

The Impact of Alcohol Advertising

ELSA project report on the evidence to strengthen regulation to protect young people

The ELSA project (2005-2007) of STAP (National Foundation for Alcohol Prevention in the Netherlands) includes representatives from 24 European countries. The objective of ELSA is to assess and report on the enforcement of national laws and self-regulation on the advertising and marketing of alcoholic beverages in EU Member States and Norway.

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Needless to say, any errors or omissions in the content of the report are the sole responsibility of the author.

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Preface

Humans have been acquainted with alcoholic beverages for centuries. Many writings on alcohol emphasize this long history and soothe the reader implicitly: do not worry about contemporary youngsters who drink too much. Our ancestors knew the harmful effects of alcohol.

Little has changed in the ingredients of alcoholic beverages: like wine and liquor, beer has had a similar taste for centuries. These beverages are produced according to ancient procedures, for which little modern craftsmanship is required.

The biggest challenge that faces alcohol producers is not production, but sale. While the substance of alcohol has remained constant over time, the consumer needs to be convinced of the existence of new beverages on the market: new brands, new mixes, new flavours, new packages, all of which should be marketed by new forms of advertising using the newest media. The alcohol industry owes its innovations to the ingenuity of communication experts rather than to production workers, since the largest part of the production process has not changed substantially with time. The alcohol industry is more or less an industry of advertising.

This report focuses on alcohol advertising. It shows that alcohol advertising is effective, it increases consumption and it contributes to a widespread problem for European societies: increasing consumption of alcohol by children and adolescents and a rising number of victims from the use of alcoholic beverages.

Young people utilize almost all types of media, and they are eager to learn and to experience and taste innovative products. They are not only the target group of communication experts who promote alcohol, but they are also the victims, since research shows that alcohol advertising attracts new drinkers and increases alcohol consumption of others. This report, which is part of the ELSA¹ project, summarizes studies which underline these claims.

The members of the European Parliament and the national Parliaments should not close their eyes to the harmful effects of alcohol advertising on youngsters. Effective coherent statutory regulations with the aim of restricting the vast amount of advertising and sponsorship which are targeted towards young and old people seem inevitable. The efforts involved in writing this report, will eventually be rewarded when such effective regulations are implemented.

¹ ELSA means Enforcement of National Laws and Self-Regulation on Advertising and Marketing of Alcohol. The project monitors, describes and evaluates national statutory and non-statutory regulations regarding alcohol marketing. ELSA is a European project with partners in 23 Member States and Norway and is co-financed by the European Commission.

I am grateful to Peter Anderson, the author of this report, for his careful conducted analysis of all available sources. It is up to the partners of ELSA in the Member States of the EU, the policy makers and all others to implement the findings of this report. Effective protection of young people and other vulnerable groups against the harmful effects of alcohol advertising should be a true fact rather than an unrealizable wish.

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Summary and conclusions

Beverage alcohol, although a ubiquitous toxin, is a widely marketed product in both traditional and non-traditional media, including information society services

Alcohol is a ubiquitous toxin that can harm almost any system or organ of the body. Beverages which contain alcohol are in essence marketed products, whose identities are built with a complex mix of marketing technologies, including traditional advertising as well as sponsorships, sweepstakes, couponing, product placement, new product development, point-of-purchase materials and promotions, person-to-person and viral marketing, distribution and sale of branded merchandise, and the use of more recent technologies such as mobile phones and the internet. Commercial communications can be defined as all forms of advertising, direct marketing, sponsorship, sales promotions and public relations promoting products and services, and these are currently regulated by both statutory and non-statutory means. Traditional global advertising expenditures of the top nine alcohol beverage companies totalled more than € 2.5 billion in 2004, but this is probably only one third of the total communications expenditure of these companies, if non-traditional advertising is also included.

Current European regulations for commercial communications on alcohol are poorly monitored and widely diverse, creating the need for approximation across Europe, with specification needed as to the extent to which alcohol advertising in certain categories of media and publications is allowed

The only European statutory regulation that contains an article specific to alcohol is the Television without Frontiers Directive, which is currently being reviewed and which includes articles that cover the content of alcohol advertisements, but no requirements in relation to the volume of advertisements. There is no body of information which tells us the extent to which this Directive is implemented. Also at the European level, the Council Recommendation on the drinking of alcohol by young people includes a number of recommendations on the content of alcohol advertisements, and one recommendation that deals partly with volume (advertising in media targeted at children and adolescents or reaching a significant number of children and adolescents). The Recommendation is not legally binding, and, again, there is no body of information which tells us the extent to which it is implemented.

All European countries have at least one regulation that covers alcohol marketing and advertising, with 49 statutory and 27 non-statutory regulations in 24 countries. All countries, with the exception of the United Kingdom, have a ban of one form or another of one or more types of advertising. Statutory regulations seem to be stronger than non-statutory regulations in that they are more likely to include systematic checks on violations of codes and are more likely to cover volume restrictions than non-statutory regulations. As with the European level, there is no body of information which tells us the extent to which the country level regulations are implemented. There are clear differences between European countries' laws, regulations and administrative provisions on the advertising of alcohol products. Such advertising commonly crosses country borders or involves events organized on an international level. As has been the case with tobacco products, the differences in national legislation are likely to

give rise to increasing barriers to the free movement between countries of the products or services that serve as the support for such advertising. There is a strong argument that these barriers should be eliminated and, to this end, the rules relating to the advertising of alcoholic products should in specific cases be approximated across Europe. In particular, there is a need to specify the extent to which alcohol advertising in certain categories of media and publications is allowed.

