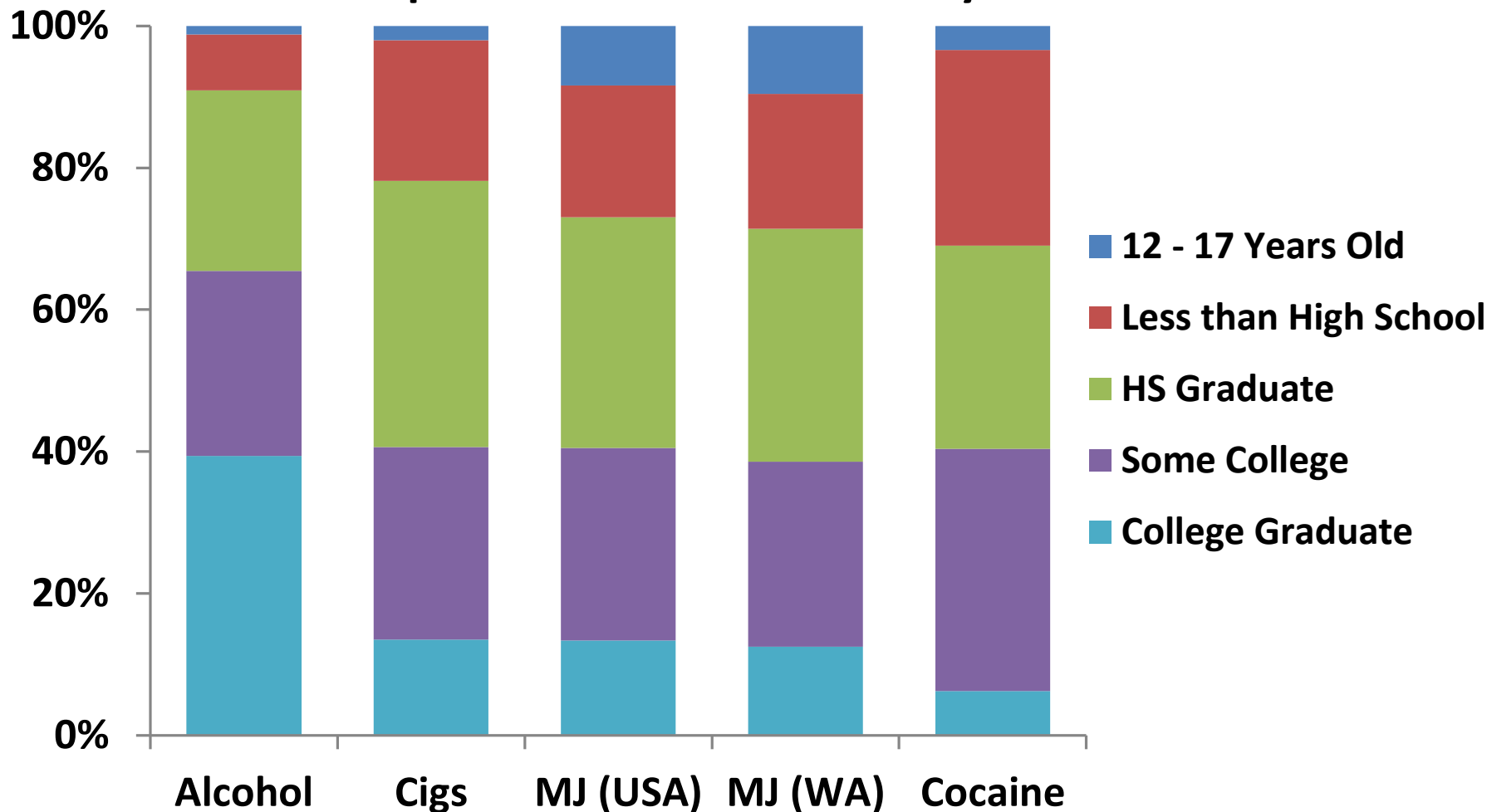
- Consumption will be concentrated among daily/near-daily “blue-collar” users, not among youth.

