

tobacconomics

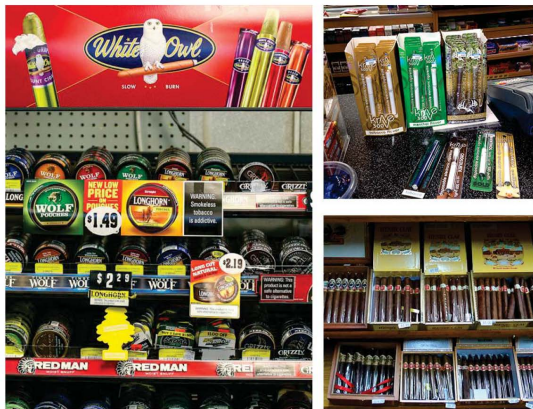
Economic Research Informing Tobacco Control Policy

Optimizing the Impact of Tax and Price Policies for Tobacco Control

Frank J. Chaloupka, University of Illinois at Chicago

NAAG Master Settlement Agreement Triennial Conference

Portland, Maine, September 20, 2016



Tobacco Product Taxation:

An Analysis of State Tax Schemes Nationwide, Selected Years, 2005-2014

Camille K. Gourdet, JD, MA | Jamie F. Chriqui, PhD, MHS | Julien Leider, MS
 Hillary DeLong, J.D. | Colin Goodman, J.D. | Frank J. Chaloupka, PhD.

State Regulation of Tribal Tobacco Sales:

A Historical State-by-State Analysis, 2005-2014

Tobacco Product Pricing Laws:

A State-by-State Analysis, 2014

DeLong H, Chriqui JF, Gourdet CG, Leider J, Chaloupka FJ,
 University of Illinois at Chicago

Fall 2015

tobacconomics
 Domestic Research Supporting Tobacco Control Policy

UIC INSTITUTE FOR HEALTH
 RESEARCH AND POLICY

Preventing and Reducing Illicit Tobacco Trade

in the United States



UNDERSTANDING THE U.S. ILLICIT TOBACCO MARKET

Characteristics, Policy Context, and Lessons from International Experiences



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PERSPECTIVE

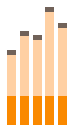
Differential Taxes for Differential Risks — Toward Reduced Harm from Nicotine-Yielding Products

Frank J. Chaloupka, Ph.D., David Sweanor, J.D., and Kenneth E. Warner, Ph.D.
 N Engl J Med 2015; 373:594-597 | August 13, 2015 | DOI: 10.1056/NEJmp1505710



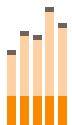
Collaborators

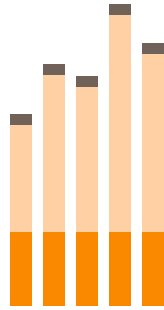
- Jidong Huang
- Jamie Chriqui
- Ce Shang
- John Tauras
- Michael Pesko
- Hillary DeLong
- David Merriman
- Dianne Barker
- Megan Diaz
- Ayda Yurekli
- Geoff Fong
- Emmanuel Guindon
- Prabhat Jha
- Ken Warner
- David Sweanor
- Xin Xu
- Sarah Edwards
- Sherry Emery
- And many more.....



Funding

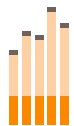
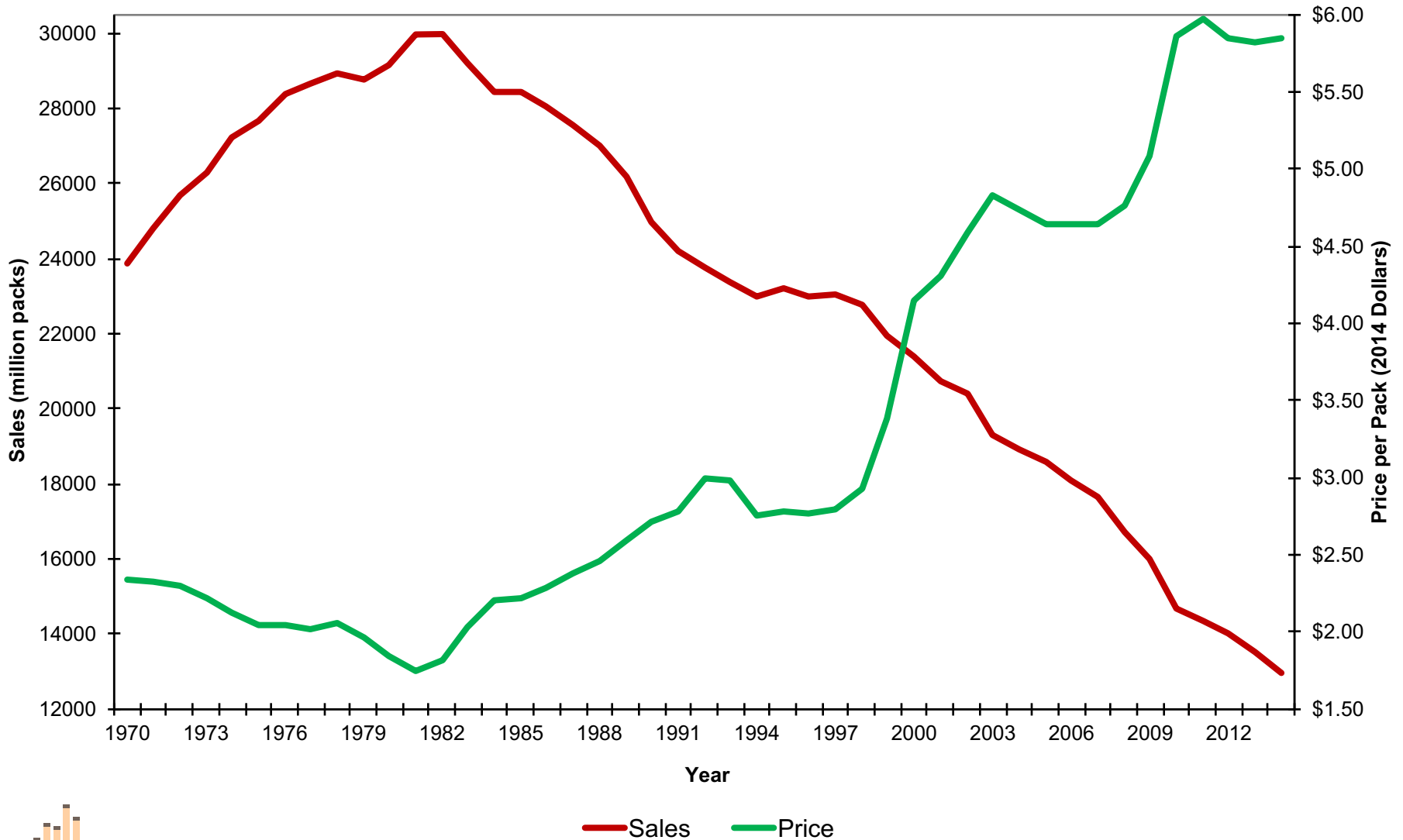
- National Cancer Institute, State and Community Tobacco Control Initiative, 5UO1-CA154248
- Centers for Disease Control and Prevention, Office on Smoking and Health
- Robert Wood Johnson Foundation
- American Cancer Society, Cancer Action Network
- Truth Initiative





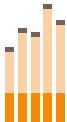
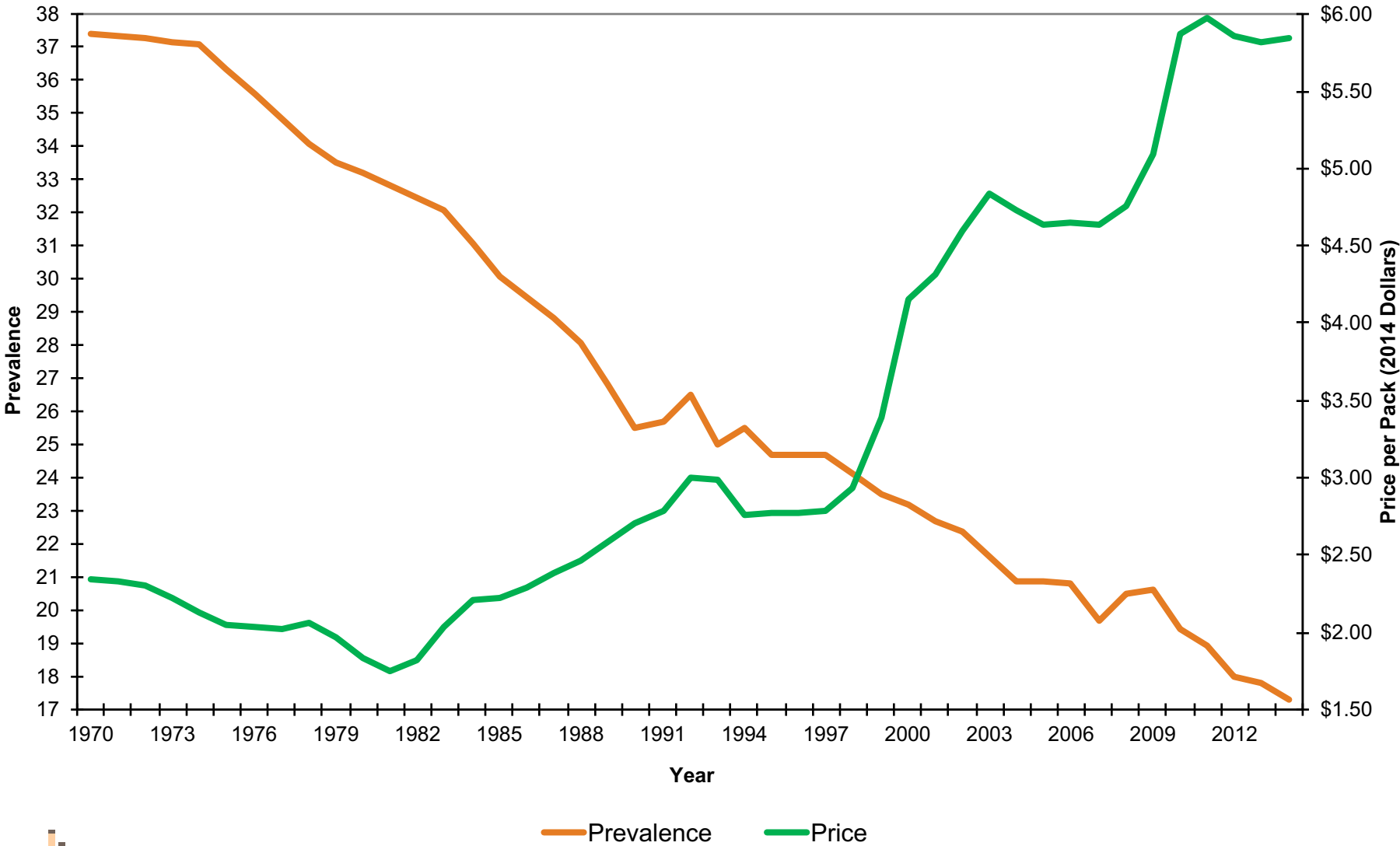
Impact of Tax and Price on Tobacco Use

Cigarette Prices and Cigarette Sales United States, 1970-2014



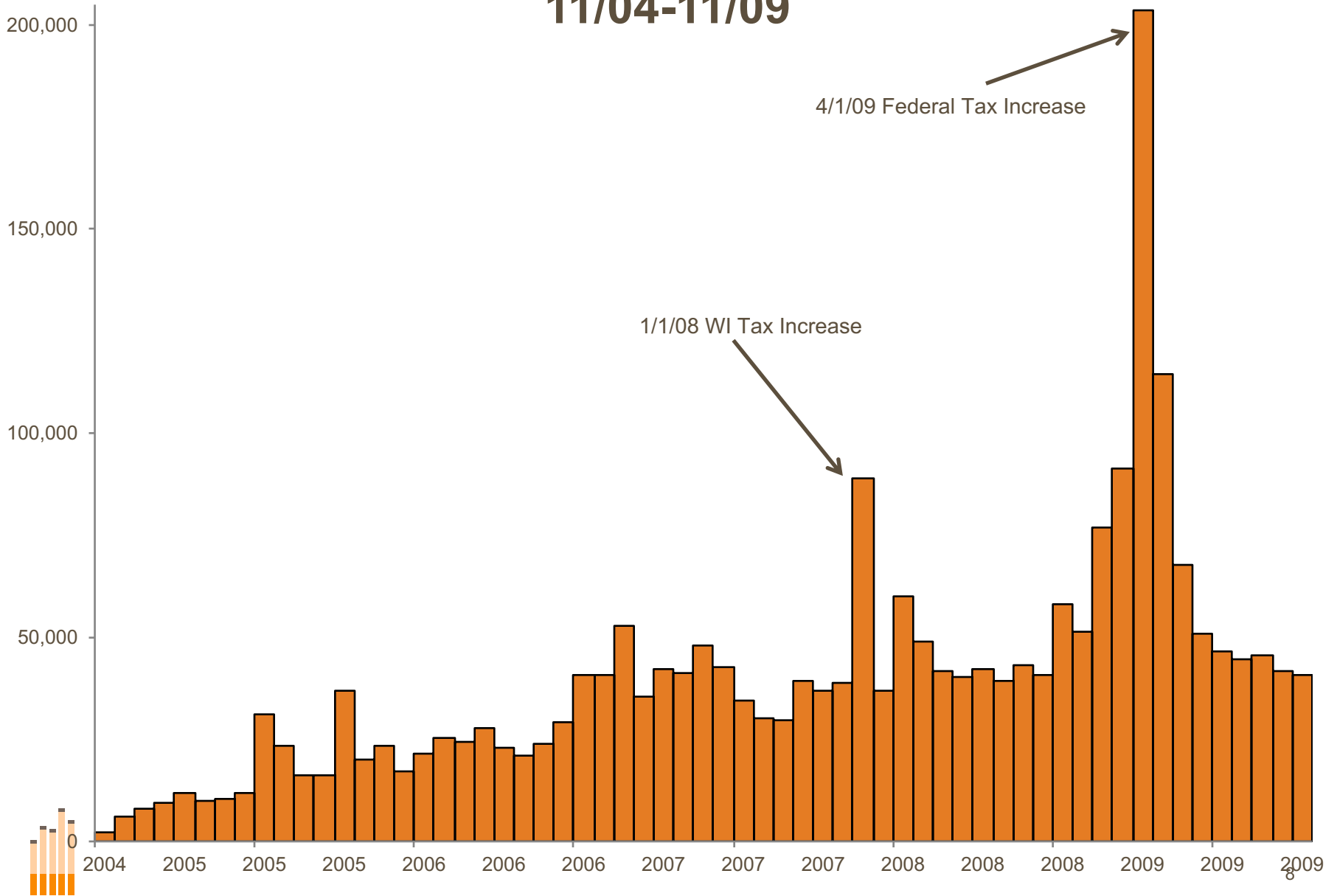
Source: *Tax Burden on Tobacco*, 2015, and author's calculations

Cigarette Prices and Adult Smoking Prevalence United States, 1970-2014

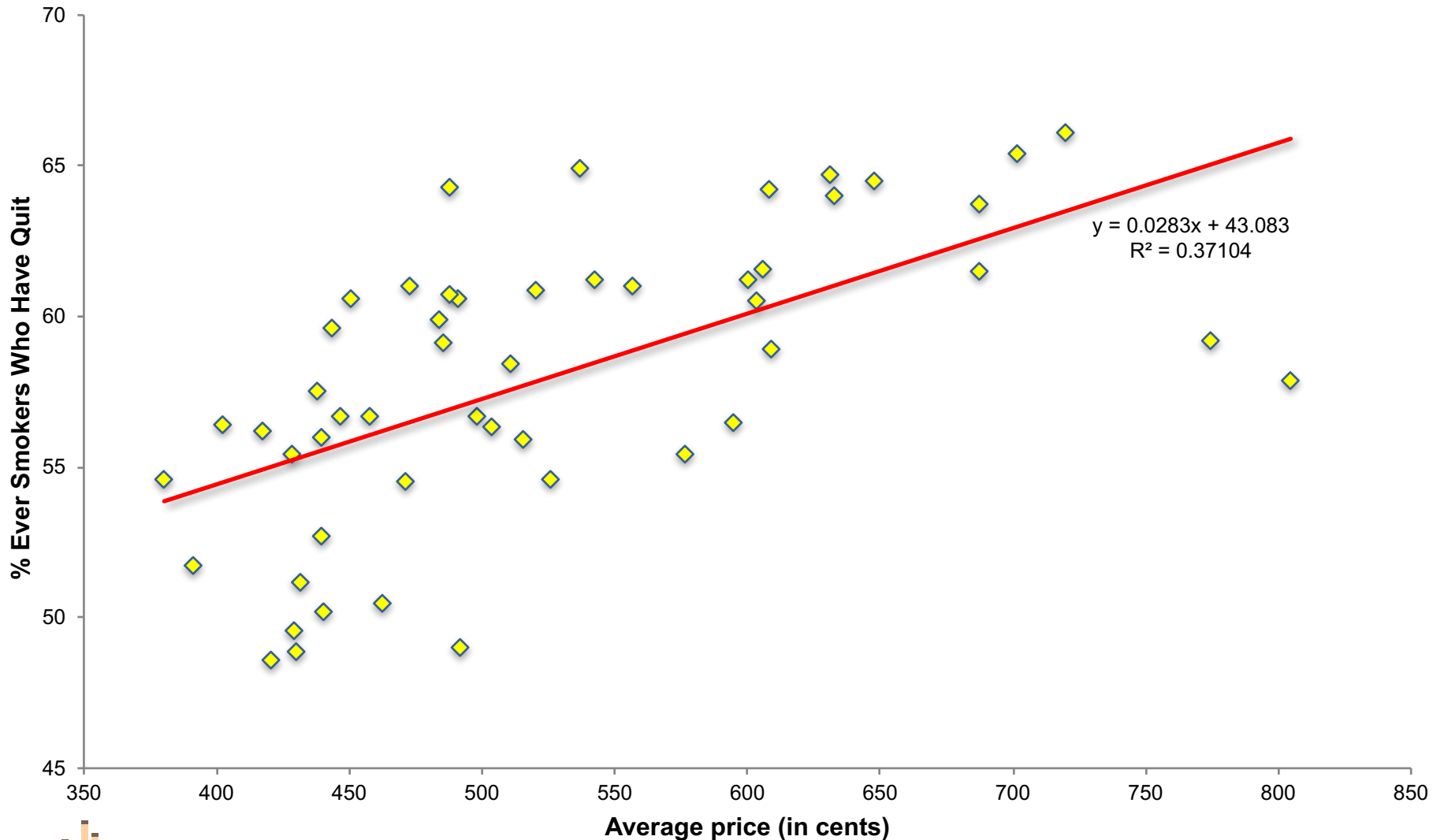


Source: NHIS, *Tax Burden on Tobacco*, 2015, and author's calculations

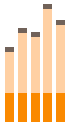
Monthly Quit Line Calls, United States 11/04-11/09



