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# **THE STATE OF TOBACCO POLICY IN CANADA THE CASE OF PLAIN PACKAGING**

(Incluant un sommaire en français)

By Yuri Chassin



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Youri Chassin

# The State of Tobacco Policy in Canada

## The Case of Plain Packaging

Montreal Economic Institute

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# TABLE OF CONTENTS

- EXECUTIVE SUMMARY / SOMMAIRE .....5
- INTRODUCTION.....9
- CHAPTER 1 - THE HISTORY AND CURRENT STATE OF TOBACCO POLICY IN CANADA..... 11
- CHAPTER 2 - PLAIN PACKAGING: A DEBATE ABOUT FACTS AND VALUES .....23
  - 2.1 Does Plain Packaging Work? .....23
  - 2.2 Overview of the Debate on the Impact of Plain Packaging ..... 26
  - 2.3 The Impact on the Illegal Trade ..... 36
  - 2.4 The Moral Issues Surrounding Plain Packaging ..... 37
- BIBLIOGRAPHY.....41
- ABOUT THE AUTHOR .....49



## EXECUTIVE SUMMARY

In Canada, tobacco is one of the most regulated and controlled industries, and smoking, because it is hazardous to one's health, is one of the most heavily regulated behaviours. It thus provides a good example of how far risky behaviour is being regulated and taxed in Canada. The case of tobacco may also hint at how government might next regulate and tax other industries like alcohol, fast food, and sugary beverages.

### Chapter 1 The History and Current State of Tobacco Policy in Canada

- Canada is among the countries in the world where smoking prevalence is the lowest. In 2013, 14.6% of Canadians aged 15 and over were smokers.
- Overall Canadian smoking prevalence has declined from 49.5% in 1965 to 14.6% in 2013.
- In 1999, the prevalence among 15- to 19-year-olds was 28.3%. In 2013, this prevalence had fallen to 10.7%, of which just under half smoked daily.
- Most estimates of the share of the illegal market in total Canadian tobacco consumption for 2010 seem to cluster between 15% and 20%.
- The high level of tobacco taxes is generally recognized as a main cause of the high level of tobacco contraband in Canada.
- The proportion of tobacco taxes in retail price varies between 54% and 70% in Canadian provinces, and total federal and provincial tobacco tax revenues amounted to approximately \$8.2 billion in fiscal year 2015.
- Tobacco tax rate increases can generate lower increases (or even decreases) in tax revenues when the tax base shrinks too much in reaction to the increased tax rate.
- Provincial governments have prohibited smoking in virtually all workplaces, and in venues open to the public. Packaging is also strictly controlled, including graphic health warnings covering 75% of packs.

## SOMMAIRE

Au Canada, l'industrie du tabac est l'une des plus lourdement réglementées et contrôlées, et fumer, parce que dangereux pour la santé, est l'un des comportements les plus réglementés. Cela fournit un bon exemple de jusqu'où un comportement risqué peut être réglementé et taxé au Canada. Le cas du tabac peut aussi indiquer comment le gouvernement pourrait éventuellement réglementer et taxer d'autres industries comme l'alcool, la restauration rapide ou les boissons gazeuses.

### Chapitre 1 L'histoire et l'état actuel des politiques publiques entourant le tabac au Canada

- Le Canada compte parmi les pays du monde où la prévalence du tabagisme est la plus basse. En 2013, 14,6 % des Canadiens âgés de 15 ans et plus étaient fumeurs.
- La prévalence globale du tabagisme au Canada a décliné de 49,5 % en 1965 à 14,6 % en 2013.
- En 1999, la prévalence chez les 15-19 ans était de 28,3 %. En 2013, cette prévalence avait diminué à 10,7 %, moins de la moitié des fumeurs de cet âge fumant quotidiennement.
- La plupart des estimations de la part du marché illégal dans la consommation de tabac au Canada en 2010 tournaient autour de 15 % à 20 %.
- Le niveau élevé des taxes sur le tabac est généralement reconnu comme l'une des causes principales de l'ampleur importante de la contrebande de tabac au Canada.
- La proportion des taxes sur le tabac dans le prix de détail varie de 54 % à 70 % selon les provinces, et le total fédéral et provincial des recettes de ces taxes s'élève à environ 8,2 milliards de dollars pour l'année fiscale 2015.
- Les hausses du taux de taxation du tabac peuvent générer de plus faibles augmentations (ou même des diminutions) de recettes fiscales lorsque la base fiscale se réduit trop en réaction à l'augmentation du taux de taxation.
- Les gouvernements provinciaux ont interdit de fumer dans pratiquement tous les lieux de travail, et dans les endroits ouverts au public. L'emballage est aussi strictement contrôlé, incluant des avertissements

## Chapter 2 Plain Packaging: A Debate about Facts and Values

In practice, cigarettes have all but completely disappeared from the public view with display bans. Nevertheless, the current federal government is contemplating the imposition of plain packaging, which consists of making packs as unattractive as possible: nondescript colour, same size and shape, and no distinctive brand colours, logos, or other design elements.

### 2.1 Does Plain Packaging Work?

- The government of Australia implemented plain packaging on December 1<sup>st</sup>, 2012. The same requirement was adopted in the United Kingdom and France in May 2016.
- On February 26, 2016, the Australian government published a *Post-Implementation Review* (PIR) that contains the most up-to-date analysis available and shows, to a point, that plain packaging has a positive impact in reducing smoking rates, but many qualifications still remain.
- The main difficulty is that the respective impact of plain packaging and new health warnings are impossible to disentangle from one another.

### 2.2 Overview of the Debate on the Impact of Plain Packaging

- An overview of the ongoing debate about plain packaging impact, full of nuances and methodological disputes, shows the gap that exists between the answers science can give and the certainty politicians seek.
- The effect of plain packaging combined with new and enhanced graphic health warnings is likely to be a statistically significant decline in smoking rates.
- From existing literature on its mechanisms, plain packaging is more likely than not to have caused a decline in smoking rate in Australia after its implementation in 2012.
- The best estimate of the amplitude of the impact from the two packaging measures is a reduction of 0.55 percentage points.
- Higher taxes are most probably more effective than plain packaging, if adequately enforced.

de santé avec des images explicites couvrant 75 % des paquets.

## Chapitre 2 L'emballage neutre : un débat de faits et de valeurs

En pratique, les cigarettes ont complètement disparu de la vue du public en raison de l'interdiction d'étalage. Néanmoins, le gouvernement fédéral actuel songe à imposer l'emballage neutre, qui consiste à rendre les paquets aussi peu attrayants que possible : couleur quelconque, taille et forme identiques, sans couleur de marque distinctive, de logo ou d'autres éléments de conception.

### 2.1 Est-ce que l'emballage neutre fonctionne?

- Le gouvernement de l'Australie a imposé l'emballage neutre le 1<sup>er</sup> décembre 2012. La même exigence a été adoptée par le Royaume-Uni et la France en mai 2016.
- Le 26 février 2016, le gouvernement australien a publié un *Examen suite à la mise en œuvre* (ou PIR en anglais) qui contient l'analyse la plus raffinée disponible et qui montre, dans une certaine mesure, que l'emballage neutre a eu un impact positif sur la réduction du tabagisme, même si plusieurs réserves demeurent.
- La principale difficulté est qu'il est impossible de démêler l'effet respectif de l'emballage neutre et des nouveaux avertissements de santé explicites.

### 2.2 Survol du débat sur l'effet de l'emballage neutre

- Un survol du débat en cours quant à l'emballage neutre, plein de nuances et de querelles méthodologiques, montre l'écart entre les réponses que peut fournir la science et la certitude que recherchent les politiciens.
- L'effet de l'emballage neutre combiné à des avertissements de santé explicites nouveaux et améliorés est probablement un déclin du taux de tabagisme statistiquement significatif.
- Si l'on se fie à la littérature existante concernant son fonctionnement, il est plutôt probable que l'emballage neutre soit l'une des causes du déclin de la



- There are some dissenting voices regarding the direction of the impact of plain packaging on smoking rates, possibly caused by downtrading. Further research is called for.

### 2.3 The Impact on the Illegal Trade

- The Australian experiment raises questions about its impact on illegal markets.
- The isolation of the Australian market increases the cost of smuggling.
- It is best not to pass judgment on the level of activity in tobacco illegal markets, due to the amount of uncertainty that exists.

### 2.4 The Moral Issues Surrounding Plain Packaging

- Plain packaging in Canada would add to an already heavy tax and regulatory burden.
- There is a danger that plain packaging will be imposed on other industries.
- From an economic viewpoint, undermining private property rights carries high social costs in terms of economic efficiency and economic growth.
- Until now, courts have rejected claims of expropriation filed by the tobacco industry.
- Plain packaging attacks the value of the brands and looks more like a fight against the tobacco industry than a public health policy.
- Other anti-tobacco measures are justified by invoking “externalities,” but plain packaging focuses on the very individual relationship between a smoker and the product he wants.
- In a free society, the rational approach to regulation should be to not infringe carelessly on personal choice and individual liberty. If the evidence is inconclusive, the normal course of action should be to refrain from legislating.

prévalence du tabagisme en Australie après sa mise en œuvre en 2012.

- La meilleure estimation de l’ampleur de l’effet combiné des deux mesures concernant l’emballage est une réduction de 0,55 point de pourcentage.
- Des taxes plus élevées représentent probablement un moyen plus efficace lorsqu’on les fait respecter.
- Il y a des avis contraires quant à la direction de l’impact de l’emballage neutre sur le taux de tabagisme, possiblement parce que les fumeurs achètent des marques moins dispendieuses. Plus de recherche est nécessaire.

### 2.3 L’effet sur le commerce illégal

- L’expérience australienne soulève des questions à propos de son effet sur le marché illégal.
- Le marché australien étant isolé, cela augmente le coût de la contrebande.
- Nous préférons ne pas nous prononcer sur le niveau d’activité sur le marché illégal du tabac, en raison d’une grande incertitude.

### 2.4 Les aspects moraux de l’emballage neutre

- L’emballage neutre au Canada s’ajouterait à un fardeau réglementaire et fiscal déjà lourd.
- Il existe un risque que l’emballage neutre soit imposé à d’autres industries.
- D’un point de vue économique, miner les droits de propriété privée engendre d’importants coûts sociaux en termes d’efficacité et de croissance économique.
- Jusqu’à présent, les cours de justice ont rejeté les prétentions d’expropriation formulées par l’industrie du tabac.
- L’emballage neutre s’en prend à la valeur des marques et ressemble davantage à un combat contre l’industrie du tabac qu’à une politique de santé publique.
- D’autres mesures antitabac sont justifiées par un certain type d’« externalité », mais l’emballage neutre se concentre sur la relation très individuelle entre un fumeur et le produit qu’il désire.

- Dans une société libre, une approche rationnelle de la réglementation serait de ne pas porter atteinte inconsidérément aux choix personnels et à la liberté des citoyens. Si les preuves ne sont pas concluantes, le cours normal des choses devrait être de s'abstenir de légiférer.

## INTRODUCTION

In Canada, tobacco is one of the most regulated and controlled industries, and smoking is one of the most heavily regulated behaviours. It is quite clear that smoking tobacco is hazardous to one's health.<sup>1</sup> But while risk is an intrinsic part of many activities,<sup>2</sup> the regulation and taxation of smoking strains the boundary line between collective health concerns and the tenets of a society based on freedom and individual choice.

Tobacco production and consumption are subject to a growing regulatory burden, and Canadian anti-tobacco policies appear to be among the most extensive in the world. Studying such policies can help to understand the kinds of regulatory controls that could be imposed on any industry lacking popular support or political clout. Often referred to as a "sin tax," tobacco taxation is a model for other policies, actual or potential, such as high excise taxes on alcohol and special taxes on soft drinks and other sugary beverages. Health concerns over obesity have even led many organizations to seek inspiration from tobacco rules in their search for new fast-food regulations.

**"Tobacco production and consumption are subject to a growing regulatory burden, and Canadian anti-tobacco policies appear to be among the most extensive in the world."**

This *Research Paper* will first look at smoking and smoking regulation in Canada today, and how it has evolved, providing an overview of the state of tobacco policy in the country. The second chapter will then analyze the question of plain packaging, which appears to be the next frontier in tobacco regulation. The federal government has promised to implement this policy measure based on the recent Australian experience, with Health Canada concluding its public consultations on the matter on August 31, 2016.

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1. For statistical evidence, see Sloan et al. (2004), Chapter 4.

2. Klein (2014), p. 255.



## CHAPTER 1

### The History and Current State of Tobacco Policy in Canada

Tobacco is one of the most heavily regulated of legal substances. Over time, as the harmful effects of smoking tobacco products have been documented, and consumers have become increasingly well-informed about them, a variety of regulations have been adopted in Canada, as elsewhere, to limit their consumption.

These regulations are partly responsible for declining smoking rates. Yet they also infringe upon the private lives of Canadian citizens. What balance should be struck between public health advocacy on the one hand, and individual choice and responsibility on the other, is admittedly open to discussion. But it is a discussion that cannot be sidestepped in the context of public policy decisions affecting the entire population. The continual push for new and more stringent regulations must be considered from this perspective.

If there is to be informed debate on tobacco policies, a grasp of prevailing social phenomena, and of the scope of existing regulations and taxes, is essential. This chapter provides an overview of the many dimensions of this issue, presenting statistics, facts, and analysis to help readers appreciate the current state of tobacco policy.

#### Smoking in Canada

The *Tobacco Atlas* recognizes that Canada is among the countries in the world where smoking prevalence<sup>3</sup> is the lowest (Eriksen *et al.* 2015, p. 33). In 2013, 14.6% of Canadians aged 15 and over were daily or occasional (non-daily) smokers.<sup>4</sup> As shown in Figure 1-1, the rate of prevalence varies widely between provinces, from 11.4% in British Columbia to 19.6% in New Brunswick. At 17.1%, Quebec is above the national average, which is pulled down by B.C. and Ontario.

3. Prevalence is the proportion of smokers in a certain population—in this case, Canadian residents aged 15 and over. When data is split between men and women, an arithmetic mean is used to provide the general rate.

4. Our data for prevalence in 2013 comes from the new Canadian Tobacco, Alcohol and Drugs Survey (CTADS), which continues the Canadian Tobacco Use Monitoring Survey (CTUMS). Another survey, the Canadian Community Health Survey (CCHS), shows higher prevalence rates—for example, 19.3% instead of 14.6% for the Canadian average in 2013—but it is not clear what explains the divergence, and the time trends are the same anyway (see Gilmore 2002). We use CTUMS and CTADS, which offer the benefit of a longer series and more data, and aim specifically at measuring the smoking rate. Results from these two surveys and one other survey are very conveniently summarized in Reid *et al.* (2015), which is used for much of the data in this section on prevalence. The 14.6% figure for 2013 is sometimes rounded to 15% in certain documents.

About one fourth of Canadian smokers are occasional smokers, so the prevalence of daily smoking is 10.9% (Reid 2015, p. 15). Out of 100 Canadians, around 60 have never smoked, 15 are current smokers, and 25 are former smokers; thus, more than 60% of people who have smoked (25 of 40) have quit (called the “quit rate” or “quitter percentage”) (*ibid.*, p. 52).

Official data shows that 9.6% of 18- and 19-year-olds are regular smokers, and 2.3% of the 15- to 17-year-olds (see Figure 1-2). Smoking prevalence is higher among those aged 18-19, but this is the age at which Canadians are legally allowed to purchase cigarettes (18 or 19, depending on the province). As a major public health report underlines, “[i]t appears that in addition to fewer youth starting to smoke over time, fewer youth are initiating smoking in their early teens.” (Reid *et al.* 2015, p. 70.)

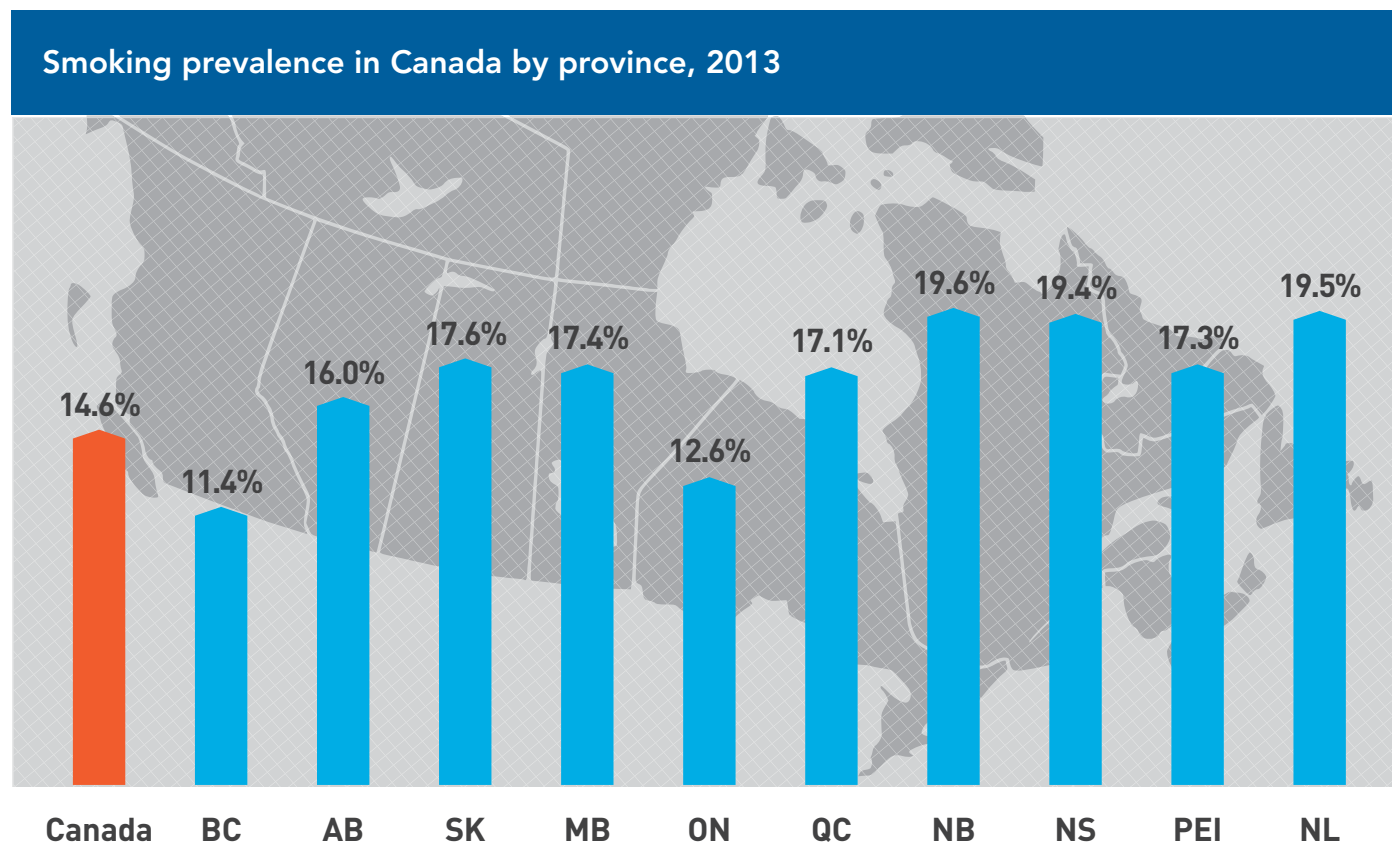
**“What balance should be struck between public health advocacy on the one hand, and individual choice and responsibility on the other, is a discussion that cannot be sidestepped in the context of public policy decisions affecting the entire population.”**

Among all age groups, the ones with the lowest prevalence are 15- to 19-year-olds and the over 55 group. Smoking prevalence rises with age to peak between 25 and 34 (18.5%), decreasing gradually thereafter (Reid 2015, p. 17).

