Generating Revenue & Cutting Costs – The Health & Economic Benefits of Tobacco Control

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Ministerial Leadership in Health
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Health & Economic Consequences of Tobacco Use
Leading Causes of Death Globally

Injuries 9%
Cardiovascular diseases 30%
Cancer 13%
Other chronic diseases 9%
Chronic respiratory diseases 7%
Diabetes 2%
Other conditions* 30%

Other Conditions include communicable diseases, maternal/perinatal conditions, and nutritional deficiencies
NCD Risks

Fig. 1.5a Probability of dying from the four main noncommunicable diseases between the ages of 30 and 70 years, comparable estimates, 2012

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Source: WHO, 2014
## NCDs: Major Risk Factors

<table>
<thead>
<tr>
<th>Major NCD</th>
<th>Tobacco Use</th>
<th>Unhealthy Diet</th>
<th>Physical Inactivity</th>
<th>Harmful Use of Alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease &amp; Stroke</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Diabetes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cancer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Chronic Lung Disease</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: WHO, 2010; Mackay, 2012
Prevalence of Current Tobacco Smoking, 2013

Source: WHO 2015
Economic Consequences of NCDs

• Large economic burden from NCDs:
  • Considerable, growing health care costs from treating NCDs
  • Significant lost productivity
  • Cause of poverty
  • Account for much of socioeconomic inequalities in health
Smoking-Attributable Spending as Share of Total Health Expenditures, 2012, by Income Group and WHO Region

Source: Goodchild, et al., forthcoming
Economic Costs of Smoking-Attributable Diseases as Share of GDP, 2012, by Income Group and WHO Region

Source: Goodchild, et al., forthcoming
Tobacco Control

- Evidence-based interventions that address demand for and supply of tobacco
- MPOWER – most effective and cost-effective strategies:
  - Monitor
  - Protect
  - Offer
  - Warn
  - Enforce
  - Raise
Key Tobacco Control Policies
Cost-Effectiveness

Source: WHO, unpublished data
Tobacco Taxation
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
Tobacco Taxes & Tobacco Use

Increases in tobacco excise taxes that increase prices result in a decline in overall tobacco use.
Cigarette Price & Consumption
Hungary, 1990-2011, Inflation Adjusted

Sources: EIU, ERC, and World Bank

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The demand for tobacco products in lower-income countries is at least as responsive to price as is the demand for tobacco products in high-income countries.
Increases in tobacco excise taxes that increase prices reduce the prevalence of adult tobacco use.
Adult Prevalence & Price, Brazil

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

Sources: Ministry of Health, Brazil; EIU; World Bank
Tobacco Taxes and Cessation

Increases in tobacco excise taxes that increase prices induce current tobacco users to quit.
Taxes, Prices & Smoking Cessation

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 & DC, 2009

% Ever Smokers Who Have Quit

Average price (in cents)

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

\[ y = 0.0283x + 43.083 \]

\[ R^2 = 0.37104 \]
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 Price and Youth Smoking Prevalence
United States, 1991-2011

Year
1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011

Price per pack (8/11 dollars)
$2.50 $3.25 $4.00 $4.75 $5.50

Smoking Prevalence

Cigarette Price 12th grade prevalence 10th grade prevalence 8th grade prevalence

Source: MTF, *Tax Burden on Tobacco*, 2011, and author’s calculations
In many countries, tobacco use among lower-income populations is more responsive to tax and price increases than is tobacco use among higher-income populations.
Who Pays & Who Benefits
Turkey, 25% Tax Increase

Change in Consumption
Change in Taxes Paid

Poorest: -35.3%
Middle: -20.4%
Richest: -18.5%

Source: Adapted from Önder & Yürekli, 2014
Tobacco Taxes & Affordability

To achieve public health goals, tobacco tax and price increases need to reduce the affordability of tobacco products.
Affordability and Tobacco Use
Bangladesh, 1997-2010

Source: Euromonitor, 2011
Cigarette Affordability, 2014 and Change, 2008-2014

- Uganda
- Sri Lanka
- Mozambique
- Jamaica
- Guyana
- Guinea Bissau
- Ghana
- Gabon
- Ethiopia
- Côte d'Ivoire
- Burkina Faso
- Bahamas

% of per capita GDP to buy 100 packs of most popular brand

Source: WHO 2015

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Tobacco Taxes and Population Health

Tobacco tax increases that increase prices improve population health
France: smoking, tax and male lung cancer, 1980-2010

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

Source: Jha, in progress
Tobacco Tax Structure

Higher and more uniform specific tobacco excise taxes result in higher tobacco product prices and increase the effectiveness of taxation policies in reducing tobacco use.
Excise tax structure: Specific and mixed relying more on the specific component tend to lead to higher prices

Source: WHO, 2015
Types of Cigarette Excise Taxes, 2014

Tobacco tax structures. Number of countries applying selected characteristics.

