Tobacco taxation for public health and public revenues: why is this important to the finance community?

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Health Effects

Tobacco smoking negatively affects every major body organ.
1. EYES  
   - Cataracts, blindness (macular degeneration)  
   - Stinging, excessive tearing and blinking

2. BRAIN AND PSYCHE  
   - Stroke (cerebrovascular accident)  
   - Addiction/withdrawal  
   - Altered brain chemistry  
   - Anxiety about tobacco’s health effects

3. HAIR  
   - Odor and discoloration

4. NOSE  
   - Cancer of nasal cavities and paranasal sinuses  
   - Chronic rhinosinusitis  
   - Impaired sense of smell

5. TEETH  
   - Periodontal disease (gum disease, gingivitis, periodontitis)  
   - Loose teeth, tooth loss  
   - Root-surface caries, plaque  
   - Discoloration and staining

6. MOUTH AND THROAT  

7. LIVER  
   - Liver cancer

12. MALE REPRODUCTION  
   - Infertility (sperm deformity, loss of motility, reduced number)  
   - Impotence  
   - Prostate cancer death

13. FEMALE REPRODUCTION  
   - Cervical and ovarian cancer  
   - Premature ovarian failure, early menopause  
   - Reduced fertility  
   - Painful menstruation

14. URINARY SYSTEM  
   - Bladder, kidney, and ureter cancer

15. HANDS  
   - Peripheral vascular disease, poor circulation (cold fingers)

16. SKIN  
   - Psoriasis  
   - Loss of skin tone, wrinkling, premature aging
6. MOUTH AND THROAT
- Cancers of lips, mouth, throat, larynx and pharynx
- Sore throat
- Impaired sense of taste
- Bad breath

7. EARS
- Hearing loss
- Ear infection

8. LUNGS
- Lung, bronchus and tracheal cancer
- Chronic obstructive pulmonary disease (COPD) and emphysema
- Chronic bronchitis
- Respiratory infection (influenza, pneumonia, tuberculosis)
- Shortness of breath, asthma
- Chronic cough, excessive sputum production

9. HEART
- Coronary thrombosis (heart attack)
- Atherosclerosis (damage and occlusion of coronary vasculature)

10. CHEST & ABDOMEN
- Esophageal cancer
- Gastric, colon and pancreatic cancer
- Abdominal aortic aneurysm
- Peptic ulcer (esophagus, stomach, upper portion of small intestine)
- Possible increased risk of breast cancer

17. SKELETAL SYSTEM
- Osteoporosis
- Hip fracture
- Susceptibility to back problems
- Bone marrow cancer
- Rheumatoid arthritis

18. WOUNDS AND SURGERY
- Impaired wound healing
- Poor post-surgical recovery
- Burns from cigarettes and from fires caused by cigarettes

19. LEGS AND FEET
- Peripheral vascular disease, cold feet, leg pain and gangrene
- Deep vein thrombosis

20. CIRCULATORY SYSTEM
- Buerger’s disease (inflammation of arteries, veins and nerves in the legs)
- Acute myeloid leukemia

IMMUNE SYSTEM
- Impaired resistance to infection
- Possible increased risk of allergic diseases

OTHERS
- Diabetes
- Sudden death
Societal Harms

2 trillion dollars in 2016
Correcting for externalities

Economic Cost of Smoking-Attributable Diseases (in million $PPP)

Sources

Tobacco control leads to social gains: Evidence from France

Losses

- Healthcare costs
- Lost productivity
- Quality of life lost
- Life lost

Gains

- Tax revenue

Source: French Monitoring Centre for Drugs and Drug Addiction, Le coût social des drogues en France, September 2015
• Individuals’ short-term desires (exacerbated by nicotine addiction) to use tobacco undermine their long-term goals of greater wellbeing.

• Economic intervention: taxing to raise prices can mitigate the former to achieve the latter.
Cigarette tax revenue in the EU

Source: European Commission “Excise Duty Tables” 2018
Smoking prevalence in the EU

Switching across different products

- Substitution of factory-made cigarettes for roll-your-own cigarettes in the event of increase in factory-made cigarette prices

Tobacco tax revenues in France
Tobacco tax revenues in France (cont.)
Cross-price elasticities across brands/products

• In the EU, increased cigarette prices are associated with increases in e-cigarette sales, suggesting substitution

