



Alcohol Consumption and Tackling Misuse

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Contents

Editorial	1
Executive Summary	2
Trends in Consumption	3
The Economic Costs and Benefits of Alcohol	5
The Efficacy of Policy Interventions	8
Conclusions	17
Selected Bibliography	18

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Editorial

Although the alcoholic drinks industry provides economic benefits, the misuse of alcohol can create costs in terms of health, crime and workplace absenteeism. Pan EU research, for example, has found that while the industry creates jobs, generates fiscal revenues and contributes €9 billion per annum to the EU's economy through trade, the costs of misusing alcohol were estimated around €125 billion in 2003.

The alcoholic drinks industry is important in Ireland (e.g. excise duty was €1,130 million in 2007) but concerns, most recently in a Health Research Board study, have been raised over the harms associated with misuse of alcohol. These concerns are particularly relevant as Ireland has one of the highest levels of consumption in the EU. In this context, the present Government introduced the *Intoxicating Liquor Act 2008*, which includes some measures aimed at addressing excessive consumption. Plans to publish further legislation in this area during the current parliamentary session have also been signalled.

This *Spotlight* looks at trends in alcohol consumption in Ireland and assesses the value of alcohol from an economic perspective. In addition, the *Spotlight* examines the efficacy of policy interventions for tackling the misuse of alcohol. In particular, it assesses which types of interventions are the most effective for addressing misuse and, in this analysis, provides examples of initiatives which have been employed in other countries.

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Executive Summary

This *Spotlight* reviews the economic costs and benefits of alcohol, and examines the efficacy of different types of policy interventions for addressing misuse.

Costs and benefits

The alcohol industry provides an important contribution to the Irish economy. It contributed €1,130 million in excise duty in 2007 and produced an annual export surplus of between €250.3 - €571.2 million from 2000-2007. In addition, it provides a source of employment for an estimated 24,000 to 100,000 people.

Evidence shows, however, that alcohol related harm also creates an economic cost. From examining the loss of work output and the costs of healthcare, road accidents, crime and social security payments, studies estimated the economic cost of alcohol abuse in Ireland in 2003 to be between €1.7 - €2.65 billion.

These costs of alcohol related harm cannot be overlooked, particularly as alcohol consumption in Ireland is one of the highest in the EU and increased by 8.8% from 1995-2008 or 20.2% if the period 1995-2007 is analysed.

The efficacy of policy interventions

A mix of policy interventions are being employed in Ireland to tackle the misuse of alcohol. These include, among others, taxation, licence restrictions, drink driving regulations and codes for advertising.

From reviewing the international literature, a number of main conclusions can be drawn in relation to the efficacy of different policy interventions for tackling alcohol misuse. The main findings are as follows:

- A mix of policy interventions are being employed in Ireland to tackle the misuse of alcohol. Overall, an effective alcohol strategy should include a mix of policy interventions which are implemented in an integrated way.
- Substantial evidence exists which shows that an increase in alcohol prices reduces consumption and the level of

alcohol-related problems. Although tax on alcohol can increase price, greater rises in income can make alcohol more affordable which leads to greater consumption.

- Some countries such as Canada have introduced a minimum pricing regime in an effort to control the price of alcohol. While evidence suggests this policy can help to reduce overall alcohol consumption, concerns have been raised that it places a burden on consumers and penalises moderate drinkers. For this reason, some commentators suggest introducing measures which target specific problem groups as alternative or supplementary actions.
- Increasing the price of alcohol can lead to cross-border purchasing. It can result in greater levels of consumption and a rise in alcohol related harms. Measures to reducing the price of alcohol and protect the tax base from cross-border purchasing can exacerbate alcohol problems.
- Stricter controls on the availability of alcohol are generally regarded as effective interventions. These controls include introducing a minimum legal purchasing age, and measures to restrict sales times and the number of licensed outlets.
- Most measures against drink driving are also highly effective, but with any alcohol regulation, enforcement is important.
- Interventions focusing on promoting public health, controlling advertising and enhancing education (for example, developing young people's social and refusal skills and positive peer support) and controlling advertising show more mixed results. Measures that utilise the family provide some benefits for children and young people, especially if supported by other community programmes.

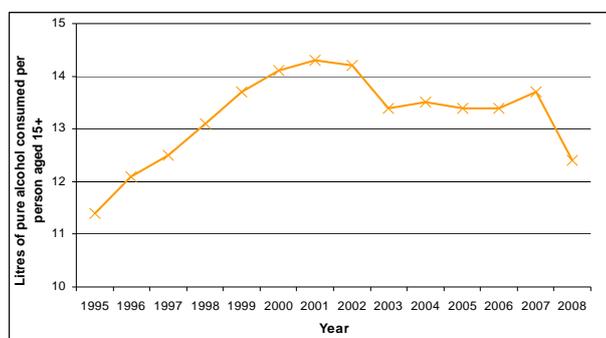
Trends in Consumption

Alcohol consumption in Ireland

According to Mongan *et al* (2009), per capita consumption is a good indicator of alcohol-related harm in a country. They argue that the higher the average consumption of alcohol in a population, the higher the population's incidence of alcohol related problems.

Overall, data shows that from 1995-2008, alcohol consumption in Ireland increased. In 1995, 11.4 litres of pure alcohol were consumed per person (aged 15+) but by 2008, this figure had increased to 12.4, as shown in Figure 1.

Figure 1: Alcohol consumption in Ireland 1995-2008



Source: Department of Justice (2008) Report of the Government Alcohol Advisory Group and Mongan *et al* (2009)

In the same period, however, there was some variation in the levels of alcohol consumption. Although increasing year on year from 1995 to 2002, alcohol consumption declined somewhat from 2003-2006 before rising in 2007 and falling again in 2008.