Young people are particularly vulnerable to alcohol and to alcohol advertising, which is commonly targeted to them

Young people are at particular risk of alcohol-related harm, including accidents and injuries and untimely death. There is evidence over the last 10 years that young people all over Europe have been increasingly consuming alcohol in a more risky fashion. What is particularly worrying is that the earlier the age young people start to drink, and the more they drink at a young age, the more likely they are to suffer alcohol related harm and to become dependent on alcohol as a young adult. Young people are influenced by the availability of products that are targeted to them, but also are particularly responsive to increased prices and reduced availability of alcohol. To reduce the harm done by alcohol to young people, there are strong arguments for restricting the production of alcoholic beverages that are specifically produced and targeted at children and adolescents, and strong arguments for ensuring that alcoholic beverages do not become more affordable for young people, and that restrictions on the availability of alcohol to young people are widely enforced.

The adolescent brain undergoes major development, which makes adolescents more vulnerable to impulsivity with greater sensitivity to pleasure and reward. Young people who already have problems related to alcohol are likely to be particularly vulnerable to alcohol advertising, with the vulnerability increasing with increasing alcohol consumption. Alcohol advertising manipulates adolescents' vulnerability by shaping their attitudes, perceptions and particularly expectancies about alcohol use, which then influence youth decisions to drink. This vulnerability is exacerbated by the enormous exposure to commercial communications, not only through traditional media, which are highly targeted to young people, but also through mobile phones and the Internet, which have particular appeal to young people. Article 95(3) of the Treaty of the European Union requires the Commission, in its proposals for the establishment and functioning of the Internal Market concerning health, to take as a base a high level of protection. An approximation of the European countries' advertising laws, including statutory regulations and a ban in certain media would protect young people, by regulating the promotion of alcohol, an addictive product responsible for over 25% of young male deaths and over 11% of young female deaths, and avoid a situation where young people begin using alcohol at an early age and in a risky fashion as a result of promotion, and thereby become dependent.

Alcohol advertisements are related to young people's expectancies about alcohol and their desire to consume alcohol

There is an enormous wealth of evidence that alcohol advertisements are related to positive attitudes and beliefs about alcohol amongst young people. In addition, the content of advertisements is related to expectancies about the use of alcohol amongst young people and the role of alcohol in their lives. Young people are particularly drawn to elements of music, characters, story and humour. Young people who like advertisement believe that positive consequences of drinking are more likely, their peers drink more frequently, and their peers approve more of drinking. These beliefs interact to produce a greater likelihood of drinking, or of intention to drink in the near future. These results are not surprising, given

that increased desires to drink must be one of the main aims of commercial communications. One example of a law which restricts the content of advertising is the French Loi Evin, which limits the messages and images of alcohol advertisements to only refer to the quality of the product.

Alcohol advertisements increase the likelihood of young people starting to drink, the amount they drink, and the amount they drink on any one occasion

Six US-based well designed longitudinal studies and one Belgian well designed longitudinal study show that the volume of advertisements and media exposure increase the likelihood of young people starting to drink, the amount they drink, and the amount they drink on any one occasion. There have been no published longitudinal studies that do not find such an effect. These findings are similar to the impact of advertising on smoking and eating behaviour, and are not surprising, given that increased drinking must be the main hoped for outcome of commercial communications. It is difficult to study the relationship between expenditure on commercial communications, or whether or not there are bans on alcohol advertisements in a jurisdiction and drinking by young people. Where this has been done, some studies have found that increased expenditure on advertising is associated with increased alcohol-related harm amongst young people, and that total bans have reduced alcohol-related harm, whereas others have not. In general, later studies seem to have found more of an effect of commercial communications. The evidence would thus show that there is a need to specify the extent to which alcohol advertising in certain categories of media and publications is allowed, and it would suggest that, as is the case with tobacco, consideration should be given to the prohibition of advertising of alcohol products on television and radio and in specified certain print media.

There is no available scientific evidence which shows that the non-statutory regulation of commercial communications impacts on the content or volume of advertisements

There is no scientific evidence available that tests the effectiveness of non-statutory regulation or shows that it works in regulating the content of commercial communications or in reducing the volume of commercial communications. On the other hand, there is documentation and experience that shows that self-regulation does not prevent the kind of marketing which can have an impact on younger people. It could be argued that self-regulation could work to the extent that there is a current and credible threat of regulation by government. Further, it could be considered that, unless industry processes related to alcohol advertising standards come under a legal framework, and are monitored and reviewed by a government agency, governments may find that allowing industry self-regulation results in a loss of policy control of the marketing of a product that impacts heavily on public health.

Educational approaches cannot be considered as alternative alcohol policy options to the regulation of the marketing of alcohol, including advertising

Although educational approaches to reduce the harm done by alcohol to young people are intuitively appealing, theoretical evidence would suggest that they are unlikely to achieve sustained behavioural change in an environment in which many competing messages are received in the form of marketing and social norms supporting drinking, and in which alcohol is readily available. This is confirmed by a substantial body of evidence, which shows that educational approaches are largely ineffective in reducing the harm done by alcohol to young people. Thus, educational approaches cannot be considered as alternative alcohol policy options to the regulation of the marketing of alcohol, including price, availability and advertising.