Daily & Near-Daily Users Dominate Consumption

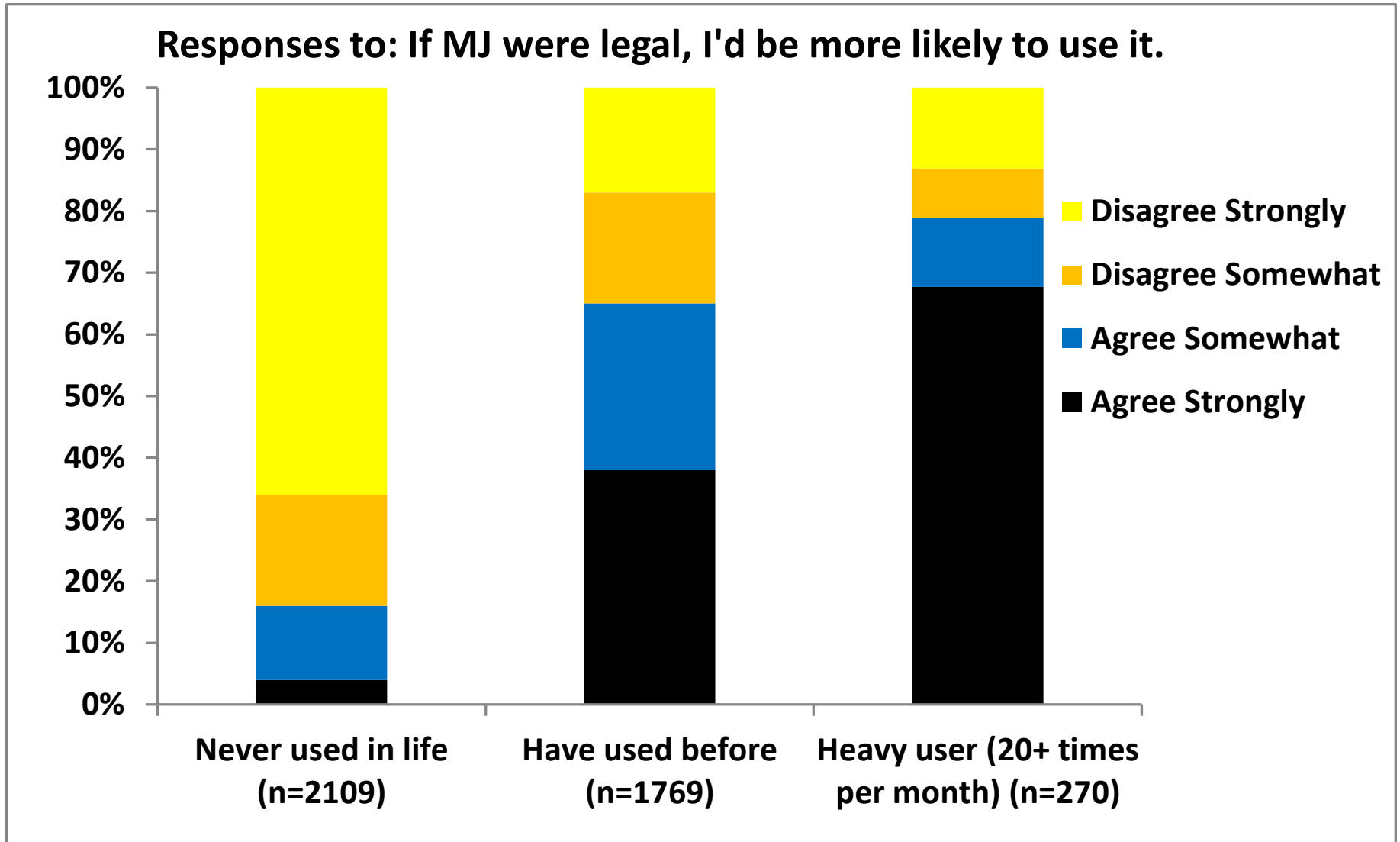


Most MJ Used by Demographics that Shop Walmart

Proportion of Past-Month Days of Use

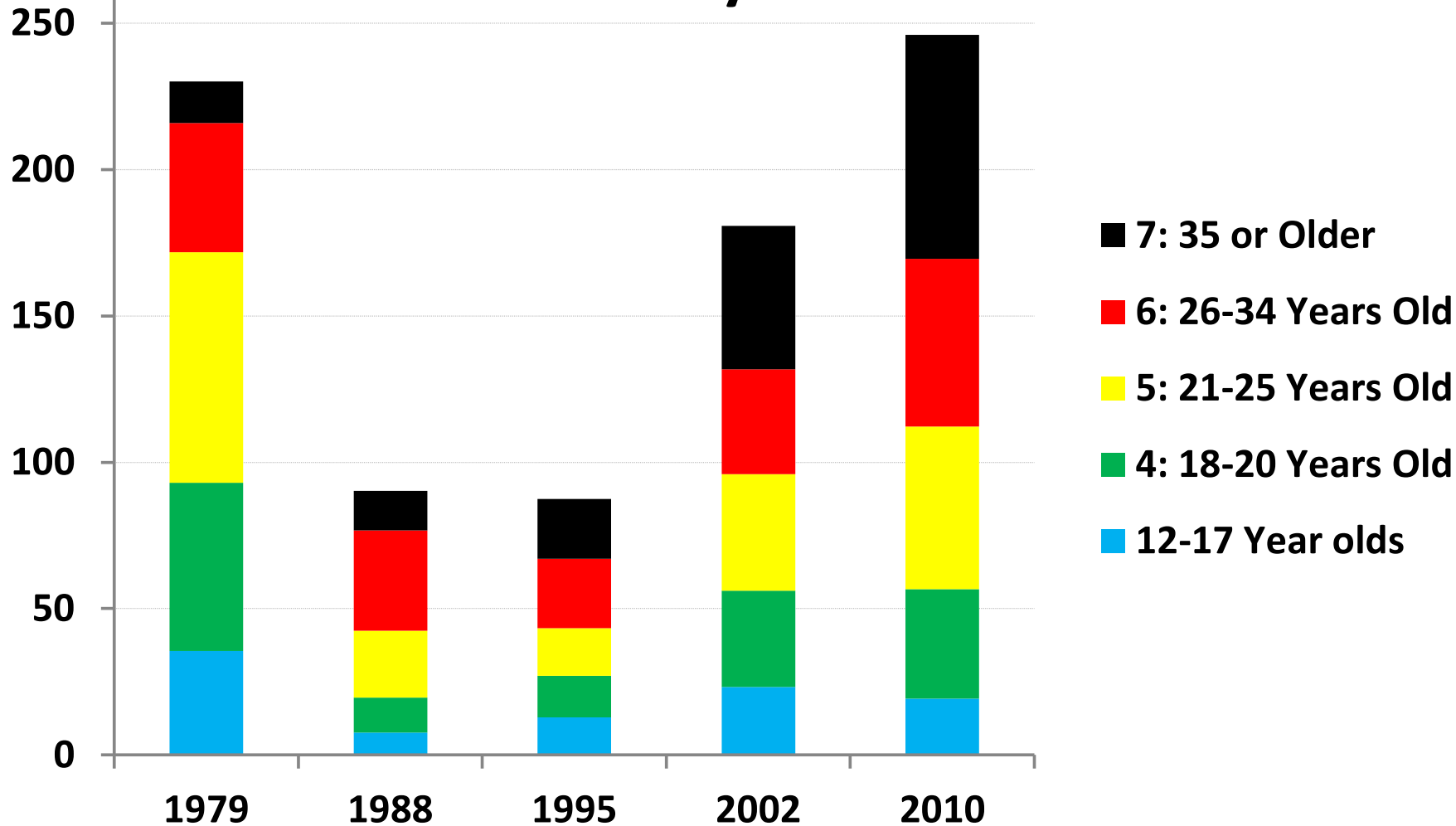


Youth Themselves Think Legalization Will Increase Their Use

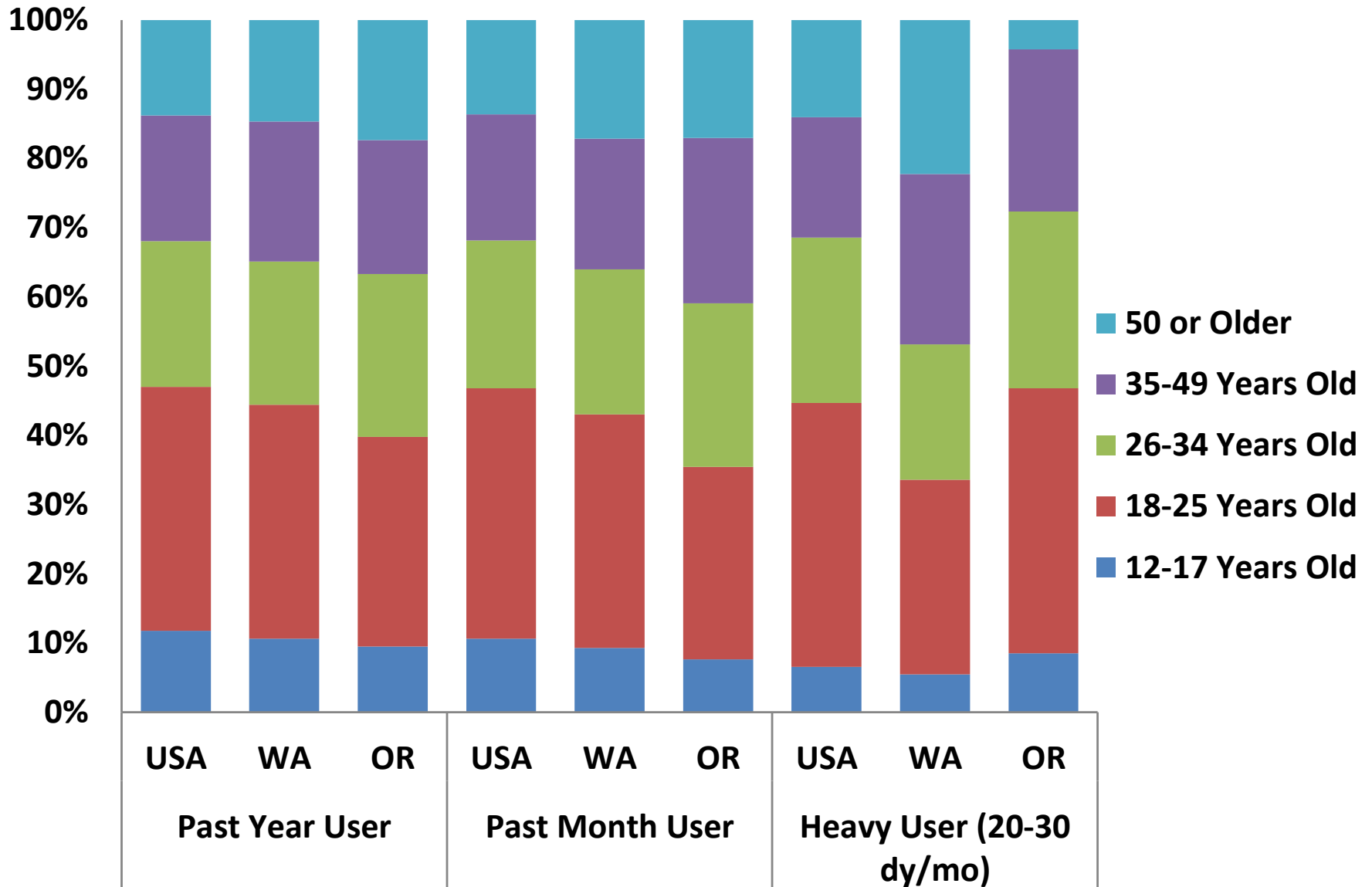


But Use Is No Longer Concentrated Among Youth

Millions of Days of MJ Use



WA's Users Even Older than Elsewhere



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



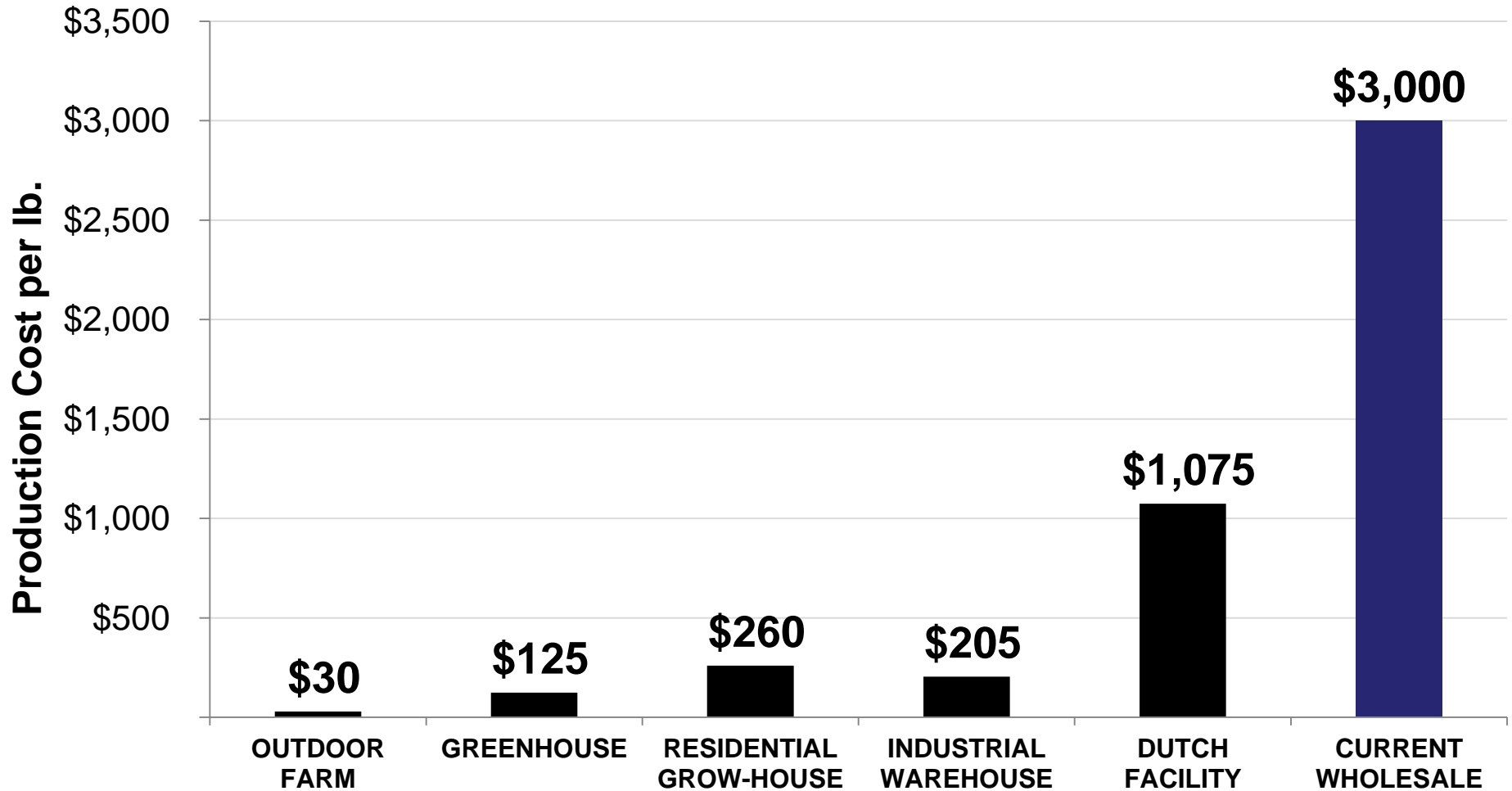
Prediction #2

- 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 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)

