

FACT SHEET 3:

CHEAPLY AVAILABLE ALCOHOL, IRRESPONSIBLE PROMOTIONS AND DEEP DISCOUNTING

PENNY PHILLIPS-HOWARD, MICHELA MORLEO, PENNY A COOK, MARK A BELLIS

1. INTRODUCTION

Alcohol sales generate £7.9bn annually for the Government¹, while £20bn is spent on alcohol-related illness, crime and debilitation². The cost of alcohol has remained relatively constant since 1996, but in reality became cheaper as income increased.^{3,4} This relative decrease is likely to have increased alcohol-related harm: in Finland after a year of tax cuts (where the price of alcohol fell by 22%), eight additional alcohol-related deaths per week were recorded.⁵ In the UK, supermarket discounting has encouraged home drinking while on-trade sales (pubs, clubs) have decreased slightly.⁶⁻⁸ Although the British Retail Consortium claims that supermarket customers buy alcohol to drink over time or at family events,⁹ cheap

KEY POINTS

- Alcohol has become relatively cheap over the past decade and excessive consumption has resulted in increased harm.
- Licensed premises, particularly supermarkets and off-licences, compete through price cutting strategies and value own brand products to attract customers.
- Lower alcohol and alcohol-free drinks are more expensive than standard alcoholic drinks in a supermarket: non-alcoholic cider can be over four times more expensive than standard cider.
- With the average North West weekly pocket money of £9.73, 12-16 year olds can buy 57 units of cider from a supermarket (a quantity which would be harmful for an adult male).
- Internationally, a decrease in the price of alcohol leads to an increase in consumption and alcohol-related harm, and vice versa.
- There are a number of ways to adjust price such as tax increases, promotion bans, removing the tax exemption in place for cider, and tax incentives for lower strength products. These should be sustained in line with inflation, and be proportional to alcohol content.
- Modelled data show a 10% price increase would reduce the number of deaths from alcohol specific conditions by 29% for males and 37% for females.
- An alcopops tax would not tackle underage consumption because they are far from the only drink consumed by young people and those drinking can switch to cheaper products.

alcohol may fuel binge drinking, ¹⁰ and may be used for home consumption prior to a night out (pre-loading). Pre-loading has been linked with experiencing significantly higher levels of harm, such as violence, as some arrive into nightlife environments already drunk. ^{11,12}

Young people are particularly at risk. Low prices of alcohol, promotions and adverts for alcohol outlets have been directly associated with increased binge drinking on US college campuses. ¹³ Furthermore, teenagers' expendable income is strongly associated with binge drinking, ¹⁴ and as the average pocket money has dramatically increased (from £1.80 per week in 1996 to £8 in 2006 for UK 12-16 year olds), ¹⁵

so has the potential to buy large quantities of alcohol. An online supermarket review shows the amount of alcohol potentially purchasable with the North West average weekly pocket money (£9.73 in 2007; Table 1). The cheapest drink was own brand value cider (17p a unit). Thus, a North West 12-16 year old could buy 57 units of alcohol per week, a quantity deemed harmful for an adult male. ¹⁶ Drinks such as cider are particularly

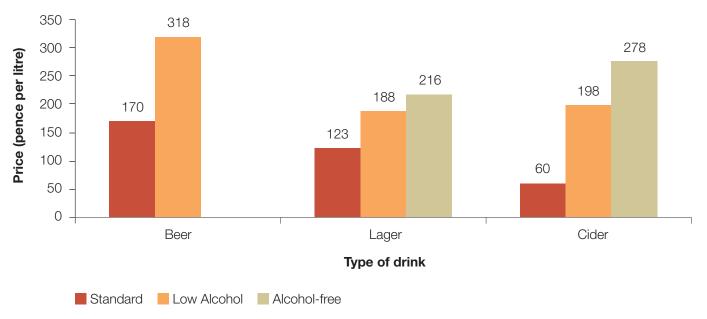
appealing as they enable rapid intoxication cheaply^{17,18} whereas alcopops represent a relatively expensive drink at 89p per unit. Worryingly, cider consumption has more than doubled since 2005 (although this has also been linked to brand remarketing).^{19,20} The same survey also found that low alcohol versions of drinks are up to 4.6 times more expensive than standard drinks (Figure 1).