Three quarters of European citizens approve the banning of alcohol advertising targeting young people throughout Europe

Experience from other sectors and directives demonstrate that it is quite possible to regulate commercial communications in both traditional and non-traditional media. The European Union 2003 tobacco directive has shown that it is quite possible to ban the advertising of tobacco products in the broadcast and print media, and to ban relevant sport sponsorship. Were such a ban to be introduced for alcohol products, the adjustment costs to the media sector would be non-existent or very small. Along with taxation and restricted sales, an advertising ban would be one of the most cost effective options in reducing alcohol-related ill-health and premature death in the European Union. Three quarters of European citizens approve the banning of alcohol advertising targeting young people throughout Europe

Urgent attention needs to be given to the creation of the European equivalent of the US Centre on Alcohol Marketing and Youth to monitor youth exposure to commercial communications

Using industry-standard data sources and methods that are available to advertisement agencies and advertisers, the volume of commercial communications as measured by expenditure and youth exposure to commercial communications need to be monitored, tracked and reported for all Member States and the European Union as a whole, annually. Youth exposure should be related to youth audience composition. Using governmental and non-governmental data sources, the prevalence, content and adherence to regulations of commercial communications need to be documented, tracked and reported on an annual basis. The ELSA project has provided the baseline for this work. There needs to be a considerable investment in funding additional longitudinal studies to assess the impact of commercial communications in a range of media on youth drinking in a variety of European cultures.

1 Introduction

Alcohol is a ubiquitous toxin that can harm almost any system or organ of the body. Beverages which contain alcohol are in essence marketed products, whose identities are built with a complex mix of marketing technologies, including traditional advertising as well as sponsorships, sweepstakes, couponing, product placement, new product development, point-of-purchase materials and promotions, person-to-person and viral marketing, distribution and sale of branded merchandise, and the use of more recent technologies such as mobile phones and the Internet. Commercial communications can be defined as all forms of advertising, direct marketing, sponsorship, sales promotions and public relations promoting products and services, and these are currently regulated by both statutory and non-statutory means. Traditional global advertising expenditures of the top nine alcohol beverage companies totalled more than € 2.5 billion in 2004, but this is probably only one third of the total communications expenditure of these companies, if non-traditional advertising is also included. Data on the expenditure of non-traditional advertising needs to be made available, and research on the effects of non-traditional marketing strategies needs to keep pace with the technological innovations that are occurring.

Alcohol is not an ordinary commodity (Babor et al. 2003), but rather a ubiquitous toxin that can harm almost any system or organ of the body, exacerbating pre-existing mental and physical disorders, and adversely interacting with other illicit drugs (Anderson and Baumberg 2006). Following consumption of a given amount, alcohol shows wide individual variation in its toxic effects, with no threshold below which it can be regarded as entirely risk free. Alcohol can produce a state of dependence and depression and stimulation of the central nervous system, with no means of identifying whether or not an individual is at risk, or not at risk, of becoming dependent.

Beverage alcohol is prominent among the many branded consumer goods that young people, in particular, increasingly use as a way of signalling their identity and place in the world. The producers and marketers of beverage alcohol, many of whom are global players, use sophisticated promotional practices to target specific groups such as those starting to drink, regular young drinkers and established young drinkers. This marketing utilizes multiple channels (youth radio, television, events, websites, mobile phones) and diverse modalities (advertising, sponsorship, branding). Such marketing of alcohol to young people is at the forefront of what is termed post-modern marketing. Advertising and branding are crafted to mirror and express dominant representations of youth culture and lifestyles. Promotion is never static, even in established markets, as new cohorts of young people become available as targets for marketing activity on a continual basis as they mature. Market segmentation and targeting is used by the alcohol industry to ensure that significant amounts of advertising are placed where youth are more likely to be exposed to it than adults. Paid placements of products in films, television, books, and video games is another way to embed alcoholic beverages in the daily lives of young people.

1.1 Commercial communications and their regulation

Commercial communications

A total marketing strategy has five steps: product development, pricing, physical availability, market segmentation and targeting, and advertising and promotion campaigns (Cowan and Mosher 1985; Kotler 1992). In the Green paper from the Commission on Commercial Communications in the Internal Market, Commercial Communications is defined as “*all forms of advertising, direct marketing, sponsorship, sales promotions and public relations promoting products and services*”.

Commercial communications can include:

- advertising of alcoholic beverages on TV, radio, Internet, billboards, and any other media visible to the public;
- labelling or packaging of alcoholic beverages (regarding promotional aspects);
- sales promotion of alcoholic beverages;
- advertising of lower prices of alcoholic beverages;
- advertising of volume discounts of alcoholic beverages;
- sponsoring of events (sport or cultural or else) by promoting of alcoholic beverages;
- sampling or interpersonal promotion of alcoholic beverages;
- placement and presentation of alcoholic beverages at selling points;
- advertising through mobile phone use (e.g. sms-advertising);
- visible sponsoring (of e.g. TV programmes or events); and
- paid product placement.

The review will only briefly mention the impact of pricing and availability, since these issues have been discussed in detail elsewhere (Anderson & Baumberg 2006).