Figure 1 shows that alcohol consumption increased from 1995 to a peak of 14.2 litres in 2002. From 2003-2006 levels of consumption ranged between 13.4 and 13.5 before increasing to 13.7 in 2007. Alcohol consumption then fell to 12.4 in 2008.¹

While an increase in excise duty has been identified as a key factor in the decline of alcohol

¹ For more analysis of alcohol consumption in Ireland see the following link for a 2009 report from the Minister for Health and Children, produced by SLÁN, http://www.dohc.ie/publications/pdf/slan_alcohol_report.pdf?direct=1

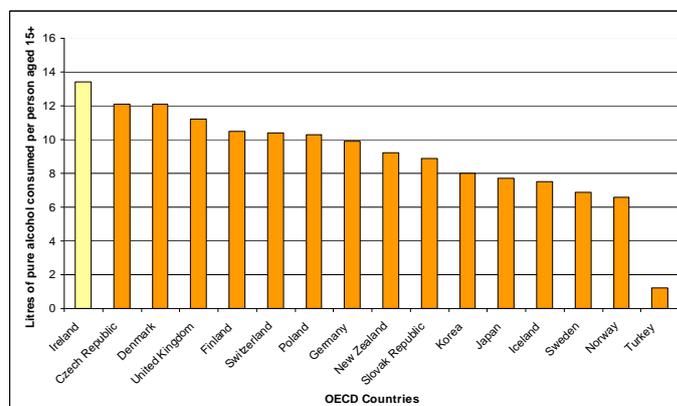
consumption in 2003, Mongan *et al* (2009) argue that the fall in 2008 can be attributed to the fall in the value of Sterling relative to the Euro, which led to an increase in cross-border trading in Northern Ireland. They state that it is also possible that the current recession has led to people having less disposable income to spend on alcohol.

How Ireland compares?

Comparative analysis shows that Ireland has one of the highest level of alcohol consumption among OECD countries. Figure 2 charts the number of litres of pure alcohol consumed per person across a number of OECD countries for which OECD Health Data 2007 was available.

As can be seen from the 2007 data, at 13.7 litres, Ireland has the highest level of alcohol consumption per person aged 15 or over among the 16 OECD countries included. Ireland is followed by the Czech Republic (12.1), Denmark (12.1) and the United Kingdom (11.2).

Figure 2: Alcohol consumption among OECD countries 2007 (where data available)



Source: OECD Health Data (2007)

'Binge drinking'

With the overall rise in alcohol consumption from 1995-2007, concerns have been expressed over levels of 'binge drinking' in Ireland.²

The World Health Organisation (WHO) defines binge drinking as consuming more than 60g of absolute alcohol on one occasion (WHO, 2001).

² See, for example, Department of Justice (2008). Report of the Government Alcohol Advisory Group.

In Ireland, according to the Department of Health and Children, this translates to six measures of spirits, six standard glasses of wine, or three pints of beer (DOHC, 2004).³

As with the overall levels of alcohol consumption, research shows that levels of binge drinking in Ireland are high relative to other countries. This is highlighted, for example, by survey research commissioned by the Health and Consumer Protection Directorate-General of the European Commission. This survey focused on the drinking habits of EU citizens and asked individuals “how often in the past 12 months have you had five or more drinks on one occasion?”⁴. The results of this question are presented in Table 1.

The table shows that compared to 28 other countries, Ireland has the highest number of respondents (37%) who claim to have five or more drinks on one occasion once a week (the European average was 15%).

The number of respondents in Ireland (17%) who claim to have five or more drinks on one occasion several times a week was also relatively high compared to other countries (the European average was 13%). Indeed, by ranking countries in terms of those who had the greatest levels of binge drinking several times a week, Ireland was the fifth highest country.

Table 1: Frequency of binge drinking in EU countries⁵

Q: How often in the past 12 months have you had five or more drinks on one occasion?	Several times a week	Once a week	Once a month	Less than once a month	Never
EU25	13%	15%	16%	24%	31%
Belgium	9%	15%	17%	22%	37%
Czech Rep	7%	18%	17%	26%	31%
Denmark	8%	14%	23%	37%	18%
Germany	15%	19%	20%	23%	23%
Estonia	4%	17%	21%	30%	28%
Greece	6%	9%	15%	23%	46%
Spain	28%	21%	11%	16%	22%
France	6%	9%	16%	30%	39%
Ireland	17%	37%	14%	20%	11%
Italy	21%	13%	7%	12%	46%
Rep. of Cyprus	6%	7%	12%	21%	54%
Latvia	2%	8%	15%	22%	52%
Lithuania	4%	8%	16%	31%	40%
Luxembourg	10%	9%	14%	21%	46%
Hungary	14%	11%	14%	25%	36%
Malta	4%	22%	11%	33%	30%
Netherlands	8%	12%	17%	27%	36%
Austria	24%	20%	17%	18%	20%
Poland	4%	13%	22%	37%	21%
Portugal	14%	6%	6%	18%	55%
Slovenia	7%	14%	17%	23%	39%
Slovakia	10%	16%	19%	26%	28%
Finland	5%	16%	25%	31%	23%
Sweden	1%	11%	20%	33%	34%
United Kingdom	12%	19%	16%	24%	29%
Turkish Cypriot Community	19%	14%	17%	20%	29%
Bulgaria	14%	13%	9%	18%	45%
Romania	14%	18%	15%	23%	29%
Croatia	10%	11%	14%	24%	40%

Source: European Commission (2008) Eurobarometer: Attitudes towards Alcohol.

By contrast, Ireland had the lowest number of respondents (11%) who stated that they never had five or more drinks on one occasion over the last 12 months (the European average was 31%).

On-trade and off-trade

In recent years, changes have occurred in locations where alcohol is purchased, with Ireland experiencing a marked shift towards the off-trade. In 2001, the on-trade in Ireland accounted for 70% of all alcohol sales by

³ The Department of Health and Children has stated that a standard drink in Ireland contains 10 grams of alcohol (DOHC, 2004).

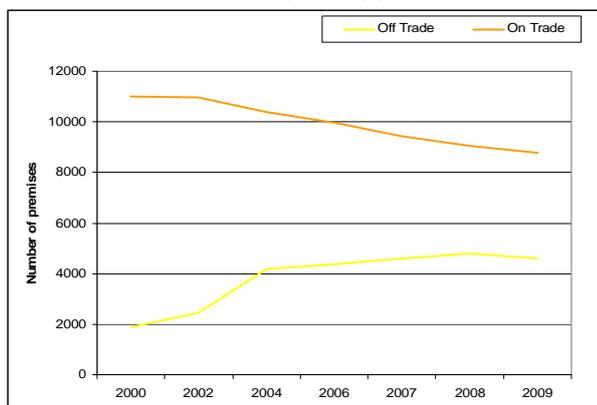
⁴ Drinking five or more drinks on one occasion constitutes binge drinking

⁵ Number of respondents = 18,895

volume. By 2008, however, this figure declined to 48% with off-trade consumption growing from 30% to 52% over the same period (Irish Nightclub Industry Association, 2009).

As a result, similar trends have taken place in the number and type of licensed premises. Figure 3⁶ outlines the number of off-trade and on-trade premises between the years 2000-2007. The figure shows that the number of off-trade premises in Ireland rose from 1,881 to 4,719 between 2000 and 2007, an increase of 150%.

