

## **Tax and price**

### **Background**

This is a snapshot of alcohol policies in twenty five member states<sup>1</sup> of the European Union as at 31 December 2007. The data were collected as a joint initiative between the World Health Organization and the European Union as part of the World Health Organization's global alcohol database. Further information was taken from and is available in two publications of the World Health Organization: Evidence for effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm [<http://www.euro.who.int/document/E92823.pdf>], and handbook for action to reduce alcohol-related harm [<http://www.euro.who.int/Document/E92820.pdf>].

The Alcohol Policy Series includes the following ten fact sheets documenting the state of the European Union's member state alcohol policy:

1. Infrastructures for alcohol policy
2. Price and tax measures
3. Awareness raising activities
4. Counselling and treatment
5. Availability regulations
6. Drink driving legislation
7. Health warning labels
8. Alcohol advertising
9. Alcohol sponsorship
10. Monitoring and evaluation.

The present fact sheet deals with price and tax and considers three issues:

1. The evidence for managing price and tax
2. The current situation
3. Considerations and next steps

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<sup>1</sup> Austria; Belgium; Bulgaria; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Hungary; Ireland; Italy; Latvia; Lithuania; Malta; Netherlands; Poland; Portugal; Romania; Slovakia; Slovenia; Spain; Sweden; and United Kingdom

## **1. THE EVIDENCE BASE**

Of all alcohol policy measures, the evidence is perhaps strongest for the impact of alcohol prices on alcohol consumption and alcohol-related harm. Yet a study of the period 1996–2004 found that the affordability of alcohol – a composite measure of the relative price of alcohol and of income – increased in 19 of 20 EU member states, the only exception being Italy (Rabinovich et al., 2009). Compared to other goods, alcohol has become relatively cheaper and, at least until the economic downturn that began in 2007, EU residents have had more income to spend on it. One contributing factor has been the introduction of a single market for alcohol in the EU, leading to significant tax competition among countries and thus lower alcohol taxes than would otherwise be in place. As a result, EU member states are underutilizing alcohol taxes, which have great potential as tools to improve public health, earn revenue and balance the external costs of alcohol use, including social costs and damage to non-drinkers.

The political unpopularity of increasing taxes can be compounded by several other factors.

- Increased taxes do not necessarily mean increased prices. Alcohol producers and retailers, in particular large supermarket chains, sometimes offset tax increases by reducing prices. One way to control this outcome is to introduce a legal minimum price per gram of alcohol.
- It is sometimes said that light drinkers are punished by tax increases. However, raising taxes or introducing a minimum price hardly affects the alcohol consumption and out-of-pocket expenses of light drinkers. In any case, no level of consumption is entirely risk-free, so there is a health benefit if light drinkers do consume less. Reductions in the damage that drinkers inflict on others will also benefit light drinkers.
- It has also been argued that tax increases cause job losses. In fact, the long-term effects of higher alcohol taxes on employment are likely to be neutral, with less unemployment if anything, although there may be some short-term adjustments in the hospitality sector. Moreover, job losses in alcoholic beverage production have been largely due to manufacturers shifting from labour-intensive to capital-intensive production.
- Despite evidence to the contrary, two thirds of EU citizens believe that higher alcohol prices will not discourage young people and heavy drinkers from consuming alcohol. This finding suggests that focusing on alcohol affordability in public education campaigns would obtain stronger public support for higher alcohol taxes.

One of the main determinants of alcohol consumption and alcohol-related harm is alcohol affordability, a composite measure of the price of alcohol relative to the price of other goods, adjusted for income. The more affordable alcohol is – the lower its price, or the more disposable income people have – the more it is consumed and the greater the level of related harm. To protect public health, alcohol taxes may need to be adjusted to ensure that alcohol does not become more affordable. If the government wants to reduce the burden of alcohol-related harm, it should raise taxes to make alcohol less affordable. National data can be used to estimate how much taxes should be raised on the various beverage categories in order to achieve the desired change. These projections can be supplemented by standard economic modelling studies to estimate the potential impact of such changes on alcohol's health and economic burden and on crime and productivity.

