



**Modelled income group-specific impacts of alcohol  
minimum unit pricing in England 2014/15:**

**Policy appraisals using new developments to the  
Sheffield Alcohol Policy Model (v2.5)**

**Addendum examining the impact of a ban on 'below cost  
selling'**

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## 1. INTRODUCTION

In July 2013, the UK Government announced that it intended to introduce a ban on retailing alcoholic drinks for less than the cost of the duty and VAT payable on the product. Typically referred to as a ban on below cost selling (BBCS), this policy was originally included in the Coalition's programme for government in May 2010 [1] and was due to be implemented in April 2012. However, the Government abandoned this policy in March 2012 following the inclusion of a commitment to introduce a minimum unit price for alcohol in *The Government's Alcohol Strategy* [2].

During the consultation period on a package of policies including minimum unit pricing, the Sheffield Alcohol Research Group were asked by Government to appraise the potential impacts of implementing a range of minimum unit pricing policies in England in 2014/15, with a particular focus on the impacts on low income groups. A report detailing the results of these appraisals is available at:

<http://www.sheffield.ac.uk/scharr/sections/ph/research/alpol/research/newresearch>.

This addendum reports the results of a further appraisal of the new BBCS policy, as requested by Government, and compares the potential impact of this policy against a 45p minimum unit price.

## **2. SUMMARY OF MODEL FINDINGS**

### **2.1. Effects on alcohol prices**

**F1.** As alcohol duty rates vary by beverage type, the proposed BBCS would set different floor prices for different beverage types. For beverage types with multiple duty bands (i.e. beer, cider and wine) there would effectively be different minimum unit prices for different strength products. For beverage types where duty is charged by volume of product rather than by alcohol content (i.e. cider and wine) minimum unit prices will vary also depending on the volume of product purchased. Based on current UK duty and VAT rates, we estimate average minimum unit prices following a BBCS to be 22.9p for beer, 9.4p for cider, 24.5p for wine and 33.9p for spirits and RTDs.

**F2.** A BBCS would affect 1.3% of units of alcohol sold in England and prices would rise by 0.1% on average. This would vary by beverage type and trade sector. For alcohol bought in the off-trade, the proportion of units affected would be 2.4% of beer, 0.1% of cider, 0.4% of wine, 1.2% of spirits and 0.1% of RTD units. The largest average price increase would be for off-trade beer at 0.2%.

**F3.** For comparison, a 45p minimum unit price (MUP) would affect a much greater proportion of the units of alcohol sold in England and would lead to larger average price increases. For alcohol bought in the off-trade, a 45p MUP would affect 44.8% of beer units sold, 70.2% of cider, 24.9% of wine, 38.5% of spirits and 0.8% of RTDs. The largest average price increase would be for off-trade cider at 27.4%. Off-trade, beer, wine and spirits prices would increase by 8.1%, 2.4% and 3.3% respectively on average.

### **2.2. Estimated policy impacts of a ban on below cost selling on alcohol consumption and related harms**

**F4.** A BBCS is estimated to reduce alcohol consumption in the population by -0.04%. This equates to a reduction of -0.3 units per drinker per year.

**F5.** Moderate, hazardous and harmful drinkers would reduce their consumption by -0.03%, -0.01% and -0.08% respectively. This equates to -0.1, -0.1 and -3.0 units per drinker per year.

**F5.** Annual spending on alcohol is estimated to increase by small amounts in all consumption groups and moderate drinkers would see the smallest spending increases

(+£0.01). Spending increases be similar for both hazardous drinkers (+£0.33) and harmful drinkers (+£0.27).

**F6.** The BBCS would lead to relatively small reductions in alcohol-related health harms. The central estimate is 3 fewer deaths, and 100 fewer hospital admissions in the first year of the policy. In the tenth year, when the policy is estimated to have reached its full effect, the estimated reduction would be 14 fewer deaths per year and 500 fewer hospital admissions.

**F7.** Crime and workplace absence reductions would also be small. An estimated 900 fewer alcohol-related crimes would occur as a result of introducing a BBCS and there would be 5,700 fewer days lost to workplace absence.

**F8.** The total discounted value of harm reductions over the first ten years of the policy would be -£77.3m. This is comprised of £9.5m less in healthcare costs, £30.2m less in crime costs, £4.7m less in costs of workplace absence and £32.9m less from reductions in QALY losses.

**F9.** The impact of the policy on alcohol consumption remains small under a range of sensitivity analyses using different price elasticities. The base case gives the smallest estimated reduction in consumption at -0.04% and the largest reduction seen is -0.06%. In all sensitivity analyses the impact of the policy on harmful drinkers is small (ranging from -0.08% to -0.11%) but remains larger than the impact on moderate drinkers (-0.02% to -0.04%).

### **2.3. Comparison of policy impacts with a 45p minimum unit price**

**F10.** The estimated impact of the BBCS is approximately 40 to 50 times smaller than the estimated impact of a 45p MUP. The BBCS is estimated to reduce population consumption by -0.04% compared to -1.6% for a 45p MUP. The estimated consumption reduction for harmful drinkers under a BBCS is -0.08% compared to -3.7% under a 45p MUP (-3 units per annum vs. -137 units per drinker per annum).

**F11.** Estimated reductions in alcohol-related harms are also approximately 40 to 50 times smaller for a BBCS compared to a 45p MUP. For a BBCS, the central estimate for the reduction in annual deaths due to alcohol in year 10 of the policy is -14 compared to -624 for a 45p MUP. The equivalent reductions in hospital admissions are -500 for a BBCS and -23,700 for a 45p MUP. Similar proportionate differences are seen for reductions in alcohol-related crime (-900 vs. -34,200) and work absence (5,700 vs. -247,600).

## **2.4. Main conclusions**

Estimates from the Sheffield Alcohol Policy Model (version 2.5) suggest:

1. A ban on below cost selling would have a very small impact on levels of alcohol consumption and rates of alcohol-related harms (including alcohol-attributable deaths, hospitalisations, crimes and workplace absences) in England.
2. The impact on all consumption groups would be very small, with harmful drinkers experiencing marginally greater consumption reductions from the policy than moderate drinkers and hazardous drinkers.
3. The estimated impact of a ban on below cost selling is approximately 40 to 50 times smaller than that of a 45p minimum unit price.

### 3. METHODS

The same policy appraisal model (the Sheffield Alcohol Policy Model version 2.5 or SAPM2.5) and the same methodologies are used for the appraisal of the BBCS policy as for the appraisal of the minimum unit pricing (MUP) policies in our main report. The only difference is that the minimum price thresholds used as model inputs are adjusted to those implied by the new policy. As VAT is levied as a percentage of the retail price of a product, the effect of a BBCS policy is to set a minimum price equivalent to the duty payable for a product plus the VAT payable on that duty. At the current rate of VAT, this means the effective minimum price is the duty payable plus 20%. Therefore, in this analysis, the BBCS policy is treated as a special case of a MUP policy where the MUP thresholds are defined as the estimated duty plus VAT per unit of alcohol (1 unit = 8g/10ml of ethanol) payable for each of the 10 modelled beverage types.

Table 1 summarises the estimated average duty plus VAT per unit of alcohol for beer, cider, wine, spirits and RTDs (ready-to-drink beverages or alcopops) in the UK based on the current duty rates set by Her Majesty's Revenue and Customs (HMRC) effective from 25<sup>th</sup> March 2013. A number of assumptions are used to estimate these thresholds as 1) different duty rates exist for the same modelled beverage type (e.g. there are currently three duty rates for beer which increase with alcohol content) and 2) duty rates for cider and wine are calculated based on product volume rather than ethanol content. When multiple duty rates exist (for beer, cider and wine), we choose the average duty rate as this is the duty rate which is most widely applied. The ABV assumptions for cider and wine are based on the average ABV used by HMRC (personal communication with HMRC in March 2013). The estimated duty plus VAT payable per unit of alcohol is 22.9p, 9.4p, 24.5p, 33.9p and 33.9p for beer, cider, wine, spirits and RTDs respectively.