Figure 3: Number of off-trade and on-trade premises in Ireland 2000-2007



Source: Competition Authority (2008) / Nielsen Establishment Survey

Looking at trends in the sale of alcohol in recent years, the Report of the Government Advisory Group (2008) expressed concerns over the shift towards off-licence trade. In particular, the Group outlined reservations in relation to the number of off-licences, their trading hours and the price of alcohol which is for sale in those premises.

The economic costs and benefits of alcohol

Economic costs of alcohol

The Strategic Task Force on Alcohol (STFA) (Byrne, 2004) estimated that the economic costs of alcohol abuse in Ireland was €2.65 billion in the year 2003.

⁶ This figure is included in the Competition Authority's report and is sourced from the Nielsen Establishment Survey

This total figure was the result of an analysis of a range of issues which included the loss of work output and the costs of healthcare, road accidents, crime and social security payments. The detailed costs, identified by Byrne (2004), are outlined in Table 2.

Table 2: Cost of alcohol related problems in Ireland

	2001 Euro million	2003 Euro million
Healthcare costs	279	433
Cost of road accidents	315	322
Cost of alcohol related crime	100	147.5
Loss of output due to alcohol related absences from work	1,034	1,050
Alcohol related transfer payments ⁷	404	523.3
Taxes not received on lost output	234	210
Total	2,366	2,652.8

Source: Byrne (2004)

The table shows that from 2001-2003, the total costs of alcohol misuse in Ireland rose from €2.4m to €2.6m (an increase of 12.1%). In particular, during this period, the costs associated with health and crime experienced relatively large increases of 55.2% and 47.5%, respectively. One element, however, did decline from 2001-2003. Taxes not received on lost output fell from €234m to €210m, a decline of 10.3%.

In critiquing the work of Byrne (2004), Foley (2006) argues that the STFA's report overestimates the costs. In assessing the impact of alcohol on road accidents and crime, Foley draws more of a distinction between 'associated with' and 'caused by'.

In contrast to Byrne, Foley also examines the possibility that reduced abusive alcohol consumption may be replaced by other abuses. From this analysis, published by the Drinks Industry Group of Ireland (DIGI) (2008), Foley states that the costs of alcohol related harm in Ireland are more likely to be €1.7 billion in 2003.

⁷ Transfer payments are paid to those suffering the consequences of alcohol abuse including unemployment benefits, disability pay and pensions (Byrne, 2004).

It is understood that an updated study on the total costs of alcohol misuse in Ireland will be published by the Health Service Executive in early 2010.

In the absence of this report, however, it is useful to supplement the work of Byrne (2004) and Foley (2006) by outlining key findings from other available research on the costs of alcohol. A review of available data, for instance, highlights that:

- **Healthcare:** in 2004, 117, 373 bed days were taken up in hospital due to alcohol related illness and injury.⁸
- **Alcohol related crime:** between 2003-2007, there were 284,641 alcohol related offences (drunkenness, public order and assaults).⁹
- **Loss of work output:** in a 2004 study, IBEC estimated the cost of workput due to alcohol to be €1.5m per year.¹⁰
- **Cost of road accidents:** between 1990 and 2006 there were a total of 7,078 people killed on the roads of which 2,462 were alcohol related. The Road Safety Authority estimates that for every one road fatality, eight serious injuries occur (HSE, 2008). This means that there were approximately 19,696 alcohol related road injuries between 1996 and 2006.

Furthermore, as the costs of each road death has been estimated by Goodbody Economic Consultants at €3 million and serious injuries at €386,000 (O'Brien, 2009), this suggests that the financial cost of alcohol related road accidents from 1990-2006 was €7.3 billion (fatalities) and 7.6 billion (injuries).

Economic benefits of alcohol

There are four main ways in which the alcohol industry makes a contribution to the Irish

⁸ Mongan *et al* (2007) Health-related Consequences of Problem Alcohol Use.

⁹ Mongan *et al* (2009) *Social consequences of harmful use of alcohol in Ireland*, Health Research Board Overview Series.

¹⁰ IBEC (2004) Employee absenteeism: a guide to managing absence. Dublin: Irish Business and Employers Confederation.

economy: balance of payments, revenue by taxes, employment and tourism.

Balance of payments

The DIGI state that the drinks industry runs a substantial balance of payments surplus between imports and exports of beverages. Indeed, from 2000-2007, data shows there has been an annual export surplus over imports of between €250.3 million and €571.2 million, as outlined in Table 3.

Table 3 : Exports and imports of beverages 2000 - 2007

	Exports €M	Imports €M	Balance €M	Ratio: Exports + Imports
2000	854.4	446.7	407.7	1.91
2001	871.0	596.3	274.7	1.46
2002	894.0	643.7	250.3	1.39
2003	1012.7	598.8	413.9	1.69
2004	949.0	637.9	311.1	1.49
2005	1013.6	703.2	310.4	1.44
2006	1297.0	725.8	571.2	1.79
2007 Jan-Nov	1260.4	763.4	497.0	1.65

Source: DIGI (2008)

While also fluctuating over the period being considered, the ratio of exports to imports ranged from a high of 1.91 in 2000 to 1.44 in 2005. For the latest full year 2006, the ratio is 1.79 while the ratio for the first eleven months of 2007 is 1.65 (DIGI, 2008).

Tax revenue

Through production and consumption, the alcohol industry contributes to tax revenues in Ireland via excise duty. Table 4 (overleaf) details the amount of revenue generated by excise duties on alcohol products for the years 1985, 1995, 2005, 2006, and 2007.

The table shows that the excise duty from alcohol increased from €493 million in 1985 to €1,130 million in 2007. At the same time, however, excise duty as a percentage of net tax receipts declined from 7.3% in 1985 to 2.4% in 2007. This is due to a number of factors including, *inter alia*, excise duty rates on alcohol not keeping pace with inflation and increases in

tax revenues in other areas (Alcohol Beverage Federation of Ireland, 2009).¹¹

Table 4: Revenue from excise duty on alcohol 1865-2007

Year	Excise duty from alcohol € million	Net tax receipts € million	Excise duty from alcohol as % of net tax receipts
1985	493.1	6,797.1	7.3%
1995	649.5	13,821.0	4.7%
2005	1,038.3	39,490.0	2.6%
2006	1,077.1	45,536.4	2.4%
2007	1,130.8	47,502.5	2.4%

Source: Revenue Commissioners, various years

Employment

According to the Irish Nightclub Industry Association (2009), employment associated with the drinks industry arises from three main areas:

- Direct employment in the manufacture, distribution and retail segments.
- Indirect employment from the providers of inputs to the sectors not included elsewhere e.g. fittings and refurbishment in premises, musicians, food suppliers and general services.
- The additional employment impact of the expenditure arising from the incomes from the above employment.