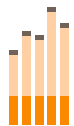
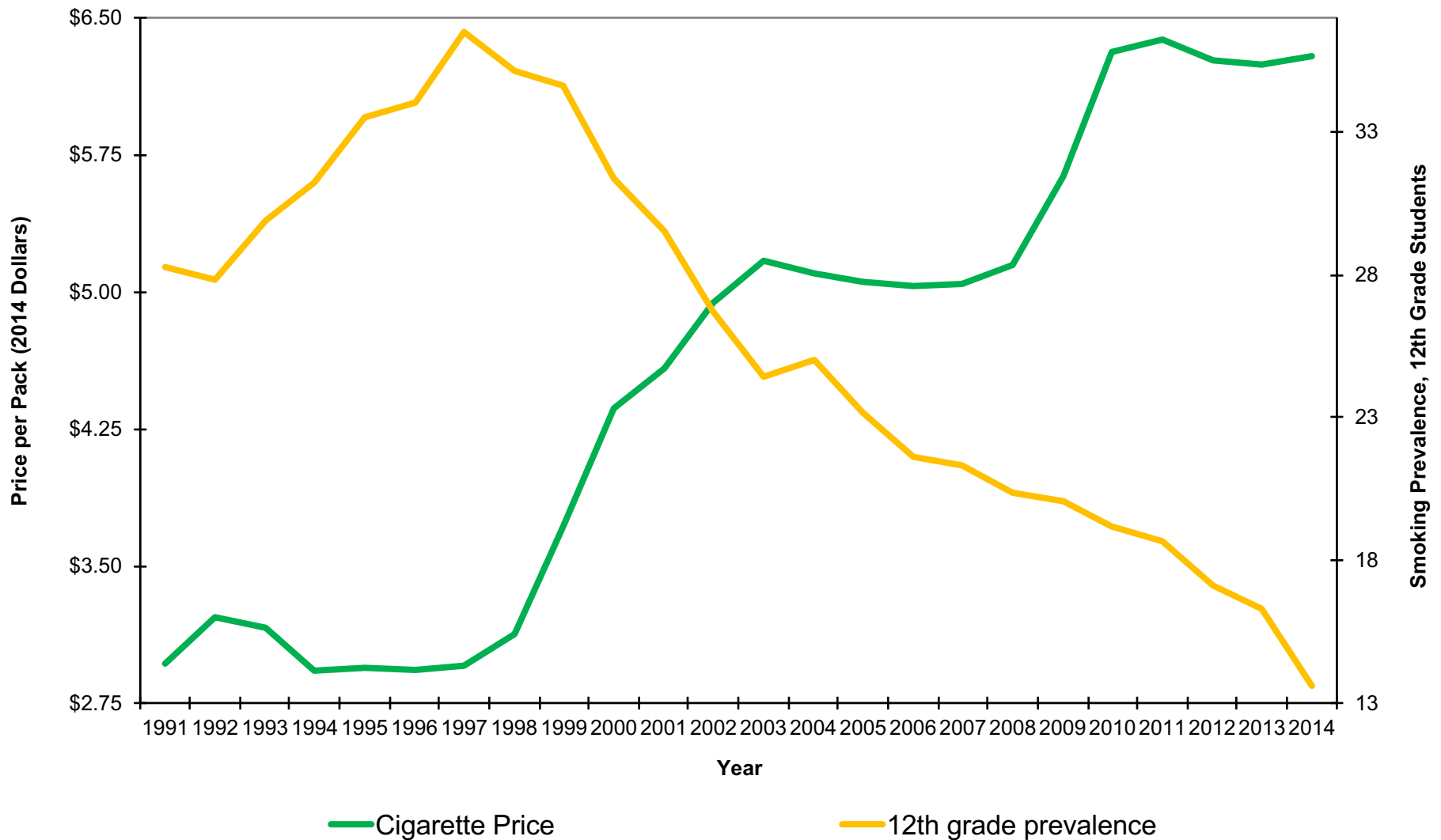
Cigarette Prices and Cessation US States & DC, 2009



Source: BRFSS, *Tax Burden on Tobacco*, 2010, and author's calculations

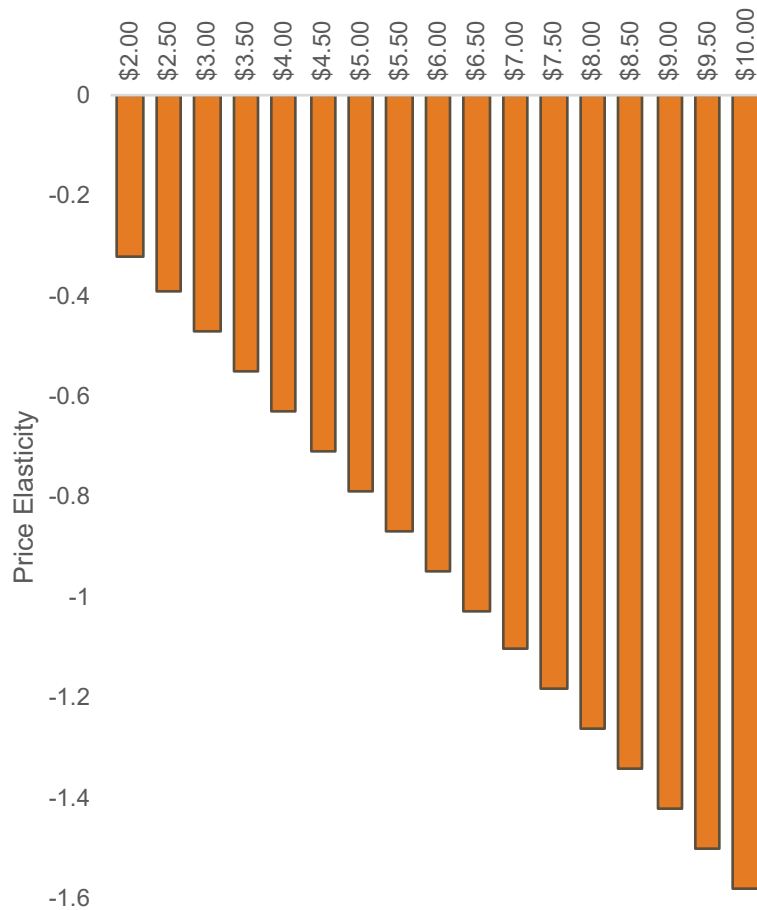


Cigarette Price and Youth Smoking Prevalence Seniors, United States, 1991-2014

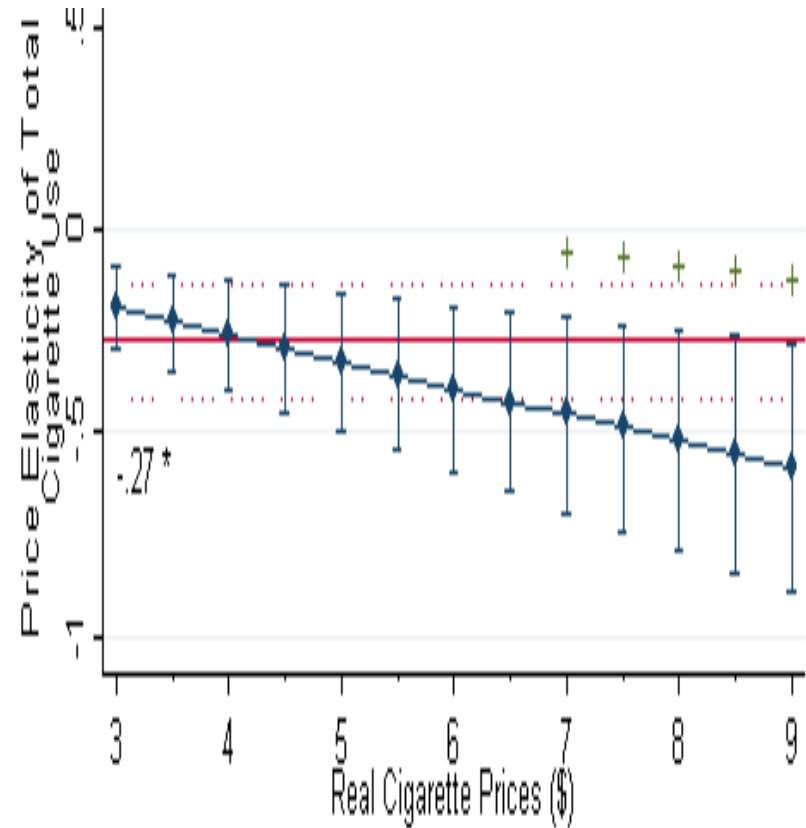


Source: MTF, *Tax Burden on Tobacco*, 2015, and author's calculations

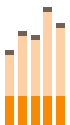
Increasing Elasticity with Increasing Price



State tax-paid sales

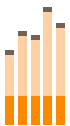


TUS-CPS Prevalence & Consumption



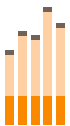
Prices and Tobacco Use

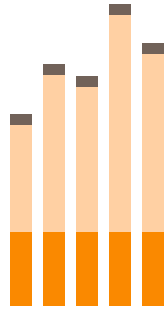
- Similar evidence for variety of other tobacco products and for electronic nicotine delivery systems
 - Generally see evidence of substitution between similar products (e.g. cigarettes, little cigars, roll-your-own)
 - Some evidence of complementarity between combustibles and non-combustibles



Prices and Tobacco Use

- But tax/price increases lead to other changes in tobacco use behaviors:
 - “Downtrading” to cheaper brands
 - Substitution to cheaper products
 - Tax avoidance and evasion
 - Increase in use of price reducing promotions
 - Purchase of larger quantities



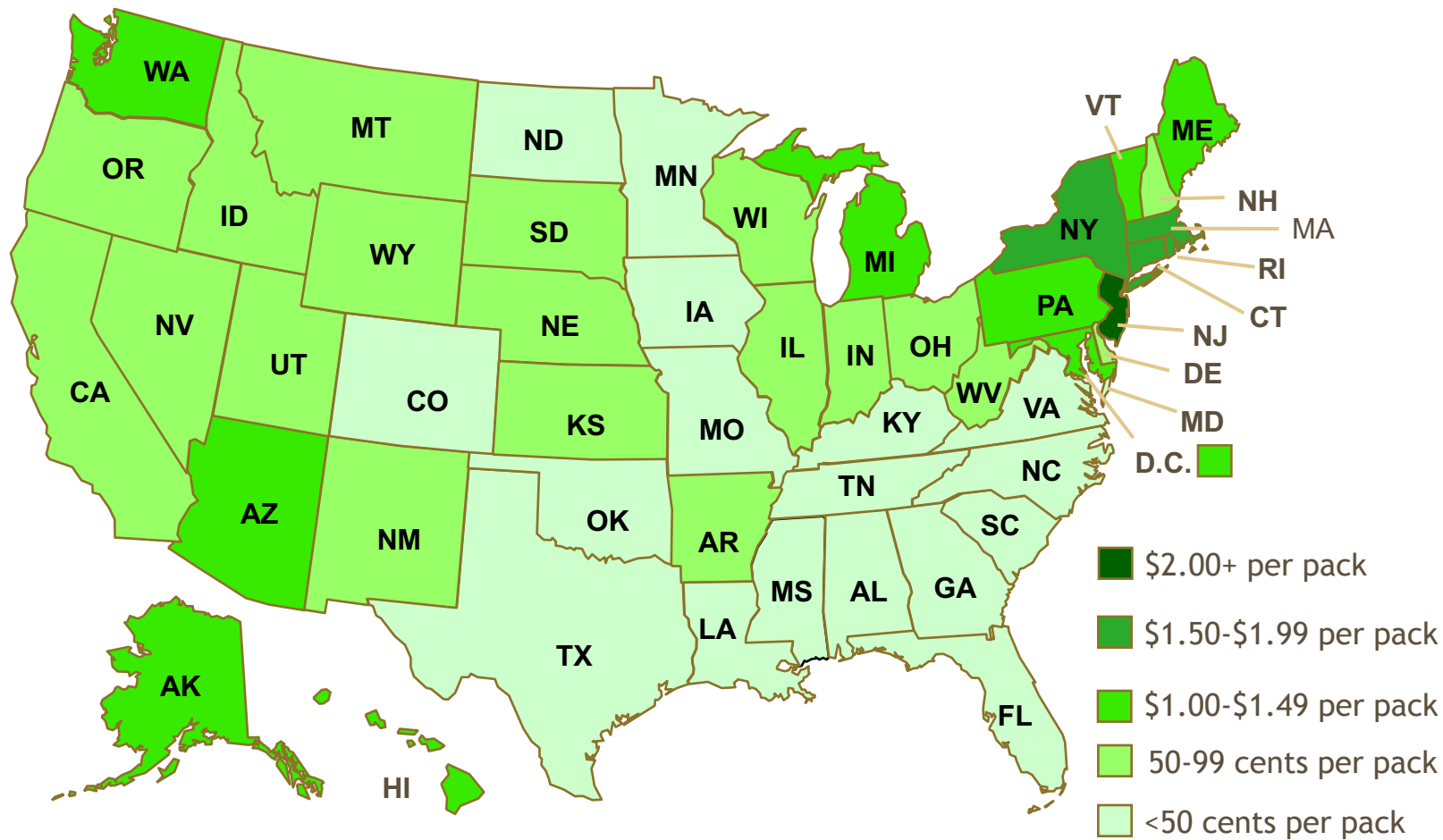


Optimizing Tobacco Taxation

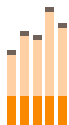
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Curbing Tax Avoidance & Tax Evasion

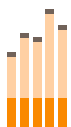
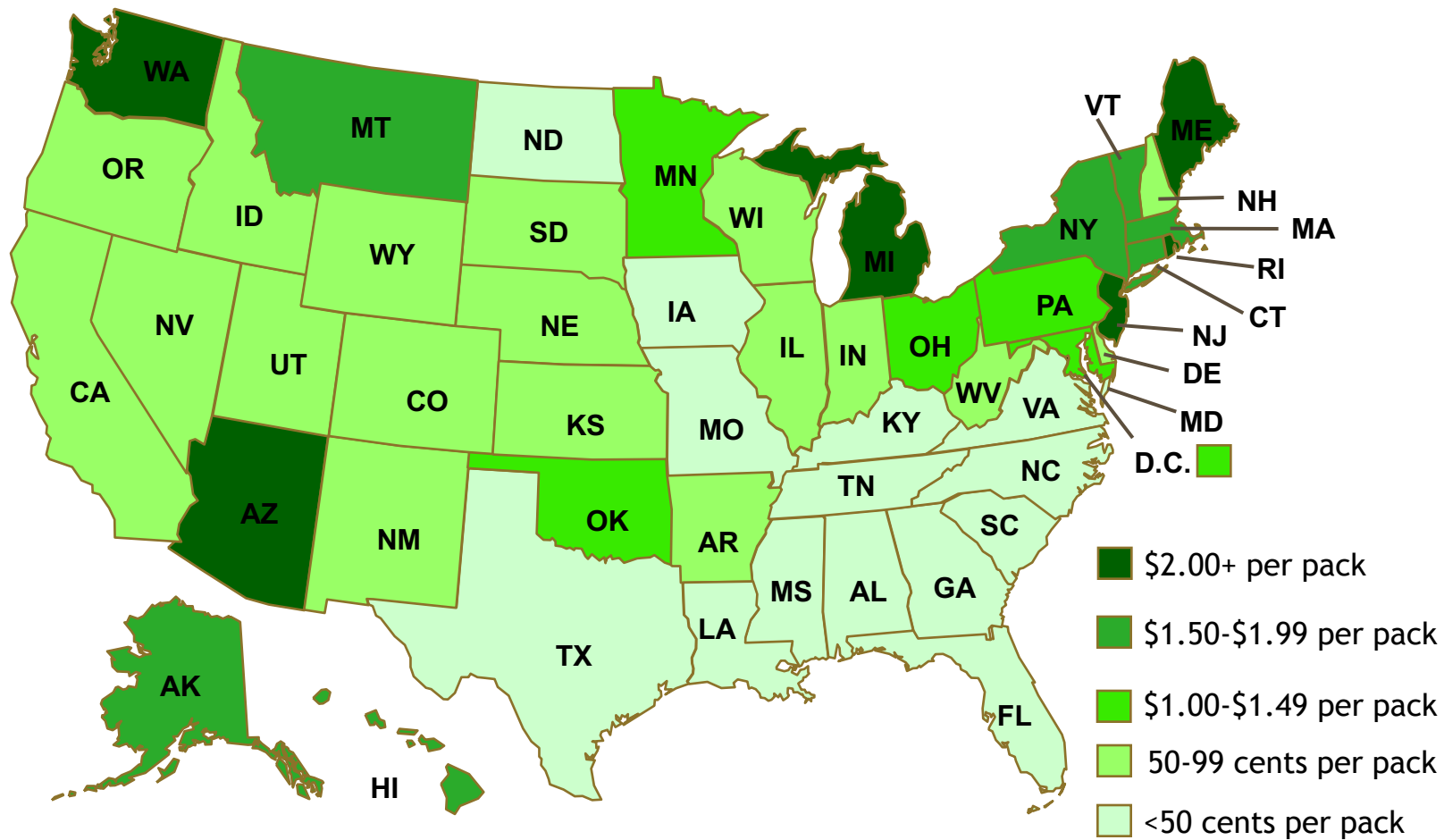
State Cigarette Excise Tax Rates – 2003



