# A rational approach to alcohol taxation

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## Executive Summary

- Excessive drinking creates costs to public services which the government can recoup through alcohol taxes, thereby making drinkers internalise the costs. However, in Britain, the alcohol duty regime is excessive and illogical. Not only do revenues from alcohol duty far exceed the costs to public services, but units of alcohol are taxed at dramatically different rates depending on what type of drink they are in. The tax on a unit of alcohol ranges from 7p to 34p.

- A flat rate of 9p on every unit of alcohol sold would raise approximately £4.6 billion (at current rates of consumption), totally off-setting the external costs of drinking to public services. Alcohol would continue to earn the government additional revenue in the form of VAT on the product, VAT on the duty, and other taxation on the alcohol and hospitality industry.

- A 9p/unit tax would pay for all the costs incurred to public services by alcohol abuse and would incentivise the development of lower strength drinks across the board. It would also effectively create a minimum unit price of 11p (including VAT on the duty). Alcohol duty evasion, currently valued at £1.8 billion per annum, would likely fall as a result of the lower price of beer, wine and spirits.

- A 9p/unit tax would ensure that alcohol duty is a tax on alcohol, not an arbitrary tax on fluids. EU regulation currently prohibits this system of alcohol taxation. Outside of the EU, Britain will no longer be constrained.


### Alcohol duty in the UK

Alcohol taxation in Britain defies common sense. The negative externalities associated with excessive drinking justify a tax to recoup the money spent by the government on alcohol-related crime and health problems, but rather than tax alcohol *per se*, the Treasury taxes volumes of fluid. A unit of alcohol is taxed at 27.7p if it happens to be in a glass of whisky but at just 7.8p if it is in a pint of cider. If the cider is strong, the tax is less than 7.8p, but if it is strong and fizzy the tax is 33.6p. Similarly, the tax on a unit of alcohol in a glass of wine amounts to 19.8p unless the wine is sparkling, in which case it is 25.4p.

Overall, there is a greater than four-fold difference between the highest and lowest rates. Perversely, the highest and lowest rates of tax are levied on the same drink - strong cider. The effective tax on each unit of alcohol is shown in Table 1 below (excluding VAT).

**Table 1**

| | Alcohol duty per unit |
|---|---|
| **Beer (2.8%)** | 8.1p |
| **Beer (5%)** | 18.4p |
| **Cider (5%)** | 7.8p |
| **Strong cider (8%)** | 7.3p |
| **Strong sparkling cider (8%)** | 33.6p |
| **Wine (14%)** | 19.8p |
| **Wine (15.5%)** | 23.9p |
| **Sparkling wine (14%)** | 25.4p |
| **Spirits** | 27.7p |
| **Ready-to-drink (‘alcopops’)** | 27.7p |

Alcohol taxation in Britain has evolved along protectionist and paternalist lines with wine being penalised while cider is treated more leniently. This is plainly an attempt to help the British cider industry at the expense of the foreign wine industry. Spirits have been heavily taxed for many years, starting with the Gin Act of 1736, partly to encourage beer consumption.

In 2011, the government introduced an additional duty on beer over 7.5 per cent ABV and reduced the duty on low strength beers (≤2.8 per cent ABV) (HM Treasury 2011: 61). These measures were intended to ‘to encourage the consumption of lower strength beers’ but attempts to sell such weak drinks have floundered. AB InBev produced 2.8 per cent variants of Rolling Rock and Löwenbräu but both drinks remain niche products, at best. Diageo and Molson Coors have been slightly more successful with 2.8 per cent variants of Guinness and Carling, but neither drink has come close to threatening the dominance of full-strength beers. There appears to be limited demand for beer below 3.5 per cent ABV.

It is unlikely that the current duty system maximises welfare. Using the tax system to nudge drinkers from one product to another likely produces reluctant cider drinkers who, under market conditions, would have preferred wine, or beer drinkers who would have preferred brandy, but who are pushed towards their second choice by the rate of duty. The consumer surplus foregone by these drinkers is an unnecessary deadweight loss.

**A more rational approach**

It is time to wipe the slate clean and start from first principles. We need to ask what the purpose of alcohol taxation is, how much needs to be raised, and how it should be collected.

The best justification for taxing alcohol above the rate of VAT is that drinking creates negative externalities which impose costs on others. These include costs to the health service, police service, prison service, welfare system and judiciary which we have previously estimated to cost English taxpayers no more than £3.9 billion in 2015 prices (Snowdon 2015). Assuming similar costs per capita in Wales, Scotland and Northern Ireland, this amounts to a cost of no more than £4.6 billion for the whole United Kingdom. Tax on alcohol should seek to internalise those costs by raising £4.6 billion per annum; no more, no less.