DIGI (2008) conducted a review of the literature and found substantial differences across a number of studies in relation to the estimates of employment associated with the alcohol industry in Ireland, as shown in Table 5.

Some of the differences in the employment studies arise because of population coverage, survey responses, time period, definitions used in the collection of the data and sources of data. According to a number of studies, Table 5 shows that employment levels in the industry range from 24,245 (Census 2006) to 100,220 (DIGI, 2003). DIGI claim that the census figure excludes many other bar/public houses occupants such as providing food caterers, office staff, cleaning and security.

¹¹ Given changes to Budget 2010, it is expected that excise duty from alcohol will decline by €90 million in 2010.

Table 5: Numbers employed by retail distribution of beverages

Source	Category worker	Persons
Census 2006	Bar staff	15,727
	Publicans, innkeepers, club managers	8,518
	Total	24,245
Fáilte Ireland 2006 – Employment in licensed premises	Full time	36,175
	Seasonal	36,175
	Part time	15,647
	Total	87,998
Services Inquiry 2005: Bars Persons Engaged	Full time employees	17,235
	Part time employees	16,657
	Other	7,513
	Total	41,405
DIGI Survey 2003 – All licensed Premises	Full time	47,885
	Part time	42,606
	Casual	9,729
	Total	100,220

Source: DIGI (2008)

Tourism

Alcohol also forms an important part of the tourism industry in Ireland. Popular tourist attractions, for example, include the Guinness Storehouse (top fee paying attraction for 2008) which had 1,038,910 visitors, the Old Jameson Distillery (ranked 14th fee paying attraction for 2008) which received 250,000 visitors in 2008.¹²

In addition, tourists visiting Ireland spend over a third of their expenditure on food and drink. According to *Fáilte Ireland* figures for 2008, tourists from Britain spend the most (40%) on food and drink, with tourists from other regions spending between 33%-35% as follows: Mainland Europe (34%), North America (33%) and the rest of the world (35%).

¹² <http://www.failteireland.ie/getdoc/339a40e8-db2f-4260-b756-b381c1e0b3c0/top20feecharging-attractions2008>

The Efficacy of Policy Interventions

Given consumption trends and the estimated costs, this section examines the efficacy of different types of interventions which have been employed in other countries to curb the misuse of alcohol.

This relates to interventions that not only focus on 'binge' or problem drinkers but those which seek to reduce the costs of alcohol related harm. Indeed, Mongan *et al* (2009) state that, in reality, it is the much greater number of low to medium-volume drinkers who drink to excess on occasion that accounts for much of the acute alcohol-related problems such as aggression, violence, injuries, and poor work performance.

The misuse of alcohol: Irish policy interventions

A mix of policy interventions are being employed in Ireland to tackle the misuse of alcohol. The main measures are as follows:¹³

- **Tax:** Ireland has the highest excise duties on wine and the second highest on beer and spirits among EU Member States. The Budget 2010, however, reduced excise duty on alcohol.¹⁴
- **Availability:** reduced hours to sell alcohol in supermarkets, new conditions for the sale of alcohol by supermarkets, stricter conditions to obtain a 'late opening' licence and regulations to control alcohol promotions.
- **Drink driving:** alcohol testing of drivers, and legislative plans to reduce Blood Alcohol Content levels from 80mg/mL to 50mg/mL and 20mg/mL for professional and novice drivers.
- **Advertising:** public health campaigns and strengthened advertising and sponsorship codes. Legislative plans to

¹³

http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/ev_20090624_co05_en.pdf

¹⁴ Budget 2010 stated that excise duty on alcohol is to be cut by 12 cent on pint of beer/cider, 14 cent per half glass of spirits and 60c on bottle of wine.

introduce mandatory labelling of alcohol containers warning about alcohol consumption in pregnancy.

- **Education:** introduction of measures such as including the Social, Personal and Health Education (SPHE) in junior cycle education. This programme aims to support the personal development, health and well being of young people and helps them create and maintain supportive relationships.¹⁵

International approaches to the misuse of alcohol

Overview

From reviewing the international literature, a number of main conclusions can be drawn in relation to the efficacy of different policy interventions for tackling alcohol misuse. Overall, the literature suggests that targeted measures such as tax, and regulations in regard to drink-driving and the physical availability of alcohol are highly effective.

By contrast, the effectiveness of voluntary codes of bar practice and various forms of education and persuasion is low (Cnossen, 2007, Babor, *et al* 2003). Advertising bans are not considered to be very effective, although there is some evidence that advertising is influential in positively shaping young people's attitudes and perceptions about alcohol (Fleming, *et al* 2004).

The following table (Table 6, overleaf) provides a summary of the effectiveness of different measures to reduce harmful drinking, as examined by Babor *et al* (2003). The subsequent paragraphs examine the effectiveness of different interventions in more detail.

Tax policy and price

Consumption and price

Substantial evidence exists which shows that an increase in alcohol prices reduces consumption and the level of alcohol-related problems. Babor, *et al* (2003) state that almost all of the econometric studies have found that a rise in the

¹⁵ http://www.curriculumonline.ie/en/Post-Primary_Curriculum/Junior_Cycle_Curriculum/Junior_Certificate_Subjects/Social,_Personal_and_Health_Education/

Table 6: Effectiveness of restraining harmful alcohol use through regulatory measures

Intervention	Effectiveness +++ = highest 0 = not effective ? = unknown
Regulating physical availability	
Minimum legal purchase age	+++
Government monopoly of retail sales	+++
Server legal liability	+++
Restrictions on density of outlets	++
Hours and days of sale restrictions	++
Drink-driving counter measures	
Random breath testing	+++
Lowered blood alcohol content limits	+++
Low blood alcohol content for young drivers	+++
Administrative license suspension	++
Designated drivers	0
Altering the drinking context	
Outlet policy to not serve intoxicated persons	+++
Enforcement of on-premise regulations	++
Training bar staff to manage aggression	+
Voluntary codes of bar practice	0
Promoting alcohol - free activities	0
Regulating alcohol promotion	
Advertising bans	+
Advertising content controls	?
Education and persuasion	
Alcohol education in schools	0
College students education	0
Public services messages	0
Warning labels	0

Source: Babor *et al* (2003)

price of alcoholic beverages leads to a fall in alcohol consumption, and a decrease in prices generally leads to a rise in alcohol consumption. This has been shown both with regard to total alcohol consumption and the consumption of different types of alcoholic drinks (Babor, *et al.* 2003, Österberg, 1995, Chaloupka, Grossman and Saffer 2002, Farrell *et al*, 2002).