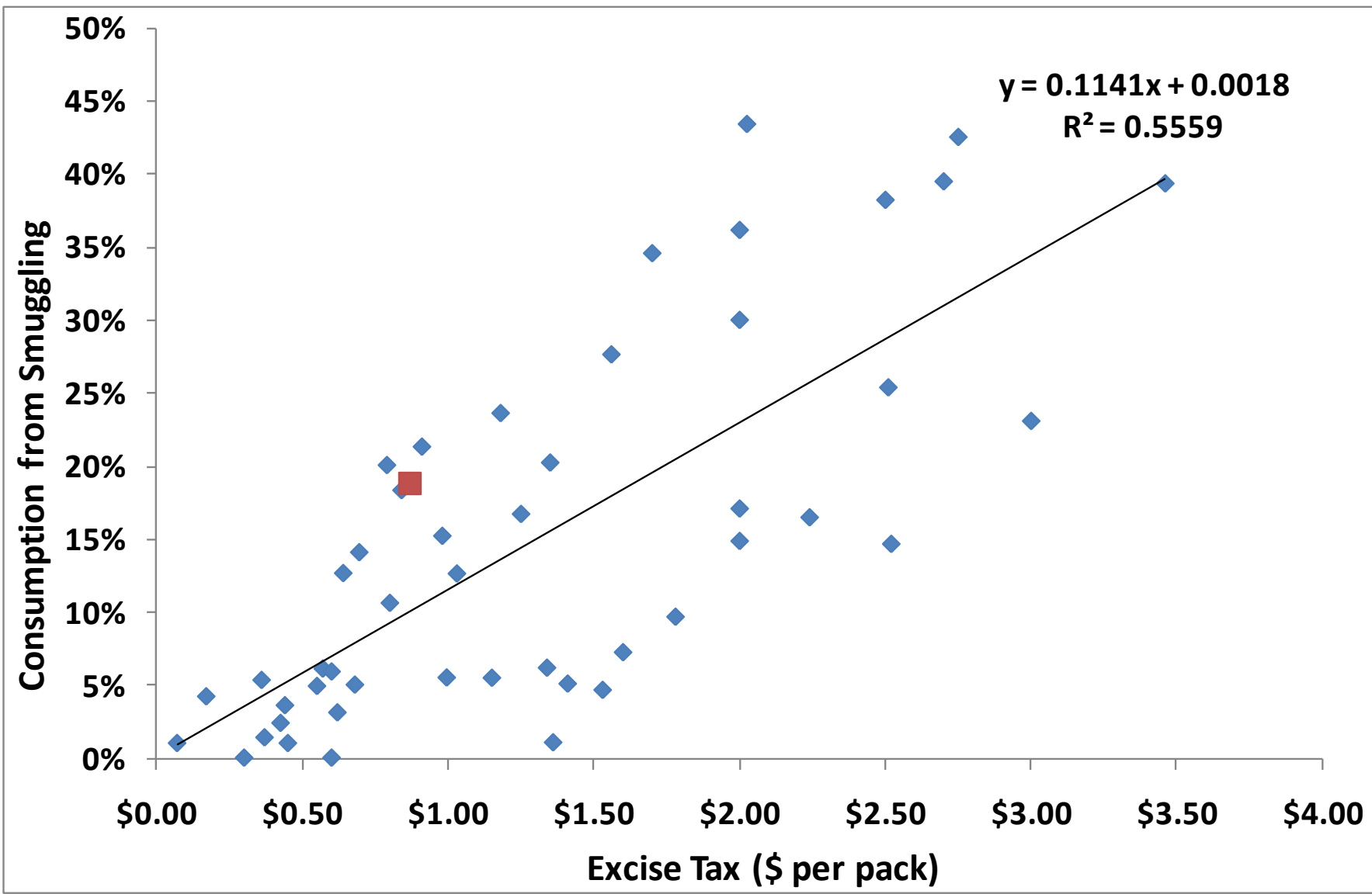
- Will be hard to make money on basic intoxicant
- Think organic vs. generic vegetables