TABLE 1: COST OF A UNIT OF ALCOHOL FROM A LEADING SUPERMARKET AND NUMBER OF UNITS A NORTH WEST 12-16 YEAR OLD CAN BUY WITH WEEKLY POCKET MONEY (£9.73)*

Type of drink	Promotion type	Alcohol by volume (ABV)	Cost of alcohol per unit	Number of units that canbe bought with £9.73
Own brand (value) cider	nil	4.2%	17p	57.2
Own brand (value) vodka	nil	37.5%+	24p	40.5
Scrumpy Jack Strong cider	nil	6%	29p	33.6
Sepia Vin De Pays white wine	Half price	13.5%	29p	32.3
Own brand Special Reserve whisky	nil	40%	32p	30.4
Sandiman Cream sherry (fortified wine)	Save	17.5%	32p	30.4
Gordons Dry London gin	Save	37.5%	38p	25.6
Harveys Stamps S.Cabernet red wine	Save	13.5%	39p	24.9
Leffe Blond beer	2 for 1	6.6%	42p	23.2
Boddingtons beer	2 for 1	4.1%	47p	20.7
Bacardi Breezer	2 for 1	4%	89p	10.9

^{*} The survey was conducted on 3rd February 2008, through Tesco online shopping facility. Brands selected represent choices available of own brands and price promotions.

FIGURE 1: COST OF STANDARD ALCOHOLIC, LOW ALCOHOL AND NO ALCOHOL SUBSTITUTE DRINKS IN A LEADING SUPERMARKET*



^{*} The survey was conducted on 3rd February 2008, through Tesco online shopping facility. Brands selected represent choices available of own brands and price promotions. Alcohol-free beers were not available to purchase on the site.

Strategies aiming to increase the price of alcohol (Section 3) are amongst the most effective interventions available to combat alcohol harm²¹ and are supported by the Chief Medical Officer, 22 police officers 23 and various bodies. 10,24,25 Although public opinion surveys conducted in the 25 European Commission Member States show limited support for price increases, 38% of young people believe higher prices would restrain young and heavy drinkers.²⁶ Such strategies were unpopular in Ireland, but the subsequent impact has been beneficial (Section 3). The European Court of Justice permits increasing tax to meet public health objectives, as occurred for tobacco.²⁷ The UK Government has commissioned an independent review into whether, and to what extent, alcohol price and promotion result in harmful consumption.²⁸

2. HOW PRICE WORKS

The price of a product is dependent on a number of factors:²⁹⁻³³

- Production, distribution and retail costs;
- Profit margins sought;
- Value Added Tax (VAT; where tax is added to the cost of goods and services at the point of purchase by the consumer);
- The level of demand (increased demand increases prices);
- Supply (ready availability decreases prices);
- Excise duty (this specifically affects alcohol; Box 1);
- Deliberate price reductions, for example when competing with other companies (discounts can attract customers and increase total sales); and
- Size of company (large companies can offer cheaper products by selling large quantities and extracting discounts from producers).

BOX 1: EXCISE DUTY

Excise duty on alcohol is governed by the EU and varies by beverage (for example, reduced rates for wine can be sought). While the EU has harmonised product definitions and agreed minimum duties, they vary widely by country. This is because other taxes can be used if they: pursue community objectives (such as public health); use objective criteria to differentiate drinks (such as strength); and do not discriminate or protect competing domestic products.