The European Public Health Alliance contend that if a common EU tax was used to raise the price of alcohol by 10%, over 9,000 deaths would be prevented the following year and approximately €13bn of extra revenues would be gained (European Public Health Alliance, 2009).

Affordability

While tax can be regarded as a useful mechanism for reducing consumption, as well as raising revenue¹⁶, research shows that the affordability of alcohol is an important consideration. Rabinovich *et al* (2009) argue that despite taxation, the affordability of alcohol increased by 50% or more from 1996-2004 in six countries of the EU, including Ireland.¹⁷

Their study found that across the EU, 84% of the increase in alcohol affordability was driven by rises in income and only 16% was driven by changes in alcohol prices. It shows that while incomes went up across the EU, the relative price of alcoholic beverages has remained relatively stable, or fallen at a lower rate than the income increases in most of the EU countries.

On the basis of this finding, Rabinovich *et al* (2009) argue that there is a negative relationship between alcohol price and consumption¹⁸, and a positive relationship between income and consumption.¹⁹

Minimum pricing

Given these conclusions, some commentators such as Anderson *et al* (2009) suggest that emphasis should be placed on directly controlling the actual price of alcohol (as opposed to indirect control via taxation).

¹⁶ In 2007, for example, the Department of Finance's Tax Strategy Group calculated that a 10c increase on alcohol would yield €144.4 million for the Exchequer – <http://alcoholireland.ie/?p=748>

¹⁷ This is despite Ireland having one of the highest tax rates on alcohol in the EU (Rabinovich *et al*, 2009). The other five countries which experienced 50% increases in affordability include Lithuania, Estonia, Latvia, Finland and Slovakia.

¹⁸ If price rises, consumption falls.

¹⁹ If income rises, consumption rises.

In Canada, for example, a minimum pricing policy was introduced in eight of the ten provinces over the period 1990-1998²¹. From their research, the Centre for Economics and Business Research (CEBR) (2009) found that alcohol consumption in the Canadian provinces which instituted minimum pricing fell relative to those that did not have a minimum pricing regime.

In particular, their analysis shows a clear break during the 1990s when higher consumption in the eight minimum pricing provinces was reversed. By contrast, after 1998, CEBR (2009) show that consumption growth in non-minimum pricing provinces increased significantly above the provinces which introduced minimum pricing.

In 2009, the Scottish Government set out proposals to introduce minimum retail pricing of alcohol products in the policy document 'Changing Scotland's Relationship with Alcohol: A Framework for Action', as set out in Text Box 1.

Analysis of the potential impact of minimum pricing in Scotland, conducted by Purshouse *et al*

²⁰ <http://www.scottish.parliament.uk/s3/bills/34-AlcoholEtc/index.htm>

²¹ The minimum pricing provinces are: Newfoundland & Labrador; Prince Edward Island; Nova Scotia; New Brunswick; Ontario; Manitoba; Saskatchewan; and British Columbia. The non-minimum pricing provinces are: Alberta and Quebec.

al (2009), shows that pricing regulation will impact on levels of consumption. They project that levels of consumption will change in accordance with the minimum price settings, as set out in Table 7.

Text Box 1: Minimum retail pricing - Scotland

In a bid to reduce excessive alcohol consumption and alcohol-related harm, the Scottish Government has proposed establishing a minimum price for a unit of alcohol as set out in the Alcohol Bill 2009.²⁰

It is proposed that minimum prices will be set independently of those bodies connected either directly or indirectly with the manufacture, retail, supply or distribution of alcohol products. Discussions have also been held with the UK Government to control pricing and promotions of alcohol bought remotely and delivered to Scotland from England, Wales or beyond.

These proposals, if implemented, will mean Scotland could become the first country in Europe to fix alcohol prices

As part of the Alcohol Bill, the Scottish Government also aims to control 'irresponsible alcohol promotions' such as offers enticing customers to multi-buy (i.e., 'buy two – get one free'). This proposal relates to both 'on sales' and 'off-sales' premises and is based on ending the promotion and 'loss leading' (i.e. below cost selling) of alcohol drinks in licensed premises.

Source: Scottish Government (2009) Changing Scotland's Relationship with Alcohol: A Framework for Action

Purshouse *et al* (2009) also forecast that as the minimum price threshold increases, positive changes will occur in relation to the levels of health, crime and workplace harm. They argue that an increase in the minimum price will lead to a range of reductions, as set out in Table 8 (overleaf).

At the same time, it is estimated that consumer

spending will increase with the introduction of minimum retail pricing for alcohol. According to Purshouse *et al* (2009), drinkers faced with a price increase of 10% would, on average, reduce their consumption by less than 10%. On this basis, they state that although consumption is projected to reduce by 2.7% under a 40p minimum price policy, overall spending on alcohol will increase by 3.4%.

Table 7: Projected changes in consumption in Scotland in accordance with different minimum prices per unit

Minimum price per unit	Change in consumption
35p	-1.3%
40p	-2.7%
45p	-4.7%
50p	-7.2%
55p	-10.0%
60p	-12.9%
65p	-15.9%
70p	-18.9%

Source: Purshouse *et al* (2009)

Table 8: Project impact on alcohol related harm with a rise in the minimum price of alcohol

Impact	Reductions with changes in price threshold
Alcohol related hospital admissions and deaths	-3,600 admissions per annum for a 40p threshold compared to -8,900 per annum for a 50p threshold
Alcohol related crimes	-1,100 per annum for a 40p threshold compared to -4,200 offences per annum for a 50p threshold
Health related harms	For the 50p minimum price, alcohol-related hospital admissions at full effect are estimated to reduce by 13.5% whilst alcohol-related crimes reduce by 1.5%.
Absenteeism from work	A minimum price of 40p is estimated to reduce days absent from work by approximately 12,000 per annum, whereas for 50p the reduction is estimated at almost 35,000
Unemployment due to alcohol problems	For a 40p threshold, 800 avoided cases of unemployment are estimated per annum. For 50p the figure is 1,700.

Source: Purshouse *et al* (2009)

CEBR (2009), however, have provided a critique of the study undertaken by Purshouse *et al* (2009). From their research, CEBR argue that while minimum pricing will place a significant additional financial burden on consumers (consumers would pay almost an extra £1.8 billion per year more for alcohol while losing £1.2 billion per year in lost satisfaction from drinking)²², the value of reduced health, policing and other social costs are considered small (the value of benefits of improved health and job prospects for individuals are less than £0.8 billion per year and savings to society, including NHS and policing costs and costs to victims of crime, would be £200 million per year).

