

Optimizing the Public Health Impact of Tobacco Taxes

Frank J. Chaloupka, University of Illinois at Chicago Society for Research on Nicotine and Tobacco Chicago, Illinois, March 2, 2016



Tobacco Product Taxation:

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

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Preventing and Reducing Illicit Tobacco Trade

in the United States







Characteristics, Policy Context, and Lessons

NATIONAL RESEARCH COUNCIL AND INSTITUTE OF MEDICINE

from International Experiences





Disclosures

- 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

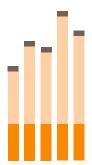


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Highlighting Chicago

Chicago a Leader on Tobacco Control

- One of the strongest, most comprehensive and earliest smoke-free policies
 - First large US city to include e-cigarettes under smoke-free policy
- Highest combined cigarette taxes in the country - \$7.17 total excise tax
 - \$1.98 Illinois tax; \$3.00 Cook County tax;\$1.18 Chicago tax; \$1.01 Federal tax
- Variety of public education programs



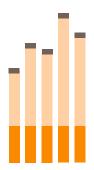
Chicago a Leader on Tobacco Control

- Ban on the sale of ALL flavored tobacco products in stores near schools
 - In process of being implemented
- New e-cigarette tax
 - Effective January 1, 2016
- Latest proposals include:
 - Significant taxes on other tobacco products
 - Minimum prices for all tobacco products
 - Enhanced tax enforcement
 - Raising minimum purchase age to 21 years









Impact of Tax and Price on Tobacco Use

Tobacco Taxation

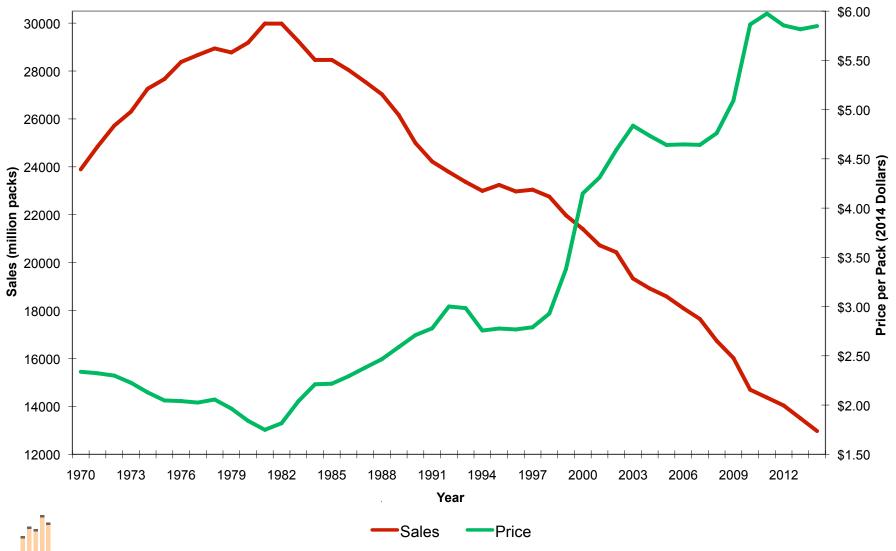
"Sugar, rum, and tobacco, are commodities which are no where necessaries of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation.

Adam Smith, 1776

An Inquiry into the Nature and Causes of The Wealth of Nations



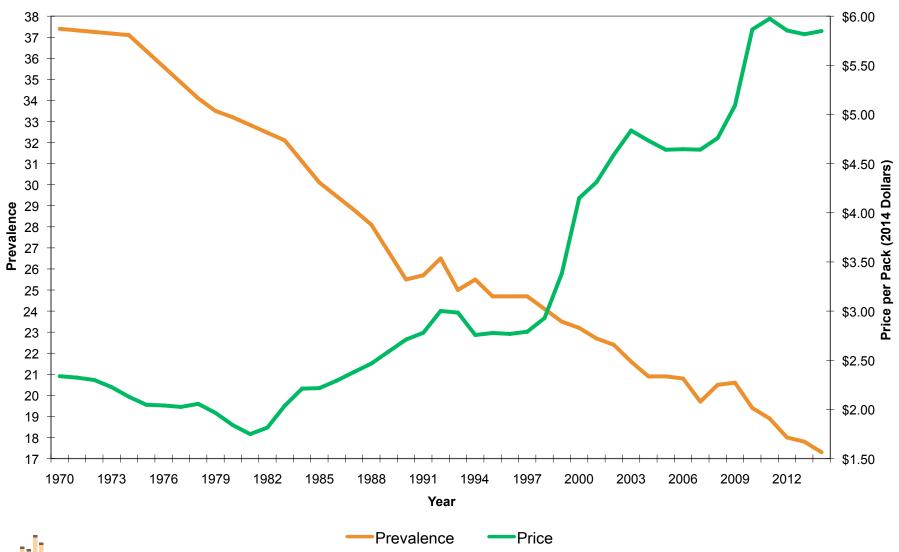
Cigarette Prices and Cigarette Sales United States, 1970-2014





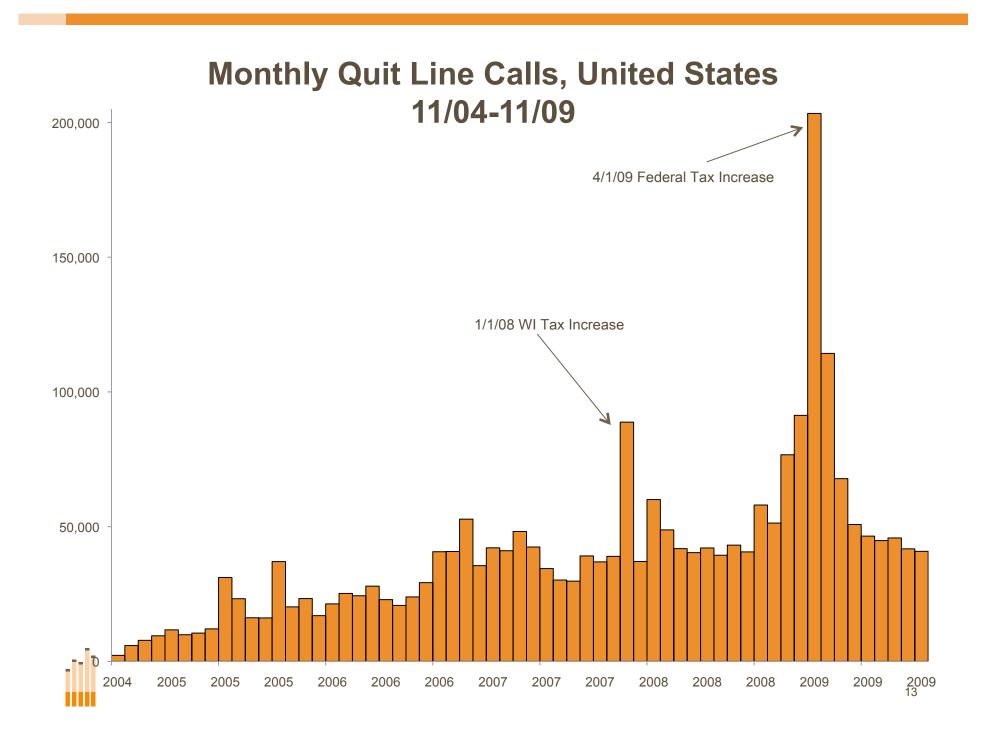
Source: Tax Burden on Tobacco, 2015, and author's calculations