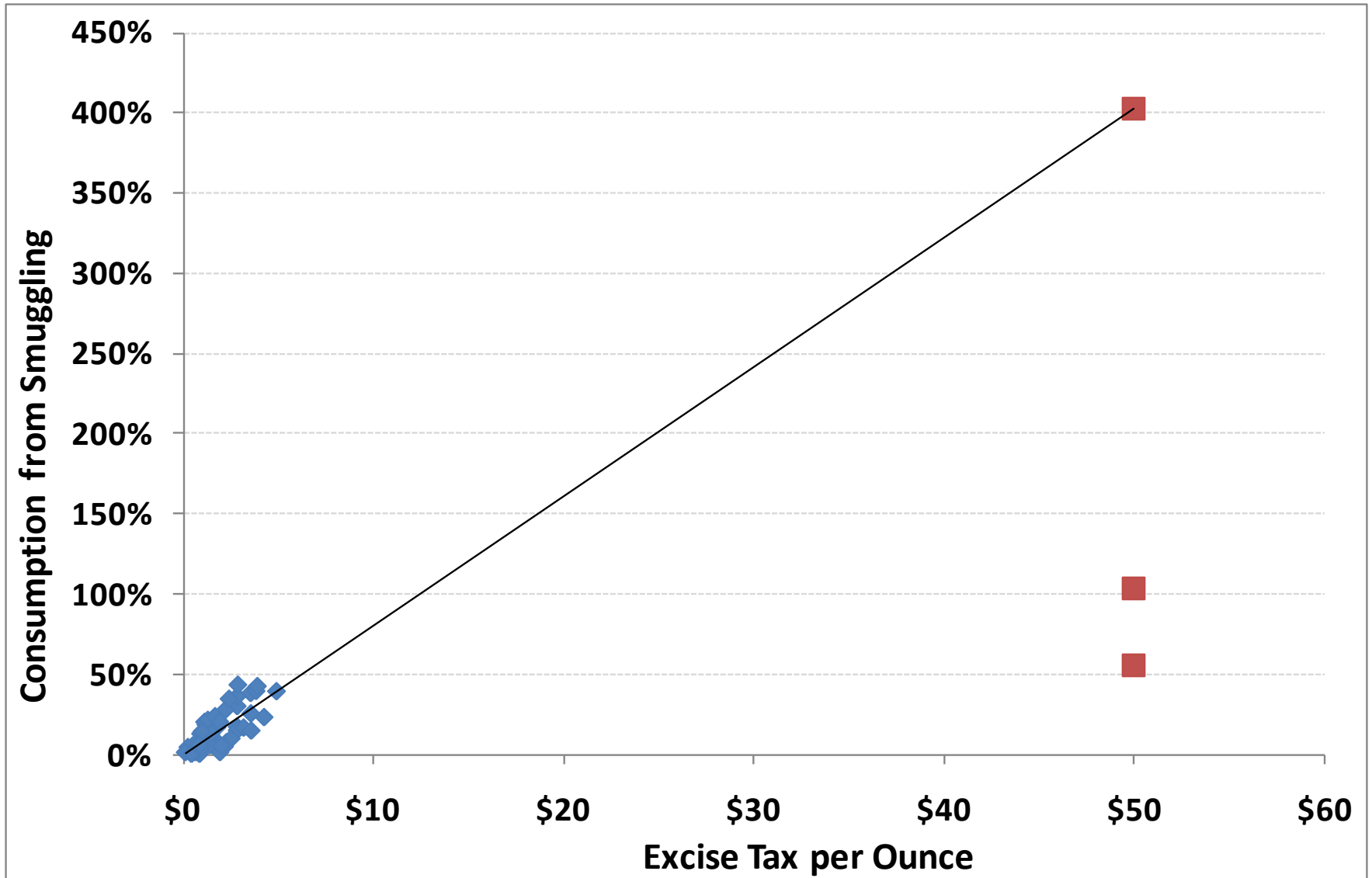
Prediction #3

- 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



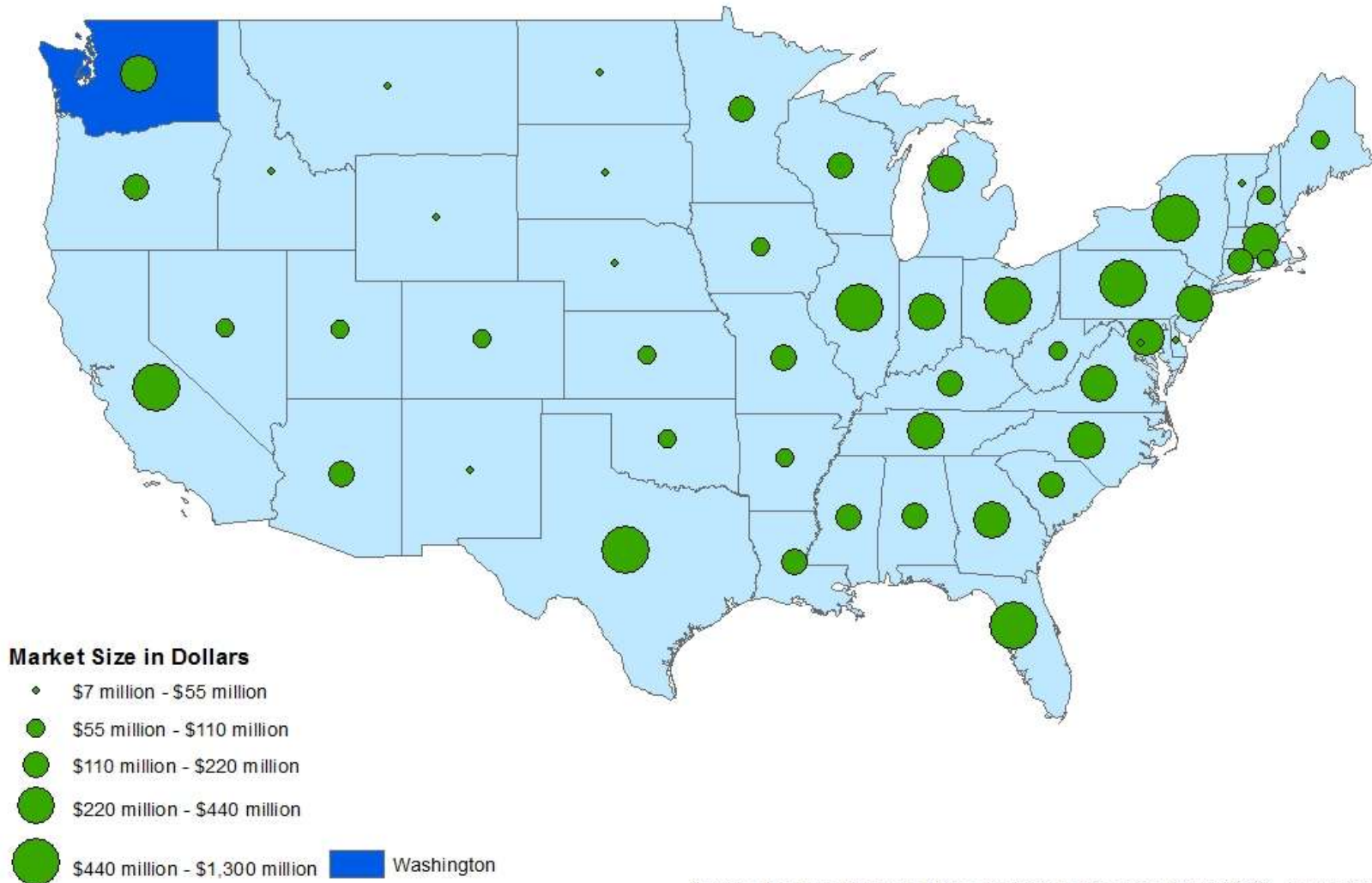
Placing a \$50 per Ounce MJ Tax on the Same Scale



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

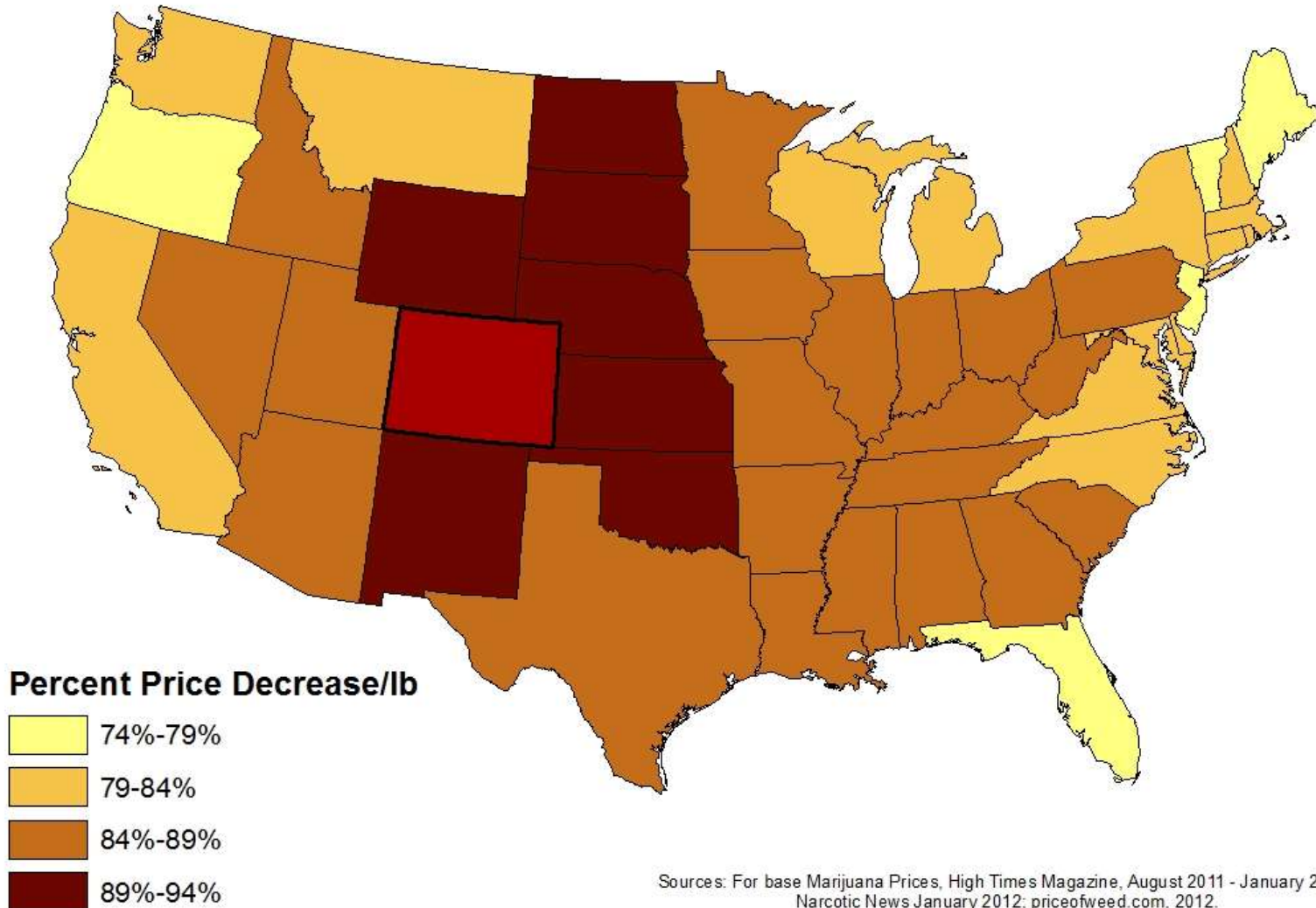


Sources: For base Marijuana Prices, High Times Magazine, August 2011 - January 2012; Narcotic News January 2012; priceofweed.com, 2012.

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.

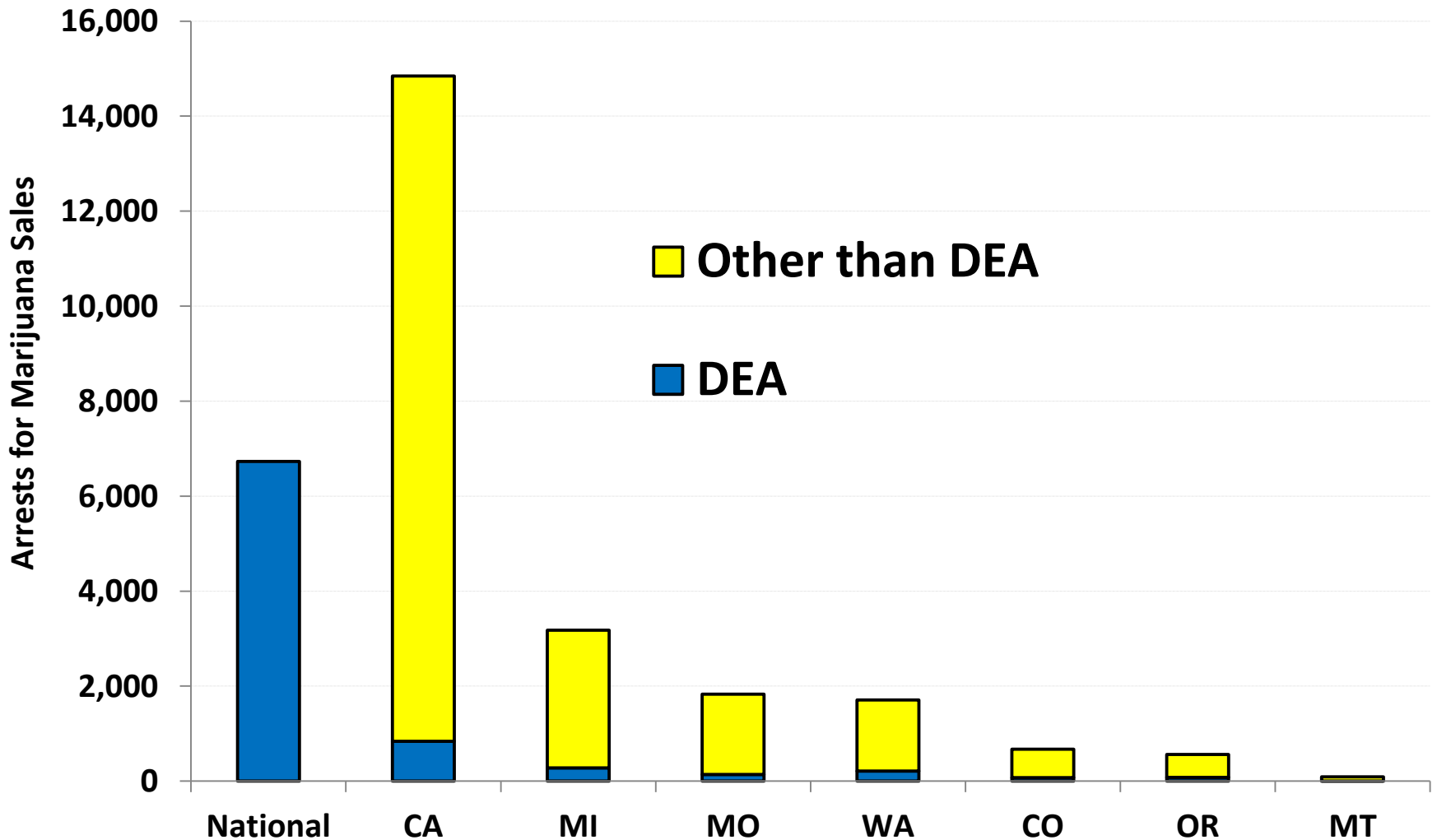


Sources: For base Marijuana Prices, High Times Magazine, August 2011 - January 2012; Narcotic News January 2012; priceofweed.com, 2012.