Strong arguments can be made that all alcoholic beverages, including wine, should be taxed in proportion to their alcohol content (although EU member states may need to ensure that they still satisfy EU directives on alcohol excise duties). Such taxes recognize that alcohol-related harm increases with the amount of alcohol consumed. It is sometimes objected that alcohol taxes are

regressive, affecting the poor more than the rich. Although this may be true, it is important to note that the poor also shoulder a higher burden of alcohol-related harm than those who are better off, and that alcohol taxes thus help reduce health inequities.

As noted above, tax increases do not necessarily result in higher prices, since producers, distributors and retailers may choose to adjust prices to compensate for higher taxes, sometimes even selling alcoholic beverages below cost. This tactic can be foiled by setting a minimum price per gram of alcohol. Again, modelling studies can help estimate the impact of different minimum prices on the health and economic burden of alcohol consumption and on alcohol-related crime and productivity, as has been done for example in the United Kingdom.

The existence of a substantial illicit or informal market for alcohol can also complicate the policy considerations for alcohol taxes. In such circumstances, tax increases should be accompanied by government efforts to control these markets, for example through tax policies that make lower-alcohol forms of culturally preferred beverages more attractive. Tax stamps can also be introduced to show that duty has been paid on informal products.

Cross-border trade can also complicate policy considerations for alcohol taxes. However, it is important to note that decreasing taxes does not necessarily resolve cross-border issues. For example, Finland, which joined the EU in 1995, was given until 2003 to lift its restrictions on alcohol imports. After that date, alcohol imports were expected to increase heavily, not only because the borders were opening, but also because neighbouring Estonia, with its lower alcohol prices, was scheduled to join the EU in 2004. The Finnish government therefore decided to lower the alcohol taxes by an average of 33% in March 2004. Total consumption of alcohol per capita increased by 10%, from 9.4 litres in 2003 to 10.3 litres in 2004. Recorded consumption increased by 6.5%, from 7.7 litres to 8.2 litres per capita, while unrecorded – and thus untaxed – consumption increased an estimated 25%, from 1.7 litres to 2.1 litres per capita. While the health impact of Estonia's accession was not significant for Finland, the health impact of the Finnish alcohol tax cuts were, resulting in a 17% increase in alcohol-positive deaths per week, with the largest number of deaths occurring among the underprivileged. Tax revenues also dropped by 17%. In 2008, Finland again raised its alcohol taxes.