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

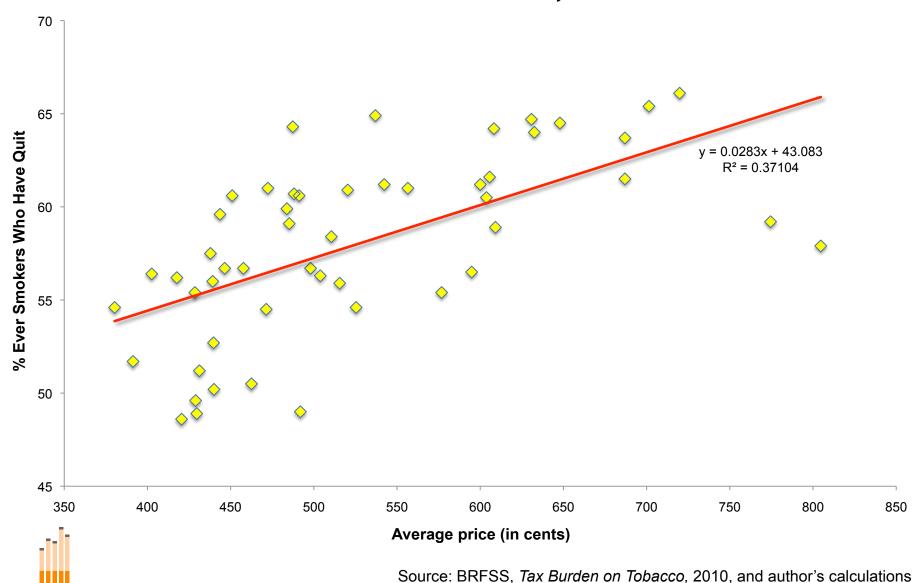




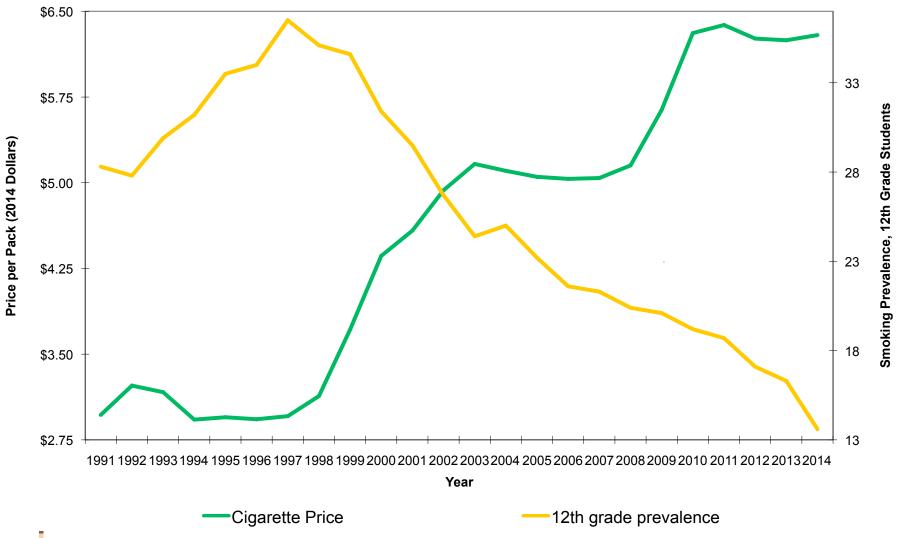
Source: NHIS, Tax Burden on Tobacco, 2015, and author's calculations



Cigarette Prices and Cessation US States & DC, 2009



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





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





Prices and Tobacco Use

- Similar evidence for variety of other tobacco products and for ecigarettes
 - Generally see evidence of substitution
 - Greater substitution among more similar products



Tobacco Taxation

"... We [] have a package of six policy measures, known as MPOWER, that can help countries implement the provisions in the Convention. All six measures have a proven ability to reduce tobacco use in any resource setting. But tobacco taxes are by far the most effective."

Director General Dr. Margaret Chan, WHO, 2008



Prices and Tobacco Use

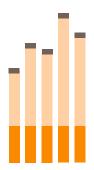
- But tax/price increases lead to other changes in tobacco use behaviors:
 - "Downtrading" to cheaper brands
 - Substitution to cheaper products
 - Tax avoidance and evasion
 - Increase in use of price reducing promotions
 - Purchase of larger quantities



Optimizing the Impact of Tobacco Taxes

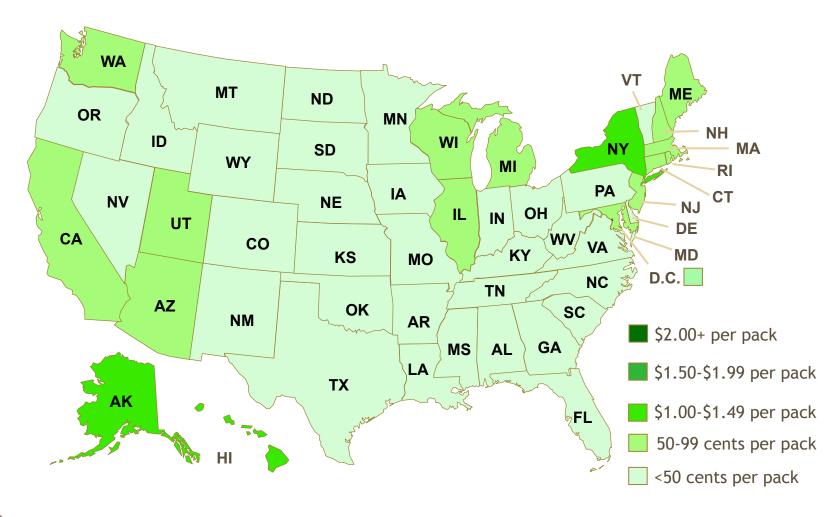
- Current tobacco tax systems far from optimal in US and in most other countries
 - Fail to maximize public health impact
 - Fail to maximize potential revenues
 - Fall far short of covering external costs from tobacco