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?



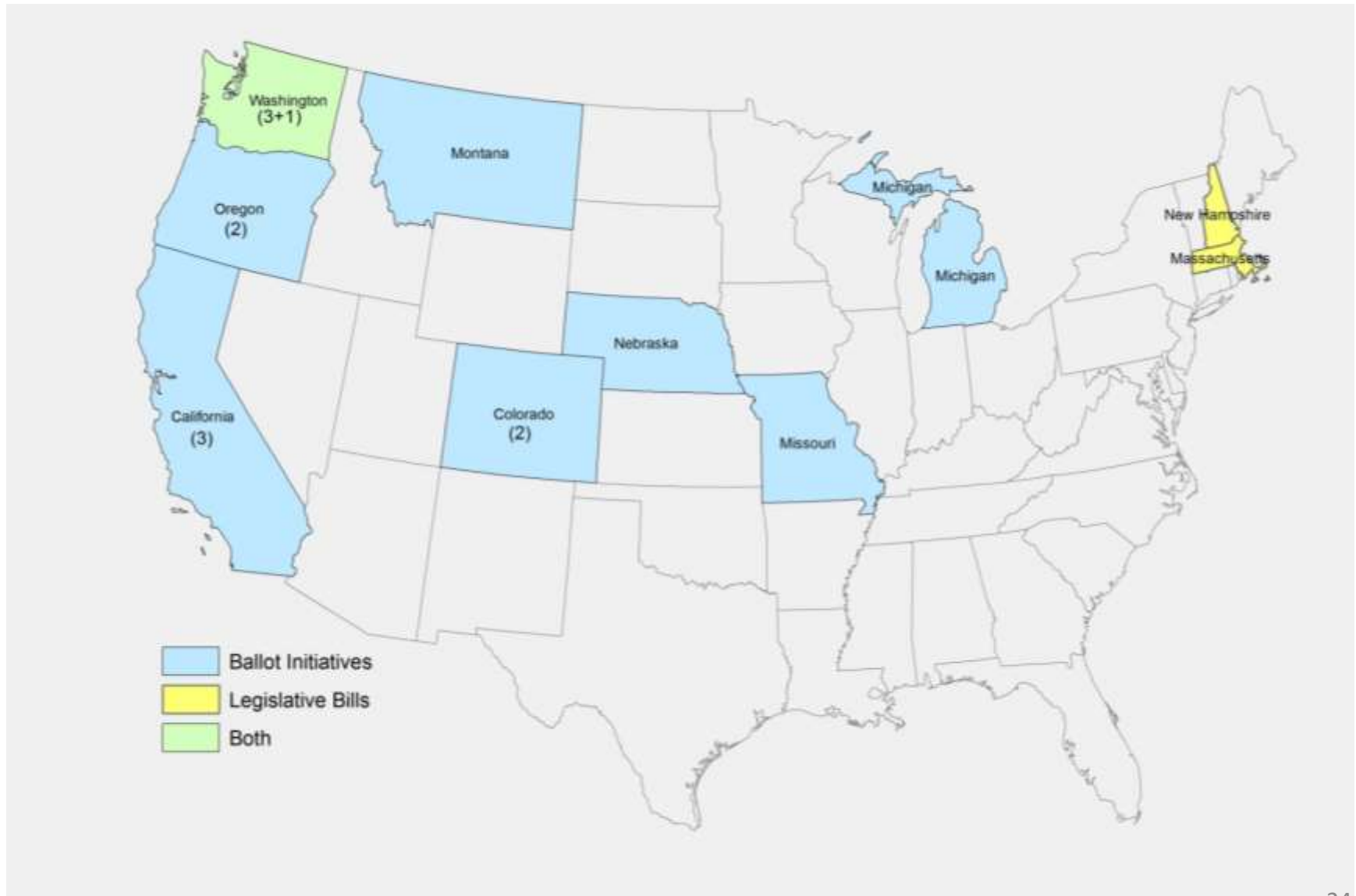
Federal Dilemma: Attacking Regs Could Be a “Double-Edged Sword”