Cost is a primary determinant of alcohol consumption:³² price increases lead to a decrease in consumption and vice versa.³³ The effects of this are measured through the price elasticity (PE) index (Box 2). In the UK, alcohol has a PE of -1.39: if prices increase by 1%, consumption decreases by 1.39%.³¹ Spirits are the most responsive to price change and beer drunk onpremises the least. However, price increases should not be restricted to the most responsive drink, as this could lead to individuals choosing alternative, cheaper drinks (Section 3).

BOX 2: PRICE ELASTICITY OF DEMAND 29-31,33

A price elasticity (PE) of -0.5 means that if prices are increased by 1%, consumption will decrease by 0.5%. PE varies by:

- Type of alcohol;
- Country;
- Consumption in on-licensed premises or away from the premise;
- Standard of living; and
- Over time.

3. PRICE INTERVENTIONS AND THEIR EFFECTS

The regulation of alcohol price is internationally the most popular strategy used to control alcohol consumption and related harm. Numerous examples show that such a strategy has beneficial effects. The Northern Territory (Australia) introduced a special tax on alcoholic beverages that are stronger than 3%ABVa together with the Living With Alcohol (LWA) programme. Subsequently, there was a 22% reduction in per capita consumption in four years and a reduction in hazardous drinking, and related morbidity and mortality. In Ireland between 2001 and 2002, cider tax increased by 87% (to €0.83 per litre for those with a maximum alcohol content of 6%) and spirits by 42% (to €39.25 per litre of pure alcohol). In 2002/03, Ireland experienced:

- 11.3% reduction in cider sales and 21% reduction in spirits sales;
- 6% fall in per capita total alcohol consumption;
- 14% fall in alcohol poisoning deaths; and
- 6% fall in public order offences. 35,36

^a The levy for beer and pre-mixed spirits became \$0.20/litre, wine and cider \$0.48/litre, and spirits and fortified wines \$1.60/litre. ³⁴

b The LWA programme, established in 1992, focused on education, increased control of the availability of alcohol, rehabilitation and treatment to tackle excessive alcohol consumption.

Other studies show that tax increases decrease consumption and related harms such as liver cirrhosis and fatal car crashes.³⁷⁻⁴⁰ In addition:

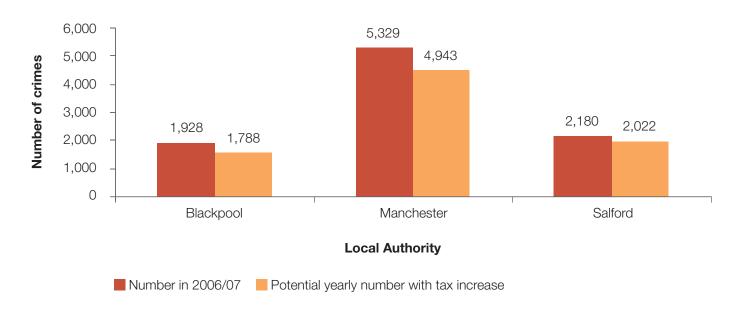
- A 1% price increase decreases the probability of wife abuse by 5%;⁴¹
- A 10% increase in tax on beer reduces rape by 1.32% and robbery by 0.9%;⁴²
- A 10% increase in excise tax on beer reduces the chance of severe child abuse by 2%;⁴³ and
- Increased tax in Australia raised \$4-5 million annually for alcohol prevention and treatment.³⁴

A number of models show the impact of increasing alcohol price via taxation:

- In the USA, a 17% tax increase for a six pack of beer would reduce alcohol-related deaths by 3.3% (that is by 1,490 deaths annually).⁴⁴
- In Sweden, a 10% price increase would reduce sales by 1.7%.⁴⁰ However, if the rise was restricted

