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**Does increasing Tobacco Tax increase Contraband?**
Debunking the Taxation and Contraband Tobacco Myth

Dr. Robert Schwartz, Dr. Bo Zhang

**Start time:** 11:00 A.M. – 12:00 P.M.

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Does Increasing Tobacco Tax Increase Contraband?
Debunking the Taxation-Contraband Tobacco Myth

Robert Schwartz, PhD
Bo Zhang, PhD

Ontario Tobacco Research Unit (OTRU)
Dalla Lana School of Public Health
University of Toronto
OTRU Webinar
May 12, 2015
What you will learn

- What is the magnitude of the contraband cigarette problem?
- Does increasing tobacco taxes necessarily lead to an increase in contraband tobacco?
- What does recent data tell us about the impact of taxation on contraband tobacco in Ontario and Quebec?
Estimated Contraband Cigarette Use in Ontario

Any purchase of contraband cigarettes

Any purchase of contraband cigarettes (2.9%/year, p<0.05)

- 2008: 31.1%
- 2009: 22.7%
- 2010: 23.5%
- 2011: 19.6%
- 2012: 18.4%
The Myth

Tobacco Industry:

- High taxes and other tobacco control policies drive contraband tobacco

A 2010 report by the Fraser Institute:

- *Federal and provincial tobacco excise taxes are the primary precipitating factors in the growth of contraband tobacco*
WHAT DOES INTERNATIONAL RESEARCH SAY?
# Intervention Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Data</th>
<th>Tax increase</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emery et al. 2002</td>
<td>California individual survey data</td>
<td>$0.50 per pack</td>
<td>• Only 5% avoided tax hike by purchasing low or non-tax cigs</td>
</tr>
<tr>
<td>Farrelly et al. 2003</td>
<td>Tobacco sales and tax data</td>
<td>Series of tax increases in all US states</td>
<td>• Legal tobacco sales decreased immediately, but resumed to settle at a new level within 2-4 months</td>
</tr>
<tr>
<td>DeCicca et al. 2010</td>
<td>US tobacco use individual survey data</td>
<td>Difference between states on tobacco tax</td>
<td>• No significant change in contraband activity after 12 months</td>
</tr>
</tbody>
</table>

**References**

Emery et al. 2002 “Was there significant tax evasion after the 1999 50 cent per pack cigarette tax increase in California?”

Farrelly et al. 2003 “State cigarette excise taxes: implications for revenue and tax evasion”

DeCicca et al. 2010 “Excise tax avoidance: the case state of cigarette taxes”
Correlational Studies

European studies (Joossens et al. 1998, 2000)
- No correlation between tobacco taxation and contraband
- Nine country data: high tobacco taxes are not correlated with high levels of smuggling
- Countries (Norway, Sweden, Denmark and UK) with very expensive cigarettes do not have large smuggling problem

African study (Titeca et al. 2011)
- Cigarette smuggling is not caused by difference in tax levels in Central and Eastern Africa (US $0.60/pack)

References
Joossens et al. 1998 “Cigarette smuggling in Europe: who really benefits?”
Joossens et al. 2000 “Issues in the smuggling of tobacco products”
Titeca et al. 2011 “Blood cigarettes: cigarette smuggling and war economies in Eastern and Central Africa”
Simulation Study 1
Merriman et al., 2000

Increasing cigarette taxes results in:

- Minor increases in contraband
- Lower cigarette consumption
- Net population health gain
- + Increased tax revenues

Reference
Merriman et al. 2000 “How big is the worldwide cigarette-smuggling problem?”
Simulation Study 2
Yurelki et al., 2010

Increasing cigarette taxes and improving anti-contraband enforcement results in:

- Decreased contraband
- Decreased cigarette consumption
- + Increased tax revenues

Reference
Yurekli et al. 2010 “Worldwide organized cigarette smuggling: an empirical analysis”
Tobacco industry involvement must be prevented

**Canadian Experience** *(Cunningham 1996)*

- Over 90% of the contraband market supplied by tobacco companies in the 1990s in Canada
- ITL & RBH: admitted guilt in 1990s cig smuggling crimes and agreed to pay criminal fines $550 million to the federal government

**European Experience** *(Joossens & Raw 2002)*

- UK, Spain, Italy: tobacco industry took advantage of increases in tobacco taxes to create and to supply contraband markets. Gov’t action ended this.

References
Cunningham 1996 “Smoke and mirrors: the Canadian tobacco war”
Joossens & Raw 2002 “Progress in combating cigarette smuggling: controlling the supply chain”
Net Effects

IARC Expert Panel (2011)

- Tax avoidance and evasion reduce, but do not eliminate, the public health and revenue impact of tobacco tax increases.

