

Weighing the pounds: The economics of public health intervention

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This is the third of three papers exploring tobacco, alcohol, obesity and gambling policy. It argues that the contribution of such activities to the economy should not be used as a justification to avoid action to discourage them, whereas the costs they generate through ill health are more significant – though they should not be overstated.

KEY POINTS

- Economic arguments are often used to resist public health measures, and increasingly to promote them, though they often confuse quite different types of costs and benefits.
- While many (though not all) interventions involve lower sales of unhealthy commodities, it is important to remember that a loss of spending in one particular sector will be at least partly offset by higher spending in others.
- We need to look at the specific characteristics of different industries to understand the trade-offs involved in shifting activity between them.
 - For example, pubs and restaurants tend to generate a large number of relatively poorly paid jobs; online gambling employs fewer people but at higher wages and generates exports.
- The economic costs associated with health harms, unlike the costs to particular industries, are a pure loss to the economy, not offset by gains elsewhere.
 - Improving health outcomes should reduce working-age deaths, decrease economic inactivity and sickness absence and improve efficiency, leading to a bigger and more productive workforce.
- Yet these gains should not be overstated – the cost of these issues to the economy is likely in the tens of billions, which means addressing them is only likely to boost growth by a fraction of a percentage point a year.

ECONOMIC ARGUMENTS AROUND PUBLIC HEALTH MEASURES ARE OFTEN CONFUSED

This is the third and final instalment of our series exploring tobacco, alcohol, obesity and gambling policy. In the first paper, we found that more interventionist approaches – bans, taxes and regulations – tend to be the most effective way to tackle these problems, though they may seem more politically challenging.¹ In the second, we showed that public opinion is broadly supportive of action, and the greater obstacles may be sustaining elite political coalitions, facing media hostility and resistance from industry.²

One of the most common arguments used to fight public health measures are warnings that they are liable to harm the economy. For example, last year, the Scottish Government's plans to address harmful drinking by regulating alcohol advertising unravelled over the course of the Scottish National Party's leadership election, amid competition to position the party as pro-business. With Kate Forbes having signalled her opposition to the measures at a campaign event in a brewery held specifically to highlight her favourability to industry³, the eventual winner Humza Yousaf scrapped the consultation citing the concerns alcohol producers.⁴

A similar row seems to be brewing between the Labour Party at Westminster and the media industry over plans to restrict junk food advertising.⁵ The New Zealand government recently reversed measures to create a smokefree generation – policies set to be emulated by the UK government – in part because of concerns regarding the loss of tobacco revenue for newsagents.⁶ Efforts to regulate gambling have been resisted because of their threat to jobs in the horseracing industry.⁷

These episodes are part of a long-running struggle within governments between those that want to protect health and those that want to support businesses. Industry lobbyists regularly cite the economic contribution of their sectors to highlight the apparent costs of harming them with regulation.⁸ Conversely, those arguing for policies to promote public health are increasingly making their arguments in economic terms.⁹

This paper tries to make sense of the economic arguments around public health policy. It suggests that, in general, policymakers should not be afraid to tackle the use of harmful products for fear of damaging the economy. At the same time, it suggests that claims that such measures will provide a substantial boost to the economy are often overstated.

Different types of economic costs and benefits

There are a lot of numbers in the public health debate, and when those numbers are attached to pound or dollar signs, they are often taken to relate to something, hazily understood, as the 'economy', and as such to be incredibly important. None of this makes sense or is a proper guide to policymaking unless we distinguish the different things that researchers put in financial terms, and how they relate to one another.

Table 1 sets out some of the different ways of analysing costs and benefits. The first one – *total social costs and benefits* – is the broadest. It tries to encapsulate all the pros and cons of a product or activity and put financial values against them. This is the sort of analysis we might want to do, for example, if we wanted to know whether drinking is, on net, good for society as a whole or whether reducing the overall level of gambling would make things better or worse. Such ambitious analysis is pretty unusual and incredibly challenging to conduct. First, because it is tricky to confidently capture all the harms and benefits. Second, because many of these harms and benefits are rather abstract and are difficult to quantify financially – for example, the pleasure people get from eating unhealthy foods or the suffering endured by the families of those that die prematurely.