Regulating commercial communications

Regulation has three components: legislation (defining appropriate rules); enforcement (initiating actions against violators); and adjudication (deciding whether a violation has taken place and imposing an appropriate sanction) (Swire 1997). Statutory regulation means regulation imbedded in law and issued by the national government. Non-statutory regulation means voluntary codes of practice, statutes or guidelines. The term ‘self-regulation’ means that the industry rather than the government is doing the regulation. However, it is not necessarily the case that government involvement is entirely lacking. Instead of taking over all three components of regulation, industry may be involved in only one or two. For example, an industry may be involved at the legislation stage by developing a code of practice, while leaving enforcement to the government, or the government may establish regulations, but delegate enforcement to the private sector. Sometimes government will mandate that an industry adopt and enforce a code of self-regulation. Frequently an industry will engage in self-regulation in an attempt to stave off government regulation. Alternatively, self-regulation may be undertaken to implement or supplement legislation (Kuitenbrower 1997). The term ‘co-regulation’ is sometimes used when the rules are developed, administered and enforced by a combination of government agencies and industry bodies (see Caswell and Maxwell 2005). In the United Kingdom, for example, broadcast advertising is co-regulated by Ofcom, the statutory body overseeing content and structure of the communications sector with responsibility for auditing, and the industry body, the Advertising Standards Authority, which has become a “one-stop shop” for all advertising standards and consumer complaints.

1.2 Investment in commercial communications

Within the global beer and spirits industries, a small number of companies dominate (Impact Databank 2005). As of 2004, 60 percent of global branded spirits were marketed by the ten largest companies. This level of concentration has remained stable over the past 15 years, through multiple waves of mergers that have increased the size of the top five companies (now with a market share nearing 50%) relative to the rest of the market. The majority of the market share for globally-branded beer, in contrast, has only recently concentrated in the hands of the ten largest brewers, with the leading five brewers directly control nearly half of the global market.

Six of the top 20 alcoholic beverage producers are among the world's 100 largest advertisers, with spending heavily concentrated in the United States and Europe. (Endicott 2005) Global advertising expenditures of the top nine alcohol beverage companies alone totalled more than € 2.5 billion in 2004. If "unmeasured" marketing activities such as sponsorships, product placements, campus promotions, and point-of-purchase advertising are included, the figure is probably three times as large.

The advertising spending figures above are for traditional or "measured" advertising activity alone. In this arena, alcohol marketing gains enormous exposure to the population, both those of legal drinking ages and those below those ages. Alcohol companies typically employ a mix of unmeasured activities, tailored to the brand as well as to the cultural, religious and regulatory context. For example, sponsorship is a huge area of activity, including sponsorship of sporting events, fashion shows and beauty contests on university campuses, university sporting events, musical segments of radio programs, radio call-in shows, and end of year carnivals at beaches or in parks (Jernigan and Obot 2006). Faced with marketing restrictions, alcohol producers have also carried their alcohol brand names into other areas, including merchandise such as comic books, sports trading cards and compact disks.

Product placement in film and television is another means to increase the visibility of alcohol brands. According to Anheuser-Busch's website, in the past 20 years it has placed its products in *Wedding Crashers*, *Batman Begins*, *Seabiscuit*, *Spider Man*, *Oceans Eleven*, *Terminator 3*, *Dodgeball*, *Collateral*, *Good Will Hunting*, *As Good As It Gets*, *Jerry Maguire*, *Children of a Lesser God*, *Mission Impossible*, *Ace Ventura: Pet Detective*, *Forrest Gump*, *The Silence of the Lambs*, *Platoon*, *Dirty Dancing*, *Working Girl*, *Top Gun*, *Rain Man*, *Erin Brockovich* and *Close Encounters of the Third Kind*. Product placement has also become common in popular music, particularly rap and hip-hop.

Alcohol marketing on the web easily transcends national boundaries (and regulations). Research in the U.S. has found large numbers of underage persons making in-depth visits (i.e. visits beyond the age verification screens at the front end of many alcohol web sites) to branded alcohol web sites (Center on Alcohol Marketing and Youth 2004). According to a survey of alcohol web sites in 2003, the sites were filled with "sticky content" that may be attractive in particular to youth: video games, downloadable audio and video files and screensavers, make-your-own-music-video features, opportunities to create an on-line avatar and interact with others, practical joke post-cards and humorous customizable e-mail features that have the advantage of turning users into marketers, engaging in "viral" marketing that makes them inadvertent promoters of the brand to their friends by sending branded e-cards and the like.

1.3 Method of preparing the report

Due to resource limitations and limitations of the published literature, this report is not a series of new meta-analyses or formal syntheses based on systematic reviews, but rather a comprehensive review based on systematic searches for published reviews, systematic reviews, meta-analyses and individual papers. Surprisingly, and different to the tobacco field, no formal systematic syntheses or meta-analyses of the impact of commercial communication on youth drinking were identified.