As shown in Figure 1-3, overall Canadian smoking prevalence has followed a clear and nearly continuous downward trend from 49.5% in 1965 all the way to 14.6% in 2013 (rounded to 15% in the graph). A study of smoking trends in the world notes that “[f]our countries were successful in achieving reductions of greater than 50% in both male and female smoking prevalence since 1980: Canada, Iceland, Mexico, and Norway.” (Ng *et al.* 2014, p. 189.)

As Reid *et al.* (2015, p. 17) note about Canada, “the largest drop was observed in the youngest age group, 15 to 19 year olds.” Figure 1-4 illustrates this drop over the years for which we have consistent data in the CTUMS and CTADS. In 1999, the prevalence among 15- to 19-year-olds was 28.3%, of which almost 3/4 were daily

Figure 1-1



**Note:** These percentages include daily and non-daily smokers.

**Source:** Canadian Tobacco, Alcohol and Drugs Survey (CTADS); JL Reid, et al., *Tobacco Use in Canada: Patterns and Trends, 2015 Edition*, Propel Centre for Population Health Impact, University of Waterloo, p. 22.

smokers. In 2013, this prevalence had fallen to 10.7%, of which just under half smoked daily, the first time that there were fewer daily smokers (5.1%) than non-daily smokers (5.6%).

A similar downward trend of smoking prevalence among the young can be observed in Quebec. Prevalence among the 15- to 19-year-old age group has decreased from 35.7% in 1999 to 13.9% in 2013. The downward trend may have slowed since 2008, but one cannot judge from isolated annual increases (in 2002, 2009, 2011, and 2013) that were not statistically significant year on year, and that have been reversed.<sup>5</sup>

### Illegal Tobacco Markets

The 2013 CTADS asked respondents where they had obtained their cigarettes over the past six months. Most had bought them from ordinary commercial sources—gas stations and corner stores—but 10.0% of all Canad-

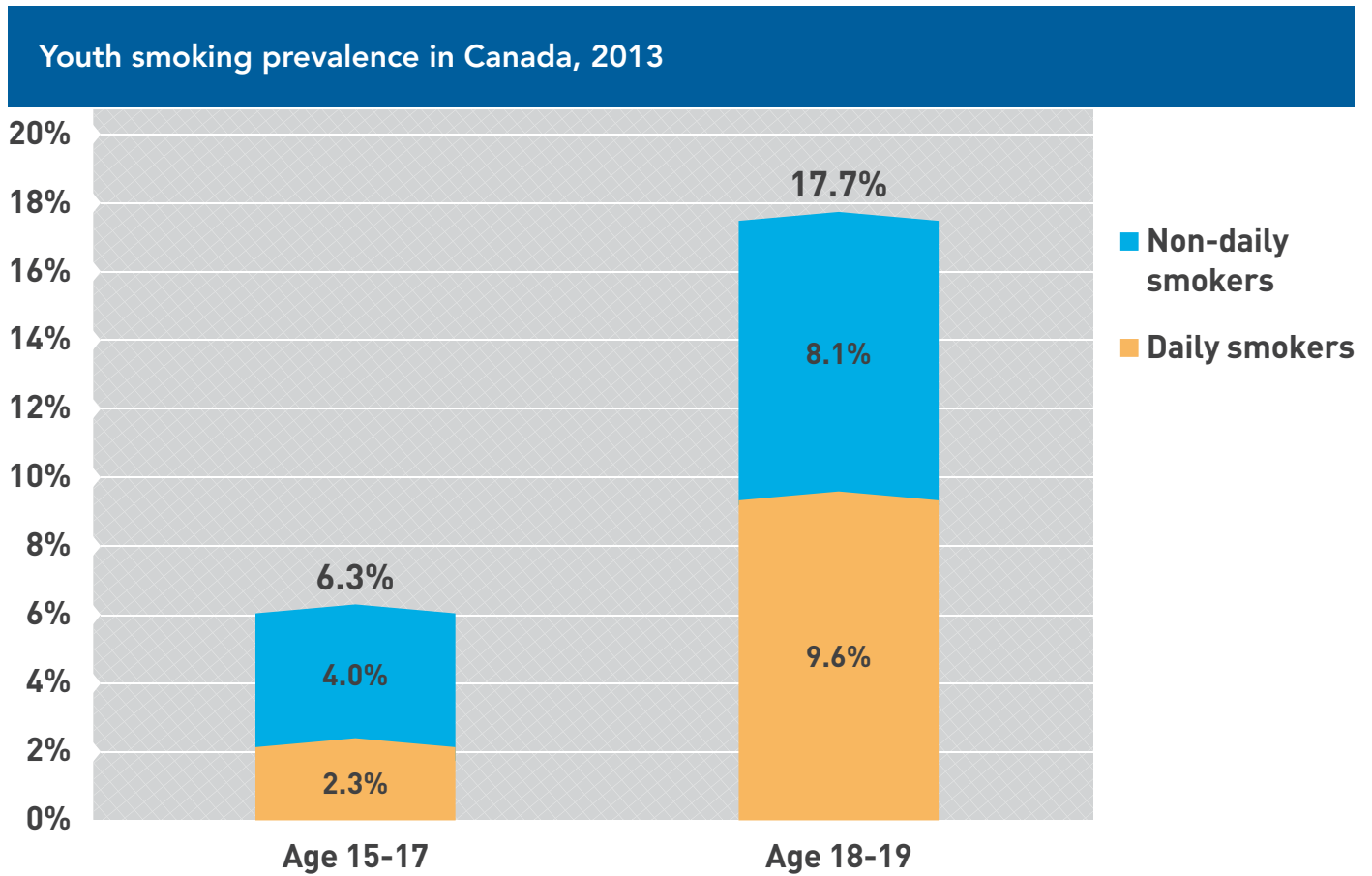
ian smokers had purchased some cigarettes from a First Nations reserve, and 2.4% had *usually* done so.<sup>6</sup> (First Nations reserves are the main source of contraband cigarettes in Canada, but organized crime is also involved.) The proportion of smokers aged 15-18 who had *usually* obtained their cigarettes from “other sources” is listed as 16.1%, but in this case, the figure includes sources besides reserves (Reid 2015, pp. 44-45 and 79). Still, this suggests a large contraband tobacco market.

**“Out of 100 Canadians, around 60 have never smoked, 15 are current smokers, and 25 are former smokers; thus, more than 60% of people who have smoked have quit.”**

5. Data from CTUMS and CTADS; see Reid (2015), data for Figure 2.19.

6. Since registered Indians make up less than 3% of the Canadian population, some very small part of the CTADS sample would be aboriginals buying their cigarettes legally on reserves.

Figure 1-2



Source: Canadian Tobacco, Alcohol and Drugs Survey (CTADS); Reid et al. (2015), p. 72.

“Contraband” tobacco refers to any tobacco product that is either smuggled or produced or distributed domestically without complying with all federal and provincial laws (including taxes, packaging, etc.). By their very nature, illegal markets are difficult to measure, and we have to rely on estimates, which often vary widely depending on their methodology or sources.

Tobacco contraband has been endemic in Canada over the past three decades. After continuous increases in provincial and federal tobacco taxes, smuggling developed rapidly in the early 1990s. Contraband cigarettes accounted for 40% of the national market, and up to two-thirds in Quebec (CTF 1996, p. 5.11). The impact on public finances was large: In Quebec, for example, provincial revenues from tobacco taxes dropped 61% in constant dollars<sup>7</sup> between 1986-87 and 1993-94. “In February 1994, the federal and the Quebec government (as well as eventually all provincial governments) re-

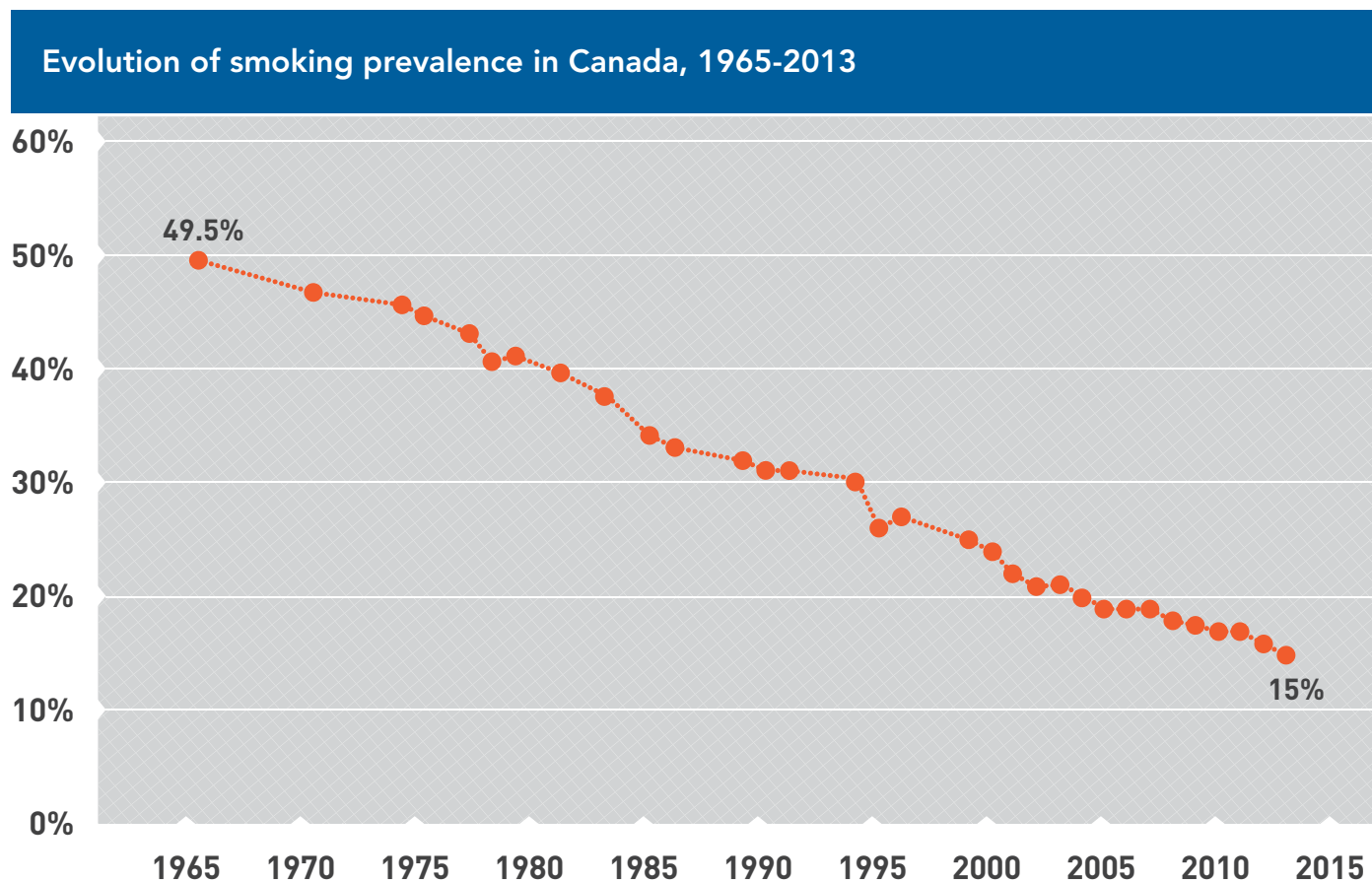
**“Overall Canadian smoking prevalence has followed a clear and nearly continuous downward trend from 49.5% in 1965 all the way to 14.6% in 2013 .”**

sponded by cutting tobacco taxes dramatically—by nearly 80% in Quebec.” (Lemieux 2007, p. 9.) This killed smuggling, but tobacco taxes soon began to creep back up again.<sup>8</sup> Contraband reappeared, although from different sources. In the mid- to late 2000s, some estimates put illegal tobacco’s share of the market at 30% for the whole country, 40% for Quebec, and 50% for Ontario (TFITP 2009, p. 1). These proportions have fallen since, probably because of tougher enforcement (more surveillance and arrests, higher penalties, etc.).

7. All figures are in Canadian dollars.

8. See below and Figure 1-6.

Figure 1-3



**Note:** Includes daily and non-daily smokers, both sexes, aged 15 and older. The downloadable data is not available for all years from 1965 to 1999, which is why there are gaps between some data points on the graph.  
**Source:** Reid et al. (2015), p. 14.

Most estimates of the share of the illegal market in total Canadian tobacco consumption for 2010 seem to cluster between 15% and 20% (Reuter and Majmundar 2015, pp. 93-95; Daudelin et al. 2013, p. 8). Quebec and Ontario were, and remain, the main centres of tobacco contraband, and consistently show a higher proportion of illegal tobacco.

It is generally believed that the illegal market has continued to retreat over the past few years. The Quebec government's latest estimates for the illegal market in the province is down to 14% for 2013-2014, whereas it had reached nearly 30% four years earlier (Government of Quebec 2014, p. A.48). The National Coalition against Contraband Tobacco puts the illegal cigarette market in Ontario at 40% of the total market (NCACT 2014).<sup>9</sup> The Ontario government contents itself with the

very broad statement that the illegal market "is generally acknowledged to be substantial." (Government of Ontario 2013, p. 268.)

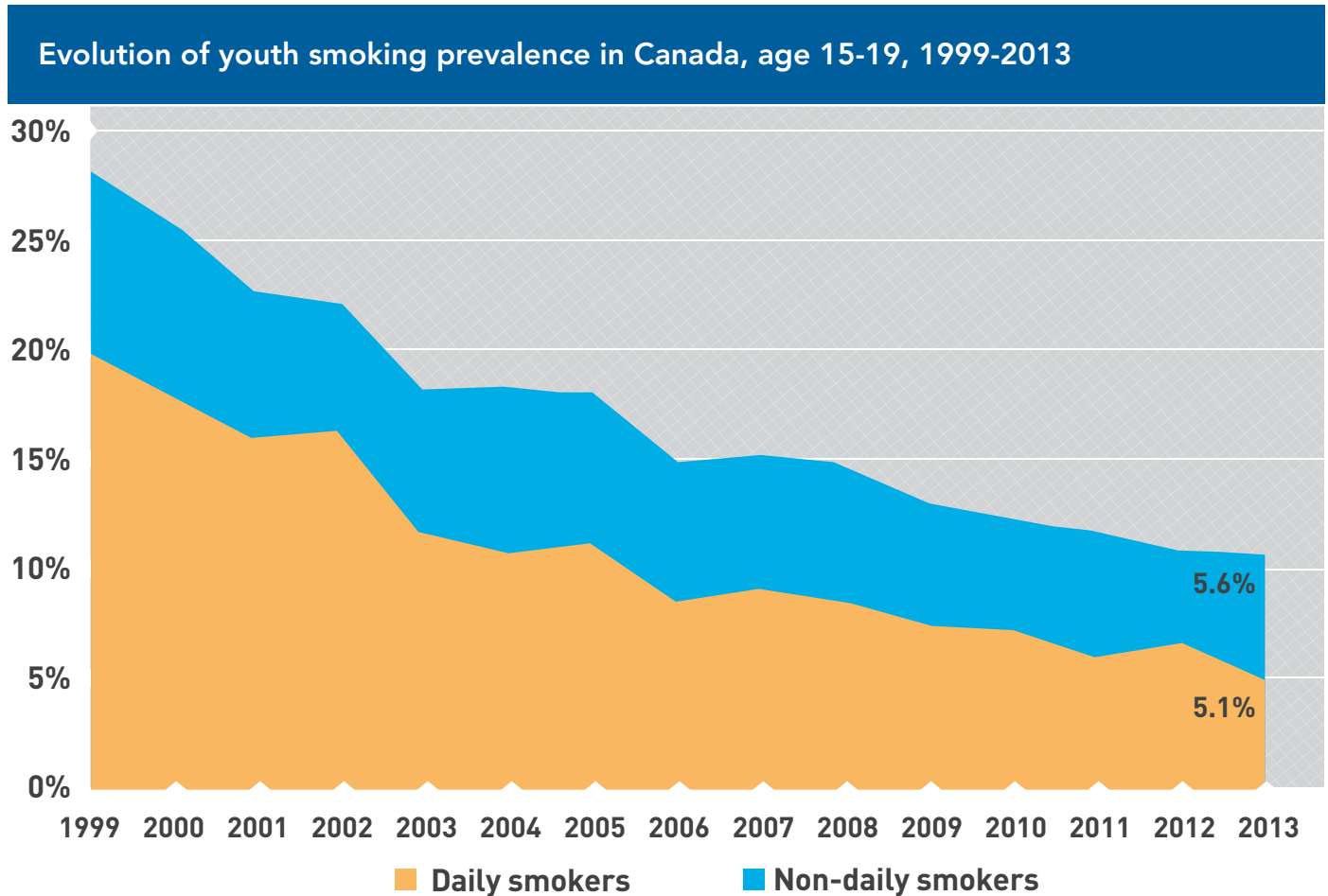
**"In the mid- to late 2000s, some estimates put illegal tobacco's share of the market at 30% for the whole country, 40% for Quebec, and 50% for Ontario."**

In order to fight tobacco contraband and coordinate actions among government agencies (the Canadian Border Services Agency, for example) and police forces (at the federal, provincial, and local levels), government groups and strategies have been created—for example, the federal Government Task Force on Illicit Tobacco Products and the Contraband Tobacco Enforcement Strategy (RCMP 2013). Individuals arrested for tobacco

9. The proportion reported for October 2014 is 40%, but the increase from the 36% figure for August 2014 appears not to be statistically significant (NCACT 2014, p. 5).



Figure 1-4



Source: Canadian Tobacco Use Monitoring Survey (CTIMS); Canadian Tobacco, Alcohol and Drugs Survey (CTADS); Reid *et al.* (2015), p. 72, and data at <http://www.tobaccoreport.ca/2015/toc.cfm> (accessed May 19, 2016).

contraband can be charged under a variety of laws, including the federal Excise Act, the Customs Act, provincial Tobacco Acts (RCMP 2013, pp. 14-18), the related sections in the Criminal Code (which were strengthened by the Tackling Contraband Tobacco Act in 2013 – NCACT 2013), and revenue laws (Quebec’s Tobacco Tax Act, Ontario Tobacco Tax Act, etc.; see also RCMP 2008, p. 46). Most provincial governments have also granted police new powers against those involved in contraband, and increased penalties (NCACT 2013).

These measures have been partly successful and probably explain the weakening of the illegal market, but Daudelin *et al.* emphasize the limitations of the repressive approach as long as demand exists, even though some measures are more effective than others (Daudelin *et al.* 2013, pp. 24-29) and the debate is ongoing.<sup>10</sup>

Another reason that there is a limit to reining in the illegal market has to do with the resilience of supply operations on Indian reserves:

[T]he manufacturing and storage facilities (where larger loads are bought in bulk) and the stores and “shacks” (where tobacco products are sold to non-Aboriginals) are on-reserve and are essentially immune to police action. Outlets operate in plain sight behind the legitimacy conferred on them by the fact that the community... cares little about this illegal trade. (Daudelin *et al.* 2013, p. 26.)

Although the intense regulation of the legal industry may also contribute to the phenomenon, the high level of tobacco taxes is generally recognized as a main cause of the high level of tobacco contraband in Canada (Irvine and Sims 2012).

10. Luk Joossens and Martin Raw, “How Can Cigarette Smuggling Be Reduced?” *British Medical Journal*, Vol. 321, No. 7266, October 14, 2000, pp. 947-950.