Although a recent Scottish expert consultation concluded that minimum pricing is possible

²² This relates to utility or the enjoyment that people derive from drinking alcohol products.

under EU competition law (SHAAP 2007)²³, Rabinovich *et al* (2009) state that minimum pricing practices have tended to be seen as trade-distorting by the European institutions²⁴ (Baumberg and Anderson, 2008).

To avoid potential conflict regarding competition law, Rabinovich *et al* (2009) state that a small number of European countries (both EU and other European states) have introduced regulations that act as 'proxies' for minimum price regulations. Two examples of these regulations are outlined in Text Box 2.

Text Box 2: Different minimum pricing mechanisms - Germany and Switzerland

In Germany, the so-called Apple Juice law states that in the on-premise trade, at least one alcohol-free beverage must be cheaper than the cheapest alcoholic beverage available.

In Switzerland, in some cantons (provinces) all restaurants are obliged by law to offer at least three non-alcoholic drinks cheaper than the cheapest alcoholic beverage for the same quantity.

Source: Rabinovich *et al* (2009)

Price sensitivity

Research has found that different groups of people have different levels of sensitivity to price changes in alcohol products. While price increases via excise duties on alcohol beverages can have a particular effect in reducing youth drinking, the effect of increased prices on the heaviest drinkers is unclear²⁵ (Cnossen, 2007).

In addition, concerns have been expressed that taxation is a blunt instrument, as higher taxes

²³ Also see the following reference for an analysis on whether price regulation is compliant with EU competition law, House of Commons (2009) A Minimum Price for Alcohol? 20th March 2009. <http://www.parliament.uk/commons/lib/research/briefings/spha-05021.pdf>

²⁴ As setting an artificial price floor amounts to resale price maintenance, limiting and distorting price competition.

²⁵ CEBR (2009) state that heavier drinkers are less responsive to price changes. They argue that maintain that legislation is unlikely to have a significant impact on overall consumption levels of those heavy drinkers that it is intended to target, unless price increases are set at very high levels, which would place an unfair burden on moderate drinkers.

will penalise people who enjoy alcohol responsibly. For this reason, Cnossen (2007) argues that there is a need to balance the reduction in harmful consumption through excise taxation against the loss in revenue and benefits of moderate or low risk consumption. This means that calculating the optimal tax rate involves trade-offs.

In this regard, Cnossen (2007) states that excise duty should be complemented by regulatory measures targeted at specific problem groups such as young drinkers and those dependent on alcohol. Text Box 3 provides an example of tax increases, introduced in some countries, to target groups such as young adults.

Text Box 3: Tax on 'alcopops' - Denmark, France, Germany and Luxembourg

Denmark, France, Germany and Luxembourg have introduced an additional excise on 'alcopops' which has reduced the consumption of these types of alcoholic drinks among the young. 'Alcopop' taxes are also being considered in the Netherlands and Sweden.

Source: Cnossen (2007)

Cross-border trade

Concerns have also been expressed that increasing tax on alcohol can lead to smuggling or increased border trade. The border trade in alcoholic beverages is especially serious as the regulations restricting travellers' alcohol import quotas have loosened in the more integrated European economy of recent years (Österberg and Karlsson, 2002).

For this reason, Cnossen (2007) argues there is a case for narrowing differences in alcohol taxes between EU Member States by increasing an agreed EU-wide floor for alcohol taxes. Text Box 4 (overleaf) outlines the implications of cross-border trade in alcohol in three case studies.

Advertising

In a review of research that considered the cumulative effect of exposure to advertising by children and young people in shaping attitudes towards alcohol, Babor *et al* (2003) found a small but positive relationship.

From a meta-analysis of 132 studies, Booth *et al* (2008) also found evidence of a small but

consistent effect of advertising on consumption of alcohol, particularly among young people. Indeed, they found that consistent evidence exists to suggest that exposure to advertising may increase the likelihood of young people starting to drink, the amount they drink and the amount they drink on any one occasion.²⁶ This finding was supported by primary research, conducted by Snyder *et al* (2006), who concluded that alcohol advertising contributes to greater drinking among youths.

However, in a comparative analysis of different strategies to prevent and reduce alcohol related problems, Babor *et al*. (2003) and Anderson *et al* (2009) found that the impact of public service messages on drinking was low. They argue that while the provision of information and education is important for raising awareness and imparting knowledge, health promotion campaigns are ineffective against more widespread alcohol advertising in the mass media.

At the same time, other research has shown that interventions centred on implementing advertising controls have produced variable results. Controlling the advertisement of alcohol is a complex issue as different branded events and ways of marketing alcohol have proved difficult to monitor (Ludbrook, 2004).

Booth *et al* (2008) argue that while there may be some evidence that advertising bans have a positive effect in reducing consumption²⁷, contextual factors are a likely explanation for any differences. They also maintain that it is methodologically challenging to control for all possible confounding factors that may influence any changes in the consumption of alcohol.

Similarly, Grube and Waiters (2005), cited by Ludbrook (2004), found that attempts to restrict marketing, which rely primarily on voluntary codes, are an inadequate measure for reducing the misuse of alcohol. This is particularly true given the pervasiveness of alcohol in advertising and the media. To illustrate this point, Grube

²⁶ Booth *et al* (2008) state there is also consistent evidence from longitudinal studies that exposure to TV and other broadcast media is associated with inception of and levels of drinking.

²⁷ From their review of the literature, Booth *et al* (2008) cite a study undertaken by Saffer and Dave (2003) who estimate that the complete elimination of alcohol advertising could reduce adolescent monthly alcohol participation by about 24% and binge participation by about 42%.

Text Box 4: Cross-border alcohol consumption: key findings from three case studies - Finland – Estonia, UK – France, and Sweden - Denmark and Germany

Alcohol purchased abroad can be a large fraction of total alcohol consumption

In Sweden, the volume of cross-border purchasing of alcohol more than doubled from 1996-2004. In 2007, cross-border purchases of alcoholic beverages totalled almost one-fifth (19%) of all alcohol consumption.

Cross-border purchases affect the tax revenues that can be collected by national tax authorities

In the UK, it was estimated that in 2007, cross-border shopping for spirits resulted in over £150 million in lost revenue. As this figure does not include beer and wine sales or other income lost due to smuggling or tax fraud, Rabinovich *et al* (2009) state that the total revenue loss is likely to be much higher.

