

### The price of alcohol



What determines the price of a drink? • How much do people pay for alcohol? • How has the cost of alcohol changed over time? • How does the price of alcohol affect consumption? • How does the price of alcohol affect levels of harm? • The theory of alcohol taxation • What is the relationship between taxes and prices? • What is the relatinoship between taxes and harm? • Current rates of alcohol duty • How have UK alcohol taxes changed over time? • How important is the revenue from alcohol duty to the government? • Minimum unit pricing • Ban on below cost sales

Regulation of the price of alcohol is one of the main tools used by governments to address alcohol-related harm. This factsheet provides an overview of the main issues around alcohol pricing, with particular focus on the UK.

It starts with an overview of alcohol pricing in the UK, starting with an explanation of the determinants of the price of alcohol, before looking in detail at the price paid for different alcoholic products by different consumers in the UK, and how this has changed in recent years.

The factsheet then looks at how the price of alcohol affects both the level of consumption and the level of various harms, showing that there is a wealth of evidence indicating that cheaper alcohol leads to people drinking more and suffering greater harms.

It then turns to different policy measures that seek to influence the price of alcohol, beginning with alcohol taxes. The factsheet runs through the economic theory behind alcohol taxation. It shows that taxes are in general associated with higher prices and lower harm, though different retailers vary in the extent to which they pass through alcohol taxes. The factsheet then provides an overview of the current level and structure of UK taxes, and how this has changed over time.

Next, the factsheet discusses another prominent pricing policy – minimum unit pricing (MUP). It starts with an account of the political and legal debate around the introduction of MUP in Scotland (where legislation was passed in 2012 but is yet to come into force) and the rest of the British Isles (where the Westminster government reneged on a commitment to MUP, and other nations have explored the policy to differing extents). It then summarises the evidence on the effectiveness of minimum unit pricing.

Finally, the factsheet discusses two other pricing policies – a ban on below cost sales, which was introduced across the UK in 2014, and a ban on multi-buy sales, which came into force in Scotland in 2011.



Broadly, the price of an alcoholic drink (or indeed any product) consists of three elements:

- 1. **Costs** (to the producer and retailer): these include labour, raw materials (e.g. grains and fruits), packaging, transport, rent, power, marketing
- 2. **Tax**: both excise duty and value added tax (VAT)
- 3. **Profits**: to the producer and retailer

The relative contribution of these different elements to the price of a drink varies significantly between different beverage types, brands and retailers. The rate of VAT is currently set at 20% of a product's pre-tax price (which is equivalent to 17% of the post-tax retail price).<sup>1</sup>

The excise duty levied varies widely between different products, but on average accounts for around 25% of the final retail price.<sup>2</sup> Consequently, around 40% of the price of an average drink is tax.

In general, the more expensive a product is, the lower the proportion of its price that is tax. For example, an average pint of beer of 4.2% ABV<sup>3</sup> attracts 44p of duty. Its average retail price is £3.40 in the on-trade, and £1.22 in the off-trade.<sup>4</sup> Under these prices, 13% of the price of beer in the on-trade is duty, and 36% of the price of beer in the off-trade.



<sup>1</sup> Gov.uk (2016), VAT rates < <a href="https://www.gov.uk/vat-rates">https://www.gov.uk/vat-rates</a>

<sup>&</sup>lt;sup>2</sup> This is calculated by dividing the £11bn raised in duty in 2014, by the total retail sales of £42bn in that year. See report *Alcohol's Impact on the Economy* for more details <a href="http://www.ias.org.uk/uploads/pdf/IAS%20reports/rp23022017.pdf">http://www.ias.org.uk/uploads/pdf/IAS%20reports/rp23022017.pdf</a>

<sup>&</sup>lt;sup>3</sup> British Beer & Pub Association (2016), Statistical Handbook 2016, Table A1

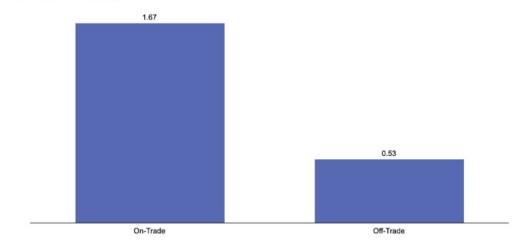
<sup>&</sup>lt;sup>4</sup> British Beer & Pub Association (2016), op. cit., Tables C10–11

### How much do people pay for alcohol?

To allow comparisons between different types of drinks of varying strengths, alcohol prices are often expressed in terms of price per unit (where a unit is equivalent to 10ml or 8g of pure alcohol). Data from NHS Health Scotland's *Monitoring and Evaluating Scotland's Alcohol Strategy* (MESAS) project reveals the average price per unit paid for different products in different retail locations.

Figure 1: Average price per unit in the on-trade and off-trade, England & Wales, 2015 (£)





Source: NHS Health Scotland (2016), Alcohol retail sales dataset 1994 to 2015 – May 2016, 'MESAS alcohol sales and price update May 2016'

Figure 1 shows that alcohol prices paid in the on-trade (pubs, clubs, bars, restaurants and hotels) are on average three times higher than those in the off-trade (supermarkets and off-licences).<sup>1</sup>

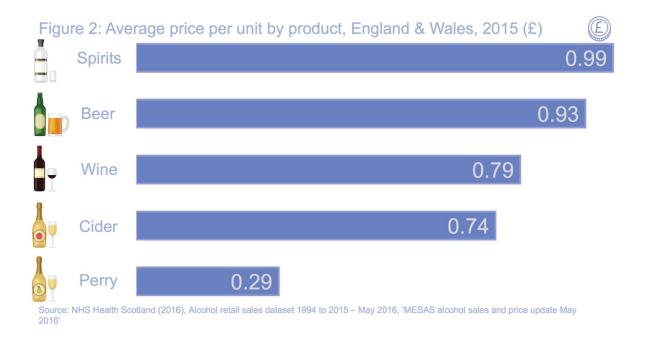
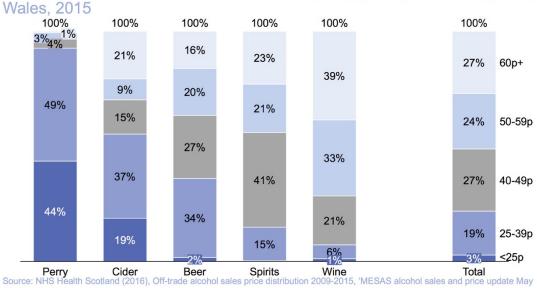


Figure 2 shows that on average, people pay more for spirits and beer than they do for wine and cider, and that in general, perry (pear ciders) is sold extremely cheaply.<sup>2</sup>

These are average figures, and so do not account for the substantial variation in price within product types. Figure 3 shows that over 90% of perries are sold for less than 35p per unit.<sup>3</sup>

However, cider is sold for a wider range of prices – over half of cider is sold for less than 40p per unit, but 21% retails for over 60p – a higher share than for beer. Note that these numbers relate only to the off-trade, and so are not directly comparable with figure 2.

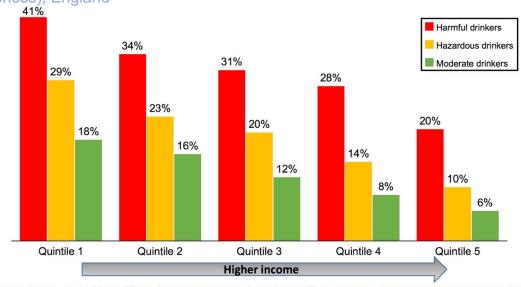
Figure 3: Share of volume sales in the off-trade by price per unit, England &



2016

The price paid for alcohol also varies significantly between individuals. Unsurprisingly, richer and less heavy drinkers tend to buy more expensive drinks. Holmes et al have quantified this, using national survey data to estimate the proportion of different groups' consumption that is below a proposed minimum unit price of 45p (in 2011 prices).<sup>4</sup>

Figure 4: Proportion of alcohol consumption below 45p per unit (2011 prices), England



Source: Holmes, J. et al (2014)., Effects of minimum unit pricing for alcohol on different income and socioeconomic groups: a modelling study, 'The Lancet', 383:9929, pp. 1655–64 (Note: Harmful drinkers are those men consuming over 50 units per week and women consuming over 35; hazardous drinkers are men consuming 22–50 units and women consuming 15–35 units per week)

<sup>&</sup>lt;sup>1</sup> NHS Health Scotland (2016), Alcohol retail sales dataset 1994 to 2015 – May 2016, 'MESAS alcohol sales and price update May 2016' <a href="http://www.healthscotland.com/documents/27345.aspx">http://www.healthscotland.com/documents/27345.aspx</a>>

<sup>&</sup>lt;sup>2</sup> Ibid

<sup>&</sup>lt;sup>3</sup> NHS Health Scotland (2016), Off-trade alcohol sales price distribution 2009-2015, 'MESAS alcohol sales and price update May 2016' <a href="http://www.healthscotland.com/documents/27345.aspx">http://www.healthscotland.com/documents/27345.aspx</a>>

<sup>&</sup>lt;sup>4</sup> Holmes J et al (2014), Effects of minimum unit pricing for alcohol on different income and socioeconomic groups: a modelling study, 'The Lancet', 383:9929, pp. 1655–64

## How has the cost of alcohol changed over time?

As with most products, the price of alcohol is subject to inflation over time. The UK's Office for National Statistics tracks alcohol prices as part of its Retail Prices Index. Figure 6 shows how this has evolved over time, in particular demonstrating that prices in the off-trade (supermarkets and off-licences) have risen much more slowly than those in the on-trade (pubs, clubs, bars, restaurants and hotels), with the gap widening significantly since the early 1990s. Indeed, beer prices in the off-trade today are around the same level as they were in 2001. It is notable that the only period of significant price rises in the off-trade in recent years is between 2008 and 2013: this is likely to be linked to the duty escalator (see below).

