

CONTROL POLICIES TO COMBAT THE HEALTH RISKS FROM SMOKING AND PASSIVE SMOKING¹

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Good information is necessary for markets to allocate resources efficiently. Tobacco is a demerit good; smoking endangers smokers but also exerts externalities on non-smokers. Public policies, however, foster misinformation, are contradictory and damage public health. Current policies also deny feedback from the tobacco industry and reduce consumer information about tobacco products that could substantially reduce the harmful effects of smoking.

Keywords: Externalities, demerit goods, passive smoking, tobacco, taxation.

Introduction

Good information on product price and quality are necessary ingredients for markets to allocate resources efficiently. Economists consider tobacco to be a demerit good since smoking directly endangers the health of smokers but also exerts externalities on non-smokers when they come into contact with tobacco smoke. The standard economic policy solution for such a product is to impose taxation that forces markets to fully account for (internalise) all costs associated with its consumption.

Empirical evidence does not fully support the view that any further taxation is necessary to promote an efficient allocation of smoking since it appears that past taxation has been more than sufficient in pushing markets to fully recognise all its attendant costs. Indeed an economic case can be made for smokers to be subsidised because they consume fewer social insurance resources given their shorter lives (Viscusi, 1994). Evidence also exists that indicates both smokers and non-smokers greatly overestimate risks of developing lung cancer associated with smoking. Anti-smoking policies include prohibitions on smoking in public places and public spending on media campaigns advertising the harmful effects of smoking. Perversely, information about tobacco products that could substantially reduce the harmful effects of smoking is mostly ignored. These policies are promoted

on the basis of their supposed good intentions but, as we explain in this paper, they are short-sighted strategies. Unfortunately, recent public policies introduced in many countries in the name of protecting society from the dangers of tobacco use foster greater misinformation on health risks and are likely to damage the health of smokers and encourage an illicit market.

The risks of smoking tobacco and the protection of smokers

The health risks from smoking tobacco have been known since around the middle of the last century, 'when several case-control studies of lung cancer were published in Western Europe and North America, leading to the conclusion in 1950 that smoking was "a cause, and an important cause" of the disease' (Doll *et al.*, 2004, and others – see references).

There is no doubt that the most effective way to remove the harm from tobacco is to cease using it. But instead of taking a pragmatic view that many of the world's 1.3 billion smokers simply can't or won't quit and creating harm-reducing policies and international law to create that reality, the WHO Framework Convention on Tobacco Control (FCTC) (which became binding international law in 2005) stipulates that governments should focus on making smokers quit and reducing dependence on nicotine

through cessation policies (Cameron, 2007). Thus the main policies adopted in most countries are tax increases, health education, advertising bans and smoking bans in public places. Outright prohibition of the product (as with other recreational drugs) is considered to be unenforceable. This view is undoubtedly correct; if drugs cannot be kept out of the highest security prisons it would be impossible to keep tobacco out of society.

Much of the literature by anti-smoking groups implicitly assumes that smokers are somehow grossly misinformed and underestimate the risks to their health from smoking. Khwaja *et al.* (2009) examined the relative accuracy of mature smokers' risk perceptions about future survival and a range of morbidities and disabilities. Smokers in the age group studied (50–70-year-olds) were not overly optimistic in their perceptions of health risk, but rather tended to be relatively pessimistic about these risks. The finding that smokers are either well informed or pessimistic regarding a broad range of health risks suggests that these beliefs are not pivotal in the decision to continue smoking. The authors concluded that there is no evidence of systematic misinformation about the health consequences of smoking and thus no reason to believe that it would inhibit quitting. The knowledge that smokers know that smoking damages health and threatens life and are also overly pessimistic about the risks they face leads to the paradoxical economic conclusion that there is a case for subsidising tobacco. This is because the taxes and excise duties raised over a smoker's lifetime outweigh the costs of eventual medical treatment. In addition, smokers die younger than non-smokers and hence do not draw upon the same welfare payments and care costs in old age (Viscusi, 1990; 1994). This point illustrates the tobacco policy conundrum for governments; namely that, on the one hand, they wish to discourage smoking but, on the other, wish to maximise tax revenue from it!