The estimated duty plus VAT per unit of alcohol figures shown in Table 1 are effective from 25<sup>th</sup> March 2013 until HMRC update the duty rates (the next scheduled increases are in March 2014). The baseline year for SAPM2.5 is 2011 and Table 2 presents the thresholds for the BBCS policy adjusted to 2011 prices. The adjustment factors to convert duty plus VAT rates in 2014/15 prices to 2011 prices are the same as those used to similarly convert MUP thresholds in our main report. Table 2 also shows the equivalent thresholds for the 45p MUP policy for comparison. The thresholds for the BBCS policy are much lower than those for the 45p MUP policy and this is particularly the case for cider.

Table 1: Method and assumptions to estimate threshold prices under BBCS:- estimated duty plus VAT per unit of alcohol for beer, cider, wine, spirits and RTDs in the UK (based on duty rates from 25<sup>th</sup> March 2013)

Beverage type	Duty rates as set by HMRC from 25 <sup>th</sup> March 2013 (£)	Assumed duty rate for SAPM2.5	Assumed average ABV for wine and cider	Estimated duty in pence per unit of alcohol	Estimated duty plus VAT in pence per unit of alcohol
Beer	9.17 to 24.21 per hectolitre per cent of alcohol in the beer (varies according to ABV: general - 19.12, lower strength - 9.17, higher strength - 24.21)	<b>£19.12</b> per hectolitre per cent of alcohol in product (general duty rate)	n/a	19.1	22.9
Cider	39.66 to 258.23 per hectolitre of product (still cider - 39.66 to 59.52, sparkling cider - 39.66 to 258.23)	<b>£39.66</b> per hectolitre of product (still cider with ABV 1.2% to 7.5% and sparkling cider with ABV 1.2% to 5.5%)	5.06%	7.8	9.4
Wine	82.18 to 355.59 per hectolitre of product (wine, still wine and made wine - 82.18 to 355.59, sparkling wine and made wine - 258.23 to 341.63) or 28.22 per litre of pure alcohol (wine with ABV > 22%)	<b>£266.72</b> per hectolitre of product (still wine with ABV 5.5% to 15%)	13.05%	20.4	24.5
Spirits	28.22 per litre of pure alcohol	<b>£28.22</b> per litre of pure alcohol	n/a	28.2	33.9
RTDs	28.22 per litre of pure alcohol (spirits based)	<b>£28.22</b> per litre of pure alcohol (spirits based)	n/a	28.2	33.9

Table 2: Comparison of Implied Thresholds (pence per unit) for the BBCS and 45p MUP policies in 2011 prices

	Estimated duty plus VAT (pence per unit of alcohol) in 2011 prices	45p MUP thresholds in 2011 prices
Off-trade beer	21.0	41.2
Off-trade cider	8.8	42.3
Off-trade wine	22.5	41.2
Off-trade spirits	30.2	40.1
Off-trade RTDs	31.5	41.8
On-trade beer	21.1	41.4
On-trade cider	8.7	41.8
On-trade wine	22.6	41.6
On-trade spirits	31.3	41.6
On-trade RTDs	31.3	41.5

Table 3 presents the proportion of alcohol units sold below the duty plus VAT thresholds in 2011 and the relative change in average price for the BBCS policy for the 10 modelled beverage types. Overall, only 1.3% of alcohol is sold below the thresholds of the BBCS policy and the estimated overall price increase is 0.1%. Figures 1 and 2 compare the proportion of alcohol sold and relative change in average price in the off-trade between the BBCS and the 45p MUP policies.

Table 3: Proportion of alcohol units sold below the duty plus VAT thresholds and the relative change in average price for the BBCS policy

	Proportion sold below duty plus VAT	% change in price
Off-trade beer	2.4%	0.2%
Off-trade cider	0.1%	0.0%
Off-trade wine	0.4%	0.1%
Off-trade spirits	1.2%	0.1%
Off-trade RTD	0.1%	0.0%
On-trade beer	0.0%	0.0%
On-trade cider	0.0%	0.0%
On-trade wine	0.0%	0.0%
On-trade spirits	0.0%	0.0%
On-trade RTD	0.0%	0.0%
Total	1.3%	0.1%



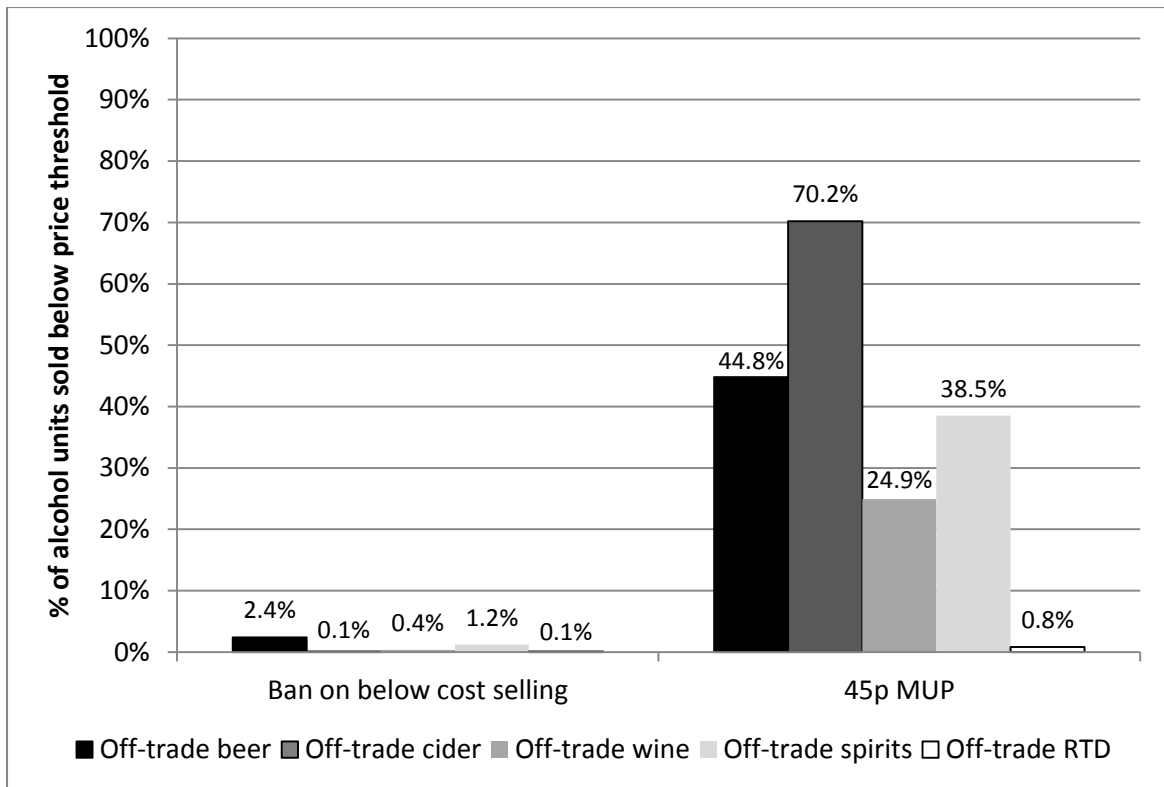


Figure 1: Comparison of proportions of alcohol units sold in the off-trade below the price thresholds used by the BBCS and the 45p MUP policies

