

Submission to the Senate Inquiry into
The effect of red tape on tobacco retail

Sinclair Davidson

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As soon as we surrender the principle that the state should not interfere in any questions touching on the individual's mode of life, we end by regulating and restricting the latter down to the smallest detail.

- Ludwig von Mises

Introduction

Combustible cigarettes are being subject to technological disruption – with the effect of making nicotine consumption a lot less risky than has historically been the case. In turn, this implies that tobacco control policy is being disrupted and, more importantly, the tobacco control industry is being disrupted too. As such we can expect to observe attempts to regulate alternate nicotine delivery mechanisms, such as electronic cigarettes (vaping in common parlance), much like combustible cigarettes, and not like other nicotine delivery technologies such as nicotine gum and lozenges.

To the extent that it is now widely accepted that the health risks associated with, say, electronic cigarettes are much lower than combustible cigarettes it is clear that regulating the two products (delivery technologies) in a like manner would be inappropriate. This regulatory approach would not benefit nicotine consumers, nor contribute to government revenue, nor would it target harm. The only beneficiaries of such a regulatory approach would be the tobacco control industry – it would in effect be a subsidy to those individuals and organisations that earn a living, or justify their existence, from tobacco control activities.

The primary role of regulation should be to target harm. Nobody would ever express concern about the airline industry or automobile industry making its product safer – neither should the tobacco industry be criticised for making its product safer. The disorder costs associated with nicotine consumption relate to asymmetric information and the various externalities and internalities that result from combustible cigarettes. The disorder costs associated with alternate nicotine delivery mechanisms are lower than those associated with combustible cigarettes implying a different approach to regulation and a much lower level of regulation.

In this submission I set out an institutional theory of tobacco control. I then discuss the Australian prohibition on alternate nicotine delivery systems – such as electronic cigarettes and the like. This prohibition results in smokers consuming nicotine at a higher personal health risk that might otherwise be the case, and also imposing higher costs on the public health system. These health risks and costs are more likely to be incurred by individuals that the Australian Bureau of Statistics describes as being “disadvantaged”.¹

Rates of smoking are also considerably higher amongst people living in areas of Australia with the most disadvantage. In 2014-15, 21.4% of people living in areas of most disadvantage (first quintile) smoked daily, compared with 8.0% of people living in areas of the least disadvantage (fifth quintile).

The adverse impact on health this prohibition creates, particularly for the low-skilled and disadvantaged, brings this policy within the purview of the inquiry.

An Institutional Theory of Tobacco Control

The tobacco control lobby views tobacco (combustible cigarettes) consumption from a disease perspective. The World Health Organization, for example, talks about the “Global Tobacco Epidemic”. From this perspective it may be entirely sensible to wish to totally eliminate or eradicate tobacco consumption. This is, however, a normative assessment. Economics strives to be a positive science that investigates human action and choice. It is only through a careful analysis of incentives,

¹ Australian Bureau of Statistics, 2015, National Health Survey: First Results 2014-15, Cat. 4364.0.55.001.

constraints, costs, and benefits that choices and decisions can be fully understood. Economics provides a coherent and consistent framework to investigate the totality of any policy choice or decision. It provides, in principle, for a full accounting of the costs and benefits under differing institutional frameworks of different choices and decisions.

From an economic perspective, tobacco consumption is much like consuming any other good or service. There may be an informational asymmetry that results in market failure associated with the consumption of tobacco, but once that information asymmetry is overcome there is no further basis, in *economic* theory, for government intervention. Any additional tobacco control policies are likely to impose unnecessary costs on the economy and distract attention from the primary policies that are likely to be successful.

While the tobacco control lobby may wish to reduce tobacco consumption to zero, from an economic perspective that may not be an appropriate policy objective. The point being that reducing tobacco consumption to zero may reduce the health costs associated with tobacco consumption, but may also impose higher social costs or economic costs.

In a series of papers Andrei Shleifer (and various co-authors) has developed an institutional theory that posits (efficient) regulation as emerging from societal trade-offs between the costs of private disorder, and the costs of government dictatorship.² “Disorder” relates to the ability of private individuals to inflict harm on others, while “Dictatorship” relates to the ability of government and its bureaucrats to inflict harm on citizens. Behavioural responses to government intervention should also be classified as “Dictatorship” costs.

Depending on the relative costs of disorder and dictatorship, different regulatory approaches are more or less appropriate in different circumstances, for different industries, and for different goods and services. What is important to recognise is that government has a role to play in reducing private disorder when private solutions are unavailable, or too costly; subject, of course, to not imposing too high dictatorship costs itself.

This institutional model of regulation, following in the “new comparative economics” literature (see Djankov et al 2003), develops the notion of an “Institutional Possibility Frontier” that maps the various trade-offs in any set of institutions (which could be regulations or policies) aimed at social control in pursuit of some socially desirable end. These socially desirable ends could include, for example, Business Regulation to address negative externalities, Productivity reform, Environmental Policy, Media Regulation, or Innovation Policy.³ In this submission I apply the same model to Tobacco Control.