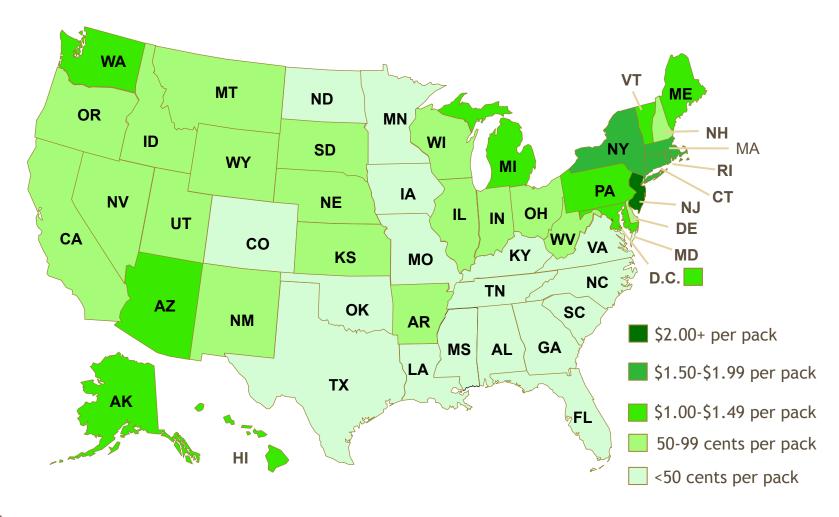


Optimizing Tobacco Taxation

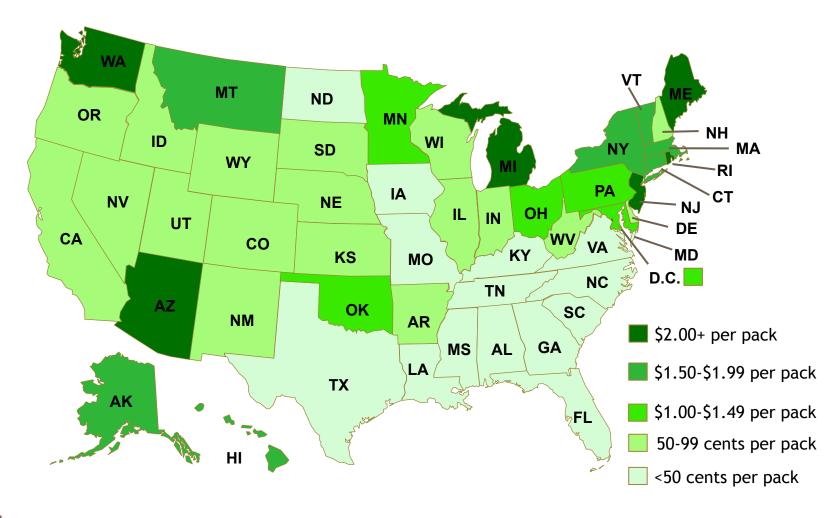
Curbing Tax Avoidance & Tax Evasion



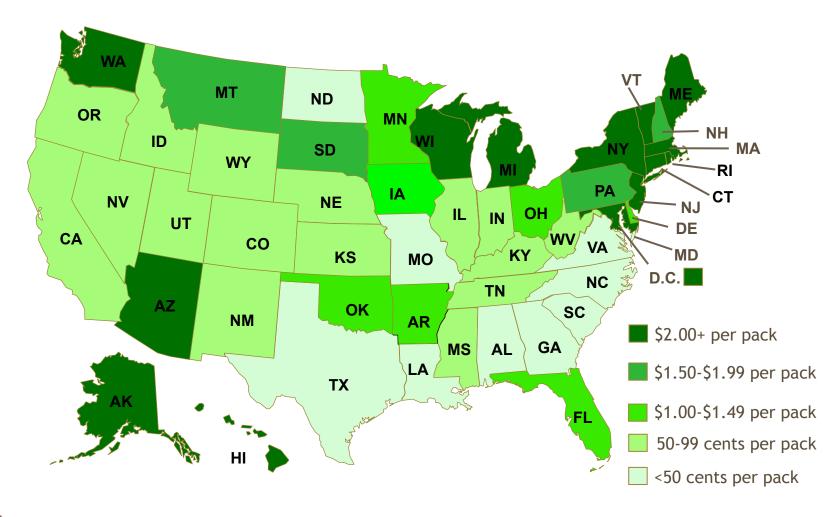




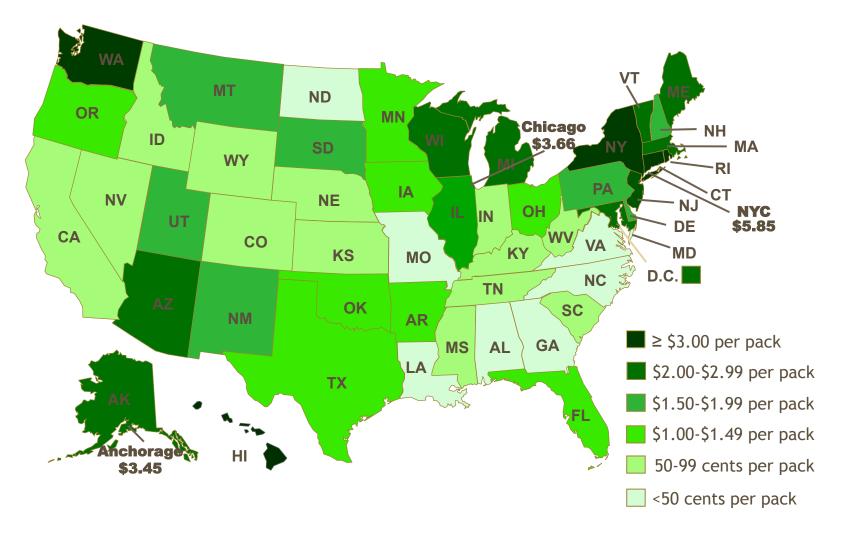






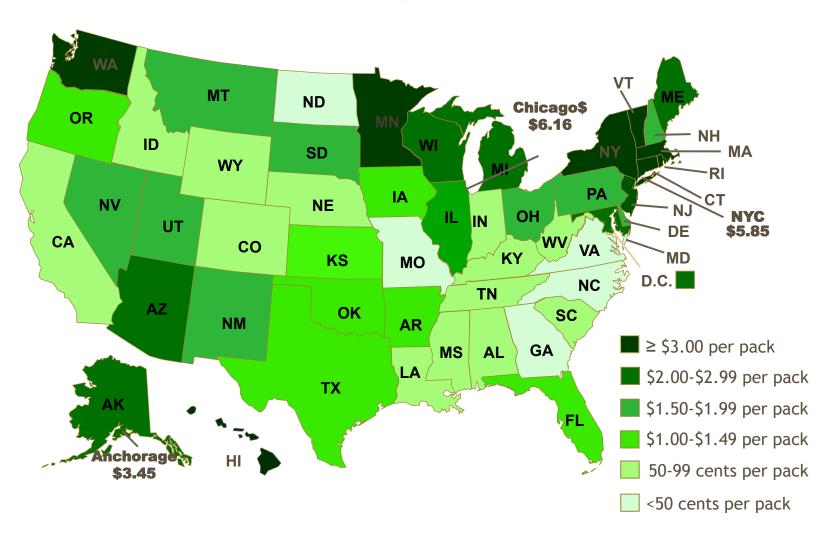








March 1, 2016



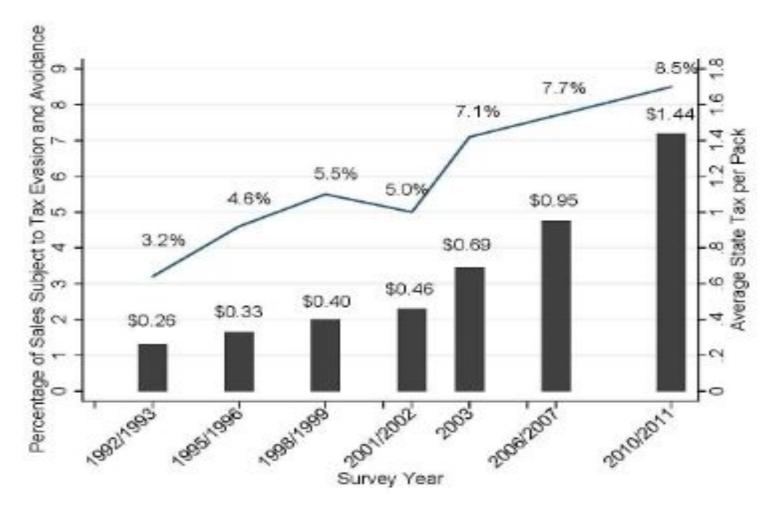


State Tobacco Taxes

- 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

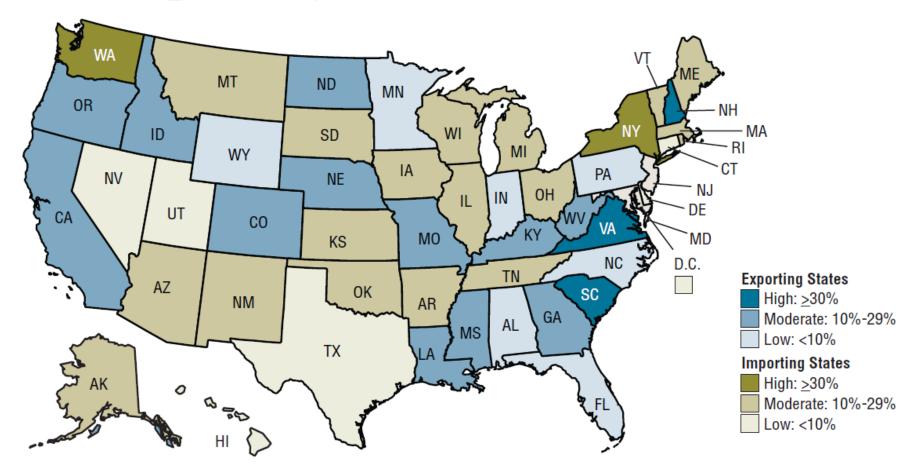


Trends in Net Tax Avoidance & Evasion in the United States





Estimated State Cigarette 'Importing' and 'Exporting', 2010-11

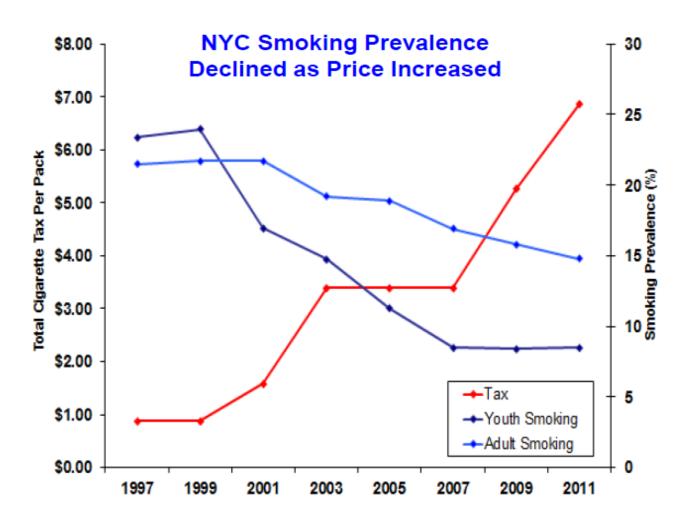


Note: "Importing states" are those where some consumers avoid or evade taxes by obtaining their tobacco products from states or federal tribal lands where taxes are lower. "Exporting states" are those where some tobacco products intended for consumption within that state are purchased by consumers from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