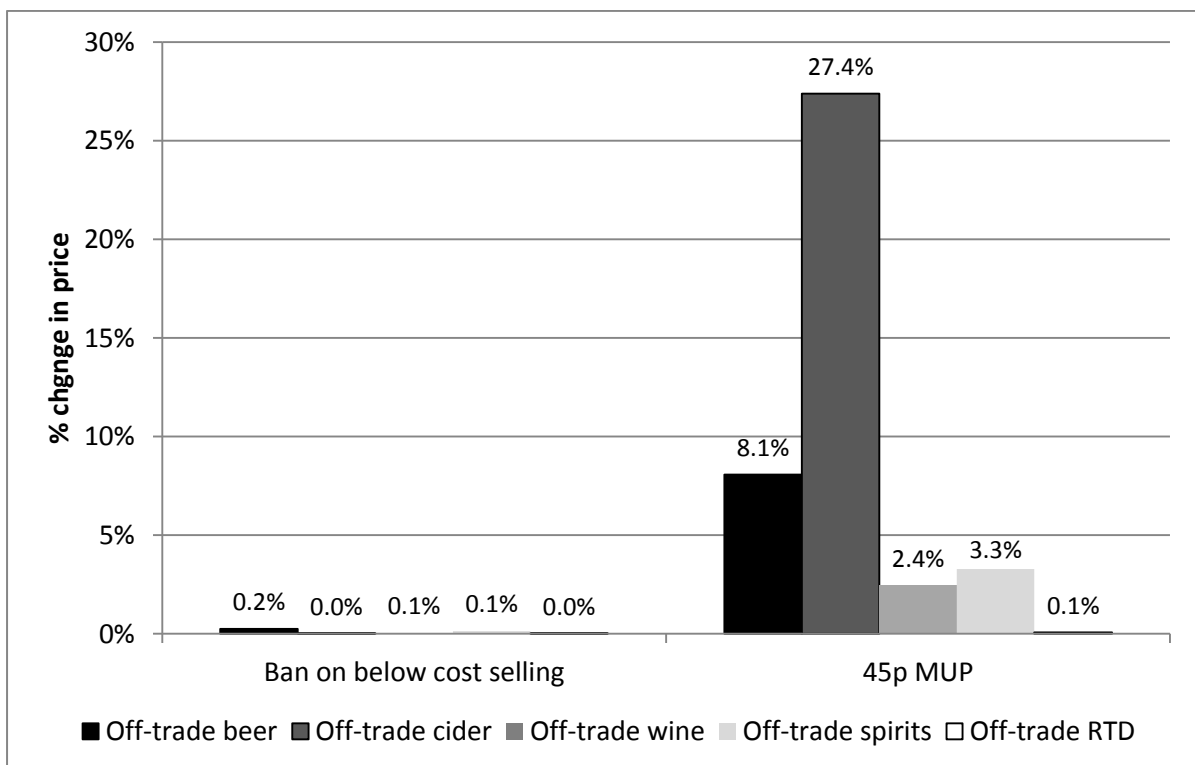


Figure 2: Comparing relative change in average price in the off-trade between the BBCS and the 45p MUP policies

## 4. RESULTS

### 4.1. Results for the ban on below cost selling policy

Table 4 presents estimated effects on consumption and spending for the BBCS policy in our base case model and Table 5 presents the resulting estimated harm reductions. The likely impact of the BBCS policy on alcohol consumption in England is very small; a 0.04% drop in consumption overall (which equates to 0.3 units per drinker per year), and a 0.08% reduction for harmful drinkers (a 3 units per year reduction from harmful drinkers' current average consumption level of over 3,700 units per year). The corresponding harm changes are also small, with an estimated reduction of 14 alcohol-related deaths, 500 hospital admissions and 900 alcohol-related crimes per year at full effect.

Table 4: Estimated effects on consumption and spending for the BBCS policy

	Population	Moderate	Hazardous	Harmful
% population	100.0%	77.2%	17.5%	5.3%
% non-drinkers	16%	20.3%	0.0%	0.0%
<b>Consumption</b>				
Baseline consumption (units per year per person)	620.5	226.6	1,419.3	3,722.1
Baseline consumption (units per year per drinker)	736.2	284.5	1,419.3	3,722.1
% change per person	-0.04%	-0.03%	-0.01%	-0.08%
% change per drinker	-0.04%	-0.03%	-0.01%	-0.08%
Change per drinker per year (units)	-0.3	-0.1	-0.1	-3.0
<b>Spending</b>				
Baseline spending (£ per year per drinker)	612.30	275.43	1,142.56	2,771.06
% change per drinker	0.02%	0.00%	0.03%	0.01%
Change per drinker per year (£)	0.09	0.01	0.33	0.27

Table 5: Estimated harm reductions for the BBCS policy

		Population	Moderate	Hazardous	Harmful
Year 1	Deaths	-3.0	-0.7	-0.5	-1.7
	Hospital admissions ('000s)	-0.1	0.0	0.0	-0.1
Year 10: Full effect per year	Deaths	-13.9	-0.8	-2.6	-10.6
	Hospital admissions ('000s)	-0.5	-0.1	-0.1	-0.4
	Total crimes ('000s)	-0.9	-0.2	-0.1	-0.7
	Days absence ('000's)	-5.7	-1.5	-0.5	-3.7
Value of harm reduction cumulative years 1-10 discounted (£millions)	Healthcare costs	-9.5	-2.4	-1.5	-5.6
	Crime costs	-30.2	-6.3	-2.2	-21.8
	Absence costs	-4.7	-1.5	-0.3	-2.9
	Total direct costs	-44.4	-10.1	-4.0	-30.3
	Total value of harm reduction incl. QALYs	-77.3	-18.3	-9.6	-49.4

Table 6 and Figure 3 show results for sensitivity analyses around the estimated effects on consumption for the same policy.

Table 6: Sensitivity analysis results for estimated effects on consumption of the BBCS policy

	Ban on below cost selling						
	Base case	SA1	SA2	SA3	SA4	SA5	SA6
Population	-0.04%	-0.04%	-0.04%	-0.04%	-0.05%	-0.06%	-0.06%
Moderate	-0.03%	-0.02%	-0.02%	-0.04%	-0.02%	-0.03%	-0.03%
Hazardous	-0.01%	-0.03%	-0.02%	-0.01%	-0.03%	-0.05%	-0.04%
Harmful	-0.08%	-0.08%	-0.07%	-0.08%	-0.11%	-0.10%	-0.11%

Note: SA1: assuming all cross-price elasticities to be zero (i.e. assuming no substitution effects) in the elasticity matrix estimated for the base case. SA2: excluding non-significant elasticities (p-value greater than 0.05) in the elasticity matrix estimated for the base case, SA3: separate low income and higher income specific-elasticity matrices were estimated using the pseudo-panel approach, SA4: separate moderate and hazardous/harmful-specific elasticity matrices were estimated using the pseudo-panel approach, SA5: elasticities were estimated using a time series analysis of national aggregate data on alcohol released for consumption or sale in the UK from 1964 to 2011. SA6: latest elasticities estimated by HMRC in 2012.