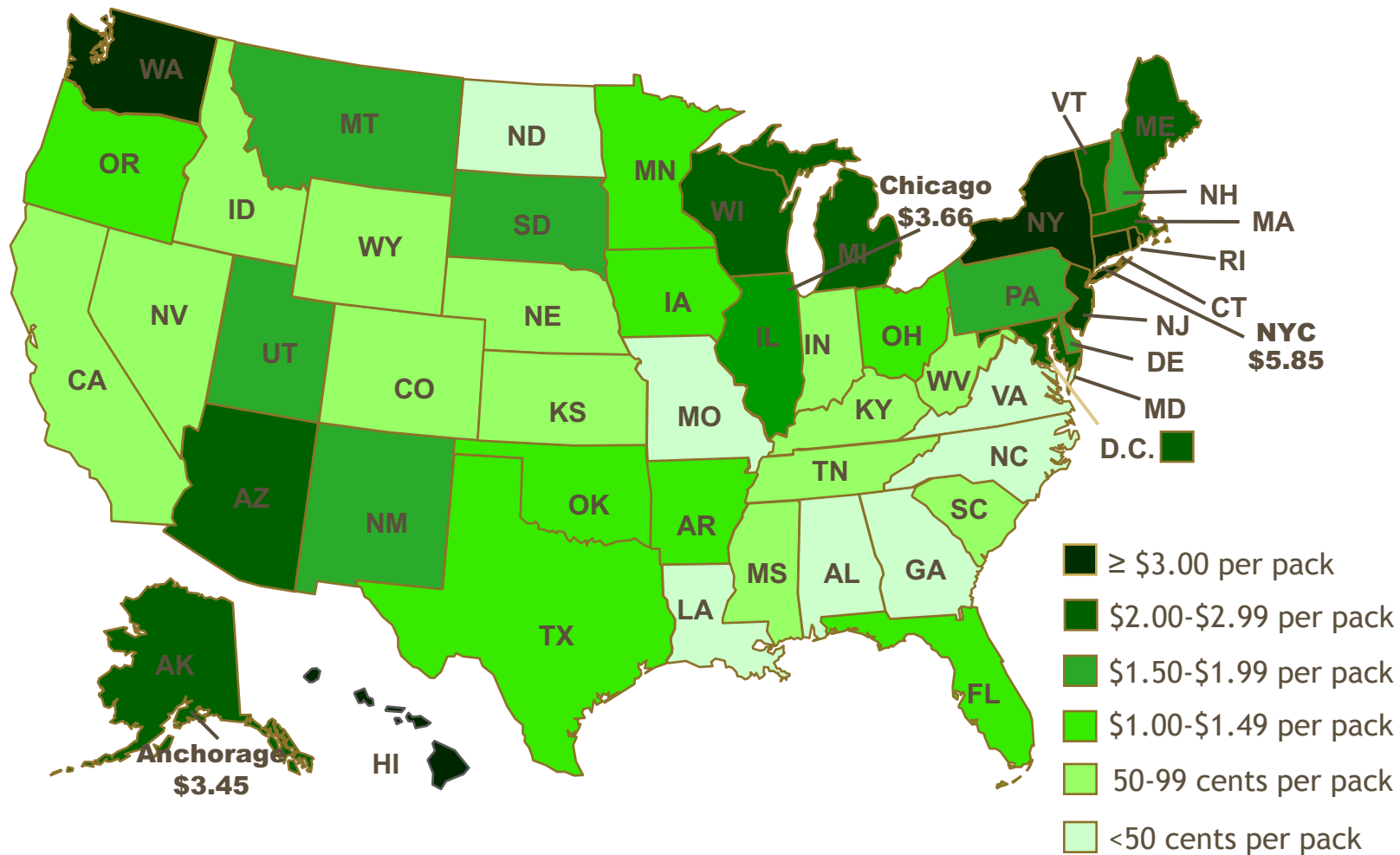
CDC, Office on Smoking and Health. State Tobacco Activities Tracking and Evaluation (STATE) System.



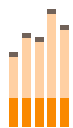
State Cigarette Excise Tax Rates – 2006



State Cigarette Excise Tax Rates – 2012

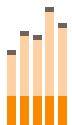
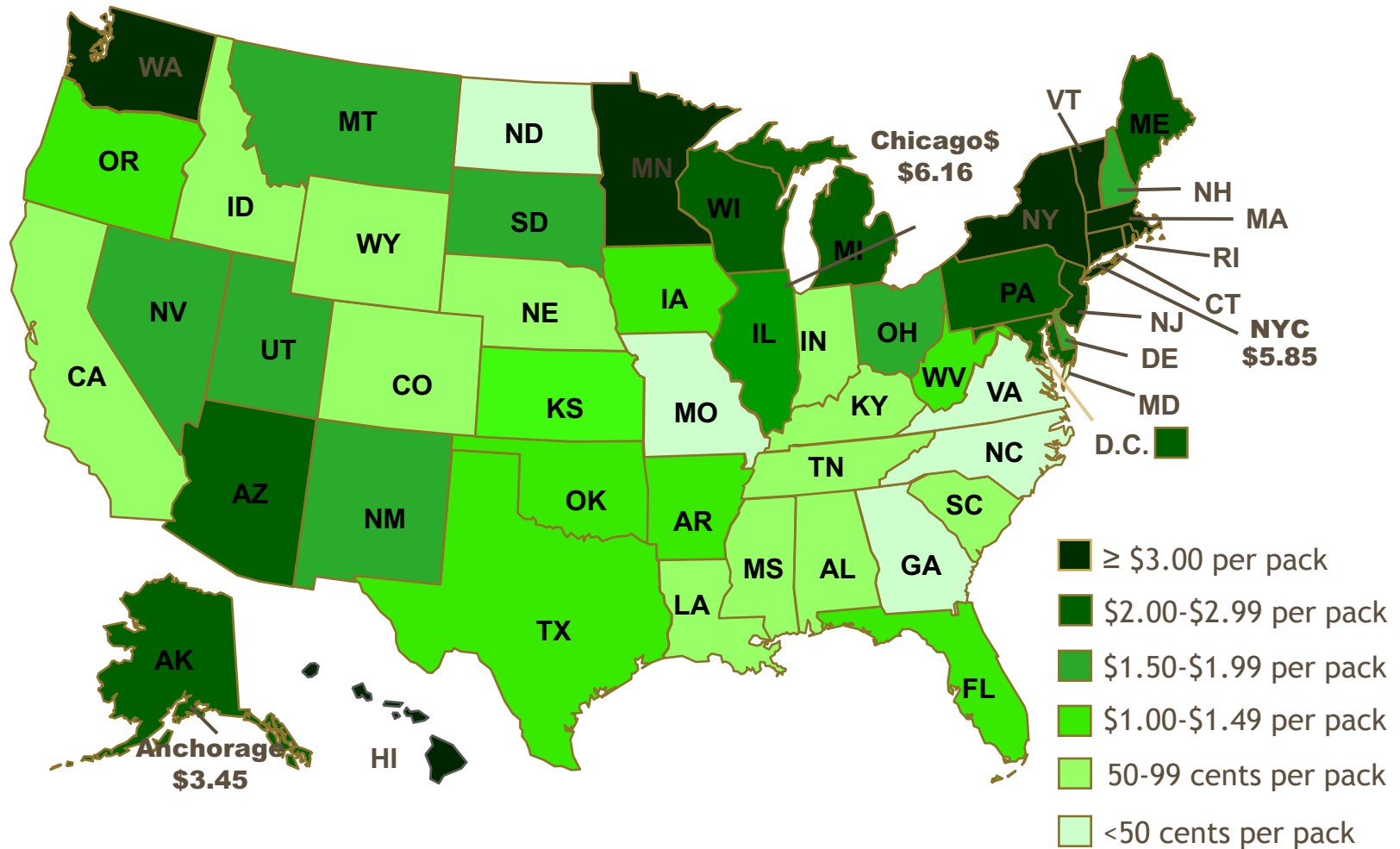


CDC, Office on Smoking and Health. State Tobacco Activities Tracking and Evaluation (STATE) System.



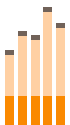
State Cigarette Excise Tax Rates

September 1, 2016

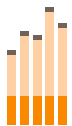
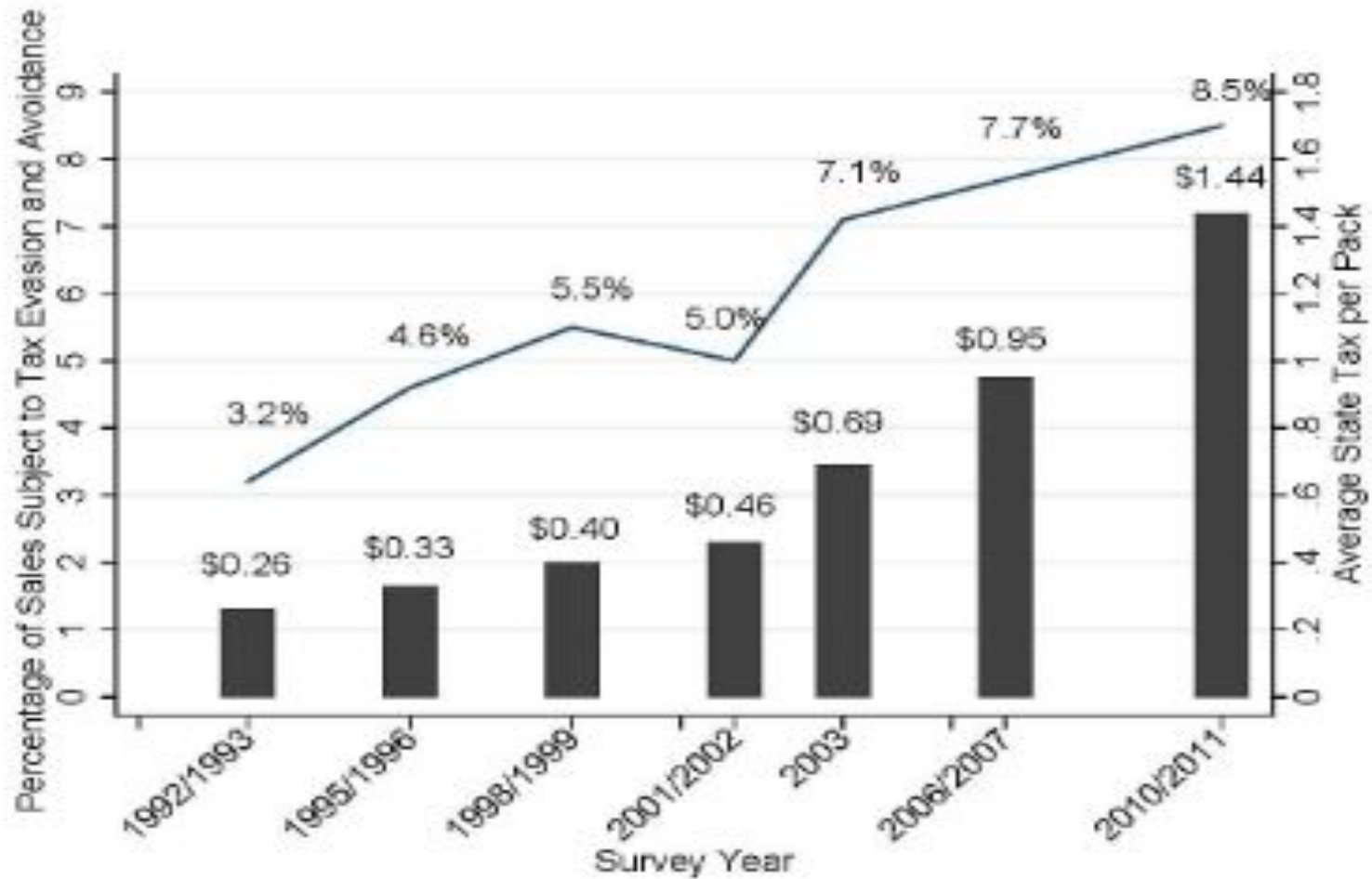


State Tobacco Taxes

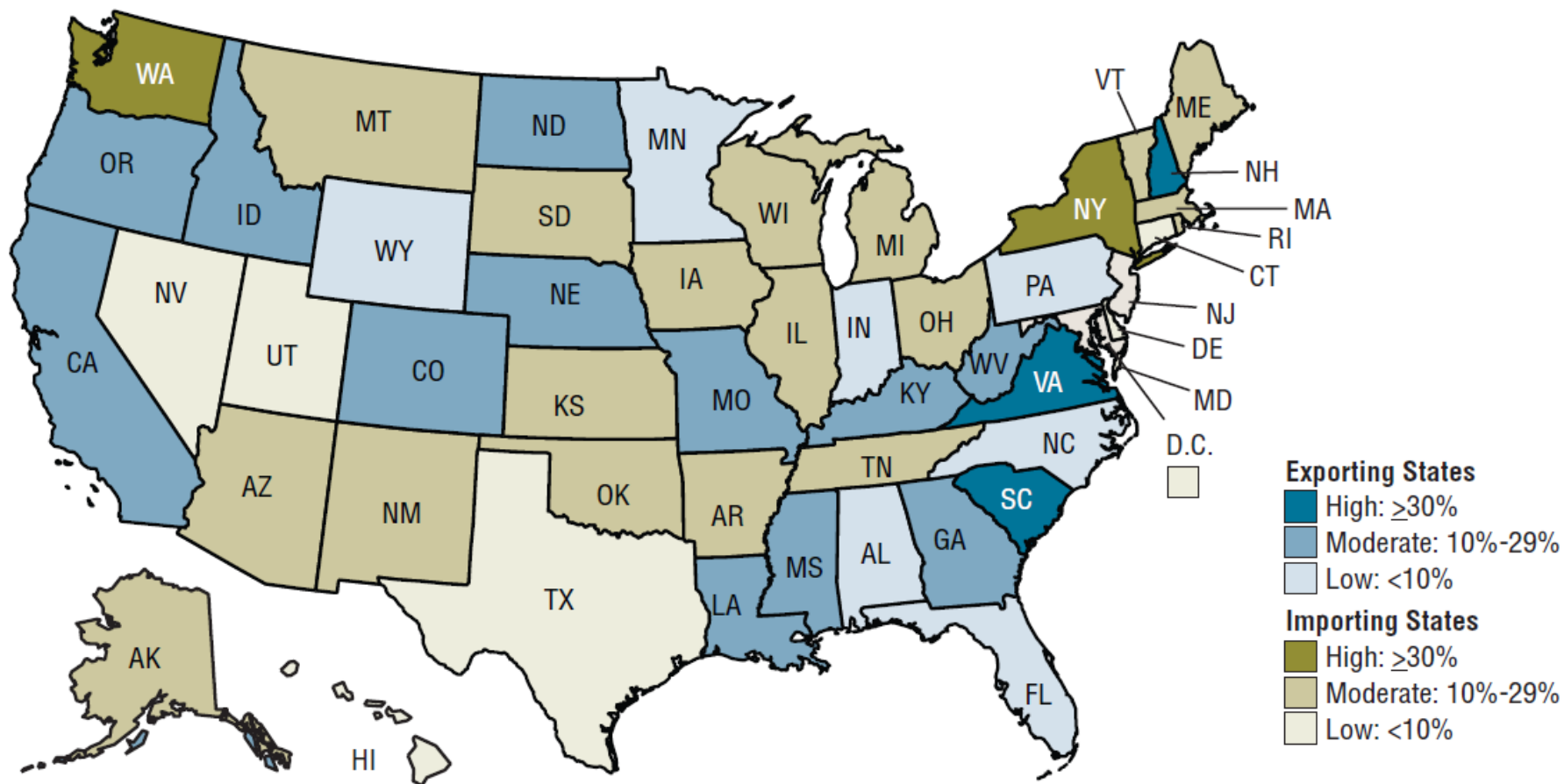
- Differences across jurisdictions create opportunities for tax avoidance and evasion
 - NRC (2015) – estimated range from 8.5% to 21%
 - Low-end based on comparisons of self-reported consumption and tax-paid sales
 - Underestimate - captures ‘net’ effects of ‘importing’ and ‘exporting’
 - High-end based on pack collection estimates
 - Overestimate – reflects tourism, commuting



Trends in Net Tax Avoidance & Evasion in the United States



Estimated State Cigarette ‘Importing’ and ‘Exporting’, 2010-11

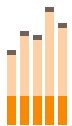
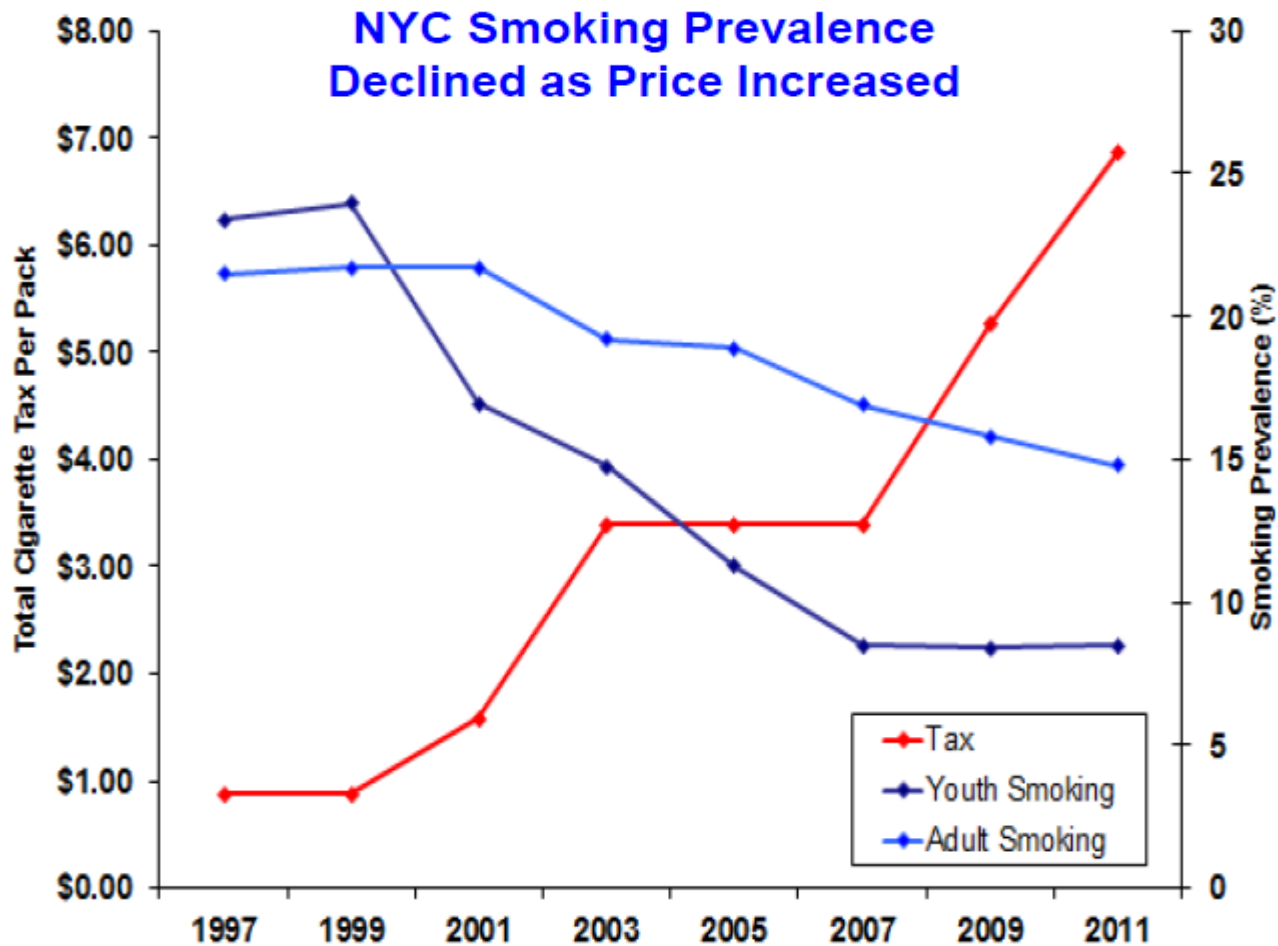


Note: “Importing states” are those where some consumers avoid or evade taxes by obtaining their tobacco products from states or federal tribal lands where taxes are lower. “Exporting states” are those where some tobacco products intended for consumption within that state are purchased by consumers from outside of the state to avoid or evade their “home” taxes.

