

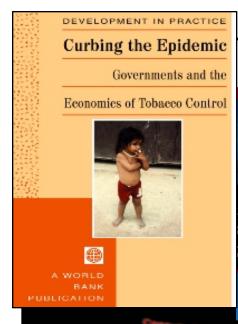
# The Truth About Tobacco Economics

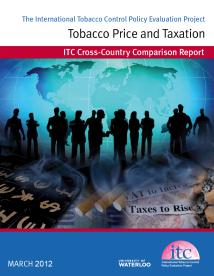
Frank J. Chaloupka, University of Illinois at Chicago Menthol & Flavored Tobacco Summit Honolulu, Hawaii, October 16, 2019

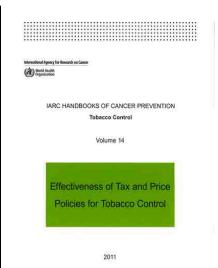
#### Overview

- Economic costs of tobacco
- Tobacco taxation
- Impact of taxes/prices on tobacco use
- Industry price marketing
- Economic counterarguments Myths & Facts

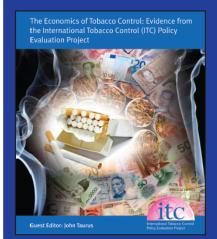








## TOBACCO CONTROL



tobaccocontrol.bmj.com

BMJ



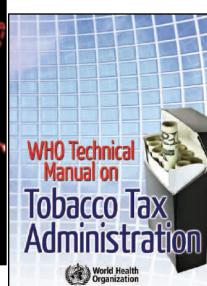
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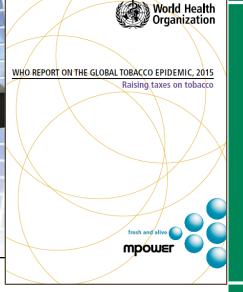
NCLTOBACCO CONTROL MONOGRAPH SERIES

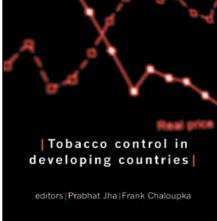
The Economics of Tobacco and Tobacco Control

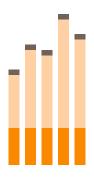
IN COLLABORATION WITH WORLD HEALTH ORGANIZATION

Executive Summary









## **Economic Costs of Tobacco Use**

## **Categories of Costs**

- Direct costs: reduction in existing resources
  - "Direct health care costs" (e.g., medicines)
  - "Direct non-health care costs" (e.g., transportation to clinic, time of family members providing care)
- Indirect or productivity costs: reduction in potential resources
  - Lost productivity due to morbidity and premature mortality





## **Categories of Costs**

#### External costs

 costs that tobacco users impose on others (e.g., costs related to secondhand smoke)

#### Internal costs

 costs paid for by tobacco users (and their families) incurred as a result of tobacco use (e.g., out of pocket costs for health care to treat diseases caused by smoking)

#### "Internalities"

 the internal costs that result from the information failures in the market that can be thought of as external costs





#### **Economic Costs of Tobacco Use**

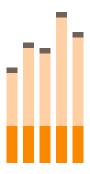
#### Considerable costs in United States:

- US: smoking-attributable health care expenditures of \$132.5-175.9 billion each year in recent years
  - Lifetime health care costs for smokers are significantly higher than those of nonsmokers
- US: additional \$151 billion in lost productivity from premature death
  - Additional lost/reduced productivity from smoking on the job, smoking-attributable morbidity
- Hawaii: \$526 million in health care costs (\$141.7 million in Medicaid costs) and \$387.3 million in Lost productivity



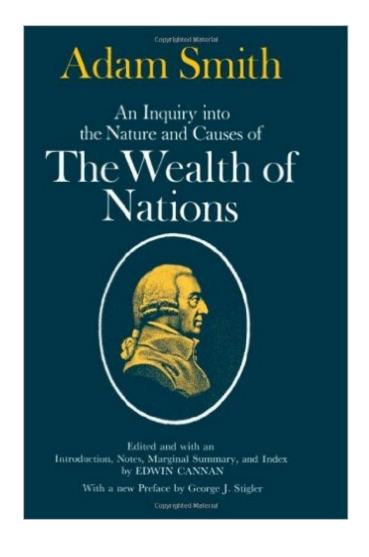






## Why Tax Tobacco?

"**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.







## Why Tax Tobacco?

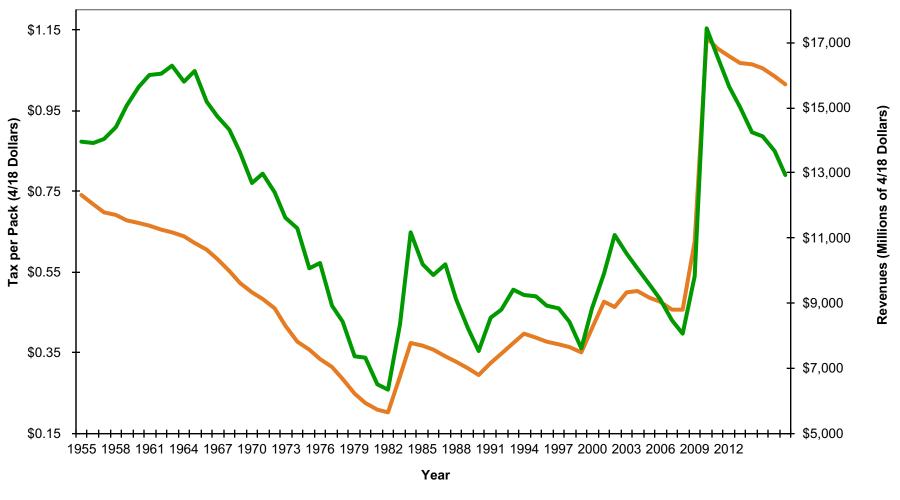
#### Efficient revenue generation

- Primary motive historically and still true in many countries today
- Very efficient source of revenue given:
  - Historically low share of tax in price in many countries
  - Relatively inelastic demand for tobacco products
  - Few producers and few close substitutes
- Makes tobacco one of many goods and services that satisfies the "Ramsey Rule"

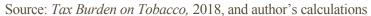




## Federal Cigarette Tax and Tax Revenues Inflation Adjusted, 1955-2017



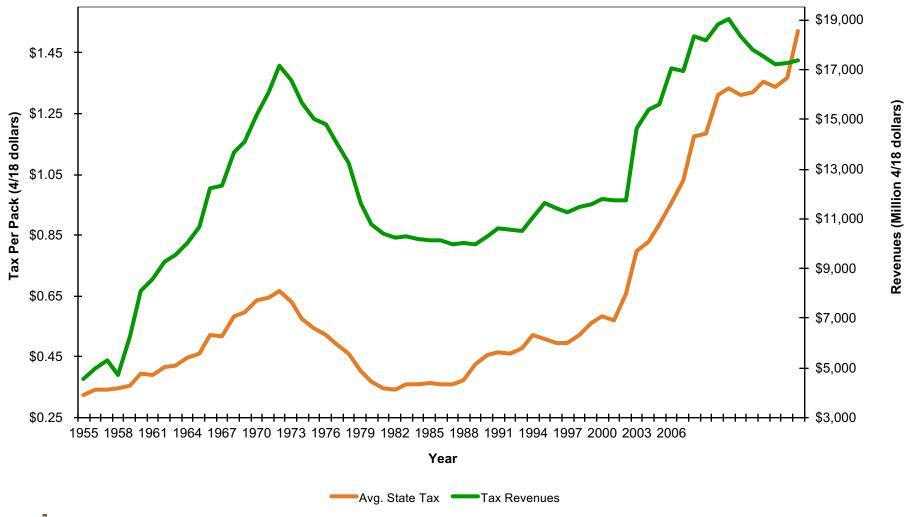
Federal Tax Tax Revenues







## State Cigarette Taxes and Tax Revenues Inflation Adjusted, 1955-2017







Source: Tax Burden on Tobacco, 2018, and author's calculations

## Why Tax Tobacco?

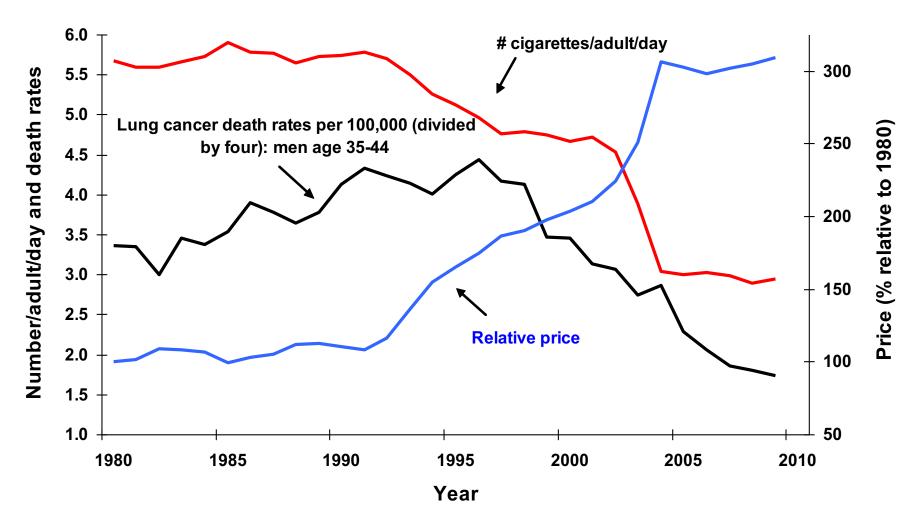
#### Promote public health

- Increasingly important motive for higher tobacco taxes in many high-income countries
  - Emerging as important factor in some low- and middle-income countries
- Based on substantial and growing evidence on the effects of tobacco taxes and prices on tobacco use
  - Particularly among young, less educated, and lowincome populations





#### Price, Consumption & Lung Cancer, France







## Why Tax Tobacco?

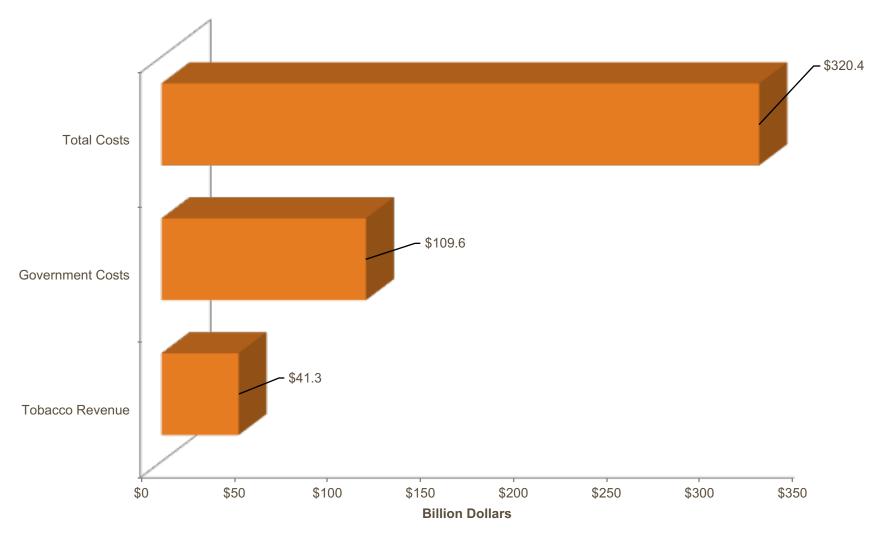
#### Cover the external costs of tobacco