- to expensive drinks, sales would increase by 2.8% (consumers would buy cheaper beverages and more of them). If the increase was for cheap drinks, sales would decrease by 4.2%.
- British data show a 10% price increase would reduce male and female liver cirrhosis mortality by 7% and 8.3% respectively, victims of murder by 5% and 7.1%, and deaths from alcohol specific conditions (such as poisoning) by 29% and 37%.⁴⁵
- If the price of beer in England and Wales was sustainably increased by 1% above inflation, the number of violent injuries would decrease by 7.25% (2,200 a month).³⁹ Using 2006/07 data on the number of alcohol-related violent crimes,¹⁶ this equates to a fall from 49,970 to 46,347 of such crimes in the next year in the North West. Figure 2 shows the anticipated effect for Blackpool, Manchester and Salford (where the highest rates of such violence are experienced regionally).¹⁶

FIGURE 2: POTENTIAL REDUCTION IN ALCOHOL-RELATED VIOLENT CRIME IF BEER PRICE WAS RAISED BY 1% ABOVE INFLATION FOR BLACKPOOL, MANCHESTER AND SALFORD^{16,39}



However, price changes must be sustained. In Ireland, the 86% tax increase led to an initial 11% decrease in cider sales in 2002, after which sales subsequently increased by 1% in 2003 suggesting that a single tax

increase does not lead to a continuous reduction in consumption.³⁵ Thus, tax increases should be in line with inflation.⁴⁶ Price can be adjusted in a number of other ways (Table 2).

TABLE 2: OTHER METHODS OF ADJUSTING PRICE BEYOND SIMPLE TAXATION

Route	Details	Impact
Tax linked to cost-of- living indices	The real value of fixed taxes can reduce over time because of inflation, so taxation should be linked to cost-of-living indices. ^{33,46}	An adjustment of beer tax for the rate of inflation from 1951 to mid 1980's would have reduced total road traffic fatalities by 11.5% and fatalities in 18-20 year olds by 32.1%. ⁴⁷
Minimum price	Canada has a minimum beer price in order to contribute to public health and order. ⁴⁸	Raising the minimum beer price in Canada contributed to a reduction in car accidents (PE -1.2) and traffic offences (PE -0.5). However, a minimum price in the UK would breach UK and EU competition law.
State control via monopolies	In places such as the Nordic countries, North America and Eastern Europe, the state may control alcohol production, import and sale. Here, price can be easily adjusted. ³³	Increased levels of consumption among young people in Finland were curbed by increasing prices. ⁵⁰
Tax linked to strength	In France, a social security tax is imposed on beverages with a high alcohol content. 46 Tax can also be imposed specifically on high strength drinks such as spirits.	Targeted tax on spirits in Ireland successfully reduced consumption by 21%. ³⁵ If prices increase only for some types of alcohol, however, consumers may switch to cheaper alternatives, ⁴⁰ as happened in Sweden. ⁵¹
Tax incentives for lower strength drinks	In Australia, low and mid-strength beer comprises 41% of the beer market. They have been encouraged by tax exemptions and subsequent price reductions of 20-40% compared with full-strength beers. 52	Low strength beer consumption is significantly associated with lower levels of serious alcohol-related harm. Following the tax incentive in Australia, per capita alcohol consumption fell by 24% (1980-2002) but rose 31% in the UK. ⁵³
Removing the cider regulations	Due to historic laws in England, tax for cider is lower than for beer (26p and 65p per litre respectively). This was to protect local orchards but five producers now make 70% of UK cider.	Cheap strong cider in shops and off-licences appeals to vulnerable groups, such as young people. The number of children (14-17 years) drinking cider doubled between 2005 and 2007, and trebled in 18-21 year olds. 19
Ban day time drinks reductions	Ireland strengthened licensing laws and prohibited the sale of reduced price liquor during the day (banned happy hours). ³⁵	The total alcoholic drinks market declined by 3% in volume terms in 2005. ⁵⁴ See Section 3 above for other policies and effects.
Banning deep discounting	The Competition Commission investigated loss leading in supermarkets because of the potential impact on onlicensed premises (not public health, as this is not their remit).	The Competition Commission recommended that deep discounting and loss leading on alcohol should not be banned based on competition reasons. ⁷