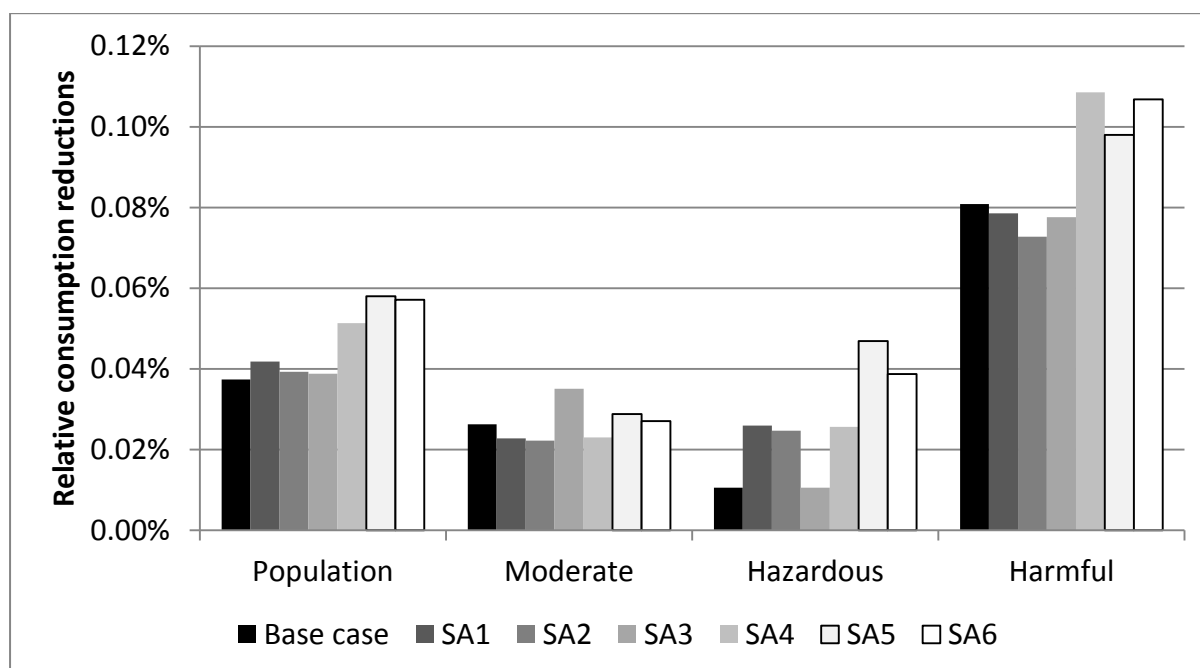


Figure 3: Comparison of estimated impacts on alcohol consumption of the BBCS policy using alternative elasticities.

#### 4.2. Comparing the ban on below cost selling and the 45p MUP policy

Table 7 compares the impacts on consumption between the BBCS and the 45p MUP policies. Figures 4-9 compare the estimated impacts on alcohol consumption, alcohol-related

deaths and hospital admissions and alcohol-related crime and absenteeism between the BBCS and the 45p MUP policies.

In general, a 45p MUP policy is estimated to have impacts which are 40 to 50 times larger than the impacts of the BBCS policy.

Table 7: Comparison of the impacts on alcohol consumption of a BBCS and a 45p MUP.

		Population	Moderate	Hazardous	Harmful
% change per person	Ban on below cost selling 45p MUP	-0.04%	-0.03%	-0.01%	-0.08%
		-1.6%	-0.6%	-0.7%	-3.7%
% change per drinker	Ban on below cost selling 45p MUP	-0.04%	-0.03%	-0.01%	-0.08%
		-1.9%	-0.7%	-0.7%	-3.7%
Change per drinker per year (units)	Ban on below cost selling 45p MUP	-0.3	-0.1	-0.1	-3.0
		-11.7	-1.6	-9.5	-136.6

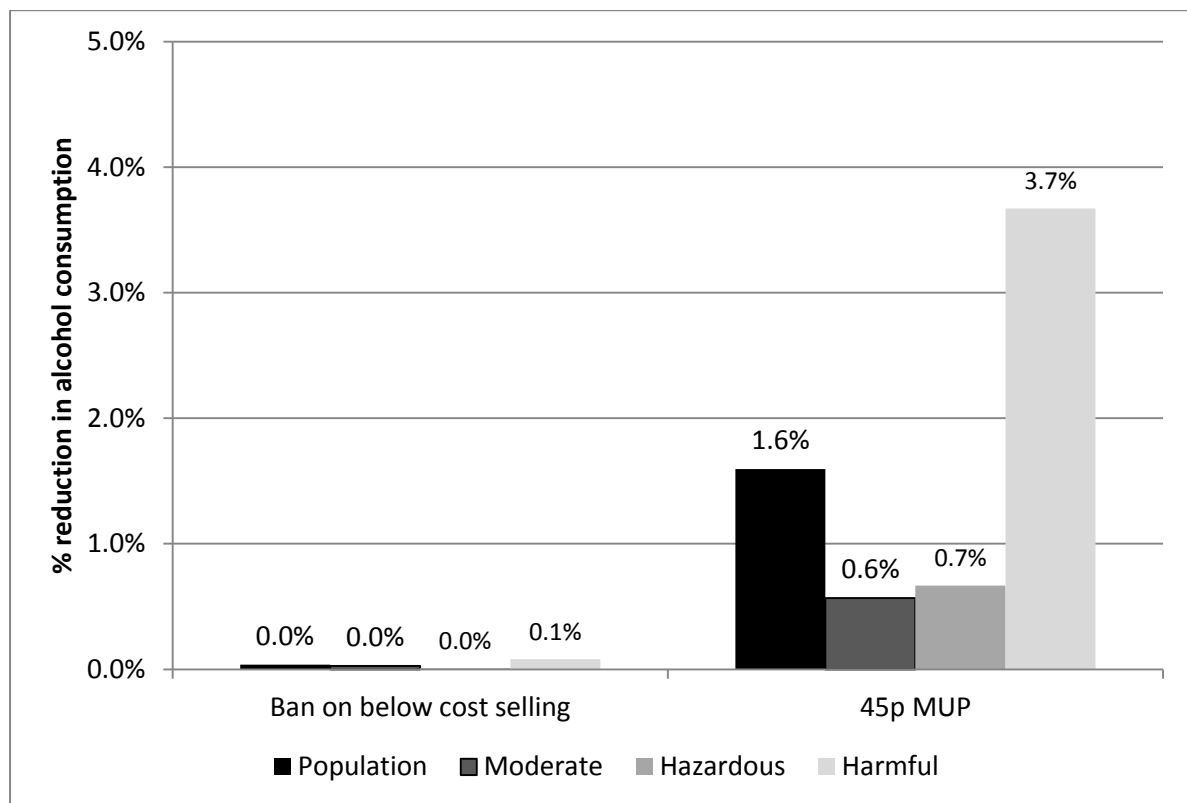


Figure 4: Comparison of the impacts on alcohol consumption of a BBCS and a 45p MUP

