The economic impacts of alcohol

The different types of cost of alcohol • Estimates of the cost of alcohol
A number of studies have attempted to calculate the cost of alcohol to society. This is tricky for two reasons. First, because many of the costs are difficult to estimate accurately. Second, because there is significant debate around which types of cost to include. The lack of a definitive set of criteria means that there is no single figure representing the cost of alcohol consumption to the UK.

The Government regularly cites the number £21 billion in relation to alcohol costs – this represents the ‘external’ cost of alcohol to society in England and Wales: the costs imposed by drinkers upon others, excluding any personal impact. Standard economic theory suggests that this should be the basis for setting alcohol taxes. However, this number remains controversial, and many groups, including IAS, have called for it to be updated or revised.
The different types of cost of alcohol

There are a wide array of costs and benefits associated with the consumption of alcohol. These are typically classified as either ‘private’ or ‘external’. Private costs and benefits are those that accrue to the drinker themselves. The most obvious private benefit is the pleasure the drinker gains from drinking. Private costs include the suffering associated with ill health (as opposed to costs of treating these ailments in taxpayer-funded health-care systems), or negative effects on their earnings. External costs and benefits represent the ‘spillover’ effects of a person’s drinking on others. If a person is more enjoyable to be around when drinking, this could represent an external benefit. External costs include concerns such as violence and crime suffered as a result of drinking, or the cost of treating health problems that others incur as a result of drinking.

Figure 1, taken from the UK Government Cabinet Office’s report into the costs of alcohol offers an overview of this framework. The purple bubbles represent private costs, while the green ones represent external costs.

External costs are significant because they are not willingly chosen, but are imposed upon third parties without their consent. Consequently, there is general agreement that they offer a justification for government intervention. Standard economic theory posits that external costs should be reflected in alcohol taxes, so that consumers bear the full price of the social cost of their drinking, and not just the private cost.\(^1\)

However, some economists argue that policymakers should look not only at external costs, but also costs resulting from irrational consumption (e.g. due to addiction or misinformation).\(^2\) These might be collectively termed ‘market failure’ costs, as they represent costs generated as a result of deviations from the ‘perfect market’ model. In
practice, identifying such irrational consumption is too difficult and open to debate to quantify market failure costs.

In certain contexts, it may be appropriate to focus on alcohol costs from a specific perspective, rather than looking at society as a whole. For example, it may be of interest to take the government’s perspective, and look at how alcohol tax revenue compares to public spending on alcohol-related problems. Similarly, the specific impact of alcohol on the health service, the criminal justice system or the economy may be of interest.

A further important distinction is between tangible and intangible costs. Tangible costs are those that involve the loss of resources that could otherwise be used for consumption or investment. These are commonly assigned financial value, and so are relatively easier to estimate. For example, health-care and criminal justice costs represent sums of money that would not otherwise have to be paid by the government. Intangible costs, such as the fear of crime or the badness of premature death, by contrast, would not yield resources if eliminated, and are therefore inherently more difficult to value.

Each of these different types of costs have different uses in different contexts, as figure 2 summarises:

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Estimates of the cost of alcohol

Total social costs

It is relatively unusual to look at total social costs of alcohol. A study by the National Social Marketing Centre comes closest to such an analysis, with a broad scope covering both private and external costs. It estimates that the total social cost of alcohol to England in 2006-07 was £55.1 billion. This comprises:

- £22.6 billion costs to individuals and households, including
  - Crime and violence
  - Private health and care costs
  - Informal care costs for families
  - Lost income due to unemployment
  - Unusually, spending on alcohol consumption above guideline levels (on the basis that “From a family perspective the economic impact of such purchasing can be devastating”)
- £21.9 billion ‘human values’ costs: the pain and grief associated with illness, disability and death
- £3.2 billion costs to public health and care services
- £5.0 billion costs to other public services, such as social care, criminal justice and fire services
- £7.3 billion of costs to employers due to lost productivity, absenteeism and accidents

‘Transfer payments’ which do not represent an overall cost to society, but simply move resources from one group to another – for example, tax income and benefits – are subtracted from this total to produce the overall estimate, as shown in figure 3.
External costs – England and Wales

A more common approach to valuing the costs of alcohol is to focus on external costs – that is, setting aside private costs to the drinkers themselves, and estimating only the costs drinkers impose on others in society.

In the UK, the most widely cited such estimate is the Government’s claim that alcohol generates external costs of £21 billion a year in England and Wales. This number has its roots in a 2003 Cabinet Office Strategy Unit report which surveyed the evidence on the cost of alcohol to society. While the methodology and assumptions underpinning the Cabinet Office analysis have not been revisited, their estimate has been periodically updated for new data and inflation. According to the most recent revisions from the Department of Health and the Home Office, these costs comprise:

- NHS costs, at £3.5 billion per year (at 2009–10 costs)
- Alcohol-related crime, at £11 billion per year (at 2010–11 costs)
- Costs to the economy, at about £7.3 billion per year (at 2009–10 costs, UK estimate)

While detailed breakdowns of these estimates are unavailable, the original Cabinet Office report provides an indication of the relative size of the specific items that make up the £21 billion number (though these have been updated subsequently):
In recent years, the Government’s reliance on its £21 billion estimate has received growing criticism from those who believe that its assumptions and methodology ought to be revisited. For example, its assumptions over the proportion of accident & emergency attendances attributable to alcohol are based on a single survey, which has been augmented by further research since. Moreover, certain costs are omitted from the tally – most prominently social care costs and reduced workplace productivity.