Table 1-1

| Federal and provincial/territorial tobacco taxes on a carton of 200 cigarettes, April 2016 |                     |                                    |                     |  |   |
|--|---------------------|------------------------------------|---------------------|--|---|
|  | Federal excise duty | Provincial/territorial tobacco tax | Total tobacco taxes | Average retail price (including all taxes) | Proportion of tobacco taxes in retail price |
| Ontario  | 21.03               | 30.95                              | 51.98               | 97.12                                      | 54%   |
| New Brunswick  | 21.03               | 44.52                              | 65.55               | 112.99                                     | 58%   |
| Quebec   | 21.03               | 29.80                              | 50.83               | 88.12                                      | 58%   |
| Manitoba   | 21.03               | 59.00                              | 80.03               | 134.79                                     | 59%   |
| Newfoundland and Labrador  | 21.03               | 49.00                              | 70.03               | 119.26                                     | 59%   |
| Nova Scotia  | 21.03               | 55.04                              | 76.07               | 128.49                                     | 59%   |
| Saskatchewan   | 21.03               | 50.00                              | 71.03               | 118.94                                     | 60%   |
| Prince Edward Island   | 21.03               | 50.00                              | 71.03               | 116.95                                     | 61%   |
| Northwest Territories  | 21.03               | 57.20                              | 78.23               | 123.89                                     | 63%   |
| Nunavut  | 21.03               | 50.00                              | 71.03               | 113.00                                     | 63%   |
| Yukon  | 21.03               | 42.00                              | 63.03               | 100.10                                     | 63%   |
| British Columbia   | 21.03               | 47.80                              | 68.83               | 100.09                                     | 69%   |
| Alberta  | 21.03               | 50.00                              | 71.03               | 101.09                                     | 70%   |

**Note:** Excise taxes only, excluding general provincial sales taxes and the federal goods and services tax.  
**Source:** NSRA (2016a).

## Tobacco Taxes

At both the federal and the provincial/territorial level, tobacco products are subject to special taxes, technically called “excise taxes.” Historically, excise taxes are designed for specific goods, either luxuries or goods for which the elasticity of demand (the sensitivity of quantity demanded to price) is low. Conversely, general sales taxes (including the federal goods and services tax) apply to nearly all goods and services. At the federal level, these excise taxes are called excise “duties.” At the provincial level, the special excise taxes levied on tobacco are simply called tobacco taxes, and they vary by province. The amounts of federal excise taxes and the amounts or percentages of provincial tobacco taxes vary for different tobacco products (CTF 2013, pp. 5:8-5:11). In this *Research Paper*, references to tobacco taxes refer only to these special excise taxes or duties, and exclude sales taxes.

Consider tobacco taxes on cigarettes, the main tobacco product. Table 1-1 gives the federal excise duty (applicable across Canada) and the provincial/territorial tobacco taxes on cigarettes as of April 2016. For each prov-

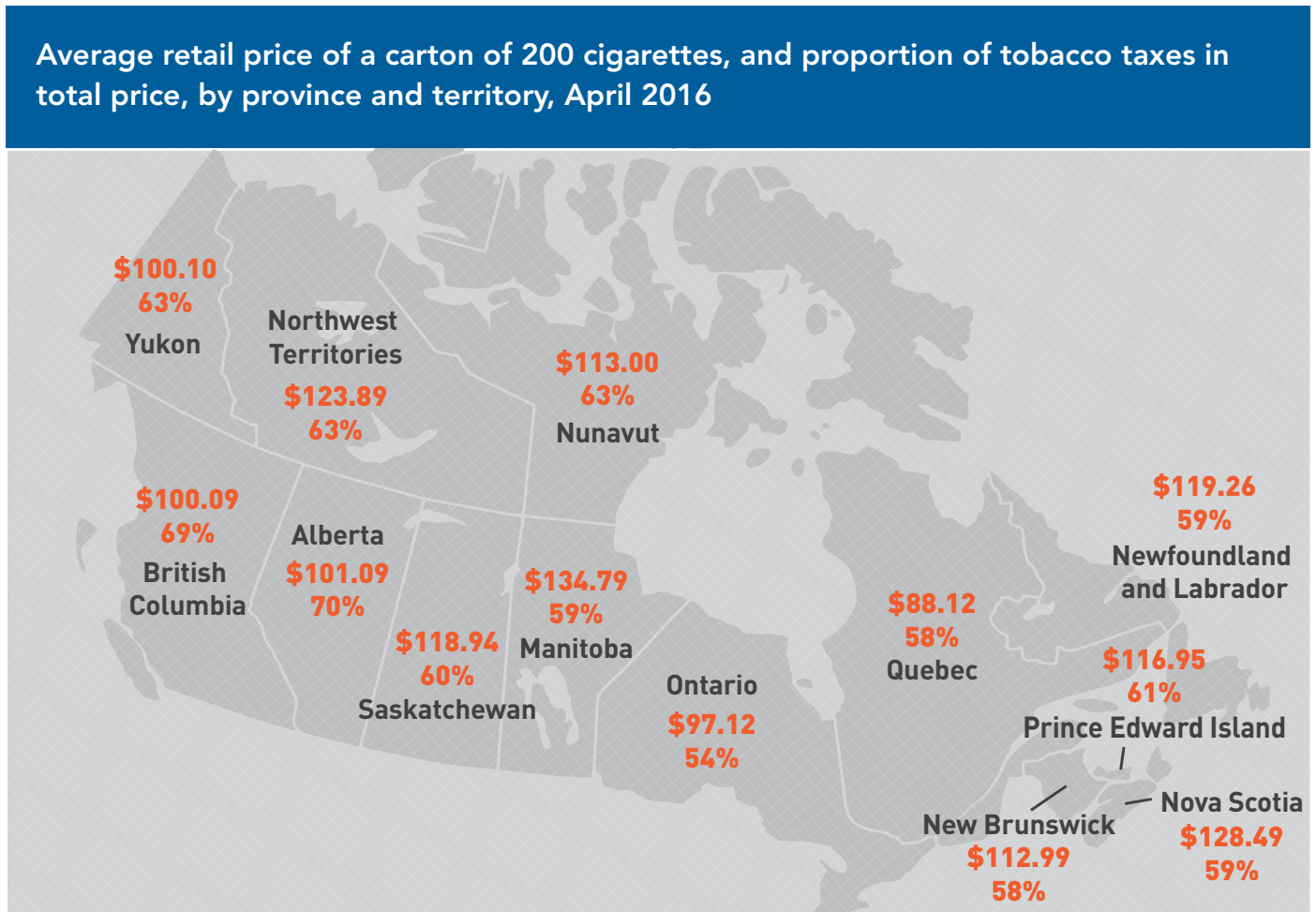
ince or territory, total tobacco taxes are the sum of these excise taxes at the two levels of government. The last two columns show that tobacco taxes represent between 54% and 70% of the retail price of a carton of 200 cigarettes. Figure 1-5 provides a visual picture of the taxation of cigarettes all across Canada.

**“The high level of tobacco taxes is generally recognized as a main cause of the high level of tobacco contraband in Canada.”**

Figure 1-6 shows the evolution of federal and Quebec taxes. At the end of fiscal year 1994, the federal and the Quebec governments both cut tobacco taxes (as did the governments of some other provinces) by 63% and 78% respectively, resulting in a 70% total tax drop from \$29.61 to \$8.90 per carton in the province.<sup>11</sup> The graph

11. Data on tax level variations are available in Jean-François Minardi, “Annexe technique à la Note Économique « Les effets pervers des taxes sur le tabac, l’alcool et le jeu »,” MEI, January 2014, p. 9.

Figure 1-5



Source: Table 1-1.

also shows how, after the smuggling networks had been broken, tobacco taxes were slowly increased, finally exceeding their former level in 2002. They are now 72% higher than their combined 1993 level, while inflation during this period was 50%. A similar phenomenon has occurred in the other provinces.

### Public Revenues from Tobacco Taxes

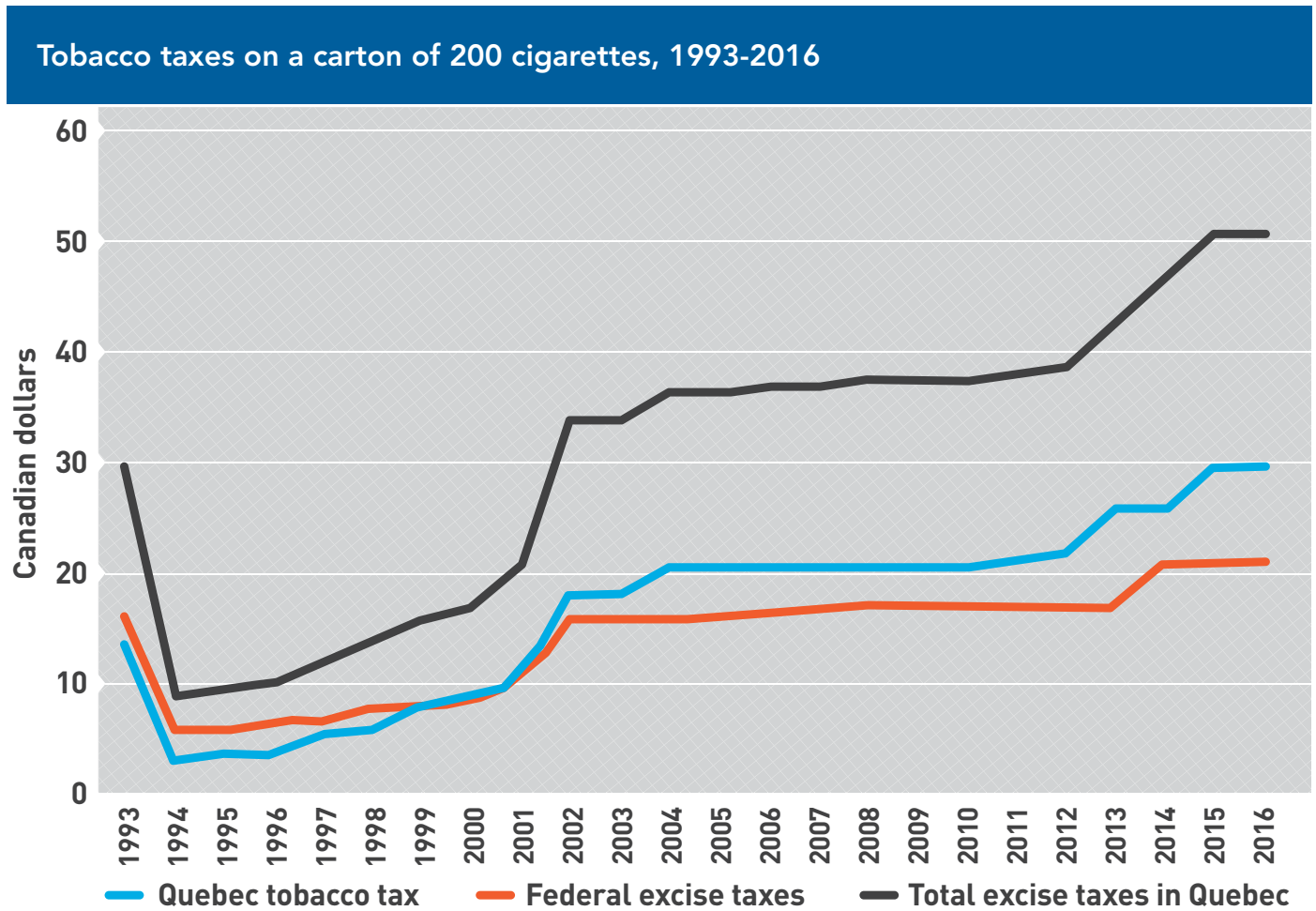
The evolution of revenues from tobacco taxes is depicted in Figure 1-7. Both at the federal and provincial (all provinces) level, these revenues went down two years before the end of fiscal year 1994 (explaining the urgently felt need to cut tax rates) and continued downwards for one year after the tax cut. They climbed substantially in the first part of the first decade of the 21<sup>st</sup> century, and then stabilized or decreased slightly. They started increasing again in the 2010s. Total federal and

provincial tobacco tax revenues amounted to approximately \$8.2 billion in fiscal year 2015.

**“For each province or territory, the sum of excise taxes at the two levels of government represent between 54% and 70% of the retail price of a carton of 200 cigarettes.”**

A higher excise tax translates into higher tax receipts, but only in part, since consumers will reduce their consumption of tobacco and/or switch their demand to the illegal market following a tax and price increase. In some circumstances, tobacco tax rate increases can generate lower increases (or even decreases) in tax revenues when the tax base shrinks too much in reaction to

Figure 1-6



**Note:** Includes excise taxes only, i.e., excluding general provincial sales taxes and the federal goods and services tax. Government fiscal years are from April 1 to March 31. Fiscal year labels are taken from the civil year in which the fiscal year ends. The data is presented in current dollars, which gives a better idea of the political decisions to change tax rates, but because of inflation, amounts are not directly comparable. For example, total excise taxes of \$29.61 in 1993 is equivalent to \$44.48 in 2016. **Source:** Revenue Quebec (2001) for 1993; Canadian Tax Foundation (different issues of *The National Finances* and *Finance of the Nations*) for 1994-2012; NSRA (2013, 2014, 2015b, 2016) for 2013-2016.

the increased tax rate. This seems to have happened already in many countries, including in Sweden in the early 1990s, Singapore in the early 2000s, and Greece in the mid-2000s (Laffer 2014, pp. 213-233).

Figure 1-8 presents data for Quebec’s provincial tax on tobacco and the associated tobacco revenues over time.

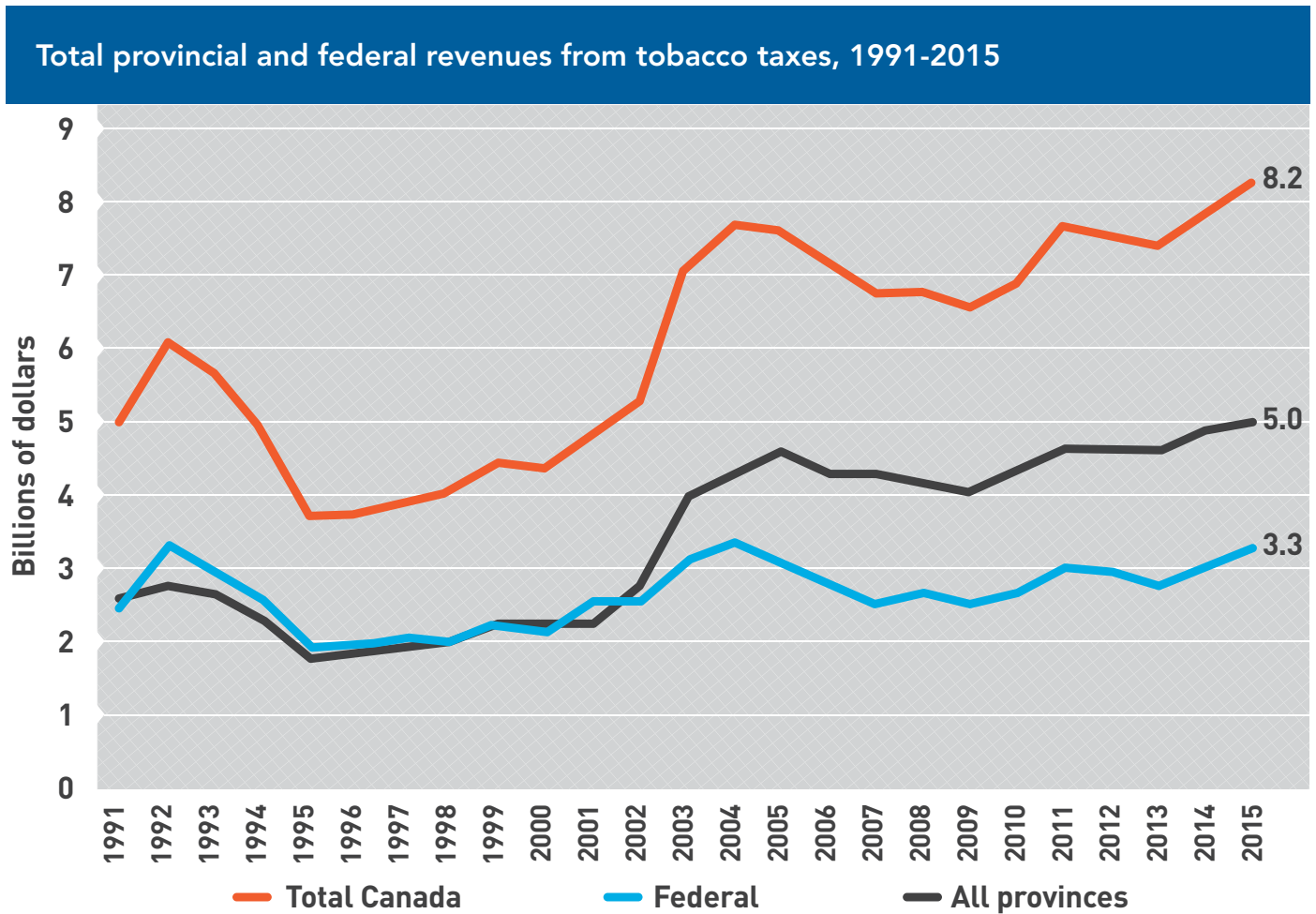
### Public Costs Associated with Tobacco Consumption

Taxes on tobacco are usually justified as a way of transferring to smokers the higher costs they impose on government finances, mainly in terms of public health care costs. The notion that smokers impose costs on the public treasury has been found in the public health literature

**“In some circumstances, tobacco tax rate increases can generate lower increases (or even decreases) in tax revenues when the tax base shrinks too much in reaction to the increased tax rate.”**

for several decades. The argument appears straight-forward: Smokers incur special health care costs associated with smoking-related diseases, and to the extent that health care is subsidized by government, these costs fall on the public treasury and are thus partly paid for by non-smoking taxpayers. The standard estimate for Canada is that “direct health care costs” for “tobacco

Figure 1-7



**Note:** Includes excise taxes only, i.e., excluding general provincial sales taxes and the federal goods and services tax. Government fiscal years are from April 1 to March 31. Fiscal year labels are taken from the civil year in which the fiscal year ends. For 2015, the figures are provisional data from the latest budgets of the relevant governments. Rounding explains why totals for 2015, on the right-hand side of the graph, do not sum exactly. Data presented in current dollars, hence the same warning as for Figure 1-6 also applies here.  
**Source:** PSC (2015).

related illness” cost Canadian governments \$4.4 billion in 2002 (Rehm *et al.* 2006, p. 9).<sup>12</sup>

This sort of estimate only provides a *gross* cost of health care for smoking-related illnesses, based on the socialized costs of health care. Another perspective considers that smokers die younger on average, and hence do not