- "Pigouvian" tax
- Less frequently used motive
- Account for costs resulting from tobacco use imposed on non-users
  - Increased health care costs, lost productivity from diseases/death caused by exposure to tobacco smoke
  - Increased financial costs from publicly financed health care to treat diseases caused by tobacco use



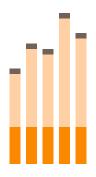


#### **Economic Costs of Tobacco Use**









# Tobacco Taxation in the United States

### **Types of Tobacco Taxes**

#### Variety of tobacco taxes

- Taxes on value of tobacco crop
- Customs duties on tobacco leaf, tobacco products imports and/or exports
- Sales taxes/Value added taxes
- Implicit taxes when government monopolizes production and/or distribution
- Excise Taxes
- Excise taxes are of most interest given specificity to tobacco products
- Specific (per unit, volume, weight) and ad valorem (based on price) excises





#### **Federal Tobacco Taxes**

- Federal cigarette tax
  - Specific (per unit) excise tax
  - initially adopted in 1864
  - Raised during war time/lowered during peace time
  - Set at 8 cents per pack in 1951
  - Doubled to 16 cents per pack in 1983
  - Eventually raised to 39 cents per pack in 2002
    - Less than 60% of inflation adjusted value of 1951 tax
  - Significant increase 61.66 cents April 1, 2009
    - Earmarked for S-CHIP expansion





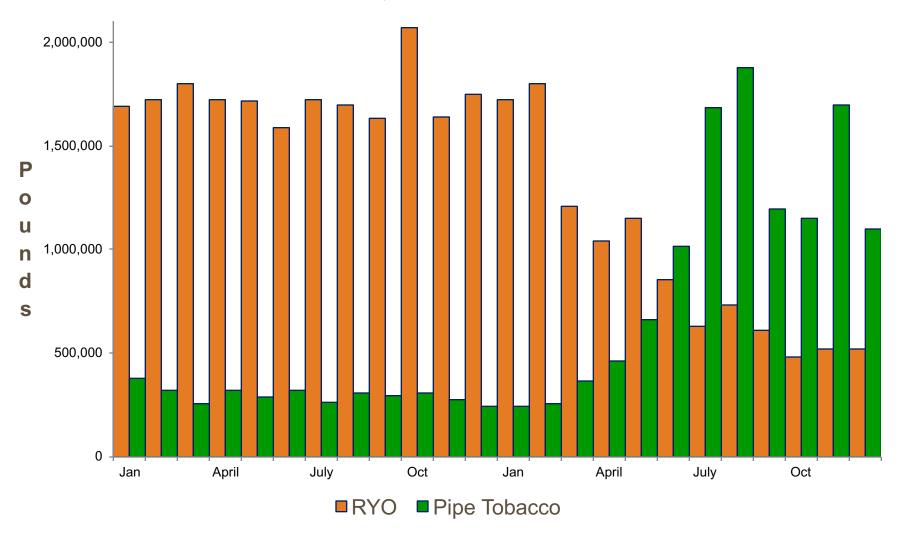
#### **Federal Tobacco Taxes**

- Specific federal excise taxes on most other tobacco products, including
  - Small cigars: \$1.0066 per pack of 20
  - 52.75% of price for low priced cigars; cap of 40.26 cents per cigar for high priced cigars
  - chewing tobacco: 3.1 cents per ounce
  - moist snuff: \$1.51 per pound
  - roll-your-own tobacco \$24.78 per pound
  - pipe tobacco: \$2.83 per pound
  - rolling papers: 1.26 cents per pack
  - Until latest increases, most were lower than cigarette tax; more equivalent now
  - Similarly infrequent increases in taxes





## Taxable RYO and Pipe Tobacco US, 2008-2009





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



#### **State Tobacco Taxes**

- State cigarette taxes
  - First adopted by IA in 1921; NC last to adopt in 1969
  - Currently: 17.0 cents/pack (MO) to \$4.35/pack (NY)
  - Average \$1.81 per pack
  - Many states considering increases





## Cigarette Taxation in Hawaii

Hawaii first adopted cigarette tax in 1939 - 2.9 cents per pack \$3.00 Changing tax structure Specific until 1965 \$2.50 Ad valorem 1965-1993 Specific since 1993 \$2.00 Last increase to \$3.20 per pack in 2011 \$1.50 About 175% above US average, 4th highest at the time \$1.00 Currently 6th highest, 113% above average \$0.50 





#### **State Tobacco Taxes**

- State taxes on other tobacco products
  - All states tax other tobacco products
    - Some variability in what products are taxed
  - Mostly ad valorem taxes
    - Typically applied to wholesaler/distributor price
    - Highest taxes include:
      - Wisconsin 100%; Washington 95%
    - Lowest taxes include:
      - South Carolina 5%; Tennessee 6.6%
    - Generally below equivalent rate on cigarettes
  - Many state governments have implemented taxes on vaping products in recent years
    - Considerable variation in tax structures/rates



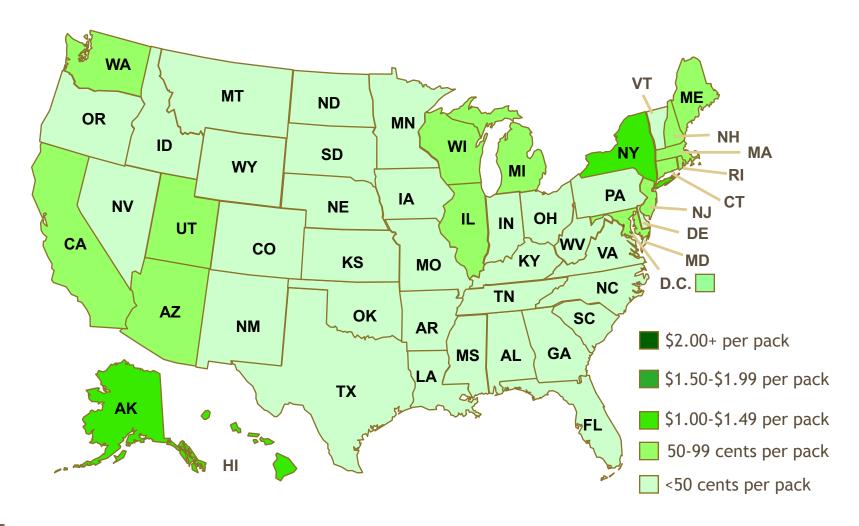


#### **OTP Taxation in Hawaii**

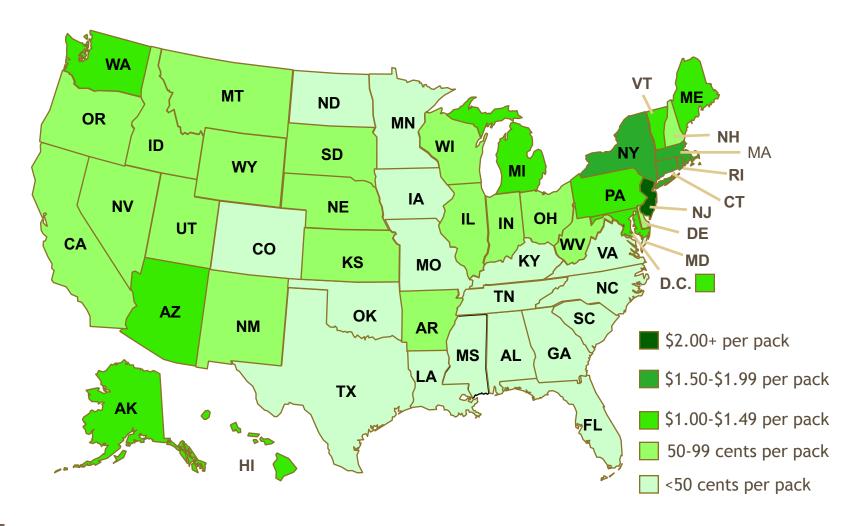
- Other tobacco product taxes
  - Generally similar to tax burden on cigarettes
    - \$3.20 per pack for little cigars
    - 50% of wholesale price for cigars
    - 70% of wholesale price for RYO, pipe tobacco; chewing tobacco, snuff
    - No tax on vaping products