To begin with, source materials were identified from Anderson & Baumberg (2006), with additional source material to update the evidence base identified through literature searches using PubMed¹, MEDLINE² and PsychINFO³, with the following search terms:

1 <http://www.pubmedcentral.nih.gov/>

2 <http://medline.cos.com/>

3 <http://www.psycinfo.com/>

Alcohol drinking + adolescent + motion pictures
Alcohol drinking + adolescent + films
Alcohol drinking + adolescent + radio
Alcohol drinking + adolescent + newspapers
Alcohol drinking + adolescent + magazines
Alcohol drinking + adolescent + posters
Alcohol drinking + adolescent + billboards
Alcohol drinking + adolescent + television
Alcohol drinking + adolescent + promotion
Alcohol drinking + adolescent + advertising
Alcohol drinking + adolescent + communication
Alcohol drinking + adolescent + telecommunication
Alcohol drinking + youth + motion pictures
Alcohol drinking + youth + films
Alcohol drinking + youth + radio
Alcohol drinking + youth + newspapers
Alcohol drinking + youth + magazines
Alcohol drinking + youth + posters
Alcohol drinking + youth + billboards
Alcohol drinking + youth + television
Alcohol drinking + youth + promotion
Alcohol drinking + youth + advertising
Alcohol drinking + youth + communication
Alcohol drinking + youth + telecommunication
Alcohol advertising
Alcohol advertisements
Alcohol promotion

The titles and abstracts for the references identified with the search strategy were screened for relevance for the report, and obtained and classified under each of the chapter titles of the report. The report is dependent on the available published literature, which is not always representative of all countries, cultures and population groups. Although the literature base is growing throughout Europe (Sanchez-Carbonell et al. 2005), it is still heavily dominated by North American literature.

The report has followed the definitions of evidence-based medicine modified for the purpose of alcohol policy. This can be defined as ‘the conscientious, explicit and judicious use of current best evidence in informing decisions about alcohol policy through an approach that promotes the collection, interpretation, and integration of valid, important and applicable research-derived evidence that can support alcohol policy. In adopting an evidence-based approach, it is relevant to

note the importance of doing this pragmatically and realistically. As Gray (Gray 2001) states, *“The absence of excellent evidence does not make evidence-based decision making impossible; what is required is the best evidence available, not the best evidence possible”*.

It should be noted that a large proportion of the literature in chapters 5 and 6, which describes the impact of advertising on youth attitudes and expectancies and on youth behaviour is cross-sectional studies, some of which attempt to overcome problems of causality in their design. Nevertheless, cross-sectional data sets open the possibility for different models that equally well fit the data, and cannot give conclusive evidence for causality. Extra weight is given to longitudinal studies which include base line scores of the dependent variables as well as other relevant confounders (for example Robinson et al. 1998; Wingood et al. 2003; Stacy et al. 2004; Ellickson et al. 2005; Sargent et al. 2006; Snyder et al. 2006; and McClure et al. 2006, Table 8, Chapter 6). These longitudinal studies provide strong evidence for the impact of advertising and media exposure on youth drinking behaviour.

The rapid rise of information technology and, in particular, the Internet has given manufacturers a new promotional opportunity. Commercial alcohol web sites are easily accessible to youth, and are often accessed from search engines through non-related key word searches for games, entertainment, music, contests, and free screensavers. Content analyses of web sites that are registered to large alcohol companies reveal that young drinkers are targeted through a glorification of youth culture that offers humour, hip language, interactive games and contests, audio downloads of rock music, and community-building chat rooms and message boards. Research on the effects of these marketing strategies on alcohol consumption and harm has largely failed to keep pace with the technological innovations occurring in the marketplace.

1.4 Structure of the report

Chapter 2 of the report will describe the current state of regulation of commercial communications at the European level and at the country level. The country descriptions will be based on the ELSA Report on existing regulation on advertising and marketing of alcohol (ELSA 2007a).

Chapter 3 will describe young people and alcohol consumption, discussing the extent to which young people are at risk of alcohol-related harm, the availability of alcohol products specifically produced for young people, and the impact of price and availability on young people’s consumption and alcohol-related harm.

Chapter 4 will discuss whether or not young people are vulnerable to commercial communications, what types of media are used to promote alcoholic products to young people, and whether or not commercial communications are targeted to young people.

Chapter 5 will describe the evidence for the impact of commercial communications in influencing young people’s attitudes to alcohol and their desires to drink alcohol, and Chapter 6 will describe the evidence for the impact of commercial communications on young people’s drinking behaviour.

Chapter 7 will discuss the non-statutory regulation of the content and volume of commercial communications, and Chapter 8 will review the evidence of whether or not other alcohol related policy measures, such as education and persuasion, are an effective alternative to regulation of commercial communications.

Chapter 9 will discuss options for regulating commercial communications and how their potential impact compares with other alcohol policy measures. Finally, Chapter 10 will propose recommendations on how commercial communications can be monitored and evaluated.

2 Regulation of commercial communications in Europe

The only European statutory regulation is the Television without Frontiers Directive, which is currently being reviewed and which includes articles that cover the content of alcohol advertisements, but no requirements in relation to the volume of advertisements. There is no body of information which tells us the extent to which this Directive is implemented. Also at the European level, the Council Recommendation on the drinking of alcohol by young people, includes a number of recommendations on the content of alcohol advertisements, and one recommendation that deals partly with volume (advertising in media targeted at children and adolescents or reaching a significant number of children and adolescents). The Recommendation is not legally binding, and, again, there is no body of information which tells us the extent to which it is implemented. All European countries have at least one regulation that covers alcohol marketing and advertising, with 49 statutory and 27 non-statutory regulations in 24 countries. Most countries cover almost all the elements of the Council Recommendation, with the volume restricting element more likely to be covered through statutory regulation than through non-statutory regulation. All countries, with the exception of the United Kingdom, have a ban of one form or another of one or more types of advertising. The most common bans are watershed time bans for specific beverages and media that are usually regulated through statutory as opposed to non-statutory regulation. All countries have procedures for monitoring commercial communications, but this is most commonly the possibility to complain. Systematic searching for violations is implemented through statutory regulations in a higher percentage of countries than through non-statutory regulations. As with the European level, there is no body of information which tells us the extent to which the country level regulations are implemented. There are strong arguments that the differences in the regulations between countries should be eliminated and, to this end, the rules relating to the advertising of alcoholic products be approximated, and the extent to which alcohol advertising in certain categories of media and publications is allowed should be specified.

