

## Debunking the taxation–contraband tobacco myth

Robert Schwartz PhD, Bo Zhang PhD

**T**obacco use is still the leading cause of preventable death in Canada and is a leading cause of preventable morbidity and mortality worldwide. Tobacco use has declined in Canada from 50% in the 1960s to 19% in 2013, but the rate of decline has slowed substantially in recent years.

In a *CMAJ* commentary in 2015, Jha and Alleyne<sup>1</sup> make the point that the single biggest driver of reduced tobacco consumption is increasing taxation. However, Canadian (federal, provincial and territorial) governments have not taken up the challenge to substantially raise tobacco taxes. One apparent explanation is the fear, promoted by the tobacco industry, that raising taxes will fuel increases in the contraband tobacco market. Indeed, international research indicates that the availability of contraband tobacco makes governments wary that adoption of evidence-informed tobacco control policies would drive more tobacco users to the contraband market.<sup>2,3</sup>

Contraband tobacco is particularly a problem in Canada. According to the Royal Canadian Mounted Police (RCMP) Contraband Tobacco Enforcement Strategy,<sup>4</sup> the bulk of contraband tobacco seized comes from four First Nations reserves that straddle the border with the United States and may be a large source of income for these communities.

The tobacco industry consistently argues that the solution to reduce smuggling problems is to reduce tobacco taxes. Indeed, the tobacco industry and its partners argue that higher tobacco prices would result in increased contraband use.<sup>2</sup> In addition, a Fraser Institute report<sup>5</sup> identifies tobacco taxes as “a primary precipitating factor” in the growth of the contraband tobacco market in Canada.

A close look at evidence from international experience and analysis of Canadian data refute the claims by the tobacco industry and the Fraser Institute. An expert panel hosted by the International Agency for Research in Cancer (IARC) concluded that there is sufficient evidence that tax avoidance and tax evasion reduce, but do not eliminate, the public health and revenue impact of tobacco tax increases. Evidence from many countries shows that tobacco use falls and tax

revenues rise following a tax increase, even when there is increased tax avoidance and evasion.<sup>6</sup> Three American studies (using state-level sales and cigarette excise tax revenue data<sup>7</sup> and representative data from population surveys<sup>8,9</sup>) found that contraband tobacco activity increased somewhat after tax increases and returned to previous levels within 12 months. The rebound in legal sales following the initial drop in sales is likely due to smokers returning to established cigarette purchasing habits (e.g., buying by the pack at nearby convenience stores) after using up stockpiles. In general, sales resume at a new stable level within two to four months after a tax increase. An analysis of cigarette prices and levels of smuggling in 16 European countries<sup>2</sup> found no correlation between tobacco prices (taxation) and rates of contraband tobacco activity. A simulation analysis<sup>3</sup> based on data of cigarette sales, exports and imports, prices, taxes, corruption and smuggling incentives in 110 countries worldwide forecasted that tobacco tax increases would result in decreased cigarette consumption, increased tax revenue and only marginal increases in contraband tobacco use. However, extrapolation from foreign experience must be done with caution, because the Canadian contraband market differs from those in other jurisdictions.

A 2015 report by the University of Toronto’s Ontario Tobacco Research Unit (OTRU) indicated that there was no correlation between increases in tobacco taxes and contraband tobacco use in Ontario or in Canada overall.<sup>10</sup> According to the report, any purchase of contraband cigarettes over a six-month period among Ontario smokers has been declining since 2008 (2.9 percentage points per year;  $p$  for linear trend = 0.033). During this period, the price of cigarettes increased by \$0.78 per pack per year and cigarette tax (total tax including federal excise

**Competing interests:** None declared.

This article has been peer reviewed.

**Correspondence to:**  
Bo Zhang,  
bo.zhang@camh.ca

*CMAJ* 2016. DOI:10.1503/  
cmaj.150492

### KEY POINTS

- The notion that increasing tobacco taxes necessarily leads to increasing use of contraband tobacco is false.
- Lowering tobacco taxes is not the solution to the contraband tobacco problem.
- A strong evidence base indicates that, as the price of tobacco increases through tax measures, tobacco use decreases.

duty, provincial excise tax and provincial harmonized sales tax) increased by \$0.85 per pack per year. Any purchase of contraband cigarettes was not significantly correlated with cigarette tax or cigarette price (Figure 1 of the report). These data on contraband use were based on self-reports and likely underestimate contraband use; however, this underestimation would be constant over time.

The RCMP's statistics on contraband tobacco in the 2015 OTRU report also showed a decline in seizures of contraband cigarettes since 2008 (Figure 2 of the report).<sup>10</sup> From 2008 to 2012, the average number of seizures declined by 150 568 cartons or unmarked bags each year ( $p$  for linear trend = 0.018).

Based on the evidence presented here, the notion that increasing tobacco taxes necessarily leads to increasing use of contraband tobacco is false. Evidence and experiences from Canada and other countries have shown that increases in tobacco taxes lead to reductions in cigarette smoking and increases in tobacco tax revenues, even when they are accompanied by some contraband tobacco use.