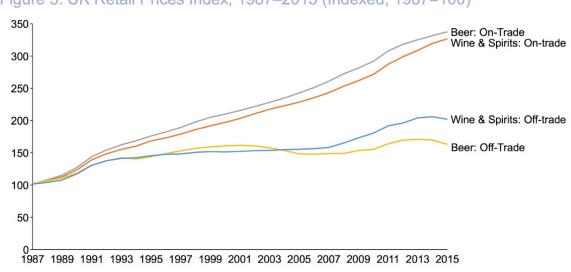


Figure 5: UK Retail Prices Index, 1987–2015 (Indexed, 1987=100)

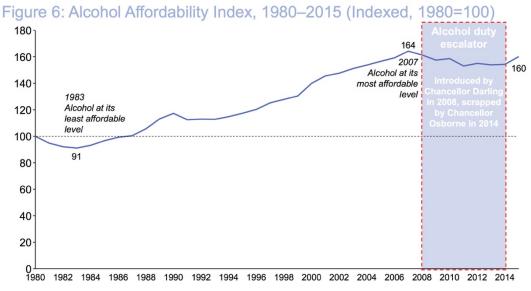
Source: www.parliament.uk (April 2013), 'HC Deb, c867W', Justice: On Probation

It is often argued that the price of alcohol is less relevant than its *affordability*.<sup>2</sup> In other words, since people's ability to buy alcohol depends on their incomes and the price of other goods, as well as the price of alcohol, these should be considered together. For example, an analysis of data from New Zealand found that consumption of beer and wine was more closely correlated with affordability than price.<sup>3</sup>

Such an approach has strengths and weaknesses: its comprehensiveness is a good thing, but may obscure underlying trends in different indicators. Moreover, some argue that affordability is a less useful measure than price for policymakers as it does not relate directly to a policy instrument.<sup>4</sup>

NHS Digital (formerly the NHS Health and Social Care Information Centre) calculates a measure of the affordability of alcohol in the UK since 1980. This is calculated by dividing real household disposable income by the relative price of alcohol compared to other goods.<sup>5</sup>

The alcohol affordability index shows that alcohol was 60% more affordable in 2015 than 1980, and that affordability rose by 36% between 2005 and 2015. It also shows that having declined between 2007 and 2013 in the wake of the recession and rising alcohol taxes, affordability has begun to rise again.



Source: HSCIC (June 2016), 'Statistics on Alcohol, England 2016', Appendices, p. 11

<sup>&</sup>lt;sup>1</sup> ONS (2016), 'Consumer Price Inflation time series dataset'

<sup>&</sup>lt;a href="https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/consumerpriceindices">https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/consumerpriceindices>

<sup>&</sup>lt;sup>2</sup> University of Stirling, Alcohol Health Alliance, British Liver Trust (March 2013), 'Health First: an evidence-based alcohol strategy for the UK', Stirling: University of Stirling, p. 18

<sup>&</sup>lt;sup>3</sup> Wall M and Casswell S (2013)., 'Affordability of alcohol as a key driver of alcohol demand in New Zealand: a co-integration analysis, Addiction 108:1, pp. 72–9

<sup>&</sup>lt;sup>4</sup> Rabinovich L et al (2009)., 'The affordability of alcoholic beverages in the European Union', RAND Corporation, p. 24

<sup>&</sup>lt;sup>5</sup> HSCIC (Health & Social Care Information Centre, now NHS Digital) (June 2016), 'Statistics on Alcohol, England, 2016', Appendices, p. 11

## How does the price of alcohol affect consumption?

The relationship between the price and consumption of a good is measured by its *price elasticity*. This is often expressed as the percentage change in consumption of the good that results from a 1% increase in its price, all else equal. Goods with a price elasticity greater than 1% are described as 'relatively elastic', while those with a price elasticity of less than 1% are described as 'relatively inelastic'. The economic 'law of demand' states that people consume less of a good when its price increases, though there are a few unusual exceptions.

A number of academic studies have attempted to estimate the price elasticity of demand for alcohol. While these have produced a range of estimates, the majority agree that alcohol conforms to the law of demand, but that it is relatively inelastic. In other words, raising alcohol prices reduces alcohol consumption, but typically the fall in consumption is proportionately smaller than the increase in prices.

Two major meta-analyses have attempted to consolidate and summarise this research. Wagenaar et al reviewed 112 studies of the impact of changes in alcohol taxes or prices on consumption, and found on average a 1% increase in price leads to a:

- 0.46% decrease in beer consumption
- 0.69% decrease in wine consumption
- 0.80% decrease in spirits consumption<sup>1</sup>

They also found that heavy drinkers are less responsive to price, with a 1% increase in price reducing drinking in the group by 0.28%.

In a similar analysis, Gallet also found that demand for wine and spirits is more elastic than demand for beer.<sup>2</sup> However, his estimates were slightly lower than Wagenaar et al - in his analysis, a 1% increase in prices causes a:

- 0.36% decrease in beer consumption
- 0.70% decrease in wine consumption
- 0.68% decrease in spirits consumption
- 0.50% decrease in overall alcohol consumption

Gallet also looked at the relationship between age and price sensitivity, and found that younger individuals reduce their drinking less in response to a change in prices. However, he suggests that this might be because younger people are more likely to drink beer, which is less price elastic.

Supporting the arguments for the use of affordability metrics (see above), Gallet also shows that increases in income are associated with higher levels of drinking. On average, he finds that a 1% increase in income is associated with a:

- 0.39% increase in beer consumption
- 1.10% increase in wine consumption
- 1.00% increase in spirits consumption
- 0.50% increase in overall alcohol consumption

Both of these studies aggregate data from a range of different countries, with different cultures and economies, so we should be careful in applying them to any specific context. The UK Government produces its own estimates of price sensitivity to model the effect of tax changes.<sup>3</sup> These split out the effect of changes in price on both on-trade and off-trade sales, and find that beer and cider consumption is more price elastic in the off-trade, but wine and spirits consumption is more elastic in the on-trade. In line with other studies, it reports that demand for spirits is more elastic than other drinks, though unusually the elasticity of wine is relatively low. The Government also estimates 'cross-price elasticities': the impact of a change in the price of one product on the consumption of another. These elasticity estimates are shown in figure 7 below.

Figure 7: UK Government estimates of the price elasticity of different alcoholic drinks

	Quantity	Be	er	Spi	rits	R	TDs	Cid	ler	Wi	ne
Price		On	Off	On	Off	On	Off	On	Off	On	Off
Beer	On	-0.34***	0.03	0.26***	0.08	0.08	0.11	0.05	0.11	0.10*	-0.04
	Off	-0.08	-0.74***	-0.10	-0.11**	0.02	-0.01	-0.02	0.07	-0.02	-0.08*
<b>Spirits</b>	On	-0.10***	-0.01	-1.25***	0.01	0.04	0.00	0.00	0.03	0.01	0.05*
	Off	0.00	0.04	-0.16**	-0.45***	-0.22	-0.09	-0.06	0.13	-0.01	-0.02
RTDs	On	0.00	0.09	0.17*	0.05	-0.24*	-0.03	-0.02	0.00	-0.04	0.00
	Off	0.00	-0.03	-0.03	-0.02	-0.03	-0.52***	0.03	-0.04	0.04	-0.03
Cider	On	-0.06	0.05	0.04	0.10	-0.04	0.24	-0.49***	-0.13	0.02	-0.06
	Off	-0.06	-0.01	0.02	0.05	0.30*	0.13	-0.25**	-0.74***	-0.04	-0.09**
Wine	On	0.02	0.02	0.12***	0.00	-0.07	0.01	0.07	-0.04	-0.24***	0.02
	Off	0.01	0.00	-0.02	-0.07*	0.14*	0.10	0.15*	0.05	0.03	-0.08***
* p<0.05, ** p<0.01, *** p<0.001											

Source: Sousa, J. (2014), Estimation of price elasticities of demand for alcohol in the United Kingdom, HMRC Working Paper 16.

However, using an alternative modelling approach, Meng et al produce somewhat higher elasticities, except for spirits, which are considerably lower (figure 8).<sup>4</sup>

Figure 8: Meng et al estimates of the price elasticity of different alcoholic drinks

	Purchase									
	Off-beer	Off-cider	Off-wine	Off-spirits	Off-RTDs	On-beer	On-cider	On-wine	On-spirits	On-RTD
Price										
Off-beer	-0.980	-0.189	0.096	-0.368	-1.092	-0.016	-0.050	0.253	0.030	0.503
Off-cider	0.065	-1.268	0.118	-0.122	-0.239	-0.053	0.093	0.067	-0.108	-0.194
Off-wine	-0.040	0.736	-0.384	0.363	0.039	-0.245	-0.155	0.043	-0.186	0.110
Off-spirits	0.113	-0.024	0.163	-0.082	-0.042	0.167	0.406	0.005	0.084	0.233
Off-RTDs	-0.047	-0.159	-0.006	0.079	-0.585	-0.061	0.067	0.068	-0.179°	0.093
On-beer	0.148	-0.285	0.115	-0.028	0.803	-0.786	0.867	1.042	1.169	-0.117
On-cider	-0.100	0.071	0.043	0.021	0.365	0.035	-0.591	0.072	0.237	0.241
On-wine	-0.197	0.094	-0.154	-0.031	-0.093	-0.276	-0.031	-0.871	-0.021	-0.363
On-spirits	0.019	-0.117	-0.027	-0.280	-0.145	-0.002	-0.284	0.109	-0.890	0.809
On-RTDs	0.079	0.005	-0.085	-0.047	0.369	0.121	-0.394	-0.027	-0.071	-0.187

<sup>\*</sup> p-Value <0.05.