Source: Created from data in National Research Council and Institute of Medicine, 2015.

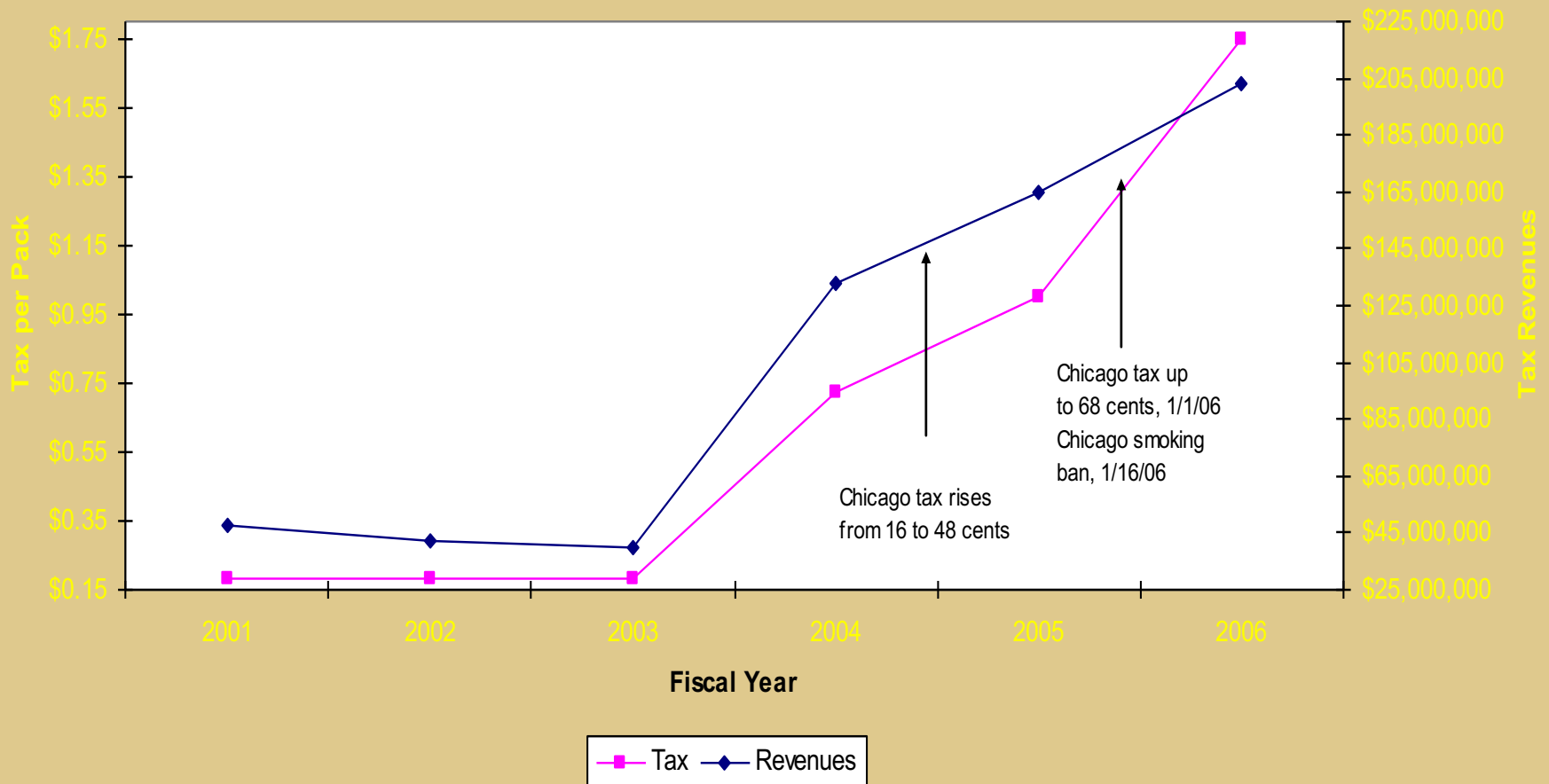
Source: CDC, 2015

Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes



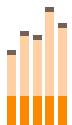
Tax Avoidance & Evasion Do NOT Eliminate Revenue Impact of Higher Taxes

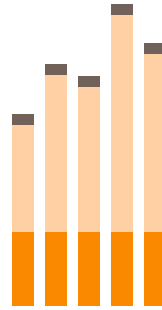
Cook County Cigarette Tax and Tax Revenues - FY01-FY06



Optimizing the Impact of Tobacco Taxes

- Harmonize tobacco taxes across states
 - reduce incentives for cross-border shopping and bootlegging
 - Done with other policies (minimum legal ages for tobacco & alcohol; *per se* illegal BAC level)
 - Could reduce Medicaid match for states that do not adopt the minimum match
- Setting tax floor most appropriate approach to maximize public health, revenue impacts



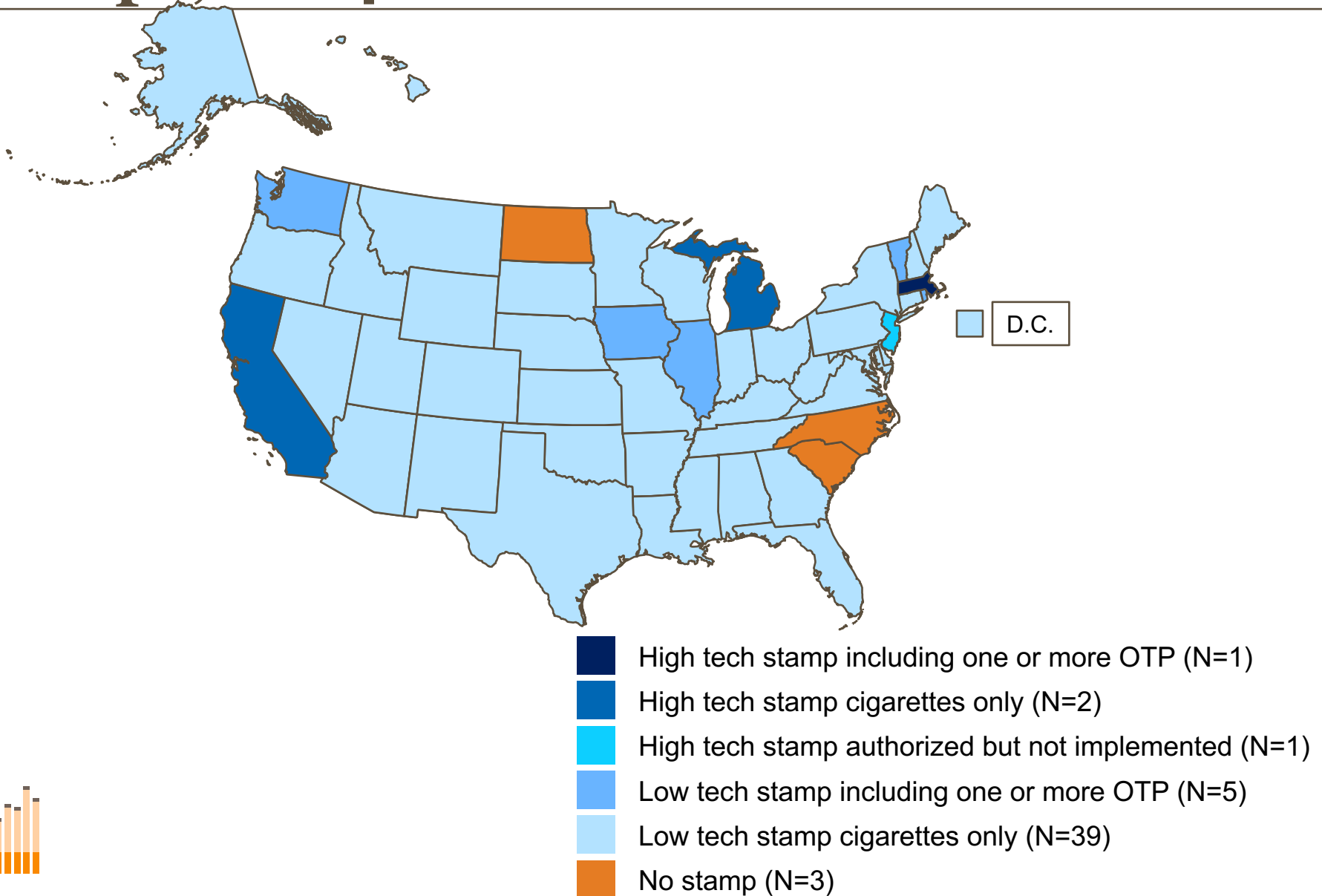


Optimizing Tobacco Taxation

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Implementing Pack Markings, Licensing & Enforcement

Types of State Cigarette and OTP Tobacco Stamps, 2014



California's Encrypted Cigarette Tax Stamps

2005-2010 →

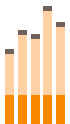


2011-present ↘

Stamp Front View
(ink appears green)

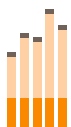
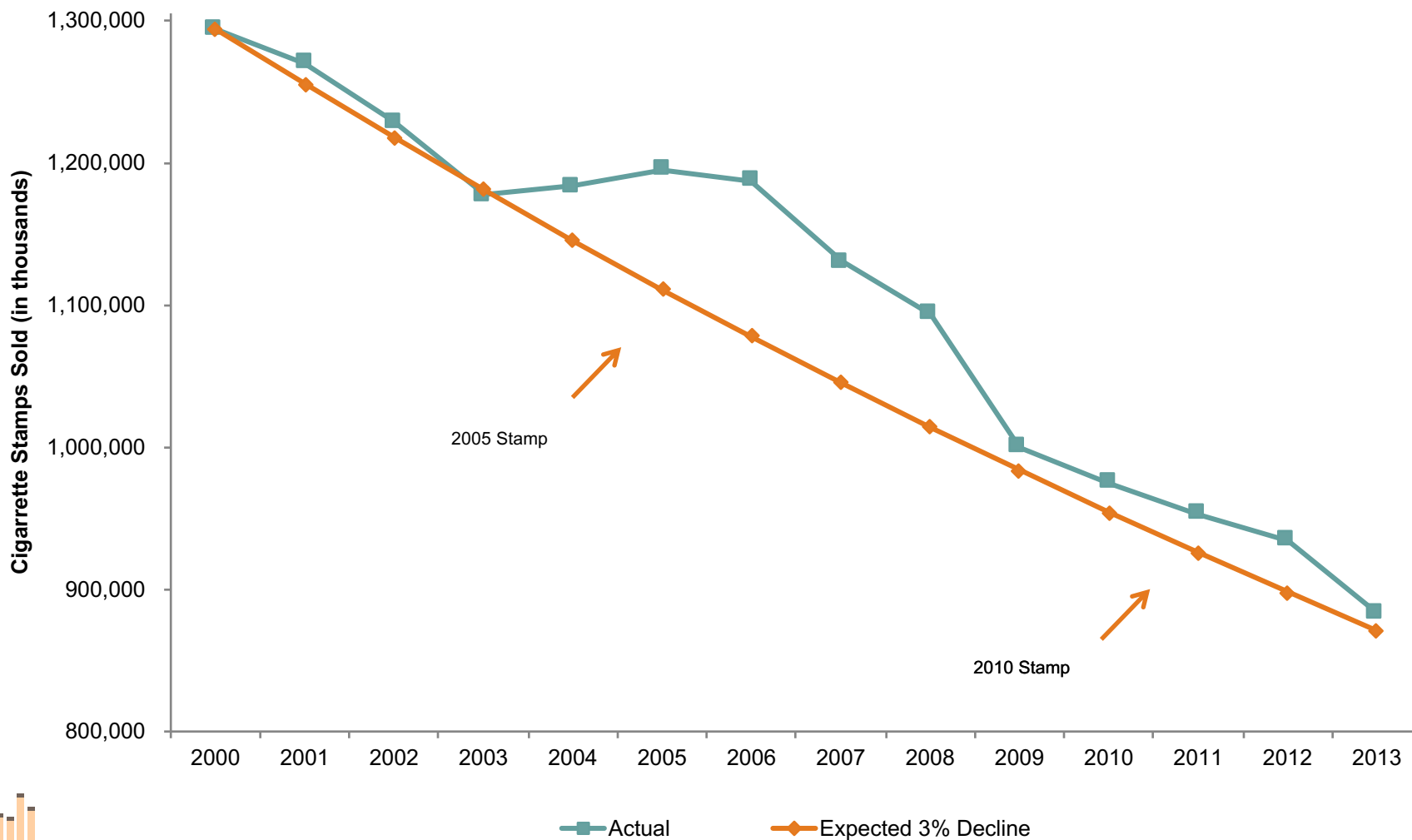


Stamp Angled View
(ink appears blue)



Cigarette Tax Stamps Sold

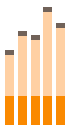
Projected and actual, California, 2000 - 2013

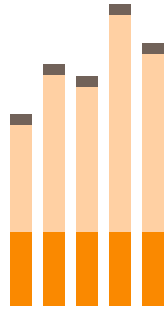


Source: Chaloupka, et al., 2015

Optimizing the Impact of Tobacco Taxes

- Adopt the “Three-Legged Stool” approach
 - License of all involved in tobacco product manufacture, import, distribution, and retail sales
 - Apply high-tech tax stamps
 - Increase enforcement resources and levy strong penalties on violators





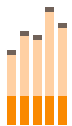
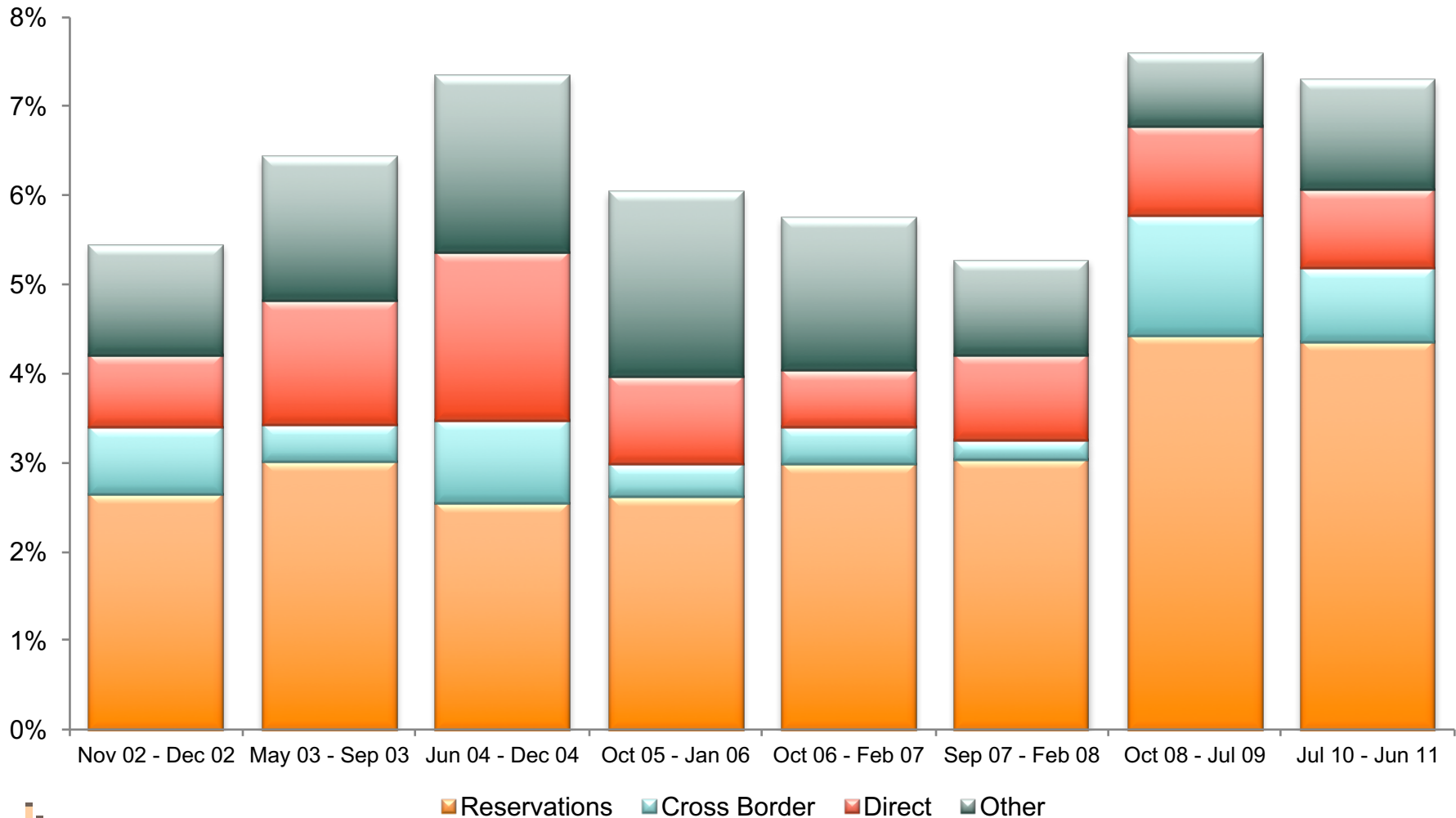
Optimizing Tobacco Taxation