Cross-border purchasing leads to an increase in consumption

In Sweden, total alcohol consumption rose from 8 litres of pure alcohol in 1996 to 10.5 in 2004. Since 2004, however, there has been a slight decline in both the levels of cross-border purchasing of alcohol and overall alcohol consumption. This also happened to a lesser extent in Finland. In Finland, research suggests this drop in consumption occurred once consumers adjusted to the availability of cheap alcohol in neighbouring countries.

A rise in alcohol related harm

With the increase in cross-border purchasing and alcohol consumption in Finland, government and independent studies indicate there were significant increases in alcohol-related harms. Similarly, the Swedish Government expressed concerns over noted rises in alcohol related harm. One study found that the closer a hospital was located to the Danish border, the number of alcohol related problems increased.

Curbing alcohol consumption

Finland, the UK and Sweden have all faced difficulties in curbing alcohol consumption. The case study research shows that lower taxation in neighbouring countries, attracts cross-border shoppers and effectively reduces the average price of alcohol in a country. The research also highlights that this effect is reinforced when countries reduce their excise duty rates to protect their own tax base.

Indeed, this was the case in Finland which in anticipation of the abolition of traveller tax-free import quotas and the accession of Estonia into the EU, reduced taxation by an average of 33% for all alcoholic beverages in 2004. This action contributed towards a rise in consumption and the costs of alcohol related harm. In response, alcohol taxes were raised in Finland in 2008. Anderson *et al* (2009) argue that the experience of Finland shows that cross-border issues are not solved by decreasing taxes.

Sources: Rabinovich *et al* (2009) and Anderson *et al* (2009)

and Waiters found that 17% of lyrics of pop music referred to drinking which naturally makes it difficult to enforce a complete ban.

Drink driving interventions

Most measures against drink-driving, such as random breath testing, lowered blood alcohol concentration limits, suspension of driver's licenses, and graduated licensing for novice drivers receive high effectiveness ratings (Babor *et al* 2003). In particular, Anderson *et al* (2009) stress that measures which support intensive

random breath testing and establish legal levels of concentration in the blood, are effective in reducing alcohol related injuries and deaths. They also suggest that some evidence exists of the effectiveness of setting low concentrations of alcohol in the blood for young or novice drivers, and of using an ignition interlock (a mechanical device that does not allow a car to be driven by a driver who is over the limit) for repeat drink drivers.

Licensing

Stricter controls on the availability of alcohol are generally regarded as effective interventions. These controls include a minimum legal purchasing age, restrictions on sales times, a government monopoly of retail sales, and regulations of the number of distribution outlets. Results from multiple studies show that elimination of state alcohol monopolies and the introduction of licensed private sales outlets substantially increase sales and consumption of alcoholic beverages (Toomey and Wagenaar, 1999).

Studies of licensing arrangements also indicate that increased outlet densities are associated with a rise in alcohol sales (Toomey and Wagenaar, 1999). From their research on a number of cities in Europe, Roberts *et al* (2006) found that loosening the regulations surrounding the consumption of alcohol leads to a proliferation of premises, increases in drunkenness and disorderly behaviour, and heavier demands on waste management.

Roberts *et al* (2005), for example, cite research which shows that the trend of issuing large numbers of late licences to bars and clubs in Nottingham (where there were more than 3000 applications in the year 2000 for new drinking licences, 38 per cent more than in 1995) resulted in a leap of violent crime by 106 per cent in 2 years. Text Box 5 provides examples of regulations introduced in some cities to control the density and size of licensed premises.

Text Box 5: Restrictions on density and size of alcohol outlets - Copenhagen and Berlin

With a view to addressing issues surrounding the density of outlets for alcohol sale, authorities in Copenhagen and Berlin have set upper limits on the ground-floor areas that could be used for entertainment. Nightclubs are also not allowed in areas with a significant number of residents and in addition, restrictions are placed on the size of establishments in certain areas. In the Spandauer Vorstadt area of Berlin, for example, the capacity of new establishments is limited by specific regulations to a maximum of 50 seats, inside and out. This measure prevents the development of 'superpubs'.

Source: Roberts *et al* (2006)

As well as introducing minimum legal purchasing ages for alcohol²⁸, some countries have targeted beverages which have very low alcohol content but which are available for children and young people under the age of 18. This policy has been introduced in Canada, as shown in Text Box 6.

Text Box 6: Restrictions on low content alcohol - Canada

In New Brunswick, Canada, the authorities enacted a policy to prohibit sales of near-beer (alcohol content 0.5%) to individuals age 18 and younger, believing that such sales encourage youth to move to regular beer.

Source: Toomey and Wagenaar (1999)

Another way in which governments have sought to reduce the misuse of alcohol is by introducing a levy on licence holders to contribute towards the costs of alcohol related harm. The Scottish Government, for example, has proposed introducing a social responsibility fee. This fee, yet to be defined, is to be applied to some alcohol retailers to help off-set the costs of dealing with the adverse consequences of alcohol.

It is envisaged the money raised from the levy could help meet the costs of health provision, extra late-night policing and other costs resulting from drink-fuelled anti-social behaviour. In Scotland, the costs associated with alcohol related harm are currently estimated at £2.25 billion a year.²⁹

The Scottish Government proposes that local authorities should determine how this money is spent according to local needs and priorities (e.g. identifying initiatives or projects which would assist in meeting the licensing objectives). During the consultation over the social responsibility fee, those working in the health and local government sectors strongly supported the proposal.

It has been reported that opposition has mostly come from trade and business sector

²⁸ The Scottish Government, for example, has proposed raising the minimum purchasing age in off-sales to 21.

²⁹ Plan to Make Booze Retailers Help Pay Cost of Drink Misuse, *The Scotsman*, 17th June 2008
<http://news.scotsman.com/scotland/Plan-to-make-booze-retailers.4191412.jp>

organisations with many stating that it would be 'just another tax'. It was also stated that the fee would tax the supplier of alcohol rather than those who were misusing it and that it would penalise all traders to compensate for the small number who allow alcohol misuse to take place.³⁰

In England and Wales, a variation of the social responsibility fee has been introduced in the form of designed Alcohol Disorder Zones (ADZs), as detailed in Text Box 7.

Text Box 7: Alcohol Disorder Zones (ADZs) - England and Wales

In England and Wales, Section 16 of the *Violent Crime Reduction Act 2006* permits local authorities (with the consent of the police) to designate areas as Alcohol Disorder Zones where there are problems with alcohol-related nuisance, and crime and disorder. In order to pay for additional policing and other enforcement activities, charges can be imposed on premises and clubs within the ADZ that sell or supply alcohol. Home Office guidance states that even the potential for a zone being declared may be a useful tool to cause licence holders to review their practices and improve the area before a statutory action plan or order is imposed. As of July 2009, no local authority in England or Wales has yet applied to establish an ADZ.³¹

Source: Home Office (2008) and Daily Telegraph (22 July 2009)

Enforcement

Server liability and enforcement of on-premises regulations are two interventions which have some impact without being too costly (Toomey and Wagenaar, 1999). These measures, however, are not relevant for off-premises drinking.