Source: Meng, Y. et al (2014), Estimation of own and cross price elasticities of alcohol demand in the UK – a pseudo-panel approach using the Living Costs and Food Survey 2001-2009, 'Journal of Health Economics' 34, pp. 96–103

Bringing these studies together, we find a general consensus that raising the price of alcohol does reduce consumption, typically by about half as much as the price increase (so a 1% price rise reduces drinking by around 0.5%). There is also agreement that demand is more elastic in the off-trade for beer and cider, and in the on-trade for wine and spirits. However, there remains disagreement over which particular drinks are most price elastic.

<sup>&</sup>lt;sup>1</sup> Wagenaar A C et al (2009)., 'Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1,003 estimates from 112 studies', Addiction 104:2, pp. 179–90

<sup>&</sup>lt;sup>2</sup> Gallet C A (2007)., 'The demand for alcohol: a meta-analysis of elasticities', The Australasian Journal of Agricultural and Resource Economics 51:2, pp. 121–35. See also Fogarty J (2010)., 'The demand for beer, wine and spirits: a survey of the literature', Journal of Economic Surveys 24:3, pp. 428–78

<sup>&</sup>lt;sup>3</sup> Sousa J (2014)., 'Estimation of price elasticities of demand for alcohol in the United Kingdom', HMRC Working Paper 16

<sup>&</sup>lt;sup>4</sup> Meng Y et al (2014)., 'Estimation of own and cross price elasticities of alcohol demand in the UK – a pseudo-panel approach using the Living Costs and Food Survey 2001–2009', Journal of Health Economics 34, pp. 96–103

<sup>&</sup>lt;sup>5</sup> Public Health England (2016), 'The Public Health Burden of Alcohol and the Effectiveness and Cost-Effectiveness of Alcohol Control Policies: An evidence review', p. 83



Given that higher alcohol prices reduce alcohol consumption, and lower alcohol consumption generally reduces health risks, we have strong reason to expect that higher alcohol prices should improve health outcomes.

A number of academic studies have addressed this relationship directly. Wagenaar et al carried out another meta-analysis of 50 articles, finding that doubling alcohol taxes was associated with a range of positive outcomes:<sup>1</sup>

- 35% fall in alcohol-related mortality
- 11% fall in traffic collisions
- 6% fall in sexually transmitted diseases
- 5% fall in suicides
- 2% fall in violence
- 1% fall in crime

All the studies examining mortality, traffic accidents and sexually transmitted diseases found that these fell as taxes rose, though the evidence on violence, crime and suicide was mixed.

<sup>&</sup>lt;sup>1</sup> Wagenaar A C et al (2010)., 'Effects of Alcohol Tax and Price Policies on Morbidity and Mortality: A Systematic Review', American Journal of Public Health 100:11, pp. 2,270–8

<sup>\*</sup> Please see our *Health impacts* factsheet for more information.

### The theory of alcohol taxation

In light of this evidence, it is often argued that governments should intervene in the market for alcohol to raise its price. One of the most common ways of doing so is by levying specific taxes, known as excise duties, on the sale of alcohol. The World Health Organization classes increasing alcohol taxes as one of the most cost-effective measures for achieving its target of a 10% reduction in harmful alcohol consumption. Alcohol tax has also been endorsed by the Organisation for Economic Co-operation and Development (OECD), among a suite of measures to reduce the negative health effects of drinking. A recent Public Health England review of the efficacy of different alcohol policies concluded that increasing taxes was a cost-effective way to reduce alcohol consumption and harms.

In general, taxes may be levied on alcohol for three reasons:4

- To correct for externalities: The consumption of alcohol imposes costs on third
  parties ('externalities') that are not reflected in the price charged by the retailer to the
  drinker for example, increasing the risk of violence and social disorder, drink driving
  accidents, costs to the health service etc. One function of alcohol taxes is to
  'internalise' these costs by ensuring that the drinker faces them.
- 2. Paternalism: While externality-correction adjusts drinkers' behaviour to prevent them imposing costs on others, paternalist justifications for tax say we should reduce people's drinking for their own good. There are a number of reasons why the government may choose to act in such a way. Drinkers may not be fully informed about the risks of drinking. They may behave irrationally, because they are addicted or intoxicated, or indeed influenced by social pressure or marketing. This is understandably a controversial line of argument, but it is one accepted by many people and governments.
- 3. To raise revenue for the Government: A third justification for taxes on alcohol is to raise revenue for the government. In particular, it is sometimes argued that alcohol taxes cause less distortion to markets than other goods, but the practical relevance of such arguments is debateable.

In practice, all three types of argument are influential, and in some cases reinforce one another in making the case for taxing alcohol.

<sup>&</sup>lt;sup>1</sup> World Health Organization (2013), 'Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020', Geneva: World Health Organization, p. 67

<sup>&</sup>lt;sup>2</sup> Organisation for Economic Co-operation and Development (OECD) (2015), 'Policy Brief: Tackling harmful alcohol use' <a href="https://www.oecd.org/els/health-systems/Policy-Brief-Tackling-harmful-alcohol-use.pdf">https://www.oecd.org/els/health-systems/Policy-Brief-Tackling-harmful-alcohol-use.pdf</a>

<sup>&</sup>lt;sup>3</sup> Public Health England (2016), 'The Public Health Burden of Alcohol and the Effectiveness and Cost-Effectiveness of Alcohol Control Policies: An evidence review', p. 100

<sup>&</sup>lt;sup>4</sup> Bhattacharya A (2016)., 'Dereliction of duty: Are UK alcohol taxes too low?'

<sup>&</sup>lt;a href="http://www.ias.org.uk/uploads/pdf/Derelictionofduty.pdf">http://www.ias.org.uk/uploads/pdf/Derelictionofduty.pdf</a>

# What is the relationship between taxes and prices?

The link between alcohol taxes and alcohol prices is often assumed to be straightforward: raising taxes should automatically mean prices go up (and vice-versa). However, in practice, taxes are charged to producers, who may choose to pay an increase in taxes out of their own profits (or retain any cut in taxes), rather than passing these on to consumers by raising prices. Conversely, producers may choose to increase or decrease prices by a greater amount than the change in taxes, perhaps because a change in taxes gives them an opportunity to renegotiate with retailers.

One recent analysis found that cheaper drinks are more prone to 'under-shifting' (changing prices by less than the change in tax), while 'over-shifting' (changing prices by more than the change in tax) is more common for expensive drinks. Under-shifting was found to be more common for beer and cider, while there was less evidence of it for wine and spirits. Overall, the pass-through rate varied from 78% for lower priced beers to 124% for higher priced ciders (where 100% would mean that the price increase was equal to the tax increase).

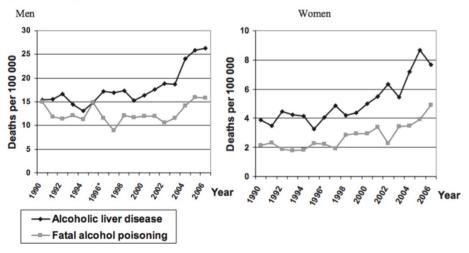
<sup>&</sup>lt;sup>1</sup> Ally A K et al (2014)., 'Alcohol tax pass-through across the product and price range: do retailers treat cheap alcohol differently?', Addiction 109:12, pp. 1,994–2,002

## What is the relationship between taxes and harm?

Even though taxes are not always fully passed through to consumers in the shape of higher prices, it is nevertheless generally believed that alcohol taxes succeed in reducing consumption and health harms. 'Natural experiments', where governments have suddenly and drastically reduced alcohol taxes offer further evidence:

• In 2004, Finland reduced alcohol taxes ahead of neighbouring Estonia joining the European Union, and so Finland being required to reduce import restrictions on cheaper alcohol from abroad. Tax on spirits was reduced by 44%, beer 32% and wine 10%. As a result, alcohol consumption rose by 10% in 2004, alcohol-attributable deaths by 19%, deaths from liver disease by 29% (see figure 9) and alcohol-related hospitalisations rose by 9%. However, the effect on crime was more ambiguous.<sup>1</sup>

Figure 9: Age-adjusted mortality from alcoholic liver diseases and fatal alcohol poisoning in Finland



Source: Makela, P. & Osterberg, E. (2009), Weakening of one more alcohol control pillar: a review of the effects of the alcohol tax cuts in Finland in 2004, 'Addiction' 104:4, pp. 554–63

 In 1999, World Trade Organization regulations required Switzerland to reduce the tax rate on imported spirits, leading to a 30–50% drop in their prices. As a result, consumption of spirits rose by 29%, with no significant change in wine or beer consumption.<sup>2</sup>

Health economic modelling is a further source of information on the likely health effects of different tax regimes. The Sheffield Alcohol Policy Model, described below, has estimated that:

 A one-off 1% increase in all alcohol taxes would reduce annual alcohol-attributable deaths by 35 (0.3%) and alcohol-attributable hospital admissions by 1,624 (0.2%) in England<sup>3</sup>.

- A one-off 10% increase in all alcohol taxes would reduce annual alcohol-attributable deaths by 351 (2.9%) and alcohol-attributable hospital admissions by 16,309 (2.0%) in England.
- The reintroduction of the duty escalator for five years would reduce annual alcoholattributable deaths by 605 (5.0%) and alcohol-attributable hospital admissions by 29,507 (3.7%) in England.