Some analyses therefore limit their focus to *tangible costs and benefits* – generated when people actually exchange payments. Tangible benefits might include the profits and wages generated by a particular industry, while tangible costs might include insurance costs or the costs of repairing criminal damage. If we add these tangible costs and benefits to intangible costs (pain, suffering or fear) and benefits (like pleasure and community) it should sum to the total social costs and benefits.

Table 1: Different types of costs and benefits associated with public health policies

Type	What it measures	Examples
Total social cost/benefit	Everything – all the pros and cons	Gustatory pleasure, suffering from disease
Tangible costs/benefits	Actual things people pay	Medical insurance costs, repair of criminal damage
External costs and benefits	Impact on others beyond buyer and seller	Passive smoking, crime
Economic costs and benefits	Impact on the economy as a whole – societal prosperity	National income, jobs, productivity
Fiscal costs and benefits	Impact on public finances	Taxes and public spending

Source: SMF analysis

Economists are often particularly interested in *external costs and benefits*, or ‘externalities’. These reflect the impact of a transaction on people other than the buyer and seller. Textbook economics begins with the assumption that people’s actions rationally reflect their own self-interest, which implies there is no reason to interfere in a mutually agreeable trade between two parties – unless it carries an externality, in which case proportionate taxes or regulations may be in order. The health harms of passive smoking, and the cost to the taxpayer of preventable illness are both examples of externalities. Notice that externalities can be intangible (health harms) or tangible (cost to the taxpayer).

A fourth type of analysis, which we will spend much of this paper discussing, relates to the *economic costs and benefits* of an activity or policy on the economy. That is, whether it makes us richer or poorer, in terms of our living standards – how it affects things like productivity and incomes.

Economic costs and benefits are often wrongly conflated with *fiscal costs and benefits*, which refer specifically to the impact on the public/government finances. This reflects a broader tendency to run together the government budget and the economy as a whole, but it is important to recognise they are different things and should be kept separate. If a policy generates £x billion for the economy, the fiscal benefit will be smaller – only the portion of that gain the government can take in tax. Conversely, if a policy reduces public spending by £x billion, that does not in itself grow the economy and make us richer – that depends on how the savings are spent by the government.

PUBLIC HEALTH MEASURES MAY REDUCE SPENDING ON HARMFUL COMMODITIES – BUT THAT SPENDING WILL GO TO OTHER SECTORS

So let us focus on the fourth of these concepts – economic costs and benefits. As we have seen, the fear that public health measures will damage the economy is a significant obstacle to their implementation. Yet whether such fears are justified depends on a number of factors.

The first order impact of regulation on harmful commodity industries is often, but not always, negative

It is true that public health measures generally try to reduce consumption of harmful products – they try to get us to smoke, drink, gamble and eat unhealthy foods less. It is natural therefore to assume that this is a bad thing for those that make their living from selling those goods and services. But this is not necessarily the case.

First, some health policies – notably, encouraging reformulation – do not seek to reduce volume sales. The UK's soft drinks industry levy ('sugar tax') was designed in such a way as to incentivise producers to change the amount of sugar in their drinks, but not to encourage consumers to drink less. Indeed, between 2015 and 2019 total soft drinks sales rose by 15%, even as sugar consumption from drinks fell by 35%.¹⁰

In other cases, the effect is for people to consume 'less, but better' (i.e. trading up to more expensive products). This may be part of the dynamic around minimum unit pricing of alcohol in Scotland, which reduced volume sales but had no discernible effect on the industry as a whole, which was able to charge higher prices.¹¹

More generally, policies often have differential impacts on different firms within a sector. They may, as minimum pricing appears to have done, benefit premium over cheaper products. Or they may be differentially affected by regulation – for example, restrictions on online gambling could shift activity towards land-based providers (or vice-versa).

To understand the full economic impact of interventions, we need to look beyond the directly affected industries

A problem with much of the economic debate over public health policies is that it is often dominated by the industries directly affected, but the indirect impact on industries is less obvious and so easy to ignore. Regulations on alcohol will provoke outcry from the drinks industry, those on junk food will prompt objections from food producers, and gambling firms will resist efforts to curb harmful gambling. In each case, they point to the people they employ and the income that they generate and argue that if their sales suffer, those numbers will fall.

Even if that is true, it is not the full picture. If sales fall in a particular industry, the money does not just disappear from the economy. Consumers will take that money and spend it on other things. Less money on alcohol or tobacco or calorific foods might mean more spending on clothes or games or travel. One sector's loss is just another's gain.