3.1 TARGETING AT RISK GROUPS

3.1.1 YOUNG PEOPLE

Changes to price particularly affect young people, 33,55-⁵⁷ and potentially could have a long-term effect on their consumption (reducing immediate consumption can lessen the impact of alcohol's addictive nature).⁴⁶ Amongst US college students, the lower the price of beer in the surrounding community, the higher the binge drinking rate. 13 An alcopops tax is being considered in some European countries to tackle excessive consumption in young people (particularly those who are underage)²⁹ and has been called for in the UK,⁵⁸ as alcopops are seen as the main drink for young people. Such strategies may not be effective in the UK because drinks such as cider and lager are more popular⁵⁹ (drinks such as high strength cider are popular because of their low cost and quick intoxication) 17,18 and because alcopops are already a more expensive option (Table 1). Internationally, the relationship between price

of beer specifically and young people is also particularly compelling.⁶⁰ American examples of how price influences consumption and related harm show:

- Increases in beer prices significantly reduce underage drinking⁵⁵ in terms of frequency, probability of binge drinking and the potential for long-term addiction.^{61,62} Modelled data show a 10% increase in the price of beer reduces the number of school aged binge drinkers by 2-5%.⁶¹
- Increases in beer prices significantly reduce binge drinking among female college students.⁵⁵

However, increasing tax for only one alcohol type must be done with caution because this can lead individuals to substitute an alternative cheaper drink (Table 2). It is possible that significant price increases for alcohol could lead young people to seek alternative recreational activities such as illegal drugs. Unfortunately, studies documenting a reduction in alcohol consumption after price rises have not specifically monitored the impact on consumption of other harmful substances. 35,46,51,52

However, because risky behaviour is often clustered, ^{59,63} monitoring the effect of higher priced alcohol on consumption of other substances should be undertaken.

3.1.2 HEAVY DRINKERS

Alcoholics and heavy drinkers are responsive to price changes: ^{56,64,65} the PE for this group is -1.49. ⁶⁶ Thus, higher prices could combat dependence and abuse. Examples of price influencing consumption and behaviour include:

- A 10% increase in the price of spirits would decrease consumption by 1.11% amongst those described as hard liquor drinkers in Los Angeles;⁶⁷ and
- Heavy drinkers doubled their consumption during happy hours compared with controls, but suppressed drinking when normal prices were reinstated.⁶⁸

4. SUMMARY

In summary, international experience and research evidence confirm that price increases on alcohol products reduce alcohol consumption, abuse and related harm. Reducing exposure of the young to heavy alcohol consumption is particularly important to prevent long term addiction and harm. Evidence suggests that partial or selective price increases may prompt drinkers to substitute for cheaper drinks, suggesting a universal rise is preferable. Price increases need to be sustainable and in-line with inflation. In addition, because of the links with young people's consumption, the low tax on cider needs to be withdrawn.