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Addressing Tribal Sales

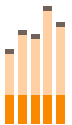
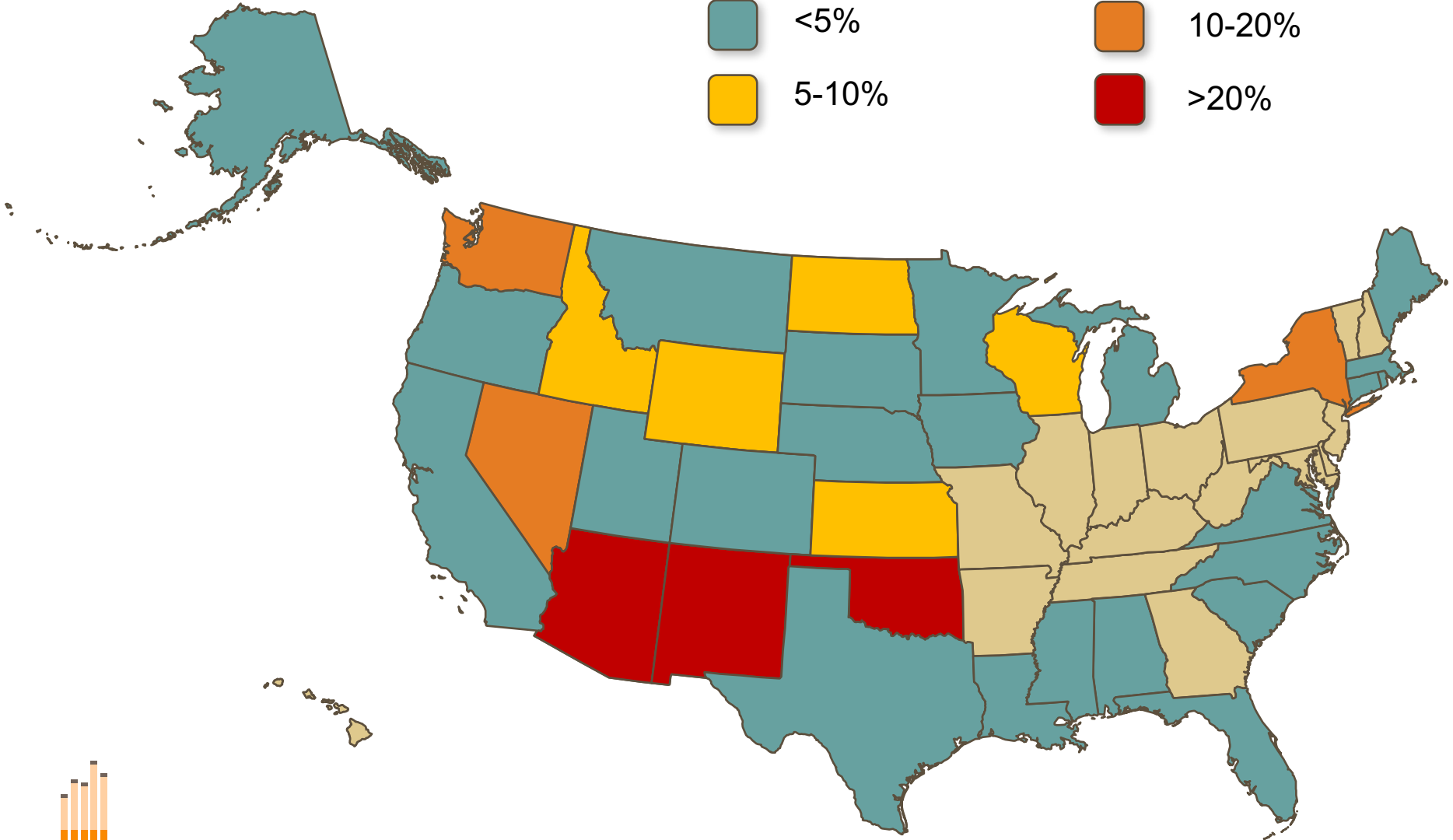
Tax Avoidance

US Smokers, Last Purchase, November 2002-June 2011

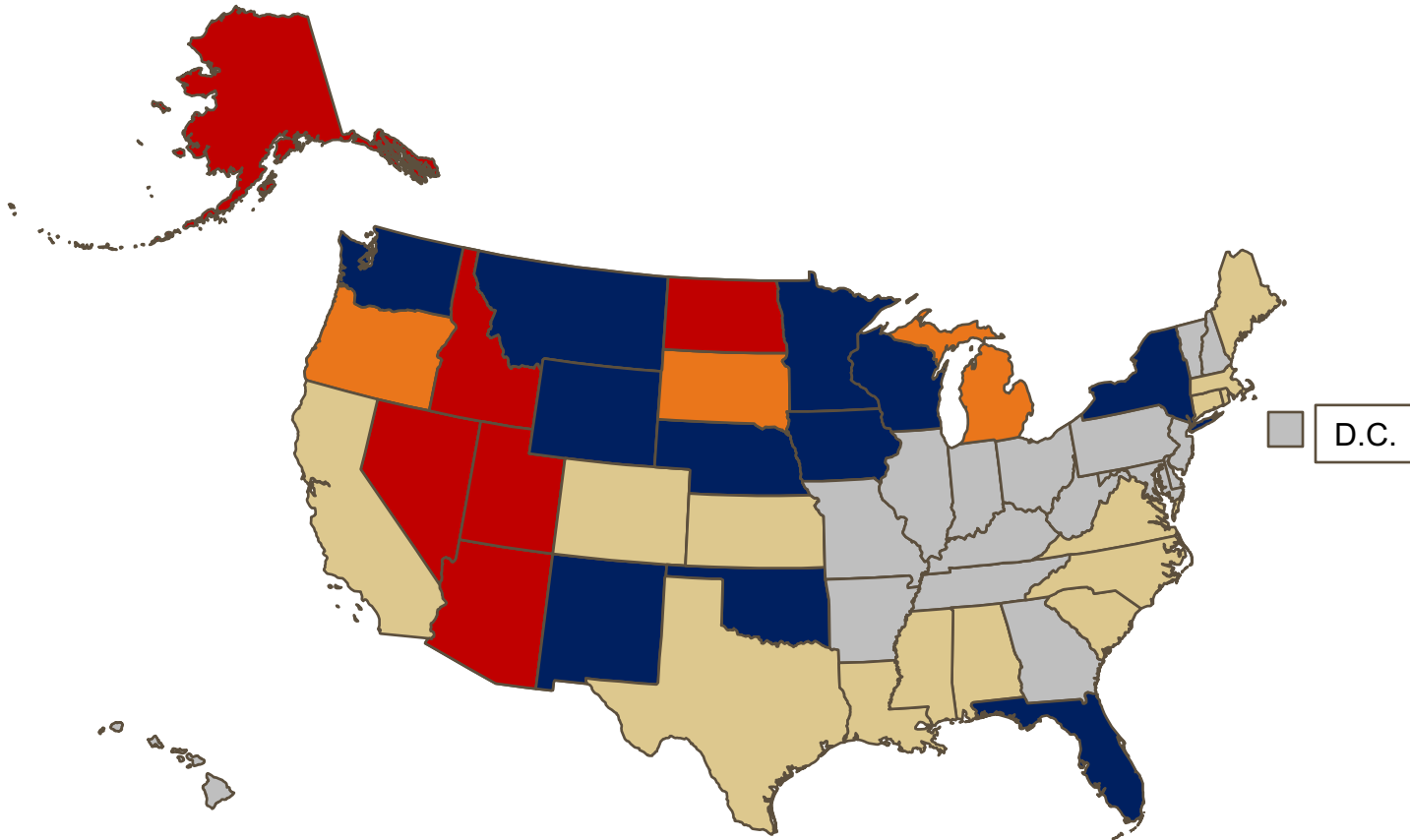


Source, ITC project, US survey, Waves 1-8

Percent of Smokers Buying on Reservations – 2010/11



Tribal Tobacco Sales Laws, 2014



Use both compacts and other sales laws (N=11)



Use compacts only (N=3)



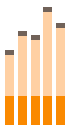
Use sales laws only (N=6)



Use no tribal-specific tobacco sales laws (N=14)

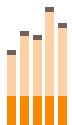


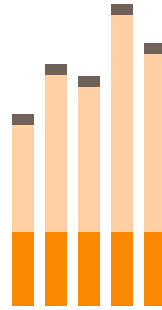
No tribal reservations within state borders (N=17)



Optimizing the Impact of Tobacco Taxes

- Case studies of state efforts to address tribal sales suggest:
 - Compacts critical to ensuring success of efforts to reduce reservation-based tax avoidance and evasion
 - Most effective systems appear to be those that apply state tax to all tribal sales
 - Rebate/quota schemes somewhat effective
 - Often based on formulas that are likely to overstate tribal consumption
 - Can be combined with efforts to limit purchase quantities





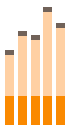
Optimizing Tobacco Taxation

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Prioritizing Efforts to Curb Tax Evasion

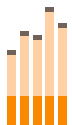
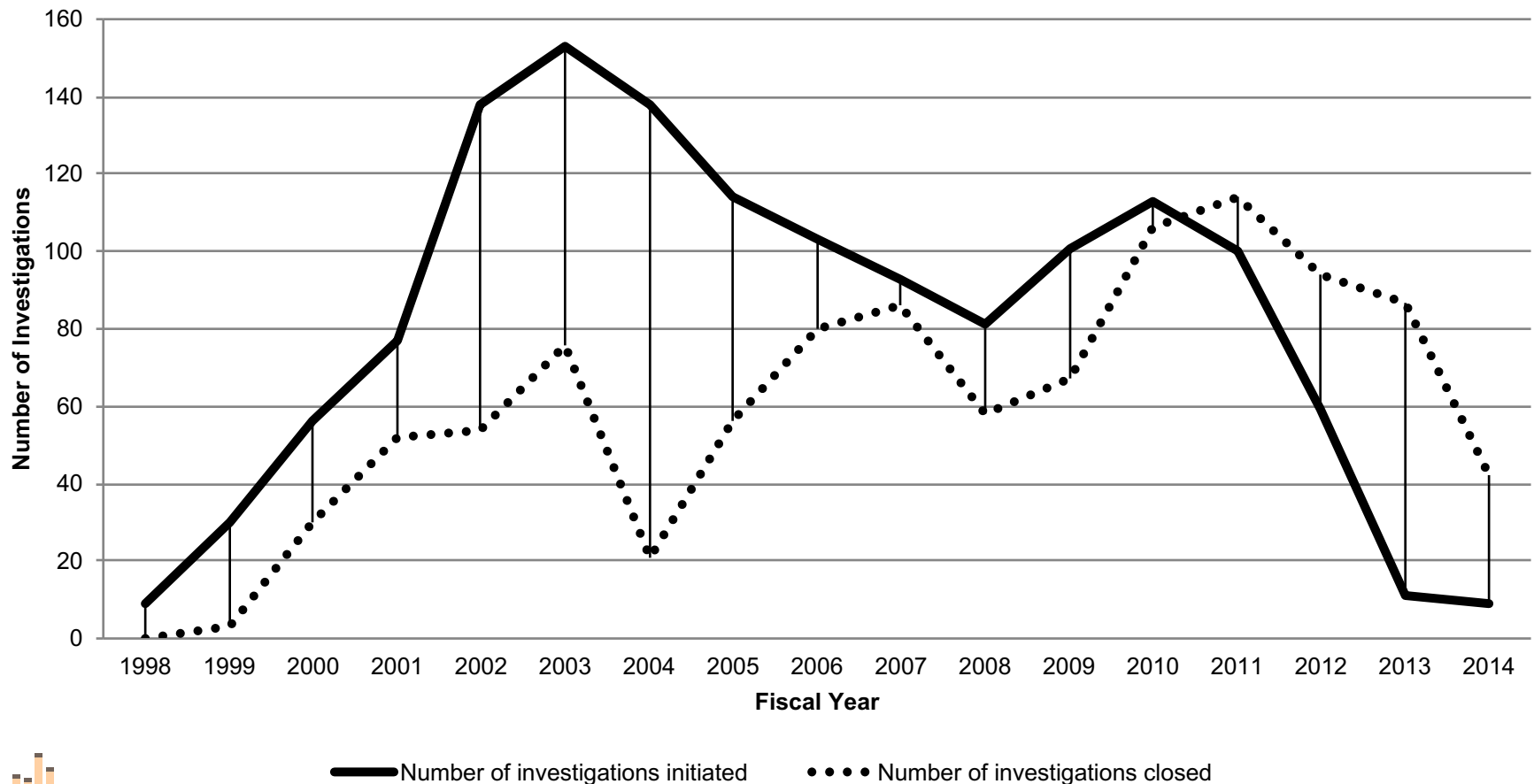
Coordinating & Prioritizing

- In US, control of illicit trade is fragmented, under-resourced, and low priority
 - Multiple federal agencies, including: Bureau of Alcohol, Tobacco, Firearms, and Explosives; Immigration and Customs Enforcement; Customs and Border Protection; Alcohol and Tobacco Tax Bureau; and Food and Drug Administration
 - Variety of state and local agencies also involved, including: state and local police; tobacco control agencies; departments of revenue; alcohol control boards; and others



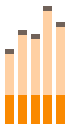
Illicit Tobacco Enforcement: A Low Federal Priority

ATF tobacco investigations initiated and closed, 1998-2014

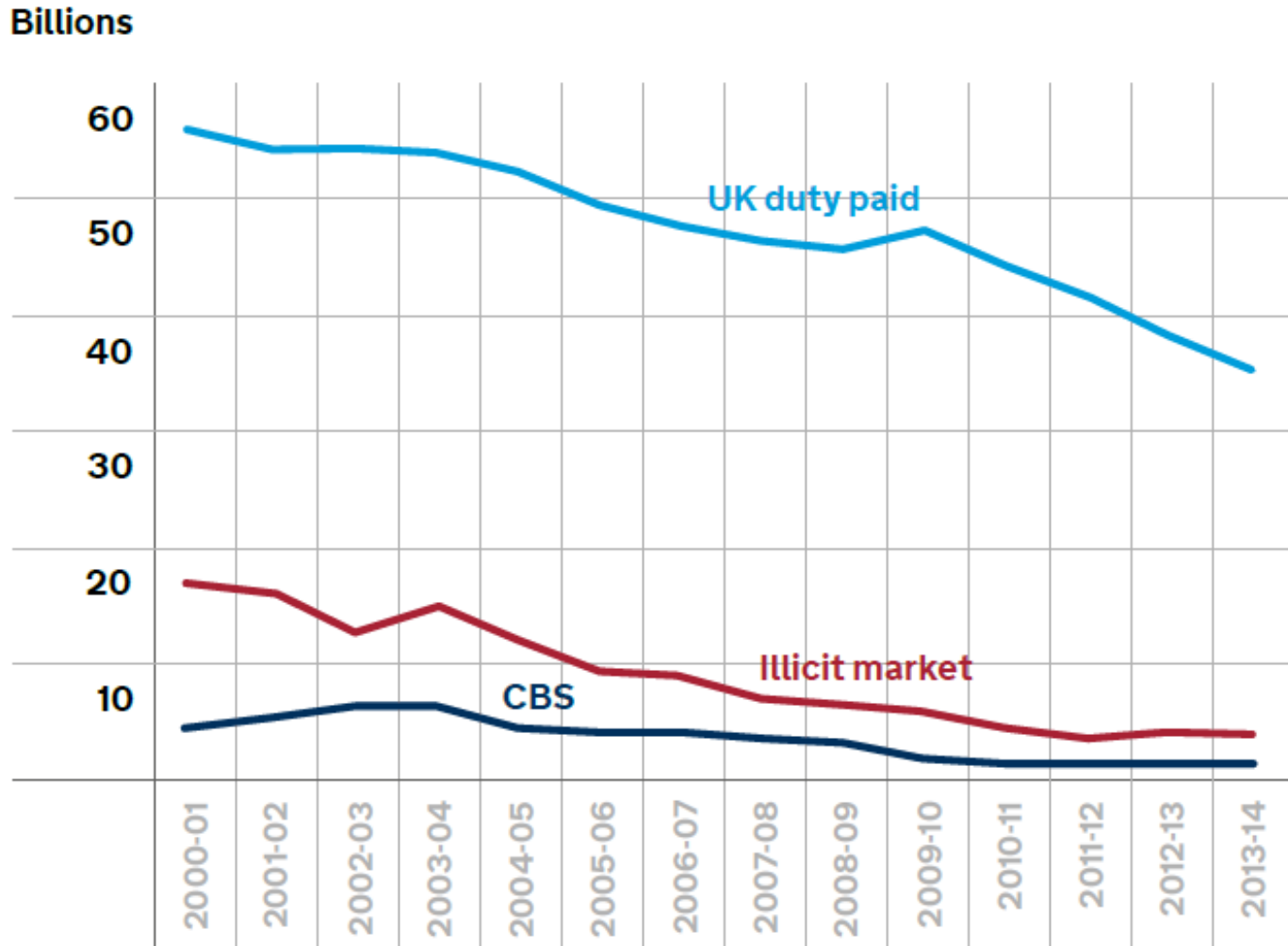


Coordinating & Prioritizing

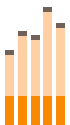
- United Kingdom implemented comprehensive approach:
 - Made it a priority with adoption of the “Tackling Tobacco Smuggling” strategy in 2000
 - Coordination among key agencies, led by Her Majesty’s Revenue and Customs
 - Focus on large scale smuggling
 - Enhanced penalties
 - Increased resources for enforcement
 - Required pack warnings
 - Public education campaigns
 - Adapted over time as illicit market changed

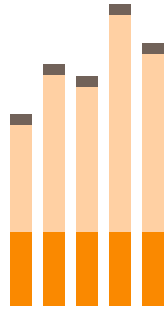


Estimated Volumes of Cigarettes Consumed in the U.K. – Duty paid, illicit, and cross-border shopping, 2000-01 – 2013-14



Source: HM Revenue & Customs, 2014





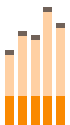
Optimizing Tobacco Taxation

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Tracking & Tracing

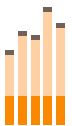
Tracking & Tracing Systems

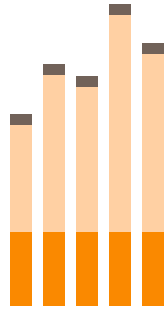
- Implementation of tracking & tracing in Turkey accompanied by:
 - Increased compliance checks and other enhanced enforcement efforts
 - Stronger penalties on violators
 - Improved coordination among revenue authorities, Ministries of Justice, Foreign Affairs, Economy, and Internal Affairs
 - *31.5% increase in revenue in first year, with no increase in taxes*
- Early success followed by significant tax increases



Optimizing the Impact of Tobacco Taxes

- Implement a national tracking and tracing system
 - FDA has authority to implement national tracking & tracing system
 - But no authority on taxation
 - Pending legislation requiring Treasury Department to implement a national tracking & tracing system
 - Encrypted state tax stamps have limited tracking and tracing features

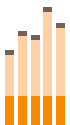




Optimizing Tobacco Taxation - Public Education

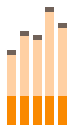
Public Education Campaigns

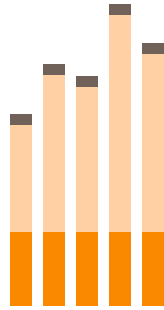
- Several countries have implemented public education campaigns targeting illicit tobacco
 - Generally run by governments, but in some run by retailer associations or advocacy groups
 - Typically one component of a comprehensive strategy to reduce illicit trade
 - Multiple themes:
 - Attack culture of tolerance for illicit tobacco and perception that tobacco smuggling is a victimless crime
 - Encourage citizens to report illicit tobacco sales
 - Highlight harms of tobacco use
 - Some concerns with campaigns that suggest that illicit products are more dangerous than licit products