This much neglected insight dates back at least as far as the 19th Century French economist Frederic Bastiat, who bemoaned our tendency to ignore "that which we do not see" in his 'parable of the broken window'¹²:

*Have you ever witnessed the anger of the good shopkeeper, James Goodfellow, when his careless son has happened to break a pane of glass? If you have been present at such a scene, you will most assuredly bear witness to the fact that every one of the spectators, were there even thirty of them, by common consent apparently, offered the unfortunate owner this invariable consolation – "It is an ill wind that blows nobody good. Everybody must live, and **what would become of the glaziers if panes of glass were never broken?**"*

Now, this form of condolence contains an entire theory, which it will be well to show up in this simple case, seeing that it is precisely the same as that which, unhappily, regulates the greater part of our economical institutions.

Suppose it cost six francs to repair the damage, and you say that the accident brings six francs to the glazier's trade – that it encourages that trade to the amount of six francs – I grant it; I have not a word to say against it; you reason justly. The glazier comes, performs his task, receives his six francs, rubs his hands, and, in his heart, blesses the careless child. All this is that which is seen.

But if, on the other hand, you come to the conclusion, as is too often the case, that it is a good thing to break windows, that it causes money to circulate, and that the encouragement of industry in general will be the result of it, you will oblige me to call out, "Stop there! Your theory is confined to that which is seen; it takes no account of that which is not seen."

It is not seen that as our shopkeeper has spent six francs upon one thing, he cannot spend them upon another. *It is not seen that if he had not had a window to replace, he would, perhaps, have replaced his old shoes, or added another book to his library. In short, he would have employed his six francs in some way, which this accident has prevented.*

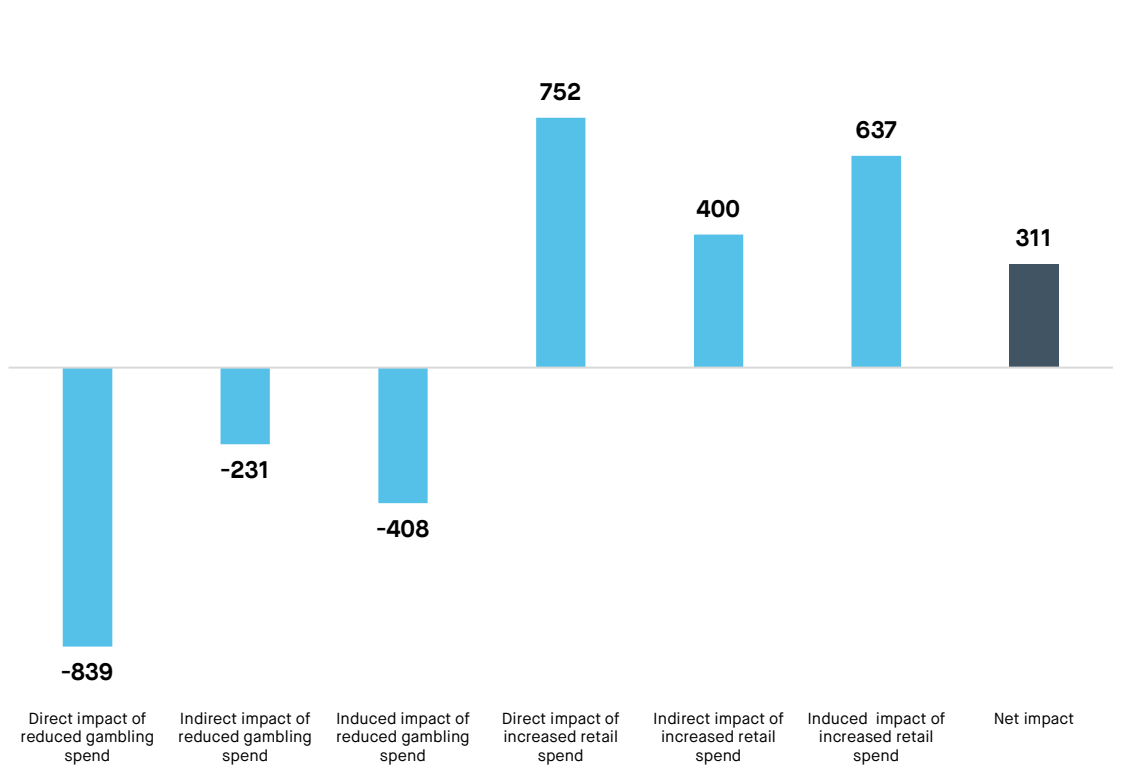
It would be absurd to go around breaking windows just to create work for glaziers, even if that would be profitable for the glaziers themselves. Just the same, it makes no sense to tolerate continued preventable illness because the activities that create that illness make some firms money.