If tobacco consumers are taking a rational view of smoking they are likely to be interested in information from leading medical and scientific bodies such as the UK Royal College of Physicians about products that somehow lower their risks. But while the rights of non-smokers are well protected in the WHO FCTC treaty the FCTC does little for the protection of smokers (by enabling them to have information about and access to lower-risk products, such as smoke-free cigarettes that are potentially less harmful to their health). Another disturbing international strategy is a consequence of capture of the FCTC by health and anti-smoking activists (many of whom seem more concerned with damaging tobacco companies than in promoting the health and welfare of smokers). Because advertising tobacco is illegal in most countries, tobacco companies are less able to draw the attention of consumers to health benefits associated with harm reducing tobacco products. One example will suffice. Sweden has the lowest prevalence of smoking in the EU and is a country where tobacco in the form of snus has been legal. Snus is a type of pasturised ground tobacco enclosed in a finely perforated bag that is placed into the side of the mouth under the lip. Snus is acknowledged by many eminent health and scientific bodies to be much safer than cigarette smoking. It is quite different from American snuff. This product, however, is banned in the EU (even though the EU still

subsidises Greek tobacco growers). This again illustrates how well intentioned actions aimed at protecting all citizens have damaged the rights of smokers and also failed to reduce their health risks through the withholding of important and verifiable information.

Moreover, a strategy of informing smokers about alternative harm reduction products would also appear to be consistent with protecting the health of non-smokers if indeed environmental tobacco smoke (ETS) was considered a serious health risk for non-smokers. Apparently, this last point is something that public health and anti-smoking activists either fail to understand or care about.

The protection of non-smokers: how harmful is environmental tobacco smoke (ETS)?

Whilst the harm to the tobacco user from smoking is understood, not least, as we have seen by the users themselves, the harm from passive smoking (ETS) is less well understood. This is partly because research into its effects is difficult to conduct (establishing credible control groups is especially problematic) but also because it cannot be assumed that research into the issue is unbiased. So although governments might be seduced into excluding tobacco industry research on the grounds that it is somehow biased, it is just as legitimate to question whether research funded and/or conducted by public health advocates is also without self-interest. Any search for medical information on the issue of passive smoking will generate thousands of responses (the words 'passive', 'smoking' and 'research' generate 334,000 responses in Google) but the results of two studies demonstrate how problematic it is to obtain evidence that is both statistically significant and unambiguous.

Consider, for example, the 1997 meta-study of non-smokers by Hackshaw *et al.* (1997) in which they considered non-smokers who did and did not live with smokers. They concluded:

'The epidemiological and biochemical evidence on exposure to environmental tobacco smoke, with the supporting evidence of tobacco specific carcinogens in the blood and urine of non-smokers exposed to environmental tobacco smoke, provides compelling confirmation that breathing other people's tobacco smoke is a cause of lung cancer.'

But, shortly afterwards, Le Fanu (1998) noted that 18 of the 37 studies cited came from China, Japan or Hong Kong: countries where there is a relatively high incidence of a form of lung cancer, adenocarcinoma, among women where the strength of the causative relation between smoking and lung cancer is substantially weaker. Le Fanu concluded that inclusion of these studies could not be justified on biological grounds, thus calling into question their conclusions. Secondly, and even more importantly, Le Fanu pointed out that the 37th study was massive and thus exerted a disproportionate impact on the results. Le Fanu (1998) wrote of the 37th study:

'This failed to show a significant relation between passive smoking and lung cancer; for good measure, 70% of the lung cancers observed in

non-smokers living with smokers were of the adenocarcinoma type, which Doll and Bradford Hill were the first to show was unrelated to smoking.'

Indeed Sir Richard Doll, who, along with Bradford Hill, first suggested a correlation between lung cancer and smoking in Doll and Hill (1950), interviewed on BBC Radio 4's *Desert Island Discs* on 23 February 2001, commented, 'The effects of other people smoking in my presence is so small it doesn't worry me'.

Then in 2003 Enstrom and Kabat published a paper in the *British Medical Journal* involving 118,094 adults drawn from the American Cancer Society (ACS) cancer prevention study who were followed from 1960 until 1998 with particular focus on 35,561 non (never) smokers who had a spouse in the study with known smoking habits. The authors' results did not support a causal relation between ETS and tobacco-related mortality, although they did not rule out a small effect. They concluded that the association between exposure to environmental tobacco smoke and coronary heart disease and lung cancer was considerably weaker than generally believed. Within days the ACS strongly criticised the study by highlighting how difficult it is to exclude other confounding factors that also may affect morbidity or mortality in this and most if not all other studies. It would seem that both the mortality and morbidity risks from passive smoking are too difficult to validate without substantial ambiguity (Lee, 1998).