<sup>&</sup>lt;sup>1</sup> Makela P and Osterberg E (2009)., 'Weakening of one more alcohol control pillar: a review of the effects of the alcohol tax cuts in Finland in 2004', Addiction 104:4, pp. 554–63

<sup>&</sup>lt;sup>2</sup> Heeb J L (2003)., 'Changes in alcohol consumption following a reduction in the price of spirits: a natural experiment in Switzerland', Addiction 98:10, pp. 1,433–46

<sup>&</sup>lt;sup>3</sup> Angus C, Holmes J, Pryce R, Meier P and Brennan A (2016)., 'Alcohol and cancer trends: Intervention Studies University of Sheffield and Cancer Research UK'

<sup>&</sup>lt;www.cancerresearchuk.org/sites/default/files/alcohol and cancer trends report cruk.pdf>

### **Current UK rates of alcohol duty**

The table below shows the rates of duty currently levied by the UK Government on different alcoholic drinks, as of 13 March 2017:<sup>1</sup>

Figure 10: Alcohol duty rates from 13 March 2017

Alcohol type	Rate per hectolitre per cent of alcohol in the beer	Alcohol type	Rate per litre of pure alcohol
Beer - General Beer Duty	£19.08	Spirits	£28.74
Beer - high strength:	£5.69	Spirits-based: Ready-to-drinks	£28.74
Exceeding 7.5% abv - in addition to the General Beer	Duty		•
Beer - lower strength:	£8.42	Wine and made-w	ine
Exceeding 1.2% - not exceeding 2.8% abv		Alcohol type	Rate per hectolitre of product
		Wine and made-wine:	£88.93
Cider and perry		Exceeding 1.2% - not exceeding 4% abv	
Cider and perry		Wine and made-wine:	£122.30
Alcohol type	Rate per hectolitre of product	Exceeding 4% - not exceeding 5.5% abv	
Still cider and perry:	£40.38	Still wine and made-wine:	£288.65
Exceeding 1.2% - not exceeding 7.5% abv		Exceeding 5.5% · not exceeding 15% abv	
Still cider and perry:	£61.04	Wine and made-wine:	£384.82
Exceeding 7.5% - less than 8.5% abv		Exceeding 15% - not exceeding 22% abv	
Sparkling cider and perry:	£40.38	Sparkling wine and made-wine:	£279.46
Exceeding 1.2% - not exceeding 5.5% abv		Exceeding 5.5% - less than 8.5% abv	
Sparkling cider and perry:	£279.46	Sparkling wine and made-wine:	£369.72
Exceeding 5.5% - less than 8.5% abv		8.5% and above - not exceeding 15% abv	

These rates of tax have a number of controversial features. First, in order to adhere to European Community Directive 92/84/EEC, beer and spirits are taxed in proportion to their alcohol content, but cider and wine are taxed according to the volume of liquid sold.<sup>2</sup> As a result, on a per unit basis, higher strength wines and ciders attract less duty than lower strength wines and ciders. The UK Government has expressed objections to these regulations<sup>3</sup>, but with the country leaving the European Union it remains to be seen whether the Government will attempt to alter the structure of wine and cider duty.

Second, there are significant differences in the level of tax between different types of drink, with wine and spirits attracting higher rates of duty on average than beer, and cider taxed at the lowest rate of any drink.

These are summarised in figure 11 below:<sup>4</sup>

Figure 11: Duty per unit by product

Source: gov.uk (2016), Rates and allowances: Excise Duty - Alcohol Duty

This picture has been widely criticised. For example, the Institute for Fiscal Studies has claimed that "it is very difficult to justify the existing structure of alcohol excise taxes based on the likely harm associated with consuming different types and strengths of alcoholic drinks".<sup>5</sup>

The rate of duty on high-strength cider has drawn particular concern. Ciders of 7.5% ABV attract the lowest rate of duty per unit of any drink: 5p per unit, less than a third of the rate of 7.5% ABV beer (18p). This fact has been linked to the growth of the market for 'white' ciders, typically the cheapest alcoholic products on sale, and closely associated with underage and dependent drinkers.<sup>6</sup>

While many believe that the current disparity between the rates of tax on different drinks is too wide, there is less agreement on how far they should be equalised. Some have argued that all drinks should be treated the same and taxed according to their alcohol content, and that there is no justification for 'discriminating' (as they see it) against spirits. Such arguments are bolstered by the lack of evidence that any particular beverage type is physiologically more harmful than others, independent of the quantity of alcohol they contain.

However, others believe that some drinks (usually spirits) should be taxed more heavily on a per unit basis. The Alcohol Health Alliance argues that since spirits are cheaper on average to produce and distribute than other drinks, taxing them at the same rate is a bad idea as it would mean that their retail price would be lower. A second argument is that stronger drinks, such as spirits, are easier to drink in greater quantities – for example, because they are more prone to 'over-pouring' (i.e. exceeding standard measures in their servings). As a result, spirits have been linked to acute heavy 'binge' drinking. For example, a Finnish study found that sales of spirits were more closely related to alcohol poisoning than total alcohol sales. On the other hand, other studies suggest spirits can be less harmful than other products – for example, analysis of Canadian data found that only

beer consumption, and not other beverages, was associated with the rate of drink driving fatalities. 13

Interpreting these conflicting findings is tricky for a number of reasons. Results from certain countries may not be generalisable to places with different drinking cultures. Moreover, behaviour under existing policies may be radically different to how people would act under different policy regimes.

One response is to model the effects of different policies using UK data on prices and elasticities, as the Sheffield Alcohol Policy Model does (see below). One recent paper used the model to compare a range of different policies to the status quo including a flat rate of tax of 22p per unit across all beverage types. As figure 12 shows, this would mean reducing the rate of tax on spirits, and raising it on most beers and ciders. The analysis found that such a move would reduce overall alcohol consumption by 1.9% and consumption by heavy drinkers (men drinking over 50, and women drinking over 35, units a week) by 2.8%. This, in turn, would reduce alcohol-attributable deaths by 4.3%. These effects are comparable to those of a minimum unit price (MUP), although a volumetric tax is applied to all products, whereas MUP is narrowly targeted at the cheapest alcohol favoured by the heaviest drinkers.

<sup>&</sup>lt;sup>1</sup> Gov.uk (2016), Alcohol Duty rates from 21 March 2016

<sup>&</sup>lt;a href="https://www.gov.uk/government/publications/rates-and-allowance-excise-duty-alcohol-duty">https://www.gov.uk/government/publications/rates-and-allowance-excise-duty-alcohol-duty>

<sup>&</sup>lt;sup>2</sup> Official Journal of the European Communities (1992) Council Directive 92/84/EEC

<sup>&</sup>lt;a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0084:en:HTML">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0084:en:HTML</a>

<sup>&</sup>lt;sup>3</sup> EU Home Affairs, Health and Education Sub-Committee, 'A new EU Alcohol Strategy? – Evidence (HL 2014–15 123)', p. 196; letter dated 06/06/2016 from Lord Prior of Brampton to Lord Brooke of Alverthorpe (DEP2016-0511) < <a href="http://bit.ly/2IDr5gg">http://bit.ly/2IDr5gg</a>>

<sup>&</sup>lt;sup>4</sup> Gov.uk (2016), Alcohol Duty rates from 21 March 2016

<sup>&</sup>lt;a href="https://www.gov.uk/government/publications/rates-and-allowance-excise-duty-alcohol-duty">https://www.gov.uk/government/publications/rates-and-allowance-excise-duty-alcohol-duty>

<sup>&</sup>lt;sup>5</sup> Levell P et al (2016)., Excise duties, in Emmerson C et al, 'IFS Green Budget 2016', Institute for Fiscal Studies, p. 223 <a href="https://www.ifs.org.uk/uploads/gb/gb2016/gb2016ch9.pdf">https://www.ifs.org.uk/uploads/gb/gb2016/gb2016ch9.pdf</a>>

<sup>&</sup>lt;sup>6</sup> Alcohol Health Alliance (2016), 'Cheap alcohol: the price we pay'

<sup>&</sup>lt;a href="https://www.basl.org.uk/uploads/Cheap%20alcohol%20the%20price%20we%20pay%20AHA%20Oct%202016.pdf">https://www.basl.org.uk/uploads/Cheap%20alcohol%20the%20price%20we%20pay%20AHA%20Oct%202016.pdf</a>; Goodall T (2011)., 'White Cider and street drinkers: Recommendations to reduce harm' <a href="https://www.alcoholconcern.org.uk/Handlers/Download.ashx?IDMF=82e506be-e44d-4094-b81a-7444414ed1e3">https://www.alcoholconcern.org.uk/Handlers/Download.ashx?IDMF=82e506be-e44d-4094-b81a-7444414ed1e3</a>

<sup>&</sup>lt;sup>7</sup> Byrnes J et al (2012)., 'The efficiency of a volumetric alcohol tax in Australia', Applied Health Economics & Health Policy 10:1, pp. 37–49; Crawford I., and Tanner S (1995)., 'Alcohol Taxes and the Single European Market', London:

Policy 10:1, pp. 37–49; Crawford I., and Tanner S (1995)., 'Alcohol Taxes and the Single European Market', London: Institute for Fiscal Studies < <a href="https://www.ifs.org.uk/comms/comm47.pdf">https://www.ifs.org.uk/comms/comm47.pdf</a>; Harford T (March 2016)., 'These are the sins we should be taxing', Financial Times <a href="https://timharford.com/2016/03/these-are-the-sins-we-should-be-taxing/">https://timharford.com/2016/03/these-are-the-sins-we-should-be-taxing/</a>>

<sup>&</sup>lt;sup>8</sup> Makela P et al (2007)., 'Does beverage type matter?', Nordic Studies on Alcohol and Drugs 24, pp. 617–31

<sup>&</sup>lt;sup>9</sup> Alcohol Health Alliance (2016), 'Our policy position on alcohol taxation < http://bit.ly/2neNtJ8>

<sup>&</sup>lt;sup>10</sup> Crawford and Tanner (1995), op. cit.; BBC News (December 2009), 'Home drinkers "over-pour spirits", BBC News <a href="http://news.bbc.co.uk/1/hi/health/8434905.stm">http://news.bbc.co.uk/1/hi/health/8434905.stm</a>

<sup>&</sup>lt;sup>11</sup> Makela et al (2007), op. cit.