The net effect of these shifts in demand depends on the industries in question, but it is usually relatively small

If people spend less on a harmful commodity and more on other goods and services, it is ambiguous in theory whether the gains in those other sectors will offset the losses to the drinks, tobacco, junk food or gambling industries. However, the implications can be modelled.

For example, a 2021 Social Market Foundation report modelled the potential impact of a 10% decline in gambling net spend, with the money diverted towards the retail sector.¹³ We found, as shown in Figure 1, that the gambling industry revenue would fall by over £800 million, suppliers to the gambling industry would lose out on over £200 million, and their workers would spend £400 million less. Yet on the other hand, the retail sector would be £750 million better off, its suppliers £400 million better off, and their employees would spend over £600 million more. The net effect would be that national income would rise by £300 million, largely because of the relatively short supply chain in the UK associated with the gambling industry. For similar reasons, we found that employment would rise by around 24,000 jobs.

Figure 1: Impact of a 10% decline in gambling net spend on GVA (£ millions), assuming consumers instead spend money in the retail sector



Source: SMF, Double or nothing?

A similar analysis has modelled the impact of a 5p per unit increase in alcohol taxes, with the money reinvested in public services, and on the Scottish economy. It found the government spending would partially, but not fully offset the losses to the industry, resulting in a £42 million decline in GDP and the loss of 686 jobs.¹⁴

The specifics vary depending on the policy under consideration, and how spending is redistributed. However, there is in general a trade-off between employment, on one hand, and productivity and wages on the other. Mechanised, technology-aided processes, such as food and drink production, tend to be more productive and as such offer higher wages, but employ relatively few people. By contrast, hospitality and retail is more labour-intensive and generates lower wages.

More generally, it is important to put these sorts of numbers in context. While millions of pounds and thousands of jobs are not to be sniffed at, these represent relatively small effects in the broader scheme of the economy – total UK GDP exceeds £2 trillion and over 30 million people are employed.

Such demand-side shifts only matter in the ‘short run’ if the economy is demand constrained

Economists make an analytical distinction between the ‘short run’ and the ‘long run’. In the short run, the ‘supply side’ of the economy – the potential amount of goods and services – is relatively fixed, and so growth depends more on the shape of demand for those goods and service. In the long run, however, it is the supply side which determines how much we can produce and how well off we are. This distinction does not map on to specific time periods, but merely reflects the fact that changes in the supply side of the economy tend to happen fairly gradually.

The arguments we have considered to this point relate only to the demand side of the economy – whether people buy good x or good y. They do not have strong implications for the economy’s productive potential. Even in the short run, their significance depends on the level of aggregate demand in the economy. If aggregate demand is high, the economy will be close to its productive potential already, and so shifting demand from one area to another should not cause much of an issue economically. For example, when demand is high, employment should be plentiful and it should be relatively easy for workers to move to other sectors. By contrast, if demand is relatively low and the economy is further from its potential then losing further demand from sectors such as alcohol, tobacco, gambling and junk food poses greater economic risks. The analyses considered in the previous section generally assume that the economy is demand, not supply, constrained – which may or may not be the case in reality.

REDUCING HEALTH HARMS WOULD BE GOOD FOR THE ECONOMY, BUT LIKELY NOT TRANSFORMATIVE

Improving workers' health boosts the long run supply side of the economy, increasing its productive capacity

We have seen that the short run demand-side impact of public health policies is ambiguous and typically small – some sectors gain, others lose, and the effects largely cancel one another out. By contrast, the supply-side effect – which is what really matters for long run living standards – is unambiguously positive. Creating a healthier population means more workers who are more productive, which raises our economic capacity. Unlike the demand-side dynamics, there is nothing to offset that positive effect.