Let us accept, with all the problems associated with measurement and confounding factors, the medical profession's conventional estimates of risk. The excess risk of lung cancer from workplace ETS exposure was estimated as from 0.12 to 0.39 by different references (Alipour *et al.* 2006). The incidence of lung cancer of non-smokers without exposure to ETS ranges from 3.7 to 10 per hundred thousand (Alipour *et al.* 2006, *op. cit.*). If we assume, following Alipour, a UK prevalence of smoking at 25% then from a working population of 21.2m full time employees we have 15.9m non smokers. Assuming further that 20% of these are exposed regularly to ETS, then out of these 3.18m, a range of between 14 and 124 additional cases could be expected. Compare this with about 40,000 deaths from lung cancer in the UK per annum out a total of about 600,000 deaths. Note too that in 2008, 3,459 people died from falls, 3,013 from road accidents of all kinds and 195 people died from drowning. When put in this context, public strategy towards ETS is irrational, harsh and imposes an excessive burden. Of course, there remains the undoubted externality of ETS, addressed by Craven and Marlow (2008), of 'nuisance' in the form of irritation, effects on clothing and non-smokers' rights to smoke free air.

The risks to smokers and non-smokers from ETS of acute myocardial infarction (AMI) (heart attacks)

Finally we wish to look at claims made in recent years that ETS can cause heart attacks. On 15 October the *New York Times* (2009) quoted Dr Neal L. Benowitz, a professor of medicine, psychiatry and biopharmaceutical sciences at the University of California, San Francisco, and a member of a federally commissioned panel of scientists as saying:

'Even a small amount of exposure to second-hand smoke can increase blood clotting, constrict blood vessels and can cause a heart attack.'

Many countries have implemented prohibitions on smoking in public places and many have reported dramatic reductions in heart attack admissions to hospitals following such prohibitions (Belluck, 2009; Maugh, 2009; Winslow, 2009). For example on 11 September 2007, the *Guardian* reported that in Scotland:

'Researchers found a 17% drop in the number of people admitted for heart attacks in the year since the ban came into force, compared with an average 3% reduction a year over the previous decade. The reduction was most marked among non-smokers, with a 20% fall, compared with a 14% drop among smokers.'

And on 9 December, the BBC (2009) on its website reported that in Wales the Chief Medical Officer in his annual report titled *Preventing the Preventable*:

'pointed to statistics which showed the number of hospital admissions for heart attacks in 2007/2008 had fallen by 3.7% on the previous year, down from 4,324 to 4,164.'

These remarkable figures seem to confirm the views of smoking ban advocates, but to what extent are these claims valid? Could it be a case of '*post hoc, ergo propter hoc*'? First, these reports of falling AMI admissions overlook the fact that there are multi-factorial causes of heart disease (such as family history or heredity, hypertension, stress, some recreational drugs – cocaine for example – and physical inactivity). Second, we know that in recent years there has been an enormous take up of anti-cholesterol statin drugs which are acknowledged to greatly reduce the threat of stroke and heart failure. Third, Marlow (2010), in reviewing 11 studies examining the effects of acute myocardial infarction (AMI) in Italy, the USA, Scotland and Canada, found several types of flawed evidence. Marlow found that there was: small sample bias; studies combining smokers and non-smokers and no direct evidence of ETS risk.

In addition to these shortcomings is the, presumably innocent, misuse of statistics. A good example was found in the *Sunday Times* (15 June 2008) which contained the headline:

'Heart attack admissions fall by up to 40% since smoking ban.'

The *Sunday Times* reported that of admissions from AMIs in 114 health trusts in England, 57% saw a fall. Presumably, then, 43% recorded an increase (and on the balance of probability a few will show no change). Some of these falls will be dramatic while others will be very small. The *Sunday Times* headline reported the figures from a single trust, Shrewsbury, where there was a 41% fall, or 418 fewer admissions; anything can be proved from a single sample where there is distribution of events surrounding a zero mean! Apparently, ban advocates are fond of cherry-picking only cases that prove their biases rather than imposing standard statistical practices of drawing randomly from the population of cases.