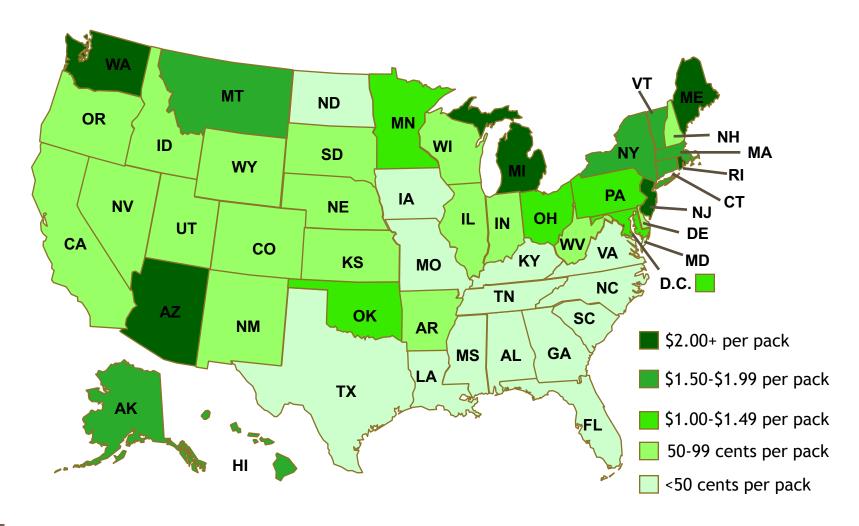




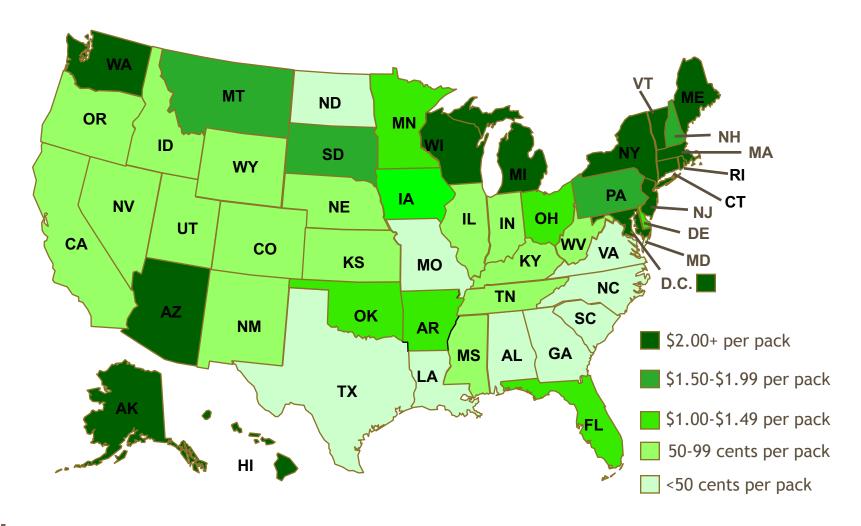




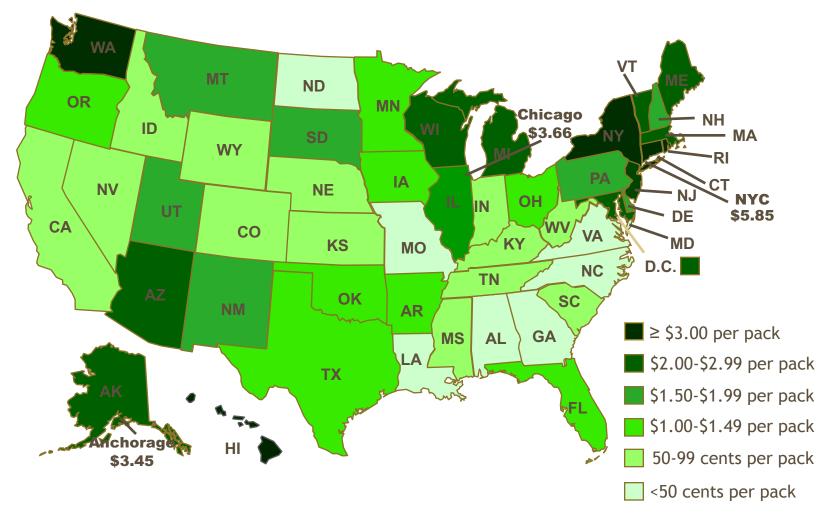






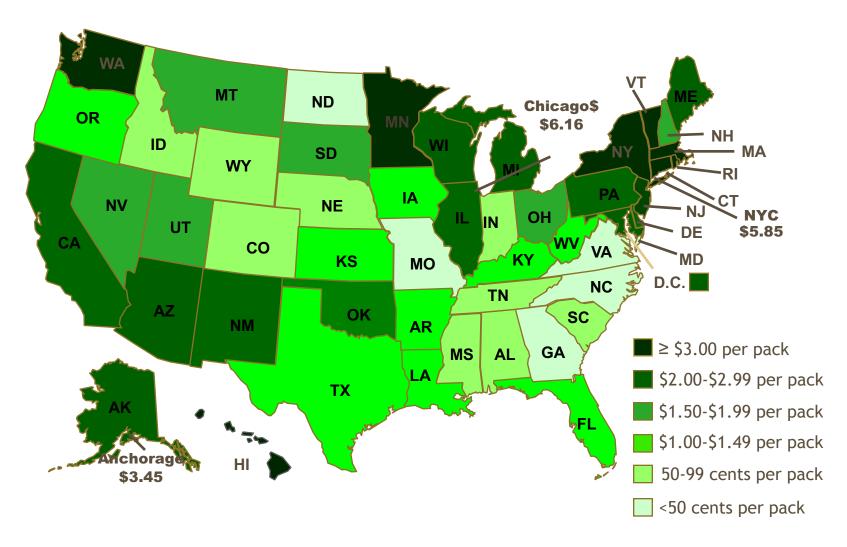








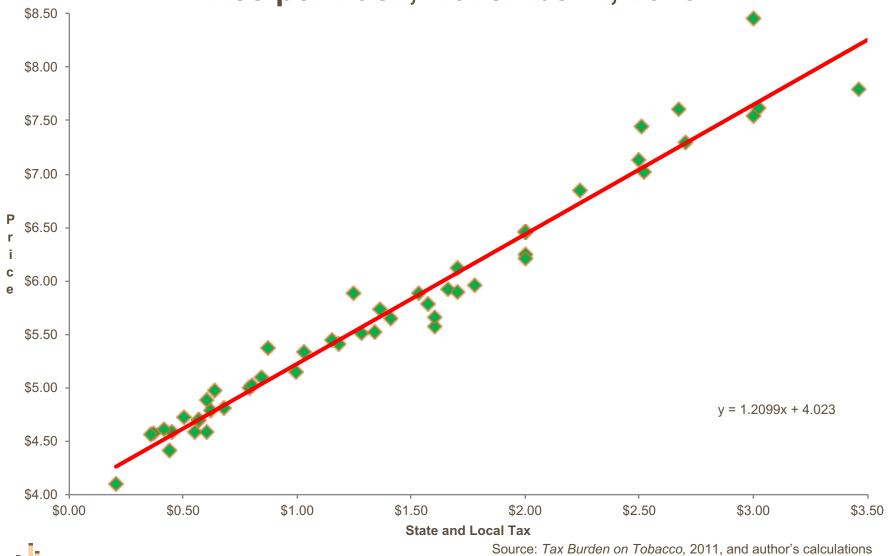
October 15, 2019







## State and Local Cigarette Taxes and Average Price per Pack, November 1, 2010





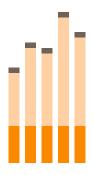


## Relative Taxation on Different Tobacco Products

- Adopt equivalent taxes on combustible tobacco products
  - Minimize substitution to other products in response to cigarette tax increase
  - Maximize revenue and health impact of tax increases
- Differential taxation for other tobacco products
  - Harm reduction







# Impact of Tax and Price on Tobacco Use

#### **Prices and Tobacco Use**

#### Increases in tobacco product prices:

- Induce current users to try to quit
  - Many will be successful in long term
- Keep former users from restarting
- Prevent potential users from starting
  - Particularly effective in preventing transition from experimentation to regular use
- Reduce consumption among those who continue to use
- Lead to other changes in tobacco use behavior, including substitution to cheaper products or brands, changes in buying behavior, and compensation





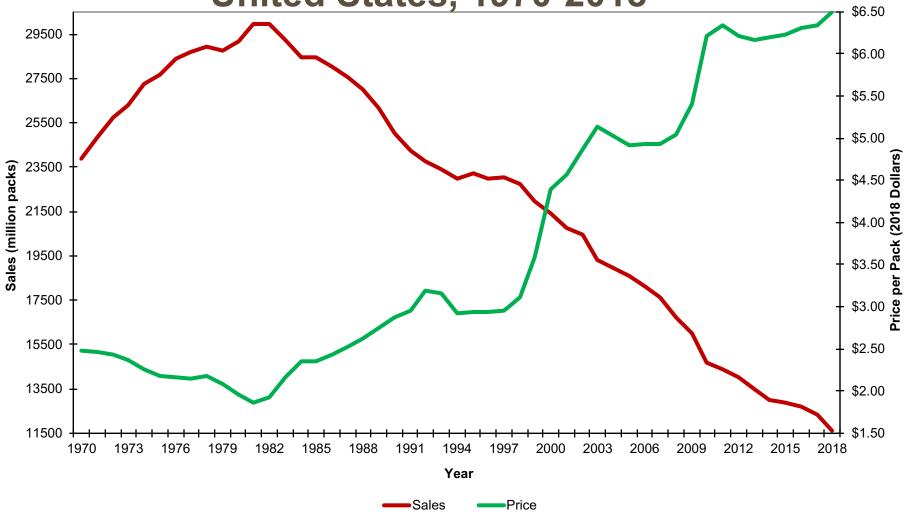
#### **Tobacco Taxes & Tobacco Use**

Increases in tobacco excise taxes that increase prices result in a decline in overall tobacco use.





Cigarette Prices and Cigarette Sales United States, 1970-2018

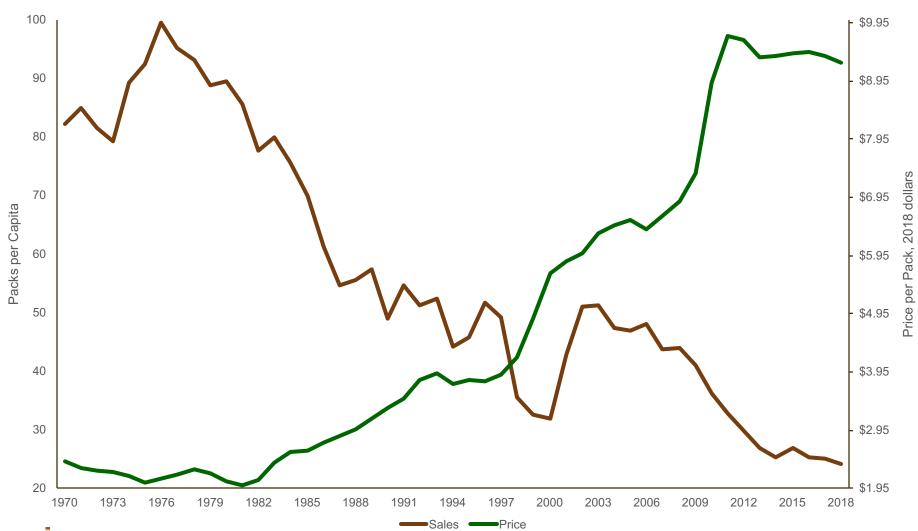




Source: Tax Burden on Tobacco, 2019, and author's calculations



#### Cigarette Price & Per Capita Cigarette Sales Hawaii, FY1970-FY2018, Inflation Adjusted





Source: *Tax Burden on Tobacco*, 2019, and author's calculations **@tobacconomics** 

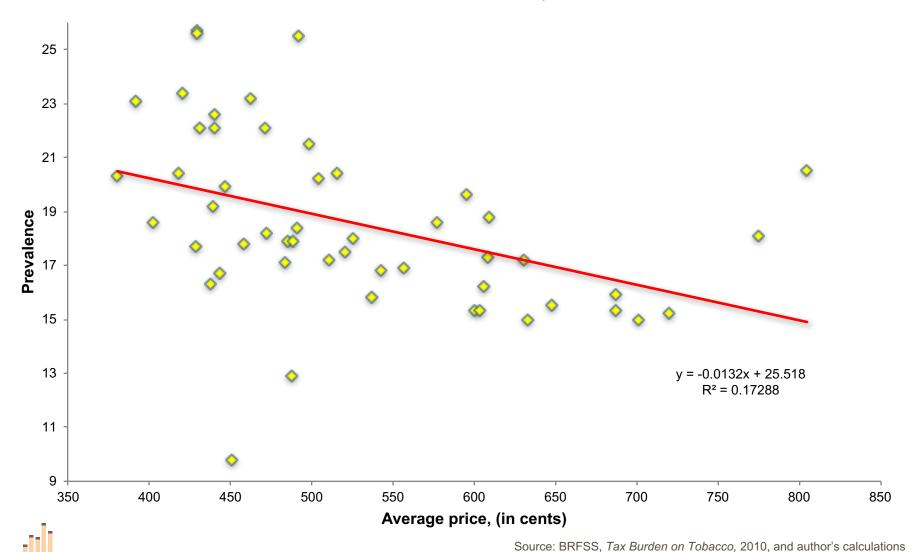
## Tobacco Taxes and Prevalence of Tobacco Use

Increases in tobacco excise taxes that increase prices reduce the prevalence of adult tobacco use.