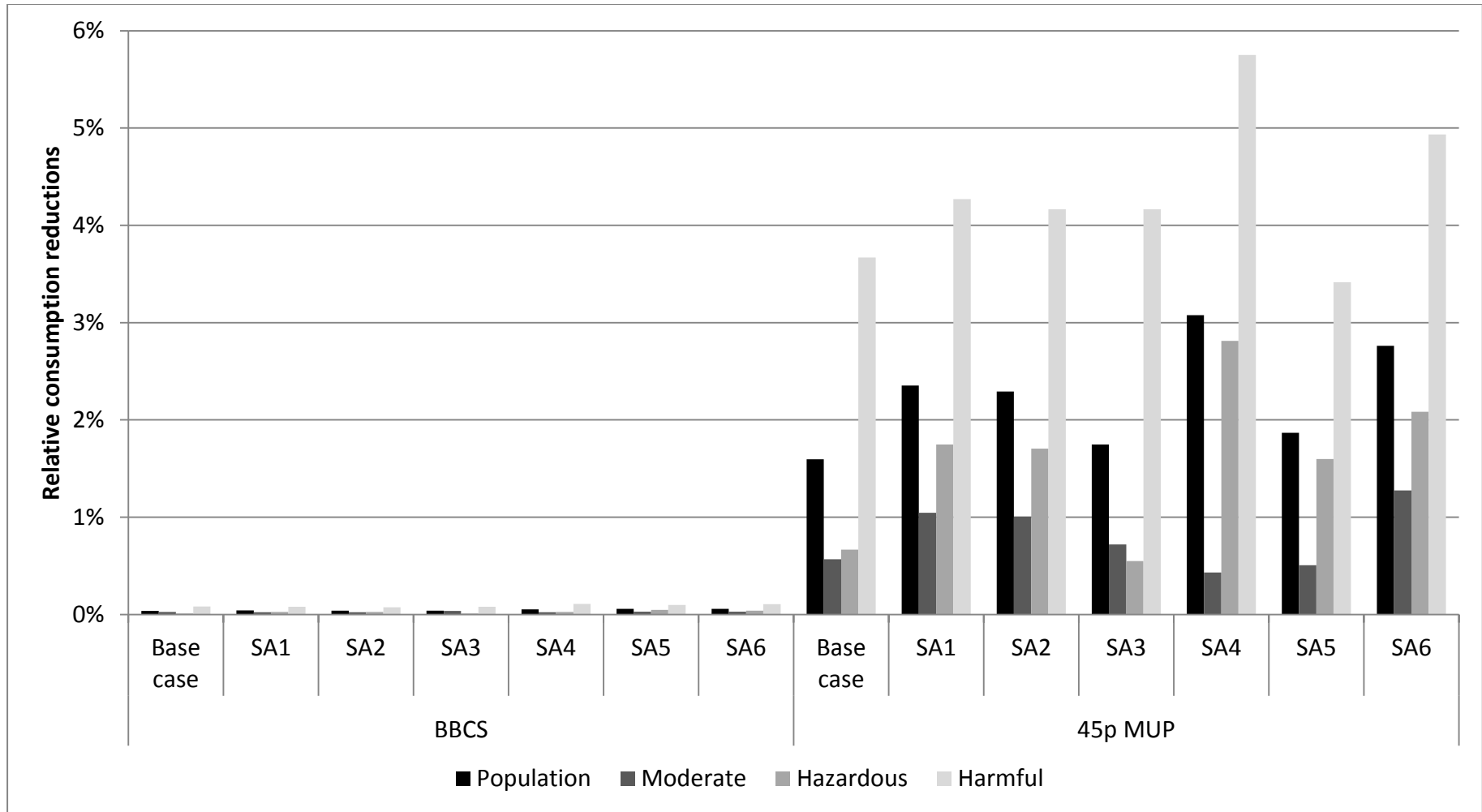


Figure 5: Comparison of impacts of a BBCS and 45p MUP on alcohol consumption for sensitivity analyses (SAs) using alternative elasticities

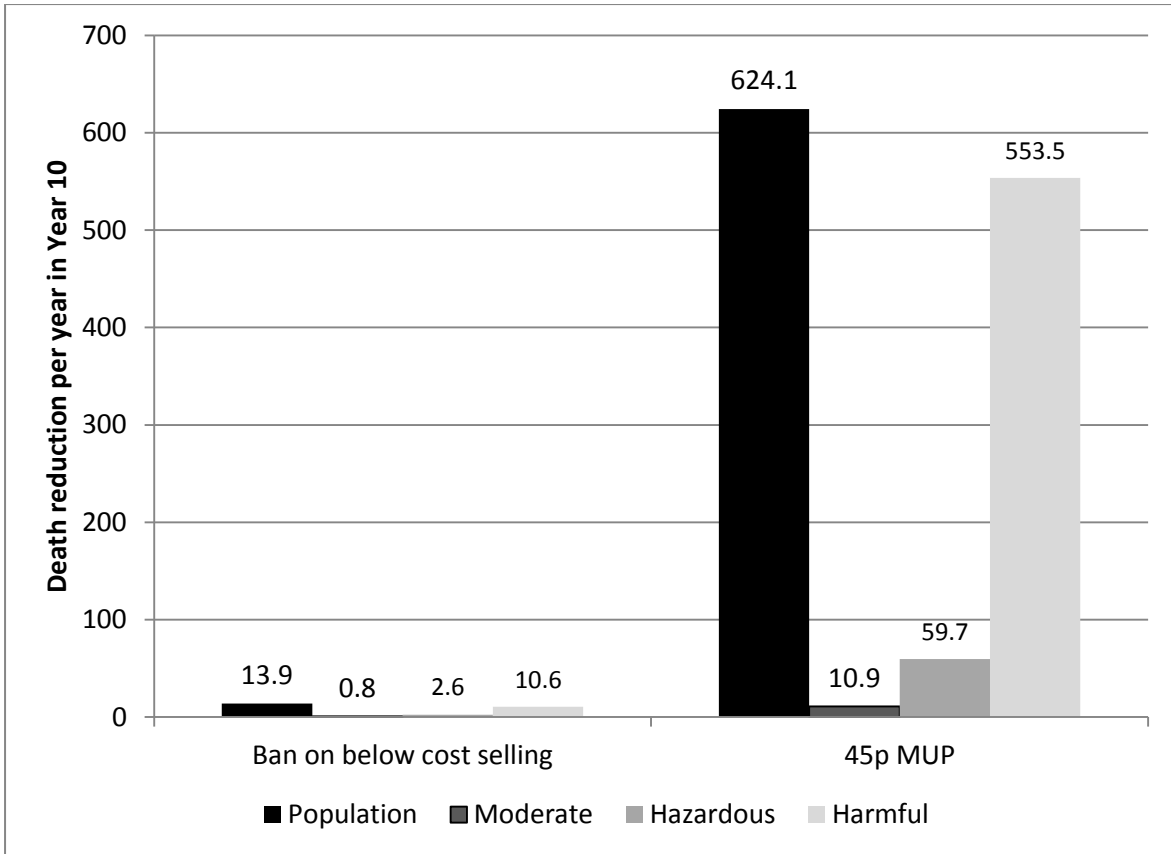


Figure 6: Comparison of the impacts on alcohol-related deaths in Year 10 of a BBCS and a 45p MUP

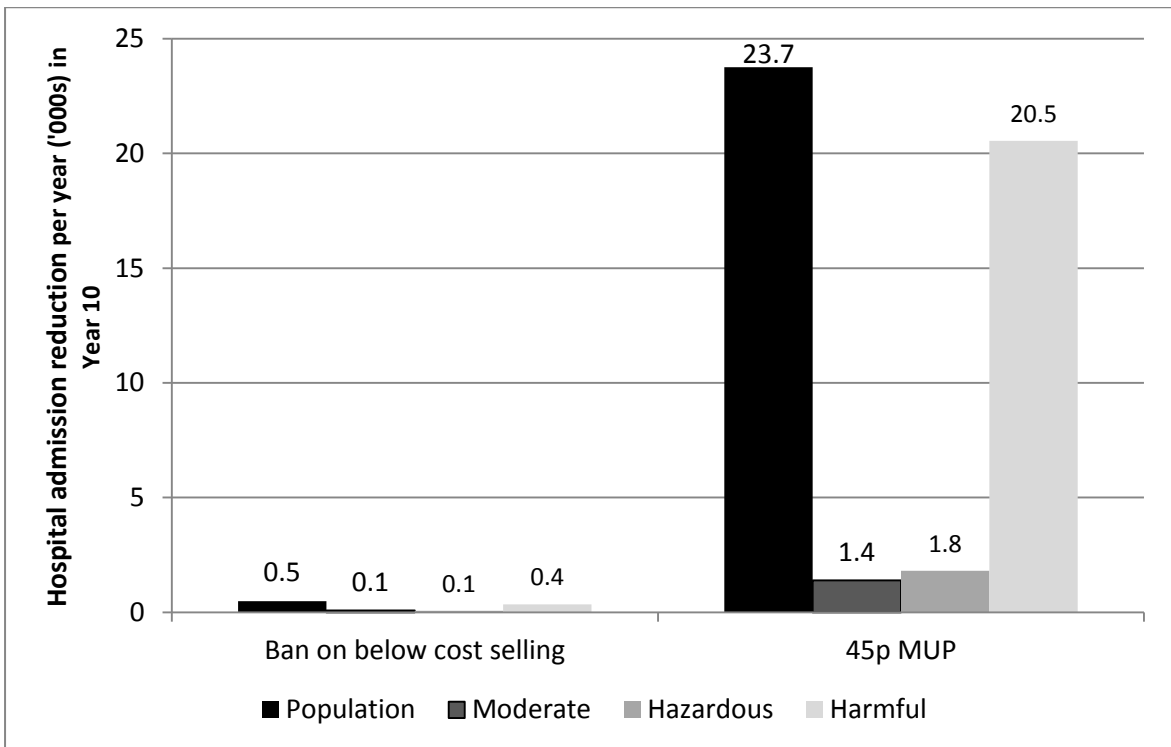


Figure 7: Comparison of the impacts on alcohol-related hospital admissions in Year 10 of a BBCS and a 45p MUP