- 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



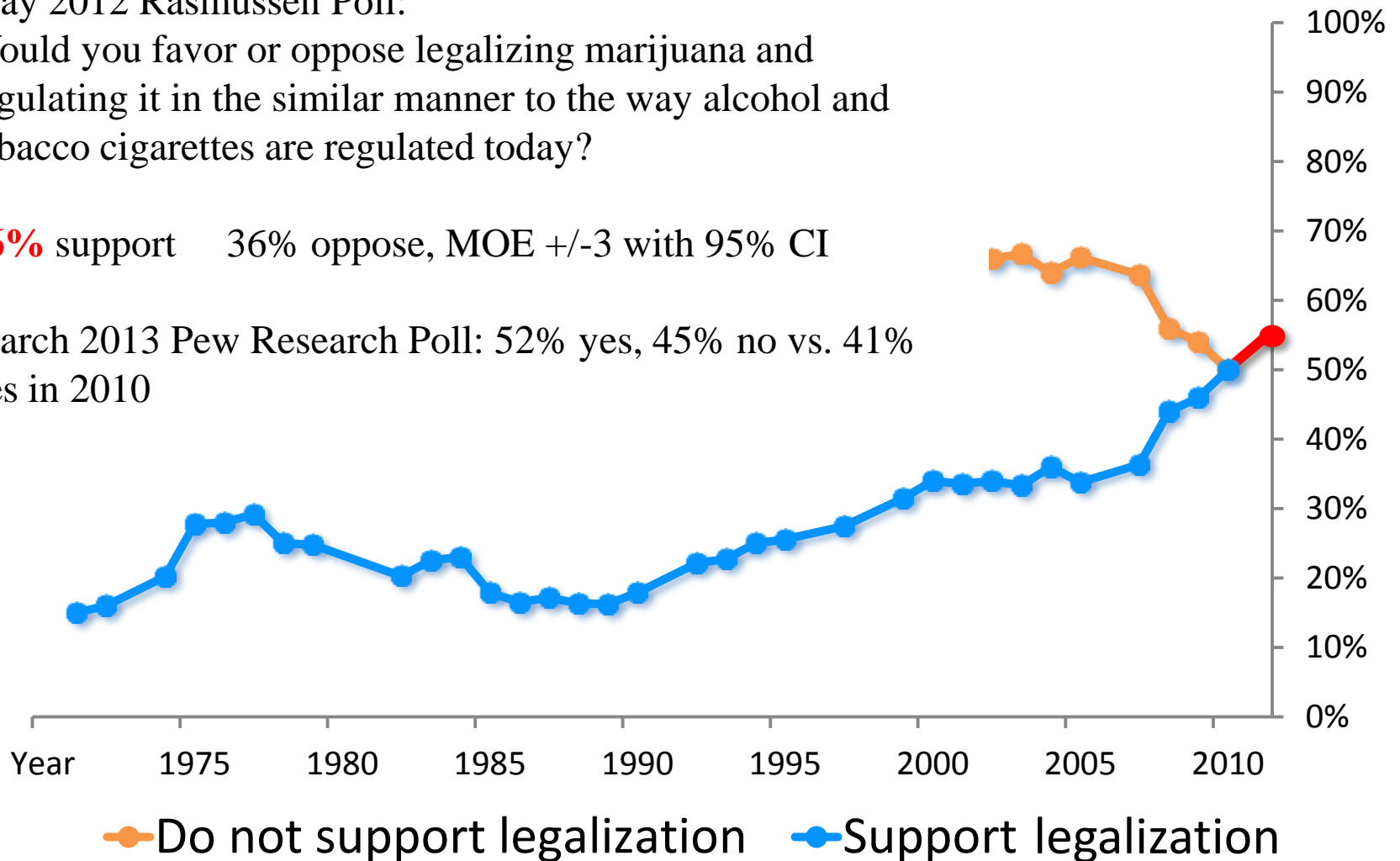
National Support Exceeds 50%

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/JVLIj>

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

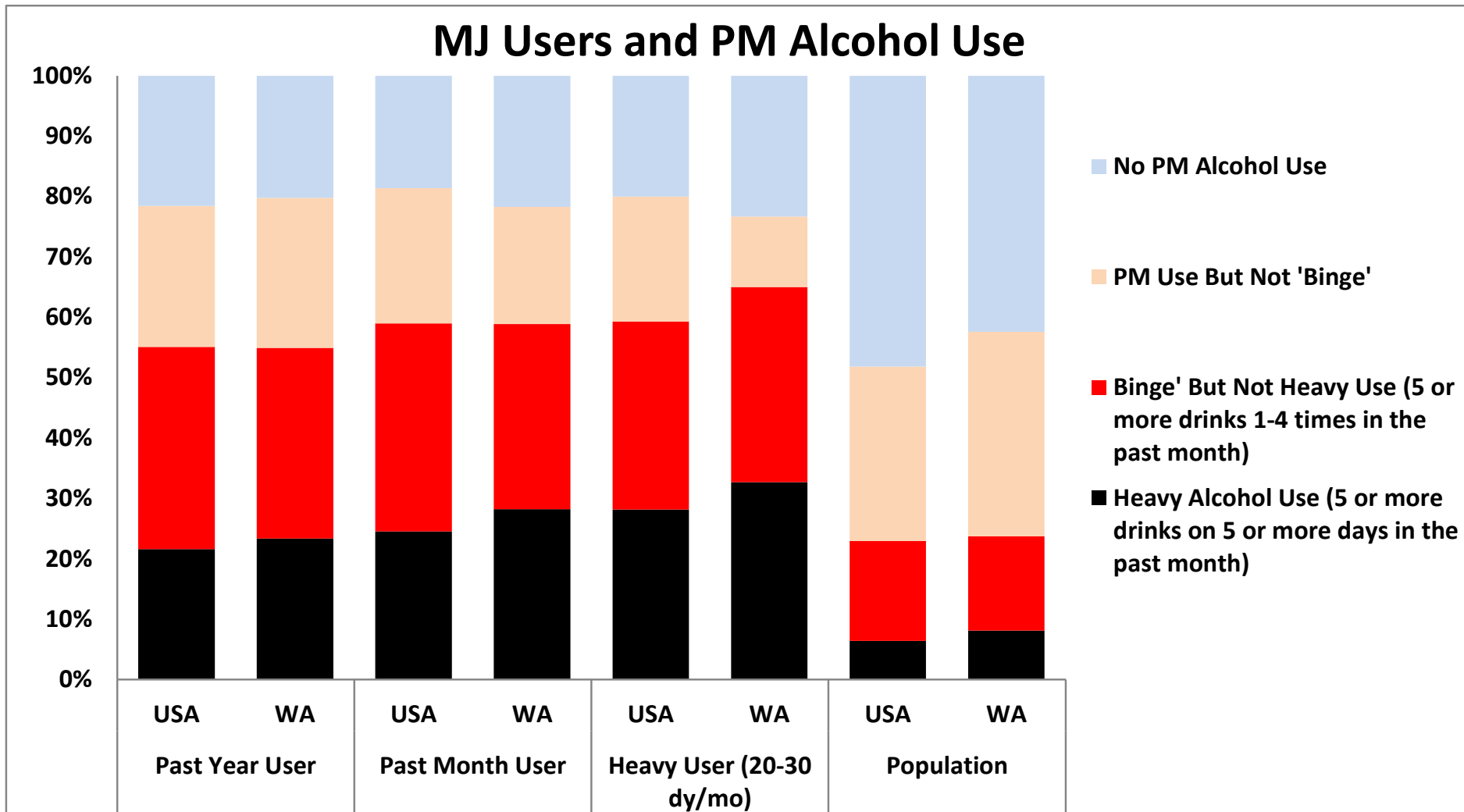
Oregon's Cannabis Tax Act Differed

- 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”

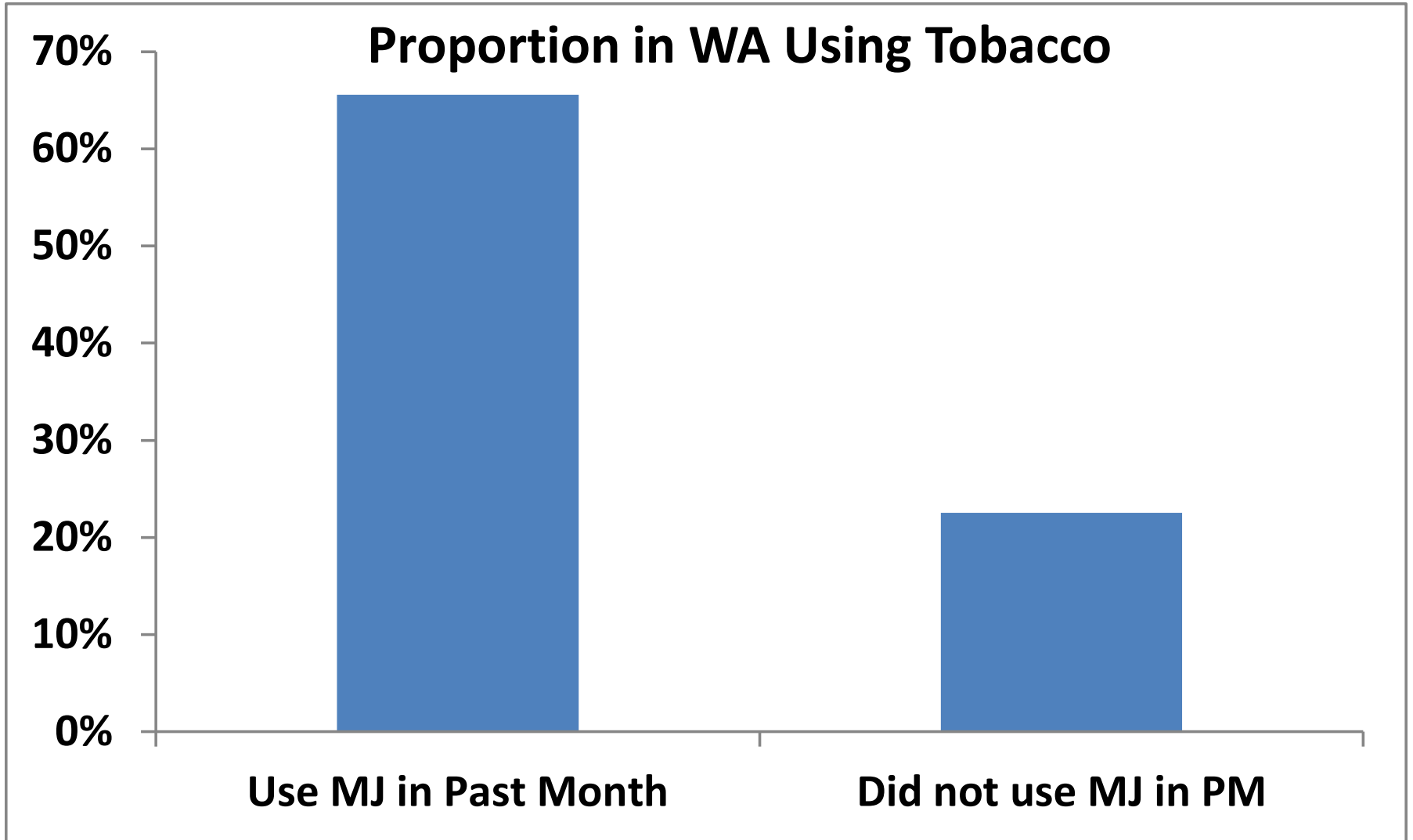
Prediction #7

- Interactions with alcohol are key.
 - Billion dollar question is whether MJ will substitute for or complement alcohol
 - And cigarettes
 - Fight over impaired driving may be just beginning.

A Goodly Share of MJ Is Used by People Who Abuse Alcohol



Will MJ Legalization Affect Tobacco Use?