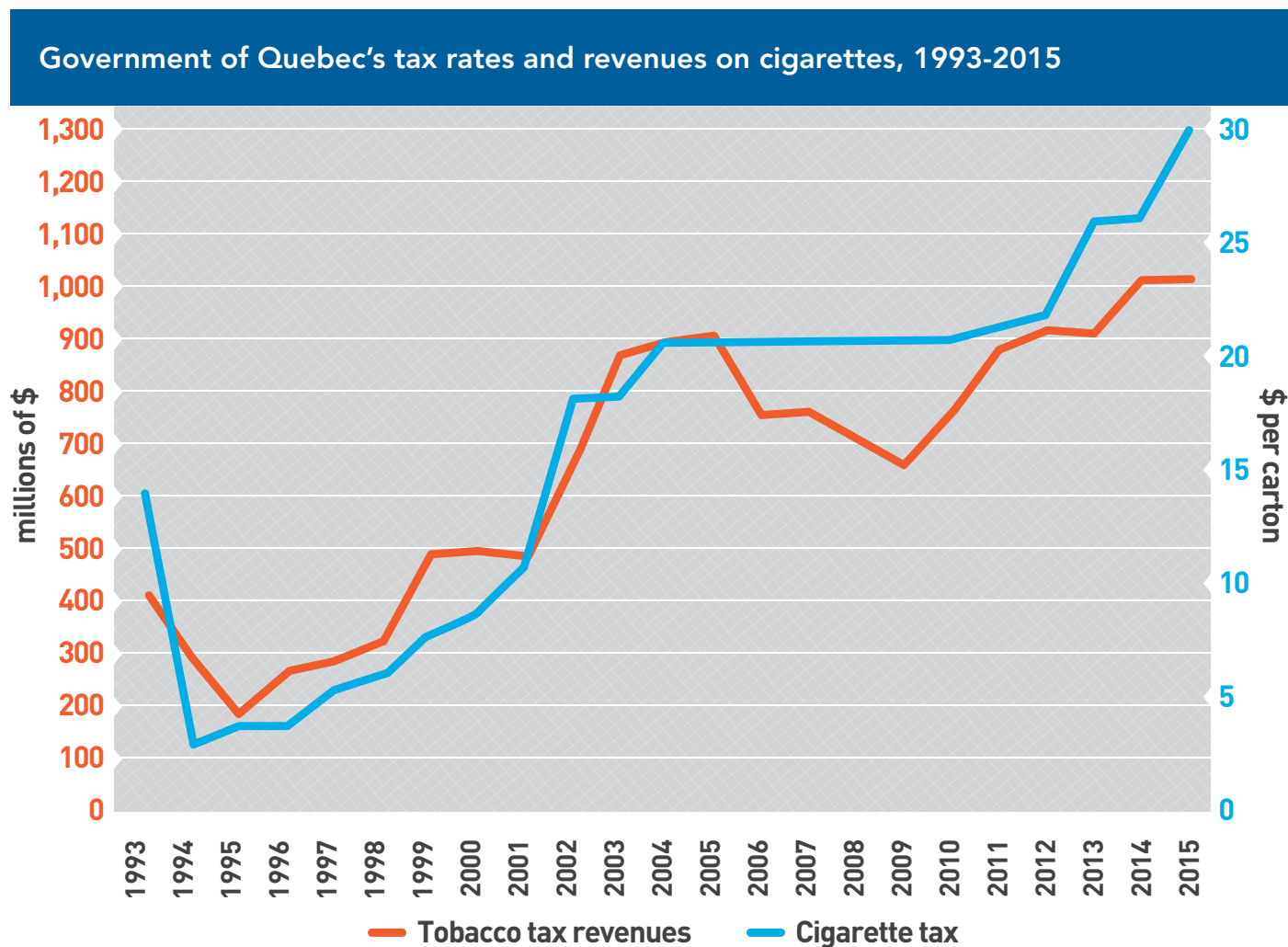
**“In 2002, total tobacco taxes collected by all levels of government in Canada amounted to \$5.3 billion, about 20% more than the estimated gross cost of smoking-related diseases for that year.”**

12. This estimate is not found in more recent editions of Reid *et al.*, perhaps because its non-reliability has been recognized. The reference given by Reid *et al.* (2012) for this estimate was a 2006 study by the Canadian Centre on Substance Abuse which produced the \$4.4-billion estimate for the year 2002 (Rehm *et al.* 2006). The estimate used by Physicians for a Smoke-Free Canada (PSC 2011), comes from a study conducted for Health Canada by American consultants (Industrial Economics 2009, notably pp. 6-23). Health Canada’s website repeats the Rehm *et al.* figure for the direct health care cost of smoking (Health Canada 2016d). As we explain in the text, this is a *gross* estimate of the health care cost of smoking. Moreover, the *public* cost of smoking (the cost to the public treasury) is different from the *social* cost of smoking.

tend to consume health care services into old age.<sup>13</sup> To measure the burden of smokers on the public treasury, a *net* cost would be better than a gross cost. In addition to health care, smokers also cost less than non-smokers

13. “Smokers and the obese cheaper to care for, study shows,” *The New York Times*, February 5, 2008.

Figure 1-8



**Note:** Tobacco tax only, excluding general provincial sales taxes. Revenues are given for fiscal years ending on March 31 of the year indicated. Data presented in current dollars, hence the same warning as for Figures 1-6 and 1-7 also applies here.

**Source:** Revenue Quebec (2001) for 1993; Canadian Tax Foundation (different issues of *The National Finances* and *Finance of the Nations*) for 1994-2012; NSRA (2013, 2014, 2015b, 2016) for 2013-2016; PSC (2015).

in terms of public pensions and other forms of old-age security.

As it is, the special taxes smokers pay on tobacco products cancel out a large part of, if not more than, their supplementary health care costs.<sup>14</sup> Just taking into account tobacco taxes, we can see in Figure 1-7 that in 2002, total tobacco taxes collected by all levels of government in Canada amounted to \$5.3 billion, about 20% more than the estimated gross cost of smoking-related diseases for that year.

It appears that, in Canada as elsewhere, smokers not only pay their way; in fact, they subsidize non-smokers. The public cost of smoking is nearly certainly negative. The conclusion of professors Ian Irvine and William Sims of Concordia University on this topic is prudent but fundamental:

The ongoing legal suits against tobacco manufacturers are driven by concerns about the additional costs borne not just by smokers themselves, but by the public at large. The public debate about tobacco use frequently neglects the fact that it is the individual smokers who bear the greater part of the costs. (Irvine and Sims 2012, p. 16.)

14. See among others Barendregt et al. 1999, Stoddard et al. 1986, Raynauld and Vidal 1992, Sloan 2004; see also Lemieux 2000.

## Litigation

There are many court cases against tobacco companies before federal and provincial courts in Canada. Major cases were brought by provincial Attorneys General seeking to recoup the health care costs of smoking-related diseases. Six provincial governments—those of British Columbia, Manitoba, New Brunswick, Nova Scotia, Prince Edward Island, and Saskatchewan—have formed a coalition for this purpose. The other four provincial governments—those of Quebec, Ontario, Alberta, and Newfoundland and Labrador—are acting separately. These suits are slowly proceeding in the courts of each province. All provincial governments have passed special laws to legalize such suits. As for the territories, the Northwest Territories and Nunavut governments have also passed enabling legislation, and Nunavut is considering a suit. Only the government of Yukon has not adopted a special law, and it is apparently not considering legal action. (NSRA 2016b, pp. 1 and 13; *CBC News* 2015.)

**“A major Quebec case against the three large manufacturers led to the judge awarding the plaintiffs \$15 billion in damages in May 2015, which the manufacturers are appealing.”**

A number of class actions have also been brought against major cigarette manufacturers on behalf of individuals who claim they were harmed by smoking. A major Quebec case against the three large manufacturers led to the judge awarding the plaintiffs \$15 billion in damages in May 2015, which the manufacturers are appealing. Similar class actions have been filed in British Columbia, Manitoba, Alberta, Nova Scotia, Saskatchewan, and Ontario. They are at early stages of litigation or are waiting for similar cases to be decided.

For their part, some tobacco companies have initiated litigation against governments, mainly regarding the new federal health warnings and flavour bans. Moreover, one tobacco manufacturer has threatened to sue the federal government if it introduces plain packaging.<sup>15</sup>

15. Hugo De Granpré, “Ottawa songe à imposer l’emballage neutre à la marijuana,” *La Presse*, June 1, 2016; Allan Woods, “Ottawa will force tobacco companies to use plain packaging, says Jane Philpott,” *Toronto Star*, May 31, 2016. On plain packaging, see Chapter 2 of the present *Research Paper*.

## Regulations

Tobacco is one of the most regulated and controlled industries in Canada, and smoking is one of the most regulated activities. While an exhaustive review is beyond the scope of this *Paper*, what follows is a sampling of some of the major restrictions imposed on the consumption of tobacco.

Provincial governments have prohibited smoking in virtually all workplaces, and in venues open to the public. The prohibition now includes smoking on patios of restaurants and bars in at least half of Canadian provinces, and similar municipal regulations also exist (Cunningham 2014, p. 214). A patio ban came into force in Quebec in May 2016 (*The Gazette* 2016). Following the American model, the ban extends to some colleges and universities. Airlines are regulated by the federal government, which has forbidden smoking on short domestic flights since 1987, all domestic flights since 1989, and all flights since 1994 (Cunningham 2014).<sup>16</sup> In all provinces, smoking is now forbidden in private cars with any passenger younger than 16, or younger than 19 in Prince Edward Island.<sup>17</sup> The *Tobacco Atlas* places Canada among the most regulated countries with regard to imposed smoke-free public places (Eriksen *et al.* 2015, p. 65).

Manufacturing, distribution, and consumption of tobacco products are regulated in many other ways by both the federal and provincial governments. Since 1994, the federal government imposes a minimum age of 18 for purchasing tobacco, but the minimum age is 19 in many provinces. Advertising is prohibited, mainly by federal law but also by provincial legislation. The federal government is moving to ban menthol-flavoured cigarettes (Blackwell 2016b). Significant restrictions on retail display exist in all provinces (Cunningham 2014, p. 212). Health Canada is apparently looking into forcing tobacco manufacturers to make cigarettes less addictive (Blackwell 2016b). E-cigarettes are also regulated as a tobacco product in Quebec (*The Gazette* 2016). Finally, packaging is also strictly controlled, including graphic health warnings, and further regulation has been promised, as discussed in greater detail in Chapter 2.

16. See also FindLaw Canada, Learn about the Law, Health Care, Smoking laws by province (accessed May 31, 2016).

17. *Ibid.*





## CHAPTER 2

### Plain Packaging: A Debate about Facts and Values

Tobacco regulation in Canada is among the most stringent in the world, with limitations on where smoking is allowed, a complete ban on advertising, and graphic health warnings covering three quarters of each cigarette pack. In practice, cigarettes have all but completely disappeared from the public view, with display bans in corner stores and supermarkets.

In addition to the vast array of existing regulations, the current federal government is contemplating the imposition of plain packaging. Cigarettes packs are seen as the last place where brands can be seen, albeit almost exclusively by current smokers already buying cigarettes. The logic of plain packaging is to make packs as unattractive as possible in an effort to convey the message that smoking is bad. Such a judgment emanating from the government regarding the legal consumption choices of individuals seems like overreach, but public health scholars and advocacy groups contend that smoking tobacco being the main evitable cause of death, protecting people from their own choices is legitimate.

Underlying this interventionist creed is a moral stance attributing a greater value to preserving life and good health than to preserving individual choice and responsibility. There is a real debate about this moral stance justifying an ever more far-reaching Nanny State. But there are also facts and science that play a more prosaic role in the motivation of such a public policy.

This chapter presents an objective overview of the scientific debate, and addresses the more philosophical angle in its concluding remarks.

#### 2.1 Does Plain Packaging Work?

“Plain packaging,” sometimes called “standardized packaging,” refers to government rules forcing tobacco product manufacturers to standardize all their product packs with the same nondescript colour such as drab olive green or brown, the same size and shape, and no distinctive brand colours, logos, or other design elements. The only features allowed are the government’s health warning plus the brand and product names in a standard colour, font style, and size, positioned in the mandated spot. Figure 2-1 shows an example of an

Australian cigarette pack before the plain packaging requirement came into force, while Figure 2-2 shows specimens of the new plain cigarette packs imposed in Australia as of December 1<sup>st</sup>, 2012—the first experiment of this policy in the world.

#### The Outlook for Plain Packaging around the World

Following Australia’s example, plain packaging requirements were adopted in the United Kingdom and France in May 2016, and Ireland will soon follow suit. Plain packaging is also being formally considered in Canada, and in at least nine other countries: Finland, Hungary, New Zealand, Norway, Singapore, Slovenia, South Africa, Sweden, and Turkey (CCS 2016; Davidson 2016b). The government of Malaysia may soon consider it as well (*Malay Mail Online* 2016). In 2015, representatives of the Uruguay government participated in a Paris meeting with the governments of Australia, France, Hungary, Ireland, New Zealand, Norway, South Africa, Sweden, and the United Kingdom in order “to discuss ways to reduce tobacco use through effective tobacco control strategies and policies, especially standardized packaging of tobacco products.” (WHO 2015.)

**“Public health scholars and advocacy groups contend that smoking tobacco being the main evitable cause of death, protecting people from their own choices is legitimate.”**

Plain packaging has survived many legal challenges from tobacco companies. The High Court of Australia ruled that plain packaging does not expropriate property (trademarks) but merely regulates it, and so does not violate that country’s constitution (High Court of Australia, 2012).<sup>18</sup> The European Court of Justice (ECJ) also confirmed the legality of plain packaging (Ram 2015b, Spiegel and McClean 2016, *Le Monde* 2016), a decision that may abort other challenges in Europe—for example, the Irish implementation plan (Cullen 2015). A legal challenge against plain packaging legislation on the grounds that it infringes property rights (Ram 2015a) was thrown out by the UK’s High Court on May 19, 2016,

18. See also <https://www.ag.gov.au/tobaccoplainpackaging> (accessed May 5, 2016).

Figure 2-1

**Example of a pre-plain packaging cigarette pack in Australia, 2009**



**Source:** Tobacco Labelling Resource Centre, at <http://www.tobaccolabels.ca/pack-images/country/?n=Australia> (accessed April 14, 2016).

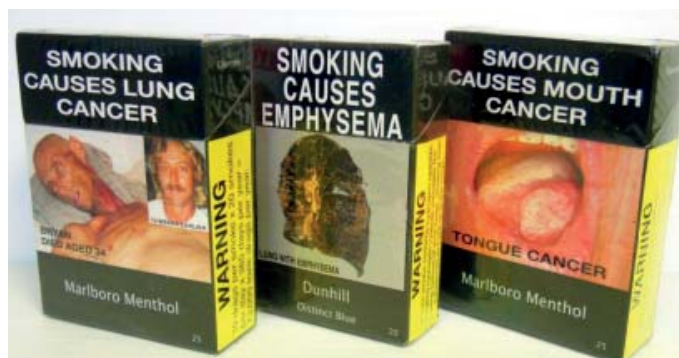
the day before the British plain packaging law came into effect. At least one tobacco manufacturer has indicated its intention to appeal (Croft 2016).

At the international level, the main issue is whether expropriating the whole surface of a cigarette pack is consistent with the protection of intellectual property—trademarks in this case—guaranteed by international treaties. In 2011, a tobacco manufacturer brought the Australian government to international arbitration pursuant to the bilateral Investment Promotion and Protection Agreement between Australia and Hong Kong. At the end of 2015, the arbitration tribunal dismissed the complaint (Hurst 2015). A similar challenge by five other governments against Australian plain packaging is pending before the World Trade Organization (WTO), the plaintiffs arguing that plain packaging prohibits the use of trademark in violation of WTO rules.

The 2005 World Health Organization’s Framework Convention on Tobacco Control (FCTC), signed by the governments of 168 countries, is a wide-ranging public health treaty (CCS 2016; Australian Government 2016, p. 16). The concept of plain packaging appears nowhere in the agreement itself (WHO 2003), but the guidelines

Figure 2-2

**Specimens of plain cigarette packs in Australia**



**Source:** Coalition québécoise pour le contrôle du tabac, at [http://www.cqct.qc.ca/Documents\\_docs/DOCU\\_2015/DOCU\\_15\\_09\\_21\\_Impacts\\_Australie\\_EmballagesNeutres.pdf](http://www.cqct.qc.ca/Documents_docs/DOCU_2015/DOCU_15_09_21_Impacts_Australie_EmballagesNeutres.pdf) (accessed April 15, 2016).

issued by the WHO mention that “[p]arties should consider adopting plain packaging requirements to eliminate the effects of advertising or promotion on packaging.” (WHO 2013, p. 99.)

Plain packaging has now gathered a great deal of international momentum. The proposed Trans-Pacific Partnership (TPP) explicitly forbids using the dispute settlement mechanism to challenge “a tobacco control measure.” (TPP 2016, Chapter 29.) It would not be surprising if the proposed Transatlantic Trade and Investment Partnership between the US and the European Union (should it see the light of day) repeated such an exclusion.

**“Plain packaging refers to government rules forcing tobacco product manufacturers to standardize all their product packs with the same nondescript colour, the same size and shape, and no distinctive brand colours, logos, or other design elements.”**

As Dr. Bettcher, of the WHO (2016), put it in a May 31, 2016 news release, “[p]lain packaging is going global.” Nevertheless, only the Australian experiment has been running for a few years now, allowing for some analysis of its impact.

## Packaging Regulations in Canada

The federal government of Canada introduced health warnings on cigarette packs in 1989. By 1994, these warnings occupied 35% of each main display surface. From 2001, the government required rotating graphic warnings covering 50% of the front and back of a cigarette pack. In 2012, new pictures were introduced, which now have to cover 75% of the cigarette pack's surface<sup>19</sup> (see Figure 2-3). As of September 25, 2014, Canada ranked 4<sup>th</sup> in terms of warning size among 77 countries where such warnings are mandatory (CCS 2014, pp. 2 and *passim*).<sup>20</sup>

Following the October 2015 election of a new federal government, the Minister of Health has been mandated to “[i]ntroduce plain packaging requirements for tobacco products, similar to those in Australia and the United Kingdom.” (Office of the Prime Minister, 2015.) Health Canada has issued a tender request for a cost-benefit analysis of this plain packaging project (Health Canada 2016a; Health Canada 2016b). On May 31, 2016, the Health Minister announced public consultations on plain packaging, which lasted until August 31, 2016.<sup>21</sup>

**“Following Australia’s example, plain packaging requirements were adopted in the United Kingdom and France in May 2016, and Ireland will soon follow suit.”**

Provincial governments can legally regulate tobacco packaging. Some started doing so before federal interventions, and continue to do so today. A Quebec law adopted in 2015 imposes a minimal *surface area* for the health warning on cigarette packs—even more stringent than the federal minimum *proportion*—apparently in order to effectively ban smaller packs. Provincial governments impose other marketing regulations over and above federal requirements—on point-of-sale displays and advertising, vending machines, flavoured tobacco, candy cigarettes, brand-stretching (on T-shirts or sport bags, for example), and so on. (Cunningham 2015).

19. Other tobacco products such as roll-your-own or chewing tobacco have slightly different requirements (Cunningham 2015).

20. See also: Tobacco Labelling Resource Centre at <http://www.tobaccolabels.ca/countries/Canada/> (accessed April 14, 2016); Non-Smokers’ Rights Association at [https://www.nsr-a-dnf.ca/cms/index.cfm?group\\_id=1281](https://www.nsr-a-dnf.ca/cms/index.cfm?group_id=1281) (accessed April 14, 2016).

21. Health Canada, “Minister Philpott Launches Public Consultations on Tobacco Plain Packaging,” News release, May 31, 2016.

Figure 2-3

### Example of graphic health warnings on cigarette packs in Canada, 2009 and 2012



**Note:** Before (left) and after (right) the 2012 requirement of 75% (instead of 50%) coverage of the pack by the health warning.

**Source:** Tobacco Labelling Resource Centre, at <http://www.tobaccolabels.ca/pack-images/country/?n=Canada> (accessed April 14, 2016); Denis Savard / The Canadian Press, from thestar.com at [http://www.thestar.com/news/canada/2012/11/14/canada\\_packs\\_a\\_strong\\_antismoking\\_message.html](http://www.thestar.com/news/canada/2012/11/14/canada_packs_a_strong_antismoking_message.html) (accessed April 14, 2016).

But it is the federal government that is leading the plain-packaging movement. In Canada, the history of plain packaging goes back to 1994, when a House of Commons committee proposed implementing the measure. The Minister of Health dropped the project in 1996, saying it would be “in violation both of trademark and of [Canada’s] Charter of Rights and Freedoms.” (Quoted by Crosbie and Glantz 2014, p. 9.) At around the same time, the government of Australia rejected the idea of plain packaging for similar reasons.