## E-cigarette taxation in the EU

### Specific excise per 1 ml of the e-cigarette liquid in the European Union countries (as of April 2019)

<table>
<thead>
<tr>
<th>Country</th>
<th>Excise rate in local currency</th>
<th>Excise rate in Euro</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td>0.2</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>2</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.18</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>55</td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>Cyprus</td>
<td>0.12</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.12</td>
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</tr>
<tr>
<td>Romania</td>
<td>0.5</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>0.08</td>
<td>0.08</td>
<td>0.04 euro for 1 ml of liquid without nicotine</td>
</tr>
<tr>
<td>Latvia</td>
<td>0.01</td>
<td>0.01</td>
<td>Plus 0.05 euro per mg of nicotine</td>
</tr>
<tr>
<td>Poland</td>
<td>0</td>
<td>0</td>
<td>From 1 July 2020 - 0.5 PLN per 1 ml</td>
</tr>
</tbody>
</table>

Source: World Bank “E-cigarette use and taxation” 2019
# Heated tobacco product taxation in Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Tax Category</th>
<th>Tax Rate &amp; Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>Heated tobacco</td>
<td>BGN 152 per kg</td>
</tr>
<tr>
<td>Croatia</td>
<td>Heated tobacco</td>
<td>HRK 600 per kg</td>
</tr>
<tr>
<td>Cyprus</td>
<td>Heated tobacco</td>
<td>€150 per kg</td>
</tr>
<tr>
<td>Denmark</td>
<td>Tobacco intended to produce vapor without</td>
<td>DKK 738.50 per kg</td>
</tr>
<tr>
<td></td>
<td>combustion</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>Electrically heated tobacco product</td>
<td>€156.70 per kg</td>
</tr>
<tr>
<td>Hungary</td>
<td>Novel tobacco products</td>
<td>HUF 10 per unit</td>
</tr>
<tr>
<td>Italy</td>
<td>Inhalation product without combustion</td>
<td>Specific tax depending on SKU</td>
</tr>
<tr>
<td>Latvia</td>
<td>Heated tobacco</td>
<td>€66 per kg</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Heated tobacco</td>
<td>€60.24 per kg</td>
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<tr>
<td>Portugal</td>
<td>Heated tobacco</td>
<td>€80 per kg plus 15% of retail price subject to a minimum tax of €171 per kg</td>
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<tr>
<td>Romania</td>
<td>Heated tobacco</td>
<td>RON 383.78 per kg</td>
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<tr>
<td>Serbia</td>
<td>Tobacco that is heated but not combusted</td>
<td>RSD 2,946.80 per kg</td>
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<tr>
<td>Slovakia</td>
<td>Smokeless tobacco</td>
<td>€73.90 per kg</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Manufactured tobacco intended for heating</td>
<td>€88 per kg</td>
</tr>
</tbody>
</table>

Source: Philip Gambaccini. “Taxing Heated Tobacco in Europe and Beyond” Tax Notes International
Tax avoidance and evasion

• Differences in cigarette prices across EU Member States affect cross-border cigarette purchases

Tax avoidance and evasion

- 2004–2017 pooled timeseries data and econometric modelling used.
- Incentives for cross-border shopping are measured as a function of differences in cigarette prices between bordering countries, controlling for population density near borders.
- Separate incentive variables are calculated for EU internal versus EU external borders and for terrestrial versus maritime borders.


Note: Although regions on the graph vary in size, weights used are based only on the estimated number of individuals living within 25 km from each border.
Tax avoidance and evasion (cont.)

- In an average EU country only 1.5% of tax-paid sales can be explained by cross-border purchasing resulting from price differences.
- The effect significant for EU internal, land borders only.
- High cigarette prices are still highly effective in discouraging consumption (estimated price elasticity at between -0.35 and -0.47).
- Rising income is associated with higher cigarette sales (estimated income elasticity at between 0.66 and 0.70).

Factors influencing illicit cigarette trade

In many countries, factors such as high levels of corruption, lack of commitment to addressing illicit trade, and ineffective customs and tax administration, have an equal or greater role in explaining tax evasion than do product tax and price differentials.

Experience from many countries demonstrates that illicit trade can be successfully addressed, even when tobacco taxes and prices are raised, resulting in increased tax revenues and reduced tobacco use.”

—National Cancer Institute and World Health Organization, 2016
Conclusion

• Cigarettes are still more affordable in the EU than typically in the rest of the world (median at 0.020 in the EU vs. 0.038 globally).
• The EU can reap large and positive health effects through higher and harmonized taxes, which result in lower cigarette consumption and less cross-border cigarette purchasing.
• Broadening the tax base by harmonizing tax rates among all combustible products will rip further health and revenue benefits.
• The social costs of smoking greatly outweigh the limited gains that the tobacco industry brings to the economy and the government revenue. Reducing tobacco product consumption through tax increases is an effective way to reduce those social costs.
Thank you!

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