2.1 Regulations at the European level

The only European statutory regulation is the Television without Frontiers Directive, which is currently being reviewed. Article 15 in the directive states that advertising for alcoholic beverages shall comply with the following criteria:

- a it may not be aimed specifically at minors or, in particular, depict minors consuming these beverages;
- b it shall not link the consumption of alcohol to enhanced physical performance or to driving;
- c it shall not create the impression that the consumption of alcohol contributes towards social or sexual success;
- d it shall not claim that alcohol has therapeutic qualities or that it is a stimulant, a sedative or a means of resolving personal conflicts;
- e it shall not encourage immoderate consumption of alcohol or present abstinence or moderation in a negative light; and
- f it shall not place emphasis on high alcoholic content as being a positive quality of the beverages.

There is no body of information which tells us the extent to which this Directive is implemented.

At the European level, there is also a Council Recommendation of 5 June 2001 on the drinking of alcohol by young people, in particular children and adolescents (2001/458/EC) which states that Member States should:

- 1 encourage, in cooperation with the producers and the retailers of alcoholic beverages and relevant non-governmental organisations, the establishment of effective mechanisms in the fields of promotion, marketing and retailing;
 - a to ensure that producers do not produce alcoholic beverages specifically targeted at children and adolescents;
 - b to ensure that alcoholic beverages are not designed or promoted to appeal to children and adolescents, and paying particular attention inter alia, to the following elements:
 - the use of styles (such as characters, motifs or colours) associated with youth culture,
 - featuring children, adolescents, or other young looking models, in promotion campaigns,
 - allusions to, or images associated with, the consumption of drugs and of other harmful substances, such as tobacco,
 - links with violence or antisocial behaviour,
 - implications of social, sexual or sporting success,
 - encouragement of children and adolescents to drink, including low-price selling to adolescents of alcoholic drinks,
 - advertising during, or sponsorship of, sporting, musical or other special events which a significant number of children and adolescents attend as actors or spectators,
 - advertising in media targeted at children and adolescents or reaching a significant number of children and adolescents,
 - free distribution of alcoholic drinks to children and adolescents, as well as sale or free distribution of products which are used to promote alcoholic drinks and which may appeal in particular to children and adolescents;
 - [...]
 - d to allow manufacturers to get pre-launch advice, in advance of marketing a product or investing in a product, as well as on marketing campaigns before their actual launch;
 - e to ensure that complaints against products which are not being promoted, marketed or retailed in accordance with the principles set out in points (a) and (b) can be effectively handled, and that, if appropriate, such products can be removed from sale and the relevant inappropriate marketing or promotional practices can be brought to an end;
- 2 urge the representative producer and trade organisations of alcoholic beverages to commit themselves to observe the principles described above.

Again, there is no body of information which tells us the extent to which this Directive is implemented.

At the end of 2006, the Commission launched its Communication, an EU strategy to support Member States in reducing alcohol related harm (European Commission 2006). It noted that worrying drinking trends among young people can be effectively addressed through public policy, including enforcement of restrictions on marketing likely to influence young people. However, with regard to Commercial communications, the Communication took the view that, whilst noting that Community law already regulates certain aspects of commercial communications, and some instruments are currently being reviewed and updated, there was increasing clarity regarding the kinds of self-regulatory best

practices that will help create effective parameters of behaviour for advertisers, and thus align advertising practice with social expectations. The Commission took the view that its main aim will be to support the European Union (EU) and national/local Government actions to prevent irresponsible marketing of alcoholic beverages, and to regularly examine trends in advertising and issues of concern relating to advertising, for example on alcohol. One aim of this joint effort will be to reach an agreement with representatives from a range of sectors (hospitality, retail, producers, and media/advertising) on a code of commercial communications, with benchmarks, implemented at national and EU level. As part of this approach, the Commission stated that the impact of self-regulatory codes on young people's drinking and industry compliance with such codes will be monitored, with independent parties invited to verify the performance and outcomes of self-regulatory codes against the agreed benchmarks, thus allowing alcohol industry organizations to adjust objectives accordingly.

2.2 Regulations at the country level

The ELSA project has documented the prevalence and types of regulations that deal with commercial communications and the results are summarized below (ELSA 2007a).

Prevalence of regulations

A review of 24 European countries found that all countries had at least one regulation on alcohol marketing and advertising, with most countries having several. In total 79 regulations were reported (49 statutory and 27 non-statutory), Table 1. 23 countries had one or more forms of statutory regulation, and 17 one or more forms of non-statutory regulation. In one country (UK), co-regulation existed due to a contract between the statutory body and the non-statutory body on advertising. Six countries had only statutory regulation, and two countries had in practice no statutory regulation: the UK (non-statutory and co-regulation) and the Netherlands (the existing statutory regulation is not enacted and needs a ministerial decision to change this).