More generally, in many countries the incidence of deaths from heart attacks is falling and has been falling for many years and much faster than the decline in prevalence of smoking.

Current government policy on health issues associated with tobacco

The tobacco industry's past behaviour towards dealing with the health consequences of tobacco use has been less than impressive. It has resulted in discounting completely or simply ignoring research that carries any link, funding or otherwise, with tobacco companies. It should also be recognised that governments everywhere are overly influenced by public health and single-minded anti-smoking activists who have successfully captured and dominated policy formulation. This is one of the major reasons why harm reduction strategies were passed over in favour of 'quit or die' cessation strategies in the development of the FCTC, and Cameron (2007) has spelt out how this happened.

But it is also simple minded to believe that the tobacco industry itself does not possess any useful information that might somehow improve the health attributes of its products. Unfortunately, as we have seen, recent public policies introduced in many countries in the name of protecting society from tobacco foster misinformation on health risks and thus are contradicting and damaging to public health. Furthermore, as society has become more and more risk averse the position has now been reached that, justified by the precautionary principle, any risk at all must be eliminated. This has been seen also in other policy areas such as BSE and HIV (Craven and Stewart, 1997).

Government policies relating to tobacco are geared towards preventing new consumers of tobacco as well as encouraging current users to reduce or quit smoking altogether. Current measures are arguably counterproductive, however. From April 2012, large stores will be banned from displaying cigarette packs, and displays in all other shops will be banned in 2015. This policy will not only remove the packs from display, but also will disconnect purchasers from the wall of health warnings displayed at the point of sale. High (1999), incidentally, found that in many countries the well-intentioned prohibition of cigarette advertising was associated with a rise in smoking prevalence because it also removed health warnings during advertisements. Thus, these regulatory developments are contradictory if the aim is to really convince smokers that they should reduce consumption or quit due to adverse health effects.

In another example, Ireland banned sales of 10-packs on the premise that many younger people are unable to afford packs of 20. The unintended consequence was that average daily consumption of cigarettes rose from 16 to 17 as the prohibition also gave incentives to young people to buy cheaper 20-packs from illicit sources whose suppliers do not demand proof of age. So, as governments attempt to price smokers out of the legitimate domestic market with taxes, various prohibitions and duties, the incentives rise for suppliers of illicit tobacco products to cater to those adversely affected by those same policies. In turn, these induced behaviours create new markets and tax-financed government

employment for policing by government agencies as well as additional costs for tobacco companies who are subject to more regulation and taxation.

Conclusion

This paper has examined the risks from smoking and from ETS by arguing that the capture of governmental bodies by public health and anti-tobacco activists has adversely affected public health by denying industry-related research and the views of independent scientists that could benefit both non-smokers and smokers. Activists have succeeded in over-selling the benefits of their tax and regulatory policies by failing to control for compounding factors that have contributed to the downward trend in AMI incidence as well as denying smokers the right to information on harm reduction products through their support for advertising and display bans. Unfortunately, public health will continue to suffer when public strategies deny tobacco companies the opportunity to disseminate useful information to consumers of their products.

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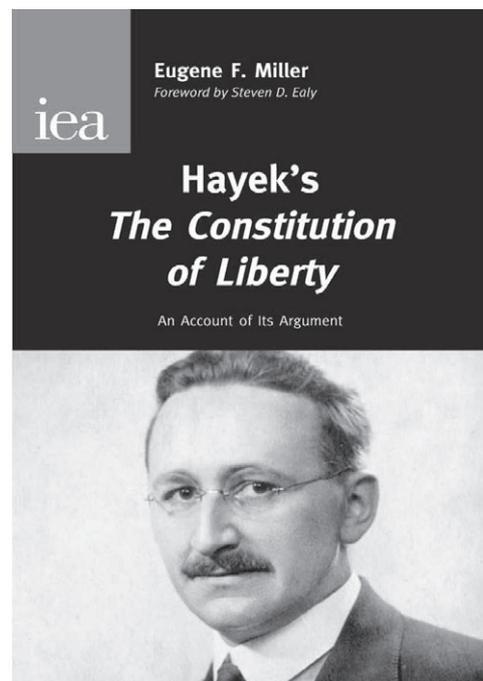
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