Poikolainen K et al (2002), 'Alcohol sales and fatal alcohol poisonings: a time-series analysis', Addiction 97:8, pp. 1,037–40. See also Razvodovsky Y (2003)., 'Association Between Distilled Spirits Consumption and Violent Mortality Rate', Drugs: Education, Prevention and Policy 10:3, pp. 235–50

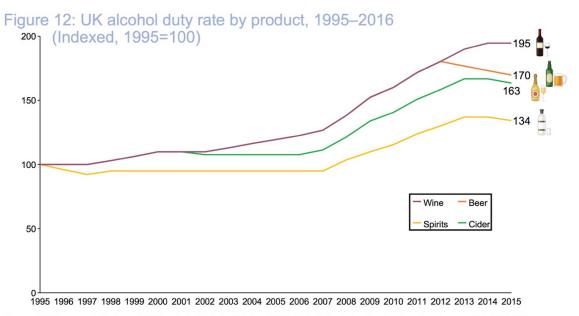
<sup>&</sup>lt;sup>13</sup> Mann R et al (2006)., 'Drink-driving fatalities and consumption of beer, wine and spirits', Drug & Alcohol Review 25:4, pp. 321–5

<sup>&</sup>lt;sup>14</sup> Meier P et al (2016)., 'Estimated Effects of Different Alcohol Taxation and Price Policies on Health Inequalities: A Mathematical Modelling Study', PLOS Medicine. doi: http://dx.doi.org/10.1371/journal.pmed.1001963

## How have UK alcohol taxes changed over time?

Figure 12 below shows how rates of alcohol duty have changed over the past 20 years. It shows that prior to 2008, beer and wine duties moved in step, and were raised at a faster rate than cider and spirits. Indeed, spirits duties were 5% lower in 2007 than 1995.

From 2008 to 2012, duty on all four products were increased at the same pace: this was the period of the 'alcohol duty escalator', which saw duties increased by 2% above the rate of inflation each year.



Source: HM Revenue & Customs (2016), 'Alcohol Bulletin October 2016' (Note: Wine duty refers to wine of fresh grape 5.5–15% ABV; beer to general (neither high nor low strength) duty; cider to 1.2–7.5% ABV)

The duty escalator was introduced by then-Chancellor Alistair Darling in the 2008 Budget as a four-year measure to address the rising affordability of alcohol:<sup>1</sup>

"Mr Deputy Speaker, as incomes have risen, alcohol has become more affordable. In 1997, the average bottle of wine bought in a supermarket was £4.45 in today's prices. If you go into a supermarket today, the average bottle of wine will cost about £4.

"From midnight on Sunday, alcohol duty rates will increase by 6 per cent above the rate of inflation. Beer will rise by 4p a pint, cider by 3p a litre, wine by 14p a bottle and spirits by 55p a bottle. Alcohol duties will increase by 2 per cent above the rate of inflation in each of the next four years."

Darling's 2010 Budget planned to extend the duty escalator until 2014. However, it was scrapped in 2013 for beer<sup>2</sup>, and 2014 for other drinks<sup>3</sup>. Since then a series of cuts and

freezes have ensured that beer duty is 6% lower than in 2012, cider and spirits duty 3% higher and wine duty 10% higher.<sup>4</sup>

While the figures above may give the impression that alcohol duty has risen significantly, it is important to remember that these do not account for inflation. Figure 13 shows how the 'real' (i.e. inflation adjusted) value of alcohol duty has changed over time, demonstrating that the duty escalator reversed the erosion of the value of alcohol duties since the 1980s. Beer duty peaked in 1985–6, and is today only 4% higher than in 1978–9. Wine and spirit duties have seen a long-term downward trend, with real wine duty 27% lower than in 1978–9, and spirits duty having halved in value.

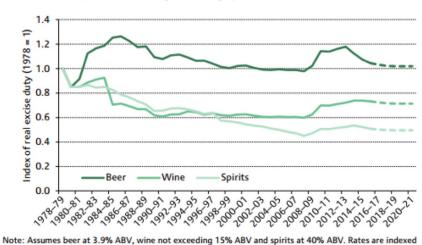


Figure 13: Real UK alcohol duty rate by product

relative to levels in 1978–79. Dashed lines indicate announced future policy.

Source: Levell, P. et al (2016), Excise duties, in Emmerson C, et al, 'Institute for Fiscal Studies Green Budget 2016', p. 223

Furthermore, this analysis does not account for income growth over the period, which has also limited the effect of alcohol duty by increasing the affordability of alcohol (see above).

<sup>&</sup>lt;sup>1</sup> HM Treasury (2008), 'Chancellor of the Exchequer's Budget statement'

<sup>&</sup>lt;a href="http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/bud">http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/bud</a> bud08 speech.htm>.

<sup>&</sup>lt;sup>2</sup> BBC News (March 2013), 'Budget 2013: Beer down 1p as planned duty rise axed', BBC News <a href="http://www.bbc.co.uk/news/business-21863051">http://www.bbc.co.uk/news/business-21863051</a>>

<sup>&</sup>lt;sup>3</sup> BBC News (March 2014), 'Budget 2014: Beer duty cut by 1p', BBC News

<sup>&</sup>lt;a href="http://www.bbc.co.uk/news/business-26644768">http://www.bbc.co.uk/news/business-26644768</a>

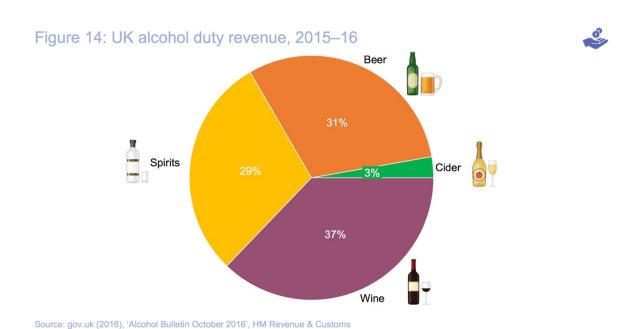
<sup>&</sup>lt;sup>4</sup> Institute of Alcohol Studies (2016), 'Budget 2016 analysis'

<sup>&</sup>lt;a href="http://www.ias.org.uk/uploads/pdf/IAS%20reports/sb10042016.pdf">http://www.ias.org.uk/uploads/pdf/IAS%20reports/sb10042016.pdf</a>

<sup>&</sup>lt;sup>5</sup> Levell et al (2016)., op. cit.

# How important is the revenue from alcohol duty to the government?

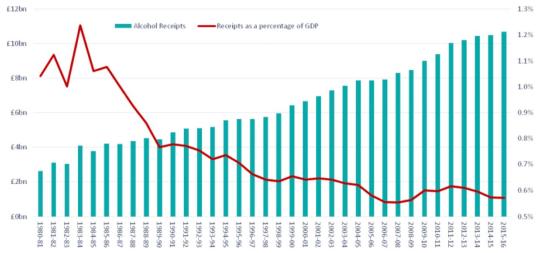
In the last financial year, the UK government raised £10.7bn in alcohol duty, fairly evenly shared between wine (£4.0bn), beer (£3.3bn) and spirits (£3.1bn). Relatively little duty is raised on cider (£0.3bn) both because it is a smaller market, and because it is taxed at a relatively low rate.



The importance of alcohol duty to UK government revenue has declined over time. As figure 15 shows, alcohol duty receipts have fallen as a share of national income from above 1% in the 1980s to less than 0.6% today.<sup>1</sup>







Source: HM Revenue & Customs (2016), HMRC Tax & NIC Receipts

As a share of central government tax receipts, alcohol duty has halved over this period, from 4% in 1980-81 to 2% today.  $^2$ 

<sup>&</sup>lt;sup>1</sup> HM Revenue & Customs (2016), 'HMRC Tax & NIC Receipts' < http://bit.ly/2mp9es8>

<sup>&</sup>lt;sup>2</sup> HM Revenue & Customs (2016), 'HMRC Tax & NIC Receipts', op. cit., p. 3

### Minimum unit pricing

In recent years, another pricing policy – minimum pricing – has attracted substantial attention. Minimum pricing is not a tax, but rather a legally mandated 'floor price' below which retailers are not permitted to sell alcohol. Unlike a tax, any additional revenue from raising prices is retained by retailers, rather than the government. Some form of minimum pricing is in place in six countries: Canada, certain states of the USA, Russia, Moldova, Ukraine and Uzbekistan.<sup>1</sup>

In the UK, debate has generally centred on minimum *unit* pricing (MUP), a specific version of minimum pricing whereby the floor price is set according to the alcohol content of a drink. For example, under a 50p MUP, the minimum legal price of a drink would be the number of units of alcohol it contained multiplied by 50p. The table below illustrates the impact different levels of MUP would have on a range of typical products.<sup>2</sup>

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Product	Volume	Strength (% abv)	Number of units	Minimum selling price			
		(70 abt)	OI dilits	40p	45p	50p	
Vodka	70cl	37.50%	26.25	£10.50	£11.81	£13.13	
Whiskey	70cl	40%	28	£11.52	£12.60	£14	
Cider (high strength)	2 litres	7.50%	15	26	£6.75	£7.50	
Cider	2 litres	5.30%	10.6	€4.24	£4.77	£5.30	
Perry	750ml	7.50%	5.625	£2.25	£2.53	£2.81	
Liqueur	700ml	17%	11.9	£4.76	£5.36	£5.95	
Alcopop	700ml	4%	2.8	£1.12	£1.26	£1.40	
Lager (4 pack)	440ml (x 4)	5%	2.2	£3.52	£3.96	£4.40	
Red wine	750ml	13%	9.75	£3.90	£4.39	£4.88	
White wine	750ml	12%	9	£3.60	£4.05	£4.50	
Champagne	750ml	12.50%	9.375	£3.75	£4.22	£4.69	
Sherry	750ml	17.50%	13.125	£5.25	£5.91	£6.56	

Source: Home Office

#### Minimum Unit Pricing in Scotland

In 2012, the Scottish Government passed legislation introducing a 50p minimum unit price.<sup>3</sup> The measure is subject to a 'sunset clause', which means it will have to be renewed or will expire after six years. However, the policy has yet to be implemented, following a series of legal challenges from alcohol industry bodies.