### Was Plain Packaging a Success in Australia?

The Australian experiment with plain packaging, which has been mandatory on all tobacco products sold since December 1<sup>st</sup>, 2012, is the first of its kind anywhere in the world. This situation has attracted a great deal of attention from researchers and has spurred a debate over the results of plain packaging.

On February 26, 2016, the Australian government published a *Post-Implementation Review* (PIR) that contains the most up-to-date analysis of plain packaging currently available. The PIR supports, to a point, the conclusion that plain packaging has had a positive impact in reducing smoking rates, but many qualifications to this general conclusion still remain.

The PIR consists of a main document (Australian Government 2016, 57 pages) and three annexes. Appendix A, prepared by a government consultant, provides an econometric analysis<sup>22</sup> of the impact of plain packaging on smoking prevalence in Australia (Australian Government 2016a, 37 pages). Appendix B, prepared by the consulting firm Siggins Miller, is a report on “stakeholder” consultations (Australian Government 2016b, 92 pages). Appendix C, prepared by the same consulting firm, looks at “Regulatory Burden Measurement and Analysis of Costs and Benefits.” (Australian Government 2016c, 45 pages.)<sup>23</sup>

Plain packaging in Australia was established by the *Tobacco Plain Packaging Act* of 2011. Although the “objects of the Act” comprise a complicated structure of goals and means, the general picture is relatively clear. “The overarching objective of tobacco plain packaging is to contribute to improving public health by, ultimately, reducing smoking and people’s exposure to tobacco smoke.” (Australian Government 2016, p. 2; see also pp. 17 and 56.) The “specific mechanisms” for implementing the broad goal of improving public health by reducing smoking consist of making tobacco packaging less attractive and less misleading,<sup>24</sup> with more visible health warnings.

The purpose of the PIR was to verify that plain packaging had achieved its goal. The main difficulty with this assessment attempt is that new health warnings were rolled out at the same time as plain packaging. The respective impacts of plain packaging and the new health warnings are therefore impossible to disentangle from one another. Figures 2-1 and 2-2 show the difference (especially the size difference) between the health warnings before and after the 2012 Australian reform.

The general conclusion of the *Post-Implementation Review* is that “the measure has begun to achieve its public health objectives of reducing smoking and exposure to tobacco smoke in Australia and is expected to continue to do so in the future.” (Australian Government 2016, p. 57.) The report states that smoking prevalence has decreased but admits that “[t]hese decreases cannot be entirely attributed to plain packaging given the

range of tobacco control measures in place in Australia, including media campaigns and Australia’s tobacco excise regime.” (*ibid.*, p. 4.) It also prudently states that “the 2012 packaging changes (plain packaging combined with enhanced graphic health warnings) have contributed to declines in smoking prevalence.” (*ibid.*, emphasis added.)

Articles and international coverage of the publication of the PIR mostly reflected this crucial qualification. The WHO press release states that “plain packaging in combination with the 2012 updates to graphic health warnings was associated with a statistically significant decline in smoking prevalence.”<sup>25</sup>

**“At the international level, the main issue is whether expropriating the whole surface of a cigarette pack is consistent with the protection of intellectual property—trademarks in this case—guaranteed by international treaties.”**

In other words, the impact of *plain packaging alone* is still unknown. Although the *existence* and the *direction* of this impact can be reasonably assumed from the PIR and the existing literature, its *amplitude* cannot, mostly because of the concurring graphic health warning regulation. This conclusion is the only one currently available that respects the state of the scientific debate. Credible proponents of plain packaging readily recognize this fact, as stated in the PIR and by the WHO.

## 2.2 Overview of the Debate on the Impact of Plain Packaging

The PIR is undoubtedly the best piece of evidence in the debate on plain packaging’s impact, but it is not the only one, by far. It is useful to provide an overview of this ongoing debate, full of nuances and methodological disputes, if only to show the gap that exists between the kinds of answers that science can give and the certainty politicians seek. The vast literature presented here is not even exhaustive, but it provides a basic account of many arguments, counterarguments, and when possible, what can be concluded.

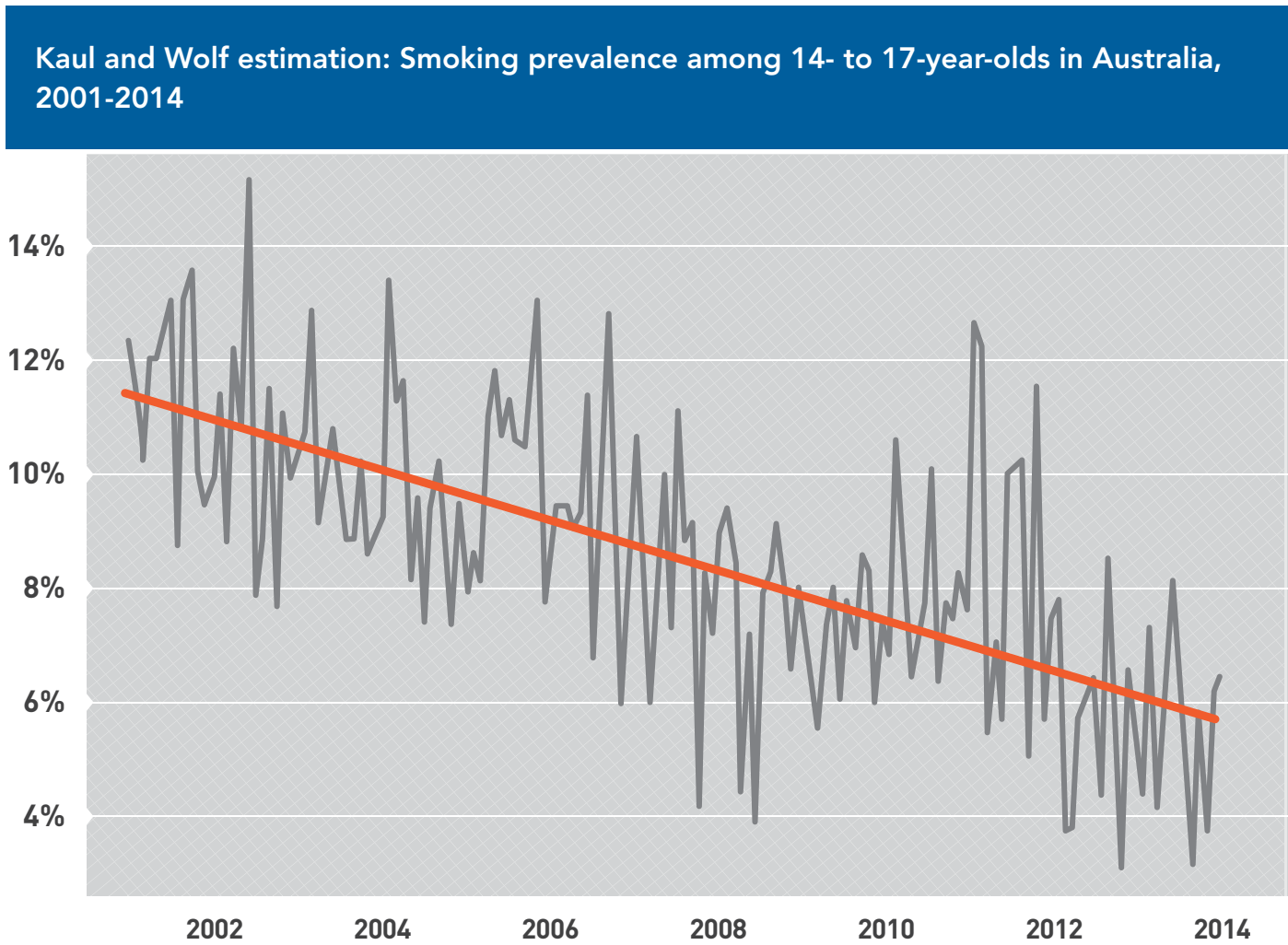
22. Econometrics is the use of statistical methods to analyze economic or social data.

23. See also <http://ris.dpmc.gov.au/2016/02/26/tobacco-plain-packaging/> (accessed June 13, 2016). A two-page addendum to Appendix A was published on May 19, 2016 (Australian Government 2016d); it only expresses the estimates for changed prevalence as actual numbers of smokers.

24. The PIR refers to “reducing the ability of the retail packaging of tobacco products to mislead consumers about the harmful effects of smoking or using tobacco products,” (Australian Government 2016, p. 2) a very similar formulation to that found in the Tobacco Packaging Act.

25. WHO, *Australia: Government releases plain packaging post-implementation review*, Press release, February 26, 2016.

Figure 2-4



Source: Reproduced from Kaul and Wolf (2014a), p. 11.

### Kaul and Wolf Studies and Their Critics

Before the publication of the PIR in February 2016, other research had been conducted and various papers focusing on the possible impacts of plain packaging had been published. Professor Ashok Kaul of the Department of Economics of Saarland University (Germany) and Professor Michael Wolf of the Department of Economics of the University of Zurich carried out two econometric evaluations commissioned by a tobacco manufacturer. Their two papers, one about smoking prevalence among minors (14- to 17-year-olds) and the other about adults, were published as working papers by the Department of Economics of the University of Zurich (Kaul and Wolf 2016a, 2016b). According to these papers, the data show no steeper decline in smoking among 14- to 17-year-olds due to plain packaging, as

illustrated by Figure 2-4 which reproduces the authors' figure, and no lasting impact on adult smokers.

**"As of September 25, 2014, Canada ranked 4<sup>th</sup> in terms of warning size among 77 countries where such warnings are mandatory."**

The PIR dismisses the two papers (Australian Government 2016, pp. 36-37) because they were subject to "significant criticism by other academic experts," notably Lavery *et al.* (2015) and Diethelm and Farley (2015). Lavery *et al.* (2015, p. 422 and *passim*) argued that Kaul and Wolf's econometric model was not correctly specified, used a level of significance larger than claimed, and had little explanatory power.

As for Diethelm and Farley, they criticize the study on adult smoking prevalence because they contend that Kaul and Wolf do not control for other factors and that their model isn't well specified. Using the same data as Kaul and Wolf and the same period, they built a different econometric model to analyze these data. Improving on Kaul and Wolf's model, they controlled for several variables, including "smoke-free policies" (which seems to mean smoking bans in private businesses, graphic health warnings, and tobacco tax increases). They claimed that their model fits the data better than Kaul and Wolf's, and found that plain packaging had a statistically significant impact on the declining prevalence trend—although not as large an impact as tax increases (the main factor) and smoke-free policies.

**"On February 26, 2016, the Australian government published a *Post-Implementation Review (PIR)* that supports, to a point, the conclusion that plain packaging has had a positive impact in reducing smoking rates."**

According to Cancer Council Victoria, a public-health research and lobby group, "[t]he available evidence suggests that plain packaging is likely to be contributing along with other tobacco control policies to continuing reductions in the prevalence of smoking in Australia." (CCV 2016a, p. 13.) The prudence of the statement should be noted.

Doubts about the actual effects of plain packaging were raised in 2014 by Sinclair Davidson, professor of institutional economics at RMIT University in Australia, and his colleague Ashton de Silva (Davidson and de Silva 2014). The two professors argued that, theoretically, plain packaging could push down the prices of tobacco products below what they would otherwise have been because price competition would become the only competitive tool left to manufacturers. Moreover, the distinction between legal and illegal prices would be attenuated, pushing up the market share of illegal tobacco. In order to test if consumption had increased or decreased after plain packaging, Davidson and de Silva used the official data of household expenditures on tobacco in three econometric tests. They admitted that expenditures are an imperfect indicator of changes in quantity consumed, but not much data was available at that early stage of the post-implementation period.

The first econometric test examined the impact of plain packaging on household expenditure, controlling for cigarette prices, household income, and excise taxes (recall that two big increases had occurred in April 2010 and in December 2013). Controlling for other factors was an improvement on Kaul and Wolf's work. Davidson and de Silva found that the impact of plain packaging was not statistically significant. In a specification of the model that excluded the 2013 excise tax increase, they even found a statistically significant increase of household expenditures on tobacco. A second econometric test found that no "structural break" in the trend occurred at the time plain packaging was implemented. A third econometric test used the data available up to the implementation of plain packaging to build a forecasted trend into the future: a 95% prediction interval showed that what actually happened in the following year fell within their confidence interval.

### Davidson's Criticisms of the Wakefield Survey and Studies

Still, since 2014, better data have been made available. More recently, Professor Davidson reviewed the data used by the Australian government in its PIR, as well as some related pieces of statistical evidence purporting to indicate a drop in tobacco consumption after the introduction of plain packaging (Davidson 2016b). In particular, he criticized a major tracking survey conducted by Professor Melanie Wakefield commissioned by the Australian government, and a series of articles published in *Tobacco Control* by a team of researchers, including Professor Wakefield.

The survey, called the National Tobacco Plain Packaging Tracking Survey (also referred to as the "Wakefield survey"), consisted of 26 waves of interviews running from April 9, 2012 to May 4, 2014. In each wave, baseline interviews were followed up by interviews of the same respondents (CCV and SRC 2015). The results of the survey were analyzed in a special issue of *Tobacco Control*,<sup>26</sup> on which much of the PIR evidence is based.

This supplemental issue of *Tobacco Control* argued that the plain packaging policy was successful. Again, none of the articles distinguished the respective contributions of plain packaging and the new graphic health warnings. Moreover, the articles only evaluated the success of the "mechanisms" or proximal objectives of the legislation, not of the actual reduction in smoking that was

26. The whole supplement is available free of charge at [http://tobaccocontrol.bmj.com/content/24/Suppl\\_2.toc](http://tobaccocontrol.bmj.com/content/24/Suppl_2.toc) (accessed May 6, 2016).

the “overarching objective.” (Australian government 2016, p. 2; see also pp. 17 and 56.)

A Health Department official questioned by a senator admitted that “[t]he tracking survey and the BMJ articles that relate to the tracking survey were not designed to measure prevalence and cannot measure prevalence.” (Davidson 2016b, pp. 15-16.)<sup>27</sup> It was not clear from the survey whether the individuals who quit smoking did so because of the changes in packaging. Davidson asked, “Why did the 1519 individuals identified as quitters in the follow-up survey quit? Unfortunately the Wakefield survey did not ask the obvious question, ‘Why did you quit?’” (Davidson 2016b, p. 25.) This indeed seems like a major omission.

A more recent article by Davidson and de Silva (2016) provides a detailed critique of the articles published in the special issue of *Tobacco Control* on plain packaging. Even though they are presented as various articles, authorship is very concentrated: Melanie Wakefield appears as a co-signer of 13 of the 14 articles, and Michelle Scollo of 10 of them.

**“The main difficulty with this assessment attempt is that new health warnings were rolled out at the same time as plain packaging. The respective impacts of plain packaging and the new health warnings are therefore impossible to disentangle from one another.”**

Few of the 14 articles actually test the effectiveness of plain packaging using the Wakefield survey. One of them is an editorial. Only six of the remaining 13 articles empirically test the effectiveness of plain packaging. Three of these six use data not in the public domain and not available to researchers for replication. Davidson and de Silva refer to the remaining three—authored by Wakefield *et al.*, Durkin *et al.*, and Brennan *et al.*—as “the Wakefield studies.” (Davidson and de Silva 2016, pp. 4 and *passim*) These three articles provided the essence of the government’s favourable evaluation of plain packaging.

Each of the three Wakefield studies lists six authors. Although the lead author is different in each one, and the co-signers are listed in a different order, the six authors for the three articles are the same people: Emily

Brennan, Kerri Coomber, Sarah Durkin, Michelle Scollo, Melanie Wakefield, and Megan Zacher. Despite having the same authors, the three papers exhibit methodological inconsistencies, as Davidson and de Silva (2016) show. For example, “the statistical significance of many of the variables (or structural breaks in those variables) that are tested are found to be inconsistent across the three studies.” (Davidson and Silva 2016, p. 7.)

After obtaining from the Australian government the data used by the Wakefield studies, Davidson and de Silva tried to replicate their results. Nearly all results were replicable, but generally fit the data poorly, that is, they have very low correlation measures (called “pseudo R-squared”), generally below 20% (Davidson and de Silva 2016, pp. 6 and *passim*). Some of the results claimed for plain packaging (such as concern about the health consequences of smoking) are observable in the data *preceding* the implementation of the measure (*ibid.*, p. 9). Davidson and de Silva also found that the statistical models used by the authors are not robust—that is, their results change completely if minor changes in specifications are made. Moreover, it appears from the survey results that the new packaging did not change either quitting behaviour or intentions (*ibid.*, p. 10).

Davidson and de Silva (2016, p. 5) write that the analysis of plain packaging in the three *Tobacco Control* Wakefield studies “is not as rigorous as it first might appear.” Their general evaluation is highly critical:

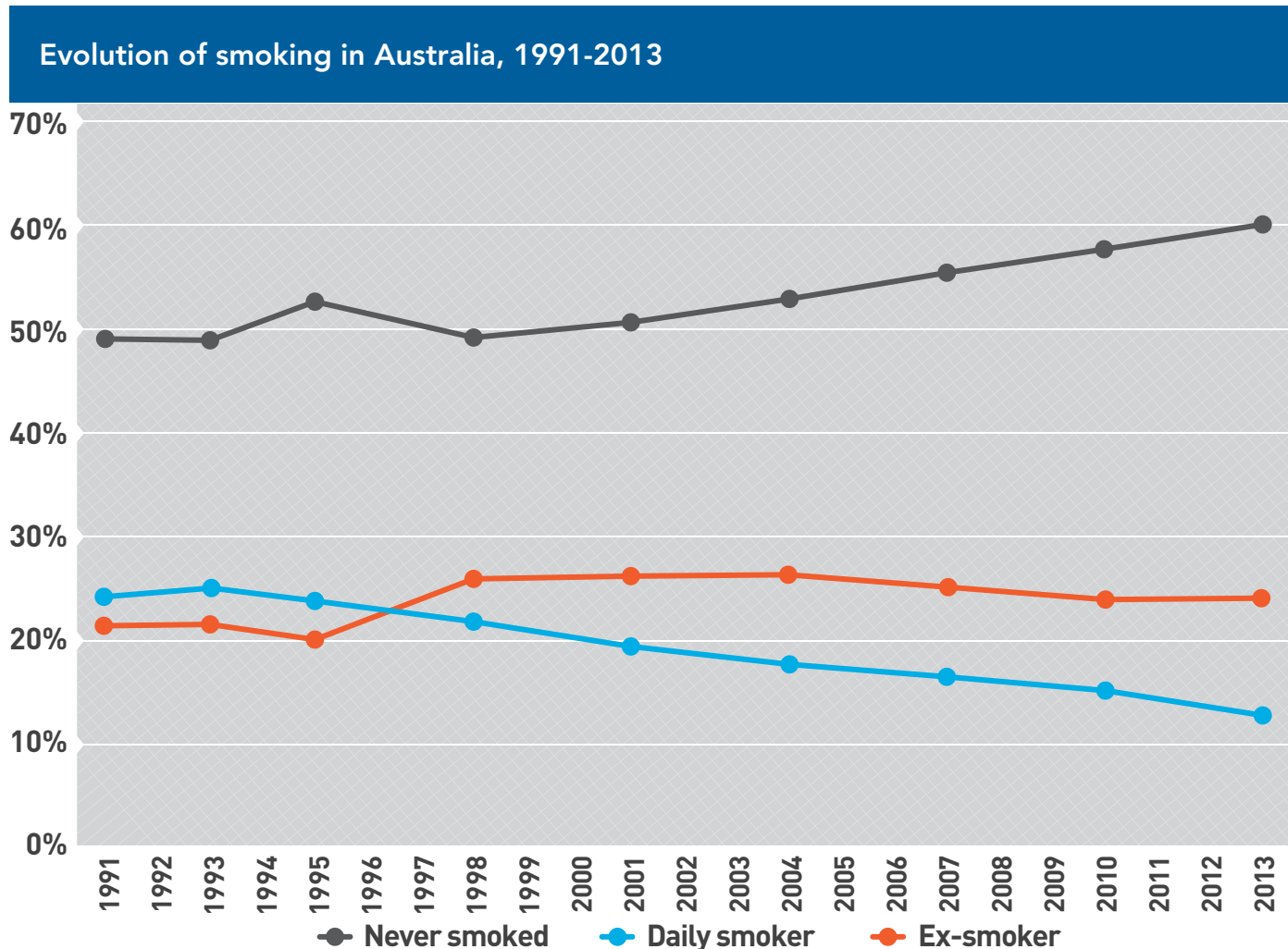
The fact is that the evidence presented by the Wakefield studies is simply not broad, tested, or rigorous. There are many variables included in the database that have not been tested. [...] The methodologies across the three studies differ, the actual data tested differs (some data are from the baseline survey, while other data are from the follow-up survey). Variables and data are included or excluded from the analysis with no explanation. The time segmentation differs too across the studies. No explanation is given for any of those differences. (Davidson and de Silva 2016, p. 7.)