Alcohol duty should be a tax on ethanol, since ethanol is the ingredient that can lead to drunkenness and ill health. British drinkers currently consume just over 50 billion units of alcohol per annum (Department of Health 2014). To recover £4.6 billion in costs, there should be a flat rate of tax of 9p per unit of alcohol sold. Table 2 shows how this would affect the tax rate on some typical drinks.

**Table 2**

| | Current tax rate | Rational tax rate |
|---|---|---|
| **Pint of 5% cider** | £0.22 | £0.26 |
| **Pint of 3.5% beer** | £0.37 | £0.18 |
| **Pint of 5% beer** | £0.52 | £0.26 |
| **Litre of strong cider (8%)** | £0.59 | £0.72 |
| **70cl 'alcopop' (4%)** | £0.77 | £0.25 |
| **75cl bottle of 14% wine** | £2.08 | £0.95 |
| **75cl bottle of sparkling wine (14%)** | £2.67 | £0.95 |
| **Litre of strong, sparkling cider (8%)** | £2.69 | £0.72 |
| **70cl bottle of 40% whisky** | £7.74 | £2.52 |

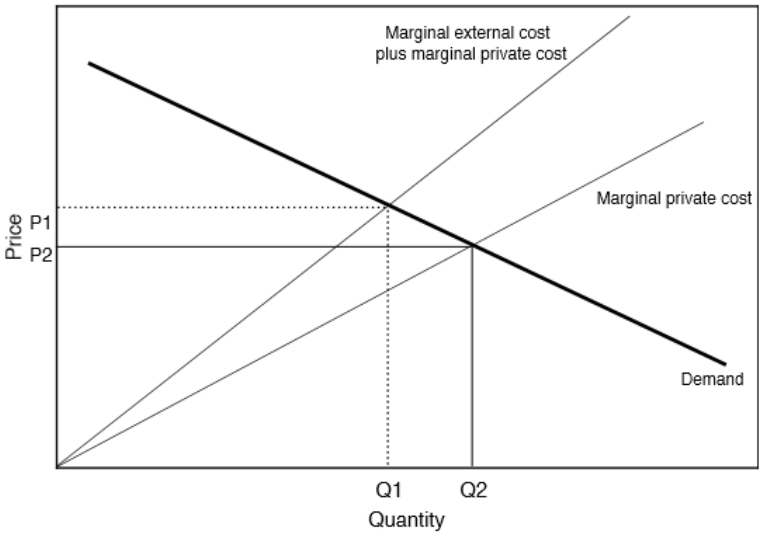
This rational system of alcohol taxation would lead to still cider becoming more expensive regardless of strength, but all other drinks would become cheaper. This is not surprising since alcohol is currently taxed at a far higher rate than is needed to recoup associated costs to public services. The lower rates proposed above are not cheap by European standards, however. The average duty on a bottle of wine in the EU-27 is €0.51 (44p) and the average duty on a five per cent pint of beer is just 14p (European Commission 2016; BBPA 2016). Only hard liquor is taxed at a higher rate in the EU-27 than a 9p/unit tax would imply, at €4.80 (£4.15) on a 70cl bottle of 40% spirits.

**Adjustments to the model**

Figure 1 shows the demand curve, external costs and tax at the point of private equilibrium (Q2) and socially optimum equilibrium (Q1), with the gap between P1 and P2 representing the tax required.

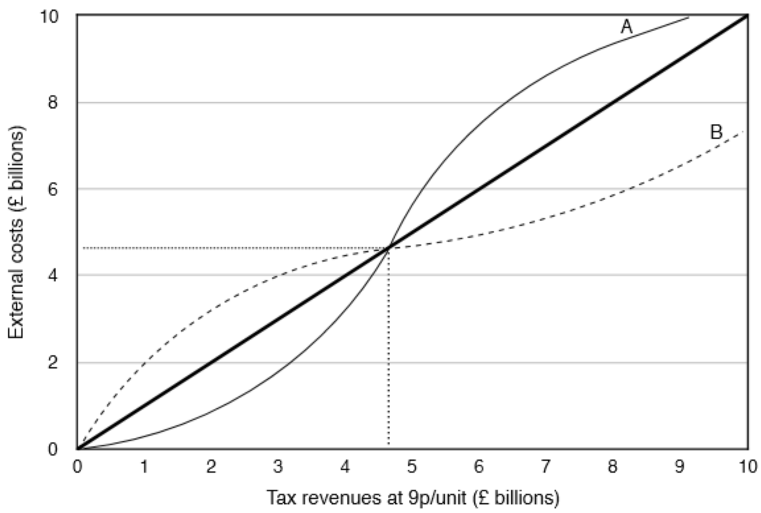
The 9p/unit system could be fine-tuned under two circumstances. Firstly, if it can be shown that certain types of drink are causally related to more external harm, the unit tax could be adjusted to reflect their higher costs. For example, if it was established that spirits create a disproportionately large number of health and social problems, the tax on spirits could be increased to, say, 11p/unit while the tax on other drinks was dropped to 8p/unit. In such a scenario, it is important that the tax on the less harmful drinks falls by a commensurate amount so that the total tax revenue matches the net externalities, which are currently estimated at £4.6 billion.