² Djankov, S., E. Glaeser, R. La Porta, F. Lopez de Silanes, and A. Shleifer, 2003, The new comparative economics, *Journal of Comparative Economics*, 31(4): 595-616.

Shleifer, A. 2005, Understanding regulation, *European Financial Management*, 11: 439 – 451.

³ Berg, C. and S. Davidson, 2016, Section 18C, Human Rights, and Media Reform: An Institutional Analysis of the 2011–13 Australian Free Speech Debate, *Agenda: A Journal of Policy Analysis and Reform*, 23(1): 5 – 30.

Davidson, S. 2013. Productivity enhancing regulatory reform, In *Australia adjusting: Optimising national prosperity*, – the Committee for Economic Development of Australia.

Davidson, S. 2014. Environmental protest: an economics of regulation approach, *Australian Environment Review*, 29(10): 283 – 286.

Davidson, S. and J. Potts, 2016a, The social costs of innovation policy, *Economic Affairs*, 36(3):282 – 293.

Davidson, S. and J. Potts, 2016b, A New Institutional Approach to Innovation Policy, *Australian Economic Review Policy Forum: Research and Innovation*, 49(2): 200 – 207.

The Djankov et al. model frames social losses due to state expropriation and private expropriation on the x and y axes of Figure 1 below, and with four institutional orderings for social control (private orderings, independent judges, regulatory state, and state ownership) mapped along the Institutional Possibilities Frontier (IPF). The position and shape of the IPF is given by the levels of “civic capital” in the relevant society and the relative transactions and governance costs of the various institutions. A 45-degree line represents points of total loss minimization and the equilibrium tangency with the IPF therefore represents an “efficient” institutional solution.

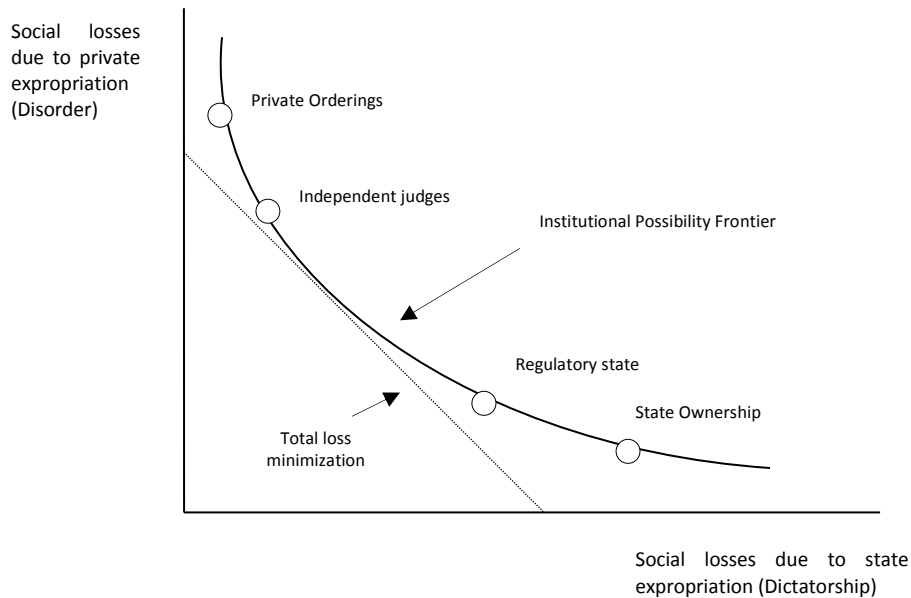


Figure 1. Institutional Possibilities
Source: Djankov et al 2003

Recognising that there are no costless solutions to societal problems or social control is the main feature of this model. It forces analysts to think carefully about the various trade-offs and opportunity costs that any institution of social control imposes. This model makes it very clear that there is no such thing as a perfect or costless institutional form, and that any institution represents some set of compromises between the risks of private expropriation (net of private benefits) and the risks of state expropriation (also net of possible benefits).

In figure 2 I apply the model to Tobacco Control.