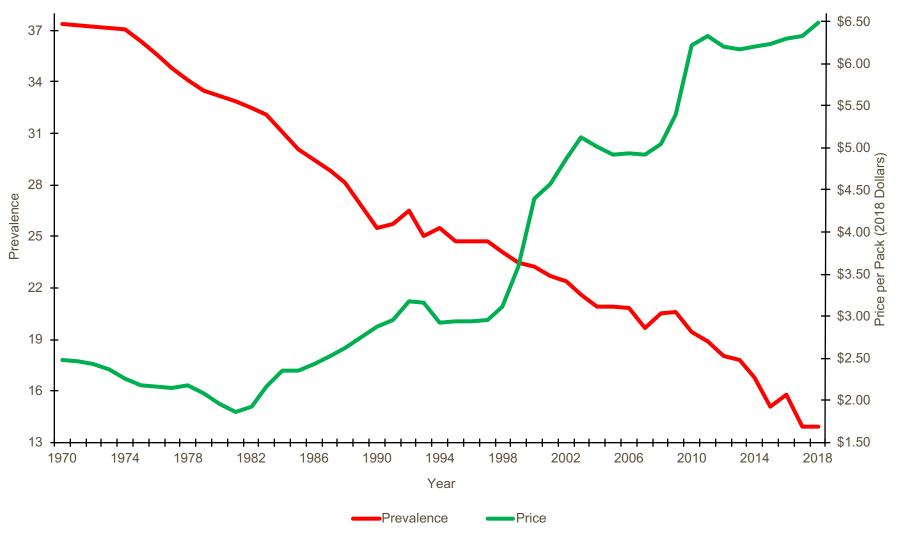


### Cigarette and Adult Smoking Prevalence US States & DC, 2009





#### Cigarette Prices and Adult Smoking Prevalence, United States, 1970-2018





Source: NHIS, *Tax Burden on Tobacco*, 2019, and author's calculations Note: some early years for prevalence are interpolated assuming linear trend

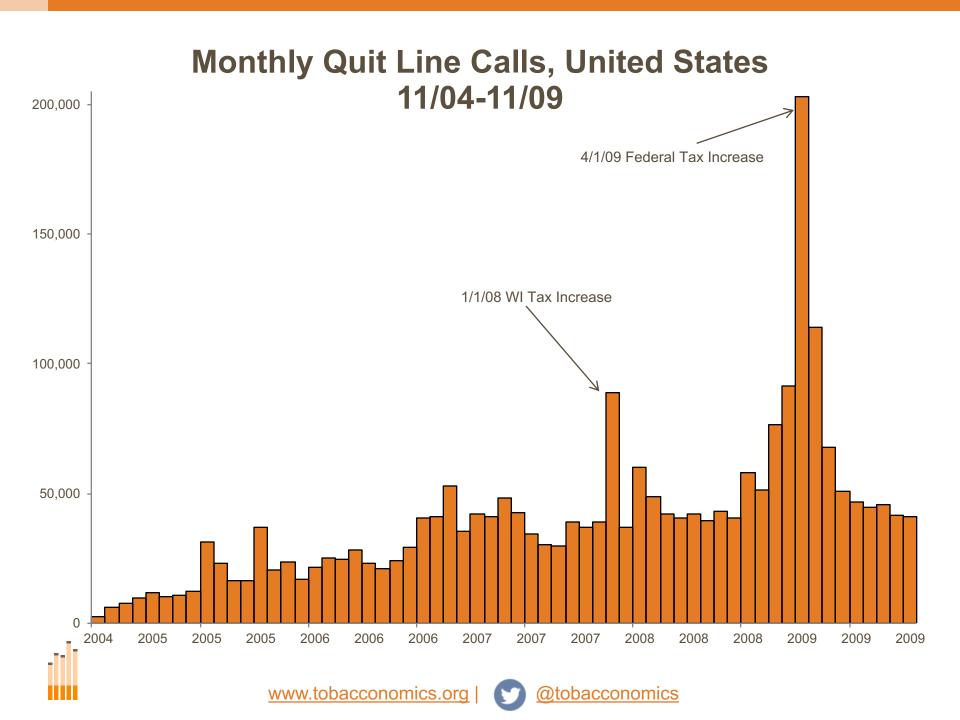


#### **Tobacco Taxes and Cessation**

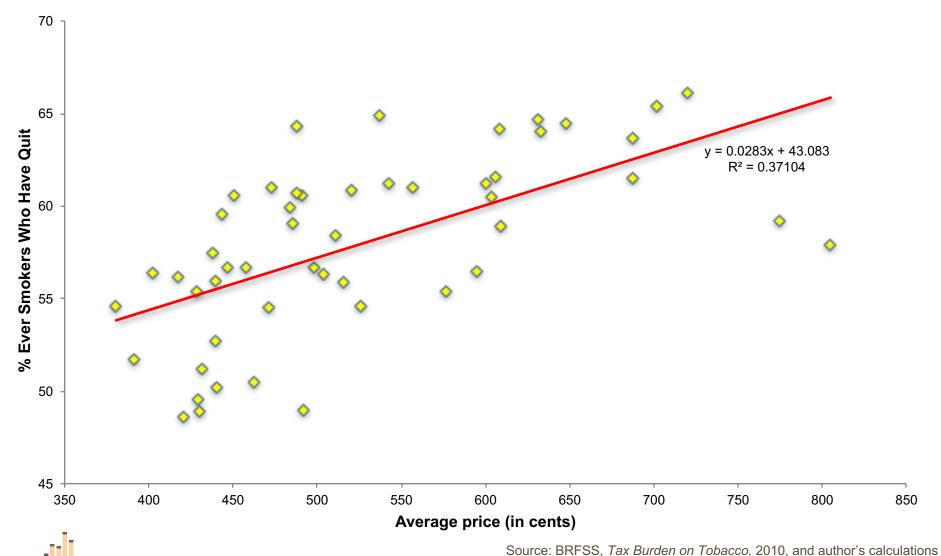
Increases in tobacco excise taxes that increase prices induce current tobacco users to quit.







## Cigarette Prices and Cessation US States & DC, 2009







## **Tobacco Taxes and Youth Tobacco Use**

Increases in tobacco excise taxes that increase prices reduce the initiation and uptake of tobacco use among young people, with a greater impact on the transition to regular use.



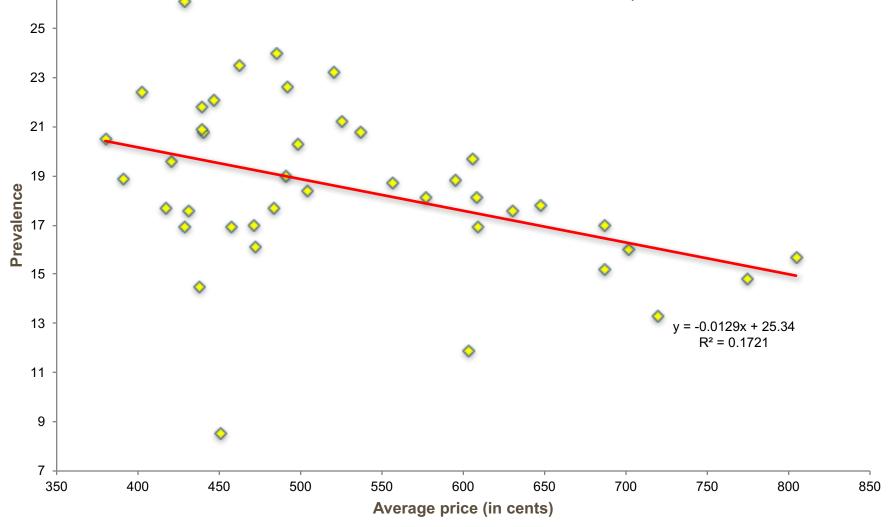


## **Tobacco Taxes and Youth Tobacco Use**

Tobacco use among young people responds more to changes in tobacco product taxes and prices than does tobacco use among adults.



## Cigarette Prices and Youth Smoking Prevalence US States & DC, 2009



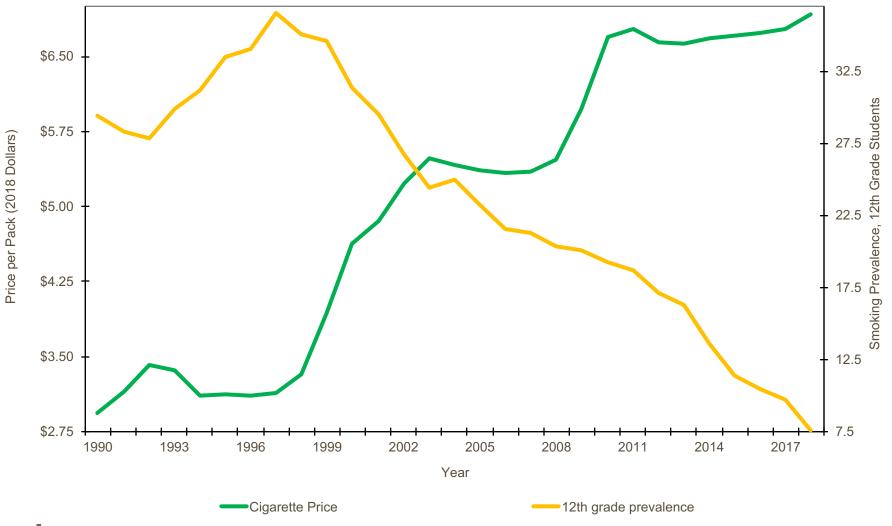
Source: YRBS, Tax Burden on Tobacco, 2010, and author's calculations