The Cabinet Office report recognises its own limitations, acknowledging that “The estimates given in this study are far from comprehensive – rather, due to the lack of data in certain areas, they are probably underestimates of the true costs associated with alcohol misuse”. Similarly, the Home Office points out that the valuation “does not include any estimate for the economic costs of alcohol misuse to families and social networks”.

Nevertheless, the Government has continued to make use of the £21 billion number, most recently in response to questions in parliament. Moreover, in October 2015, responding to criticisms of the estimate, Home Office Minister Lord Bates insisted “The Government has no plans to commission a further review of costs”.

Cost of alcohol to Scotland

The Scottish Government has produced its own estimate of the costs of alcohol in Scotland. Research it commissioned from the University of York found that alcohol consumption was associated with a total cost of £3.6 billion in 2007, which consists of roughly £2.1 billion of external costs and £1.1 billion private costs (though they do not make exactly this distinction). Figure 6 below breaks this number down in detail. Notably, it includes social care costs (unlike the Cabinet Office study for England and Wales), and finds these to be almost as high as health service costs.
A more recent academic analysis from University of Aberdeen researchers makes a significantly higher estimate of £7.2 billion for the total costs of alcohol to Scotland.11 This difference is largely due to the inclusion of morbidity costs (costs to sufferers of alcohol-related illness that does not result in death), which the researchers claim account for 61% of total alcohol costs. Of this £7.2 billion, around £5.9 billion comes from private costs and £1.4 billion external costs (which is likely to be an underestimate due to a lack of data on alcohol-specific criminal offences). The researchers also found that alcohol costs are disproportionately borne by the poorest: the 20% most deprived suffer 40% of the harms.
Figure 7: Cost of alcohol to Scotland by category, 2010 – University of Aberdeen study


Figure 8: Distribution of alcohol costs in Scotland by category, 2010 – University of Aberdeen study
Cost of alcohol to Northern Ireland

Another cost of alcohol study from the Northern Irish Government calculated the external costs of alcohol misuse to Northern Ireland in 2008/09 to be an annual £679.8 million:

- £122m is spent on healthcare
- £48.5m on social work
- £223.6m on the fire and police services
- £83.8m on courts and prison services
- £201.7m on the wider economy.

These numbers represent a ‘base case’, with the total annual cost estimated in the range of £501-£881 million. This upper limit is frequently rounded up to £900 million by the Government and charities in Northern Ireland. For example, in launching a new alcohol and drug strategy in 2012, Northern Ireland Health Minister Edwin Poots claimed “There is no doubt that alcohol misuse is one of the main threats to public health in Northern Ireland. Research has shown that it costs Northern Ireland up to £900 million every year, and almost £250 million of these costs are borne by the Health and Social Care sector.”

International context

It is typically inadvisable to make international comparisons of estimates of the social cost of alcohol because differences in data quality, definitions and methodology may account for many of the differences. However, such comparisons can help to calibrate the estimates mentioned above to see whether they are conservative or likely to overstate the costs of alcohol to society. One review of such estimates found that the weighted average total cost of alcohol to society in high-income countries is 2.5% of GDP (see figure 9).

Figure 9: Comparison of selected comparable cost of alcohol studies

<table>
<thead>
<tr>
<th>Study year</th>
<th>High-income countries</th>
<th>Middle income countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>France#</td>
<td>USA##</td>
</tr>
<tr>
<td>GDP (PPP) (2005 US$)</td>
<td>9,878</td>
<td>12,105</td>
</tr>
<tr>
<td>Direct healthcare costs</td>
<td>2,757</td>
<td>3,192</td>
</tr>
<tr>
<td>Direct law enforcement</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Other direct cost</td>
<td>270</td>
<td>304</td>
</tr>
<tr>
<td>Indirect cost</td>
<td>12,123</td>
<td>17,707</td>
</tr>
<tr>
<td>Total economic cost of alcohol</td>
<td>12,250</td>
<td>22,193</td>
</tr>
</tbody>
</table>

Comparing the official Government estimates to GDP in the year of estimate suggests that Scotland’s figure is relatively high, whereas England, Wales and Northern Ireland’s estimates are below average:16

- Scotland: 3.4% of GDP
- Northern Ireland: 2.2% of GDP
- England and Wales: 1.7% of GDP

Healthcare costs

As mentioned above, it is common to look specifically at the cost of alcohol from specific perspectives. The most common of these perspectives is costs to health service. The Department for Health has estimated that the NHS spends £3.5 billion a year on alcohol-related problems.17 The Welsh Government has carried out a similar exercise – finding in 2008/09 alcohol cost NHS Wales between £69.9 million and £73.3 million.18 However, more recently, Deputy Health Minister Vaughan Gething has claimed this has risen to £109 million a year.19

Estimates of healthcare costs are available at a sub-national level as well. Alcohol Concern has created an alcohol harm map for England, which provides information on the costs of alcohol misuse by local authority. By exposing the costs of dealing with alcohol to each and every specific region of the country, the charity aims to “reveal the real harm and cost of alcohol at a local level”.20

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2 Cabinet Office (2003), Alcohol misuse: How much does it cost?
8 HL 27 October 2015, vol 766 WA2472
12 Public Health Information and Research Branch (June 2010), ‘Social Costs of Alcohol Misuse in Northern Ireland for 2008/09’, Department of Health, Social Services and Public Safety Northern Ireland, pp. 6–8
20 Alcohol Concern, ‘Alcohol Harm Map’
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Our core aim is to serve the public interest on public policy issues linked to alcohol. We do this by advocating for the use of scientific evidence in policy-making to reduce alcohol-related harm.

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