In their commentary, Jha and Alleyne<sup>1</sup> noted that tripling excise taxes in most countries is the only plausible way to meet the World Health Organization's recommendation to reduce consumption by 30% by 2025. Indeed, a well-established evidence base, including systematic reviews and the expert panel hosted by the IARC, has indicated that, as the price of tobacco increases through tax measures, tobacco use decreases.<sup>6,11</sup> Estimates of price elasticity in high-income countries are in the range of  $-0.25$  to  $-0.5$  (most clustering around  $-0.4$ ) for a 1% increase in tobacco price.<sup>11</sup> When both France and South Africa tripled the price of cigarettes over a 15-year period, cigarette consumption was halved.<sup>12</sup>

Although increasing tobacco taxes may lead some smokers to seek contraband cigarettes, evidence indicates that only a small proportion of smokers will do this, and mostly for a limited period. Furthermore, when tobacco tax increases are accompanied by enhanced enforcement and

control, increases in contraband can largely be curbed.<sup>3,11</sup>

High levels of taxation can discourage young people from starting smoking and can help smokers quit, which will decrease the overall tobacco use and associated morbidity and mortality in Canada.

## References

1. Jha P, Alleyne G. Effective global tobacco control in the next decade. *CMAJ* 2015;187:551-2.
2. Joossens L, Raw M. Cigarette smuggling in Europe: Who really benefits? *Tob Control* 1998;7:66-71.
3. Yurekli A, Sayginosoy Ö. Worldwide organized cigarette smuggling: an empirical analysis. *Appl Econ* 2010;42:545-61.
4. *Contraband Tobacco Enforcement Strategy*. Ottawa: Royal Canadian Mounted Police; 2008. Available: [www.rcmp-grc.gc.ca/pubs/tobac-tabac/tobacco-tabac-strat-2008-eng.pdf](http://www.rcmp-grc.gc.ca/pubs/tobac-tabac/tobacco-tabac-strat-2008-eng.pdf) (accessed 2015 Sept. 8).
5. Gabler N, Katz D. *Contraband tobacco in Canada: tax policies and black market incentives*. Vancouver: Fraser Institute; 2010. [www.fraserinstitute.org/sites/default/files/contraband-tobacco-in-canada.pdf](http://www.fraserinstitute.org/sites/default/files/contraband-tobacco-in-canada.pdf) (accessed 2015 Mar. 6).
6. Chaloupka FJ, Straif K, Leon ME; Working Group, International Agency for Research on Cancer. Effectiveness of tax and price policies in tobacco control. *Tob Control* 2011;20:235-8.
7. Farrelly MC, Nimsch CT, James J. *State cigarette excise taxes: implications for revenue and tax evasion: final report*. Research Triangle Park (NC): RTI International, Health, Social and Economics Research; 2003. Available: [https://rti.org/pubs/8742\\_Excise\\_Taxes\\_FR\\_5-03.pdf](https://rti.org/pubs/8742_Excise_Taxes_FR_5-03.pdf) (accessed 2015 Apr. 12).
8. Emery S, White MM, Gilpin EA, et al. Was there significant tax evasion after the 1999 50 cent per pack cigarette tax increase in California? *Tob Control* 2002;11:130-4.
9. DeCicca P, Kenkel D, Liu F. *Excise tax avoidance: the case state of cigarette taxes* [NBER Working Paper Series]. Cambridge (MA): National Bureau of Economic Research; 2010. Available: [www.nber.org/papers/w15941.pdf](http://www.nber.org/papers/w15941.pdf) 2010 (accessed 2015 Mar. 16).
10. Zhang B, Schwartz R. *What effect does tobacco taxation have on contraband? Debunking the taxation — the contraband tobacco myth*. Toronto: Ontario Tobacco Research Unit; 2015. Available: [http://otru.org/wp-content/uploads/2015/02/special\\_tax\\_contraband\\_final.pdf](http://otru.org/wp-content/uploads/2015/02/special_tax_contraband_final.pdf) (accessed 2015 May 18).
11. Chaloupka FJ, Yurekli A, Fong GT. Tobacco taxes as a tobacco control strategy. *Tob Control* 2012;21:172-80.
12. Jha P, Peto R. Global effects of smoking, of quitting, and of taxing tobacco. *N Engl J Med* 2014;370:60-8.

**Contributors:** Both authors contributed substantially to the conception and design of the article and the interpretation of data. Bo Zhang drafted the article, and Robert Schwartz revised it critically for important intellectual content. Both authors gave final approval of the version to be published and agreed to act as guarantors of the work.

**Affiliations:** Ontario Tobacco Research Unit (Schwartz, Zhang), Dalla Lana School of Public Health, University of Toronto; Centre for Addiction and Mental Health (Schwartz), Toronto, Ont.