- When tobacco tax increases, tobacco use falls, revenues rise, even when there is increased tax avoidance and evasion.

Reference
IARC Expert Panel 2011 “Effectiveness of tax and price policies in tobacco control”
Other Causes


- Corruption, tolerance of contraband sales and weak state capacity: more important than price or tax increases

A Report in 2007 commissioned by Health Canada

- Misconception of legal purchase of cigarettes on the First Nations reserves for the general public
- Lack of publicity/information about this being illegal
- Easy access
- Lack of police presence and enforcement
- Open advertising of discount cigarettes on highways

References
European study 1998 “Cigarette smuggling in Europe: Who really benefits?”
World Band analyses 2000 “How big is the worldwide cigarette-smuggling problem?”
Health Canada 2007 “RCMP 2008 contraband tobacco enforcement strategy”
“By the early 1990s, the trade in contraband cigarettes was flourishing as tobacco excise taxes rose steadily (Cunningham, 1996).”
Our Critique

- The report by Cunningham (1996) indicates that “The major factor contributing to the rise of smuggling was a dramatic increase in manufacturer exports of Canadian cigarettes to the United States … and returned to Canada as contraband, a fact openly acknowledged by the industry” and “More than 90% of the contraband consisted of products originally manufactured in Canada”

- It is the tobacco industry that was the primary cause of the substantial increase in smuggling of cigarettes in the early 1990s in Canada.
"The greater volume of contraband sales coincides with the reinstatement of relatively high tobacco taxes (RCMP, 2008a; Canada, Department of Finance, 2009). Thus, the smuggling and trafficking of contraband cigarettes is an unintended consequence of Canadian tax policy.”
Our Critique

- As will be shown later in this presentation, the RCMP seizure data of contraband cigarettes has significantly declined since 2008 in Canada. Seizure data of contraband cigarettes do not correspond with changes in tobacco taxes in Canada.
Statement 3

“Researchers have consistently found that demand for tobacco products is relatively unresponsive to changes in price (Chaloupka et al., 2000).”
Our Critique

- People are responsive to cigarette price. Price elasticity of demand from recent studies was from -0.3 to -0.5 (meaning a 10% increase in price will result in 3% to 5% reduction in cigarette consumption), but could be as high as -1.31 for youth and -1.11 for college students.

- Although technically, a price elasticity of less than 1 is considered “relatively inelastic”, this statement is a blatant misrepresentation of the authors’ work. Demand for tobacco is relatively price inelastic due to its addictive nature.

- Jha & Peto (2014 NEJM) demonstrate that doubling tobacco price will decrease consumption by one third.
“Just as anti-smoking advocates contend that higher taxes induce smokers to quit, they also claim that fewer smokers will quit if tobacco taxes are lowered. However, this assertion has not been proven. In fact, the opposite might be true. Despite the substantial cuts in tobacco excise taxes in 1994, smoking prevalence among Canadians has continuously decreased (Health Canada, 2010b; Statistics Canada, 1998a, 1998b). One recent study found that the 1994 tax cuts had no major impact on either adult or youth smoking in Canada; these tax cuts certainly did not encourage greater tobacco consumption (Ouellet, 2010).”
Conversely, another study found that the 1994 repeal of tobacco excise taxes did, in fact, slow the pace of decline in smoking prevalence across Canada (Hamilton et al., 1997)… Therefore, the impact of tobacco tax cuts on smoking prevalence remains uncertain.”
Our Critique

- This statement ignores a wealth of Canadian studies about tax cuts and smoking in Canada.

- Many Canadian studies show that the tax cut in the 1990s in Canada had an adverse impact on smoking rates in youth and young adults.

- Recent Canadian studies (2011) reported a tax elasticity of -0.23 for the whole population, -0.34 for middle-aged men, -0.56 for those with low education, and -0.58 for male youth using representative Canadian survey data, indicating Canadian smokers are responsive to tax increases.
“Reducing the prevalence of smoking among teens has been a long-standing priority of public health officials. However, the evidence suggests that the use of taxes to curb teen smoking has had unintended consequences—that is, teens have easy access to the black market for cigarettes, in part, because of tax policies that are intended to reduce smoking prevalence.”
Our Critique

- Canadian studies clearly show that decreases in tobacco taxes increase youth smoking; tax increases result in decreases in youth smoking; and youth are more responsive to cigarette prices than adults.
“It is extremely difficult to distinguish between the effects on smoking prevalence of higher tobacco taxes, public awareness of smoking risks, and restrictions on tobacco sales and use.” and “Based on the available evidence, we conclude that while tobacco taxes clearly reduce lawful tobacco sales, their impact on smoking prevalence is less clear, especially when the effects of other anti-smoking initiatives are taken into consideration.”
SimSmoke, a well-validated simulation model, has been used in many countries, and in Ontario, to show the impact of tobacco control policies individually or in combination.