27



#### Cigarette Price and Youth Smoking Prevalence High School Seniors, United States, 1990-2018





Source: MTF, Tax Burden on Tobacco, 2019, and author's calculations



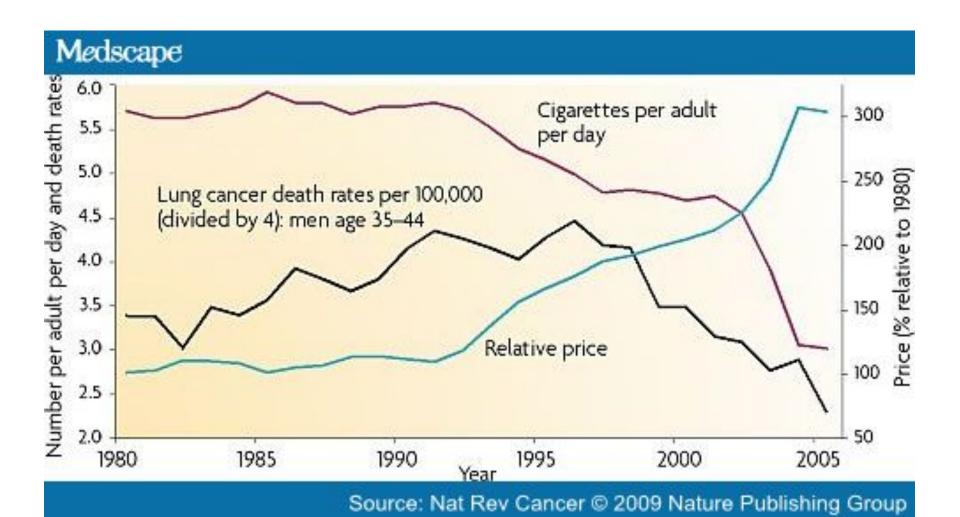
#### **Tobacco Taxes and Health**

Increases in tobacco excise taxes that increase prices result in improvements in population health



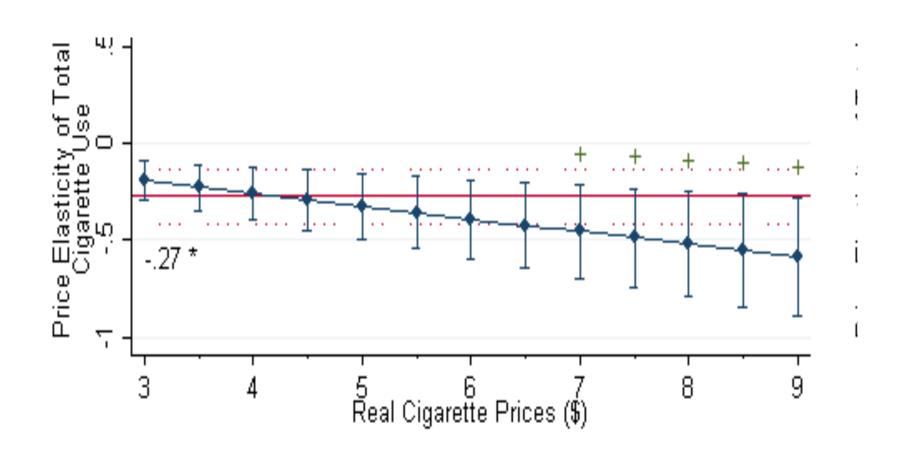


#### Taxes, Prices and Health: US, 1980-2005





## Increasing Elasticity with Increasing Price – U.S. TUS-CPS Data







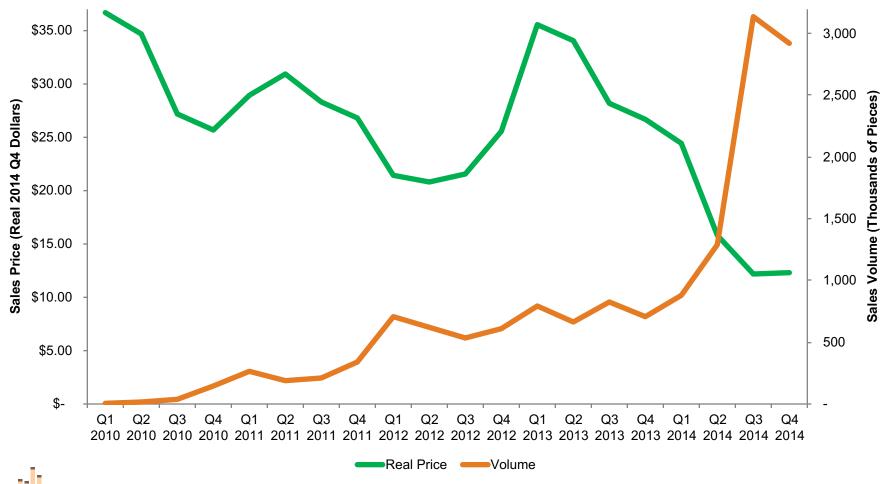
#### **Prices and Tobacco Use**

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



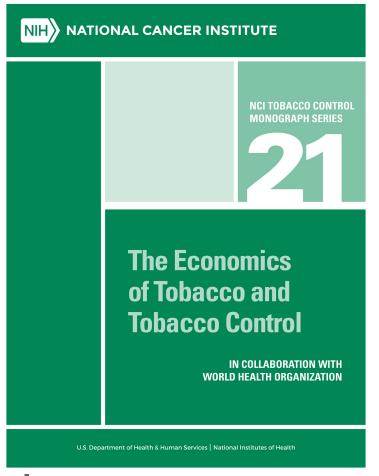


## Reusable ENDS Sale Volume and Price, US 2010 - 2014



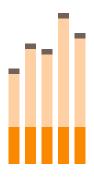


#### **Effectiveness of Tobacco Taxes**



Chapter 4, Conclusion 1:

A substantial body of research, which has accumulated over many decades and from many countries, shows that significantly increasing the excise tax and price of tobacco products is the single most consistently effective tool for reducing tobacco use.



## Public Support for Tobacco Taxes

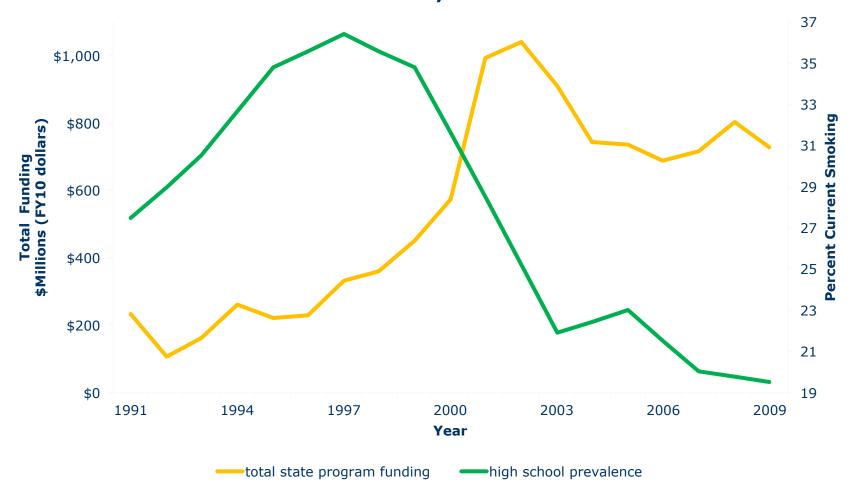
## **Tobacco Taxes Popular with Voters**

- Tobacco Excise Tax Increases:
  - Generally supported by voters
  - Supported by those likely to vote for either party
  - More support when framed in terms of impact on youth tobacco use
  - More support when some of new revenues are used to support tobacco control and/or other health-related activities
  - Greater support than for other revenue sources





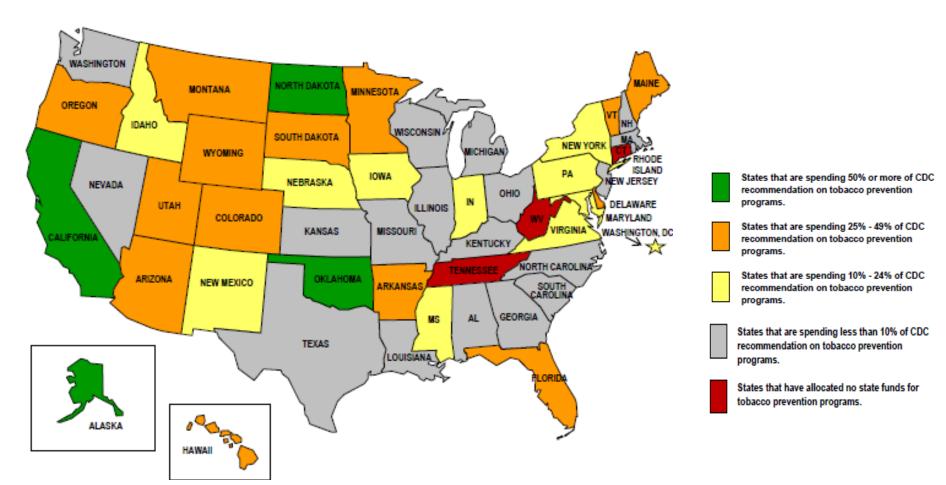
## State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009





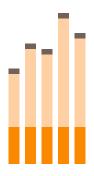


## State Tobacco Control Funding Relative to CDC Recommended Level, FY2019

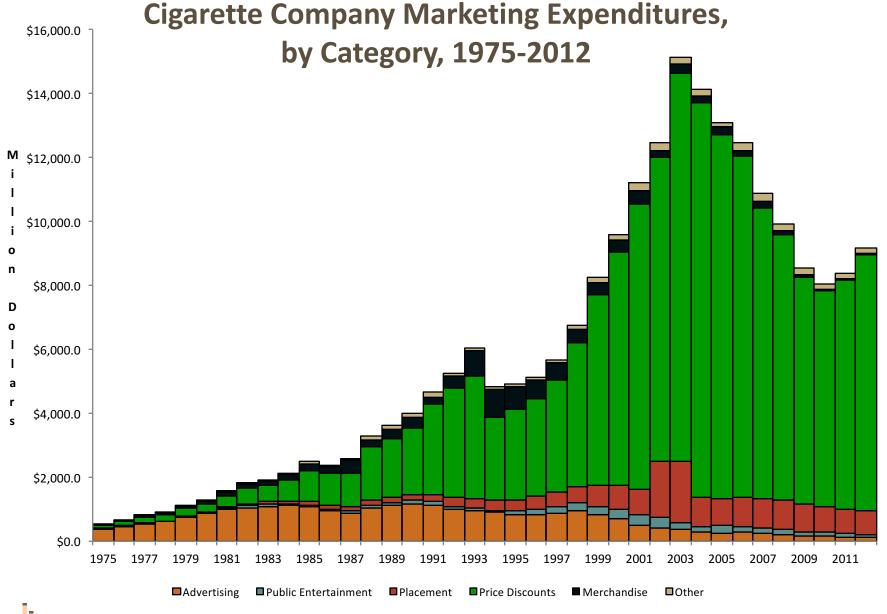








# **Tobacco Industry Price Marketing**





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



## Tobacco Industry Efforts to Offset 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 <a href="Marlboro.com">Marlboro.com</a> to become eligible for cigarette coupons and special offers using this code: MAR1558