Measures to reducing smoking, obesity, harmful drinking and problem gambling can increase the size of the workforce and its productivity in four main ways:

- *Reducing premature death*: premature deaths are tragic in and of themselves, but they are particularly bad for the economy if they occur while people are of working age, as it means the loss of workers.
- *Reducing unemployment and economic inactivity*: the physical and mental damage associated with harmful use of these products and services can often make it harder for people to hold down employment – again meaning fewer people in productive work.
- *Reducing absenteeism*: sickness and personal problems resulting from harmful smoking, drinking, gambling or obesity mean those that are in work spend more time off, reducing their working hours.
- *Reducing presenteeism*: even when people make it into work, their performance may be impaired by their physical or mental state – for example, workers will be less efficient if hungover.

In theory, it seems clear that anything that achieves these four outcomes is good for the economy. The trickier task is to quantify how substantial those gains are.

The potential economic gains from improved health are hard to quantify, but at best are likely to be in the low billions – compared to £2,200bn total GDP

A number of analyses have attempted to explore the economic costs of public health challenges, though as outlined above these can be tricky to navigate. Not everything with a pound sign in front of it is, strictly speaking, an economic cost, and often analyses include intangible, public sector or societal costs. For example, NIESR's analysis of gambling focuses on *fiscal* costs and benefits – the impact on government revenue and spending.¹⁵ One estimate of the societal costs of obesity implies that just 3% of the societal cost of obesity comes from lost economic output¹⁶, while a more recent analysis increases that to 15%.¹⁷

This sort of variation reflects the fact that putting numbers on the economic impact of illness is extremely tricky – different studies use different methods, data is generally imperfect and limited, and most involve key and debateable assumptions. They diverge in terms of the types of costs they cover (for example, which of presenteeism, absenteeism, unemployment and premature death are included). Moreover, these studies have tended to be undertaken sporadically and infrequently, meaning that the numbers are often out of date – for instance, the most reliable estimate we have of the economic costs of alcohol harm imply it costs the UK £7.3 billion in lost output, but this relates to the year 2012, using a method from a 2003 evidence review.¹⁸

I will not attempt to thoroughly compare, evaluate and reconcile these different economic cost estimates in this paper. However, though they produce quite different numbers, as a rough order of magnitude they tend to come out in the tens, but not hundreds, of billions:

- Last year, Landman Economics estimated the cost of smoking, heavy drinking and obesity in terms of unemployment and lower productivity (proxied by wages) to be £31.2 billion.¹⁹
- The UK government's estimates of the economic cost of harmful drinking, as noted above, is £7.3 billion.²⁰
- Tony Blair Institute estimates the lost output from overweight and obesity due to absence and economic inactivity to be £15.1 billion.²¹
- Analysis by IPPR has estimated that all long-term sickness (not just that linked to behavioural risk factors) costs the economy £43 billion a year.²²

These numbers are hardly trivial, but they need to be put into perspective against an economy of £2 trillion. To take the Landman Economics figure – that is, as they calculate, 1.4% of GDP. Yet to achieve such gains, we would have to essentially eliminate smoking, drinking and obesity. That is not going to happen overnight. The most effective interventions are only likely to reduce harm a few percentage points at a time.

In practice, then, the size of the prize is likely to be in the hundreds of millions, not billions, in any given year. Cutting that £31 billion drag by 5% – a pretty sizeable improvement – would yield £1.5 billion and raise GDP by less than 0.1% – near enough a rounding error.

To some extent, this is the nature of supply-side reforms: small, incremental improvements can add up to bigger economic benefits over time. For example, at the last autumn statement, the government's ability to increase the Office for Budget Responsibility's long term forecast size of the economy by 0.3% was hailed as a substantial achievement.²³

It means though, that while the potential benefits of a healthier population are real, we should be careful not to get carried away and overstate them. Relatively small gains can add up to meaningful change, but public health is unlikely to be adequate as a central pillar of economic strategy.

There can be a tendency in our political discourse for economics to trump other considerations, and therefore for policymakers and advocates tend to imagine that their most effective arguments must be couched in pounds and pennies. When it comes to literal matters of life and death, that tendency is beyond crass and fundamentally misses the point. The objective of public health interventions should be helping us to live healthier and longer lives – the economic gains, which we have seen are real, should be just a bonus.

ENDNOTES

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