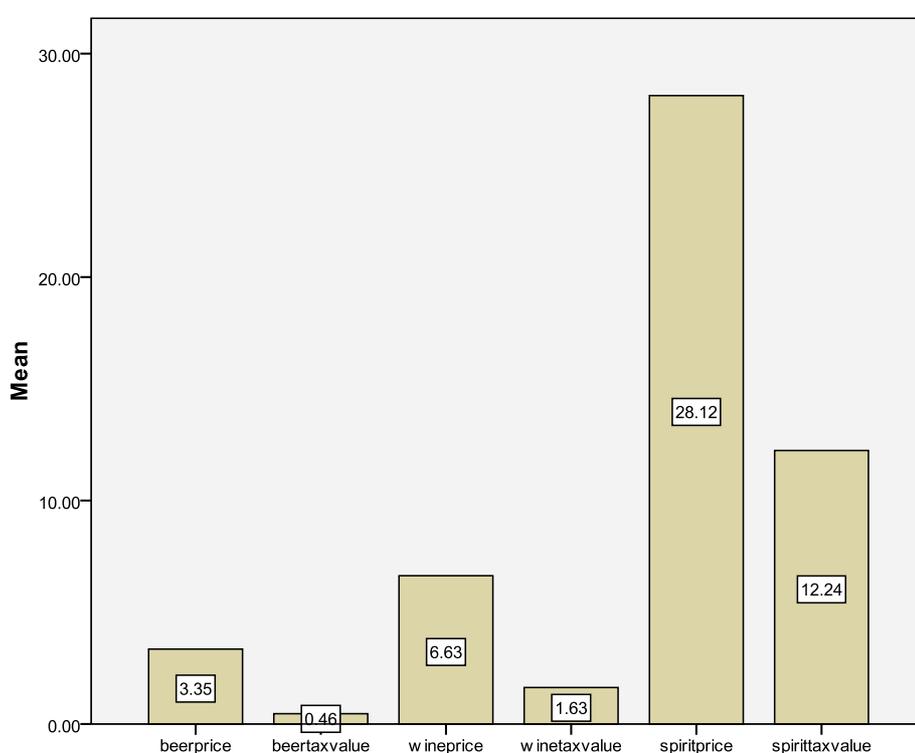
## **2. THE CURRENT SITUATION**

Twenty three countries stated that they had an excise tax on beer, 16 (two-thirds) on wine and 23 on spirits. Twenty four countries had a value added tax on alcoholic products. Fifteen countries stated that they had duty-paid excise tax stamps.

The numbers of countries (out of 25) that were able to provide data on price, tax value and both price and tax value for the three beverage categories are listed in Table 1. Based on the available data, the mean (SE mean) price per L premium brand beer, tax per L premium brand beer and thus tax as a proportion of the retail price for premium brand beer was €2.74 (0.51), €0.36 (0.10) and 15% (3.7%). The respective figures for wine were €5.16 (0.92), €1.15 (0.39) and 14% (3.7), and for leading international brand of spirits were €24.4 (3.2), €10.5 (2.4) and 41% (4%). Figure 1 displays the mean price of one litre of consumed beer, wine and spirits, and mean value of tax of beer, wine and spirits for those countries that provided data for both price and tax value.

**Table 1** The numbers of countries (out of 25) that were able to provide data on price, tax value and both price and tax value for the three beverage categories

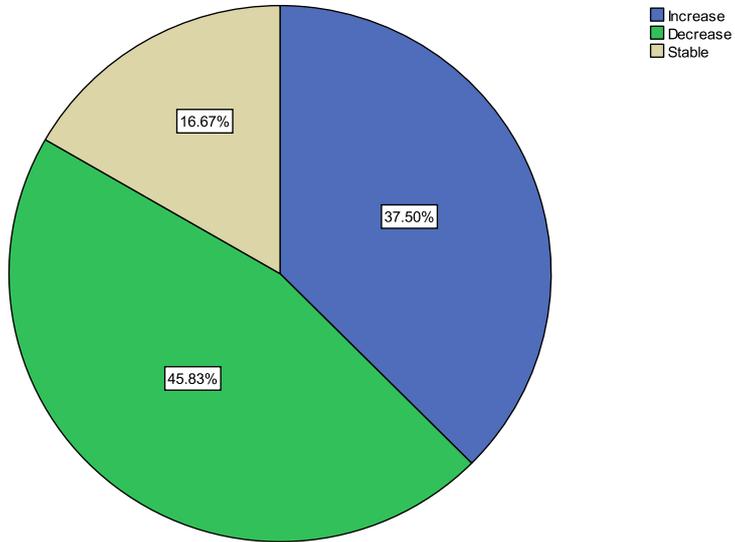
Beer			Wine			Spirits		
Price	Tax	Price and tax	Price	Tax	Price and tax	Price	Tax	Price and tax
21	16	14	21	19	17	20	16	13



**Figure 1** Mean price of one litre of consumed beer, wine and spirits, and mean value of tax of beer, wine and spirits for those countries that provided data for both price and tax value (see numbers in Table 1).