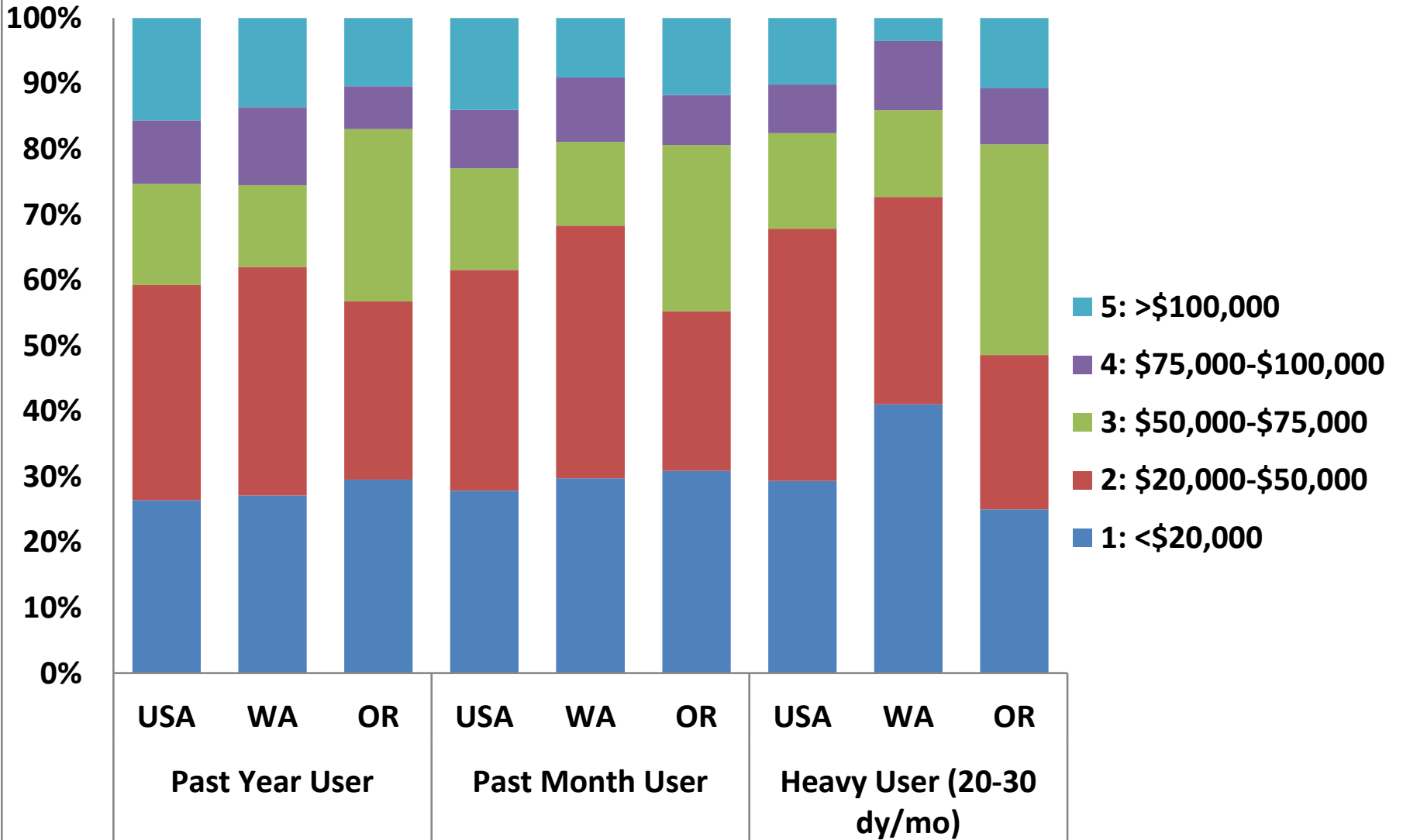
One Final Prediction

- **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

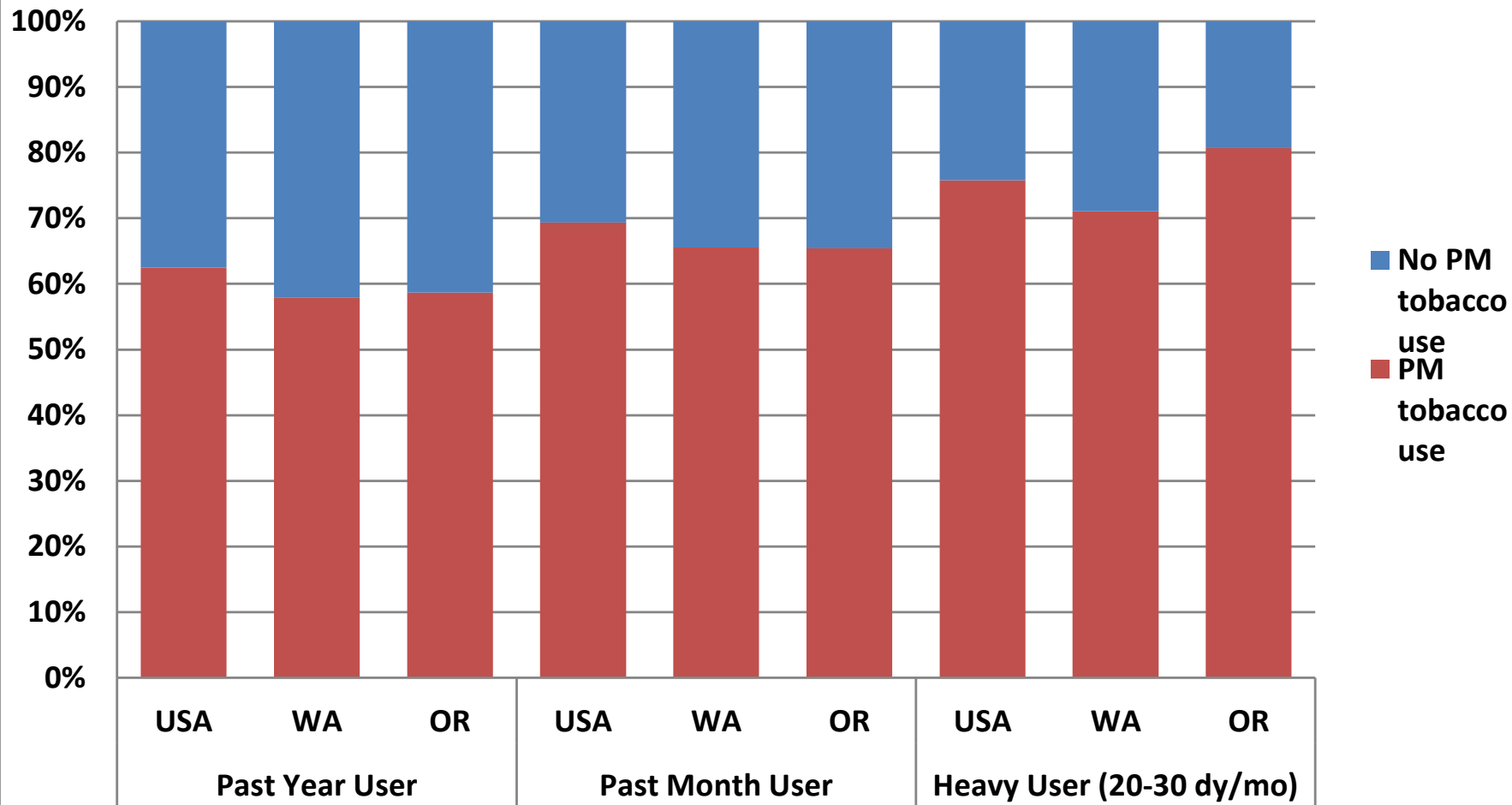
MJ Use by Income

MJ Users by Income Bracket

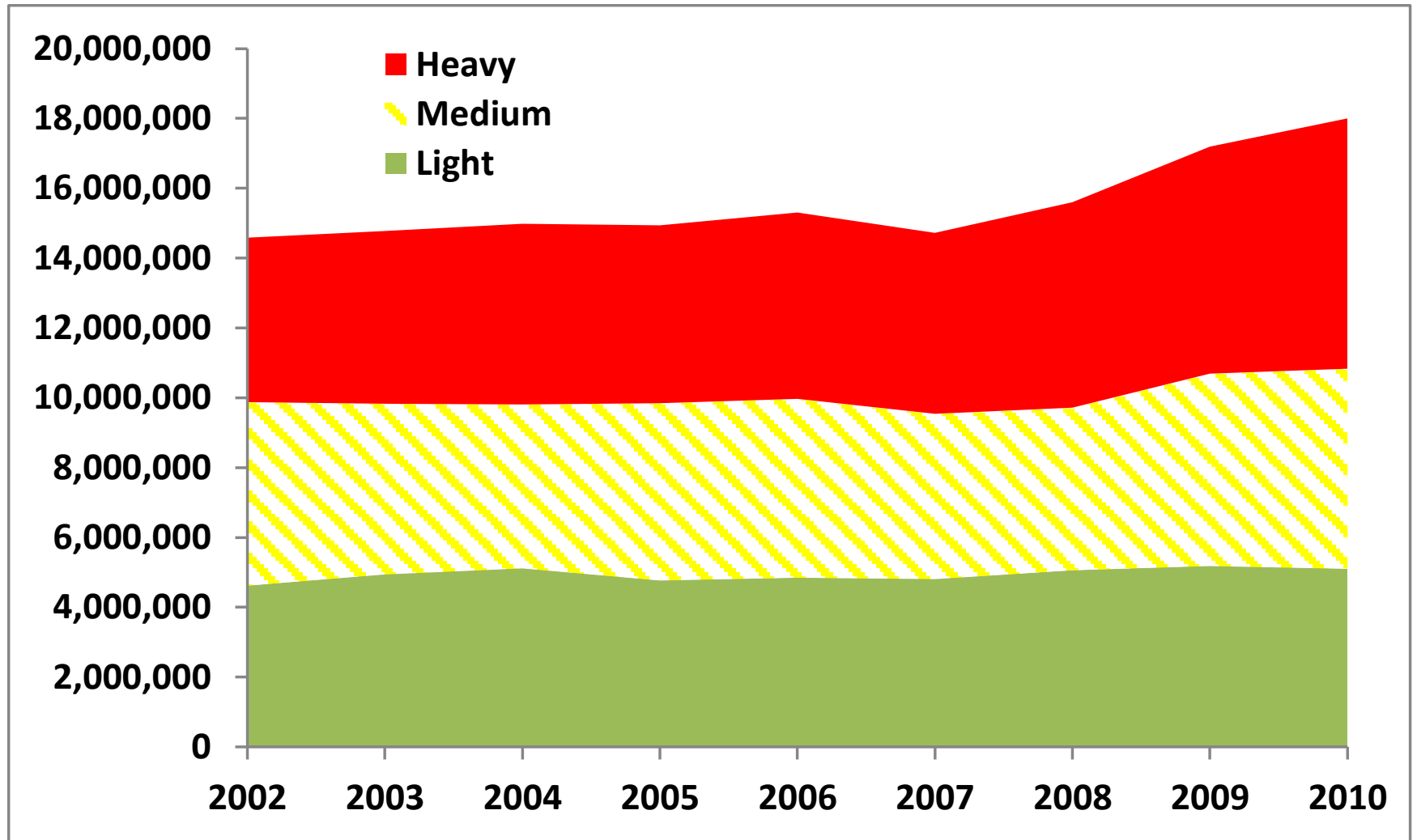


MJ Use and Tobacco