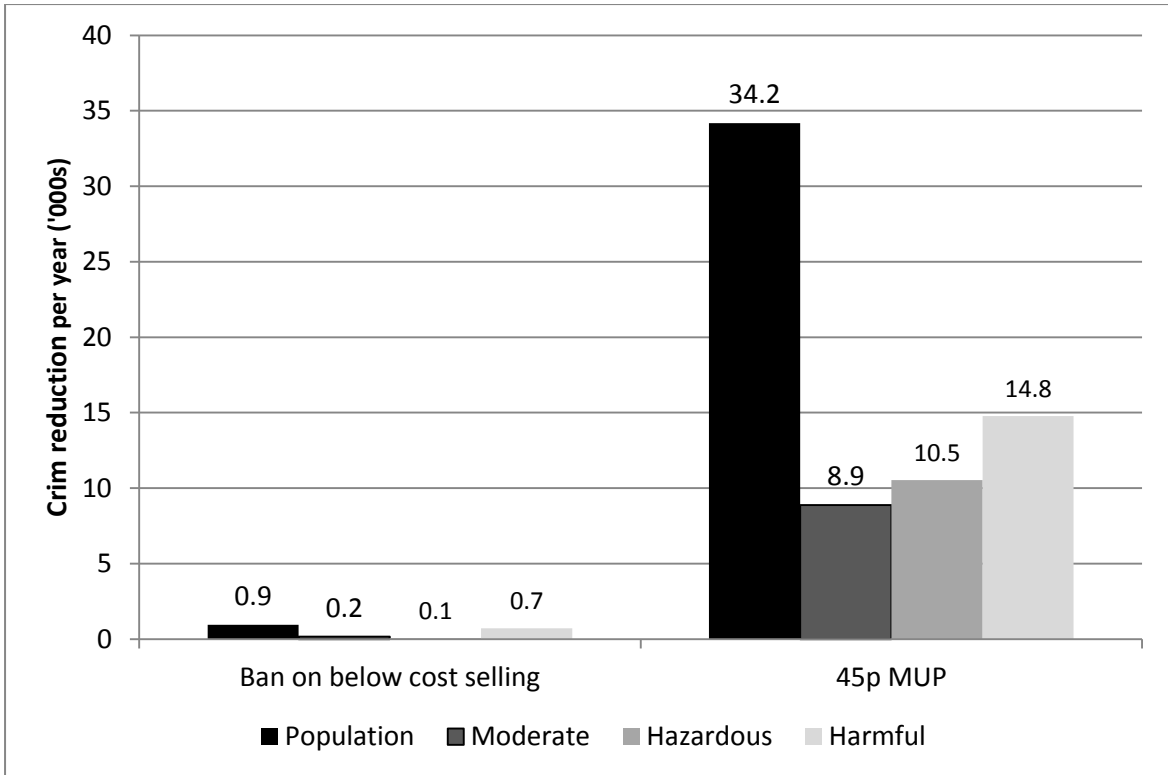


Figure 8: Comparison of the impacts on alcohol-related crime of a BBCS and a 45p MUP

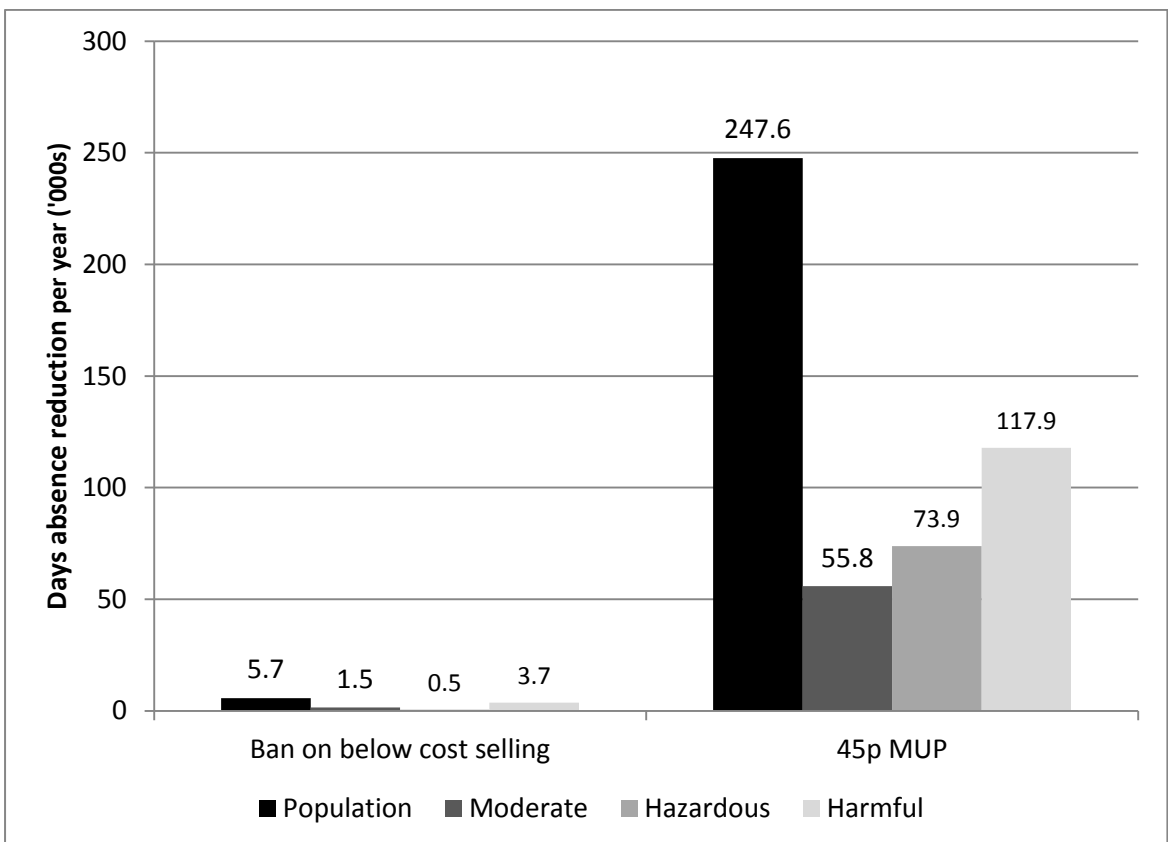


Figure 9: Comparison of the impacts on alcohol-related absenteeism of a BBCS and a 45p MUP

The BBCS is estimated to reduce population consumption by -0.04% compared to -1.6% for a 45p MUP (Table 7 and Figure 4). The estimated consumption reduction for harmful drinkers under a BBCS is -0.08% compared to -3.7% under a 45p MUP (-3 units per drinker per annum vs. -137 units per drinker per annum).

Estimated reductions in alcohol-related harms are also approximately 40 to 50 times smaller for a BBCS compared to a 45p MUP. For a BBCS, the central estimate for the reduction in annual deaths due to alcohol in year 10 of the policy is -14 compared to -624 for a 45p MUP (Figure 6). The equivalent reductions in hospital admissions are -500 for a BBCS and -23,700 for a 45p MUP (Figure 7). Similar proportionate differences are seen for reductions in alcohol-related crime (-900 vs. -34,200 in Figure 8) and work absence (5,700 vs. -247,600 in Figure 9).