The cases have been brought by a set of alcohol producer trade associations - The Scotch Whisky Association, the European Spirits Association and Comité Européen des Entreprises Vins (CEEV). They argue that minimum unit pricing is incompatible with European Union law because:



- it impedes trade between EU member states (contravening Article 34 of the Treaty on the Functioning of the European Union<sup>4</sup> and Article 6(2) of Regulation (EC) 110/2008)<sup>5</sup>
- it undermines the harmonisation of agricultural policy, specifically with respect to wine production (which would breach Regulation (EC) 1234/2007 (as amended by Regulation (EC) 491/2009)<sup>6</sup>

The case was initially ruled on in May 2013 by the Scottish Court of Session, which found that MUP is not inconsistent with EU law, holding that insofar as MUP represents a restriction on trade, this is justified "on the grounds of the protection of the life and health of humans" (as laid down in Article 36 of the Treaty on the Functioning of the European Union). MUP was also held to be consistent with EU agricultural regulations.

However, in April 2014, the Court of Session referred the case to the European Court of Justice. It judged that "although at first sight the tests to be applied under article 36 (which allows the restriction of trade to protect human life and health) might appear to be relatively well established... it would be of help to have the guidance of the Court of Justice of the European Union".<sup>8</sup>

In December 2015, the European Court of Justice (ECJ) gave its ruling, confirming the earlier judgement that MUP is restrictive of trade, but that this may be justified on the basis of protecting human life and health. However, it raised the question of whether MUP is proportionate to this objective, pointing out that this goal might also be achieved by raising taxes on alcohol. Ultimately the Court did not issue a final ruling, but referred the case back to the Court of Session, setting it the task of determining "whether measures other than that provided for by the Scottish legislation, such as increased taxation on alcoholic drinks, are capable of protecting human life and health as effectively as the current legislation, while being less restrictive of trade in those products within the EU".

In October 2016, the Scottish Court of Session returned to the question and ruled that MUP is consistent with EU law. In response to the ECJ's suggestion that alcohol taxes might be a suitable alternative, the Court of Session noted that i) increases in tax, unlike an MUP, could be absorbed by retailers and not passed onto consumers; and ii) MUP, unlike tax, can be linked to the strength of a drink (unlike wine and cider duty, see above).<sup>10</sup>

At the time of writing, the Scotch Whisky Association has been permitted to lodge a further appeal with the UK Supreme Court, which is likely to be heard in 2017.<sup>11</sup>

#### Minimum Unit Pricing in the rest of the British Isles

In March 2012, the Westminster government announced plans for a UK-wide minimum unit price, as part of its Alcohol Strategy. According to then Prime Minister David Cameron:

When beer is cheaper than water, it's just too easy for people to get drunk on cheap alcohol at home before they even set foot in the pub. So we are going to introduce a new minimum unit price. For the first time it will be illegal for shops to sell alcohol for less than this set price per unit. We are consulting on the actual price, but if it is 40p that could mean 50,000 fewer crimes each year and 900 fewer alcohol-related deaths a year by the end of the decade.

This isn't about stopping responsible drinking, adding burdens on business or some new kind of stealth tax - it's about fast, immediate action where universal change is needed.<sup>12</sup>

This was followed by a consultation on the strategy, in which the Government sought stakeholder views on the appropriate level of the minimum unit price, the mechanism for adjusting this level over time and the impact of the policy.<sup>13</sup> The consultation based its assessment of the impact of a 45p MUP, implying that this was the Government's preferred level.

However, in July 2013, the Government reversed its plans. Then Home Secretary Theresa May claimed:

That consultation has been extremely useful. But it has not provided evidence that conclusively demonstrates that Minimum Unit Pricing (MUP) will actually do what it is meant to: reduce problem drinking without penalising all those who drink responsibly. In the absence of that empirical evidence, we have decided that it would be a mistake to implement MUP at this stage. We are not rejecting MUP – merely delaying it until we have conclusive evidence that it will be effective.<sup>14</sup>

In responding to the alcohol strategy consultation in parliament, then Minister of State for Home Affairs, Jeremy Browne, described MUP as "under consideration". This has remained the Government's position: responses to recent parliamentary questions show that it is monitoring the progress of the Scottish Government's legal case, but is not taking any active steps towards introducing the policy.

The Government has no plans to introduce Minimum Unit Pricing although the evidence for all policy approaches is kept under review.

We have noted the recent opinion of the EU Advocate General. We await a final ruling from the Court of Justice of the European Union and we will continue to monitor developments.

Jane Ellison, Parliamentary Under-Secretary of State for Health, 15<sup>th</sup> December 2015<sup>16</sup>

In 2015, the Welsh Government published a draft bill proposing a minimum unit price for alcohol in Wales of 50p. <sup>17</sup> However, it currently lacks the relevant powers to introduce the policy, and In September 2016 the UK government rejected to devolve alcohol pricing to Wales. <sup>18</sup> The Northern Irish Government has also expressed a desire to introduce MUP. <sup>19</sup> At the time of writing, the Republic of Ireland is in the process of passing legislation to introduce a €1 per unit MUP. The measure is part of the Public Health (Alcohol) Bill, which was introduced to the Seanad (parliament) in December 2015. <sup>20</sup>

#### Evidence of the effectiveness of MUP

Evidence on the effect of minimum unit pricing comes from broadly two sources:

- 'natural experiments' from places that have introduced or adjusted similar policies
- academic models, based on the best available evidence, simulating the likely effects of the policy

Most academic analysis of real-world minimum pricing policy has focused on Canadian provinces, in particular British Columbia and Saskatchewan. It is important to note that the policy in these provinces is subtly different from minimum unit pricing in two ways: i) the minimum price is proportionate to the volume of liquid in the drink, rather than volume of alcohol; ii) the level of the minimum price varies by drink. However, it has been argued that in practice these policies are similar enough to those proposed in the UK that the effects of both are likely to be similar.<sup>21</sup>

A team of researchers at the Centre for Addictions Research of British Columbia have used changes in the level of minimum prices to estimate the effectiveness of such policies. In British Columbia (where over 20 years, minimum prices rose to around 43p per unit),<sup>22</sup> they have found that on average a 10% increase in minimum prices is associated with:

- a 3% reduction in consumption<sup>23</sup>
- a 32% reduction in wholly caused alcohol deaths (though no significant association was found with acute alcohol related deaths, primarily injuries)<sup>24</sup>
- a 9% reduction in alcohol-attributable hospital admissions<sup>25</sup>

In Saskatchewan, which has a higher minimum price (typically 45–60p per unit in 2010), they found on average a 10% increase in minimum prices is associated with a reduction in alcohol consumption of 8%.

The most prominent simulations of the effects of minimum unit pricing are produced by Sheffield University's Sheffield Alcohol Policy Model (SAPM). This contains two elements. First, econometric analysis that estimates the effect of changes in price of different drinks on consumption (using price elasticities as described above). Second, models of the relationship between alcohol consumption and different types of harm, based on the best available epidemiological evidence.<sup>27</sup>

By putting these two elements together, the SAPM can estimate the likely effects of a minimum unit price. According to the most recent available analyses, a 50p minimum unit price in England would:<sup>28</sup>

- Reduce total alcohol consumption in the total population by 1.3%, but by 4.7% among harmful male drinkers
- Reduce annual alcohol-attributable deaths by 4.3%
- Reduce alcohol-attributable healthcare costs by 2.5%
- Reduce alcohol-related criminal offences by 2.4%
- Reduce alcohol-related workplace absences by 2.0%

The SAPM shows that minimum unit pricing is closely targeted at the most harmful drinkers, particularly those on lower incomes. An earlier analysis found that a 50p MUP would have minimal effect on moderate drinkers (men consuming less than 22 units a week, and women consuming less than 15): on average, they would drink 3 fewer units (the equivalent of a pint of strong beer) and spend £3 more on alcohol *per year*. For moderate drinkers in the poorest 20% of the income distribution, their consumption would fall by 7 units a year, and their spending would be unchanged. By contrast, heavy drinkers (men consuming over 50 units a week, and women consuming over 35) would drink 134 fewer units a year on average, and spend £81 more. Heavy drinkers in the poorest 20% would drink 372 fewer units a year and spend £28 more.

