The Importance of Economic Data for Tobacco Control

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Overview

• Economic costs of tobacco use
• Impact of tobacco taxes on tobacco use
• Myths & Facts on economic “costs” of tobacco control
• Cost-effectiveness of tobacco control
Economic Costs of Tobacco Use
Why Study the Costs of Tobacco Use?

• To assess the economic impact of tobacco use on:
  – Society
  – Individuals
  – Government
  – Business/employers

• Economic cost estimates can help spur adoption of effective tobacco control policies
  – WHO “toolkit” for estimating economic costs
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
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
Cigarette Price & Consumption
Hungary, 1990-2011, Inflation Adjusted

Sources: EIU, ERC, and World Bank
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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Cigarette Prices and Cessation
US States, 2009

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

% Ever Smokers Who Have Quit

Average price (in cents)

y = 0.0283x + 43.083

R² = 0.371
Cigarette Price & Youth Smoking Prevalence
Chile, 2000-2015

Source: Paraje, 2017

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Affordability & Tobacco Use
Adult Smoking Prevalence, Indonesia, 2001-2014

Sources: Euromonitor, EIU, World Bank, and Authors’ Calculations

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Price, Consumption & Lung Cancer, France

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

Relative price

# cigarettes/adult/day

Sources: Jha & Hill, 2012

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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.
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
The Laffer Curve – Argentina

2016

2017

Additional tax revenue (million dollars-IPC march 2016=100)

Tax rate

Source: Tobacconomics, 2018

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Oppositional Arguments
Tax Avoidance & Evasion
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
- Chicago tax up to 68 cents, 1/1/06
- Chicago smoking ban, 1/16/06

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Illicit Cigarette Market Share & Cigarette Prices, 2012

y = -0.0076x + 0.1752
R² = 0.0496

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
Smuggling and Corruption, 2011

\[ y = -0.0131x + 0.2028 \]

\[ R^2 = 0.0815 \]

Source: NCI/WHO, 2016

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Figure 12 – Estimated Volumes of Cigarettes Consumed in the U.K. – Duty paid, illicit, and cross-border shopping, 2000-01 – 2013-14

Source: HM Revenue & Customs, 2014

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Combating Illicit Tobacco Trade

- Illicit trade protocol to the WHO FCTC
  - Adopted November 2012; currently in process of being signed/ratified; 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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Impact on the Poor
Tobacco & Poverty

Forgone Income 1:
More money spent on tobacco: high opportunity cost. Less money spent on education, nutrition, etc.

Forgone Income 2:
Due to treatment cost and loss of work days

Forgone Income 3:
Due to premature death

Breadwinner gets sick due to tobacco use

Income increases

Youth and women start smoking and men smoke more

Higher prevalence and consumption level

Family falls into poverty

Vicious Cycle of Tobacco and Poverty

Source: NCI & WHO 2016

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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
Impact on the Economy
Tobacco Control and Jobs

Industry-sponsored studies tell part of story:

- **Focus on the gross impact:**
  - Tax increase, 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

• Many published studies assess impact of reductions in tobacco use from tax increases and/or other tobacco control measures:
  • Variety of high, middle, and low income countries
  • Use alternative methodologies
• Generally find that employment losses in tobacco sector more than offset by gains in other sectors
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
Smoke Free Air Policies & Economic Activity

• Industry and its allies argue that comprehensive smoke-free air policies will harm the hospitality industry as smokers are deterred from frequenting bars and restaurants.

• Extensive research shows that comprehensive smoke-free air policies have no negative impact, and often a positive impact, on economic activity in the hospitality sector.

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Tobacco Taxes and Small Businesses

• More recent argument that higher taxes will harm convenience stores

• Huang & Chaloupka (2012)
  • Number of convenience stores, by state, 1997-2009
  • State cigarette tax rates and smoke-free air policies
  • Economic conditions (income, unemployment, gas prices)
  • Multivariate, fixed effects econometric models
  • Find that higher taxes associated with increase in convenience store business
    • Likely due to spending on other products, overshifting of taxes

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Tobacco Control and Overall Economic Activity

- Chaloupka & Peck (2009)
  - Adaptation of Murphy & Topel (2003) assessment of the broader economic impact of medical research
  - Accounts for increased life expectancy, improved productivity resulting from improvements in health
  - We estimated impact of reductions in cigarette smoking in the U.S. in the 40 years following the 1964 Surgeon General’s report
  - Estimate that by 2004, increased economic activity by $300-$700 billion; (equivalent to 2.4% - 5.7% of GDP)
Economic Impact of Tobacco Control

Major Conclusion #7:
Tobacco control does not harm economies.
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.
Figure 17.3  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.
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Thank You!