Public Education Campaigns

- Extensive evidence of success of mass media campaigns in reducing tobacco use in the US
 - National campaigns (truth, TIPS, Real Cost....)
 - Campaigns run by comprehensive state tobacco control programs in many states (CA, MA, AZ.....)
- Few efforts to address illicit tobacco
 - Mostly limited to promoting citizen activism (Chicago’s “Check the Stamps” program; Cook County’s “Cigarette Tax Reward Program”
 - Appear to be relatively cost effective
 - Chicago campaign also highlights negative impact on legitimate businesses, contribution to youth tobacco use, and lost tax revenues



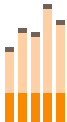
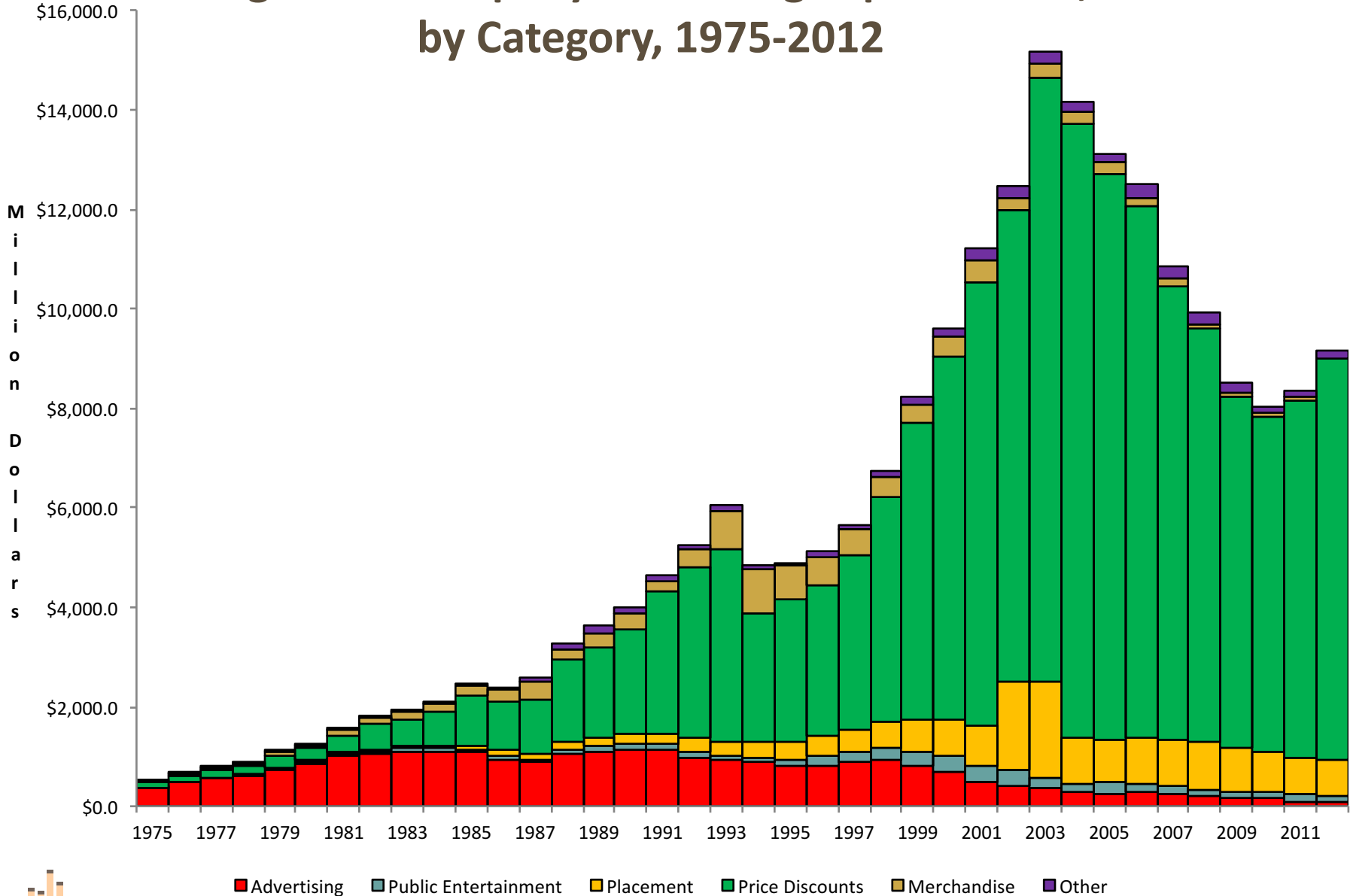


Optimizing Tobacco Taxation

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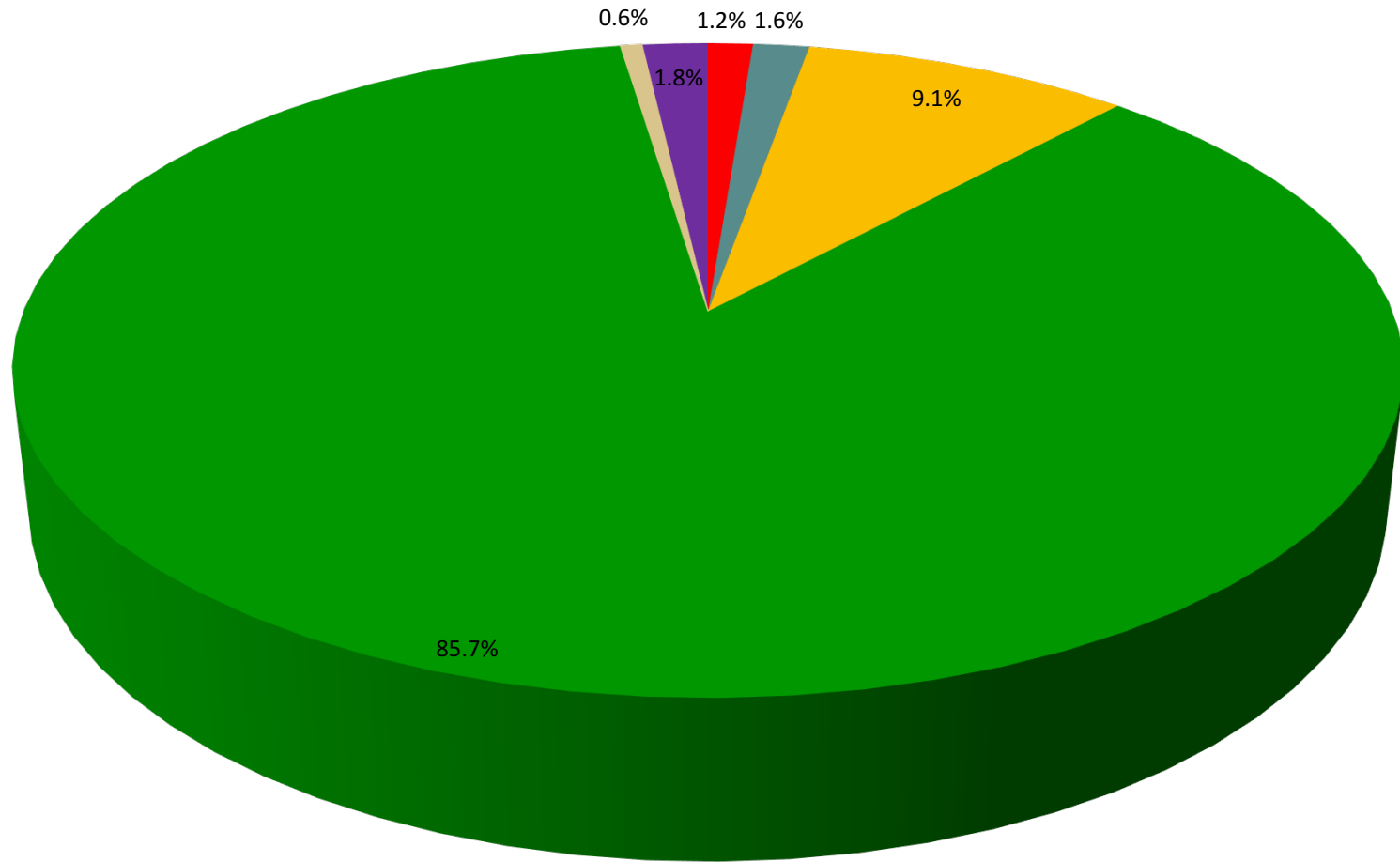
Limiting Tobacco Industry's Price-Reducing Promotions

Cigarette Company Marketing Expenditures, by Category, 1975-2012



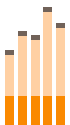
Source: author's calculations from data reported in FTC (2015)

Cigarette Company Marketing Expenditures % of Total by Type, 2012

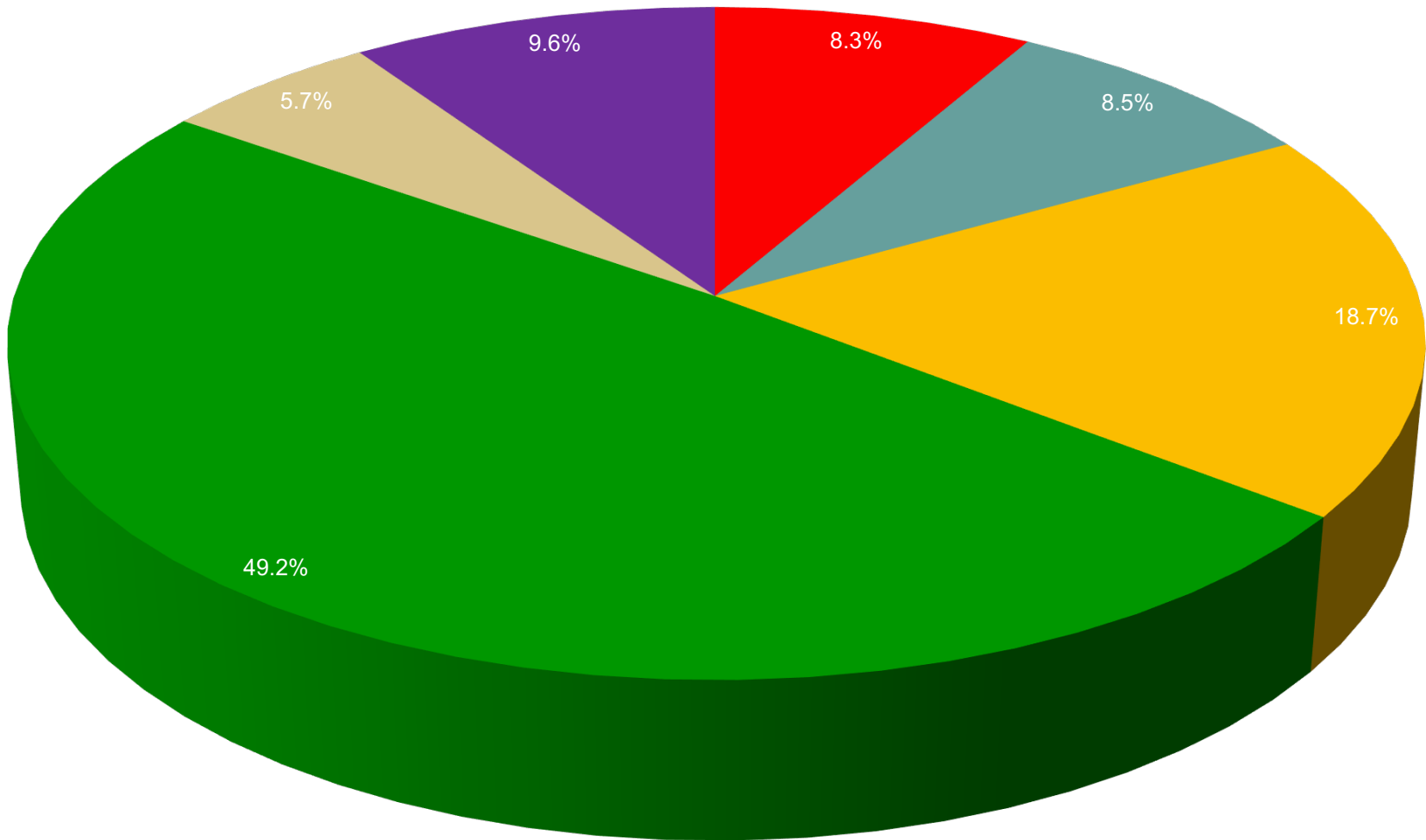


■ Advertising ■ Public Entertainment ■ Placement ■ Price Discounts ■ Merchandise ■ Other

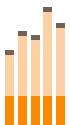
Source: author's calculations from data reported in FTC (2015)



Smokeless Tobacco Company Marketing Expenditures % of Total by Type, 2012



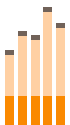
■ Advertising ■ Public Entertainment ■ Placement ■ Price Discounts ■ Merchandise ■ Other

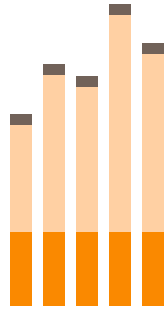


Source: author's calculations from data reported in FTC (2015)

Optimizing Tobacco Taxes

- Prohibit price-reducing promotions
 - FSPTCA (FDA regulation) eliminated federal pre-emption of stronger state, local restrictions on tobacco company marketing
 - Allows restrictions on the “time, place, or manner” of tobacco marketing
 - Providence – first to ban redemption of coupons, multi-pack deals (January 2013)
 - New York City followed in August 2014
 - Have withstood industry legal challenges





