The Economics of Tobacco Taxation in Oklahoma

Frank J. Chaloupka, University of Illinois at Chicago
Stephenson Cancer Center, University of Oklahoma
Oklahoma City, Oklahoma, February 28, 2017
Overview

• Overview of tobacco taxation
  – Why tax?
  – Types/evolution of tobacco taxes in U.S.

• Impact of taxes/prices on tobacco use

• Industry price marketing

• Counterarguments – Myths & Facts

www.tobacconomics.org
Why Tax Tobacco?
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”

www.tobacconomics.org
Federal Cigarette Tax and Tax Revenues
Inflation Adjusted, 1955-2012

Source: Tax Burden on Tobacco, 2013, and author’s calculations
State Cigarette Taxes and Tax Revenues
Inflation Adjusted, 1955-2012

Year


Revenues (Million Oct. 2009 dollars)

$3,000.00 $5,000.00 $7,000.00 $9,000.00 $11,000.00 $13,000.00 $15,000.00 $17,000.00

Tax Per Pack (Oct. 2009 dollars)

$0.25 $0.35 $0.45 $0.55 $0.65 $0.75 $0.85 $0.95 $1.05 $1.15 $1.25

State Cigarette Taxes and Tax Revenues
Avg. State Tax Tax Revenues

Source: Tax Burden on Tobacco, 2013, and author’s calculations
Why Tax Tobacco?

• Efficient revenue generation

“This vice brings in one hundred million francs in taxes every year. I will certainly forbid it at once – as soon as you can name a virtue that brings in as much revenue”

Napoleon III
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
Taxes, Prices and Health
United States, 1980-2005

Medscape

Lung cancer death rates per 100,000
(divided by 4): men age 35–44

Cigarettes per adult per day

Relative price

Source: Nat Rev Cancer © 2009 Nature Publishing Group

www.tobacconomics.org
Why Tax Tobacco?

- Promote public health

“… 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
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

www.tobacconomics.org
Economic Costs of Tobacco Use

Sources: 2014 SGR; Tax Burden on Tobacco, 2014
Brief Overview of 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 $1.61 per pack (48.5 cents in tobacco growing states; $1.76 in other states)
  – Many states considering increases
Cigarette Taxation in OK

- Oklahoma first adopted cigarette tax in 1933 - 5 cents per pack
- Last increase to $1.03 cents per pack in 2005
  - About 12% above US average, 15th highest at the time
  - Currently 36th highest, 40% below average
  - 41st in total taxes applied to cigarettes

www.tobacconomics.org
State Tobacco Taxes

• State taxes on other tobacco products
  – All but PA tax other tobacco products
  – 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%
    – Average about 35%
  – Generally below equivalent rate on cigarettes
Tobacco Taxation in OK

- Other tobacco product taxes
  - Generally lower tax burden than for cigarette tax
    - $0.72 per pack for little cigars
    - $0.12 per stick for cigars/cigarillos
    - 80% of factory list price for RYO, pipe tobacco
    - 60% of factory list price for smokeless products
    - 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 – 2009

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
March 1, 2016

@tobacconomics
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
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
Increases in tobacco excise taxes that increase prices result in a decline in overall tobacco use.
Cigarette Prices and Cigarette Sales
United States, 1970-2014

Source: Tax Burden on Tobacco, 2015, and author’s calculations
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, 1970-2014

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

Note: green data points 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

y = 0.0283x + 43.083
R² = 0.37104

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

\[ y = -0.0129x + 25.34 \]

\[ R^2 = 0.1721 \]
Cigarette Price and Youth Smoking Prevalence
Seniors, United States, 1991-2014

Source: MTF, Tax Burden on Tobacco, 2015, 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

Source: Nat Rev Cancer © 2009 Nature Publishing Group

www.tobacconomics.org
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
A tobacco tax increase does not have a partisan edge. While women are more supportive, male support is still almost two-to-one. We also see urbanites more supportive than those in rural areas.
The only group opposed to this increase – and then only narrowly – are those who would want to use the proceeds for a tax cut – and that’s only 7% of the population.
State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009

Source: ImpacTeen Project, UIC; YRBS

www.tobacconomics.org
Tobacco Industry
Price Marketing
Cigarette Company Marketing Expenditures, by Category, 1975-2012

Source: author's calculations from data reported in FTC (2015)
Cigarette Company Marketing Expenditures, % of Total by Type, 2012

Source: author’s calculations from data reported in FTC (2015)
Tobacco Industry Efforts to Offset Tax Increase