Babor *et al* (2003) comment that server training in responsible beverage service is unlikely to

³⁰ Scottish Government (2009) Changing Scotland's Relationship with Alcohol: A Framework for Action, Annex A.

<http://www.scotland.gov.uk/Publications/2009/03/04144703/14>

³¹ No takers for Alcohol Disorder Zones, *Daily Telegraph*, 22nd July 2009

<http://www.telegraph.co.uk/news/newstoppers/politics/58806/21/No-takers-for-Alcohol-Disorder-Zones.html>

have an effect if it is not backed by the threat of suspending the licenses of those who continue to serve underage drinkers or intoxicated patrons.

Increasing the legal age limit for purchasing or selling alcoholic beverages is the most immediate and effective measure for combating youth drinkers. Indeed, research shows that the minimum legal drinking age of 21 in the USA has prevented thousands of deaths, including those resulting from traffic crashes, suicides, pedestrian deaths and other unintentional injuries (Toomey and Wagenaar, 1999). The legal age for selling is also considered important as young alcohol servers and sellers are more likely than older outlet staff to sell alcohol to underage persons (Toomey and Wagenaar, 1999). Text Box 8 provides examples of enforcement measures introduced in Copenhagen, Denmark.

Text Box 8: Enforcement measures - Copenhagen

In Copenhagen, the police have adopted a number of measures for enforcement. Their practice is to go out in small teams with Environmental Protection Officers from the City Council and to inspect 20-30 premises on a weekend evening. They warn licensees who are serving customers who are drunk. Any other infringements of the licensing arrangements are dealt with through warnings, fines and the threat of closure. In some cases, action is taken to enforce closure. The duration of a licence in Copenhagen is typically short and for new licensees the threat of a police veto on their licence renewal is a strong deterrent.

Source: Roberts *et al* (2006)

Education prevention programmes

Various educational approaches have been developed to reduce alcohol consumption. These include, for example, interventions that aim to enhance young people's social and refusal skills³², develop positive peer support and target an individual's personality. Overall, the evidence on the effectiveness of education prevention programmes shows mixed results, particularly in the longer term.

³² Refusal skills are a set of skills designed to help children avoid participating in high-risk behaviours.

Velleman (2009), for instance, cites one longitudinal study conducted by Stead *et al* 2006 which was centred on enhancing young people's abilities to refuse offers of substances and improving skills needed to deal with social influences. This study found a significant impact on frequent alcohol use in the intervention group, compared to the control group at 2.5 years, but this effect dissipated at four years.³³

These findings have also been supported by Jones *et al* 2007, cited by Velleman (2009), who found mixed evidence with regard to the success of life skills approaches. It was concluded that these interventions were associated with immediate and medium term (although not with long-term) reductions in substance abuse.

Parents and family based prevention programmes

Velleman (2009) argues that interventions utilising the family are effective in tackling the misuse of alcohol among children and young people. Citing work conducted by Kumpfer *et al* (2003), Velleman outlines evidence of the effectiveness of a number of types of family-based prevention programmes including in-home family support, behavioural parent training, family skills training, family education and family therapy.

This research concludes that family-based prevention approaches have positive impacts between two and nine times greater than approaches that are solely child focused (e.g. schools-based, peer-based or individual based). It was also found that effective family strengthening prevention programmes should be included in all comprehensive substance abuse prevention activities.

In addition, Velleman states that a major review of psychosocial and education-based alcohol misuse prevention programmes found that family based programmes were the only types of intervention of this nature to show long-term results. Text Box 9 provides an example of one family-based programme in England and its outcomes.

³³ In experimental research design, the intervention group are those who participate in the programme and the control group are those who do not. Outside or external factors are factored in to ensure comparative analysis.

Text Box 9: Family-based programmes - England

The Strengthening Families Programme aims to reduce alcohol and substance misuse and other behavioural problems during adolescence. The programme is centred on improving skills in parental child management and enhancing interpersonal competencies amongst young people.

The key findings from an SFP evaluation conducted by Spoth *et al.* (2004), cited by Velleman (2009), found that compared to the control group, young people attending the programme had significantly:

- Lower rates of alcohol and marijuana use.
- Fewer problems in school regarding conduct.

The study also highlighted that parents demonstrated:

- Gains in specific parenting skills, including setting appropriate limits and building a positive relationship with their child.
- Increased skills in general child management such as effectively monitoring youth and having appropriate and consistent discipline.

Source: Velleman (2009)

An integrated and multi-faceted approach

Rabinovich *et al* (2009) argue that an effective alcohol strategy should include a mix of evidence based policy interventions. They suggest the mix would include regulations that focus on price and / or affordability, alcohol outlet density, minimum legal drinking ages and drink-driving counter-measures.

In researching the most effective ways of combating the misuse of alcohol among children and young people, the idea of an integrated and multi-faceted approach is also supported by Velleman (2009). While particularly highlighting the value of family-based intervention, Velleman stresses the importance of an integrated community prevention system which draws together effective parenting programmes, community mobilisation, enforcement of laws relating to underage purchasing, and altering

community and cultural norms so that drunken behaviour is not tolerated.

Moreover, some research suggests that when assessing interventions for alcohol misuse, attention should not be solely placed on alcohol policy measures. The Ministry of Social Affairs and Health in Finland, for example, argues that general economic and social development also affect the amount of alcohol consumed and the degree of seriousness with which alcohol problems are viewed (Ministry of Social Affairs and Health, 2006).

Conclusions

Although alcohol is an important industry in Ireland and contributes economic benefits, this *Spotlight* has shown that the costs of alcohol related harm are substantial.

In examining the efficacy of different policy interventions for addressing misuse, this *Spotlight* has identified evidence that some measures are more responsive than others. Overall, it is suggested that interventions which increase the price of alcohol and those which reduce affordability and availability are the most effective in reducing consumption. Regulations in regard to drink-driving are also valuable.

By contrast, interventions focusing on promoting public health, enhancing education and controlling advertising show more mixed results. Measures that utilise the family provide some benefits for children and young people, especially if supported by other community programmes.

The *Spotlight* concludes that to tackle the misuse of alcohol, the evidence suggests a mix of interventions is required, each acting within an integrated approach.

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