The Truth About Tobacco Economics

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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
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

Source: 2014 SGR; CTFK 2019

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Why Tax Tobacco?
"Sugar, rum, and tobacco, are commodities which are nowhere 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

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

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

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

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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 low-income populations
Price, Consumption & Lung Cancer, France

Lung cancer death rates per 100,000 (divided by four): men age 35-44

# cigarettes/adult/day

Relative price

Sources:
Jha & Hill, 2012

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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

Sources: 2014 SGR; Tax Burden on Tobacco, 2014

Total Costs: $320.4 Billion Dollars
Government Costs: $109.6 Billion Dollars
Tobacco Revenue: $41.3 Billion Dollars

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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

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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

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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

- Changing tax structure
  - Specific until 1965
  - Ad valorem 1965-1993
  - Specific since 1993

- Last increase to $3.20 per pack in 2011
  - About 175% above US average, 4th highest at the time
  - Currently 6th highest, 113% above average

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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

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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
State Cigarette Excise Tax Rates – 2000

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

CDC, Office on Smoking and Health. State Tobacco Activities Tracking and Evaluation (STATE) System.
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
October 15, 2019

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

\[ y = 1.2099x + 4.023 \]

Source: *Tax Burden on Tobacco*, 2011, and author's calculations

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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

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

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

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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

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

\[
y = -0.0132x + 25.518
\]

\[R^2 = 0.17288\]
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

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Tobacco Taxes and Cessation

Increases in tobacco excise taxes that increase prices induce current tobacco users to quit.
Monthly Quit Line Calls, United States
11/04-11/09

4/1/09 Federal Tax Increase

1/1/08 WI Tax Increase

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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 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

\[ y = -0.0129x + 25.34 \]

\[ R^2 = 0.1721 \]
Cigarette Price and Youth Smoking Prevalence
High School Seniors, United States, 1990-2018

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

Cigarette Price

- $2.75
- $3.50
- $4.25
- $5.00
- $5.75
- $6.50

Smoking Prevalence, 12th Grade Students

- 7.5
- 12.5
- 17.5
- 22.5
- 27.5
- 32.5

Year

- 1990
- 1993
- 1996
- 1999
- 2002
- 2005
- 2008
- 2011
- 2014
- 2017

Source: www.tobacconomics.org | @tobacconomics
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

Source: Nat Rev Cancer © 2009 Nature Publishing Group
Increasing Elasticity with Increasing Price – U.S. TUS-CPS Data

Source: Pesko, et al., 2016

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Prices and Tobacco Use

– Similar evidence for variety of other tobacco products and for e-cigarettes
  • Generally see evidence of substitution
  • Greater substitution among more similar products

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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

Source: ImpacTeen Project, UIC; YRBS

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State Tobacco Control Funding Relative to CDC Recommended Level, FY2019

Source: CTFK, et al. 2018

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Tobacco Industry

Price Marketing
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 Marlboro.com 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 multi-pack deals and coupon redemption
    – A few implementing high minimum pricing policies designed to minimize price promotions

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Economic Impact of Tobacco Control: Myths & Facts
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 Rate and Tax Revenues
Hawaii, FY1960-FY2018

Tax Revenues (1000s)  Tax per Pack

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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%
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
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

Monthly Cigarette Shipments, Oklahoma, 7/03-12/05
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

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Economic Impact of Tobacco Control

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

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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

Anchorage $3.45

<50 cents per pack

50-99 cents per pack

$1.00-$1.49 per pack

$1.50-$1.99 per pack

$2.00-$2.99 per pack

≥ $3.00 per pack

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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

NYC Smoking Prevalence Declined as Price Increased

Source: Schroth, 2014

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

Cook County Cigarette Tax and Tax Revenues - FY01-FY06

Chicago tax rises from 16 to 48 cents, 1/16/06
Chicago tax up to 68 cents, 1/1/06

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

Illinois 39.0%
Indiana 0.9%
Iowa 0.2%
Kentucky -6.6%
Missouri -2.6%
Wisconsin -1.2%

Cigarette Excise Tax Revenue

July 2011 - June 2012  July 2012 - June 2013

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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

<table>
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<tr>
<th>Stamp Front View (ink appears green)</th>
<th>Stamp Angled View (ink appears blue)</th>
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Cigarette Tax Stamps Sold – projected and actual, California, 2000 - 2013

Source: CDC/Chaloupka et al., 2015

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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

- High tech stamp including one or more OTP (N=1)
- High tech stamp cigarettes only (N=2)
- Low tech stamp including one or more OTP (N=5)
- Low tech stamp cigarettes only (N=39)
- No stamp (N=3)

Map of the United States showing the distribution of different types of tobacco stamps across states.
Figure 11: Types of Tribal Tobacco Sale 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)
“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

- Share of Tax Increase
- Share of Reduced Deaths

- <poverty line: 11.9%
- 1-2* poverty line: 20.7%
- >2* poverty line: 67.4%
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!

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