Coverage of the Council Recommendation

Of the 24 countries, all of them covered at least 4 of the elements of the Council Recommendation in their national regulations or codes, with most countries covering almost all of them, Table 2. Countries varied in whether or not the different elements are included in statutory or in non-statutory regulations, Table 3. The volume restricting element 'media' is more likely to be covered through statutory regulation than through non-statutory regulation, and the content restricting elements 'styles' and 'violence' are more likely to be covered through non-statutory regulation than through statutory regulation.

Prevalence of bans

All of the 24 countries have at least one ban in their national regulation, with the exception of the UK, Table 4. Bans covering specific locations and specific times are the most common, whereas bans covering specific advertisers are the least common. Bans covering specific times are largely regulated through statutory as opposed to non-statutory regulation, Table 5. The time bans are usually a watershed for specific beverages and media, and usually restrict alcohol marketing for the whole day or the afternoon until somewhere between 18.00 and 22:30 hours.

Procedures to check violations

All of the 24 countries have at least 2 procedures for monitoring regulations, with the exception of Portugal, which has none, Table 6. The possibility to complain is the most common procedure (23 countries), and the possibility to get pre-launch advice is the least common (15 countries). Pre-launch advice is implemented in a higher percentage of countries through non-statutory regulations than it is through statutory regulations, and systematic searching for violations is implemented through statutory regulations in a higher percentage of countries than through non-statutory regulations, Table 7. Sanctions connected to the violations vary widely, and include fines, warnings and reprimands, the temporary or complete cessation of marketing activity or the hindering of the trade of the advertised product. Fines vary from € 2,50 to up to € 600,000. It is not known how often sanctions are enforced.

Table 1 Number of regulations for alcohol marketing by country.

Country	Statutory	Non-statutory	Co-regulation*	Total
Austria	3	1	0	4
Belgium	6	1	0	7
Bulgaria	2	0	0	2
Czech Republic	3	2	0	5
Denmark	2	1	0	3
Estonia	1	1	0	2
Finland	1	0	0	1
France	1	3	0	4
Germany	2	1	0	3
Hungary	2	2	0	4
Ireland	1	3	0	4
Italy	4	2	0	6
Latvia	3	0	0	3
Lithuania	1	0	0	1
Netherlands	1	2	0	3
Norway*	2	0	0	2
Poland	1	1	0	2
Portugal	1	1	0	2
Romania	5	0	0	5
Slovak Republic	2	1	0	3
Slovenia	1	0	0	1
Spain	3	2	0	5
Sweden	1	1	0	2
United Kingdom	0	2	3	5
Total	49	27	3	79
Number of countries with this type of regulation	23	17	1	24

* In Norway there is a total ban on the advertising of alcohol.

Table 2 Elements of Council Recommendation mentioned in at least one of a country's regulations or codes.

Country	a Production	b Styles	c Children	d Drugs	e Violence	f Success**	g Encouragement	h Events	i Media	j Free	k Other	Number of elements covered
Austria	■	■	■	■	■	■	■	■	■	■	■	8
Belgium	■	■	■	■	■	■	■	■	■	■	■	10
Bulgaria	■	■	■	■	■	■	■	■	■	■	■	6
Czech Republic	■	■	■	■	■	■	■	■	■	■	■	9
Denmark	■	■	■	■	■	■	■	■	■	■	■	7
Estonia	■	■	■	■	■	■	■	■	■	■	■	10
Finland	■	■	■	■	■	■	■	■	■	■	■	8
France	■	■	■	■	■	■	■	■	■	■	■	11
Germany	■	■	■	■	■	■	■	■	■	■	■	9
Hungary	■	■	■	■	■	■	■	■	■	■	■	10
Ireland	■	■	■	■	■	■	■	■	■	■	■	11
Italy	■	■	■	■	■	■	■	■	■	■	■	7
Latvia	■	■	■	■	■	■	■	■	■	■	■	7
Lithuania	■	■	■	■	■	■	■	■	■	■	■	7
Netherlands	■	■	■	■	■	■	■	■	■	■	■	9
Norway*	–	–	–	–	–	–	–	–	–	–	–	0
Poland	■	■	■	■	■	■	■	■	■	■	■	6
Portugal	■	■	■	■	■	■	■	■	■	■	■	10
Romania	■	■	■	■	■	■	■	■	■	■	■	6
Slovak Republic	■	■	■	■	■	■	■	■	■	■	■	4
Slovenia	■	■	■	■	■	■	■	■	■	■	■	7
Spain	■	■	■	■	■	■	■	■	■	■	■	9
Sweden	■	■	■	■	■	■	■	■	■	■	■	8
United Kingdom	■	■	■	■	■	■	■	■	■	■	■	9
Number of countries yes (■)	9	17	22	12	21	23	19	17	22	14	12	

* In Norway none of the elements are mentioned because there is a total ban on the advertising of alcohol.

** This element particularly is also reflected in the TWF directive, article 15.

Table 3 Elements of Council Recommendation mentioned in at least one of a country's regulations or codes by statutory status.