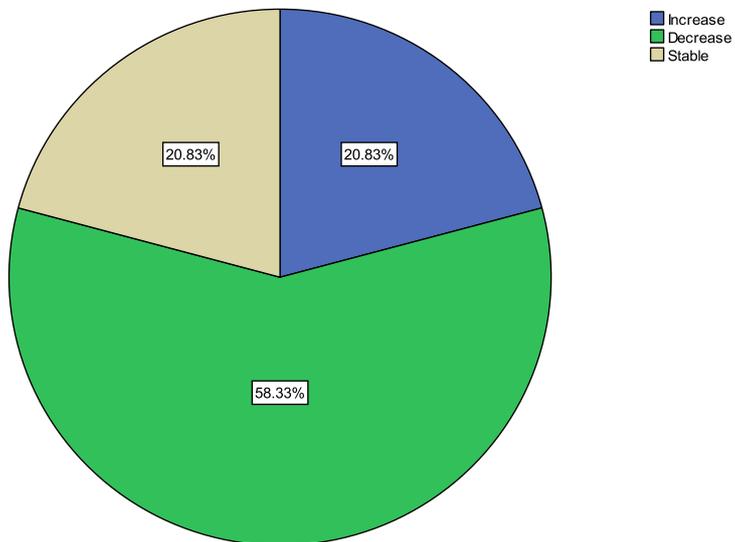
Out of 24 countries that provided data, relative to the consumer price index, beer prices had increased over the past five years in 9 countries (38%), had decreased in 11 countries (46%) and remained stable in 4 countries (17%), Figure 2. Respective figures for wine were 5 (21%), 14 (58%) and 5 (21%), and for spirits were 6 (25%), 12 (50%) and 6 (25%), Figures 3-4.

**Beer CPI trend past 5 years**

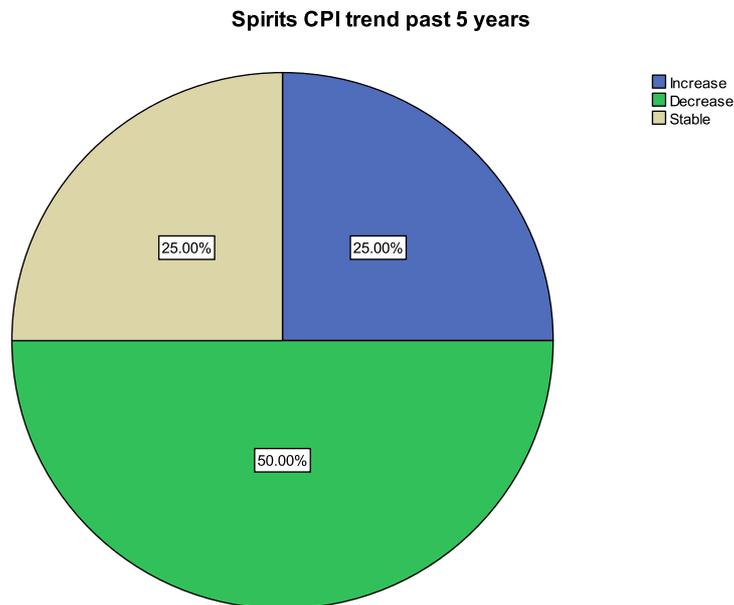


**Figure 2** Trends in price of beer compared with consumer price index (CPI) over past five years.

**Wine CPI trend past 5 years**



**Figure 3** Trends in price of wine compared with consumer price index (CPI) over past five years.



**Figure 4** Trends in price of spirits compared with consumer price index (CPI) over past five years.

### 3. CONSIDERATIONS AND NEXT STEPS

Not all countries had an excise tax on beers, wines and spirits. In fact, only two-thirds of countries had an excise tax on wines. In the vast majority of countries, the price of alcohol had decreased or remained stable compared with the consumer price index over the past five years. On average, only some 14-15% of the final price of beers and wines was due to tax and 41% of the price of spirits. In other words, most member states are underutilizing tax as an alcohol policy instrument.

#### Questions to consider

1. **How has the affordability of alcohol changed over time?** It can usually be calculated from routine statistics on average income and the price of alcohol and other goods, according to this formula:

$$\text{affordability} = \text{real disposable income} / \text{relative alcohol price} * 100.$$

See the RAND report (Rabinovich et al., 2009) for more information on calculating affordability.

1. **Are public health considerations taken into account in setting tax policies?** Usually taxes are instituted to earn revenue, rather than to improve public health.
2. **How feasible is it to tax all alcohol products, for example per gram of alcohol?** In many countries, the excise tax on wine is set at zero, even though it is an alcoholic product that can lead to harm. Some countries place a proportionally higher tax on spirits because of their higher alcohol concentration. Some countries also have higher taxes for specific alcoholic beverage types considered particularly attractive to young people, for example alcopops or similar products. Such products can also be taxed progressively according to alcohol content.