## APPENDIX – MORE DETAILED RESULTS (5 TABLES & 2 FIGURES)

Table A1: Proportion of alcohol purchased below duty plus VAT

	Proportion purchased below duty plus VAT		
	Population	Low income	Higher income
Off-trade beer	2.4%	2.2%	2.5%
Off-trade cider	0.1%	0.0%	0.2%
Off-trade wine	0.4%	0.5%	0.4%
Off-trade spirits	1.2%	1.1%	1.2%
Off-trade RTD	0.1%	0.0%	0.2%
On-trade beer	0.0%	0.0%	0.0%
On-trade cider	0.0%	0.0%	0.0%
On-trade wine	0.0%	0.1%	0.0%
On-trade spirits	0.0%	0.1%	0.0%
On-trade RTD	0.0%	0.0%	0.0%
Total	1.3%	1.6%	1.2%

Table A2: Estimated effects on alcohol consumption of a BBCS

	Population	Low income	Higher income	Moderate	Hazardous	Harmful
% population		27.1%	72.9%	77.2%	17.5%	5.3%
% non-drinkers	15.7%	26.8%	11.6%	20.3%	0.0%	0.0%
% change per person	<b>-0.04%</b>	<b>-0.04%</b>	<b>-0.04%</b>	<b>-0.03%</b>	<b>-0.01%</b>	<b>-0.08%</b>
% change per drinker	<b>-0.04%</b>	<b>-0.05%</b>	<b>-0.04%</b>	<b>-0.03%</b>	<b>-0.01%</b>	<b>-0.08%</b>
Change per drinker per year (units)	<b>-0.3</b>	<b>-0.2</b>	<b>-0.3</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-3.0</b>

	Low income			Higher income		
	Moderate	Hazardous	Harmful	Moderate	Hazardous	Harmful
% population	23%	3.1%	1.3%	54.5%	14.4%	4.0%
% non-drinkers	32.0%	0.0%	0.0%	15.5%	0.0%	0.0%
% change per person	<b>-0.06%</b>	<b>-0.04%</b>	<b>-0.02%</b>	<b>-0.02%</b>	<b>0.00%</b>	<b>-0.10%</b>
% change per drinker	<b>-0.08%</b>	<b>-0.04%</b>	<b>-0.02%</b>	<b>-0.02%</b>	<b>0.00%</b>	<b>-0.10%</b>
Change per drinker per year (units)	<b>-0.1</b>	<b>-0.5</b>	<b>-0.8</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-3.7</b>

Table A3: Estimated effects on spending on alcohol of a BBCS

	Population	Low income	Higher income	Moderate	Hazardous	Harmful
% change per drinker	<b>0.02%</b>	<b>0.03%</b>	<b>0.01%</b>	<b>0.00%</b>	<b>0.03%</b>	<b>0.01%</b>
Change per drinker per year (£)	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>	<b>0.3</b>

	Low income			Higher income		
	Moderate	Hazardous	Harmful	Moderate	Hazardous	Harmful
% change per drinker	<b>0.01%</b>	<b>0.03%</b>	<b>0.05%</b>	<b>0.00%</b>	<b>0.03%</b>	<b>0.00%</b>
Change per drinker per year (£)	<b>0.0</b>	<b>0.3</b>	<b>1.4</b>	<b>0.0</b>	<b>0.3</b>	<b>-0.1</b>

Table A4: Estimated effects on alcohol-related harms of a BCS

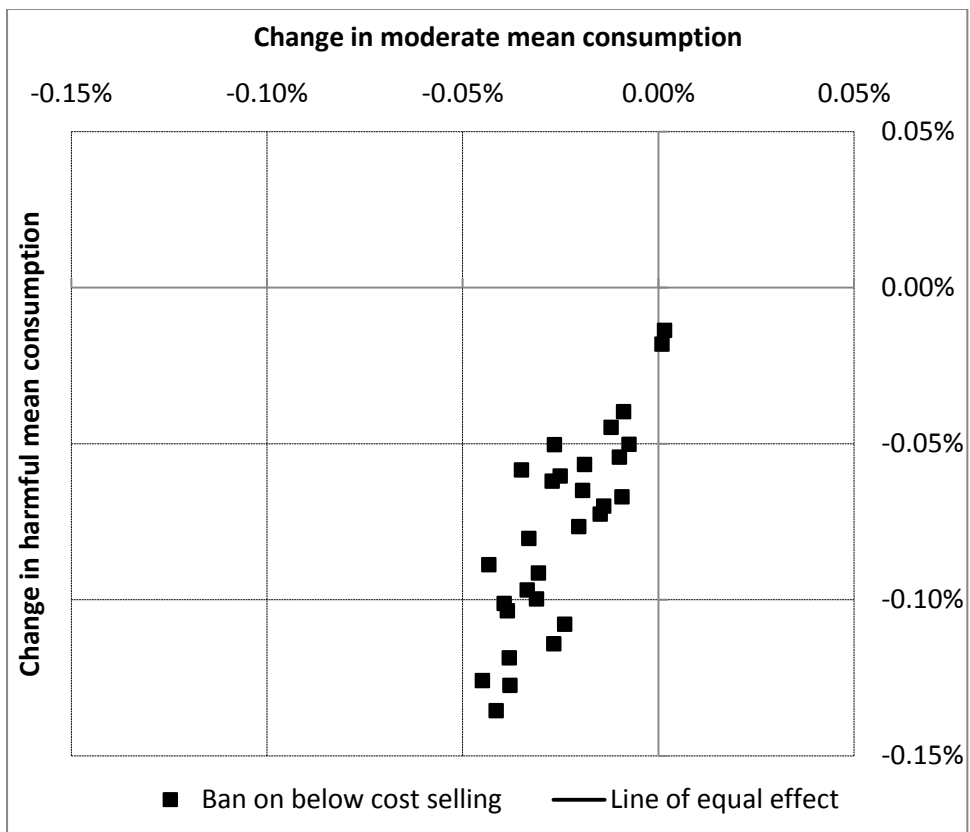
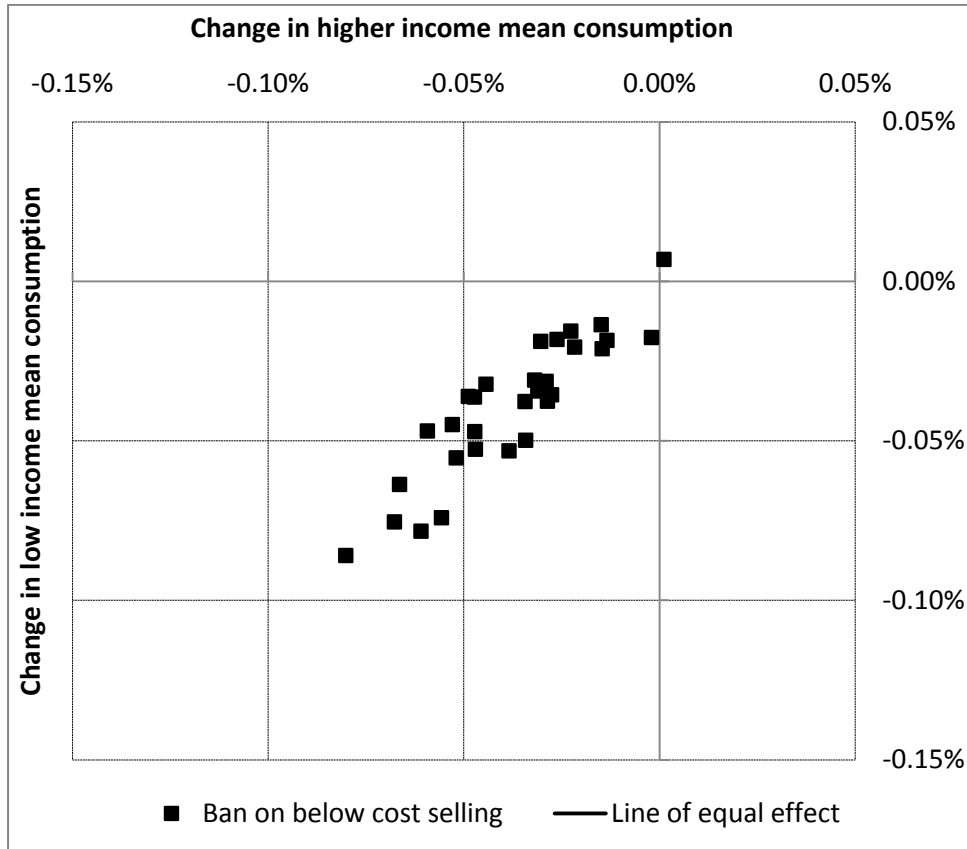
		Population	Low income	Higher income	Moderate	Hazardous	Harmful
Year 1	Deaths	-3	-1	-2	-1	-1	-2
	Hospital admissions ('000s)	-0.1	0.0	-0.1	0.0	0.0	-0.1
Full Effect per year	Deaths	-14	-3	-11	-1	-3	-11
	Hospital admissions ('000s)	-0.5	-0.1	-0.4	-0.1	-0.1	-0.4
	Total crimes ('000s)	-0.9	n/a		-0.2	-0.1	-0.7
	Days absence ('000's)	-5.7	n/a		-1.5	-0.5	-3.7
Value of harm reduction cumulative discounted (£millions)	Healthcare costs	-9.5	-2.5	-6.9	-2.4	-1.5	-5.6
	Crime costs	-30.2	n/a		-6.3	-2.2	-21.8
	Absence costs	-4.7	n/a		-1.5	-0.3	-2.9
	Total direct costs	-44.4	n/a		-10.1	-4.0	-30.3
	Total value of harm reduction incl QALYs	-77.3	n/a		-18.3	-9.6	-49.4