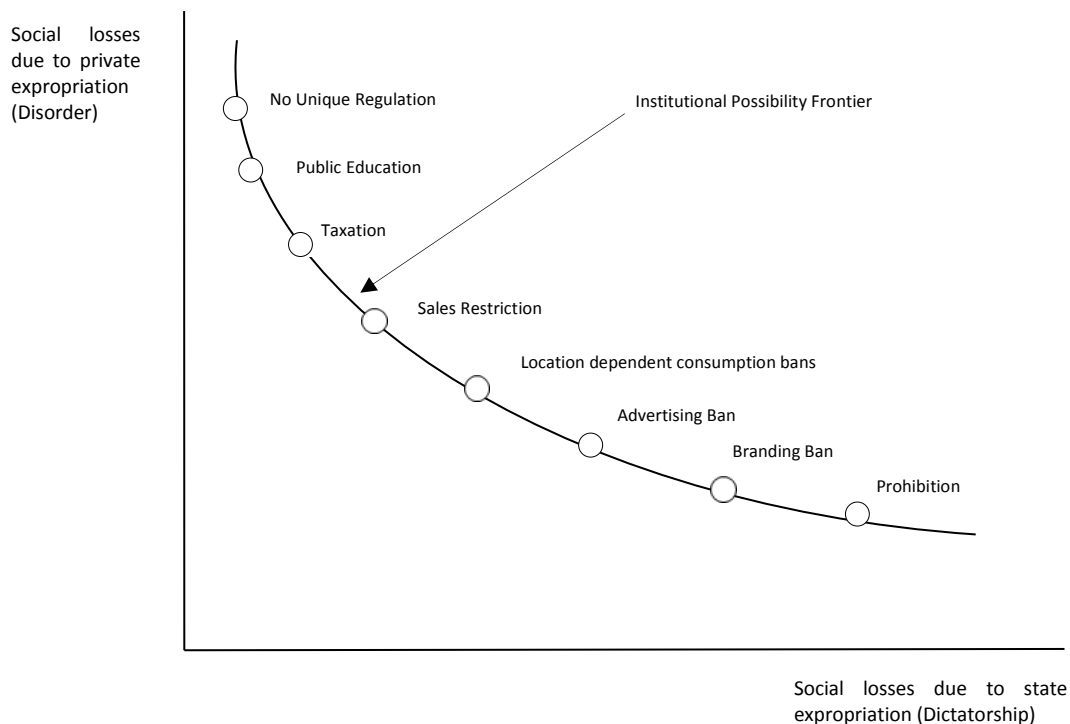


Figure 2: Institutional Possibilities of Tobacco Control

In the first instance we can imagine a situation where there is no unique tobacco control regulation. In this situation the manufacture and sale of tobacco products would be simply regulated as any other generic good or service in the economy. Given the externalities and internalities associated with tobacco consumption, the Disorder costs associated with this regulatory regime could be high.

Tobacco consumption is associated with several medical conditions, including various cancers, heart disease, and emphysema. Consumers may suffer from information asymmetry; either under-estimating the health risks of tobacco consumption generally, or under-estimating the probability of adverse health consequences for themselves. Furthermore, some tobacco consumers may have very high discount rates and undervalue the future costs of their tobacco consumption relative to their current consumption. These considerations can be described as being internalities.

Externalities occur when tobacco consumers impose costs of others through, for example, second-hand smoke. Given the potential for externalities and internalities associated with tobacco consumption a *prima facie* case can be made for government intervention. In the very first instance a government information campaign as to the dangers of tobacco consumption would very likely lower the disorder costs associated with tobacco consumption but would not increase the dictatorship costs associated with government intervention by very much.

Two forms of taxation need to be distinguished. In the first instance tobacco could (and should) be subject to Ramsey taxation. The so-called Ramsey Rule suggests that goods and services should be taxed in inverse proportion to their elasticity of demand. To the extent that tobacco products have a somewhat inelastic demand curve, they should be taxed at higher rates. This is a straight forward revenue raising exercise. Any use of taxation to discourage tobacco consumption would constitute a Pigouvian tax. This is the second form of taxation that we need to consider. While Pigouvian taxation may well raise substantial revenue, the objective of the tax involves social engineering. Here the government wishes to impose a different set of preferences on society than those the society has freely chosen. Here the costs of dictatorship start becoming large – not only in terms of foregone

consumer utility but also in terms of behavioural responses to potentially excessive Pigouvian taxes. The most obvious example would be smuggling.

Up to this point, the Tobacco Control measures have been associated with low social costs of dictatorship. The provision of information is a public service and the use of the price mechanism to ration tobacco consumption does not necessarily involve the coercive powers of the state.

Sales restrictions would represent the first major use of coercive state power. Here the state would restrict the sale and consumption of tobacco products to, say, individuals over the age of 18, or restrict where tobacco products may be sold. To ensure compliance the state needs to engage in acts of surveillance and entrapment. While these measures may have the effect of reducing tobacco consumption amongst target groups (for example, underage smoking) it also may also reduce the profitability of tobacco products, divert law enforcement activity away from violent crime, and impose surveillance costs on law-abiding citizens.

Having first restricted who may consume tobacco products and where they might be sold, the state then restricts where tobacco products may be consumed. It is somewhat ironic that the state has chosen to ban the consumption of tobacco products in private locations before banning the consumption of tobacco products in public locations. Tobacco product consumption has been banned in workplaces, private restaurants, clubs, pubs and the like under the guise that these institutions are “public places” despite the fact that they are very often private property. Such abrogation of private property constitutes a massive incursion of state power into the economy. The state has also begun to ban the consumption of tobacco products on public property (where it does have ownership – but long after banning the consumption of tobacco products in private property). Again the social costs of compliance, surveillance, entrapment, and re-allocation of law enforcement activities constitute major costs.