3. **What information is available on the price elasticity<sup>2</sup> of beer, wine and spirits?** Such information enables estimates to be calculated of the likely impact of tax changes for specific beverage categories. Normally, elasticities are lower for the most commonly consumed type of alcoholic beverage.
4. **Are there any national estimates for the cost-effectiveness of alcohol policies?** The Choosing Interventions That Are Cost Effective (WHO-CHOICE) project has provided some estimates for the three subregions of the European Region. It has estimated the cost of changing the alcohol tax rate and collecting alcohol taxes on previously untaxed goods, and the likely effect of increasing alcohol taxes on health and mortality. The model found that, of all the policy measures examined, tax increases were the most cost-effective in reducing the health burden of alcohol.
5. **Have there been any modelling studies of the potential impact of alcohol taxes on health and social costs?** To make the case for tax changes, it is useful to have information about their impact on not only health, but also on mortality, hospital admissions, crime and productivity. Sheffield University in the United Kingdom has developed the best model to date of how to estimate the overall impact of alcohol taxes, including the impact on different population groups, including light drinkers and heavy drinkers (Meier et al., 2008).
6. **Do existing regulations permit setting a minimum price for alcohol?** Countries that are actively considering this option believe that there are no legal or trade impediments to doing so.
7. **Have there been any studies that model the impact of a minimum alcohol price on health and social costs?** Existing modelling studies have shown that a minimum price reduces the health burden of alcohol and incurs very little out-of-pocket expenses for light drinkers.
8. **To what extent do cross-border issues, or the illegal or informal production of alcohol, constrain tax changes? How can these impediments be overcome?** In general, the evidence shows that decreasing alcohol taxes in a recipient country (a country whose residents buy alcohol abroad) does not resolve cross-border issues. To manage illegal production, it is better to strengthen enforcement of production laws than to decrease taxes.
9. **Are there any public opinion surveys about alcohol taxation policies?** The Eurobarometer survey conducted in 2006 did not ask whether or not the public would support increased alcohol taxes, but rather whether they thought that such increases would affect heavy drinkers (TNS Opinion and Social, 2007). Some two thirds of respondents thought that higher prices would not discourage consumption among heavy drinkers or young drinkers. Since this view is contradicted by the evidence, it provides a good opportunity to run campaigns mobilizing public support for alcohol tax increases.

### Options for action

- **Maintain the status quo and do not change taxes.** In most countries, this course would make alcohol more affordable in time, and there would therefore be a rise in both alcohol consumption and alcohol-related harm, including lower productivity and more alcohol-related death, hospitalization and crime. It would also lead to an increase in health inequalities.

<sup>2</sup> Economists use the term *elasticity* to measure how much consumption of an item is affected when its price changes. Alcohol is described as *price-elastic* when the percentage change in the amount of alcohol consumed is greater than the percentage change in price, and *price-inelastic* when the change in alcohol consumed is less than the change in price. An elasticity of  $-1.2$ , for instance, means that a 10% rise in the price of alcohol would lead to a 12% fall in consumption, a situation that would be described as price-elastic. Price-inelasticity does not mean that price does not affect consumption; it only means that the proportional change in consumption is less than the change in price.

- **Increase alcohol taxes.** Elasticity and affordability data should guide the magnitude of tax increases, which to be effective would need to ensure that alcohol becomes less affordable, including regular tax adjustments to account for changes in income and the relative price of other goods.
- **Institute a uniform tax per gram of alcohol across all beverage categories.** In some countries, this course of action would mean taxing wine products, which now carries inherent political difficulties. Instead of a uniform tax, some countries may wish to institute proportionally higher taxes on spirits to reflect their higher alcohol concentration.
- **Add special taxes to products that are especially attractive to young consumers.** Several countries have instituted such taxes for alcopops and related beverages.
- **Establish a minimum price per gram of alcohol.** This measure ensures that tax changes result in the desired changes in retail price and affordability, which price cuts can otherwise circumvent.