Source: CDC, 2015

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

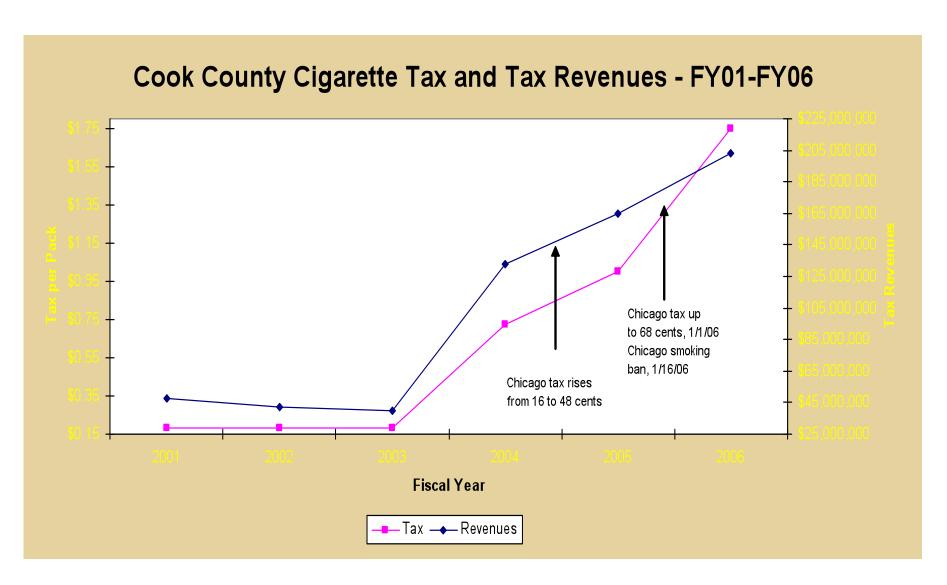
Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes





Source: Schroth, 2014

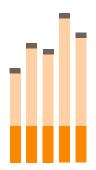
Tax Avoidance & Evasion Do NOT Eliminate Revenue Impact of Higher Taxes



Optimizing the Impact of Tobacco Taxes

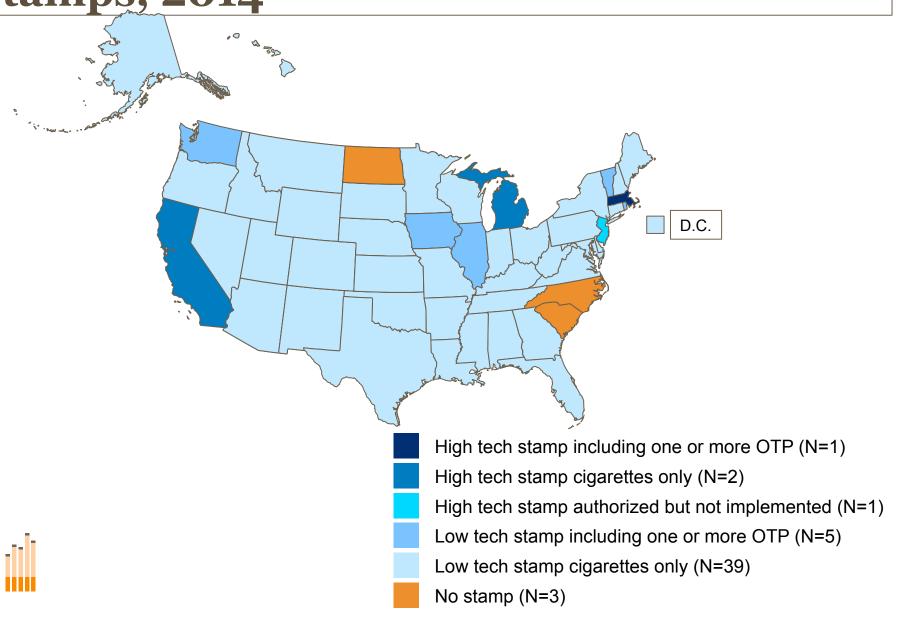
- Harmonize tobacco taxes across states
 - reduce incentives for cross-border shopping and bootlegging
 - Done with other policies (minimum legal ages for tobacco & alcohol; per se illegal BAC level)
 - Could reduce Medicaid match for states that do not adopt the minimum match
- Setting tax floor most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





Optimizing Tobacco Taxation

Implementing Pack Markings, Licensing & Enforcement Types of State Cigarette and OTP Tobacco Stamps, 2014



California's Encrypted Cigarette Tax Stamps

2005-2010 —



2011-present

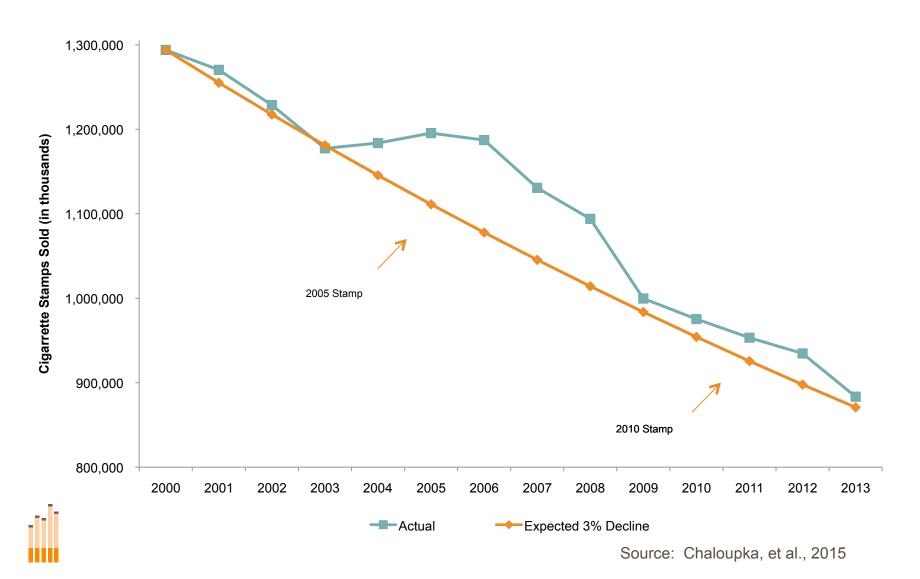


Stamp Angled View (ink appears green)

Stamp Angled View (ink appears blue)