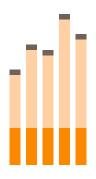
Thank You, Philip Morris USA





#### **Restricting Price Marketing?**

- Family Smoking Prevention and Tobacco Control Act, 2009
  - Eliminates federal pre-emption of stronger state, local restrictions on tobacco company marketing
    - Allows limits on time, place or manner of tobacco company marketing
    - Comprehensive state and/or local marketing bans possible?
  - A few jurisdictions moving forward with bans on multipack deals and coupon redemption
  - A few implementing high minimum pricing policies designed to minimize price promotions



# Economic Impact of Tobacco Control: Myths & Facts

#### **Impact on Revenues**

By J Scott Moody, 4/2/08, from an AP story:

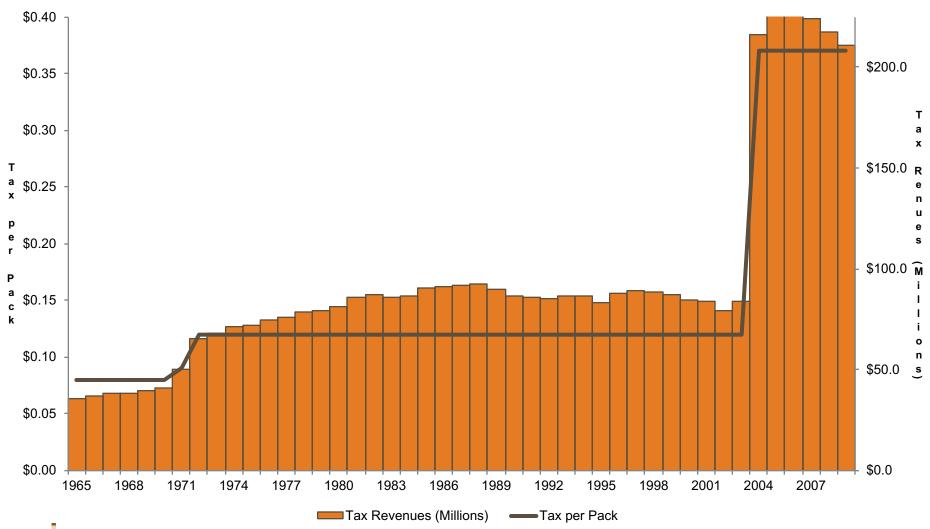
AUGUSTA — "A coalition of health groups today urged lawmakers to increase the cigarette tax by a \$1 per pack, saying the increase will encourage more people to quit smoking and generate more money for health programs.

Translation: Fewer people smoking equals more cigarette tax revenue? Someone needs a math lesson."





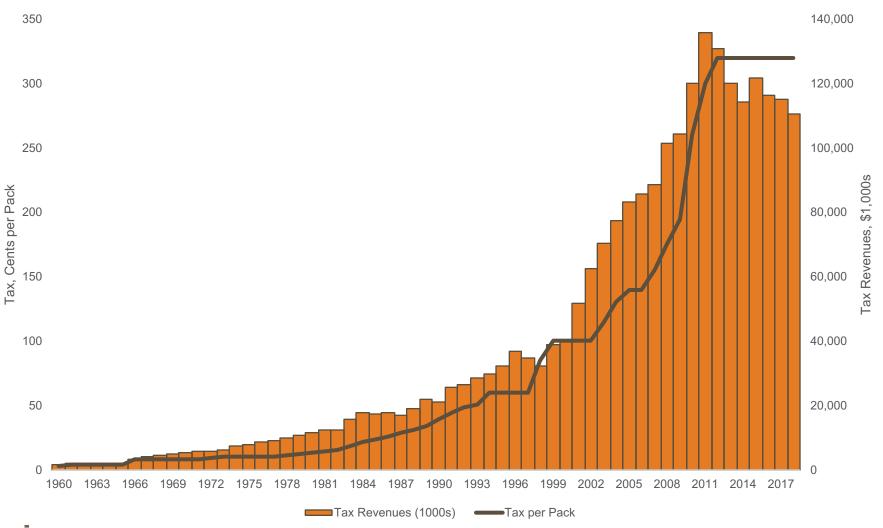
#### Cigarette Tax and Tax Revenues Georgia, 1965-2009







#### Cigarette Tax Rate and Tax Revenues Hawaii, FY1960-FY2018







## Positive Effect of Tax Increases on Revenues Results from:

#### Low share of tax in price:

- In US, state taxes account for about 25% of price on average
- total taxes account for less than half of price, on average
- Implies large tax increase has much smaller impact on price

## Less than proportionate decline in consumption:

10% price increase reduces consumption by 4%





#### Sustainability of Revenues

Corey Cooper, NewsOK, Feb. 25, 2017

As a state looks for ever more revenue, cigarette excise taxes are a poor source for funding of government budgets because they are not sustainable over the long term in order to avoid future budget deficits.





## Sustainability of Cigarette Tax Revenues

- Looked at every significant state tax increase from 2000 to 2010 where increase was maintained for at least 5 years
  - Separately for states with major tobacco control programs





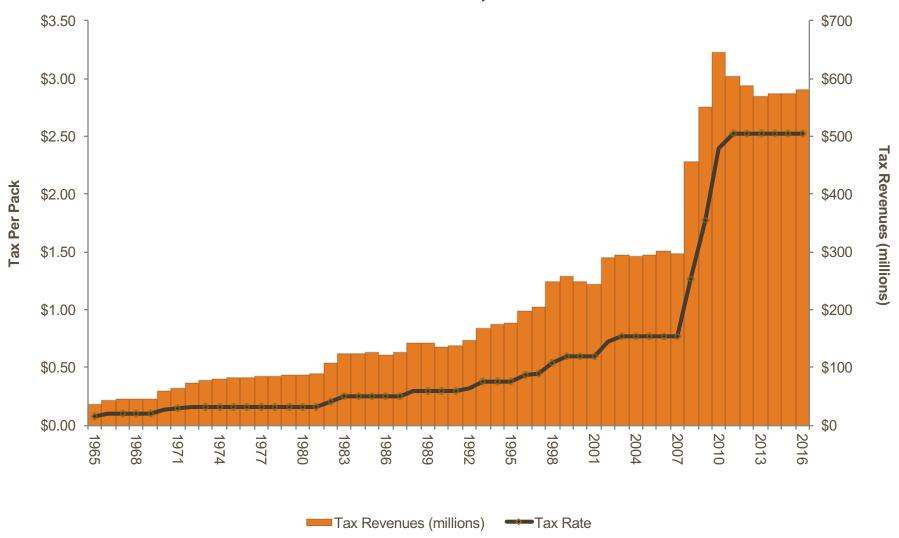
#### Sustainability of Cigarette Tax Revenues

- Conclusions:
  - All significant state tax increases resulted in significant increases in state tax revenues
    - Nominal increases in revenues sustained over time in states without tobacco control programs
    - Nominal revenues decline in states with tobacco control programs, but are significantly higher than before tax increase
    - Tobacco tax revenues more predictable than other revenues





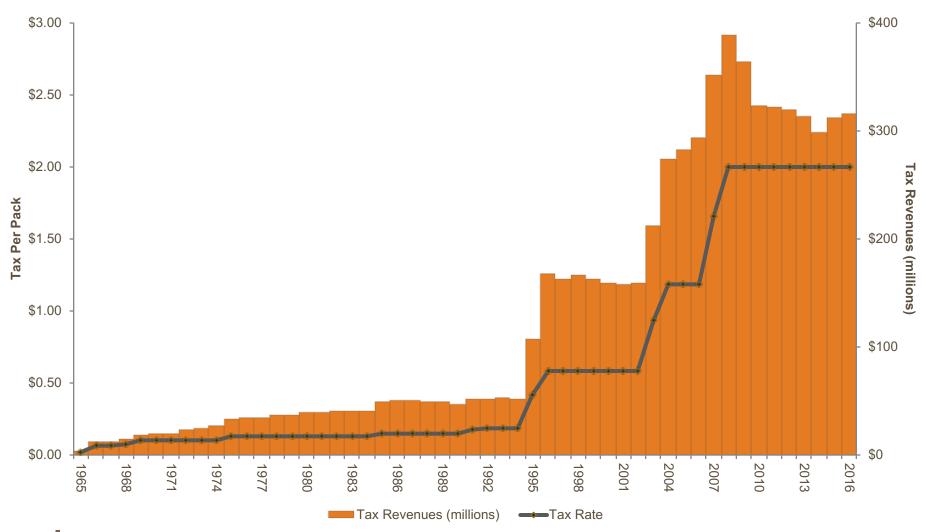
## Cigarette Tax and Tax Revenues Wisconsin, 1965-2016







#### Cigarette Tax and Tax Revenues Arizona, 1965-2016



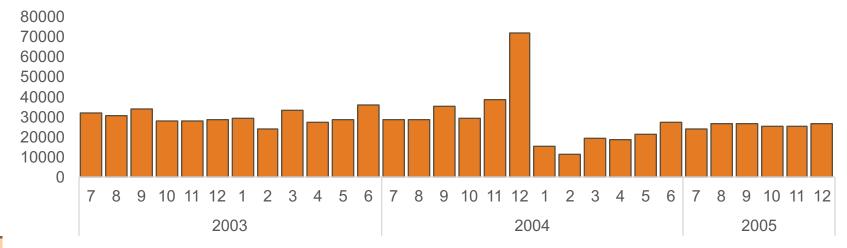




# Other Issues when Increasing Tobacco Taxes

- "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









## **Impact on Jobs**

JULY, 14, 2010 – The Associated Press

- RICHMOND, Va. The tobacco industry is running a full-court press ahead of a federal scientific panel's meeting to discuss how to regulate menthol cigarettes, a still-growing part of the shrinking cigarette market.
- The union representing nearly 4,000 tobacco workers sent a letter to the Food and Drug Administration committee examining the public health effects of the minty smokes, warning that a ban could lead to "severe jobs loss" and black market cigarettes.





## **Impact on Jobs**

- Tobacco excise tax will lead to decreased consumption of tobacco products
  - Small loss of jobs in tobacco sector
- Money not spent on tobacco products will be spent on other goods and services
  - Gains in jobs in other sectors
- Increase in tax revenues will be spent by government
  - Additional job gains in other sectors
- Net increase in jobs in states like Hawaii





## **Tobacco Control & Business**

Impact of smoke-free policies on hospitality sector

 No or small positive impact of smoke-free policies on bar and restaurant business (IARC Handbook 13)

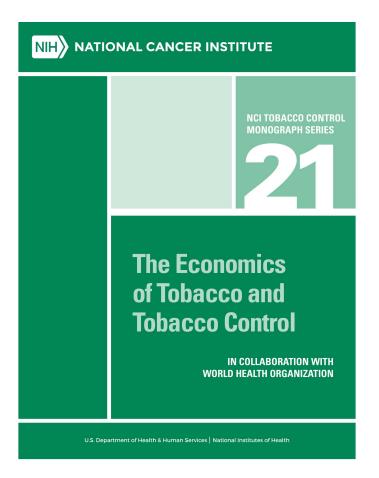
Impact of tobacco control policies on convenience stores (Huang and Chaloupka 2012)

- More business activity where cigarette taxes are higher
- No impact of smoke-free policies
- Overshifting and replacement purchase





# **Economic Impact of Tobacco Control**



Major Conclusion #7: "Tobacco control does not harm economies."