### Stakeholders for action

- The main partner in addressing alcohol prices is the ministry responsible for setting taxes. The two ministries can act jointly to obtain best estimates for alcohol price elasticities, and to model the likely impact of tax changes on the alcohol consumption of different population groups and on mortality, hospitalization, crime and productivity.
- Other important partners include the ministries and government departments responsible for collecting taxes and monitoring smuggled, illicitly produced or informally produced alcohol, so that they can monitor any adverse consequences of tax changes and institute taxes on currently untaxed alcohol.
- Normally, alcohol producers and retailers are consulted when alcohol tax changes are contemplated, although the published record shows that the industry tends to claim that tax increases do not reduce alcohol-related harm, despite evidence to the contrary. Some segments of the industry may support minimum price measures; for example, serving establishments may support them as a way to reduce competition from price-cutting by off-trade establishments.

### Bibliography

Anderson P (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

This report, a companion document to the present handbook, details the available evidence for the impact of price changes on alcohol consumption and related harm.

Meier P et al. (2008). *Independent review of the effects of alcohol pricing and promotion: Part B. Modelling the potential impact of pricing and promotion policies for alcohol in England: results from the Sheffield Alcohol Policy Model Version 2008 (1-1)*. London, England Department of Health

([http://www.dh.gov.uk/en/Publichealth/Healthimprovement/Alcoholmisuse/DH\\_4001740?IdcService=GET\\_FILE&dID=154189&Rendition=Web](http://www.dh.gov.uk/en/Publichealth/Healthimprovement/Alcoholmisuse/DH_4001740?IdcService=GET_FILE&dID=154189&Rendition=Web), accessed 9 August 2009).

Sheffield University researchers carried out this modelling study on the impact of alcohol prices for the English Department of Health. It models the effect of a range of alcohol tax increases and minimum price alternatives on alcohol consumption, mortality, hospitalization, crime and productivity, providing separate estimates for light and heavy drinkers.

Rabinovich L et al. (2009). *The affordability of alcoholic beverages in the European Union: understanding the link between alcohol affordability, consumption and harms*. Cambridge,

United Kingdom, RAND Corporation ([http://www.rand.org/pubs/technical\\_reports/TR689](http://www.rand.org/pubs/technical_reports/TR689), accessed 12 July 2009).

This report by RAND Europe for the European Commission on the affordability of alcoholic beverages in the EU details how to calculate the affordability of alcohol, changes in affordability across the EU, the impact of affordability on alcohol consumption and the impact of changes in alcohol consumption on some indicators of alcohol-related harm. The report also presents three case studies of cross-border alcohol consumption.

TNS Opinion and Social (2007). *Attitudes towards alcohol*. Luxembourg, European Commission (Special Eurobarometer 272b; [http://ec.europa.eu/health/ph\\_determinants/life\\_style/alcohol/documents/ebs272\\_en.pdf](http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/ebs272_en.pdf), accessed 10 July 2009).

WHO (2009). WHO-CHOICE interventions: hazardous alcohol use [web page]. Geneva, WHO ([http://www.who.int/choice/interventions/rf\\_alcohol](http://www.who.int/choice/interventions/rf_alcohol), accessed 11 August 2009).

In the area of hazardous alcohol use, the WHO-CHOICE project has modelled the cost, impact and cost-effectiveness of a range of alcohol policy measures in reducing alcohol-related harm. The modelled measures include various tax changes, including introducing taxes on currently untaxed alcohol. Several publications discuss the results.

This fact sheet was prepared by Peter Anderson on behalf of the German Centre for Addiction Issues (DHS) as part of the Building Capacity project managed by the Institute of Public Health of the Republic of Slovenia, co-financed by the European Commission. Unless otherwise stated all data is sourced from the WHO Global Information System on Alcohol and Health (GISAH). The data was collected in the framework of the Global Survey on Alcohol and Health implemented by the WHO Department of Mental Health and Substance Abuse (Management of Substance Abuse team) in collaboration with WHO Regional Office for Europe and the European Commission.

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