The Economics of Smoking: Dispelling the Myths

Frank J. Chaloupka, University of Illinois at Chicago
Summit on Creation of a Tobacco Endgame for Canada
Kingston, Ontario, Canada, 30 September – 1 October, 2016
Tax, Price & Tobacco Use
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
Cigarette Price & Consumption
Hungary, 1990-2011, Inflation Adjusted

Sources: EIU, ERC, and World Bank

www.tobacconomics.org
Adult Prevalence & Price, Brazil

Adult Smoking Prevalence and Cigarette Price
Brazil, Inflation Adjusted, 2006-2013

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

www.tobacconomics.org
Monthly Quit Line Calls, United States
11/04-11/09

4/1/09 Federal Tax Increase
1/1/08 WI Tax Increase

@tobacconomics
Cigarette Prices and Cessation
US States & DC, 2009

% Ever Smokers Who Have Quit vs. Average price (in cents)

\[ y = 0.0283x + 43.083 \]
\[ R^2 = 0.37104 \]

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

@tobacconomics
Cigarette Price & Youth Smoking Prevalence
High School Seniors, United States, 1991-2013

Cigarette Price

12th grade prevalence

Sources: Tax Burden on Tobacco, BLS, MTF, and author's calculations
www.tobacconomics.org
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

www.tobacconomics.org
Increasing Elasticity with Increasing Price

Price Elasticity

State tax-paid sales
Tauras, et al., 2016

TUS-CPS Prevalence & Consumption
Pesko, et al., 2016

@tobacconomics
Disposable ENDS
Sales Volume and Price, US 2010 - 2014
Prices and Tobacco Use

– Similar evidence for variety of other tobacco products and for electronic nicotine delivery systems
  • Generally see evidence of substitution between similar products (e.g. cigarettes, little cigars, roll-your-own
  • Some evidence of complementarity between combustibles and non-combustibles
South Africa - Taxes, Prices, and Tax Revenues, 1970-2012, Inflation Adjusted

@tobacconomics
Turkey

Cigarette Prices, Sales, and Excise Revenue in Turkey (2005-2011)

Source: Tobacco-Free Kids, 2014
State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009

- Total State Program Funding (FY10 dollars)
- High School Prevalence

Year
Percent Current Smoking
www.tobacconomics.org

Source: ImpacTeen Project, UIC; YRBS
Share of the World Population Covered by Selected Tobacco Control Policies, 2014

Note: The tobacco control policies depicted here correspond to the highest level of achievement at the national level, for the definitions of these highest categories, refer to the WHO Report on the Global Tobacco Epidemic 2015: Raising Taxes on Tobacco. Source: World Health Organization. 2015
Economic Impact of Tobacco Use
Smoking-Attributable Spending as Share of Total Health Expenditures, 2012, by Income Group and WHO Region

Source: Goodchild, et al., forthcoming

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

Source: Goodchild, et al., forthcoming
Economic Costs of Tobacco

• Canada doing better than much of the world
  – Tobacco-attributable health care costs about 3.1% of total health expenditures
  – Economic costs of tobacco about 0.94% of GDP
Economic Impact of Tobacco Control - Dispelling the Myths
Oppositional Arguments

- Impact on Jobs, Business
Impact on Jobs

March 9, 2009 – Vanguard, AllAfrica.com

Nigeria Anti-Tobacco Bill – 400,000 Jobs on the Line

• “if passed into law, The National Tobacco Bill which is currently on the floor of the National Assembly will lead to at least 400,000 Nigerians being thrown into the unemployment market.”