Having restricted the Who, and Where of tobacco consumption, the state then restricts How tobacco products are marketed through advertising bans. These bans range from bans on advertising in particular media, to bans on advertising of sporting events, to point of display bans, and so on. The costs here include restricting the universe of potential sponsors for major events. While major sporting events continue to receive sponsorship from the alcohol, fast food, and gambling industries, it is also the case that many smaller sporting events are unable to garner sponsorship from either these industries or the tobacco industry. This policy restricts the livelihoods of the advertising industry, restricts the quantum of sponsorship dollars in the economy and imposes compliance, surveillance and entrapment costs on the economy.

Having restricted advertising, bans on branding are an obvious next step. In the first instance naming rights could be limited. Words such as “Light” or “Extra Smooth” or “Low Tar” could be prohibited. In addition a standardised packaging policy could be adopted. In Australia this policy is known as “Plain Packaging”. Dictatorship costs here are very high – this is an abrogation of private property in the form of intellectual property. To the extent that private property rights are perceived to become insecure, the resultant loss of investment flows into the economy could be substantial.⁴

⁴ For evidence that this policy has failed see Davidson, S. and A. de Silva, 2014, The Plain Truth about Plain Packaging: An Econometric Analysis of the Australian 2011 Tobacco Plain Packaging Act, *Agenda: A Journal of Policy Analysis and Reform*, 21(1): 27 – 43 and Davidson, S. and A. de Silva, 2016, Stubbing Out the Evidence of Tobacco Plain Packaging Efficacy: An Analysis of the Australian National Tobacco Plain Packaging Survey, SSRN Working Paper Davidson, available at: <https://ssrn.com/abstract=2780938>.

Finally, there is prohibition. Prohibition can take many forms. For example, the Australian government does not allow the cultivation of tobacco within Australia. Extant tobacco production licences were bought out and no new licences will be issued. The cost here is the loss of economic activity, the potential for permanent job losses in rural areas, the loss of manufacturing capacity and employment, and so on. Alternatively, specific types of tobacco product could be prohibited. Many countries, for example, ban snus or menthol flavoured tobacco products.

Prohibition is associated with a range of costs and adverse consequences. Meadowcroft (2008) has summarised those costs and consequences as follows:⁵

- Prohibition places markets into the hands of criminal enterprises.
- Prohibition increases the risks of already risky activities.
- Prohibition criminalises people who would not otherwise be criminals.
- Prohibition diverts law enforcement resources away from conduct that harms third parties.
- Prohibition increases public ignorance.
- Organised interest groups are crucial to the introduction of prohibitions.
- Prohibition almost never works and is almost always counterproductive.

There are two additional points that need to be emphasised when considering the costs of prohibition. First many of those costs begin to be incurred well before prohibition occurs. Secondly, the social costs of prohibition are *very* high. Consider, for example, alcohol prohibition in the United States. It is popularly believed that this policy was a failure leading ultimately to its repeal. That is not entirely correct:⁶

Drinking habits underwent a drastic change during the Prohibition Era, and Prohibition's flattening effect on per capita consumption continued long after Repeal, as did a substantial hard core of popular support for Prohibition's return.

Alcohol prohibition in the United States was ultimately repealed because the social costs of enforcing the policy relative the benefits were too high.

When it comes to tobacco products, every element of the marketing mix (product, price, place, promote) is very highly regulated by the state. All of these regulations impose varying degrees of dictatorship costs upon tobacco product consumers, tobacco product producers, tobacco product retailers, and the general community. The question of interest is whether these (dictatorship) costs are worth incurring to reduce or eliminate the (disorder) costs associated with tobacco consumption.

In a world of perfect compliance, actions taken by the state to reduce or even complete prohibit tobacco consumption would be entirely successful. In a world where there is somewhat less than perfect compliance there are behavioural responses to state action that undermine those actions. For example, tobacco consumers may substitute other products that may be associated with a different range of social costs, or consumers may continue to consume tobacco product but source these products on the illicit market. Yet other tobacco consumers may simply continue to consume tobacco.

⁵ Meadowcroft, J. (ed), 2008, *Prohibitions*, Institute of Economic Affairs, Profile Books.

⁶ Blocker, J., Jr. 2006, Did Prohibition Really Work?: Alcohol Prohibition as a Public Health Innovation, *American Journal of Public Health*, 96(2): 233 – 243.