Davidson and de Silva find that the research results published in *Tobacco Control* were clearly misleading. (Davidson and de Silva 2016, p. 11.) Despite this, the government’s *Post-Implementation Review* takes the results of the Wakefield studies at face value “and provides a summary analysis as if they were three separate research projects and not one large project published across three papers.” (*ibid.*)

Interestingly, the Wakefield survey did not cover adolescents, who would seem to be a natural focus for evaluating

27. *Tobacco Control* belongs to BMJ.

Figure 2-5



**Note:** "Never smoked" means fewer than 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco.  
**Source:** Reproduced from Australian Government (2016c), p. 18, according to the National Drug Strategy Household Survey (NDHS), 2014, which is conducted every three years.

plain packaging. The other surveys that do deal with adolescents and plain packaging are not in the public domain and the Victorian government—or Cancer Council Victoria, it is not clear—is fighting a Freedom of Information request to make these data public (Davidson and de Silva 2016, p. 11; CCV 2016, p. 11).

In a very recent and unsigned web comment (CCV, 2016), Cancer Council Victoria criticized Davidson and de Silva (2016) while the present *Research Paper* was being completed. Some of the criticisms (on methodological and statistical issues, for example) may be valid, but will only be settled after further debate.

Many of the CCV's criticisms, however, merely repeat previous arguments that were shown above to be highly questionable. Moreover, the CCV's comments are some-

**"It is useful to provide an overview of this ongoing debate, full of nuances and methodological disputes, if only to show the gap that exists between the kinds of answers that science can give and the certainty politicians seek."**

times careless, as when it states that "the Government's analysis shows that about a quarter of the reduction [in smoking prevalence] could be attributed to the plain packaging policy," (CCV 2016, p. 5) whereas the PIR itself admits that "due to the timing of the 2012 packaging changes it is not possible to identify separately



the effects of tobacco plain packaging and enlarged and updated graphic health warnings on smoking prevalence.” (Australian Government 2016, p. 34.)

### Chipty’s Econometric Study in the PIR

Published in February 2016, Tasneem Chipty’s econometric study can be seen as the best piece of evidence available in evaluating plain packaging’s impact, with its strong suit being a solid methodology, although it is not entirely without its weaknesses, as we will see below.

Included in the PIR, this study used proprietary data from Roy Morgan Research (RMR), a marketing company.<sup>28</sup> The need for this more specific data arose because a comprehensive survey on smoking, called the National Drug Strategy Household Survey, is only conducted every three years. It shows that smoking prevalence in Australia, as in many other countries, has been trending downward for decades, as seen in Figure 2-5, but it is not as helpful when it comes to assessing the impact of plain packaging.<sup>29</sup>

After controlling for factors such as excise tax increases (in 2010, 2013, and 2014),<sup>30</sup> demographic factors (gender, age, income, etc.), and the time trend, Chipty’s econometric model finds a statistically significant negative impact of the packaging changes on overall smoking prevalence (Australian Government 2016a).<sup>31</sup> The author also notes that there is “some indication” that the declining trend in smoking prevalence has accelerated since the introduction of the packaging changes (Australian Government 2016a, p. 12). Between the 34-month period preceding December 2012 and the following 34 months, the average prevalence among Australians aged 14 years and over decreased by 2.2 percentage points, to 17.21%. According to Chipty’s estimates, prevalence would have been 17.77% without the packaging changes, which have thus reduced prevalence by 0.55 percentage points<sup>32</sup> (see Figure 2-6). This

decrease is statistically significant. The decrease due to packaging changes represents about 25% of the total 2.2-percentage-point drop—the rest of the decline being explained by the preceding trend. In terms of the number of smokers, the packaging changes have led to a reduction of 108,228 out of a population of 19.3 million (Australian Government 2016d).

**“Theoretically, plain packaging could push down the prices of tobacco products below what they would otherwise have been because price competition would become the only competitive tool left to manufacturers.”**

Chipty’s econometric estimates are consistent with public health evidence, according to the PIR. The reduced smoking trend was achieved by the “positive impact” of the measure “on its specific mechanisms,” (Australian Government 2016, p. 4) as shown in opinion surveys realized for the government and by “peer reviewed studies that have been published in leading medical journals.” (*ibid.*, p. 25.) The main document of the PIR repeats the important caveat that we don’t really know the impact of plain packaging by itself.

### Davidson’s Criticisms of Chipty’s Econometric Estimates

Professor Davidson criticizes the econometric estimates that Dr. Chipty calculated on behalf of the Australian government for not including the price of tobacco products and the *level* of excise taxes in addition to their *change*. This criticism seems a bit overstated considering that most elasticities in economics are measures of relative change in consumption after a change in price expressed as a percentage.

Another criticism about the overrepresentation of smokers in the survey data used by Dr. Chipty is based on a smoking prevalence for early 2015 of about 16% in her data, compared to less than 13% for 2013 in the government’s own National Drug Strategy Household Survey. Nevertheless, this data set seems fairly reliable, especially given that Chipty is not the only one to use it.

The most damning criticism formulated by Professor Davidson tackles the trend estimate. Chipty argues that a new, steeper downward trend in smoking prevalence started in January 2013. Davidson notes that “[t]rend lines are very sensitive to chosen start and end points,”

28. The RMR survey is a monthly survey of the Australian population; its data are not in the public domain, but are available for purchase.

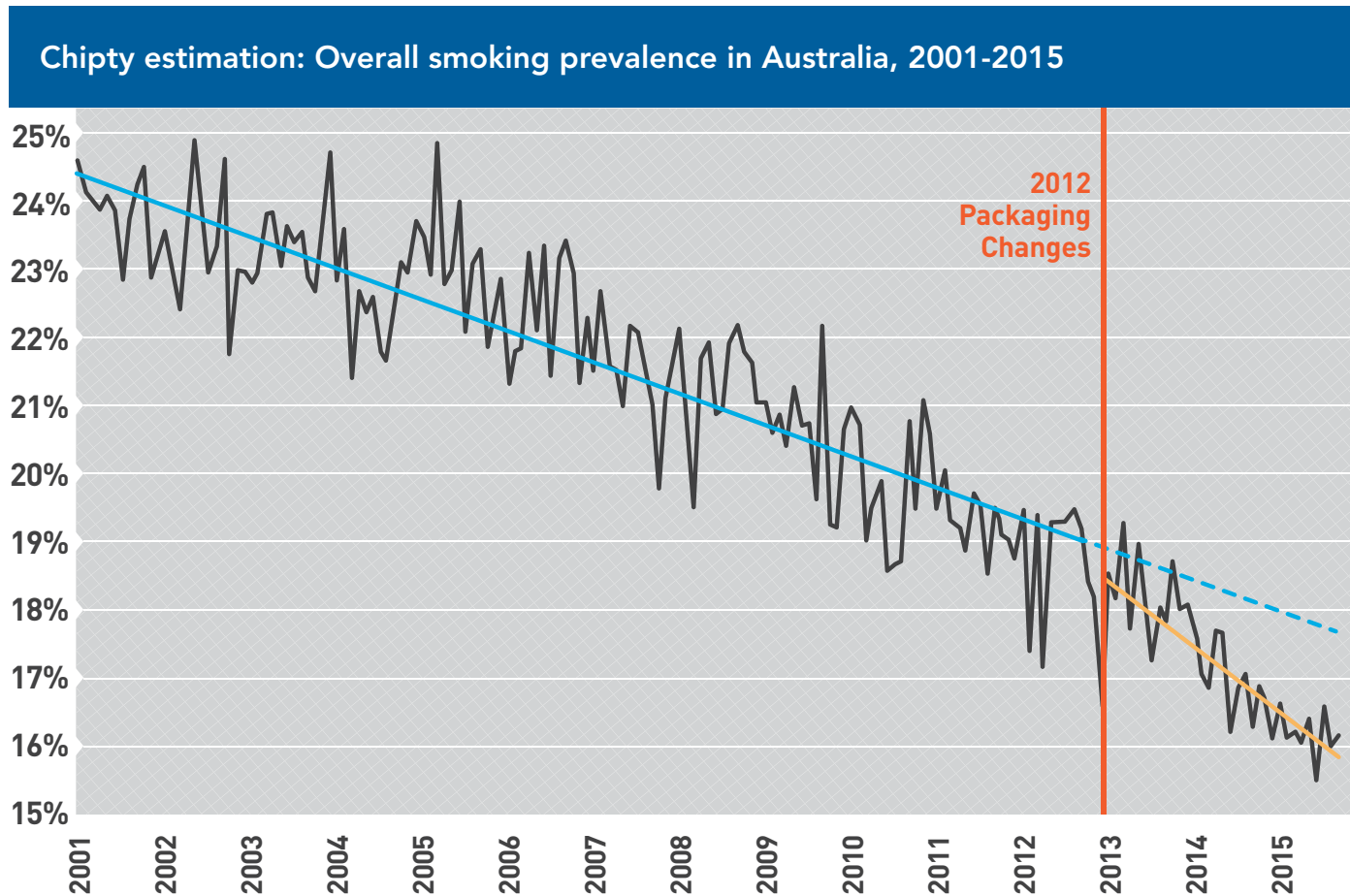
29. “Prevalence” indicates the percentage of smokers in a given population. “Smoker” is defined in different ways in different surveys.

30. The April 2010 excise tax increase was 25% (Australian Government 2016a, pp. 7 and 9). Another 12.5% increase was imposed in December 2013, to be repeated in September 2014, 2015, and 2016. (BATA 2015, p. 5).

31. The study does not discuss the impact of the packaging measure on 14- to 17-year-olds. A table in Appendix D of Chipty’s report indicates that the positive impact was statistically significant for all other age groups. Interestingly, “[t]he model is not able to measure a statistically significant effect of the 2006 graphic health warnings.” (Australian Government 2016a, p. 18.) Another interesting result is that the impact of the 2012 packaging changes indicates an increase in smoking prevalence in two of the six Australian states: Queensland and Tasmania (Australian Government 2016a, p. 36); the report does not discuss this result.

32. The difference between 17.77% and 17.21% is 0.56 percentage points, but this is due to rounding. The correct rounded figure is 0.55.

Figure 2-6



Source: Tasneem Chipty, Study of the Impact of the Tobacco Plain Packaging Measure on Smoking Prevalence in Australia, January 24, 2016.

(Davidson 2016b, p. 19) and asks why Chipty did not run an econometric test to determine whether or not January 2013 marked a structural break in the previous trend—a standard procedure for this sort of analysis.

**“It was not clear from the survey whether the individuals who quit smoking did so because of the changes in packaging.”**

Davidson suggests that when plain packaging was implemented, the long-term trend was already lower than what Chipty estimates. The alternative trend calculated by Davidson has an adjusted R-square of 0.91, which is slightly higher than the estimated 0.85 for Chipty’s trend lines. In other words, Davidson’s trend seems to fit the data better than Chipty’s. If he is correct, then there has been no structural break in the trend, as depicted in

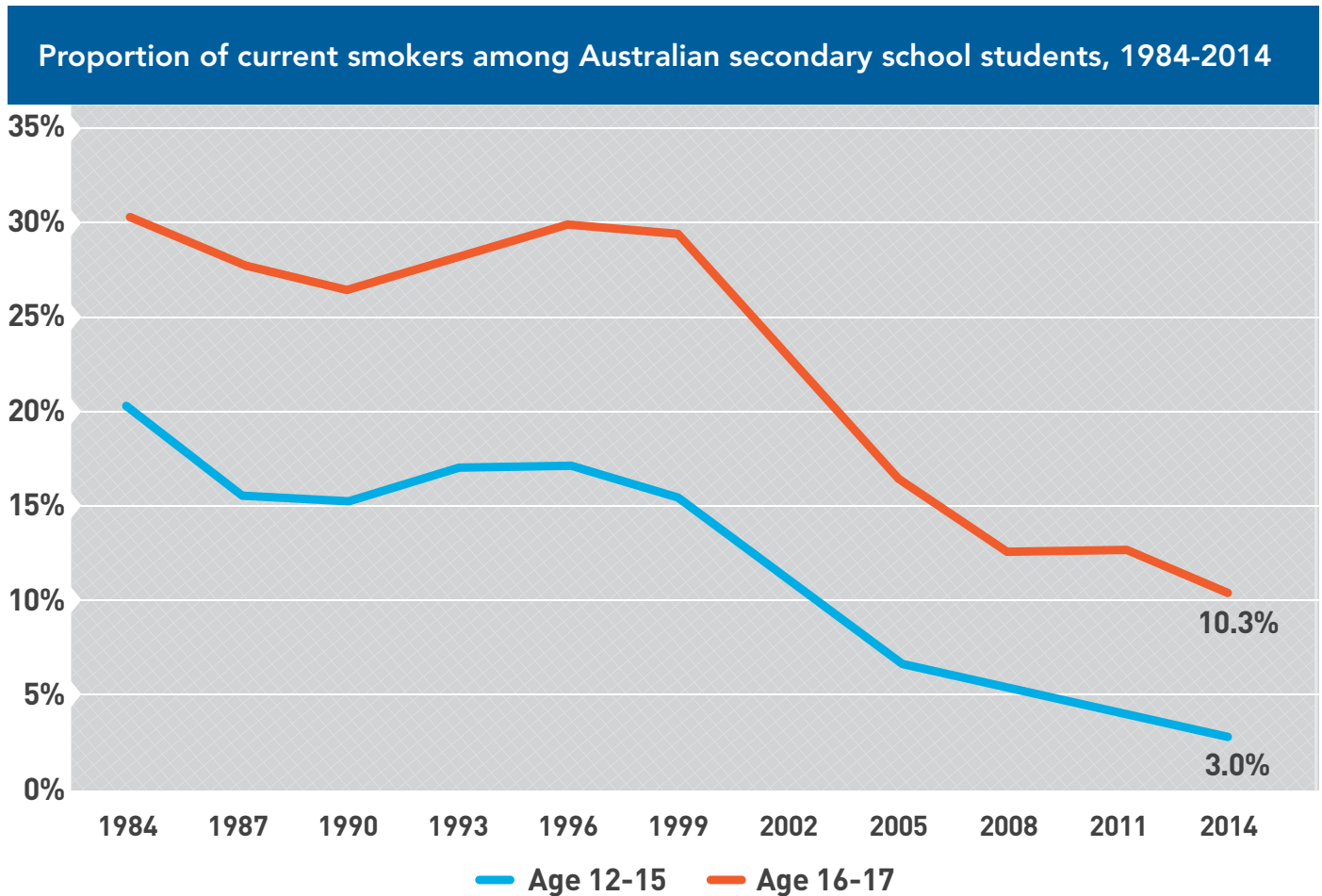
Figure 2-6, but simply a continuation of the gradual fall in smoking prevalence.

### Youth Smoking Prevalence

The trend for smoking among secondary school students in Australia, as shown by the Australian Secondary School Students’ Alcohol and Drugs (ASSAD) survey, has been downward since the mid-1990s, as shown in Figure 2-7. It does not seem that plain packaging is changing this trend.

Another survey, the National Drug Strategy Household Survey (NDSHS), also conducted every three years but on a different schedule, shows that smoking prevalence among 12- to 17-year-olds actually *increased* between 2010 and 2013, after a long period of decrease. It is true that this increase was not statistically significant (Cancer Council Victoria 2016a, pp. 4-5), but the conclusion then is that youth smoking has not decreased after the introduction of plain packaging. No firm conclusion can be

Figure 2-7



**Note:** A current smoker is defined as somebody who has smoked cigarettes on at least one of the seven days before the day of the survey.  
**Source:** Australian Secondary Students' Alcohol and Drug (ASSAD) survey and Cancer Council Victoria (2016a), p. 3.

drawn from one data point (2013), but this non-decrease should "introduce an element of caution" for those who cite the NDSHS "as providing conclusive evidence for the efficacy of the plain packaging policy." (McKeganey and Russell 2015, p. 564.)

Similar doubts arise from White *et al.*'s study on the impact of plain packaging on adolescents in secondary school. "Our data suggest that these changes [plain packaging and new and larger graphic health warnings]

have reduced the appeal of cigarette packs to adolescents." (White *et al.* 2015, p. ii48.)<sup>33</sup> The authors say they "found a decrease in positive package ratings," (p. ii47) which should come as no surprise, but it is unclear whether adolescents changed their actual smoking behaviour.

### Package Appeal, Brand, and Price

There is a disconnect between what the government and public-health studies measure on the one hand, and actual quitting and smoking prevalence on the other. What the government and public health studies measure is the tendency of plain packaging combined with new graphic warnings to make smokers dislike their packs of cigarettes or express intentions to quit. Yet as Professor

**"Davidson and de Silva find that the research results published in Tobacco Control were clearly misleading. Despite this, the government's *Post-Implementation Review* takes the results at face value."**

33. The authors add, "although we note that the changes found were modest."

Davidson points out, this result is not the same as reducing the smoking rate:

The data itself, as opposed to the commentary associated with that data, do not support the notion that standardised packaging has met its stated policy objectives. Health Department officials and anti-tobacco lobbyists have been reduced to claiming the policy will be successful because smokers dislike the packs.” (Davidson 2016b, p. 27.)

In order to better understand the impact of plain packaging on smoking prevalence, we must consider the effect of brand names or their absence on consumer behaviour. From the consumer’s point of view, the function of a brand name is to convey information about the producer’s reputation. The producer thus has incentives to maintain the quality of its product, which is why consumers are willing to pay more for branded products. This demand for brands makes them a highly valued asset for producers.<sup>34</sup> One would therefore expect de-branding—which occurs when brands do not send effective signals—to lead consumers to downtrade to lower-value brands or to no-brand products. This in turn would lower the average price of cigarettes, which would itself increase quantity demanded, compared to what it would otherwise have been.

“According to Chipty’s estimates, the decrease due to packaging changes represents about 25% of the total 2.2-percentage-point drop—the rest of the decline being explained by the preceding trend.”

These predictions are contradicted by estimates from Scollo *et al.* (2015), based on her own survey of cigarette retail points, carried out monthly from May 2012 to August 2013 (seven months before the implementation of plain packaging to nine months after). The authors find increases in the inflation-adjusted price of cigarettes. The study, however, does not include illegal cigarettes. Moreover, one of the main factors behind their results is the scheduled increase in excise/customs duties in February 2013, which had an impact across brands

and pack sizes (*ibid.*, p. ii87). Higher excise taxes can hide what would otherwise have been price reductions.