#### Tax Avoidance & Evasion

April 1, 2008 - New York Sun

• A pack of premium cigarettes in New York City now costs \$7 or \$8; prices would rise to above \$9. Opponents of the tax increase argue that higher prices would drive smokers to seek ways to evade the law and purchase cheaper cigarettes from smugglers or in neighboring states, blunting potential revenue gains for the state. "It's a black market gold mine," a senior fellow at the Manhattan Institute, E.J. McMahon, said of the proposed tax.





#### State Cigarette Excise Tax Rates – 2011

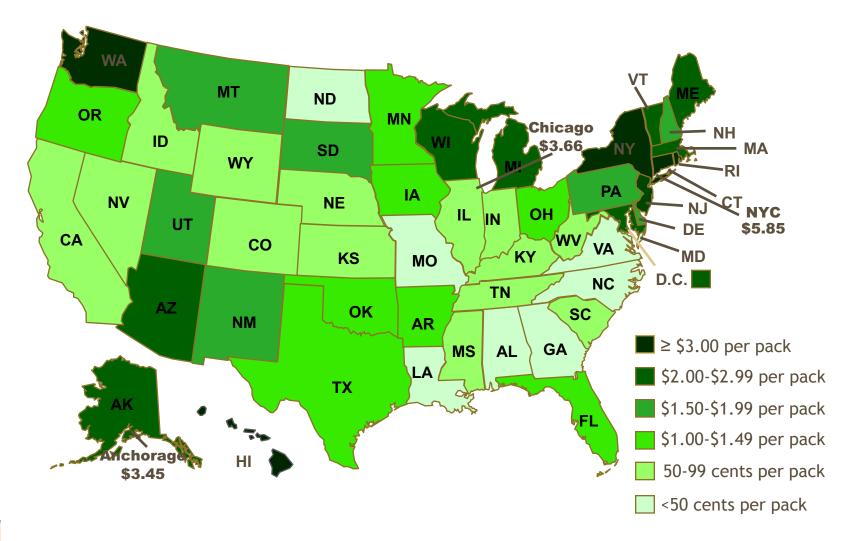
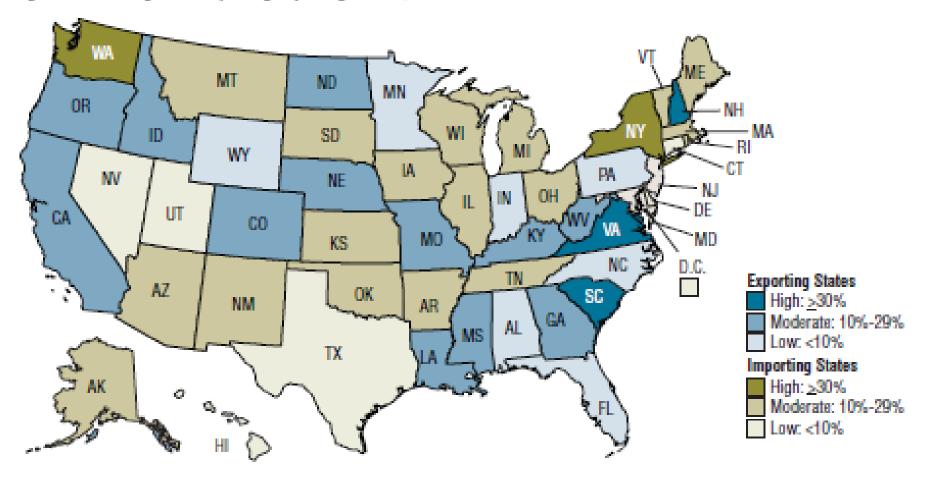






Figure 7. State Cigarette Importing/Exporting Shares, 2010-2011



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.



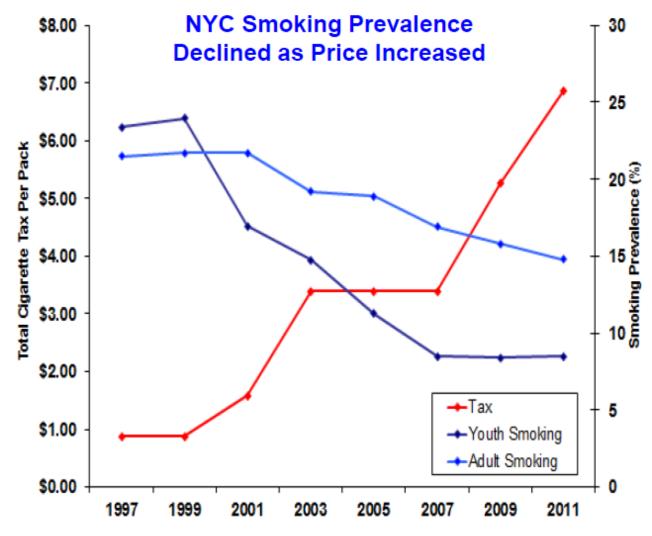
## **Tobacco Taxes & Illicit Trade**

 Tobacco use falls and tax revenues increase following tax increases even in the presence of illicit tobacco trade





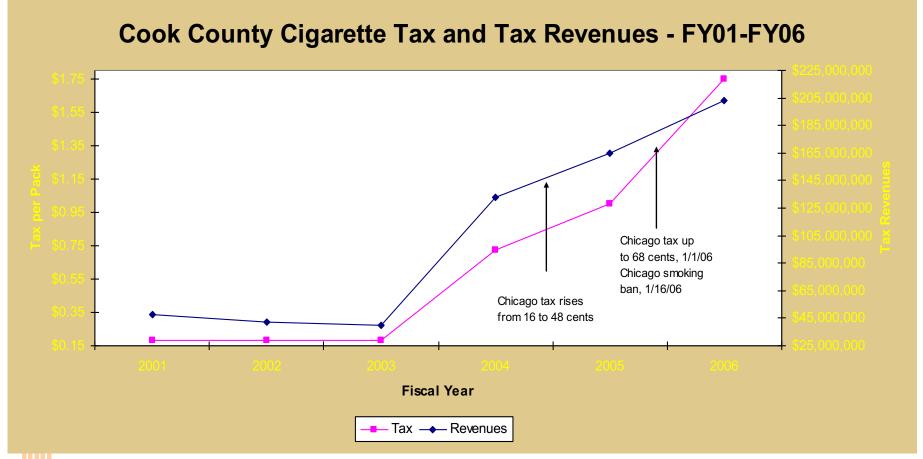
## Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes







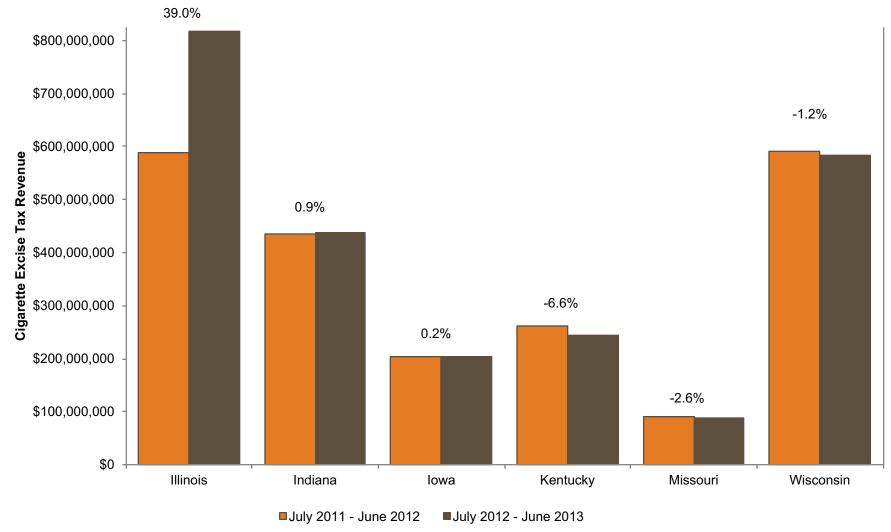
# Tax Avoidance & Evasion Do NOT Eliminate Revenue Impact of Higher Taxes







## Cigarette Tax Revenues, Illinois and Neighboring States July 2011 - June 2012







## **Tobacco Taxes & Illicit Trade**

 Governments can control illicit tobacco trade if they make it a priority and take appropriate steps





# California's Encrypted Cigarette Tax Stamps

2005-2010 --->



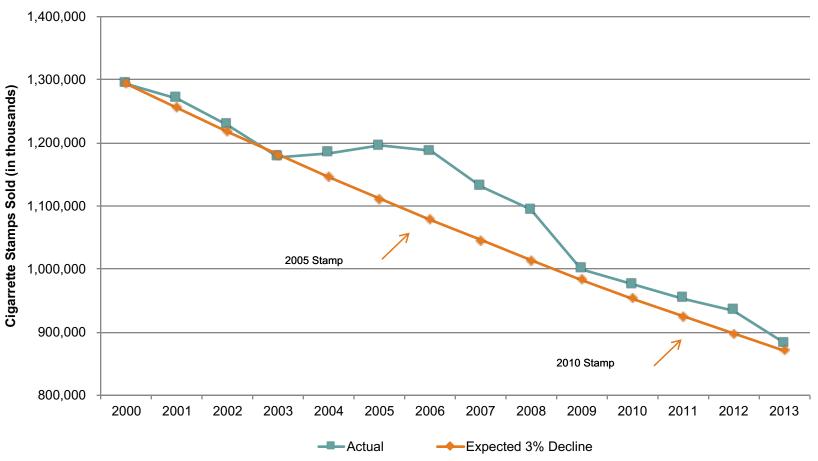
2011-present







## Cigarette Tax Stamps Sold – projected and actual, California, 2000 - 2013









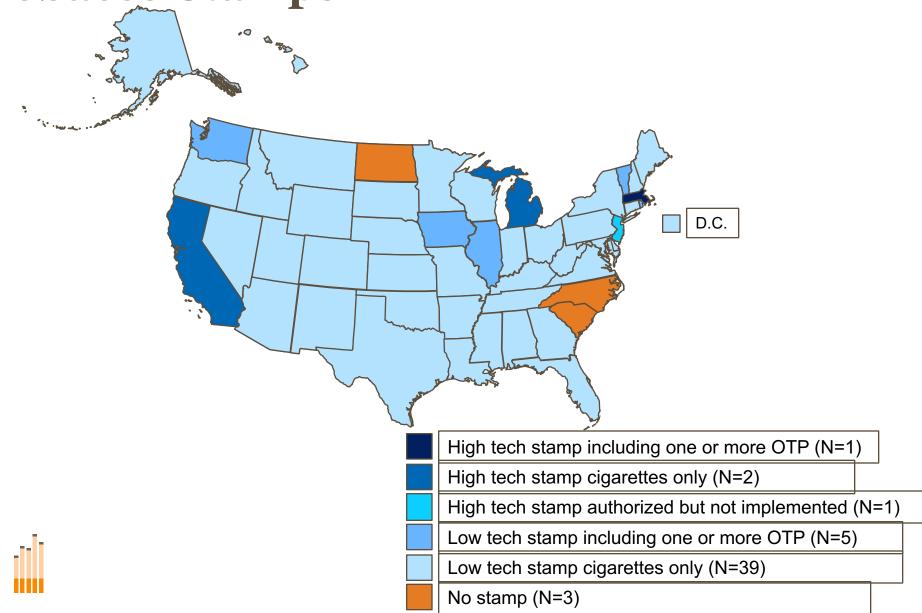
## **Tobacco Taxes & Illicit Trade**

 Tobacco use falls and tax revenues increase following tax increases even in the presence of illicit tobacco trade