Prohibition of Harm Reduction

A recent editorial in the *International Journal of Drug Policy* highlights an interesting health policy anomaly:⁷

Although nicotine is the addictive ingredient in tobacco, the well-documented harms associated with smoking stem from the carcinogens and gases in cigarette smoke rather than nicotine itself. Nicotine does not impair consciousness in the manner of other licit and illicit drugs; indeed, it often enhances it. For these reasons, it is perhaps the clearest instance of a drug where the ‘delivery system’ (the cigarette) rather than the drug itself causes harm. In light of the distinctive attributes of tobacco and nicotine, harm reduction approaches – in the form of safer nicotine delivery systems – would appear to have a lot to offer tobacco control and public health.

The adverse health consequences of cigarette consumption are well known – yet in what must be one of the greatest public health failures of all time, harm reduction in Australia is prohibited. The Royal College of Physicians define harm reduction as follows:⁸

Harm reduction is a strategy used in medicine and social policy to minimise harm to individuals and/or wider society from hazardous behaviours or practices that cannot be completely avoided or prevented. Examples include providing clean needles and syringes to intravenous drug users to reduce the risk of infection, promoting condom use by sex workers, drink-driving laws, protective clothing in sport, and motor vehicle safety measures and emission controls. Sometimes by appearing to condone or perpetuate hazardous behaviours that could in theory be prevented, harm-reduction approaches can be controversial, particularly in medicine. To their proponents, however, they represent pragmatic solutions to a range of otherwise intractable causes of avoidable death and disability.

The Australian public health lobby advocates prohibition of all tobacco products as being the only legitimate health policy that can be pursued. Simon Chapman has expressed this view:⁹

Only quitting and the decreasing incidence of smoking (ie. never starting) have dramatically decreased the tobacco disease epidemic.

The only good nicotine is this world-view is nicotine that is employed as a quit-tactic – the notion that nicotine should be consumed for recreational purposes is discouraged. This has the effect of ensuring that nicotine that is legally consumed in Australia for recreational purposes is done so in an unsafe manner.

Chapman is pessimistic about the notion of harm reduction in the tobacco market and points to research drawing that conclusion undertaken by Mark Parascandola.¹⁰ The Parascandola study,

⁷ Bell, K. and G. Stimson, 2015, Nicotine: Science, regulation and policy, *International Journal of Drug Policy*, 26: 533 – 535.

⁸ Royal College of Physicians, 2016, *Nicotine without smoke: Tobacco harm reduction*. London.

⁹ Chapman, S, 2017, Twelve myths about e-cigarettes that failed to impress the TGA, *The Conversation*, <https://theconversation.com/twelve-myths-about-e-cigarettes-that-failed-to-impress-the-tga-72408>.

¹⁰ Parascandola, M, 2005, Lessons from the history of tobacco harm reduction: The National Cancer Institute’s Smoking and Health Program and the “less hazardous cigarette”, *Nicotine & Tobacco Research*, 7(5): 779 – 789.

however, has two important features that detract from the interpretation that Chapman infers. First, the Parascandola study is a case study investigating a single program in the United States – the National Cancer Institute’s Smoking and Health Program that terminated in 1980. We are invited to believe that the failure of a research program 37 years ago can inform modern policy debates. The second consideration is that the Parascandola study was published in 2005 – but submitted to the journal in May 2004, and probably written in 2003. Many of the substitute nicotine delivery systems were developed or commercialised after this date. The failure of harm reduction in this industry in the 1960s and 1970s cannot inform harm reduction strategies and products in the 21st century.

Parascandola, moreover, concedes this very important point:¹¹

However, one should not conclude from this case study that research on tobacco products and harm reduction is necessarily misguided or devoid of public health relevance. In fact, a valuable opportunity was lost in phasing out research on tobacco products entirely in the late 1970s, as today little expertise on the design and properties of tobacco products is to be found outside the industry. Moreover, it could be argued in retrospect that a major weakness of the work of the [Smoking and Health Program] on cigarettes was that it did not go far enough toward studying product development and monitoring of products on the market. Some critics of the program raised concerns that research on “smoker satisfaction” was the responsibility of industry; but, ironically, this is exactly the type of work that could have allowed scientists to better understand smoking behavior and, potentially, nicotine addiction.

The fact is that many within the tobacco control lobby do conclude that “research on tobacco products and harm reduction is necessarily misguided or devoid of public health relevance”. Bell and Stimson attribute the antipathy to harm reduction by the anti-tobacco lobby to this attitude:¹²

Harm reduction is thus viewed as counter to the tobacco control endgame of both an end to smoking and the tobacco industry itself.

In other words, the anti-tobacco lobby specifically does not want to pursue harm reduction strategies as they perceive that this will not result in an end to smoking and that it will not result in the end of the tobacco industry. That ideological choice – and a hatred of the industry itself – leads to individuals continuing to consume nicotine in harmful ways and imposing large health costs upon themselves and the public health system.