Cigarette Tax Stamps Sold Projected and actual, California, 2000 - 2013



Michigan's Encrypted Cigarette Tax Stamp

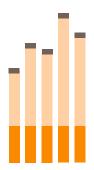




Optimizing the Impact of Tobacco Taxes

- 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

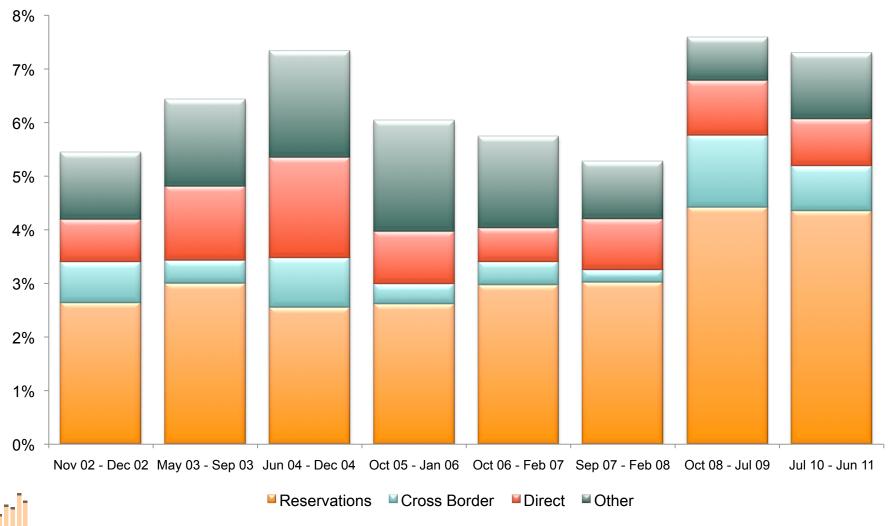




Optimizing Tobacco Taxation Addressing Tribal Sales

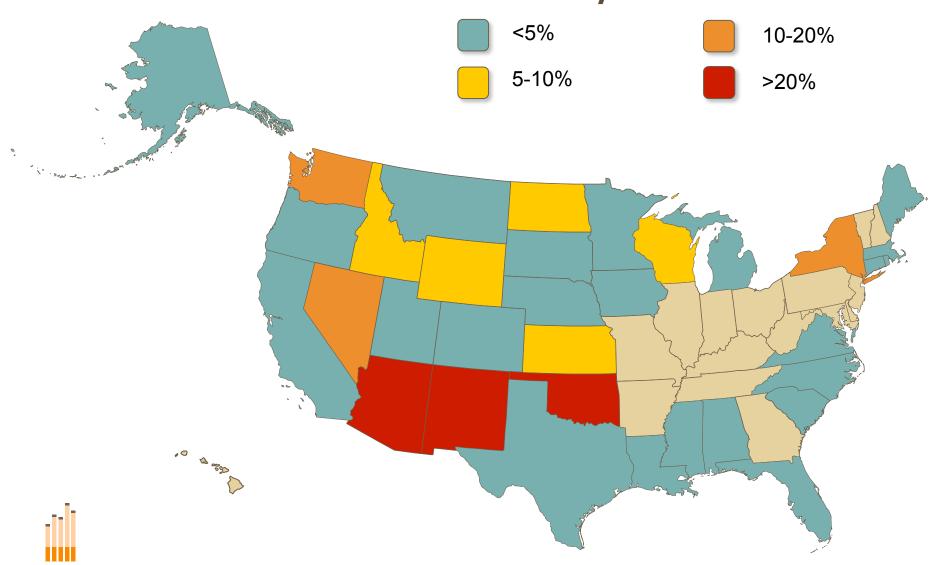
Tax Avoidance

US Smokers, Last Purchase, November 2002-June 2011

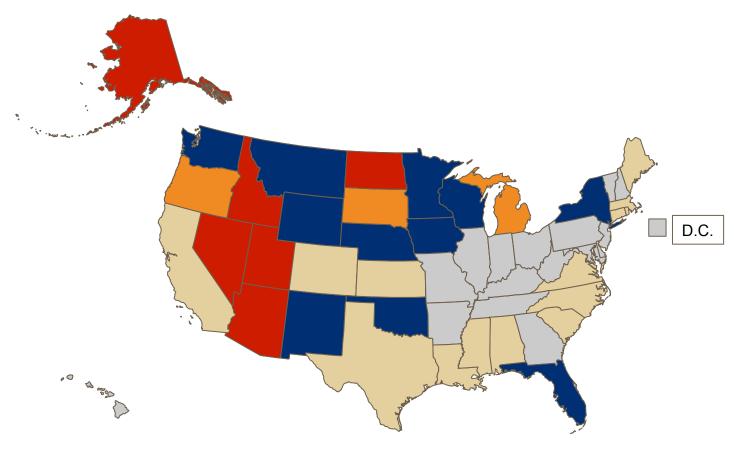


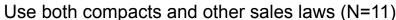


Percent of Smokers Buying on Reservations – 2010/11



Tribal Tobacco Sales Laws, 2014







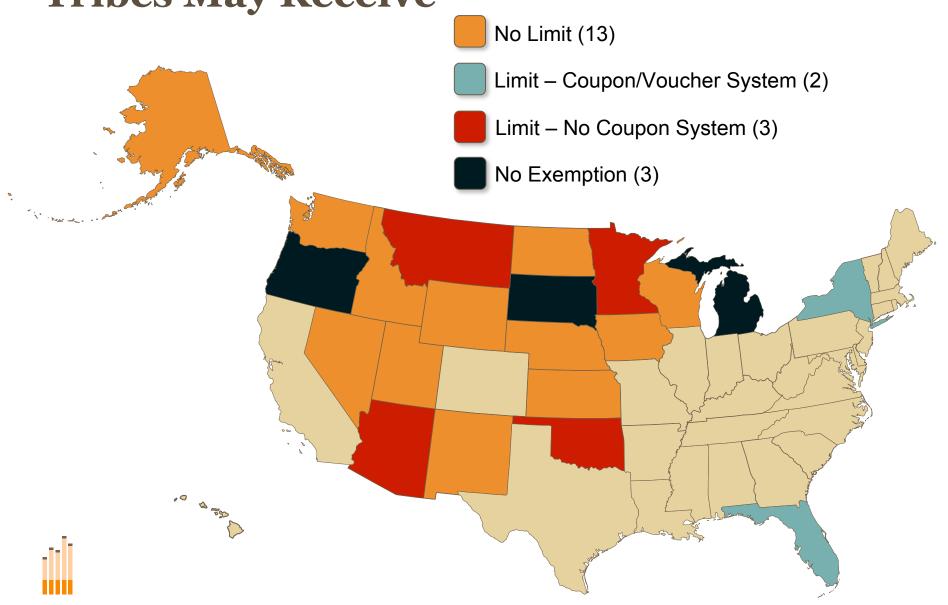
Use sales laws only (N=6)

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

No tribal reservations within state borders (N=17)



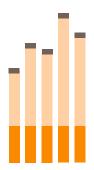
Limits on Amount of Tax-Exempt Tobacco Tribes May Receive



Optimizing the Impact of Tobacco Taxes

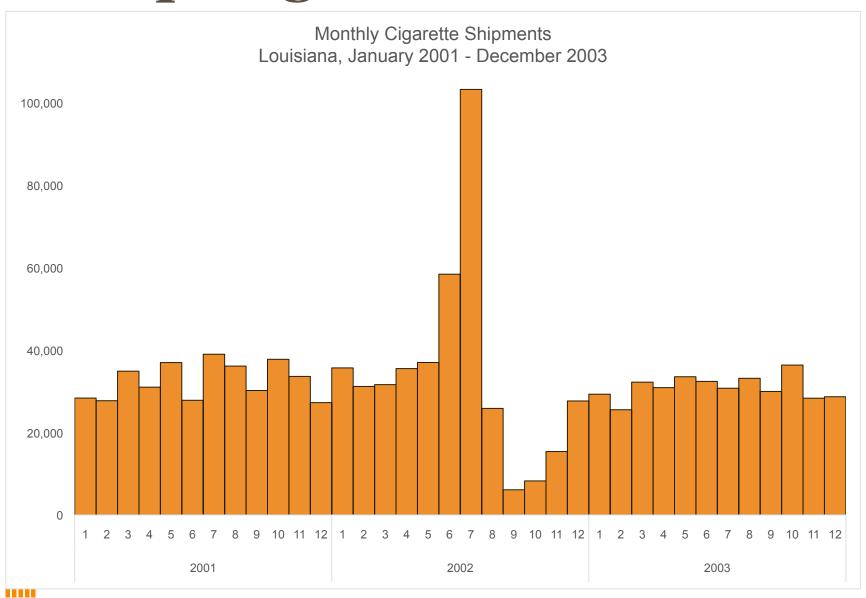
- Case studies of state efforts to address tribal sales suggest:
 - Compacts critical to ensuring success of efforts to reduce reservation-based tax avoidance and evasion
 - Most effective systems appear to be those that apply state tax to all tribal sales
 - Rebate/quota schemes somewhat effective
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





Optimizing Tobacco Taxation Deterring Stockpiling

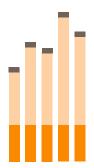
Stockpiling



Optimizing the Impact of Tobacco Taxes

- Levy "Inventory" or "Floor" tax
 - Collect increase in taxed on products in inventory taxed under old tax rate to avoid stockpiling in anticipation of tax increase





Optimizing Tobacco Taxation

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







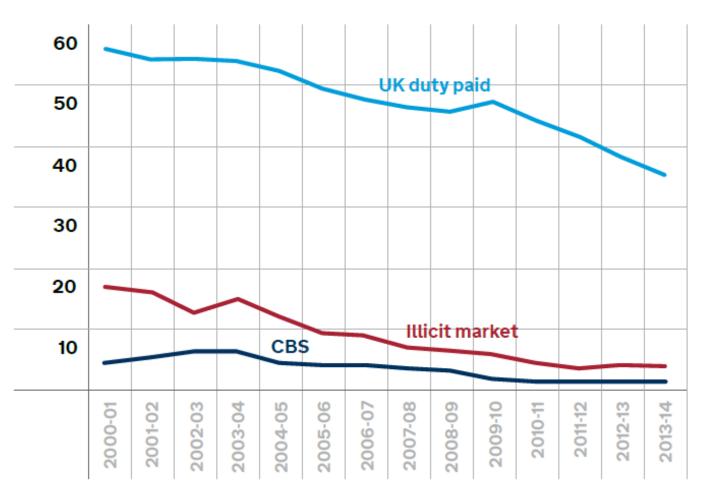
Coordinating & Prioritizing

- 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



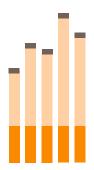
Estimated Volumes of Cigarettes Consumed in the U.K. – Duty paid, illicit, and cross-border shopping, 2000-01 – 2013-14