In 2012, two Australian economists otherwise favourable to the Plain Packaging Act predicted that the measure would reduce consumption “[p]rovided that tax increases offset any induced fall in prices.” (Clarke and Prentice 2012, p. 303. [abstract of the article]) The economists conclude:

[t]hat increased competition and price cuts are possible and this would, if left unaddressed, increase cigarette consumption. However, price falls on legal cigarettes can be readily offset by excise tax increases.” (Clarke and Prentice 2012, p. 315.)

What this means is that had there been *only* tax increases and *no* plain packaging requirement, cigarette prices would have decreased less (or increased more) and *consumption would have decreased more*. This suggests that the plain packaging legislation is not able, by itself, to reduce tobacco consumption. In the existing literature, a minority of articles thus diverge in their evaluation of the impact of plain packaging, supporting the *existence* of an impact, but concluding that its *direction* is toward more consumption, not less. We will have to wait for more data and research to confirm that plain packaging has led to lower prices for tobacco products. Meanwhile, the bulk of the current evidence presented leans toward less consumption.

## What Is the Current State of the Debate?

The debate between academics over the impact of plain packaging is far from over. With new experiments on the way in other countries, the Australian plain packaging policy will no longer be the only source of data. Even in Australia, new data will become available over time, allowing to better gauge the impact of packaging changes. Arguments will most likely continue for years to come.<sup>35</sup>

For the moment, Chipty’s econometric estimate is still the best available, despite an interesting criticism by Professor Davidson about the sensitivity of trends with respect to the choice of starting and ending dates.

To summarize the conclusions from the existing literature on the smoking rate and the effects of plain packaging, here are five main points:

34. According to *Forbes*, the Apple brand name is worth \$154.1 billion; McDonald’s \$39.1 billion; Marlboro, \$21.9 billion (*Forbes* 2016), etc. <http://www.forbes.com/powerful-brands/list/>

35. The documentation process for this *Research Paper* occurred mostly in April 2016, with some additional documentation in the following weeks.

1. The effect of plain packaging combined with new and enhanced graphic health warnings is likely to be a statistically significant decline in the smoking rate.
2. Since the two measures were rolled in together and their individual impact is impossible to isolate, the impact of plain packaging is not yet known. From the existing literature on its mechanisms, plain packaging is more likely than not to have caused a decline in the smoking rate in Australia after its implementation in 2012.
3. The best estimate of the *amplitude* of the impact from the combined packaging measures is a reduction of 0.55 percentage points. The downward trend in the smoking rate explains about three quarters of the declining smoking rate in the months after the implementation of the packaging changes. Trend lines are sensitive to start and end points.
4. Other policies, like higher taxes, are most probably more effective than plain packaging if they can be effectively enforced.
5. There are some dissenting voices about the *direction* of plain packaging's impact on the smoking rate, possibly caused by downtrading. Further research is needed in settling this question, and to settle the question of the *amplitude* of the impact.

All of these considerations suggest caution in drawing strong conclusions about the effectiveness of plain packaging. The *Regulatory Burden Measurement & Analysis of Costs and Benefits* carried out by consultant Siggins Miller and presented as an annex to the main document of the *Post-Implementation Review* admits that such evidence is ultimately lacking: "Despite the above evidence that smoking prevalence and consumption of tobacco products have fallen since the introduction of the [plain packaging] measure, a number of limitations made it difficult to attribute this decline solely to [this] measure." (Australian Government 2016c, p. 19.)

Finally, the formal causality linking plain packaging and its results has yet to be established. Citing a number of researchers, Professor Neil McKeganey, founder of the Centre for Drug Misuse Research at the University of Glasgow, and Dr. Christopher Russell, a psychologist and senior fellow at the Centre, express serious doubts about the evidence supporting many tobacco control policies, including plain packaging:

In the face of what seems likely to be the further extension of the plain packaging policy beyond Australia, Ireland, and the United Kingdom, there

has always been the necessity to ensure that high quality research is being planned and conducted to evaluate the effectiveness of plain packaging in reducing smoking prevalence in a given population set against any unintended health, social and economic consequences. Although seemingly obvious to state, we must be mindful that evidence of changes in smoking prevalence do not permit conclusions about the causes of such changes, and that only research that has been designed to quantify the causal role of various factors can inform conclusions about the role of plain packaging. We must be mindful that no such research of this kind has yet been reported, and so no person has an evidence base from which to contend that plain packaging has reduced or increased smoking in any jurisdiction. (McKeganey and Russell 2015, p. 546-547.)

**"Davidson asks why Chipty did not run an econometric test to determine whether or not January 2013 marked a structural break in the previous trend—a standard procedure for this sort of analysis."**

The logical explanation linking the mechanisms by which plain packaging may influence smoking behaviour is not in itself sufficient to prove a causal relationship. This does not mean that plain packaging does not work. It does not mean that we cannot reasonably assume such a relationship. It only means that the scientific community has yet to reach a clear conclusion.

### **Specific Worry about Health Canada's Tender for a Cost-Benefit Analysis**

Health Canada has published a tender for a cost-benefit analysis, but its terms of reference suggest some troubling shortcomings. Health Canada's call for tenders seems to define costs and benefits in a restrictive way compared to how standard cost-benefit analysis would define them (Health Canada 2016c, pp. 41-43). Regarding the benefits of plain packaging, the call states:

The purpose of this task in the analysis is to research, document and establish a theoretical framework that can support the hypothesis/assumption that exposure to standardized packaging is linked

to a decline in smoking risks, and is particularly effective in reducing the appeal of tobacco products among youth smokers. (Health Canada 2016c, p. 43.)

In scientific jargon, the phrase “can support the hypothesis/assumption” implies that the analysis could also disprove this hypothesis, whereas in vernacular terms, “support” lacks the objectivity required for such an analysis. Hopefully, Health Canada has made the consultant aware of the objectivity required. The Canadian government should make sure that its cost-benefit analysis follows standard economic concepts and methods of cost-benefit analysis.

## 2.3 The Impact on the Illegal Trade

The conclusion on the general smoking rate constitutes the main contention of plain packaging’s impact, but it is only one of the many sides of the debate. The Australian experiment with plain packaging also raises questions about its impact on illegal<sup>36</sup> markets (smuggling and illegal domestic production). As a high-ranking Australian Border Force officer said regarding organized crime’s involvement in cigarette smuggling, the “sheer size of the profits” makes it attractive to these criminals (*The Australian* 2015). The enforcement challenge is to make sure to counterbalance the additional incentive provided by the adoption of plain packaging (and graphic health warnings, raised taxes, or other regulations).

A statistic widely echoed by the popular media is that according to the Australian Treasury Department, which collects tobacco taxes and customs duties (“tax clearances” in Australian terminology), “3.4% fewer cigarettes were sold [in 2013] than 2012.” (Quoted in Davidson 2016b, p. 9.) The government later recognized that this data was meaningless. The figure for the 2012 receipts did not include refunds due on overpaid excise tax and duties for branded cigarettes (some duty-paid, branded-pack tobacco had to be destroyed around the cut-off date of December 2012 for plain packaging) and the refunds were only processed and accounted for in 2013. This artificially pushed up the apparent receipts of 2012 while underestimating the 2013 receipts. When this refund delay is taken into account, it appears that tobacco tax and duty receipts *increased* in 2013 (Davidson 2016b p.11).

36. Illegal markets are often referred to as “illicit” markets. The term “illegal” is used here because it likely conveys less of a moral connotation than “illicit,” and morally neutral terms are preferable when carrying out positive economic analysis.

The government now cites survey data according to which the proportion of illegal tobacco would have been only 3.6% in 2013 (Australian government 2016, pp. 52-53). It is true that the isolation of the Australian market increases the cost of smuggling in Australia (Clarke and Prentice 2015, p. 316) compared to, say, Canada or European countries.

On the basis of the Siggins Miller consultant’s report it commissioned (Australian Government 2016c) and some articles published in public health journals, the government argues that “the impact of tobacco plain packaging on changes in the illicit tobacco market in Australia has not been substantive, if there has been any impact at all.” (Australian Government 2016, p. 53.)

**“There is a disconnect between what the government and public-health studies measure on the one hand, and actual quitting and smoking prevalence on the other.”**

A KPMG report, commissioned by tobacco manufacturers and based on opinion surveys and analyses of discarded cigarette packs, claim that the consumption of illegal tobacco has increased from 11.5% of total consumption in 2012 to 14.5% in 2014 (KPMG 2015, pp. 6, 9, and *passim*).<sup>37</sup> The results appear valid and enlightening, but the KPMG report itself contains a warning that seriously undermines the credibility of the results.<sup>38</sup>

Illegal markets are intrinsically difficult to measure. With time and more data, the situation of contraband and illegal manufacturing in Australia will be more apparent. Meanwhile, theoretical hypotheses linking plain packaging to illegal markets exist but cannot be fully validated or refuted.

This is the case for the hypothesis about downtrading as one path to contraband. If consumers are encouraged to downtrade to lower-priced cigarettes (Kelly-Gagnon 2011), illegal ones offer an even cheaper alternative. Despite higher risks, illegal producers and importers can

37. Illegal (“illicit”) tobacco is defined as contraband or counterfeit cigarettes, as well as (mostly contraband) “unbranded” tobacco products, that is, loose tobacco in bags or tubes. Counterfeit cigarettes, where brand names and packages are imitated, are estimated to be only 0.3% of the illegal market. See KPMG (2015), p. 29 and *passim*.

38. KPMG’s warning states that its report has been prepared “to meet specific terms of reference” from its sponsors and “should not therefore be regarded as suitable to be used or relied on by any other person or for any other purpose.” (KPMG 2015, p. 1).

charge lower prices because they avoid not only tobacco-specific regulations but also taxes and other business regulations.

Gerlinde Berger-Walliser and Robert Bird, two business professors,<sup>39</sup> suggest another path to increased demand for illegal cigarettes. If consumers like nicely branded packs, some may prefer illegal cigarettes with an unknown brand name and no ugly health warnings to legal ones with no brand design and repulsive health warnings:

Finally, the debranding that plain packaging imposes might make illicit whites the only packs with branding. These illicit whites are manufactured legally but are then transported and sold illegally in their target markets. This would leave the advantages of cigarette branding in the hands of illicit manufacturers, who are not subjected to minimal, if any, standards and risk exposing consumers to cigarettes even more dangerous than their legal counterparts.<sup>40</sup> (Berger-Walliser and Bird 2013, pp. 1058-1059.)

This argument is reinforced by an experimental auction realized by Rousu and Thrasher (2013). The study shows that people are quite responsive to changes in packaging, thus providing encouraging evidence for plain packaging at first glance. The experiment found that smokers have a lower demand (that is, they bid lower) for cigarette packs that have the most repulsive health warnings and—somewhat less decisively—that are plain packaged. Nonetheless, if this is true, it is theoretically possible that a proportion of smokers turn toward illegal markets where more attractive packs are available.

If reliable data is made available in the future, these theories will be put the test. Until then, it is best not to pass judgment on the level of activity in illegal tobacco markets due to the level of uncertainty. This debate is also less relevant regarding the situation in other countries because of the remoteness of Australia and its insularity.

## 2.4 The Moral Issues Surrounding Plain Packaging

Implementing plain packaging in Canada would add to an already heavy tax and regulatory burden. The regula-

tion of tobacco products has increased over time, while smoking prevalence has been on a downward trend for decades. Public health advocacy groups always push for further and more stringent measures. Although there is also an attitudinal evolution in society about what can be imposed on tobacco and smokers, there is a danger that if plain packaging fails to meet its official objective, it will give rise to a well-known phenomenon in government intervention. Instead of abandoning failed policies, new interventions are introduced, not to replace the failed measures but to be piled on top of them.

**“With new experiments on the way in other countries, the Australian plain packaging policy will no longer be the only source of data. Even in Australia, new data will become available over time.”**

Professor Gerard Hastings, for example, has written that “plain packaging is beginning to deliver on its promise, and an important step forward, but it is still only part of the solution.” (Hastings 2015, p. ii2.) Lencucha *et al.* (2015) wrote that the cigarette package in Australia was “one of the remaining vehicles of product promotion.” What are the other ones? Are cigarettes themselves to be made ugly, coloured so as to provoke disgust, as ridiculous as this idea sounds right now? How far down this road is the government prepared to travel?

Another danger is that if plain packaging becomes an accepted norm in the tobacco industry, it will likely be imposed on other industries. Some proposals to this effect have already been suggested regarding alcohol, sugary drinks, children’s toys, computer games, and fast food (Davidson and de Silva 2016, p. 1; Snowdon 2014, p. 21; Kerr 2016).

### Regulation Should Not Be the Default Option

This raises the question of a regulation’s legitimacy. When there are clear and important costs on one hand, and significant limitations remain regarding what the scientific community can say about the impacts of plain packaging on the other, should a regulation be adopted “just in case” the policy works? Or should government refrain from adopting a regulation with such uncertain results?

39. Rousu and Thrasher indicate that their study was funded by the Robert Wood Johnson Foundation, which is openly involved in the anti-smoking movement.

40. “Illicit whites” are cigarettes produced legally in a foreign country but designed exclusively for smuggling (Berger-Walliser and Bird 2013, p. 1051).

One regulatory approach has been called “the Lalonde doctrine,” after a 1974 booklet published by the federal Department of National Health and Welfare (as it was then called) and signed by then-Minister Marc Lalonde (Lalonde 1974). The chapter entitled “Science Versus Health Promotion” argued that “[t]he spirit of inquiry and skepticism, and particularly the Scientific Method, so essential to research, are, however, a problem in health promotion. The reason for this fact is that science is full of ‘ifs’, ‘buts’ and ‘maybes’ while messages designed to influence the public must be loud, clear and unequivocal.” The politician explained that “many of Canada’s health problems are sufficiently pressing that action has to be taken on them even if all the scientific evidence is not in.” (Lalonde 1974, p. 57.)

**“The Australian experiment with plain packaging also raises questions about its impact on illegal markets (smuggling and illegal domestic production).”**

Considering the continued decline in smoking rates and their historically low level, this problem is not objectively “pressing.” Even if it were, the rational approach to regulation is the exact opposite of the Lalonde doctrine, especially in a free society where regulations should not infringe carelessly on personal choice and individual liberty. Before introducing any additional constraint, politicians and bureaucrats should be sure that it works as intended. If they are not sure, they should wait for conclusive evidence. In other words, regulation and control should not be the default option.

In the case of plain packaging, the effects of the measure spurred a debate about infringing upon property rights, which is a legal matter. Proponents of plain packaging contend that “[t]he tobacco package is a type of advertising,” an argument that has apparently been accepted by the courts (Cunningham 2015, p. 9). Yet, there is a qualitative difference between requiring information to be displayed on any package—from ingredients and nutrients in food to health warnings for tobacco products—and mandating a specific form of packaging that reduces to zero brand distinctiveness and business discretion. In the latter case, the packaging of their products, which companies also produce, is no longer theirs in any meaningful sense.

From one perspective, plain packaging might just look like another degree of marketing regulation, overlooking the qualitative difference. At some point, how-

ever, private property rights cease to exist in the economic sense of effective control. From an economic viewpoint, even abstracting from the moral issue, undermining private property rights carries high social costs in terms of economic efficiency and economic growth. As Djankov *et al.* (2003, p. 614) explain, “[a]t least since the 18<sup>th</sup> century, economists have recognized that institutions that secure property rights are conducive to good economic performance.” The cost of seriously infringing on private property rights, including intellectual property, should be taken seriously.

Until now, courts have rejected claims of expropriation filed by the tobacco industry. The fact that the courts do not find a sufficient legal basis to these claims does not mean that plain packaging does not lead to avoidable social losses. It only means that the decision of the courts is that the State has the right to mandate plain packaging at the price of expropriating companies of their intellectual property. This judicial validation only allows these costs to be imposed legally.

## A New Puritanism

Plain packaging attacks the value of brands. It is difficult to escape suspicions of ulterior motives, aside from the official objective of reducing smoking prevalence. McKeganey and Russell (2015) cite Mair and Kierans (2007) who observe “the tendency of tobacco control researchers to see themselves as engaged in a fight against the tobacco industry” and note the danger of “tobacco control policies being passionately advocated by supporters in the face of relative weak evidence as to their beneficial impact on changing individual behavior and reducing smoking prevalence because those policies are congruent with the political commitment to tackle Big Tobacco.” (McKeganey and Russell 2015, pp. 566-567.) It might be the case that plain packaging reduces smoking, but it is certainly the case that it undermines the value of a legal industry, however unpopular or unfashionable.

The whole public health strategy of making cigarette packs unattractive and singling out smoking as bad behaviour, although it avoids total prohibition, still proceeds from a very puritan sentiment. A judging elite is trying to curb individual choice and responsibility to protect people’s health from risks they might take. This moral stance provides a justification for government intervention in our very personal lives, on the grounds of protecting citizens who are deemed irresponsible, which fits the description of a Nanny State perfectly.



This puritan sentiment is especially true for plain packaging. Whereas banning indoor smoking from public spaces was justified by invoking “externalities,” meaning that smoking imposes a cost not only on smokers but on others as well, plain packaging focuses on the very individual relationship between a smoker and the packaging of the product he wants to purchase.

**“It might be the case that plain packaging reduces smoking, but it is certainly the case that it undermines the value of a legal industry, however unpopular or unfashionable.”**

As a general rule, in a civilized society, everything should be permitted unless there is a very good reason for prohibiting it, such as a danger that unwilling individuals will be harmed. Laws restraining individual liberty should also at the very least be based on facts and logic. If the evidence is still lacking, as it is for plain packaging, the normal course of action should be to refrain from legislating.