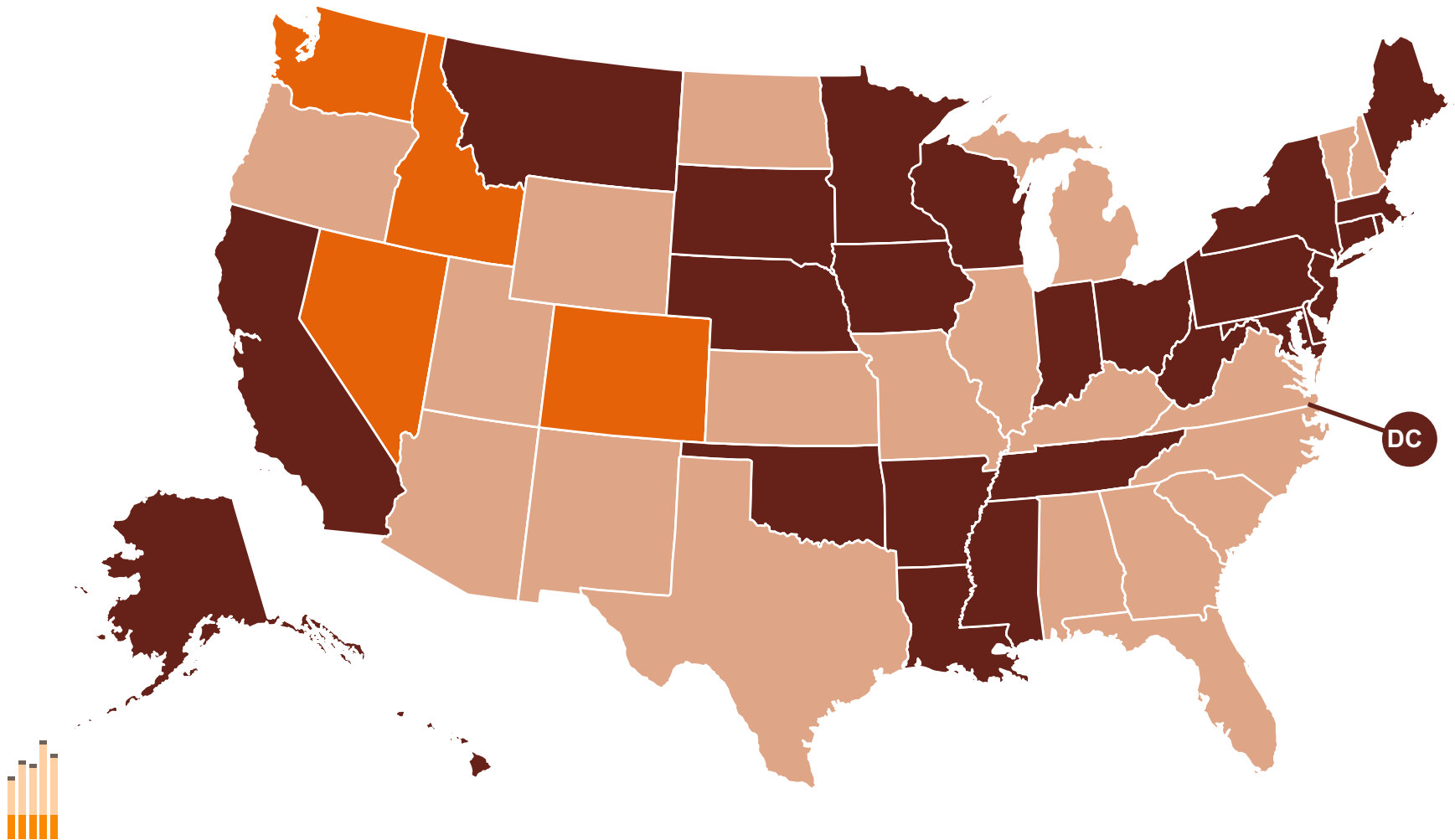
Optimizing Tobacco Taxation

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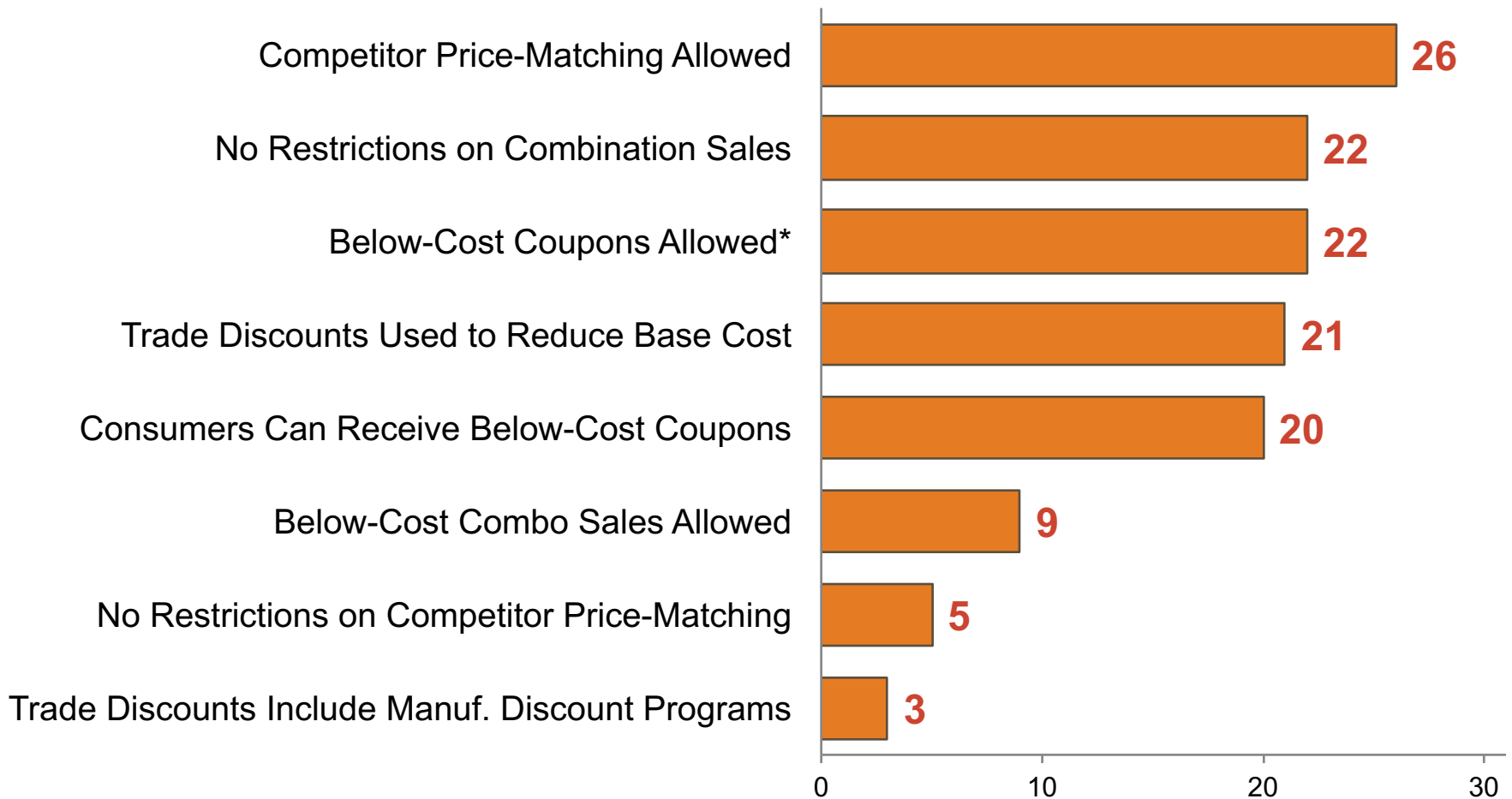
Minimum Pricing Policies

State Minimum Cigarette Pricing Policies, 2015

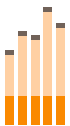
Minimum Markup Minimum Pricing No minimum pricing laws



State MPLs - Factors That Decrease the Base Cost of Cigarettes

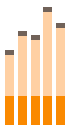


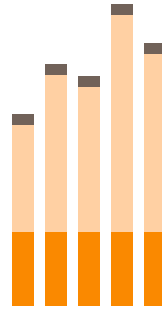
Notes: Data are not mutually exclusive; 31 states with some MPL; * Includes states silent on coupons



Optimizing the Impact of Tobacco Taxes

- Implement minimum pricing policies:
 - with high minimum prices
 - that do not include loopholes for reducing prices below minimum
 - that cover all tobacco products
- Also helpful in detecting illicit products
 - Primary motivation for NYC minimum pricing law



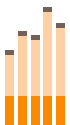
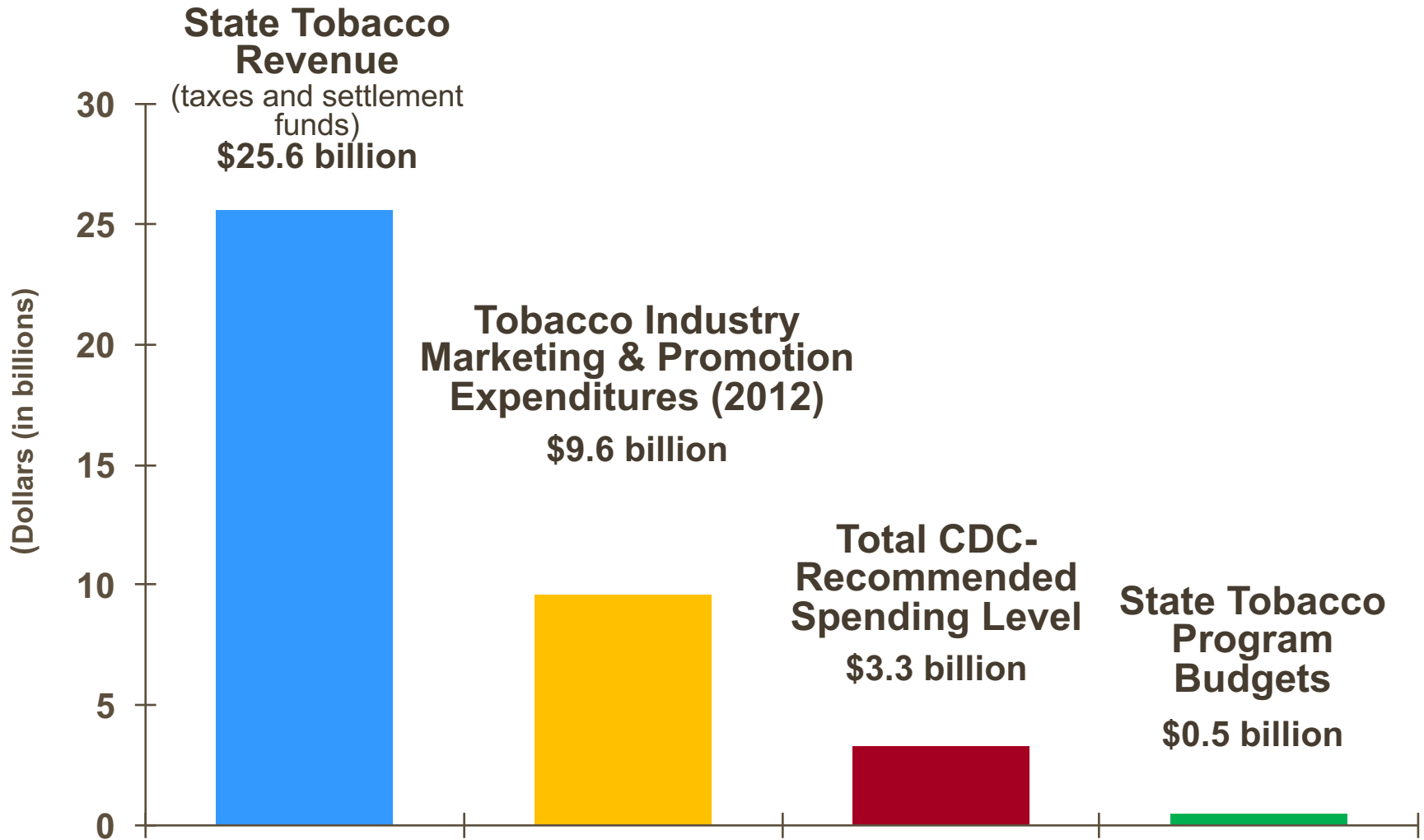


Optimizing Tobacco Taxation

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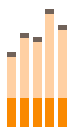
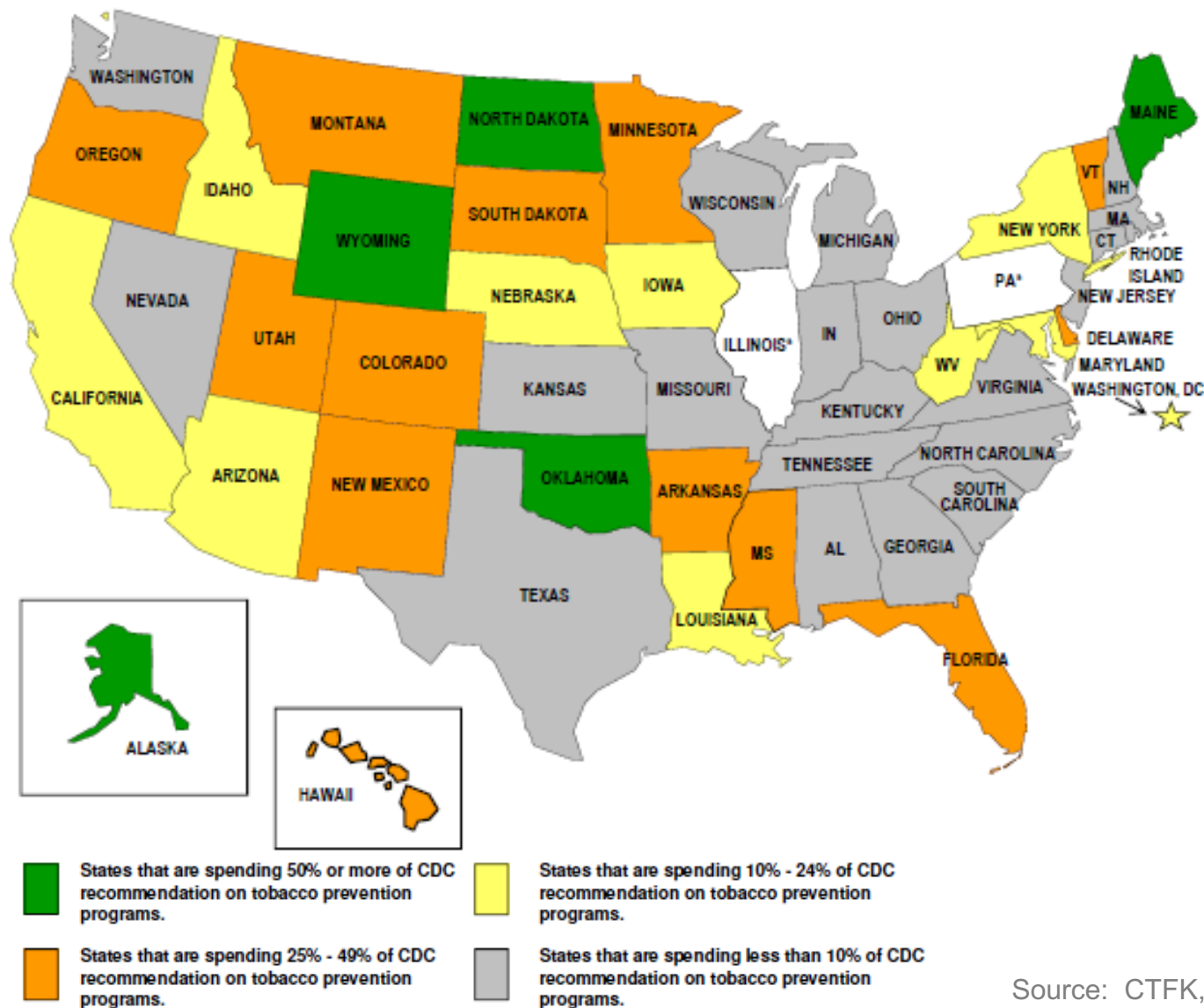
Use of Tax Revenues

Tobacco Industry is Outspending Prevention Efforts 20.5:1 —FY2016

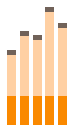
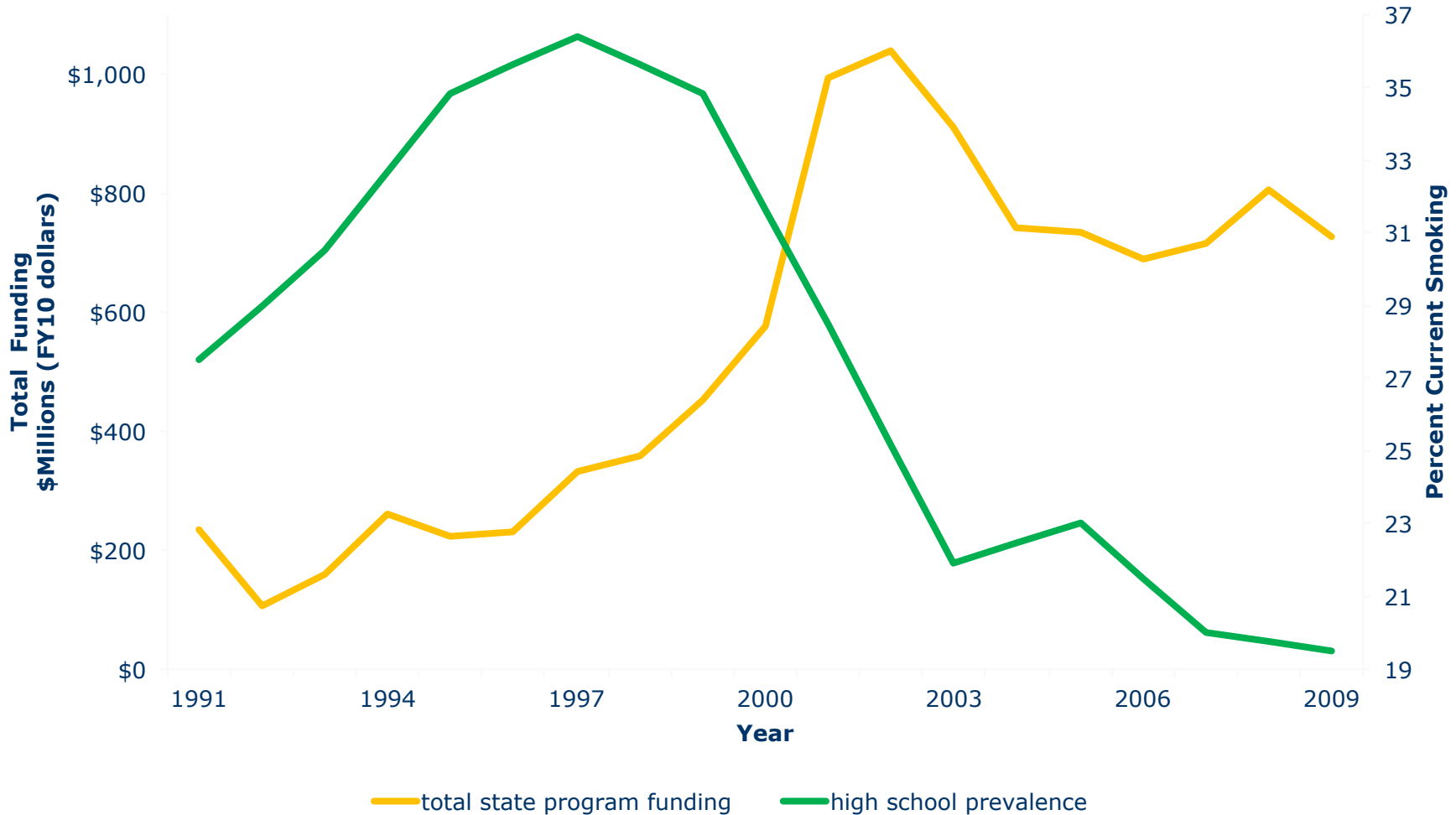


Campaign for Tobacco Free Kids, Federal Trade Commission, American Heart Association, American Cancer Society, American Lung Association, SmokeLess States National Tobacco Policy Initiative

Tobacco Program Funding, FY16, as Percentage of CDC Recommendation



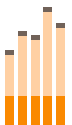
State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009

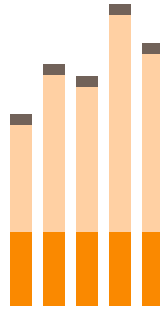


Source: ImpacTeen Project, UIC; YRBS

Optimizing the Impact of Tobacco Taxes

- Earmark tobacco tax revenues for comprehensive tobacco control programs
 - Adds to reductions in tobacco use
 - Enhances public support for tax increases
- Earmark tobacco tax revenues for other health promotion efforts
 - Can address concerns about impact of tax increases on low-income tobacco users





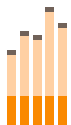
Optimizing Tobacco Taxation

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Differential Taxation

Differential Taxation

- WHO Technical Manual on Tobacco Tax Administration:
 - “Adopt comparable taxes and tax increases on all tobacco products”
- WHO FCTC Article 6 Guidelines:
 - “All tobacco products should be taxed in a comparable way as appropriate, in particular where the risk of substitution exists.”