Billions





Source: HM Revenue & Customs, 2014



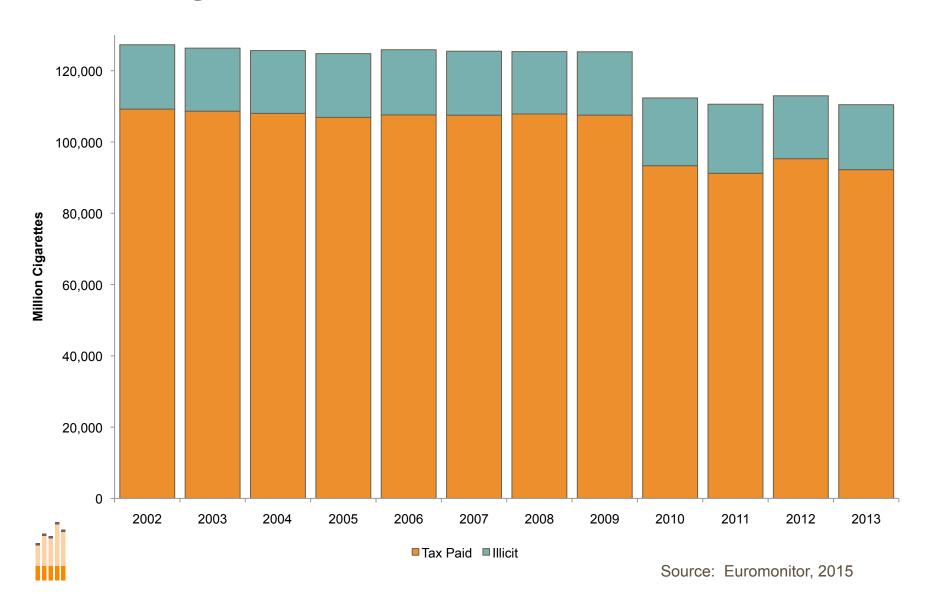
Optimizing Tobacco Taxation Tracking & Tracing

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



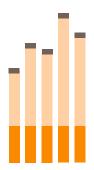
Figure 13 – Cigarette Consumption, Turkey, 2002-2013 – Tax Paid & Illicit



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

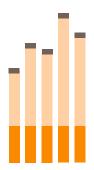
- Several countries have implemented public education campaigns targeting illicit tobacco
 - Generally run by governments, but in some run by retailer associations or advocacy groups
 - Typically one component of a comprehensive strategy to reduce illicit trade
 - Multiple themes:
 - Attack culture of 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

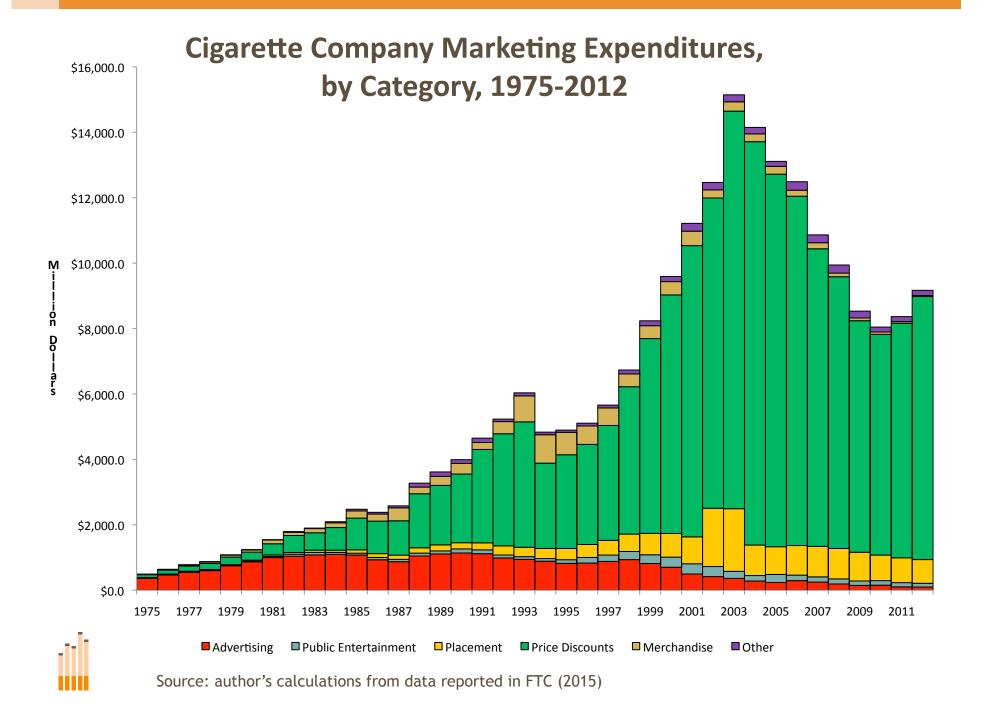
- Extensive evidence of success of mass media campaigns in reducing tobacco use in the US
 - National campaigns (truth, TIPS, Real Cost....)
 - Campaigns run by comprehensive state tobacco control programs in many states (CA, MA, AZ.....)
- Few efforts to address illicit tobacco
 - Mostly limited to 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



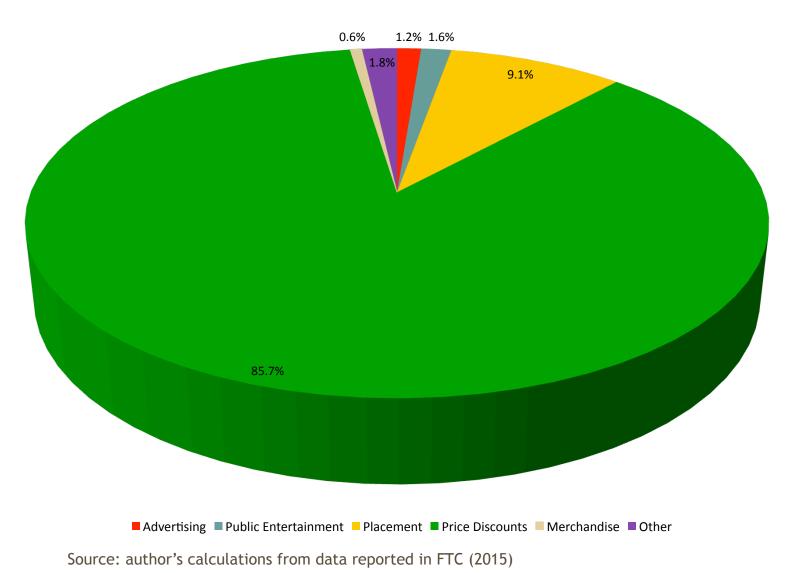


Optimizing Tobacco Taxation

Limiting Tobacco Industry's Price-Reducing Promotions

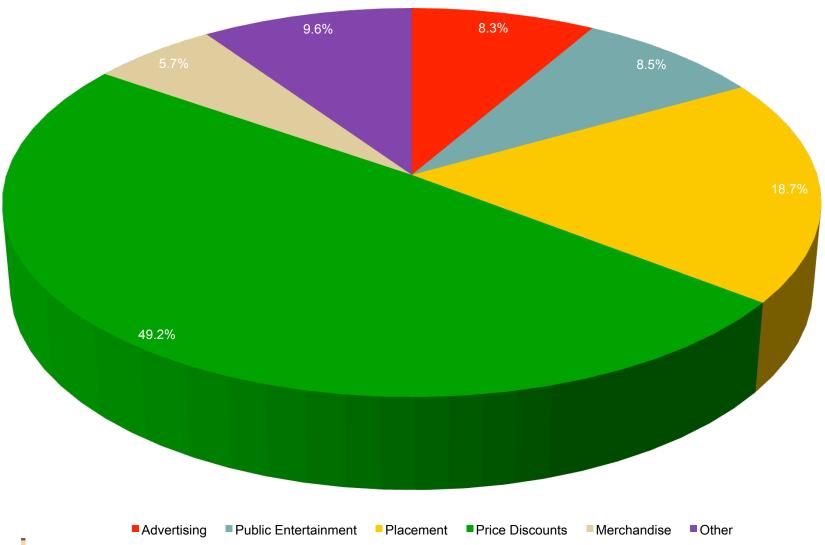


Cigarette Company Marketing Expenditures % of Total by Type, 2012





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





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

Tobacco Industry Efforts to Offset Impact of Tax Increases

On February 4th, 2009, the Federal Government enacted legislation to fund the expansion of the State Children's Health Insurance Program (SCHIP) that increases excise taxes on cigarettes by 158%.

As a result, you will see the price of all cigarettes, including ours, increase in retail stores.