- Impose a uniform excise tax (vs tiered system): 120
  - Low-income: 18
  - Middle-income: 57
  - High-income: 45
- Have specific or mixed excise system relying more on specific: 96
  - Low-income: 9
  - Middle-income: 55
  - High-income: 32
- Have ad valorem or mixed system with minimum excise tax: 47
  - Low-income: 2
  - Middle-income: 18
  - High-income: 27
- Ad valorem or mixed with retail price as the tax base (or retail price minus VAT): 48
  - Low-income: 3
  - Middle-income: 17
  - High-income: 28
- Impose a uniform specific tax: 37
  - Low-income: 10
  - Middle-income: 16
  - High-income: 11
- Have specific excise component automatically adjusted to inflation (or other upward adjustment): 14
  - Low-income: 9
  - Middle-income: 5
  - High-income: 5

Source: WHO 2015
## Summary of Tax Structures

<table>
<thead>
<tr>
<th>Country</th>
<th>Structure</th>
<th>Type</th>
<th>Price</th>
<th>Excise Share</th>
<th>Total Tax Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahamas</td>
<td>Ad Valorem</td>
<td>Tiered</td>
<td>$9.41</td>
<td>42.9%</td>
<td>42.9%</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>Ad Valorem</td>
<td>Tiered</td>
<td>$2.21</td>
<td>17.0%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Côte d'Ivoire</td>
<td>Ad Valorem</td>
<td>Uniform</td>
<td>$2.17</td>
<td>15.2%</td>
<td>26.1%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Ad Valorem</td>
<td>Uniform</td>
<td>$1.91</td>
<td>13.9%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Gabon</td>
<td>Ad Valorem</td>
<td>Uniform</td>
<td>$3.21</td>
<td>19.6%</td>
<td>34.8%</td>
</tr>
<tr>
<td>Ghana</td>
<td>Ad Valorem</td>
<td>---</td>
<td>$2.29</td>
<td>13.2%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Guinea Bissau</td>
<td>Ad Valorem</td>
<td>Uniform</td>
<td>$1.40</td>
<td>3.3%</td>
<td>19.1%</td>
</tr>
<tr>
<td>Guyana</td>
<td>Specific</td>
<td>Uniform</td>
<td>$3.11</td>
<td>11.4%</td>
<td>25.2%</td>
</tr>
<tr>
<td>Jamaica</td>
<td>Specific</td>
<td>Uniform</td>
<td>$13.00</td>
<td>26.3%</td>
<td>42.9%</td>
</tr>
<tr>
<td>Malawi</td>
<td>Specific</td>
<td>Tiered</td>
<td>$7.43</td>
<td>14.5%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>Mixed/Specific</td>
<td>Tiered</td>
<td>$1.76</td>
<td>16.3%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Specific</td>
<td>Tiered</td>
<td>$9.24</td>
<td>63.1%</td>
<td>73.8%</td>
</tr>
</tbody>
</table>
Tobacco Tax Levels

• WHO “Best Practice”: set tobacco excise tax levels so that they account for at least 70 percent of the retail prices for tobacco products
  – Update of World Bank ‘yardstick’ of any taxes accounting for 2/3 to 4/5 of retail prices
  – Well above where most countries are currently
  – Further increases in countries that do reach this target
Weighted average Price of the Most Sold Brand & Taxes per Pack

Source: WHO 2015
Tobacco Taxes and Tobacco Tax Revenues

Tobacco tax increases increase tobacco tax revenues.
Earmarking Tobacco Tax Revenues

• Using a portion of tobacco tax revenues to support other tobacco control and/or health promotion efforts
  – Increases the health impact of tobacco tax increases
  – Increases public support for tax increases
  • Including among many smokers
Support for Earmarked Taxes