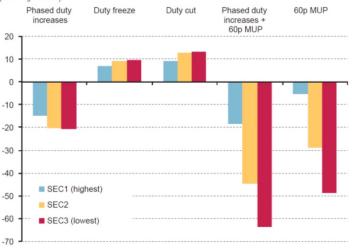
Moreover, it has been argued that this targeting would help reduce health inequalities, with 90% of the lives saved coming from lower socio-economic groups.<sup>30</sup>

#### The relative and combined impact of MUP and tax

Though MUP and alcohol taxes both reduce alcohol-related harm, they operate in quite different ways, and so can be seen as complements rather than substitutes. As described above, MUP is relatively narrowly targeted at the cheapest alcohol favoured by the heaviest drinkers. As a result, substantial tax increases would be required in order to replicate the effects of an MUP – a recent modelling study found that duty would have to be increased by 28% to match the reduction in deaths that could be achieved by a 50p MUP in Scotland.<sup>31</sup>

At the same time, taxes affect a much broader range of products, and so can reduce consumption among those who drink at hazardous or harmful levels, but favour more expensive drinks. As a result, taxes and MUP have greatest effect when used in conjunction. For example, research commissioned by Public Health England found that a five-year duty escalator and a 60p MUP together would reduce alcohol-related hospital admissions in England by 25,000 compared to a reduction of 17,000 for MUP alone or 11,000 for the duty escalator alone.<sup>32</sup> As the chart below shows, this is in large part because duty increases have a greater effect on drinkers in higher socioeconomic classes than MUP.<sup>33</sup>

Figure 17: Change in consumption at full effect by policy and socioeconomic status (units per year)



Source: Public Health England (2016), 'The Public Health Burden of Alcohol and the Effectiveness and Cost-Effectiveness of Alcohol Control Policies: An evidence review', p. 94

<sup>&</sup>lt;sup>1</sup> Stockwell T and Thomas G (2013)., 'Is alcohol too cheap in the UK? The case for setting a Minimum Unit Price for alcohol', London: Institute of Alcohol Studies, p. 11

<sup>&</sup>lt;sup>2</sup> Adapted from Home Office website, 'Alcohol pricing'

<sup>&</sup>lt;sup>3</sup> Legislation.gov.uk, 'Alcohol (Minimum Pricing) (Scotland) Act 2012' <a href="http://www.legislation.gov.uk/asp/2012/4/contents/enacted">http://www.legislation.gov.uk/asp/2012/4/contents/enacted</a>>

<sup>&</sup>lt;sup>4</sup> Treaty on the Functioning of the European Union, 13 December 2007, 2012/C 326/01

- <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT">http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT</a>
- <sup>5</sup> European Commission (January 2008), 'Regulation (EC) No 110/2008 of the European Parliament and of the Council of 15 January 2008 on the definition, description, presentation, labelling and the protection of geographical indications of spirit drinks and repealing Council Regulation (EEC) No 1576/89', 15 January 2008
- <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008R0110">http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008R0110</a>
- <sup>6</sup> European Commission (October 2007), 'Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation)'
- <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:299:0001:0149:EN:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:299:0001:0149:EN:PDF</a>
- <sup>7</sup> Judiciary of Scotland (2013), 'Petition for Judicial Review by Scotch Whisky Association and Others: Summary of Lord Docherty's decision in the Petition for Judicial Review'
- <a href="http://www.scotland-judiciary.org.uk/9/1040/Petition-for-Judicial-Review-by-Scotch-Whisky-Association-And-Others">http://www.scotland-judiciary.org.uk/9/1040/Petition-for-Judicial-Review-by-Scotch-Whisky-Association-And-Others</a>
- <sup>8</sup> Scotch Whisky Association and Others v The Lord Advocate, The Advocate General for Scotland [2014] CSIH 38
- <a href="https://www.scotcourts.gov.uk/search-judgments/judgment?id=482a86a6-8980-69d2-b500-ff0000d74aa7">https://www.scotcourts.gov.uk/search-judgments/judgment?id=482a86a6-8980-69d2-b500-ff0000d74aa7</a>
- <sup>9</sup> Court of Justice of the European Union (2015), 'The Scottish legislation introducing a minimum price per unit of alcohol is contrary to EU law if less restrictive tax measures can be introduced, Press Release No 155/15'
- <a href="http://curia.europa.eu/jcms/upload/docs/application/pdf/2015-12/cp150155en.pdf">http://curia.europa.eu/jcms/upload/docs/application/pdf/2015-12/cp150155en.pdf</a>
- <sup>10</sup> Judiciary of Scotland (2016), 'Scotch Whisky Association and others v Lord Advocate and Advocate General for Scotland: A summary of the Opinion of the Court in the reclaiming motion by the Scotch Whisky Association and others against the Lord Advocate and the Advocate General for Scotland' <a href="http://bit.ly/2m2TqaS">http://bit.ly/2m2TqaS</a>>
- <sup>11</sup> Scottish Legal News (2016), 'Court of Session allows Scotch Whisky Association appeal to Supreme Court' <http://bit.lv/2IH9xzL>
- 12 HM Government (2012), 'The Government's Alcohol Strategy' < https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/224075/alcohol-strategy.pdf>
- <sup>13</sup> Home Office (2012), 'A consultation on delivering the Government's policies to cut alcohol fuelled crime and anti-social behaviour'
- <a href="http://bit.ly/2n2ZbKU">http://bit.ly/2n2ZbKU</a>
- <sup>14</sup> Home Office (2013), Next steps following the consultation on delivering the Government's alcohol strategy <a href="http://bit.ly/2mECpb6">http://bit.ly/2mECpb6></a>
- <sup>15</sup> UK Parliament (July 2013), Hansard HC Deb. Vol 566
- <a href="https://hansard.parliament.uk/Commons/2013-07-17/debates/13071772000005/AlcoholStrategyConsultation">https://hansard.parliament.uk/Commons/2013-07-17/debates/13071772000005/AlcoholStrategyConsultation</a>
- <sup>16</sup> UK Parliament (December 2015) 'Alcoholic Drinks: Written question 19122; HC Deb <a href="http://bit.ly/2n325PA">http://bit.ly/2n325PA</a>
- <sup>17</sup> BBC News (July 2015), 'Proposed minimum alcohol price law is published'
- <a href="http://www.bbc.co.uk/news/uk-wales-politics-33522647">http://www.bbc.co.uk/news/uk-wales-politics-33522647</a>
- <sup>18</sup> BBC News (September 2016), 'Doctors criticise alcohol minimum pricing block'
- <a href="http://www.bbc.co.uk/news/uk-wales-politics-37318469">http://www.bbc.co.uk/news/uk-wales-politics-37318469</a>
- 19 BBC News (December 2014), 'Alcohol: Jim Wells plans to bring in minimum pricing per unit'
- <a href="http://www.bbc.co.uk/news/uk-northern-ireland-30296398">http://www.bbc.co.uk/news/uk-northern-ireland-30296398</a>
- <sup>20</sup> Shiels McNamee M (December 2016)., 'Alcohol pricing: Here's how the planned change will affect your pocket', The Journal <a href="http://www.thejournal.ie/alcohol-pricing-advertising-announced-2491642-Dec2015/">http://www.thejournal.ie/alcohol-pricing-advertising-announced-2491642-Dec2015/</a>
- <sup>21</sup> Stockwell and Thomas (2013), op. cit
- <sup>22</sup> Stockwell and Thomas (2013), op. cit., p. 12
- <sup>23</sup> Stockwell T et al (2012)., 'Does minimum pricing reduce alcohol consumption? The experience of a Canadian province', Addiction 107:5, pp. 912-20
- <sup>24</sup> Zhao J et al (2013)., 'The relationship between changes to minimum alcohol price, outlet densities and alcohol-related death in British Columbia, 2002–2009', Addiction 108:6, pp. 1059–69
- <sup>25</sup> Stockwell T., et al (2013)., 'Minimum alcohol prices and outlet densities in British Columbia, Canada: Estimated impacts on alcohol attributable hospital admissions', American Journal of Public Health 103:11, pp. 2014–20
- <sup>26</sup> Stockwell T., et al (2012)., 'The raising of minimum alcohol prices in Saskatchewan, Canada: impacts on consumption and implications for public health', American Journal of Public Health 102:12, e103-10
- <sup>27</sup> The Sheffield Alcohol Policy Model (SAPM) <a href="http://www.shef.ac.uk/scharr/sections/ph/research/alpol/research/sapm">http://www.shef.ac.uk/scharr/sections/ph/research/alpol/research/sapm</a>
- <sup>28</sup> Angus C., et al (2016), 'Alcohol and cancer trends: Intervention Studies University of Sheffield and Cancer Research
- <sup>29</sup> Meier P., et al (2016)., 'Estimated Effects of Different Alcohol Taxation and Price Policies on Health Inequalities: A Mathematical Modelling Study', PLOS Medicine, doi: http://dx.doi.org/10.1371/journal.pmed.1001963
- <sup>31</sup> Angus C., et al (2016)., 'Model-based appraisal of the comparative impact of Minimum Unit Pricing and taxation policies in Scotland', Sheffield: ScHARR, University of Sheffield.
- <sup>32</sup> Angus C., and Ally A (2015)., 'Modelling the potential impact of duty policies using the Sheffield Alcohol Policy Model Version 3', Sheffield: ScHARR, University of Sheffield.

<sup>33</sup> Public Health England (2016), op. cit., p. 94

#### Ban on below cost sales

In its statements that it would not be introducing minimum unit pricing, the UK Government presented a ban on below cost sales as an alternative policy addressing the same issue. For example, in the parliamentary debate on the Alcohol Strategy consultation, then Minister of State for Home Affairs, Jeremy Browne announced, "We will tackle the most egregious examples of cheap alcohol by banning sales of alcohol below the level of alcohol duty plus value-added tax". However, this measure has been strongly criticised for its minimal impact and for failing to address neither the issue of cheap alcohol nor that of 'predatory pricing'.