We know times are tough, so we'd like to help. We invite you to register at Marlboro.com to become eligible for cigarette coupons and special offers using this code: MAR1558

Thank You,

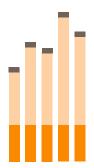
Philip Morris USA



Optimizing Tobacco Taxes

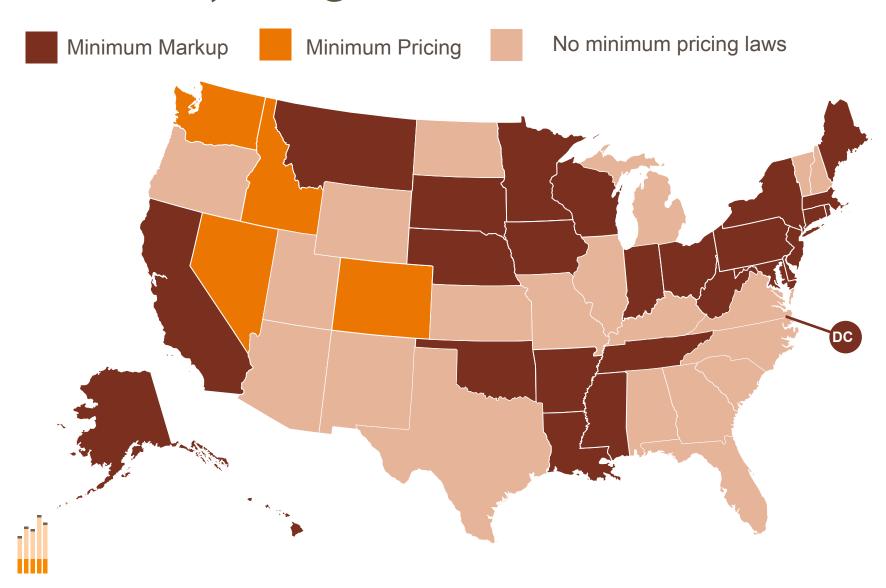
- Prohibit price-reducing promotions
 - FSPTCA (FDA regulation) eliminated federal pre-emption of stronger state, local restrictions on tobacco company marketing
 - Allows restrictions on the "time, place, or manner" of tobacco marketing
 - Providence first to ban redemption of coupons, multi-pack deals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



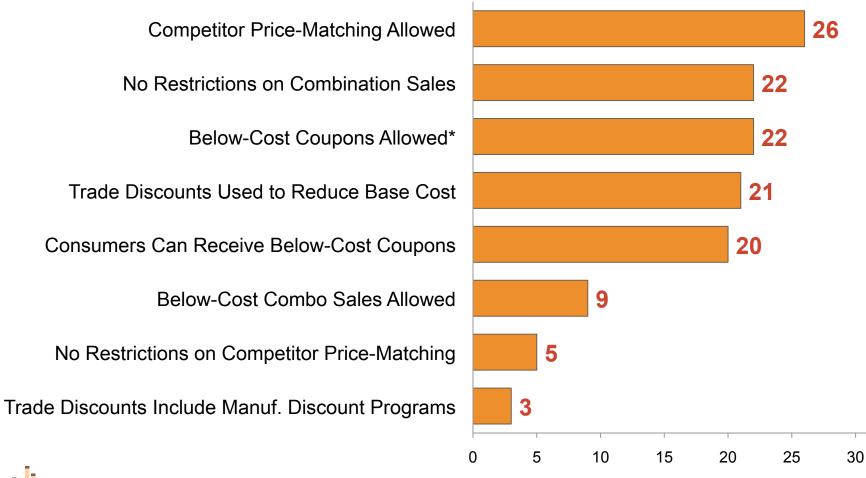


Optimizing Tobacco Taxation Minimum Pricing Policies

State Minimum Cigarette Pricing Policies, 2015



State MPLs - Factors That Decrease the Base Cost of Cigarettes



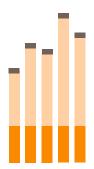


Notes: Data are not mutually exclusive; 31 states with some MPL; * Includes states silent on coupons

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

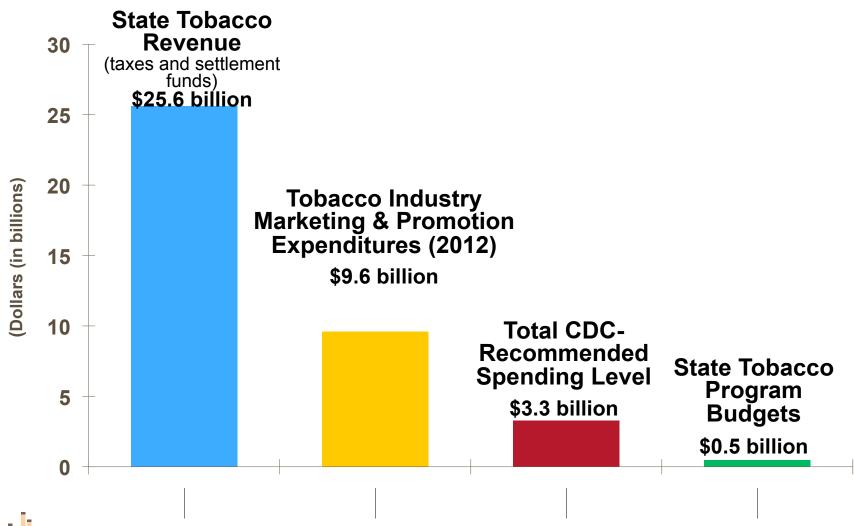




Optimizing Tobacco Taxation

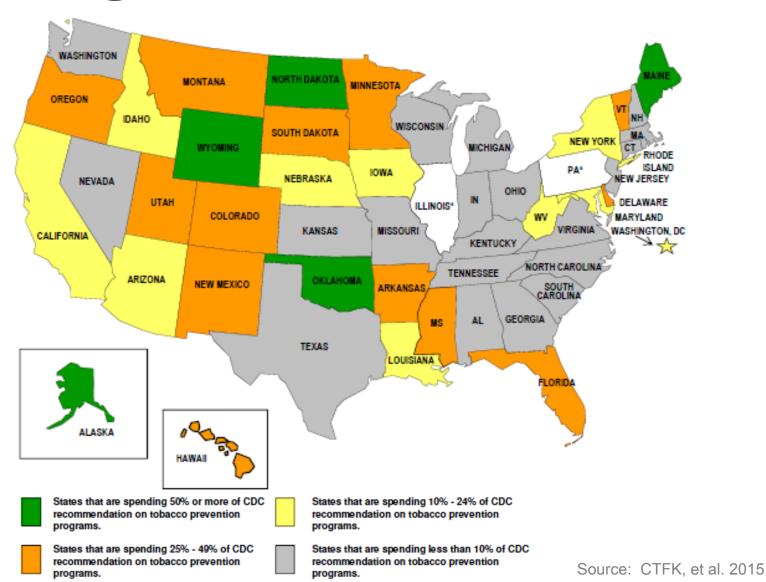
Use of Tax Revenues

Tobacco Industry is Outspending Prevention Efforts 19.6:1 —FY2015



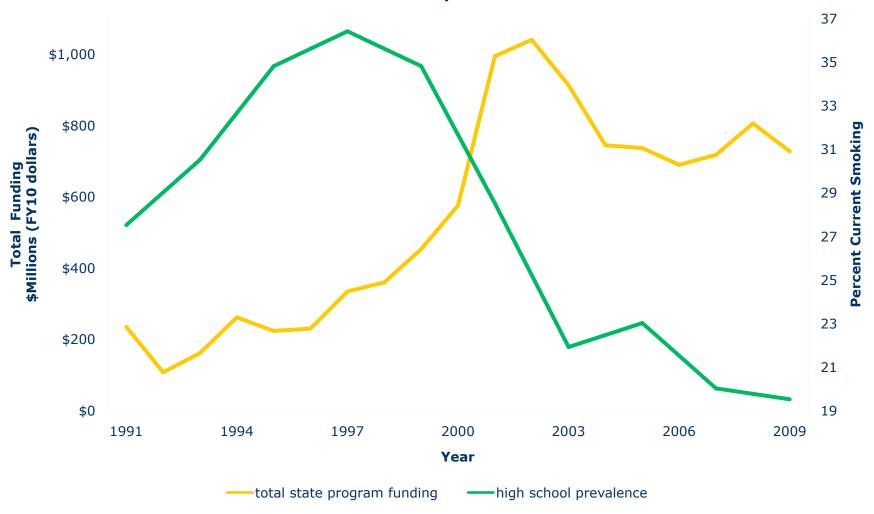


Tobacco Program Funding, FY16, as Percentage of CDC Recommendation





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



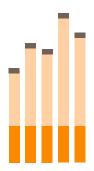


Source: ImpacTeen Project, UIC; YRBS

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 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."



