Disclosures

• National Cancer Institute, State and Community Tobacco Control Initiative, 5U01-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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• Xin Xu
• Sarah Edwards
• And many more…..
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

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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

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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

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Cigarette Prices and Cigarette Sales
United States, 1970-2014

Sales (million packs) vs. Price per Pack (2014 Dollars)

Year
Price
$1.50 $2.00 $2.50 $3.00 $3.50 $4.00 $4.50 $5.00 $5.50 $6.00
Sales
12000 14000 16000 18000 20000 22000 24000 26000 28000 30000

Source: Tax Burden on Tobacco, 2015, and author's calculations
Cigarette Prices and Adult Smoking Prevalence
United States, 1970-2014

Source: NHIS, *Tax Burden on Tobacco*, 2015, and author’s calculations
Monthly Quit Line Calls, United States
11/04-11/09

4/1/09 Federal Tax Increase
1/1/08 WI Tax Increase
Cigarette Prices and Cessation
US States & DC, 2009

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

\[ y = 0.0283x + 43.083 \]

\[ R^2 = 0.37104 \]
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 e-cigarettes
  - 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

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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
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

- $2.00+ per pack
- $1.50-$1.99 per pack
- $1.00-$1.49 per pack
- $0.50-$0.99 per pack
- <50 cents per pack

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

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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

Source: National Research Council, 2015
Estimated State Cigarette ‘Importing’ and ‘Exporting’, 2010-11

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

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

Source: CDC, 2015
Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes

NYC Smoking Prevalence Declined as Price Increased

Source: Schroth, 2014
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, 1/1/06
- Chicago tax up to 68 cents, 1/1/06

Fiscal Year

Tax Revenues

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Tax per Pack</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>$0.35</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>$0.35</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>$0.35</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>$0.40</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>$0.45</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>$0.50</td>
<td></td>
</tr>
</tbody>
</table>

$25,000,000  $150,000,000  $215,000,000  $230,000,000  $225,000,000
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

- 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)
California’s Encrypted Cigarette Tax Stamps

2005-2010

2011-present

<table>
<thead>
<tr>
<th>Stamp Front View (ink appears green)</th>
<th>Stamp Angled View (ink appears blue)</th>
</tr>
</thead>
</table>

![Stamp Front View](image1)

![Stamp Angled View](image2)
Cigarette Tax Stamps Sold
Projected and actual, California, 2000 - 2013

Source: Chaloupka, et al., 2015
Michigan’s Encrypted Cigarette Tax Stamp

Source: OpSec Security Inc.
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

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Optimizing Tobacco Taxation - Addressing Tribal Sales
Tax Avoidance

US Smokers, Last Purchase, November 2002-June 2011

Source, ITC project, US survey, Waves 1-8
Percent of Smokers Buying on Reservations – 2010/11

- <5%
- 5-10%
- 10-20%
- >20%

Map showing the percentage of smokers buying on reservations across different states.
Tribal Tobacco Sales Laws, 2014

Use both compacts and other sales laws (N=11)
Use compacts only (N=3)
Use sales laws only (N=6)
Use no tribal-specific tobacco sales laws (N=14)
No tribal reservations within state borders (N=17)
Limits on Amount of Tax-Exempt Tobacco Tribes May Receive

- **No Limit (13)**
- **Limit – Coupon/Voucher System (2)**
- **Limit – No Coupon System (3)**
- **No Exemption (3)**
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
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

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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

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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

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

Source: Euromonitor, 2015
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

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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

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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

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Optimizing Tobacco Taxation
- Limiting Tobacco Industry’s Price-Reducing Promotions
Cigarette Company Marketing Expenditures, by Category, 1975-2012

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

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

- Advertising: 49.2%
- Public Entertainment: 9.6%
- Placement: 8.3%
- Price Discounts: 8.5%
- Merchandise: 18.7%
- Other: 5.7%

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

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Optimizing Tobacco Taxation
- Minimum Pricing Policies
State MPLs - Factors That Decrease the Base Cost of Cigarettes

- Competitor Price-Matching Allowed: 26
- No Restrictions on Combination Sales: 22
- Below-Cost Coupons Allowed*: 22
- Trade Discounts Used to Reduce Base Cost: 21
- Consumers Can Receive Below-Cost Coupons: 20
- Below-Cost Combo Sales Allowed: 9
- No Restrictions on Competitor Price-Matching: 5
- Trade Discounts Include Manuf. Discount Programs: 3

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

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Optimizing Tobacco Taxation

- Use of Tax Revenues
Tobacco Industry is Outspending Prevention Efforts 19.6:1 —FY2015

State Tobacco Revenue (taxes and settlement funds)
$25.6 billion

Tobacco Industry Marketing & Promotion Expenditures (2012)
$9.6 billion

Total CDC-Recommended Spending Level
$3.3 billion

State Tobacco Program Budgets
$0.5 billion

Campaign for Tobacco Free Kids, Federal Trade Commission, American Heart Association, American Cancer Society, American Lung Association, SmokeLess States National Tobacco Policy Initiative
Tobacco Program Funding, FY16, as Percentage of CDC Recommendation

Source: CTFK, et al. 2015
State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009

Total Funding (FY10 dollars) vs. Percent Current Smoking


Percent Current Smoking: 19, 21, 23, 25, 27, 29, 31, 33, 35, 37

Source: ImpacTeen Project, UIC; YRBS

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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

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Optimizing Tobacco Taxation

- Differential Taxation
Differential Taxation

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

- Federal tobacco taxes
  - Roll-your-own vs. pipe tobacco
- Federal taxes before 4/1/2009
  - Both taxed at $1.0969/lb
- After 4/1/2009
  - roll-your-own tobacco $24.78 per pound
  - pipe tobacco: $2.83 per pound
Taxable RYO and Pipe Tobacco
US, 2008-2009

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

• 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

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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
Differential Taxation

• 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

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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.

** 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.

Source: CDC., 2015
Youth E-Cigarette and Tobacco Use
Middle School Students, 2011-2014

- Tobacco*
- ≥2 tobacco†
- E-Cigarettes‡
- Hookahs§
- Cigarettes¶
- Cigars¶
- Smokeless tobacco¶
- Snus¶
- Tobacco pipes**
- Bidis**
- Dissolvable tobacco

* 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.

Source: CDC., 2015

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Public Health Impact?

- Concerns:
  - Gateway to combustible tobacco products for youth?
  - Dual use, not cessation, among adult smokers?
  - Impact of ‘second-hand vaping’?
  - Nicotine poisoning
  - Use for vaping other substances (particularly THC)
  - Lack of evidence on long term health consequences of use
  - Impact of nicotine on the developing brain
  - Renormalization of smoking
E-cig companies say vaping will set you free. But nicotine addiction is the opposite of freedom. Wake up.

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

Source: California Department of Public Health, 2015
“An expert review of the latest evidence concludes that e-cigarettes are around 95% safer than smoked tobacco and they can help smokers to quit.”
ENDS Taxation

- 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
Differential Taxation

  – “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

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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
For more information:

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