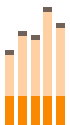
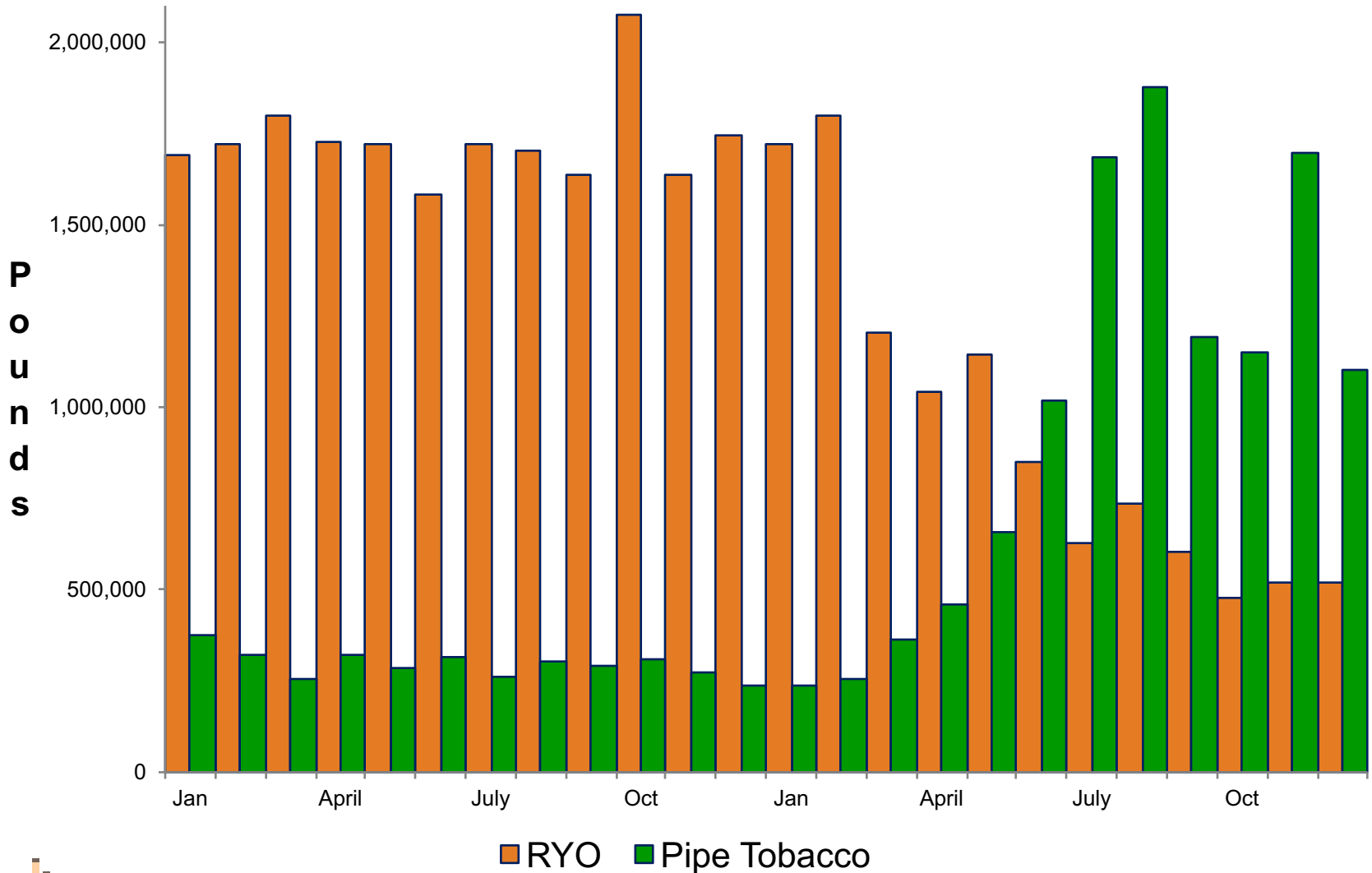


Differential Taxation

- Federal tobacco taxes
 - Roll-your-own vs. pipe tobacco
 - Federal taxes before 4/1/2009
 - Both taxed at \$1.0969/lb
 - After 4/1/2009
 - roll-your-own tobacco \$24.78 per pound
 - pipe tobacco: \$2.83 per pound

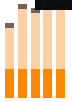


Taxable RYO and Pipe Tobacco US, 2008-2009

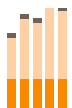
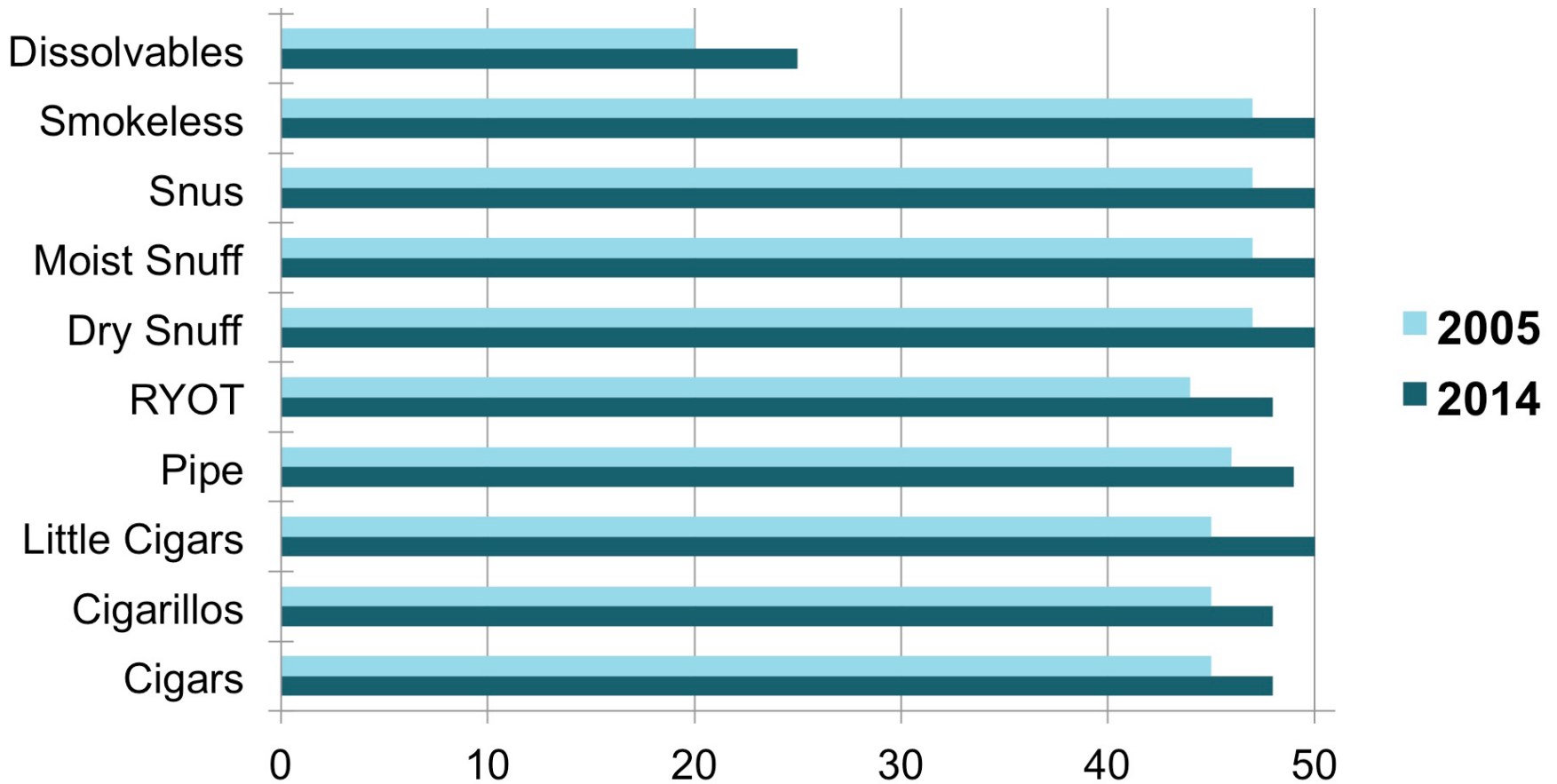


Source: US Treasury Department, Alcohol and Tobacco Tax and Trade Bureau

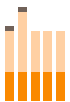
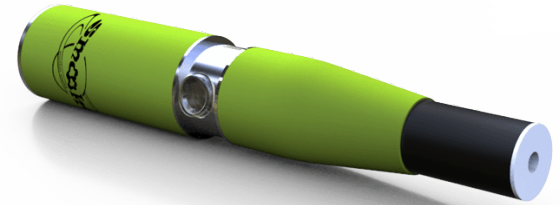
Non-Combustible Tobacco Products



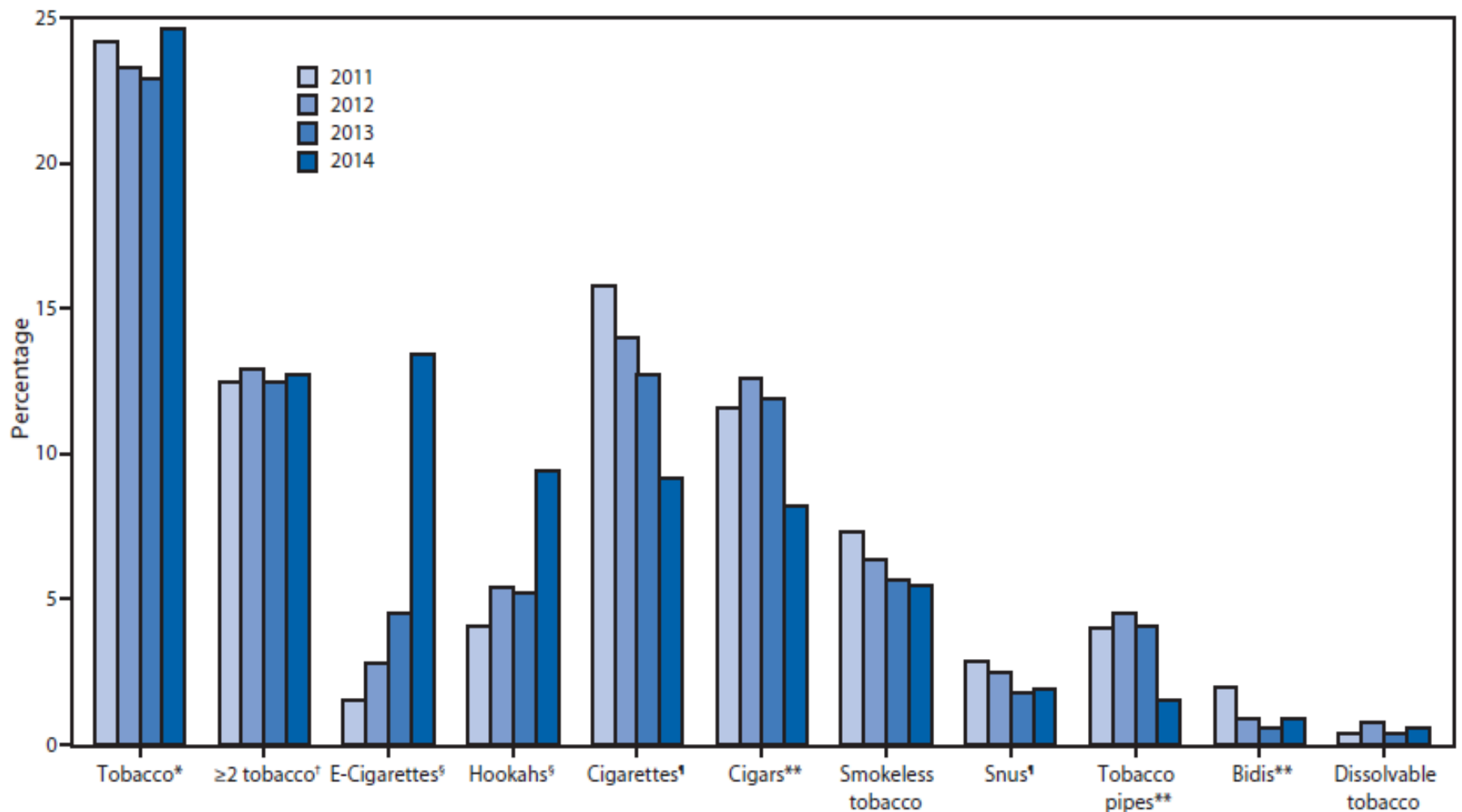
States Taxing Other Tobacco Products, 2005 & 2014



ENDS



Youth E-Cigarette and Tobacco Use High School Students, 2011-2014

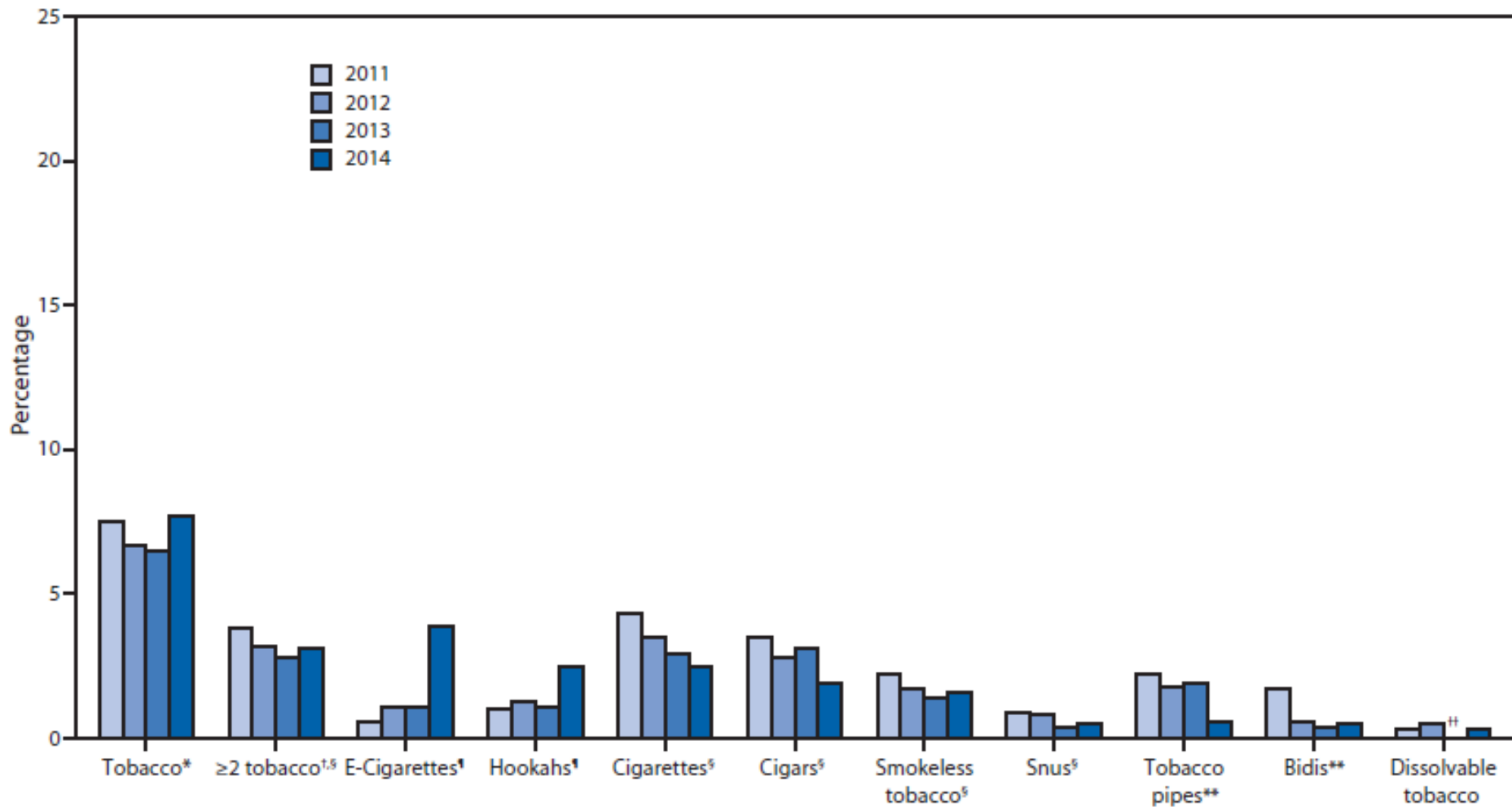


* Defined as preceding 30-day use of cigarettes, cigars, smokeless tobacco, e-cigarettes, hookahs, tobacco pipes, snus, dissolvable tobacco, and/or bidis.

† Defined as preceding 30-day use of two or more of cigarettes, cigars, smokeless tobacco, e-cigarettes, hookahs, tobacco pipes, snus, dissolvable tobacco, and/or bidis.



Youth E-Cigarette and Tobacco Use Middle School Students, 2011-2014



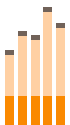
* Defined as preceding 30-day use of cigarettes, cigars, smokeless tobacco, e-cigarettes, hookahs, tobacco pipes, snus, dissolvable tobacco, and/or bidis.

† Defined as preceding 30-day use of two or more of cigarettes, cigars, smokeless tobacco, e-cigarettes, hookahs, tobacco pipes, snus, dissolvable tobacco, and/or bidis.



Public Health Impact?

- Concerns:
 - Gateway to combustible tobacco products for youth?
 - Dual use, not cessation, among adult smokers?
 - Impact of ‘second-hand vaping’?
 - Nicotine poisoning
 - Use for vaping other substances (particularly THC)
 - Lack of evidence on long term health consequences of use
 - Impact of nicotine on the developing brain
 - Renormalization of smoking



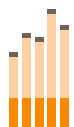


*E-cig companies say vaping will set you free. But nicotine addiction is the opposite of freedom. *Wake up.*



**IT'S THE NEXT
GENERATION
CIGARETTE.***
***FOR THE NEXT
GENERATION
OF ADDICTS.**


StillBlowingSmoke.org





Public Health
England

Protecting and improving the nation's health

E-cigarettes: an evidence update

A report commissioned by Public Health
England

Authors:

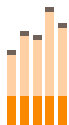
McNeill A, Brose LS, Calder R, Hitchman SC

Institute of Psychiatry, Psychology & Neuroscience, National Addiction Centre, King's
College London
UK Centre for Tobacco & Alcohol Studies

Hajek P, McRobbie H (Chapters 9 and 10)

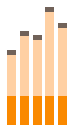
Wolfson Institute of Preventive Medicine, Barts and The London School of Medicine and
Dentistry Queen Mary, University of London
UK Centre for Tobacco & Alcohol Studies

“An expert
review of the
latest evidence
concludes that e-
cigarettes are
around 95%
safer than
smoked tobacco
and they can
help smokers to
quit.”



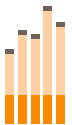
ENDS Taxation in the US

- Minnesota, North Carolina, Louisiana and DC currently tax ENDS
 - 95% of wholesale price in MN; 67% in DC; 40% in PA
 - 5 cents per ml in NC, LA; 7.5 cents/ml in WV; 20 cents/ml in KS
- Local ENDS taxes:
 - Petersburg AK (45% of wholesale price)
 - Mat Su Borough, AK (55% of wholesale price)
 - Chicago (80 cents per unit, plus 55 cents per ML)
- Many others have proposed or are considering



ENDS Taxation

- Low ENDS tax relative to cigarette, OTP taxes
 - Little impact in reducing use, uptake
 - Encourages dual use
 - Maximize incentives to switch from combustibles to ENDS
 - Minimal new revenue
- ENDS tax equivalent to cigarette tax
 - Significant impact on use, uptake
 - Little incentive to switch from combustibles to ENDS
 - Modest new revenue



Optimizing ENDS Taxation

- Significant tax on ENDS coupled with increased taxes on cigarettes and other combustible tobacco products
 - Maintain or increase relative price of combustibles
 - Maximize switching while discouraging initiation and dual use
 - Generates significant new revenues



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PERSPECTIVE

Differential Taxes for Differential Risks — Toward Reduced Harm from Nicotine-Yielding Products

Frank J. Chaloupka, Ph.D., David Sweanor, J.D., and Kenneth E. Warner, Ph.D.
N Engl J Med 2015; 373:594-597 | August 13, 2015 | DOI: 10.1056/NEJMp1505710



Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

Electronic Cigarettes: A Policy Statement From the American Heart Association
Aruni Bhatnagar, Laurie P. Whitsel, Kurt M. Ribisl, Chris Bullen, Frank Chaloupka, Mariann R. Piano, Rose Marie Robertson, Timothy McAuley, David Goff and Neal Benowitz
on behalf of the American Heart Association Advocacy Coordinating Committee, Council on Cardiovascular and Stroke Nursing, Council on Clinical Cardiology, and Council on Quality of Care and Outcomes Research

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