BROAD SUPPORT FOR CIGARETTE TAXES THAT IMPROVE HEALTH PROGRAMMES

Source: WHO 2015

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## Earmarked Tobacco Taxes

<table>
<thead>
<tr>
<th>Country</th>
<th>Reported Use of Earmarked Tobacco Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>6 dinars per pack of cigarettes go to the emergency fund and medical care activities, 2 dinars per pack go to cancer control</td>
</tr>
<tr>
<td>Argentina</td>
<td>Additional emergency tax of 7% of retail price to finance social and/or health programmes of the Rural Change Program and the Social-Agricultural Programmes</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Additional excise of 1% of the retail price goes to the Ministry of Health</td>
</tr>
<tr>
<td>Cabo Verde</td>
<td>All excise tax revenues are used for sports and health</td>
</tr>
<tr>
<td>Colombia</td>
<td>16% of the specific excise tax on tobacco products is used for sports while all revenues from ad valorem excise go to health</td>
</tr>
<tr>
<td>Comoros</td>
<td>Part of the 5% of tax on tobacco goes to Ministry of Sports and the hospital emergencies section</td>
</tr>
<tr>
<td>Congo</td>
<td>Specific excise tax per pack (40 XOF): half goes to health insurance and half to sports</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>All revenues from the specific excise tax are used to fund programmes for the prevention and treatment of diseases related to tobacco use, cancer treatment, harmful use of alcohol, and sports</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>An extra tax of 5% goes to the AIDS solidarity fund and another 2% extra tax goes to sports</td>
</tr>
<tr>
<td>Egypt</td>
<td>An extra tax of 10 plasters per pack is used to fund student health insurance</td>
</tr>
<tr>
<td>El Salvador</td>
<td>35% of revenues from taxes on tobacco, alcohol and firearms, ammunition and explosives (or a minimum of US$ 20 million per year) fund the FOSALUD (solidarity fund for health)</td>
</tr>
<tr>
<td>Guatemala</td>
<td>All revenues from the ad valorem excise tax on tobacco are used for health programmes</td>
</tr>
<tr>
<td>Iceland</td>
<td>At least 0.9% of gross tobacco sales is allocated to tobacco control</td>
</tr>
<tr>
<td>India</td>
<td>Specific amount for all tobacco products (varies by product), except bidi, goes to the Health Cessation Fund and an amount levied on bidi goes to the Bidi Workers’ Welfare Fund, which also includes medical care to workers involved in the bidi industry</td>
</tr>
<tr>
<td>Indonesia</td>
<td>10% surcharge imposed on tobacco excise; at least 50% of its proceeds are allocated for health programmes and law enforcement at the regional level. 2% of tobacco tax revenues are allocated to regional governments of which a proportion should be used for health</td>
</tr>
<tr>
<td>Iran (Islamic Republic of)</td>
<td>Up to 2% of taxes collected on tobacco products are used to support tobacco control activities</td>
</tr>
</tbody>
</table>
## Earmarked Tobacco Taxes

<table>
<thead>
<tr>
<th>Country</th>
<th>Earmarked Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jamaica</td>
<td>20% of the Special Consumption Tax (SCT) on tobacco and another 5% of the SCT on all products including tobacco go to the National Health Fund</td>
</tr>
<tr>
<td>Madagascar</td>
<td>6 ary per pack to fund the National Fund for the Promotion and Development of Youth, Sports and Recreation</td>
</tr>
<tr>
<td>Mongolia</td>
<td>A proportion of tobacco (2%) and alcohol (1%) excise tax revenues is allocated to the Health Promotion Foundation</td>
</tr>
<tr>
<td>Nepal</td>
<td>All tobacco tax revenues go to the Health Tax Fund, financing mainly prevention and treatment of noncommunicable diseases</td>
</tr>
<tr>
<td>Panama</td>
<td>50% of tobacco tax revenues collected go to National Institute of Oncology, the Ministry of Health for cessation services and Customs to fight illicit trade in tobacco products. The Ministry of Health also funds regional activities on tobacco control through the money received</td>
</tr>
<tr>
<td>Philippines</td>
<td>Following the tax increase in 2012, about 80% of incremental revenues will be allocated for universal health care while 20% will be allocated nationwide for medical assistance and health facility enhancement programmes</td>
</tr>
<tr>
<td>Poland</td>
<td>0.5% of the excise duty levied funds a programme to reduce tobacco product consumption</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>An amount of 354 won per pack goes to the Health Promotion Fund which finances health promotion research and projects</td>
</tr>
<tr>
<td>Romania</td>
<td>10 euros per 1,000 cigarettes and 13 euros per kilogram of loose tobacco are dedicated for health. Additionally, 1% of the budget from the excise on cigarettes is used to finance sports</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.26 francs per pack of cigarettes goes to the Tobacco Prevention Fund</td>
</tr>
<tr>
<td>Thailand</td>
<td>Surcharge of 2% on tobacco and alcohol excise goes to Thai Health Fund</td>
</tr>
<tr>
<td>The former Yugoslav Republic of Macedonia</td>
<td>Amount of 0.053 denars per piece (cigarette) allocated to fund drugs for rare diseases</td>
</tr>
<tr>
<td>United States of America</td>
<td>Varies by state. Amount per pack funds different types of activities, mainly health activities</td>
</tr>
</tbody>
</table>
Tax avoidance and tax evasion reduce, but do not eliminate, the public health and revenue impact of tobacco tax increases.
Combating Illicit Tobacco Trade

• Illicit trade protocol to the WHO FCTC
  – Currently in process of being signed/ratified:
    • Gabon, Sri Lanka have ratified; Burkina Faso, Côte d’Ivoire, Ghana and Guinea Bissau have signed
  – Provisions calling for:
    • Strong tax administration
      – Prominent, high-tech tax stamps and other pack markings
      – Licensing of manufacturers, exporters, distributors, retailers
      – Unique identification codes on packages
    • Better enforcement
      – Increased resources; Focus on large scale smuggling
    • Swift, severe penalties
    • Multilateral/intersectoral cooperation
Summary
Summary

• Considerable health and economic consequences from tobacco use
• Tobacco control has positive economic impact
  – Healthier, more productive labor force, reduced costs
• Tobacco control interventions are cost-effective
• Sizable tobacco tax increases most effective and cost-effective option for reducing tobacco use and its consequences
  – Improve public health while raising revenues

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