		Low income			Higher income		
		Moderate	Hazardous	Harmful	Moderate	Hazardous	Harmful
Year 1	Deaths	0	0	0	0	0	-2
	Hospital admissions ('000s)	0.0	0.0	0.0	0.0	0.0	-0.1
Full Effect per year	Deaths	0	-1	-2	0	-1	-9
	Hospital admissions ('000s)	0.0	0.0	0.0	0.0	0.0	-0.3
Value of harm reduction cumulative discounted (£millions)	Healthcare costs	-1.3	-0.7	-0.5	-1.1	-0.7	-5.1
	Total value of health harm reduction incl QALYs	-5.2	-3.3	-2.5	-5.6	-3.8	-21.9

Table A5: Detailed price-to-consumption results for a BBCS

	Population	Moderate	Hazardous	Harmful	Low income	Higher income	16-17	18-24 Hazardous
<b>Baseline statistics</b>								
Baseline Consumption (units per week)	11.9	4.3	27.2	71.4	9.3	12.9	7.8	27.6
Population	41,393,296	31,964,234	7,232,457	2,196,605	11,224,815	30,168,481	1,041,951	655,712
Baseline Consumption (drinker)	14.1	5.5	27.2	71.4	12.7	14.6	11.0	27.6
Drinker population	34,889,490	25,460,428	7,232,457	2,196,605	8,213,926	26,675,564	738,841	655,712
% drinkers	84.3%	79.7%	100.0%	100.0%	73.2%	88.4%	70.9%	100.0%
% binge (>8 male, >6 female)	21.7%	11.4%	49.4%	79.4%	14.8%	24.2%	16.3%	70.8%
Mean binge if binge occurs	12.1	10.2	12.4	15.1	12.7	12.0	12.5	14.6
<b>Sales/Consumption volume, units per drinker per year</b>								
Off-trade beer	96.8	29.6	169.6	636.0	113.5	91.6	40.0	128.1
Off-trade cider	18.9	4.8	24.8	162.6	33.4	14.4	24.9	17.1
Off-trade wine	264.5	92.1	584.2	1210.0	175.1	292.0	86.1	184.6
Off-trade spirits	71.1	27.2	128.1	392.3	93.3	64.3	23.6	157.9
Off-trade RTDs	7.8	2.1	8.7	71.7	10.1	7.2	16.4	18.7
On-trade beer	199.4	80.2	371.4	1014.7	187.7	203.0	163.2	555.0
On-trade cider	7.7	3.2	13.2	42.5	6.6	8.1	11.0	34.7
On-trade wine	37.9	26.8	68.0	68.3	15.5	44.8	27.0	57.8
On-trade spirits	19.8	14.2	31.6	46.0	14.9	21.3	62.8	160.3
On-trade RTDs	12.3	4.5	19.6	78.0	11.5	12.5	118.9	124.7
<b>Total</b>	<b>736.2</b>	<b>284.5</b>	<b>1419.3</b>	<b>3722.1</b>	<b>661.6</b>	<b>759.1</b>	<b>573.9</b>	<b>1438.9</b>
<b>Spending, per drinker per year (£)</b>								
Off-trade beer	43.1	14.5	76.5	263.8	48.6	41.4	12.3	56.0
Off-trade cider	7.0	2.1	9.8	54.6	11.2	5.7	10.9	7.1
Off-trade wine	143.2	51.7	314.1	639.9	83.7	161.5	4.5	97.3
Off-trade spirits	34.6	14.2	61.9	180.9	42.9	32.0	2.5	74.7
Off-trade RTDs	6.0	2.0	7.1	49.7	7.5	5.6	2.4	19.9
On-trade beer	246.6	104.8	456.0	1200.4	212.7	257.0	179.7	698.5
On-trade cider	9.3	4.0	16.0	48.5	6.8	10.0	5.6	41.2
On-trade wine	52.0	37.2	91.7	93.6	17.9	62.5	24.1	77.1
On-trade spirits	48.3	36.2	74.7	102.0	33.0	53.1	128.8	368.0
On-trade RTDs	22.2	8.6	34.9	137.6	18.9	23.1	188.5	226.8
<b>Total</b>	<b>612.3</b>	<b>275.4</b>	<b>1142.6</b>	<b>2771.1</b>	<b>483.4</b>	<b>652.0</b>	<b>559.1</b>	<b>1666.7</b>
<b>After intervention / Change from baseline</b>								
Changes in consumption (units per week)	0.00	0.00	0.00	-0.06	0.00	0.00	0.00	0.00
Changes in consumption (drinker)	-0.01	0.00	0.00	-0.06	0.00	-0.01	0.00	0.00
<b>Changes in consumption (%)</b>	<b>-0.04%</b>	<b>-0.03%</b>	<b>-0.01%</b>	<b>-0.08%</b>	<b>-0.04%</b>	<b>-0.04%</b>	<b>0.00%</b>	<b>-0.02%</b>
Final Consumption (drinker)	14.1	5.5	27.2	71.3	12.7	14.6	11.0	27.6
<b>Absolute change in sales/Consumption volume, units per drinker per year</b>								
Off-trade beer	-0.2	0.0	-0.2	-2.3	-0.2	-0.2	0.0	-0.2
Off-trade cider	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-trade wine	0.1	0.0	0.1	0.5	0.0	0.1	0.0	0.0
Off-trade spirits	-0.1	0.0	-0.1	-0.3	-0.1	0.0	0.0	-0.1
Off-trade RTDs	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0
On-trade beer	-0.1	0.0	0.0	-1.0	0.0	-0.1	0.0	0.0
On-trade cider	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
On-trade wine	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
On-trade spirits	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
On-trade RTDs	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1
<b>Total</b>	<b>-0.3</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-3.0</b>	<b>-0.2</b>	<b>-0.3</b>	<b>0.0</b>	<b>-0.2</b>
<b>Absolute change in spending, per drinker per year (£)</b>								
Off-trade beer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-trade cider	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-trade wine	0.1	0.0	0.2	0.9	0.1	0.1	0.0	0.0
Off-trade spirits	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Off-trade RTDs	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
On-trade beer	-0.1	0.0	0.1	-1.2	0.0	-0.1	0.0	-0.1
On-trade cider	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
On-trade wine	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
On-trade spirits	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
On-trade RTDs	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3
<b>Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.2</b>
<b>Relative change in spending</b>	<b>0.02%</b>	<b>0.00%</b>	<b>0.03%</b>	<b>0.01%</b>	<b>0.03%</b>	<b>0.01%</b>	<b>0.00%</b>	<b>0.01%</b>

Table A6: Probabilistic sensitivity analysis results for a BBCS



Note: Clustering of estimates points on one side of the line of equal effect indicates a significant difference in effect between the two groups compare

## References

1. HM Government. The Coalition: our programme for government. 2010. London: Cabinet Office
2. HM Government. The Government's Alcohol Strategy. Cm 8336, 2012. London: TSO