• “This was the view expressed by the Chairman, Senate Committee on Industries, Senator Kamorudeen Adedbu, while speaking with reporters recently in Iselyn, Oyo State, while speaking at the 2008 Farmers Productivity Day Award Ceremony.”
Tobacco Control & Employment

• Tobacco control 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 tobacco tax revenues will be spent by government
  – Additional job gains in other sectors
• Net increase in jobs in most countries

www.tobacconomics.org
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
Oppositional Arguments - Impact on the Poor
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.
Tobacco & Poverty

Family falls into poverty

Foregone income 1:
More money spent on tobacco:
Less money spent on Education, nutrition etc

High opportunity cost

Foregone income 2:
Treatment cost & Lost working days & income

Foregone income 3:
Breadwinner dies prematurely

Breadwinner gets sick due to tobacco use

Poor men smoke

Source: Yurekli, 2007

@tobacconomics
Who Pays & Who Benefits
Turkey - 25% Tax Increase

Source: Adapted from Önder & Yürekli, 2014

Change in Consumption
Change in Taxes Paid

Source: @tobacconomics
Impact of Tobacco Taxes on the Poor

Also depends on use of new tax revenues:

• 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
Oppositional Arguments

- Illicit Trade
Federal budget unveils major tax hike for smokers that will see jump in cost of cigarettes, tobacco and cigars

Gregory Thomas, federal director of the Canadian Taxpayers Federation, said the government could have a difficult time trying to collect the more than $3 billion it’s expecting in additional revenues over the next five years.

The tobacco tax hike will dramatically increase the amount of contraband tobacco in Canada, he said, yet the government is only investing a relatively small amount in combatting the illegal tobacco market.

“Let’s see them try and collect it [the expected additional revenue]. They’re demanding a whole lot of conscience on the part of smokers,” Thomas said.

“We all know that tobacco smuggling activity on our borders is a growing problem.”
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
Illicit Cigarette Market Share & Cigarette Prices, 2012

Sources: Euromonitor, WHO
Determinants of Illicit Tobacco

– Corruption
– Weak tax administration
– Poor enforcement
– Presence of informal distribution networks
– Presence of criminal networks
– Access to cheaper sources
Smuggling and Corruption, 2011

y = -0.0131x + 0.2028
R² = 0.08146

Sources: Euromonitor, Transparency International

www.tobacconomics.org
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
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
Cost-Effectiveness of Tobacco Control
Key Tobacco Control Policies
Cost-Effectiveness

Cost per HLYG (in Intl.$)

- Brief intervention
- Advertising ban
- Smoke-free protection
- Raise taxes
- Warning labels

Legend:
- Low-income countries
- Lower middle-income countries
- Upper middle-income countries
- High-income countries

@tobacconomics
Rationale for ENDS Taxation

• Improve Public Health
  • Encourage switching from combusted to potentially less harmful products
  • Prevent youth initiation

• Raise Revenue
  • Replacement revenue source as revenues from cigarettes and other tobacco products fall
ENDS Taxation in the US

- Minnesota, North Carolina, Louisiana and DC currently tax ENDS
  - 95% of wholesale price in MN; 67% in DC; 40% in PA
  - 5 cents per ml in NC, LA; 7.5 cents/ml in WV; 20 cents/ml in KS
- 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 Globally

- Togo: 45% of retail price
- Republic of Korea: 1799 won/ml (US$1.65/ml)
- Italy:
  - Mid-2013: 58.5% of retail price
  - Late-2014: 50% of retail price
  - Early 2015: €3.73 per 10 mls
  - May 2015: eliminated
- Portugal: €0.60/ml
- Others have proposed or are considering
  - European Union proposal to tax like cigarettes
Options for 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

www.tobacconomics.org
Options for 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
  - Relatively low cost, legal substitute could help address concerns about illicit trade
Summary
Summary

- Large, regular tobacco tax increases are single a key component of an Endgame strategy
  - And generate considerable new revenue
- Tobacco Endgame is good for the economy
  - Economic arguments continue to be significant obstacle
    - False or greatly overstated
  - Tobacco control is highly cost-effective
- Differential taxation could be a key part of Endgame strategy
For more information:

Tobacconomics

http://www.tobacconomics.org

@tobacconomics

fjc@uic.edu