Tobacco Taxation: The Global Evidence

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Overview

- Economic costs of tobacco use
- Impact of tobacco taxes on tobacco use
- “Best Practices” in tobacco taxation
- Myths & Facts on economic “costs” of tobacco control
- Cost-effectiveness of tobacco control
Economic Costs of Tobacco Use
Categories of Costs

• Direct costs: reduction in actual resources
  – Direct health care costs
    • e.g. hospital, out-patient, drugs, etc.
  – Other direct costs
    • e.g. transportation to clinic, family members’ time providing care

• Indirect 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 as a result of tobacco use (e.g., out of pocket costs for health care to treat diseases caused by smoking)

• “Internalities”
  – internal costs resulting from information failures in the market that can be thought of as external costs
Smoking-Attributable Spending as Share of Total Health Expenditures, 2012, by Income Group and WHO Region

Source: Goodchild, et al., 2017
Tobacco Tax Revenues as Share of Health Costs from Tobacco

Bolivia

Peru

United States

Mexico

Chile
Economic Costs of Smoking-Attributable Diseases as Share of GDP, 2012, by Income Group and WHO Region

Source: Goodchild, et al., 2017

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Impact of Tobacco Taxes & Prices on Tobacco Use
"Sugar, rum, and tobacco, are commodities which are nowhere necessaries of life, which have become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation.

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Adult Smoking Prevalence & Price

Brazil, Inflation Adjusted, 2006-2013

Sources: Ministry of Health, Brazil; EIU; World Bank

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Cigarette Prices and Cessation
US States, 2009

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

\[ y = 0.0283x + 43.083 \]

\[ R^2 = 0.371 \]
Cigarette Price & Youth Smoking Prevalence
Chile, 2000-2015

Source: Paraje, 2017
Lung cancer death rates per 100,000 (divided by four): men age 35-44

Sources: Jha & Hill, 2012
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.
Best Practices in Tobacco Taxation
Excise Tax Structure: Uniform taxes more effective than tiered taxes

Source: WHO 2017 GTCR data; unpublished figure.
Notes: Averages are weighted by WHO estimates of number of current cigarette smokers ages 15+ in each country in 2015; Prices are expressed in Purchasing Power Parity (PPP) adjusted dollars or international dollars to account for differences in the purchasing power across countries. Based on prices as of July 2016 for 53 high-income, 100 middle-income and 27 low-income countries with data on prices of most sold brand, excise and other taxes, and PPP conversion factors.
Excise Tax Structure: Specific taxes lead to higher prices

![Bar chart showing the price and taxation per pack ($PPP) for different tax structures.

- Specific excise: 5.91
- Mixed system Relying more on specific excise: 5.46
- Mixed system (all): 4.57
- Ad valorem excise: 4.25
- Mixed system Relying more on ad valorem excise: 4.08
- No excise: 3.98

Source: WHO 2017 GTCR data; unpublished figure.
Notes: Averages are weighted by WHO estimates of number of current cigarette smokers ages 15+ in each country in 2015; Prices are expressed in Purchasing Power Parity (PPP) adjusted dollars or international dollars to account for differences in the purchasing power across countries. Based on prices as of July 2016 for 53 high-income, 100 middle-income and 27 low-income countries with data on prices of most sold brand, excise and other taxes, and PPP conversion factors.
Excise Tax Structure: Specific, uniform taxes reduce price gaps

Prices of pack* of premium brand and cheapest brand of cigarettes
20 pieces, in international dollars, 2016

Notes: Data on cheapest or both premium and cheapest brands not reported/not available for: Monaco and Turkmenistan.

Source: WHO 2017

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Affordability and Tobacco Use
Cigarette Sales, Bangladesh, 1997-2010

Source: Euromonitor, EIU, World Bank

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Cigarette Affordability
European Region, 2008-2016

Notes: Relative income price is the percentage of annual per capita GDP required to buy 100 packs of most popular brand of cigarettes.
Source: WHO 2017
Cigarette Tax and Tax Revenues
Ukraine: 2008-2015

Average excise rate for cigarettes – increased 10-fold
Cigarette Tax Revenue – increased 6-fold

Source: Syvak and Krasovsky, 2017
Tobacco Taxes Popular

• Tobacco Excise Tax Increases:
  • Generally supported by the public
    • Including significant number of smokers
  • 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
Support for 20% Price Increase
Non-Smokers, 2010

Source: Gallus, et al., 2012
Support for 20% Price Increase
Current Smokers, 2010

Source: Gallus, et al., 2012

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

Year


Percent Current Smoking

$1,000

$1,000

$800

$800

$600

$600

$400

$400

$200

$200

$0

$0

Total Funding

$Millions (FY10 dollars)

total state program funding  high school prevalence

Source: ImpacTeen Project, UIC; YRBS

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Oppositional Arguments
Impact on the Economy
Tobacco Control and Jobs

Industry-sponsored studies highlight economic contribution of tobacco, but only tell part of story:

• Focus on the gross impact:
  • Tax increases, other tobacco control policies reduce tobacco consumption
  • Results in loss of some jobs dependent on tobacco production

• Ignore the net impact:
  • Money not spent on tobacco products will be spent on other goods and services
  • New/increased tax revenues spent by government
    • *Offsetting job gains in other sectors*
Tobacco Taxes and Jobs

Concerns about job losses in tobacco sector have been addressed using new tax revenues:

- Turkey, Philippines among countries that have allocated tobacco tax revenues to helping tobacco farmers and/or those employed in tobacco manufacturing make transition to other livelihoods
  - Crop substitution programs, retraining programs
Economic Impact of Tobacco Control

Major Conclusion #7:

Tobacco control does not harm economies.
Impact on the Poor
Who Pays & Who Benefits
Turkey, 25% Tax Increase

Source: Adapted from Önder & Yürekli, 2014
Who Pays & Who Benefits
Chile, 25% Tax Increase

Figure 6: Total Income Effect: Direct and Indirect Effect of Taxes
(tobacco price increase, medical expenditure and working years gained)

Source: Author's estimation using a price shock of 25%

Source: Fuchs, et al., 2017

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Impact on the Poor

Need to consider overall fiscal system

• Key issue with taxes is what’s done with the revenues generated by the tax

• 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
Incremental Revenues for Health and the Poor, Philippines, 2001-2016

Source: Adapted from Jeremias Paul, 2017
Impact of Tobacco Control on the Poor

Major Conclusion #8:
Tobacco control reduces the disproportionate burden that tobacco use imposes on the poor.

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

NYC Smoking Prevalence Declined as PriceIncreased

Source: Schroth, 2014

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Cook County Cigarette Tax and Tax Revenues - FY01-FY06

- Tax per Pack:
  - $0.15
  - $0.35
  - $0.55
  - $0.75
  - $0.95
  - $1.15
  - $1.35
  - $1.55
  - $1.75

- Fiscal Year:
  - 2001
  - 2002
  - 2003
  - 2004
  - 2005
  - 2006

- Tax Revenues:
  - $25,000,000
  - $45,000,000
  - $65,000,000
  - $85,000,000
  - $105,000,000
  - $125,000,000
  - $145,000,000
  - $165,000,000
  - $185,000,000
  - $205,000,000
  - $225,000,000

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

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

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Illicit Cigarette Market Share & Cigarette Prices, 2012

Source: NCI/WHO, 2016

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Drivers of Illicit Tobacco

- Corruption
- Weak tax administration
- Poor enforcement
- Presence of informal distribution networks
- Presence of criminal networks
- Access to cheaper sources

Sources: NRC/IOM 2015; NCI/WHO 2016
The graph illustrates the relationship between Transparency Index and illicit cigarette trade volume across various countries. The equation is $y = -0.0131x + 0.2028$ with a $R^2$ value of 0.0815. Source: NCI/WHO, 2016.

Source: HM Revenue & Customs, 2014
Combating Illicit Tobacco Trade

• Illicit trade protocol to the WHO FCTC
  – Adopted November 2012; entered into force September 2018; provisions calling for:
    – Strong tax administration
      • Prominent, high-tech tax stamps and other pack markings
      • Licensing of manufacturers, exporters, distributors, retailers
      • Export bonds
      • Unique identification codes on packages
    – Better enforcement
      • Increased resources
      • Focus on large scale smuggling
    – Swift, severe penalties
  – Multilateral/intersectoral cooperation

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Control of Illicit Tobacco Trade

Major Conclusion #5: Control of illicit trade in tobacco products, now the subject of its own international treaty, is the key supply-side policy to reduce tobacco use and its health and economic consequences.
Summary
Economic Impact of Tobacco Control

Tobacco tax increases and other effective tobacco control measures make good economic sense:

• Not just long-term public health, but near-term health and economic benefits

• Tobacco control will not harm economies

• Substantial impact in reducing health care costs, improving productivity, and fostering economic development.
Tobacco Control Policies and Cost Per Healthy Life-Year Gained, by WHO Region

Note: HLYG = healthy life-year gained.
Source: Based on calculations from World Health Organization CHOICE model, 2016.
Economic Research Priorities

• Country specific research on impact of tax/price on tobacco use in LMICs
• Research on the economic costs and benefits of tobacco taxation and tobacco control
• Research on the interrelationships between tobacco use, poverty, and tobacco control
• Other:
  – In small number of highly tobacco-dependent countries, research on economically viable alternatives to tobacco growing and manufacturing
  – In HICs, research to assess changes in price elasticity of tobacco products over time and at different tax/price levels
Bloomberg Initiative – UIC

• Build capacity of ‘think tanks’ in selected priority countries and regions to provide local evidence to support tobacco tax reforms and tax increases

• Strategic engagement with decision makers to build technical capacity and political support for tobacco tax policy

• Develop/disseminate resources (policy briefs, white papers, etc.) on tobacco taxation to build knowledge and support for tobacco tax policy
UIC Bloomberg Initiative Partners
THANK YOU!

For more information:

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