It should not be necessary to point out that the deliberate destruction of an industry is not sound policy. In the first instance, as Ludwig von Mises has argued:¹³

It is not the fault of the entrepreneurs that the consumers—the people, the common man—prefer liquor to Bibles and detective stories to serious books, and that governments prefer guns to butter. The entrepreneur does not make greater profits in selling “bad” things than in selling “good” things. His profits are the greater the better he succeeds in providing the consumers with those things they ask for most intensely.

¹¹ Parascandola, as above, pg. 786.

¹² Bell and Stimson, as above, pg. 533.

¹³ Ludwig von Mises, 1949 [1963], *Human Action; A Treatise on Economics*, fourth revised edition, Fox & Wilkes, pg. 299 – 300.

People do not drink intoxicating beverages in order to make the “alcohol capital” happy, and they do not go to war in order to increase the profits of the “merchants of death.”

The argument being that business does not *create* consumer demand, it *satisfies* consumer demand. If consumers are unable to satisfy their demand for nicotine from the extant industry they will simply satisfy their demand from other (non-legal) sources. There are excellent reasons why it is preferable that consumers purchase their nicotine (in whatever form) from legal industry sources rather than illegal sources.

The ideological aversion to harm reduction on the part of the anti-tobacco lobby and the prohibition of alternate (or substitute) nicotine delivery systems for recreational purposes results in an over-enforcement of tobacco control measures. It imposes huge health costs on individual smokers, it imposes enforcement costs on the government purse, and nuisance costs on the community in general.

In terms of the model set out in the previous section the dictatorship costs of the prohibition are unchanged. It is worthwhile, however, examining the disorder costs that the anti-tobacco lobby perceive in the instance of removing the prohibition on alternate nicotine delivery mechanisms. The fear is that these alternate nicotine delivery mechanisms will facilitate cigarette consumption – in other words that these mechanisms will serve as a “gateway” to increased cigarette consumption.

The population can be categorised as follows:

- Smokers who never quit.
- Smokers who make use of both alternate nicotine delivery mechanism and cigarettes and never quit.
- Smokers who substitute from cigarettes to some or other nicotine delivery mechanism but never quit.
- Smokers who substitute from cigarettes to some or other nicotine delivery mechanism and then do quit.
- Smokers who quit.
- Former smokers who take up an alternate nicotine delivery mechanism but not cigarettes.
- Former smokers who take up an alternate nicotine delivery mechanism and then relapse.
- Former smokers who never relapse.
- Non-smokers who take up an alternate nicotine delivery mechanism but not cigarettes.
- Non-smokers who take up an alternate nicotine delivery mechanism and then become cigarette smokers.
- Non-smokers who never take up an alternate nicotine delivery mechanism or cigarettes.

The anti-tobacco lobby’s concern is in those instances where smokers may have quit nicotine consumption but due to alternate nicotine delivery mechanisms do not, and those instances where former smokers or non-smokers become nicotine consumers. It is unclear whether the concern extends to former smokers and non-smokers becoming nicotine consumers in any form or whether the concern is limited to them becoming cigarette consumers.¹⁴

There is an academic literature that addresses some of these, and related, questions.

¹⁴ For example, there is apparently no concern that non-smokers would begin consuming nicotine gum, yet there does appear to be some concern that non-smokers may begin using e-cigarettes.

Some of the work that has been done into alternate nicotine delivery mechanisms has looked at snus. This is a Swedish moist powder tobacco product that is placed under the lip and absorbed through the skin. Investigating snus is particularly interesting as it is illegal in most of Europe but legal in Sweden. According to Scollo and Winstanley Sweden has the lowest smoking prevalence in the OECD.¹⁵

- Maki (2015) exploits the legality of snus in Sweden and the illegality of snus in Norway to specifically investigate the question of whether the availability of a less harmful alternative to smoking leads to cessation? She finds that cigarette smoking is 3.47 percentage points higher in Finland relative to what it would have been in the absence of the ban of snus. She concludes that offering acceptable alternatives to cigarettes would reduce cigarette consumption.¹⁶
- Lund et al. (2016) investigate whether snus is indeed a gateway mechanism to cigarette smoking. They find over the period 2003 – 2015, that the relative share of current snus users who had never smoked, and current snus users who were former smokers, had increased while the share of dual users, and smokers who were former snus users had decreased. In other words, a (much) larger number of individuals were using snus to reduce their cigarette consumption (even if not entirely quitting) than were using snus as a gateway to cigarettes. They report that if snus was a gateway mechanism it would operate in less than 21.1% of cigarette consumers.¹⁷
- Gartner et al. (2007) perform a simulation study using Australian data to investigate the health effects of snus consumption in Australia compared to non-smokers and smokers who substitute from cigarettes to snus. They report there is little difference in health-adjusted life expectancy between smokers who quit all tobacco and smokers who switch to snus and conclude that relaxing the current snus ban is much more likely to produce a net benefit than harm.¹⁸

Similar results are found when researchers investigate e-cigarettes.