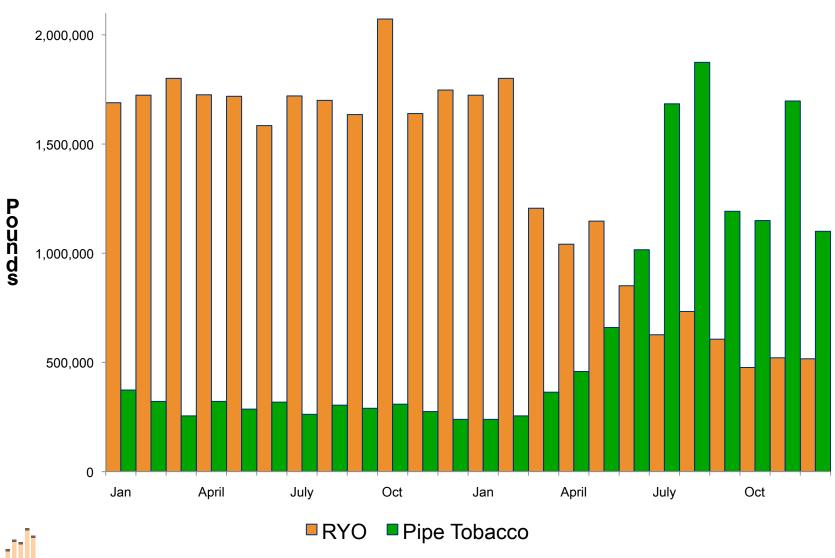
- Federal tobacco taxes
 - Roll-your-own vs. pipe tobacco
 - Federal taxes before 4/1/2009
 - Both taxed at \$1.0969/lb
 - After 4/1/2009
 - roll-your-own tobacco \$24.78 per pound
 - pipe tobacco: \$2.83 per pound







Taxable RYO and Pipe Tobacco US, 2008-2009





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

- Cigars Product definitions
 - Federal Taxes:
 - Cigarettes, Little Cigars \$1.0067/pack
 - Average prices ~ \$6.00/pack
 - Cigars 52.75% of sales price
 - Defined as weighing more than 3 pounds per 1,000
 - Average prices for little cigars just over the weight threshold ~ \$1.50



Federal Tobacco Taxes

Cheyenne Cigars and "Heavy Weight" Cigars: Different Filters



According to Bloomberg News (March 1, 2013), the filter of the "Heavy Weight" cigars contains sepiolite, a material used in kitty litter.



Source: Campaign for Tobacco-Free Kids

- Little Cigars/Cigars after 2009 Federal Tax Increases
 - 12 of 22 companies switch from little cigars to regular cigars
 - Large cigar sales rise from 411 million in
 January 2009 to 1 billion in September 2011
 - Small cigar sales fall from 430 million to 60 million
 - Estimated loss of \$1.1 billion in tax revenue



Non-Combustible Tobacco Products











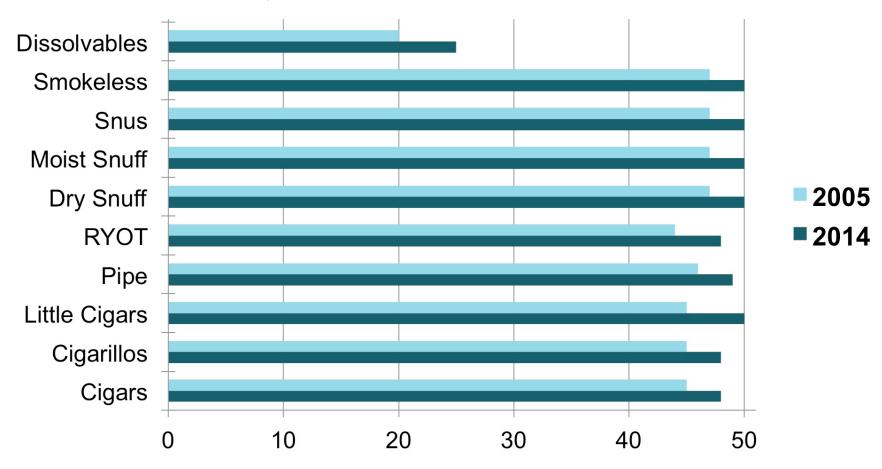








States Taxing Other Tobacco Products, 2005 & 2014





Source: Tobacconomics 2015

ENDS







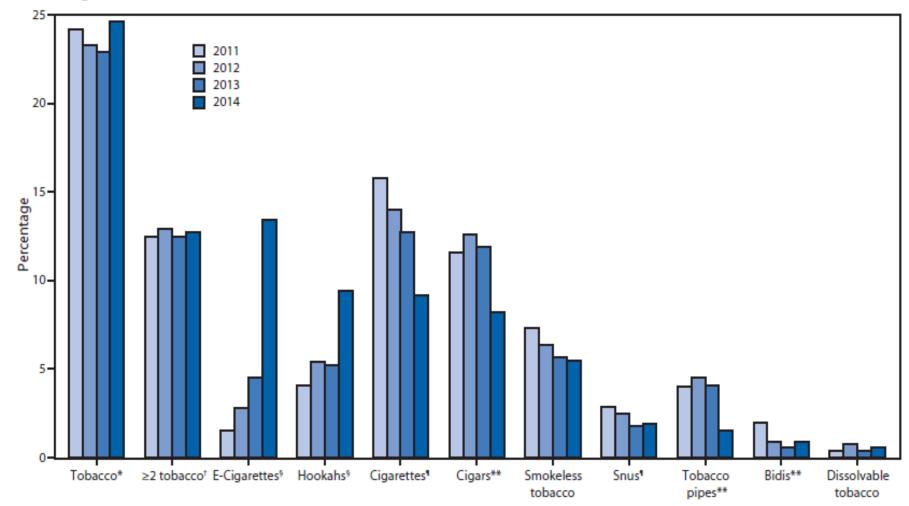








Youth E-Cigarette and Tobacco Use High School Students, 2011-2014

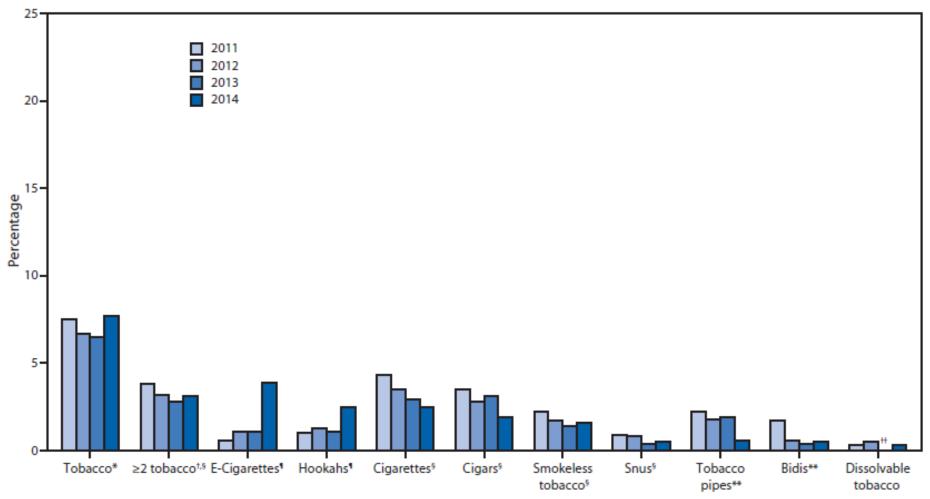


^{*} Defined as preceding 30-day use of cigarettes, cigars, smokeless tobacco, e-cigarettes, hookahs, tobacco pipes, snus, dissolvable tobacco, and/or bidis.

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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









Source: California Department of Public Health, 2015



Protecting and improving the nation's health

E-cigarettes: an evidence updateA 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 ecigarettes are around 95% safer than smoked tobacco and they can help smokers to quit."



ENDS Taxation

- Minnesota, North Carolina, Louisiana and DC currently tax ENDS
 - 95% of wholesale price in MN; 67% in DC
 - 5 cents per ml in NC, LA
- Kansas tax goes into effect July 2016
 - 20 cents per ml
- 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 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



- U.S. Surgeon General, 2014 Report "A Vision Towards Ending the Tobacco Epidemic":
 - "The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden."
 - "The increasing availability of noncombustible products raises the question of using them to help eliminate the harm caused by tobacco."



Optimizing the Impact of Tobacco Taxes

Significantly increase taxes on combustible products and tax all combustibles at same rate

- Minimizes substitution to cheaper products as tax rise
- Enhances public health impact of tax increases
- Increases revenues generated by tax increases



Optimizing the Impact of Tobacco Taxes

Tax less harmful non-combustible products at high rates, but lower than combustible product rates

- High rates discourage initiation and promote complete cessation
- Differential rates incentivizes substitution to less harmful products among those who can't quit entirely
- Maximizes public health and revenue impact



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







Electronic Cigarettes: A Policy Statement From the American Heart Association

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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
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