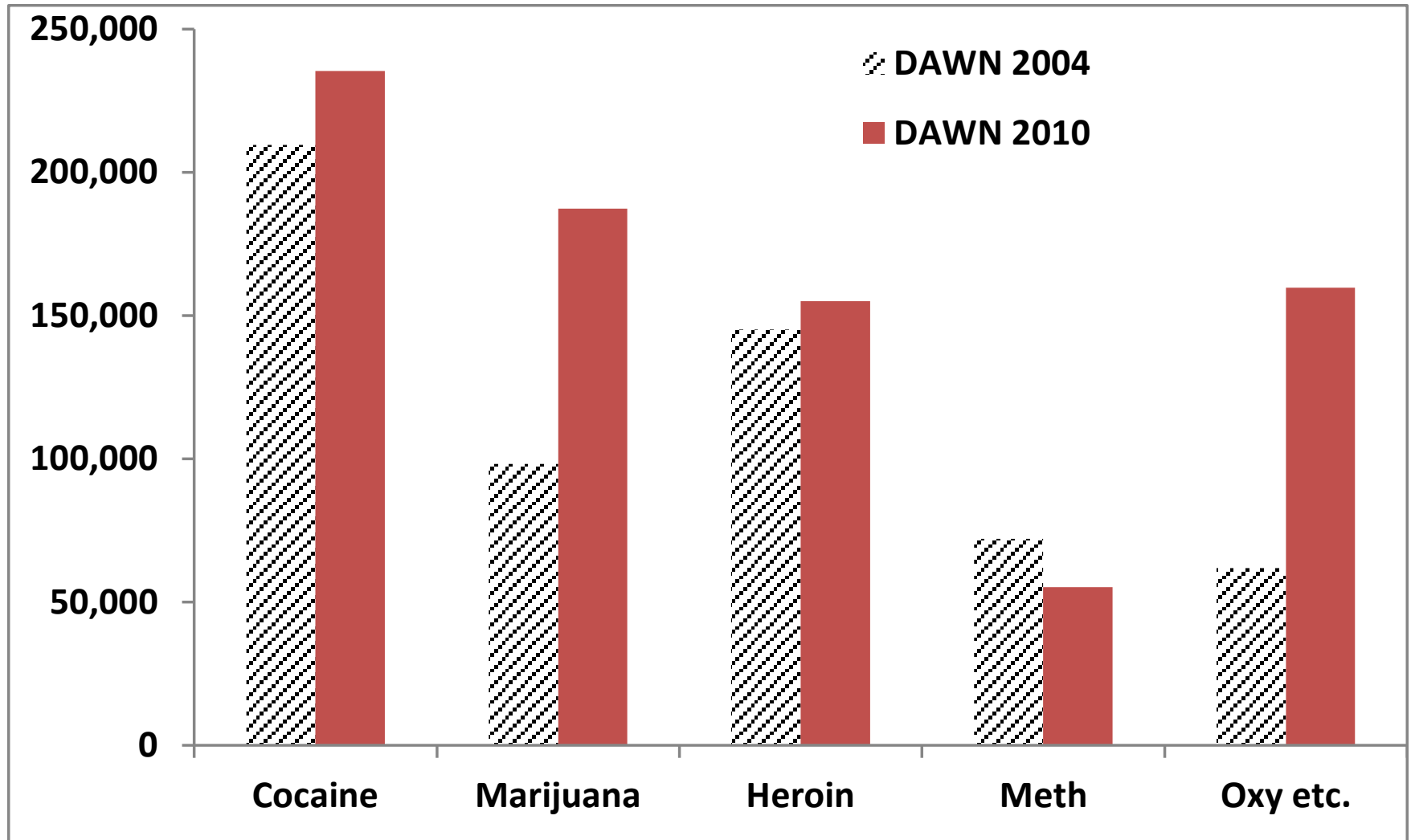
MJ Users and PM Tobacco Use



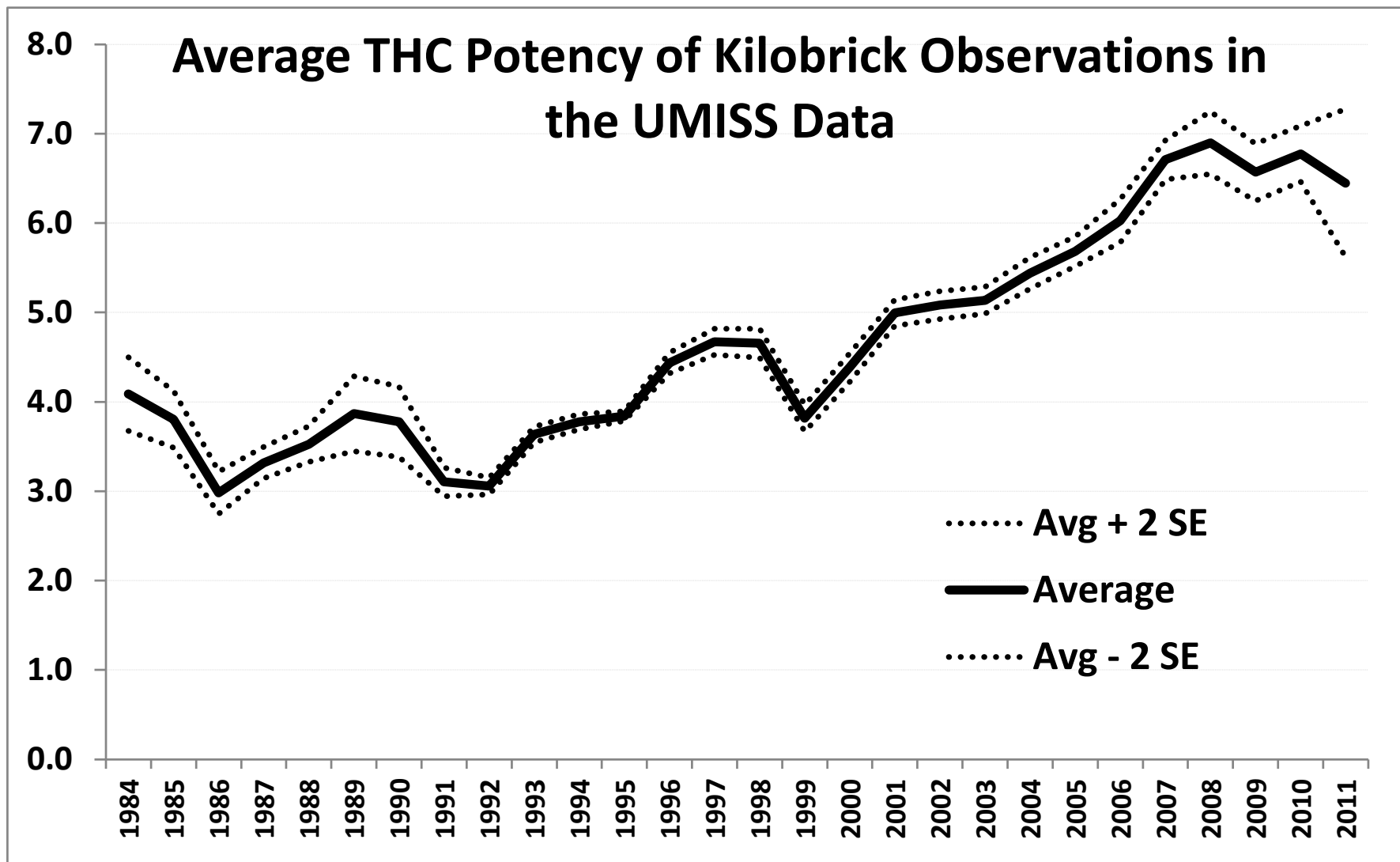
Number of Past Month Users



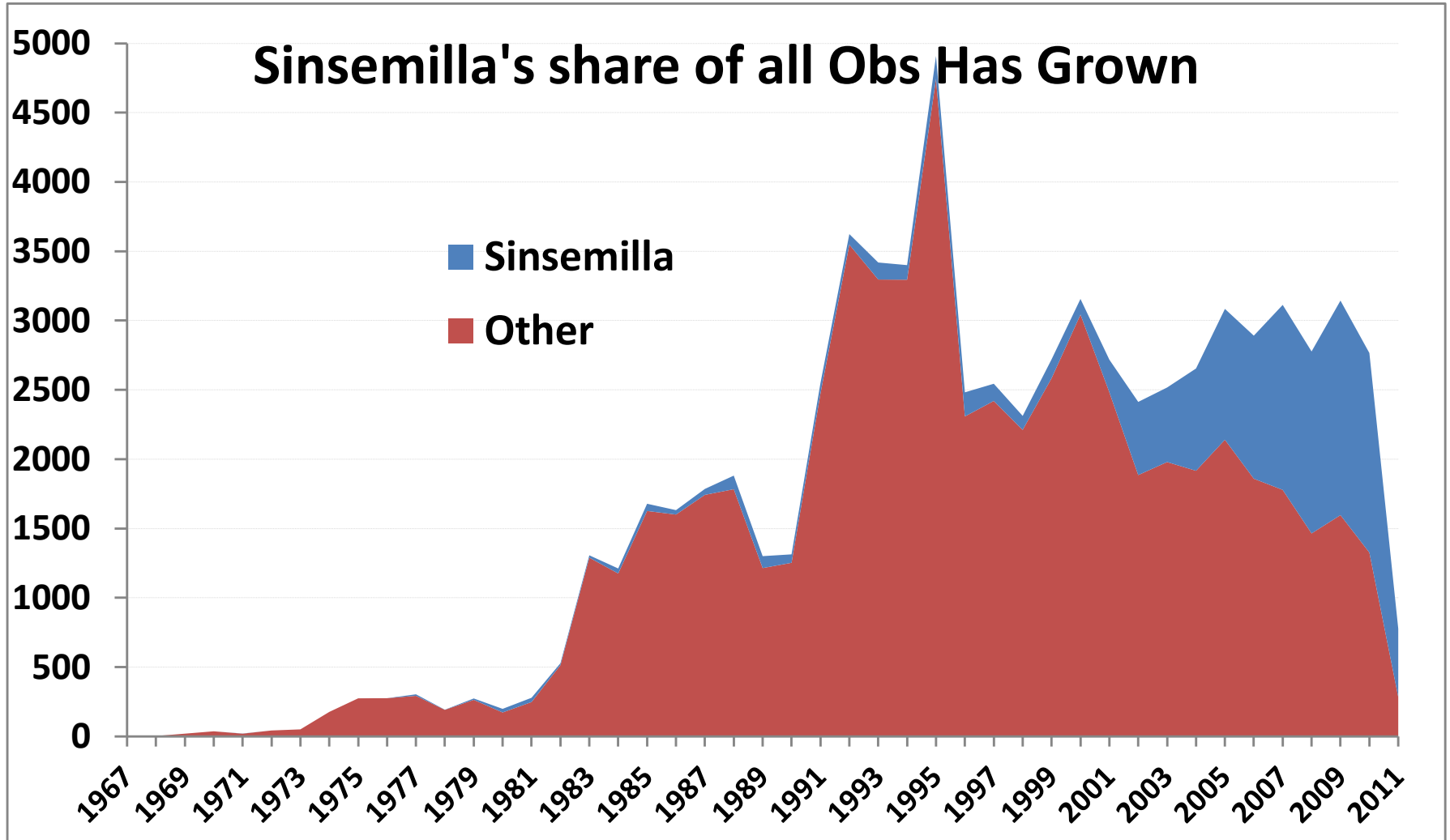
Emergency Department Mentions



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