- Levy et al. (2017) undertake a simulation study using US data investigating whether vaporized nicotine products either accelerate or undermine reductions in smoking prevalence. They report that given current tobacco consumption patterns (and including conservative assumptions) a 21% reduction smoking related deaths, *and* a 20% reduction in life years lost as a result of vaporized nicotine product use for the 1997 US birth cohort as opposed to a scenario where vaporized nicotine products are not used. They conclude, “[u]nder most plausible scenarios” the use of vaporized nicotine products generally have positive public health outcomes. Overall while some non-smokers may become smokers as a

¹⁵ Scollo, M and M, Winstanley, 2016, *Tobacco in Australia: Facts and issues*. Melbourne: Cancer Council Victoria, <http://www.tobaccoinustralia.org.au/chapter-1-prevalence/1-13-international-comparisons-of-prevalence-of-sm>

¹⁶ Maki, J, 2015, The incentives created by a harm reduction approach to smoking cessation: Snus and smoking in Sweden and Finland, *International Journal of Drug Policy*, 26: 569 – 574.

¹⁷ Lund, K., T. Vedøy and L. Bauld, 2016, Do never smokers make up an increasing share of snus users as cigarette smoking declines? Changes in smoking status among male snus users in Norway 2003–15, *Addiction*, 112: 340 – 348, pg. 346.

¹⁸ Gartner, C., W. Hall, T. Vos, M. Bertram, A. Wallace, and S. Lim, 2007, Assessment of Swedish snus for tobacco harm reduction: an epidemiological modelling study, *The Lancet*, 369(9578): 2010 - 2014.

result of vaporized nicotine products these public health effects are more than compensated by current smokers smoking less or quitting.¹⁹

The studies reviewed have all suggested that the harm reduction associated with alternate nicotine delivery systems are substantial and that any gateway features of these alternate delivery systems are likely to be small. The Royal College of Physicians has recently summarised its view on those benefits with respect to e-cigarettes:²⁰

- > Some of the carcinogens, oxidants and other toxins present in tobacco smoke have also been detected in e-cigarette vapour, raising the possibility that long-term use of e-cigarettes may increase the risks of lung cancer, [chronic obstructive pulmonary disease], cardiovascular and other smoking-related diseases.
- > However, the magnitude of such risks is likely to be substantially lower than those of smoking, and extremely low in absolute terms.
- > These potential health risks arise primarily from contaminants and components generated by the vaporisation process, which should be amenable to reduction through technological and purity improvements.
- > New nicotine products in development are likely to extend the range of choices available to smokers further, increasing purity and safety, and, in those achieving greater pulmonary absorption, addictiveness.
- > Although it is not possible to precisely quantify the long-term health risks associated with e-cigarettes, the available data suggest that they are unlikely to exceed 5% of those associated with smoked tobacco products, and may well be substantially lower than this figure.

If it is true that e-cigarettes are 95% less risky than combustible cigarette consumption then it is very clear that the harm reduction associated with e-cigarettes are massive. Chapman, however, has critiqued the 95% figure.²¹ He references a paper by Robert Combes and Michael Balls that states:²²

However, in truth, as we have argued above, there is no *evidence* for the 95% estimate. Moreover, doubts have been expressed about the integrity and objectiveness of the MCDA study, due to the alleged conflicts of interest of some of its authors.

Combes and Balls, however, state in their abstract:²³

If e-cigarettes are really 'safer', then their use should be recommended, ...

Later in the paper they state:²⁴

¹⁹ Levy, D., R. Borland, A. Villanti, R. Niaura, Z. Yuan, Y. Zhang, R. Meza, T. Holford, G. Fong, K. Cummings, D. Abrams, 2017, The Application of a Decision-Theoretic Model to Estimate the Public Health Impact of Vaporized Nicotine Product Initiation in the United States, *Nicotine & Tobacco Research*, 19 (2): 149 – 159.

²⁰ Royal College of Physicians, as above, pg. 87.

²¹ Chapman, as above.

²² Combes, R. and M. Balls, (2016), On the Safety of E-cigarettes: "I can resist anything except temptation", *Alternatives to laboratory animals: ATLA*, 43: 417 – 425, pg. 420 (emphasis original).

²³ Combes and Balls, as above, pg. 417.

²⁴ Combes and Balls, as above, pg. 422 – 423.

... it would appear that there is a growing admission among the protagonists that [Electronic Cigarettes] are not harmless, and, among those looking at health effects, that they are probably safer than smoking, but by how much it is difficult to tell.

That simply deflects the question – if may well be true that the 95% figure is wrong – but what then is the correct figure? More importantly, how much less risky do e-cigarettes have to be before the harm reduction principle does not apply? Chapman provides no insight into those questions – but he does seem to suggest that the figure is (only) 50%:²⁵

These highly respected researchers estimated the long-term effects of vaping may equate to 50% of the risk of cardio-respiratory harm that tobacco causes, what they call a “substantial” exposure.