The low prices of some alcohol in supermarkets has elicited not just health concerns, but also concerns about fair economic competition. In 2007, ten grocery retailers, including the 'big four' supermarkets (Asda, Morrisons, Sainsbury's and Tesco), admitted to a Competition Commission inquiry that alcohol, along with packaged groceries, was one of the two leading types of 'loss leader'. In other words, supermarkets sold alcohol for less than they paid for it from wholesalers, for the following reasons:

- To "avoid being beaten on price by competitors"
- To "tempt customers into store at certain times of the year"
- To cushion the impact of changes in supplier costs
- To "support the launch of a new product"

In total (across all products), it was estimated loss leaders account for 3% of sales.<sup>2</sup>

Regularly selling goods at a loss is seen as problematic because it is can be a sign of anticompetitive 'predatory pricing', whereby large incumbent retailers use sharp discounts to ward off or force out smaller competitors who cannot subsidise these losses for so long from other goods.

A number of countries, such as Poland, France, Spain, Italy and Belgium, address this issue by banning below cost sales (for a number of goods, including alcohol).<sup>3</sup> For example, in France, retailers are forbidden from selling goods for less than the invoice price plus transportation costs and taxes.<sup>4</sup>

In the UK context, discussion of a ban on below cost sales has centred around a much weaker proposal – as described above, banning sales only below the rate of duty and VAT (and excluding invoice and transportation costs). The measure was originally included as part of the Conservative/Liberal Democrat programme for government in 2010.<sup>5</sup> Having been dropped from the 2012 Alcohol Strategy on the grounds that the policy was superseded by minimum unit pricing,<sup>6</sup> the policy returned following the dropping of MUP in the response to the consultation on the strategy.<sup>7</sup> It then came into force in May 2014.<sup>8</sup>

The Government's guidelines on applying the ban on below cost sales calculate the implied minimum prices resulting from the policy include:<sup>9</sup>

- 39p for a 440ml can of 4% ABV lager
- £1.14 for a 440ml can of 9% ABV lager
- £8.72 for a 70cl bottle of 37.5% ABV vodka
- 24p for a 500ml bottle of 4.5% ABV cider
- £2.51 for a 750ml bottle of 12.5% wine



Note that these are significantly lower than the equivalent minimum unit prices that had been proposed. Analysis by the Institute for Fiscal Studies found that only 0.9% of products in the off-trade would be affected by the policy. 10 The policy's effectiveness was criticised by a number of bodies from the pub trade and the alcohol industry, for failing to account for the full cost wholesale cost of alcohol to supermarkets. For example, Mark Hunter, Chief Executive of Molson Coors claimed that "tax is not a proxy for cost". The Campaign for Real Ale estimated that a minimum price of 40p per unit – over double the effective rate of the below cost ban – was necessary to prevent supermarkets selling alcohol at a loss. 11

Analysis using the Sheffield Alcohol Policy model supports the view that the ban on below cost sales has minimal effect. It suggests that the policy reduces harmful drinkers' consumption by 0.08% a year (around 3 units), preventing 14 deaths and 500 hospital admissions a year in England. 12

In May 2016, the first conviction for selling below cost was made, with a shopkeeper in Gateshead fined £3.000.13

<sup>&</sup>lt;sup>1</sup> UK Parliament (July 2013), 'Hansard HC Deb. Vol 566'

<sup>&</sup>lt;a href="https://hansard.parliament.uk/Commons/2013-07-17/debates/13071772000005/AlcoholStrategyConsultation">https://hansard.parliament.uk/Commons/2013-07-17/debates/13071772000005/AlcoholStrategyConsultation</a>

<sup>&</sup>lt;sup>2</sup> Freeman P et al (2008)., 'The supply of groceries in the UK market investigation', Competition Commission, p. 94–5 <a href="http://www.ias.org.uk/uploads/pdf/Price%20docs/538.pdf">http://www.ias.org.uk/uploads/pdf/Price%20docs/538.pdf</a>

<sup>&</sup>lt;sup>3</sup> Hunt P et al (June 2010)., 'Preliminary analysis of the economic impacts of alcohol pricing policy in the UK', Brussels: RAND Europe, p. 19 <a href="http://bit.ly/2n9X8Bk">http://bit.ly/2n9X8Bk>

<sup>&</sup>lt;sup>4</sup> OECD (2006), 'Resale below cost laws and regulations', p. 42

<sup>&</sup>lt;a href="https://www.oecd.org/competition/abuse/36162664.pdf">https://www.oecd.org/competition/abuse/36162664.pdf</a>

<sup>&</sup>lt;sup>5</sup> Gov.uk, 'The Coalition: our programme for government', The Coalition documentation, p. 13 <a href="http://bit.ly/2m6tj3Z">http://bit.ly/2m6tj3Z</a>>

<sup>&</sup>lt;sup>6</sup> HM Government (2012), 'The Government's Alcohol Strategy', op. cit., p. 12

<sup>&</sup>lt;sup>7</sup> Home Office (2013), op. cit

<sup>&</sup>lt;sup>8</sup> Home Office (2016), 'Guidance on banning the sale of alcohol below the cost of duty plus VAT – For Suppliers of alcohol and enforcement authorities in England and Wales', p. 3 <a href="http://bit.ly/2lHxkiW">http://bit.ly/2lHxkiW</a>>

<sup>&</sup>lt;sup>9</sup> Home Office (2016), op. cit., p. 5

<sup>&</sup>lt;sup>10</sup> Griffith R et al (2013)., 'Price-based measures to reduce alcohol consumption', IFS Briefing Note BN138, p. 8.

<sup>&</sup>lt;sup>11</sup> Foottit L (January 2011)., 'Pub trade fury at below-cost plans, Publican's Morning Advertiser' <<u>http://www.morningadvertiser.co.uk/Operators/Other-operators/Pub-trade-fury-at-below-cost-plans</u>>

<sup>&</sup>lt;sup>12</sup> Brennan A (2014)., 'Potential benefits of minimum unit pricing for alcohol versus a ban on below cost selling in England 2014: modelling study', BMJ 349. <a href="http://10.1136/bmj.g5452">http://10.1136/bmj.g5452</a>>

<sup>&</sup>lt;sup>13</sup> Green M (May 2016)., 'First conviction for selling alcohol "below cost" sees retailer fined', Off Licence News <a href="http://bit.ly/2niv9ik">http://bit.ly/2niv9ik</a>

#### **Multi-buy promotions**

A further policy to address cheap alcohol is to restrict the use of multi-buy promotions, which offer discounts for the bulk purchase of alcohol – for example, 'Buy One Get One Free' and 'Two for the Price of One' deals.

A survey of Australian off-license customers suggested that such promotions encourage greater purchase of alcohol. A third of respondents who bought a product on offer said that bought it because it was on promotion, while two-fifths reported buying a specific quantity because of a promotion. Those who bought discounted alcohol typically bought more: for example, those who bought beer on sale bought 268g of alcohol on average, compared 161g for those who did not participate in a promotion.<sup>1</sup>

Multi-buy discounts were banned by the Scottish Government as part of the Alcohol Scotland Act, which came into force in October 2011.<sup>2</sup> NHS Health Scotland's official evaluation of the policy found that the multi-buy discount reduced overall sales of alcohol by 2.6% in the year following its implementation, driven primarily by a 4.0% decline in wine sales.<sup>3</sup> However, it found no evidence to suggest this was associated with a reduction in alcohol related deaths or hospital admissions.<sup>4</sup> The researchers offered a number of possible explanations for this:

- The effect on deaths and hospital admissions was too small to be demonstrated definitively
- The effects may only emerge over a longer period
- The effect of the intervention was to reduce consumption in lower-risk subgroups wine is most likely to be consumed by women and affluent drinkers, who suffer lower levels of alcohol harm
- The study used a relatively narrow definition of alcohol-related deaths, excluding conditions only partially attributable to alcohol, such as ischaemic heart disease

A separate evaluation by Nakamura et al claimed that in fact the multi-buy discount failed to reduce consumption, either. However, it is important to note that this study used less reliable data, depending on self-reported purchases in consumer surveys, while the NHS Scotland study had access to retailers' sales data. Either way, Nakamura et al's analysis provided evidence on the limitations of the ban on multi-buy sales, finding that retailers subverted the policy by using price discounts in place of volume discounts and that consumers got around it by buying smaller amounts of alcohol less frequently.

As part of its 2012 alcohol strategy, the Westminster government carried out a consultation on the introduction of a ban on multi-buy discount across the whole UK. However, they ultimately opted against the move claiming "there is no convincing evidence that it would have a significant effect in reducing consumption".<sup>6</sup>

<sup>&</sup>lt;sup>1</sup> Public Health England (2016), op. cit., p. 94

<sup>&</sup>lt;sup>2</sup> BBC News (October 2011), 'Scots ban on supermarket alcohol deals comes into force',

<sup>&</sup>lt;a href="http://www.bbc.co.uk/news/uk-scotland-15125064">http://www.bbc.co.uk/news/uk-scotland-15125064</a>>

<sup>&</sup>lt;sup>3</sup> Robinson M et al (2014)., 'Evaluating the impact of the alcohol act on off-trade alcohol sales: a natural experiment in Scotland', Addiction 109:12, pp. 2,035–43

<sup>&</sup>lt;sup>4</sup> NHS Health Scotland (2016), 'MESAS Final Report Appendix G – Alcohol Act'

<sup>&</sup>lt;a href="http://www.healthscotland.scot/publications/mesas-final-report/">http://www.healthscotland.scot/publications/mesas-final-report/</a>

<sup>6</sup> Home Office (2013), op. cit., p. 3

<sup>&</sup>lt;sup>5</sup> Nakamura R et al (2014)., 'Impact on alcohol purchasing of a ban on multi-buy promotions: a quasi-experimental evaluation comparing Scotland with England and Wales', Addiction109:4, pp. 558–67

### The price of alcohol

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