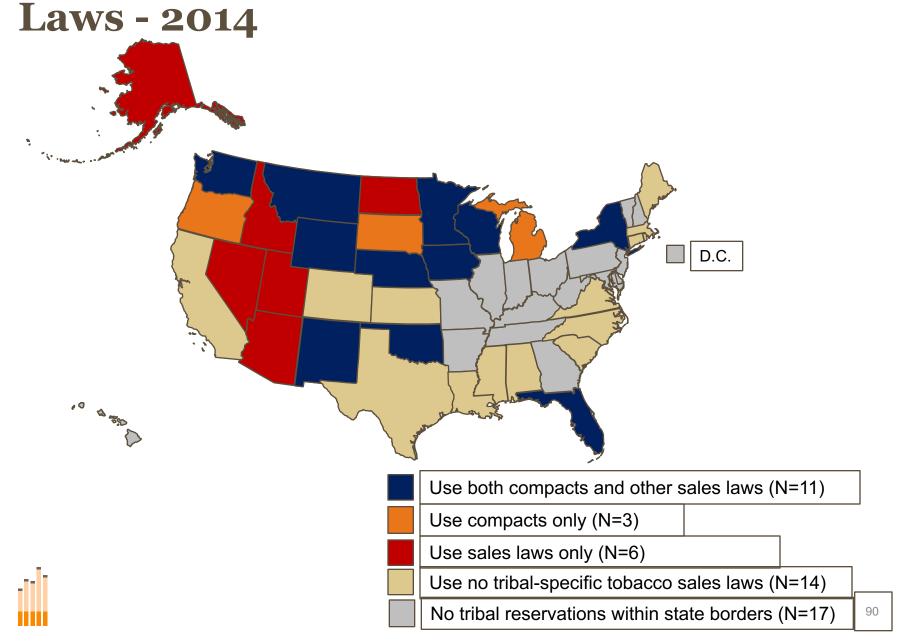




Figure 9: Types of State Cigarette and OTP Tobacco Stamps



## Figure 11: Types of Tribal Tobacco Sale



## Impact on the Poor

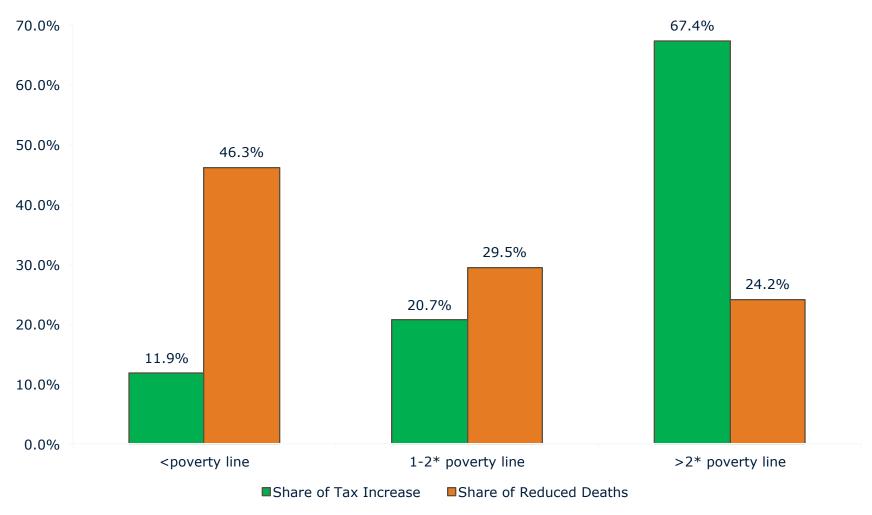
July 23, 2010 – San Francisco Examiner

"Democrats are relying more heavily in their midterm 2010 election message that Republicans care nothing about the poor. Conveniently absent from this analysis is Republican opposition to President Barack Obama's cigarette tax increase..... While higher cigarette taxes do discourage smoking, they are highly regressive. Analyzing a slightly less severe proposal in 2007, the Tax Foundation noted that 'no other tax hurts the poor more than the cigarette tax." Peyton R. Miller, special to the Examiner.





## Who Pays& Who Benefits Impact of Federal Tax Increase, U.S., 2009





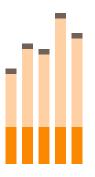


## Impact on the Poor

- Need to consider overall fiscal system
  - Key issue with tobacco taxes is what's done with the revenues generated by the tax
  - Greater public support for tobacco tax increases when revenues are used for tobacco control and/or other health programs
  - Net financial impact on low income households can be positive when taxes are used to support programs targeting the poor
  - Concerns about regressivity offset by use of revenues for programs directed to poor







# **Summary and Potential Impact of Tax Increase**

## Summary

- Tobacco use results in considerable economic costs
- Increases in tobacco prices lead to significant reductions in tobacco use
- Higher tobacco taxes are most direct option for increasing prices
- Restricting price-reducing marketing would add to impact of tax increases
- Claims of negative economic impact of tax and price increases and other effective tobacco control measures are false or greatly exaggerated





#### THANK YOU!

#### For more information: **Tobacconomics**

#### http://www.tobacconomics.org



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Policy Brief | April 2019

#### **Economic Costs of Tobacco Use**

#### Introduction

Tobacco use accounted for more than seven million deaths globally in 2015 (around five million men and two million women). Around

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80% of the deaths attributed to occurred in low- and middle-inc (LMICs).1 Tobacco use imposes economic burden on a country. costs of healthcare to treat the o

-attributable morb

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below 1% of gross domestic product (GDP). The total global economic cost of smoking is

estimated at around \$US 1.85 trillion, or around

1.8% of global GDP. Therefore, a significant

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nd the lost producti

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#### **Tobacco Control Policies** and Employment

#### Introduction

Tobacco companies commonly argue that because they contribute to the economy by creating jobs, tobacco control policies, such as increasing tobacco taxes, would significantly hurt overall employment and the economy. However, the empirical evidence suggests the opposite. Tobacco control policies do lead to a decline in tobacco consumption and that may eventually cause a small number of jobs to be lost in the tobacco sector. However, the money saved by consumers from not using tobacco products is then spent on goods and services produced in other sectors, resulting in job gains in those sectors of the economy. Governments also spend new revenues from tax increases typically on labor intensive activities, such as services or infrastructure investments. Moreover, employment in the tobacco sector has been declining regardless of tobacco control policies. These declines are driven by the tobacco industry's strategies to use cost-saving capital intensive technologies, consolidation of production and privatization.

This policy brief discusses the impact of tobacco control policies on employment, based on trends and empirical evidence. The discussion is mainly based on the U.S. NCI and WHO 2016 Monograph, "The Economics of Tobacco and Tobacco Control".1

#### Trends in Tobacco Employment

#### Classification of Tobacco Employment

Jobs created by the tobacco industry can be either directly, partially, or indirectly related to the tobacco sector. Jobs directly related to tobacco refer to those in tobacco farming and manufacturing. Those that are partially related to tobacco are jobs in wholesale and retail services. Indirectly related jobs or tobaccoexpenditure induced employment include those in other sectors of the economy generated by a multiplier effect of spending the income earned in jobs directly linked to tobacco on other goods and services. Partially and indirectly related jobs are created by all industries, not just the tobacco

#### Tobacco Farming and Manufacturing Jobs Limited to a Few Countries

In 2000, 65 percent of worldwide tobacco growing was concentrated in only 5 countries, and by 2016, that share has reached 71 percent (Figure 1). In its 2014 report, the International Labor Organization (ILO) estimated a significant decline in employment in most major tobaccogrowing countries during the past couple decades.2 The share of tobacco farming employment in total employment declined for most countries except for India and Zimbabwe (Figure 2). Similarly, more than 80 percent of worldwide tobacco manufacturing jobs were

son who dies due t ole live with a seriou s. Smoking causes e, lung disease, di ructive pulmonary hysema and chron increases the risk iseases, and proble em, including rheu

the economic costs not only for determ rden on a country, nning, but also for to implement effe ams to reduce cons reases in tobacco estimates of the ec still do not exist in LMICs. Current lev rt of recovering the o national econom ollection from toba

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#### **Tobacco Taxation Can Reduce Tobacco Consumption and Help Achieve Sustainable Development Goals**

#### Introduction

A substantial body of research shows that significantly increasing the taxes and prices of tobacco products is the single most effective way to reduce tobacco use and its devastating health consequences. A tax increase that raises prices by 10% can reduce tobacco consumption on average by 5% in low and middle income countries (LMICs),ii

Tobacco also poses a threat to development, especially in the LMICs that have the highest rates of tobacco use. The global economic costs from smoking due to medical expenses and lost productivity in 2012 alone totaled over \$1.4 trillion dollars.iii

Besides the growing recognition of the obvious harmful effects of tobacco on health and healthcare, there is a noticeable international movement recognizing the harmful effects of

tobacco use on sustainable development. The United Nations (UN) 2030 Agenda for Sustainable Development has set 17 Sustainable Development Goals (SDGs) and 169 related targets. One of those targets focuses specifically on tobacco, and urges "strengthened implementation of the Framework Convention on Tobacco Control (FCTC)." The FCTC is an international treaty created under the auspices of the World Health Organization (WHO). It focuses on reducing the demand and supply of tobacco products. In order to finance the SDGs, the Addis Ababa Action Agenda of the Third International Conference on Financing for Development noted that "price and tax measures on tobacco can be an effective and important means to reduce tobacco consumption and healthcare costs and represent a revenue stream for financing for development in many countries".

Raising tobacco excise tax by 1 International Dollar (about US\$ 0.80) in all countries would:



Increase average cigarette prices by 42% globally

revenue by 47%, representing an extra US\$ 141 billion

Global increase in public health expenditures

66

presenting 66M fewer smokers

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