Furthermore Clive Bates has provided a critique of the Combes and Balls paper that is worth quoting in full:²⁶

Professor Chapman criticises the Public Health England and Royal College of Physicians consensus on the relative risk of smoking and e-cigarette use by referring to a comment piece Combes RD, 2015 in the journal *Alternatives to Laboratory Animals*. The piece is written by a commentator whose affiliation is an animal welfare rights campaign (FRAME), for which ATLA is the house journal, and an independent consultant. How these two came to be writing about e-cigarettes at all is not stated, but this is less important than the fact that their commentary provides little of substance to challenge the robust expert-based PHE and RCP analysis, and it provides even less to justify the colourful dismissive pull-out quotes chosen by Professor Chapman. Even though the work can be dismissed on its merits, surely the authors should have disclosed that FRAME has pharmaceutical funders [Our supporters], including companies who make and sell medical smoking cessation products.

In summary, it appears that alternate delivery mechanisms are much less risky than traditional combustible cigarettes. It appears that alternate delivery mechanisms provide massive scope for harm reduction, even if current smokers substitute to them, but do not quit. The benefits from harm reduction are massive even if some current non-smokers take up the use of these alternate delivery mechanisms. As Carl Phillips explains:²⁷

The availability of low-risk tobacco/nicotine products will inevitably increase total consumption as compared to a world where cigarettes are the only option. This is the inevitable and rational effect of lowering the costs of a consumption choice. It is properly counted as an additional benefit, though it is widely derided as a cost. Public supporters of low-risk products who condition their support on those products not attracting any new users are either being naïve or cynically imposing conditions they know cannot be met.

Bear in mind, however, there is still a role for public education in warning individuals about the harms associated with tobacco usage.

²⁵ Chapman, as above. Here Chapman appears to be citing a blog – not a peer-reviewed result.

²⁶ Clive Bates, <https://www.ncbi.nlm.nih.gov/pubmed/27518691/#comments>. The link contains a reply by Comes and Balls.

²⁷ Carl Phillips, 2016, Understanding the basic economics of tobacco harm reduction, IEA Discussion Paper No.72, pg. 6.

Recommendations

Tobacco control in Australia should emphasise the needs of smokers and not anti-smoking activists. An ideological choice to harm the tobacco industry, rather than maximise the welfare of smokers, has led to a policy environment where smokers get to consume nicotine in a costly manner.

Efforts to produce less risky nicotine delivery mechanisms should be encouraged and consumers should be encouraged to consume nicotine (if that is what they want to do) in less risky ways. It is true that the long term consequences of alternate nicotine delivery mechanisms are unknown. This does not justify the so – called precautionary principle. The long term consequences of many new technologies is unknown or unclear. What is known, however, is that the long-term consequences of these new technologies are much less risky than the existing combustible cigarette. The important point, however, is that new technology could be either benign or malign. Legalisation and regulation are more likely to ensure that new technologies are benign.

At a very minimum this is a compelling argument for the legalisation of electronic cigarettes and nicotine fluid. The advantages of legalising nicotine fluid include:

- Consumer safety – known quality, quantities, and dosages of nicotine.
- Regulatory compliance with standardisation – which should include child – proof packaging.
- Ongoing research into the long-term effects of electronic cigarettes would benefit from standardisation.
- Tax revenue.
- An additional tobacco cessation tool.

A level playing field for all new alternate nicotine delivery mechanisms should be legislated. These arguments and recommendations apply equally to all alternate delivery mechanisms.

Advertising for these products should be permitted – even encouraged. To the extent that government would want to promote alternative delivery mechanisms over combustible cigarettes (given the reduced levels of harm), branding and advertising should be encouraged just as nicotine gum and lozenges are branded and advertised.

Ultimately regulation should be sensible, evidence based, and reflect commercial realities and not pander to activists that are promoting prohibition and industry destruction at the expense of smokers who are drawn from the more disadvantaged sectors of our society and at the expense of the public health system.

About the author

Sinclair Davidson is Professor of Institutional Economics in the School of Economics, Finance and Marketing at RMIT University, a Senior Research Fellow at the Institute of Public Affairs, and an Academic Fellow at the Australian Taxpayers' Alliance. Sinclair has published in academic journals such as the *European Journal of Political Economy*, *Journal of Economic Behavior and Organization*, *Economic Affairs*, and *The Cato Journal*. He is a regular contributor to public debate. His opinion pieces have been published in *The Age*, *The Australian*, *Australian Financial Review*, *Daily Telegraph*, *Sydney Morning Herald*, and *Wall Street Journal Asia*.

He blogs at Catallaxyfiles.com and tweets [@sincdavidson](https://twitter.com/sincdavidson).