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

www.tobacconomics.org
Economic Impact of Tobacco Tax Increase: Common Oppositional Arguments
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

Tax Revenues (Millions)

Tax per Pack

Tax Revenues (Millions)


$0.00  $0.05  $0.10  $0.15  $0.20  $0.25  $0.30  $0.35  $0.40

$0.0  $50.0  $100.0  $150.0  $200.0

Tax Revenues (Millions)

Tax per Pack

Tax Revenues (Millions)


$0.00  $0.05  $0.10  $0.15  $0.20  $0.25  $0.30  $0.35  $0.40

$0.0  $50.0  $100.0  $150.0  $200.0

Tax Revenues (Millions)

Tax per Pack

Tax Revenues (Millions)


$0.00  $0.05  $0.10  $0.15  $0.20  $0.25  $0.30  $0.35  $0.40

$0.0  $50.0  $100.0  $150.0  $200.0

Tax Revenues (Millions)

Tax per Pack

Tax Revenues (Millions)


$0.00  $0.05  $0.10  $0.15  $0.20  $0.25  $0.30  $0.35  $0.40

$0.0  $50.0  $100.0  $150.0  $200.0

Tax Revenues (Millions)

Tax per Pack

Tax Revenues (Millions)
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 significant state tax increases over past 20 years 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

@tobacconomics
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 Oklahoma
Impact on Businesses

• More recent argument that higher taxes will harm convenience stores

• Recent analysis
  – Number of convenience stores (convenience only, gas stations, both), by state, 1997-2009
  – State cigarette tax rates and smoke-free air policies
  – Economic conditions (income, unemployment, gas prices)
  – Multivariate, fixed effects econometric models
Impact on Businesses

• Results:
  – Positive association between state cigarette tax and number of convenience stores
    • “overshifting” of cigarette tax in retail price
    • Substitution of spending on cigarettes to spending on other products
      • $1.00 tax increase associated with increase of 11 stores per million population
  – No impact of smoke-free policies
  – Robust to alternative specifications and empirical methods

www.tobacconomics.org
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.
Figure 6 - State Cigarette Excise Tax Rates, United States, April 2015
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

• Fact: 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

www.tobacconomics.org
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 smoking ban, 1/16/06
Chicago tax up to 68 cents, 1/1/06
Tax Revenues, Oklahoma and Neighboring States, 2004 & 2006
Combating Tobacco Tax Evasion

- Adopt high tech tax stamp and enforce
  - Reduces tax evasion
  - More than pays for itself with increases in revenues
Cigarette Tax Stamps Sold – projected and actual, California, 2000 - 2013

Source: CDC/Chaloupka et al., 2015
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)
- No stamp (N=3)
- Low tech stamp cigarettes only (N=39)
- High tech stamp authorized but not implemented (N=1)
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)
Oklahoma’s “New Unity Rate”
State/Tribal Tobacco Compacts

- Full state tax collected on nearly all tribal cigarette sales
- One-half of tax revenue to state / one-half to tribal government
- Automatically adjusts to increases in state tax rate
- Has helped stabilize tribal market share at 27%

Tribal Share of Overall Cigarette Sales
Oklahoma, 2002-2016
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

- Share of Tax Increase
- Share of Reduced Deaths

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Share of Tax Increase</th>
<th>Share of Reduced Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; poverty line</td>
<td>11.9%</td>
<td>46.3%</td>
</tr>
<tr>
<td>1-2* poverty line</td>
<td>20.7%</td>
<td>29.5%</td>
</tr>
<tr>
<td>&gt;2* poverty line</td>
<td>67.4%</td>
<td>24.2%</td>
</tr>
</tbody>
</table>
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

www.tobacconomics.org
Summary and Potential Impact of Tax Increase
Summary

- 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 false or greatly exaggerated
Potential Impact

• $1.50 Increase in cigarette excise tax in Oklahoma would:
  – Raise $183.9 million in new tax revenue
  – Prevent 28,200 kids from taking up smoking
  – Encourage 30,400 adult smokers to quit
  – Prevent 16,700 premature deaths from smoking
  – Reduce smoking-complicated pregnancies and births by 4,900 in first 5 years
  – Save $3.9 million in Medicaid spending in first 5 years

Source: CTFK, ACS-CAN & Tobacconomics, 2016
Estimated Future Cigarette Tax Revenues
Oklahoma

- Without Increase
- With $1.50 Increase

Source: CTFK, ACS-CAN & Tobacconomics, 2017
For more information:

Tobacconomics

http://www.tobacconomics.org

@tobacconomics

fjc@uic.edu