All of these studies show that taxation policy has played an important role in reducing smoking prevalence and smoking-related deaths, both individually and in combination with other tobacco control policies.
Critique of the Fraser Institute Report

Overall summary

- *Substantial evidence* has been omitted from the Fraser Institute Report.
- Statements in the report are *not supported by the evidence cited* in the report.
PROOF FROM ONTARIO, QUEBEC AND CANADA
Estimated Contraband Cigarette Use, Cigarette Price and Tax (total tax) in Ontario

Cigarette price
- 2008: 81.04
- 2009: 82.44
- 2010: 83.92
- 2011: 84.80
- 2012: 83.75

Tobacco tax
- 2008: 50.37
- 2009: 50.28
- 2010: 52.20
- 2011: 53.66
- 2012: 52.93

Any purchase of contraband cigarettes
- 2008: 31.1%
- 2009: 22.7%
- 2010: 23.5%
- 2011: 19.6%
- 2012: 18.4%

Correlation coefficient of contraband purchase with cigarette tax: $r = -0.75, p=0.15$; with cigarette price: $r = -0.85, p=0.07$

Correlation coefficient between cigarette tax and price: $r = 0.91, p=0.03$
## Ontario Tobacco Tax, Tax Revenue, Smoking Prevalence & Consumption

<table>
<thead>
<tr>
<th>Year</th>
<th>Tax ($/carton)</th>
<th>Tax Revenue ($ Billion)</th>
<th>Prevalence (%)</th>
<th>Population Consumption (million cigs/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>51.48</td>
<td>1.236</td>
<td>19.5</td>
<td>26.18</td>
</tr>
<tr>
<td>2008</td>
<td>50.37</td>
<td>1.127</td>
<td>18.5</td>
<td>26.18</td>
</tr>
<tr>
<td>2009</td>
<td>52.28</td>
<td>1.044</td>
<td>17.6</td>
<td>14.92</td>
</tr>
<tr>
<td>2010</td>
<td>52.20</td>
<td>1.083</td>
<td>18.2</td>
<td>24.92</td>
</tr>
<tr>
<td>2011</td>
<td>53.66</td>
<td>1.160</td>
<td>18.0</td>
<td>24.70</td>
</tr>
<tr>
<td>2012</td>
<td>52.93</td>
<td>1.150</td>
<td>17.6</td>
<td>24.51</td>
</tr>
<tr>
<td>2013</td>
<td>52.31</td>
<td>1.142</td>
<td>16.9</td>
<td>23.79</td>
</tr>
<tr>
<td>Linear trend</td>
<td>0.32 (p&gt;0.05)</td>
<td>-0.0043 (p&gt;0.05)</td>
<td>-0.33 (p&lt;0.05)</td>
<td>-0.38 (p&lt;0.01)</td>
</tr>
</tbody>
</table>

Findings here are contradictory to the claim by the tobacco industry: tobacco tax and revenues did not decline, although smoking prevalence and cigarette consumption declined, suggesting that contraband tobacco was not increasing.
Quebec is doing it

Serious focus on anti-contraband enforcement since 2008 (ACCESS) have led to:

- A reduction in illegal trade
- Increase in tobacco tax revenue from $654 million in 2008-2009 to $1,026 million
- Confidence in raising tobacco taxes
- Despite three tax increases (two provincial and one federal) since 2012, contraband has remained stable and tax revenue has increased
Quebec Contraband & Revenue (2002 – 2014)
from Quebec Budget Plan 2014-15
RCMP Cigarette Seizures, Canada 2008-2012

No. of cartoons/unmarked bags of cigarettes

2008: 965000
2009: 975000
2010: 782000
2011: 598000
2012: 197340

Declining by 150,568 cartons/unmarked bags per year (p<0.05)
Ontario has the lowest provincial excise tobacco tax ($27.95/200 cigarettes)
Ontario and Quebec have the lowest tobacco taxes, yet the contraband tobacco issues are the highest in these two provinces
These findings suggest that tobacco taxes are not the major factor for contraband tobacco in Canada
Take Home Messages

- The magnitude of the contraband tobacco problem is generally overstated.
- The notion that increasing tobacco taxes necessarily leads to increasing contraband tobacco is false.
- Contraband use in Ontario is not correlated with changes in tobacco taxes.
The benefits of increased tobacco taxes outweigh any minor increase in contraband use that might occur.

Increasing tobacco taxes accompanied by enhanced enforcement & public education are the best policy option to decrease tobacco use, curb contraband tobacco & increase tobacco tax revenue.
Full Report

Press Release
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