## BIBLIOGRAPHY

- Australian Government (2006), *Handbook of Cost-Benefit Analysis*, Department of Finance and Administration, January 2006.
- Australian Government (2016), *Post-Implementation Review: Tobacco Plain Packaging*, Department of Health, February 26, 2016.
- Australian Government (2016a), *Study of the impact of the Tobacco Plain Packaging Measure on Smoking Prevalence in Australia, Report of Dr. Tasneem Chipty*, January 24, 2016.
- Australian Government (2016b), *Stakeholder Consultation Report*, by Siggins Miller, September 2015.
- Australian Government (2016c), *Regulatory Burden Measurement & Analysis of Costs and Benefits*, by Siggins Miller, January 2016.
- Australian Government (2016d), *Addendum to Study of the Impact of the Tobacco Plain Packaging Measure on Smoking Prevalence in Australia, Report of Dr. Tasneem Chipty*, May 19, 2016.
- Australian Government (2016e), *Cost-Benefit Analysis Guidance Note*, Office of Best Practice Regulation, February 2016.
- Baker, Al, et al. (2015), "Beyond the Chokehold: The Path to Eric Garner's Death," *New York Times*, June 13, 2015.
- BATA (2015), British American Tobacco Australia's Submission to the Senate Reference Committee Inquiry into Measures Introduced to Restrict Personal Choice "For The Individual's Own Good," British American Tobacco Australia, September 18, 2015.
- Barendregt, Jan J., et al. (1999), "When Does Non-Smoking Save Health Care Money?" in Claude Jeanrenaud and Nils Soguel (Eds.), *Valuing the Cost of Smoking: Assessment Methods, Risk Perception and Policy Options* (Boston: Kluwer Academic Publishers, 1999), pp. 75-94.
- Bator, Francis M. (1957), "The Simple Analytics of Welfare Maximization," *American Economic Review* 47:1 (March 1957), pp. 22-59.
- Becker, Gary, and Kevin M. Murphy (1988), "A Theory of Rational Addiction," *Journal of Political Economy* 96:4, pp. 675-700.
- Berger-Walliser, Gerlinde, and Robert C. Bird (2013), "The Impact of Plain Packaging Regulation on Illicit and Non-Illicit Tobacco Products in the European Union," *North Carolina Journal of International Law* 38:4 (Summer).
- Blackwell, Tom (2016a), "Health Canada Looks at Forcing Tobacco Companies to Make Cigarettes Less Addictive," *National Post*, April 20, 2016.
- Blackwell, Tom (2016b), "Liberals Propose Ban on Menthol Cigarettes, Signal Aggressive Anti-Smoking Stance," *National Post*, April 29, 2016.
- Boardman, Anthony E., et al. (2006), *Cost-Benefit Analysis: Concepts and Practice* (Upper Saddle River NJ: Prentice Hall, 2006).
- Brennan, Geoffrey, and James Buchanan (1980), *The Power to Tax: Analytical Foundations of a Fiscal Constitution* (Cambridge, Cambridge University Press).
- CBC News (2015), "Yukon's Size a Factor in Lack of Tobacco Lawsuit Legislation," June 16, 2015.
- CCS (2014), *Cigarette Package Warnings: International Status Report*, 4th Edition (Ottawa: Canadian Cancer Society, 2014).
- CCS (2016), *Plain Packaging – International Overview*, Canadian Cancer Society, January 11, 2016.
- Cancer Council Victoria (2011), *Plain Packaging of Tobacco Products: A Review of the Evidence*, Cancer Council Victoria, May 2011.
- Cancer Council Victoria (2016a), Fact Sheet No. 4: What Is Happening to the Prevalence of Smoking in Australia? Cancer Council Victoria, March 2016.
- Cancer Council Victoria (2016b), Comments on Kaul & Wolf "The (Possible) Effects of Plain Packaging on the Smoking Prevalence of Minors in Australia: A Trend Analysis," Cancer Council Victoria, March 26, 2014.
- Cancer Council Victoria (2016c), Comments on Davidson, S and de Silva, A. Stubbing out the evidence of tobacco plain packaging efficacy: An analysis of the Australian National Tobacco Plain Packaging Survey, Social Science Research Network, Cancer Council Victoria, June 3, 2016.
- Cancer Council Victoria and Social Research Centre (2015), *Australian National Tobacco Plain Packaging*

*Tracking Survey: Technical Report*, Prepared for the Australian Government Department of Health, Cancer Council Victoria and Social Research Centre, March 2015.

Chaloupka, Frank. J., et al. (2015), "An Evaluation of the FDA's Analysis of the Costs and Benefits of the Graphic Warning Label Regulation," *Tobacco Control* 24.

Clarke, Harry, and David Prentice (2012), "Will Plain Packaging Reduce Cigarette Consumption?" *Economic Papers* 31:3 (September 2012), pp. 203-317.

Coase, Ronald H. (1960), "The Problem of Social Cost," *Journal of Law and Economics* 3 (October 1960), pp. 1-44.

Coase, Ronald H. (1968), Letter to Dean Edward W. Barrett, November 25, 1968, Library of Congress, William J. Baroody Papers, 1943-1983, Box 50.

CQCT (2015), Adoption finale du projet de loi 44 sur le tabac: Grande victoire pour la lutte antitabac et pour la santé des Québécois, News Release, Coalition Québécoise pour le Contrôle du Tabac, November 26, 2015.

Croft, Jane (2016), "High Court Rejects Big Tobacco's Appeal against Plain Packaging," *Financial Times*, May 19, 2016.

Crosbie, Eric, and Stanton A. Glantz (2014), "Tobacco Industry Argues Domestic Trademark Laws and International Treaties Preclude Cigarette Health Warning Labels, Despite Consistent Legal Advice that the Argument is Invalid," *Tobacco Control* 23:3.

CTF (1996), *Finances of the Nation 1996* (Toronto: Canadian Tax Foundation).

CTF (2013), *Finances of the Nation 2012* (Toronto: Canadian Tax Foundation).

Cullen, Paul (2015), "European Court of Justice Rules in Favour of Plain Packaging Directive for Cigarettes," *Irish Times*, December 23, 2015.

Cunningham, Rob (2014), "Tobacco Control in Canada," in Mitchell and Voon (2014), pp. 209-234.

Cunningham, Rob (2015), A Province Can Regulate Tobacco Packaging, Coalition Québécoise pour le Contrôle du Tabac, February 17, 2015.

Daudelin, Jean, et al. (2013), *Border Integrity, Illicit Tobacco, and Canada's Security*, Macdonald-Laurier Institute.

Davidson, Mark (2014), "Tobacco Control in Australia: The High Court Challenge to Plain Packaging," in Mitchell and Voon (2014), pp. 258-278.

Davidson, Sinclair (2014), "Blowing Smoke on Plain Packaging," *Quadrant Online*, August 12, 2014.

Davidson, Sinclair (2016a), "Submission to Parliamentary Joint Committee on Law Enforcement Inquiry into Illicit Tobacco," Catallaxy Files, January 2016.

Davidson, Sinclair (2016b), "Submission to the Slovenian Restriction of the Use of Tobacco (Products) and Related Products Act Inquiry," Catallaxy Files, April 2016.

Davidson, Sinclair, and Ashton De Silva (2014), "The Plain Truth about Plain Packaging: An Econometric Analysis of the Australian 2011 Tobacco Plain Packaging Act," *Agenda* 21:1, pp. 27-43.

Davidson, Sinclair, and Ashton De Silva (2016), "Stubbing Out the Evidence of Tobacco Plain Packaging Efficacy: An Analysis of the Australian National Tobacco Plain Packaging Survey," Social Science Research Network, May 17, 2016.

Diethelm, Pascal A., and Timothy M. Farley (2015), "Refuting Tobacco-Industry Funded Research: Empirical Data Shows Decline in Smoking Prevalence Following Introduction of Plain Packaging in Australia," *Tobacco Prevention and Cessation* 1:6 (November 2015), pp. 1-7.

Diethelm, Pascal, and Martin McKee (2015), "Tobacco Industry-Funded Research on Standardized Packaging: There Are None So Blind as Those Who Will Not See!" *Tobacco Control* 24 (2015), pp. e113-e115.

Djankov, Simeon, et al. (2003), "The New Comparative Economics," *Journal of Comparative Economics* 31:4, pp. 595-616.

Eriksen, Michael, et al. (2012), *The Tobacco Atlas*, 4<sup>th</sup> Edition (Atlanta: American Cancer Society).

*Forbes* (2016), "The World's Most Valuable Brands, On-line List."

Gilmore, Jason (2002), *Report on Smoking Prevalence in Canada*, Statistics Canada, Catalogue no. 82F0077XIE.

Government of Ontario (2013), *A Prosperous and Fair Ontario: Budget Papers, 2013 Ontario Budget*.

Government of Quebec (2014), *Budget 2014-2015: Budget Plan*, Department of Finances, June 4, 2014.

- Hastings, Gerard B. (2012), "Why Corporate Power Is a Public Health Priority," *BMJ* 345 (August 2012), pp. 28-29.
- Hastings, Gerard B., and Crawford Moodie (2015), "Death of a Salesman," *Tobacco Control* 24, pp. ii1-ii2.
- Health Canada (2016a), Request for Proposals: Cost-Benefit Analysis of the Plain Packaging of Tobacco Products, March 11, 2016.
- Health Canada (2016b), Amendment No. 001 to the Request for Proposal: Cost-Benefit Analysis of the Plain Packaging of Tobacco Products, March 23, 2016.
- Health Canada (2016c), Request for Proposals (RFP): Cost-Benefit Analysis of the Plain Packaging of Tobacco Products, Full solicitation document), March 11, 2016.
- Health Canada (2016d), Strong Foundation, Renewed Focus - An Overview of Canada's Federal Tobacco Control Strategy 2012-17.
- High Court of Australia (2012), *JT International SA v Commonwealth of Australia; British American Tobacco Australasia Limited & ORS v Commonwealth of Australia*, October 5, 2012.
- Hurst, Daniel (2015), "Australia Wins International Legal Battle with Philip Morris over Plain Packaging," *The Guardian*, December 17, 2015.
- Industrial Economics (2009), *Economic Evaluation of Health Canada's Proposal to Amend the Tobacco Product Information Regulations*, Prepared for Health Canada.
- Irvine, Ian, and William Sims (2012), *A Taxing Dilemma: Assessing the Impact of Tax and Price Changes on the Tobacco Market*, Commentary No. 350, C.D. Howe Institute, May 2012.
- Johansson, Per-Olov (1991), *An Introduction to Modern Welfare Economics* (New York: Cambridge University Press).
- Kaul, Ashok, and Michael Wolf (2014a), "The (Possible) Effect of Plain Packaging on the Smoking Prevalence of Minors in Australia: A Trend Analysis," University of Zurich Working Paper No. 149, May 2014, available on the website of the Social Science Research Network.
- Kaul, Ashok, and Michael Wolf (2014b), "The (Possible) Effect of Plain Packaging on Smoking Prevalence in Australia: A Trend Analysis," University of Zurich Working Paper No. 165, June 1 2014, available on the website of the Social Science Research Network.
- Keer, Christian (2016), "Australia's Warning to Canada: Plain Tobacco Packages Can Backfire," *National Post*, June 7, 2016.
- Kelly-Gagnon, Michel (2011), "Plain Packaging and its Unintended Consequences," Economic Note, Montréal Economic Institute, August 2011.
- Klein, Richard (2014), "Nanny Bloomberg," *Society* 51:3 (May/June, 2014), pp. 253-257.
- KPMG (2015), *Illicit Tobacco in Australia, 2014 Full Year Report*, March 31, 2015.
- Laffer, Arthur B. (2014), *Handbook of Tobacco Taxation: Theory and Practice* (San Francisco: The Laffer Center at the Pacific Research Institute).
- Lalonde, Marc (1974), *A New Perspective on the Health of Canadians: A Working Document* (Ottawa: Department of National Health and Welfare, 1974).
- Laverty, Anthony, et al. (2015), "Use and Abuse of Statistics in Tobacco Industry-Funded Research on Standardised Packaging," *Tobacco Control* 24, pp. 422-424.
- Lemieux, Pierre (2000), "The Economics of Smoking," *Library of Economics and Liberty*, June 28, 2000.
- Lemieux, Pierre (2001), "The World Bank's Tobacco Economics," *Regulation* 24:3 (Fall 2001), pp. 16-19.
- Lemieux, Pierre (2004), "The Public Choice Revolution," *Regulation* 27:3 (Fall 2004), pp. 22-29.
- Lemieux, Pierre (2007), *The Underground Economy: Causes, Extent, Approaches*, Montréal Economic Institute, November 2007.
- Le Monde* (2016), "Paquet neutre: la justice européenne rejette le recours des industriels du tabac," May 4, 2016.
- Lencucha, Raphael, et al. (2015), "Tobacco Plain Packaging: Too Hot for Regulatory Chill," Correspondence, *The Lancet* 385 (May 2), p. 1723.
- Luk, Rita, et al. (2009), "Prevalence and Correlates of Purchasing Contraband Cigarettes on First Nations Reserves in Ontario, Canada," *Addiction* 104:3, pp. 488-495.
- Malay Mail Online* (2016), "Reconsider 'Regressive' Plain Packaging Plan, Asean Intellectual Property Body Tells Putrajaya," March 6, 2016.

- Malone, Ruth E. (2013), "Changing Tobacco Control's Policy on Tobacco Industry-Funded Research," *Tobacco Control* 22:1 (January 2013), pp. 1-3.
- Markandya, Anil, and David W. Pearce (1989), "The Social Cost of Tobacco Smoking," *British Journal of Addiction* 84, pp. 1139-1150.
- McKeganey, Neil, and Christopher Russell (2015), "Tobacco plain packaging: Evidence based policy or public health advocacy?" *International Journal of Drug Policy* 26:6, pp. 560-568.
- McQuigge, Michelle (2012), "Canada Packs a Strong Anti-Smoking Message," *thestar.com*, November 14, 2012.
- Mishan, Ezra J. (1988), *Cost-Benefit Analysis: An Informal Introduction* (London: Unwin-Hyman).
- Mitchell, Andrew D., and Tania Voon, Eds. (2014), *The Global Tobacco Epidemic and the Law* (Cheltenham UK: Edward Elgar Publishing Limited).
- Moe, Terry (1997), "The Positive Theory of Bureaucracy," in Mueller (1997), pp. 455-480.
- Mueller, Dennis C. (Ed.), *Perspectives on Public Choice: A Handbook* (Cambridge: Cambridge University Press, 1997).
- Nas, Tevfik F. (1996), *Cost-Benefit Analysis: Theory and Applications* (Thousand Oaks CA: Sage Publications).
- NCACT (2013), *Contraband Tobacco in Canada: An Assessment of the Fifth Anniversary of the RCMP's Contraband Tobacco Enforcement Strategy*, National Coalition Against Contraband Tobacco, May 7, 2013.
- NCACT (2014), *Contraband Tobacco Monitoring Survey Results, Ontario, October 2013-October 2014*, National Coalition against Contraband Tobacco, November 28, 2014.
- Ng, Marie, et al. (2014), "Smoking Prevalence and Cigarette Consumption in 187 Countries, 1980-2012," *JAMA* 311:2, pp. 183-102.
- NSRA (2013), *Cigarette Prices in Canada, Non-Smokers' Rights Association*, March 2013.
- NSRA (2014), *Cigarette Prices in Canada, Non-Smokers' Rights Association*, April 2013.
- NSRA (2015b), *Cigarette Prices in Canada, Non-Smokers' Rights Association*, April 2015.
- NSRA (2016a), *Cigarette Prices in Canada, Non-Smokers' Rights Association*, April 19, 2016.
- NSRA (2016b), *Tobacco-Related Litigation in Canada, Non-Smokers' Rights Association*, March 2016.
- Office of the Prime Minister, Minister of Health Mandate Letter (2015).
- Peck, Richard, et al. (2000), "A Welfare Analysis of Tobacco Use," in Prabhat Jha and Frank Chaloupka (Eds.), *Tobacco Control in Developing Countries*, Published on behalf of the Human Development Network, the World Bank, and the Economics Advisory Service, World Health Organization (Oxford: Oxford University Press), pp. 131-151.
- PSC (2011), *Estimating the Economic Value of Reducing Smoking Rates in Canada to 18% ... and the Cost of Failing to Achieve the 12% Goal*, Physicians for a Smoke-Free Canada, March 2011.
- PSC (2015), *Tax Revenues from Tobacco Sales: Provincial and Federal Tax revenues, 1990-1991 to 2014-2015*.
- Ram, Aliya (2015a), "Tobacco Giants Launch UK Plain Packaging," *Financial Times*, December 8, 2015.
- Ram, Aliya (2015b), "European Court Paves the Way for Plain Cigarette Packaging," *Financial Times*, December 23, 2015.
- Raynauld, André, and Jean-Pierre Vidal (1992), "Smokers' Burden on Society: Myth and Reality in Canada," *Canadian Public Policy* 18:3, pp. 310-317.
- RCMP (2008), *Contraband Tobacco Enforcement Strategy 2008*, Royal Canadian Mounted Police.
- RCMP (2013), *Contraband Tobacco Enforcement Strategy: Third Progress Report (2010-2011)*, Royal Canadian Mounted Police, February 2013.
- Rehm, Jürgen (2006), *The Cost of Substance Abuse in Canada 2002*, Canadian Centre on Substance Abuse, 2006.
- Reid, Jessica, et al (2012), *Tobacco Use in Canada: Patterns and Trends*, Propel Centre for Population Health Impact, University of Waterloo.
- Reid, Jessica, et al (2015), *Tobacco Use in Canada: Patterns and Trends*, Propel Centre for Population Health Impact, University of Waterloo.

- Reuter, Peter, and Malay Majmunbar (2015), *Understanding the U.S. Illicit Tobacco Market* (Washington DC: National Academic Press).
- Revenu Québec (2011), *Mémoire présenté à la Commission des finances publiques sur l'étude des mesures pour contrer la consommation du tabac de contrebande*, September 2011.
- Rousu, Matthew C, and James F. Thrasher (2013), "Demand Reduction from Plain and Pictorial Cigarette Warning Labels: Evidence from Experimental Auctions," *Applied Economic Perspectives and Policy* 35:1, pp. 177-184.
- Schleifer, Andrei (2005), "Understanding Regulation," *European Financial Management* 11:4, pp. 439-451.
- Scollo, Michelle, et al. (2012), *Tobacco Australia: Facts and Issues*, 4<sup>th</sup> Edition (Melbourne: Cancer Council Victoria).
- Scollo, Michelle, et al. (2015), "The Advertised Price of Cigarette Packs in Retail Outlets across Australia Before and After the Implementation of Plain Packaging: A Repeated Measures Observational Study," *Tobacco Control* 24, pp. ii82-ii89.
- SLG Economics, *Review of Evidence on the Introduction of Plain Packaging of Tobacco Products in Australia*, June 2015.
- Sloan, Frank A., et al. (2004), *The Price of Smoking* (Cambridge MA and London UK: MIT Press).
- Smith, Adam (1776), *The Wealth of Nations* (Indianapolis: Liberty Fund, 1979).
- Snowdon, Christopher (2014), *Plain Packaging – Questions that Need Answering*, Institute of Economic Affairs, Briefing 14:02.
- Spiegel, Peter, and Paul McClean (2016), "EU's Highest Court Upholds Tougher Cigarette Pack Rules," *Financial Times* (May 4, 2016).
- Stoddard, Greg L., et al. (1986), "Tobacco Taxes and Health Care Costs: Do Canadian Smokers Pay Their Way?" *Journal of Health Economics* 5:1, pp. 63-80.
- The Australian* (2015), "Police Bust Cigarette Smuggling Syndicate," September 30, 2015.
- The Gazette* (2016), "Smokers Beware: New Rules Come into Effect Thursday," May 25, 2016.
- TFITP (2009), *Report on the Status of the Contraband Tobacco Situation in Canada*, Task Force on Illicit Tobacco Products, Public Safety Canada, July 2009.
- Tobacco Atlas* (2016), Fact Sheet on Canada.
- TPP (2016), Text of the Agreement, Global Affairs Canada, Trans-Pacific Partnership.
- Viscusi, W. Kip (2016), "Risk Beliefs and Preferences for E-cigarettes," *American Journal of Health Economics* 2:2, pp. 213-240.
- Warner, Kenneth E. (1998), "The Economics of Tobacco and Health: An Overview," in Iraj Abedian et al. (Eds.), *The Economics of Tobacco Control: Towards an Optimal Policy Mix* (Cape Town: University of Cape Town, 1998), pp. 57-75.
- Warner, Kenneth E. (2013), "An Endgame for Tobacco?" *Tobacco Control* 22 (Supplement 1) (May 2013), pp. 13-15.
- White, Victoria, et al. (2015), "Has the Introduction of Plain Packaging with Larger Graphic Health Warnings Changed Adolescents' Perceptions of Cigarette Packs and Brands," *Tobacco Control* 24, pp. ii42-ii49.
- White, Vicki, and Tahlia Williams (2015), Australian Secondary School Students' Use of Tobacco in 2014, Tobacco Control Task Force, Australian Government Department of Health (October 2015).
- WHO (2003), WHO Framework Convention on Tobacco Control, World Health Organization.
- WHO (2013), WHO Framework Convention on Tobacco Control: Guidelines for Implementation, World Health Organization.
- WHO (2015), Press Statement: First Ministerial Meeting on Plain Tobacco Packaging, World Health Organization, July 20, 2015.
- WHO (2016), World No Tobacco Day, 31 May 2016: Get Ready for Plain Packaging, News Release, May 31, 2016.
- Wintrobe, Ronald (1997), "Modern Bureaucratic Theory," in Mueller (1997), pp. 429-454.









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