REFERENCES

- ¹ HM Treasury (2007). Budget 2007. Building Britain's long-term future: prosperity and fairness for families. The Stationery Office, London.
- $^2\,$ Strategy Unit (2003). Alcohol misuse: how much does it cost? Strategy Unit, London.
- ³ Office for National Statistics (2006). Focus on consumer price indices. ONS, London.
- ⁴ Office for National Statistics (2007). Focus on consumer price indices. ONS, London.
- ⁵ Koski A, Sirén R, Vuori E et al. (2007). Alcohol tax cuts and increase in alcohol-positive sudden deaths: a time-series intervention analysis. Addiction. 102(3):362-68.
- ⁶ Euromonitor (2007). Alcoholic drinks in the United Kingdom. Euromonitor International.
- ⁷ Competition Commission (2007). Grocers market investigation, provisional findings report, Competition Commission, London.
- ⁸ Mintel (2003). In- vs out-of home drinking-UK-November 2003. Mintel International Group Ltd, London.
- ⁹ British Retail Consortium (2007). BRC briefing to Westminster MPs reported in Alert. Issue2
- ¹⁰ Royal College of Physicians (2007). New coalition calls for tougher measures on alcohol. News 13 November 2007. RCP, London.
- ¹¹ Hughes K, Anderson Z, Morleo M et al. (2007). Alcohol, nightlife and violence: the relative contributions of drinking before and during nights out to negative health and criminal justice outcomes. Addiction. 103:60-5.
- ¹² Morleo M, Harkins C, Lushey C et al. (2007). Investigating drinking behaviours and alcohol knowledge amongst people resident in the Linacre and Derby wards of Sefton: interim report. Centre for Public Health, Liverpool John Moores University.
- ¹³ Kuo M, Wechsler H, Greenberg P et al. (2003). The marketing of alcohol to college students: the role of low prices and special promotions. Am J Prev Med. 25(3):204-211.
- ¹⁴ Bellis MA, Hughes K, Morleo M et al. (2007). Predictors of risky alcohol consumption in schoolchildren and their implications for preventing alcohol-related harm. Subst Abuse Treat Prev Policy. 2:15.
- $^{\rm 15}$ HBOS (Halifax Bank of Scotland (2007). Halifax Pocket Money Survey. HBOS, London.
- ¹⁶ NWPHO (North West Public Health Observatory) (2007). Local Alcohol Profiles for England. Online tool. NWPHO, Centre for Public Health, Liverpool John Moores University.

- ¹⁷ Measham F (1996). The big bang approach to sessional drinking: changing patterns of alcohol consumption amongst young people in North West England. Addiction Research Theory. 4:3(283-299).
- ¹⁸ Chen MJ, Paschall MJ, Grube JW (2006). Motives for malt liquor consumption in a sample of community college students. Addict Behav. 31(8):1295-307.
- ¹⁹ Advertising Standards Authority (2005). Young people and alcohol advertising – an investigation of alcohol advertising prior to the Advertising Code changes. ASA, London.
- ²⁰ British Broadcasting Corporation (2006). I am, now, a cider drinker. BBC online article. 18 August 2006.
- ²¹ World Health Organization (2004). Public health problems caused by alcohol. EB115/37. WHO, Geneva.
- ²² Thomson A, Sylvester R (2007). Sir Liam Donaldson targets fat binge drinkers. Daily Telegraph, 23 July 2007.
- ²³ Fahy P (2007). The scourge of cheap alcohol. The Guardian, 14 August 2007.
- ²⁴ Alcohol Concern (2007). Cheap at twice the price: young people, purchasing power and alcohol. Alcohol Concern. November 2007.
- ²⁵ Nuffield Council on Bioethics (2007). Public health: ethical issues, alcohol and tobacco. November 2007. Cambridge Publishers.
- ²⁶ Eurobarometer (2007). Attitudes towards Alcohol Special Eurobarometer Report. 272b/Wave 66.2-TNS Opinion and Social, March 2007. European Commission, Brussels.
- ²⁷ European Court of Justice (2000). Failure of a State to fulfil obligations Directive 95/59/EC Article 9 Minimum price Manufactured tobacco. ECJ, Luxembourg.
- ²⁸ Cabinet Office (2007). Safe, social, sensible: the next steps in the National Alcohol Strategy. Prime Ministers Strategy Unit, London.
- ²⁹ Cnossen S (2007). Alcohol taxation and regulation in the European Union. Int Tax Public Finance. 14:699-732.
- ³⁰ Huang CD (2003). Econometric models of alcohol demand in the United Kingdom. HM Customs and Excise, London.
- ³¹ Institute of Alcohol Studies (2007) Alcohol: tax, price, and public health, IAS, London.
- ³² Chaloupka FJ, Grossman M, Becker GS (1999). The economic analysis of substance use and abuse: an integration of econometric and behavioural economic research. University of Chicago Press.
- ³³ Babor T, Caetano R, Casswell S et al. (2003). Alcohol: no ordinary commodity. Research and public policy. Oxford University Press.
- ³⁴ Chikritzhs T, Stockwell T, Pascal R. (2005). The impact of the Northern Territory's Living With Alcohol program 1992-2002: revisiting the evaluation. Addiction. 100(11):1625-36.
- ³⁵ Department of Health and Children (2004). Strategic Task Force on Alcohol. 2nd Report. September 2004, Health Promotion Unit and Department of Health and Children, Dublin.