**Figure 1**




Secondly, the unit tax could be adjusted if alcohol-related externalities rise or fall. The calculations in this paper are based on the negative externalities associated with alcohol in the current market in which most units of alcohol are over-taxed. 'Public health' campaigners might argue that the effect of reducing the price of most alcoholic beverages, as suggested above, will lead to greater alcohol consumption and an increase in alcohol-related harm. In practice, the link between per capita alcohol consumption and alcohol-related harm is quite weak (Poikolainen 2015), but standard economic theory predicts that lower prices will lead to increased consumption.

**Figure 2**




Increased consumption means more tax revenue to offset the externalities, but we cannot be sure that alcohol-related externalities will increase in a linear fashion in line with consumption. In Figure 2, tax revenues are a proxy for consumption. If the marginal external cost of each unit of alcohol is 9p then a 9p/unit tax will ensure that costs are covered by tax revenue at any level of consumption (as shown by the straight line). However, if the marginal costs exceed 9p/unit beyond a certain level, policy-makers should be prepared to adjust the tax upwards (Curve A). Similarly, if the marginal external cost falls (Curve B), the tax should be reduced by a proportionate amount until an equilibrium is reached.

**Practical objections**

It must be acknowledged that the government taxes goods to raise money for general expenditure, not just to offset the costs incurred by their use. Under a rational system, alcohol would still make a significant contribution to the public finances. Drinkers would continue to pay several billion pounds in VAT on alcohol, and the drinks industry would continue to pay taxes on production, retail and profits. In addition, VAT on £4.6 billion of alcohol duty would produce an extra £920 million for the government. This VAT could be counted as part of the 'sin tax' since there is already VAT levied on the product itself, but we have not done so here. The £920 million should therefore be seen as an additional luxury tax paid by drinkers and a bonus for the government.

The British government raised £10.7 billion in alcohol duty in 2015/16, exceeding the costs of alcohol to public services by 130 per cent. A rational system of alcohol taxation would reduce this total to less than half and require the rest to be made up from general taxation. This tax gap would be narrowed by the probable reduction in alcohol duty evasion, which cost the government £1.8 billion in 2014/15 (HMRC 2016: 34) since the incentive to buy cheaper alcohol abroad or from illicit suppliers would become weaker. Nevertheless, because of the initial shortfall in revenue, and because alcohol taxation is a convenient way for the government to make money from goods that have inelastic demand, we accept that rational alcohol taxation may be an idea whose time has not yet come. But it should be considered.

The current alcohol duty system already incorporates this system to some extent. Spirits are taxed at £27.66 per litre of pure ethanol, regardless of the type of drink. Since 10ml of alcohol = 1 unit, this amounts to a tax of 27.7p per unit of alcohol. Mid-strength beer is effectively taxed at 18.37p per unit, with higher and lower unit rates for high-strength and low-strength beer respectively. But cider and wine are crudely taxed by the litre, albeit in a two-tiered system depending on the strength. A 9p/unit tax would create consistency across all drinks.

This is not the first time the idea has been suggested. From their different perspectives, economic think tanks and temperance groups have called for alcohol to be taxed by the unit. The Institute for Fiscal Studies (2011: 16) found little evidence that any one type of alcoholic drink creates more negative externalities than another and concluded that 'it would seem desirable to treat different types of alcohol in the same way in the tax system'. The Alcohol Health Alliance (2016) has called on the government to lobby the EU so that 'drinks in all categories can be taxed according to their strength'. This raises the important point that EU regulation prohibits the system outlined in this briefing paper. Outside of the EU, Britain will no longer be constrained.

**Conclusion**

The current tax regime is characterised by paternalism and protectionism, neither of which can be justified in a free society. Moreover, the paternalism is largely ineffective. In an effort to clamp down on high-strength alcohol, the government created a new, high tax category for beers and sparkling ciders with an alcohol content of more than 7.5 per cent. As a result, there is now a wide range of cheap, high-strength beers and sparkling ciders with an alcohol content of exactly 7.5 per cent. The government's attempt to give the drinks industry an incentive to produce lower strength beer has been unsuccessful because the lower rate of tax only applies to beers with an ABV of up to 2.8 per cent. This limit, which is derived from EU law, is lower than the market will stand. It would make more sense to set the limit at around 3.6 per cent, which was the typical strength of ale in Britain before the rise of stronger continental lagers.

But the best approach would be to tax all alcoholic drinks by unit at the same rate. A 9p/unit tax would pay for all the costs imposed on public services by alcohol abuse and would incentivise the development of lower strength drinks across the board. It would also effectively create a minimum unit price of 11p (including VAT on the duty) and would tackle alcohol duty evasion. It is time to tax alcohol, not fluids.

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