- ³⁶ Bedford D (2007). Is our love affair with alcohol causing more pleasure or pain? Royal College Physicians of Ireland, April 2007.
- ³⁷ Chaloupka FJ, Saffer H, Grossman M (1993). Alcohol control policies and motor vehicle fatalities. J Legal Studies. 22:161-86.
- ³⁸ Cook PJ (1981). The effect of liquor taxes on drinking, cirrhosis and auto fatalities. In: Moore M (eds). Alcohol and public policy: beyond the shadow of prohibition. National Academy of Sciences, Washington DC.
- ³⁹ Sivarajasingham V, Matthews K, Shepherd J (2006). Price of beer and violence-related injury in England and Wales. Injury. 37(5):388-94.
- ⁴⁰ Gruenewald PJ, Ponicki WR, Holder HD et al. (2006). Alcohol prices, beverage quality, and the demand for alcohol: quality substitutions and price elasticities. Alcohol Clin Exp Res. 30(1):96-105.
- ⁴¹ Markowitz, S (2000). The price of alcohol, wife abuse, and husband abuse. Southern Econ J. 67:279-304.
- ⁴² Cook PJ, Moore MJ (1993). Taxation of alcohol beverages. In: Hilton ME (ed). Economics and the prevention of alcohol related problems. Research Monograph No. 25 NIH Pub No 93-3513, Rockville, MD.
- ⁴³ Markowitz S, Grossman M (1998). Alcohol regulation and domestic violence towards children. Contemp Econ Policy, 1998, 16: 309–320.
- ⁴⁴ Hollingworth W, Ebel BE, McCarty C et al. (2006). Prevention of deaths from harmful drinking in the United States: the potential effects of tax increases and advertising bans on young drinkers. J Stud Alcohol. 67(2):300-8.
- ⁴⁵ Academy Med Sci (2004). Calling time: the nations drinking as a major health issue. AMS, London.
- ⁴⁶ Anderson P, Baumberg B (2006). Alcohol in Europe: a public health perspective. Institute of Alcohol Studies, London.
- ⁴⁷ Chaloupka FJ, Grossman M, Saffer H (1993). Effects of price on the consequences of alcohol use and abuse In: Galanter M Recent developments in alcoholism. Vol 14. The consequences of alcoholism. pp. 331-46. NY Plenum Press.
- ⁴⁸ McCarthy P (2000). Effect of speed limits on speed distributions and highway safety: a survey of recent literature. Transport Reviews. 21:31–50.
- ⁴⁹ Adrian M, Ferguson B, Her M (2001). Can alcohol price policies be used to reduce drunk driving? Evidence from Canada. Subst Use Misuse. 36(13):1923-57.
- ⁵⁰ Holder HD, Kuhlhorn E, Nordlund S et al (1998). European integration and Nordic alcohol policies: Changes in alcohol controls and consequences in Finland, Norway and Sweden, 1980-1997. Ashgate Publishing Ltd, Aldershot.

- ⁵¹ Ponicki W, Holder HD, Gruenewald PJ et al. (1997). Altering alcohol price by ethanol content: results from a Swedish tax policy in 1992. Addiction. 92(7):859-70.
- ⁵² Stockwell T, Crosbie D (2001). Supply and demand for alcohol in Australia: relationships between industry structures, regulation and the marketplace. Int J Drug Policy. 12(2):139-52.
- ⁵³ Stockwell T (2004). Lies, damned lies and no statistics: a study of dysfunctional democracy in action. Addiction. 99:1090-1.
- ⁵⁴ Euromonitor (2006). Alcoholic drinks in Ireland. Euromonitor International.
- ⁵⁵ Chaloupka FJ, Wichsler H (1996). Binge drinking in college: the impact of price, availability, and alcohol control policies. Contemp Econ Policy. 14:112-24.
- ⁵⁶ Kenkel DS (1993). Driving, driving and deterrence: the effectiveness and social costs of alternative policies. J Law Econ. 36:877-913.
- ⁵⁷ Sutton M, Godfrey C (1995). A grouped data regression approach to estimating economic and social influences on individual drinking behaviour. Health Econ. 4(3):237-47.
- ⁵⁸ Borland S (2008). Conservatives plan alcopop tax rise. Daily Telegraph. 8 March 2008.
- ⁵⁹ Fuller E (ed) (2006). Drug use, smoking and drinking among young people in England in 2005. NatCen (National Centre for Social Research) and NFER (National Foundation for Educational Research), London.
- 60 Office for National Statistics (2008). Drinking: adults' behaviour and knowledge in 2007. ONS Omnibus Survey report. No 34, January 2008. ONS, London.
- ⁶¹ Grossman M, Chaloupka FJ, Saffer H et al. (1994). Effects of alcohol price policy on youth: a summary of economic research. J Res Adolescence. 4(2): 347-64.
- ⁶² Laixuthai A, Chaloupka F (1993). Youth alcohol use and public policy. Contemp Policy Issues. 11(4):70-84.
- ⁶³ Hughes S, Bellis MA, Hughes K et al. (2008). Risky drinking in North West school children and its consequences: a study of fifteen and sixteen year olds. Centre for Public Health, Liverpool John Moores University.
- ⁶⁴ Vuchinich RE, Simpson CA (1999). Delayed-reward discounting in alcohol abuse. In: Chaloupka FJ, Grossman M, Bickel et al. (eds.). The economic analysis of substance use and abuse: an integration of econometric and behavioural economic research. pp.103-122. University of Chicago Press.

- ⁶⁵ Babor TF (1985). Alcohol, economics and the ecological fallacy: toward an integration of experimental and quasi-experimental research. In; Single E and Storm T (eds). Public drinking and public policy, pp. 161-89. Toronto: Addiction Research Foundation.
- ⁶⁶ Farrell S, Manning WG, Finch MD. (2003) Alcohol dependence and the price of alcoholic beverages. J Health Econ. 22(1):117-47.
- ⁶⁷ French MT, Browntaylor D, Bluthenthal RN (2006) Price elasticity of demand for malt liquor beer: findings from a US pilot study. Soc Sci Med. 62(9):2101-11.
- ⁶⁸ Babor TF Mendelson JH, Greenberg I et al. (1978). Experimental analysis of the 'happy hour': effects of purchase price on alcohol consumption. Psychopharmacology (Berl). 58(1):35-41.

ACKNOWLEDGEMENTS:

We would like to thank all those who contributed to the production of this fact sheet, including Brenda Fullard from the Department of Health, and all those at the Centre for Public Health at Liverpool John Moores University, in particular Gillian Elliott, Kerin Hannon, Corinne Harkins, Carly Lightowlers and Lee Tisdall.

Contact:

Michela Morleo

Centre for Public Health

Faculty of Health and Applied Social Sciences

Castle House

North Street

L3 2AY

m.j.morleo@ljmu.ac.uk

0151 231 4535

ISBN: 978-1-906591-23-6 (print version)

ISBN: 978-1-906591-24-3 (web version)