	Statutory (S) / Non-statutory (NS)	Production	Styles	Children	Drugs	Violence	Success	Encouragement	Events	Media	Free
Number of countries with this element in statutory regulation	S	5	8	20	9	12	20	14	12	20	10
	S	23%	36%	91%	41%	55%	91%	64%	55%	91%	45%
Number of countries with this element in non-statutory regulation	NS	6	14	15	5	16	15	11	6	11	7
	NS	35%	82%	88%	29%	94%	88%	65%	35%	65%	41%

Table 4 Type of bans in at least one of a country's regulations or codes

Country	i Location	ii Time	iii Media Channel	iv Type of product	vi Advertiser	Number of bans covered
Austria	■	■	■	■	■	3
Belgium	■	■	■	■	■	4
Bulgaria	■	■	■	■	■	3
Czech Republic	■	■	■	■	■	1
Denmark	■	■	■	■	■	1
Estonia	■	■	■	■	■	4
Finland	■	■	■	■	■	1
France	■	■	■	■	■	3
Germany	■	■	■	■	■	1
Hungary	■	■	■	■	■	4
Ireland	■	■	■	■	■	4
Italy	■	■	■	■	■	4
Latvia	■	■	■	■	■	2
Lithuania	■	■	■	■	■	3
Netherlands	■	■	■	■	■	4
Norway*	–	–	–	–	–	0
Poland	■	■	■	■	■	5
Portugal	■	■	■	■	■	3
Romania	■	■	■	■	■	3
Slovak Republic	■	■	■	■	■	2
Slovenia	■	■	■	■	■	4
Spain	■	■	■	■	■	4
Sweden	■	■	■	■	■	2
United Kingdom	■	■	■	■	■	0
Number of countries yes (■)	17	17	14	15	2	

* In Norway none of the ban types are mentioned because there is a total ban on the advertising of alcohol.

■ = yes ■ = no

Table 5 Type of bans in at least one of a country's regulations or codes by statutory status

Country	Statutory (S) / Non-statutory (NS)	i Location	ii Time	iii Media Channel	iv Type of product	vi Advertiser
Number of countries with this ban in statutory regulation	S	14	15	12	14	2
	S	64%	68%	55%	64%	9%
Number of countries with this ban in non-statutory regulation	NS	7	5	6	5	0
	NS	41%	29%	35%	29%	0%

Table 6 Type of procedures in at least one of a country's regulations or codes

Country	Pre-launch advice	Systematically searching for violations	Possibility to complain	Sanctions connected to violations	Procedures covered
Austria	■	■	■	■	4
Belgium	■	■	■	■	4
Bulgaria	■	■	■	■	3
Czech Republic	■	■	■	■	3
Denmark	■	■	■	■	3
Estonia	■	■	■	■	3
Finland	■	■	■	■	4
France	■	■	■	■	4
Germany	■	■	■	■	4
Hungary	■	■	■	■	4
Ireland	■	■	■	■	3
Italy	■	■	■	■	4
Latvia	■	■	■	■	3
Lithuania	■	■	■	■	2
Netherlands	■	■	■	■	4
Norway	■	■	■	■	3
Poland	■	■	■	■	4
Portugal	■	■	■	■	0
Romania	■	■	■	■	3
Slovak Republic	■	■	■	■	4
Slovenia	■	■	■	■	3
Spain	■	■	■	■	3
Sweden	■	■	■	■	4
United Kingdom	■	■	■	■	4
Number of countries yes (■)	15	19	23	23	

Table 7 Type of procedures in at least one of a country's regulations or codes by statutory status

Country	Statutory (S) / Non-statutory (NS)	Prelaunch advice	Systematically searching	Complain	Sanctions
Number of countries with this procedure in statutory regulation	S	9	17	22	21
	S	39%	74%	96%	91%
Number of countries with this procedure in non-statutory regulation	NS	13	8	16	14
	NS	76%	47%	94%	82%

Adherence to the regulatory system

Systematic searches find very little documentation and hardly any scientific studies that test the impact of the adherence to marketing regulations, meaning that it is not possible to draw any conclusions on whether or not marketing regulations are adhered to (ELSA 2007b). Although there are complaints concerning marketing targeted at minors, in general it seems that sanctions have low punitive power and sometimes adverse effects. In Austria, publicly known sanctions were found to double the impact of the advertising effects instead of reducing them (Berka et al. 2006). Adolescents may be particularly attracted to products that are criticised and sanctioned by established sources. However, making the sanctions private does not seem to be a solution, since this decreases the transparency of the adherence to the regulations. There is still no pre-launch advice system in many EU Member States and in countries with a pre-launch advice system there is a general lack of transparency. In some countries (e.g. in the UK) pre-launch advice is even confidential. Thus, overall, there is a lack of structured and independent evaluation systems with regard to adherence to regulations, and therefore it is hard to draw any conclusions on the functioning of and adherence to regulations. There is a need for a comprehensive structural system for evaluating the adherence to national alcohol marketing regulations, which is independent and based on agreed standards and methods. Most ideally this system should be compatible and transparent EU wide, since alcohol marketing is operating across national borders. This is in accordance with an important part of the Communication on alcohol which proposes independent parties to verify the adherence to existing codes and the discussion on establishing common benchmarks (European Commission 2006).

2.2 Conclusions

There is no body of information which tells us the extent to which European or country level codes that cover the content of alcohol advertisements have been adhered to. Statutory regulations seem to be stronger than non-statutory regulations in that there are more likely to include systematic checks on violations of codes and are more likely to cover volume restrictions than non-statutory regulations. There are clear differences between European countries' laws, regulations and administrative provisions on the advertising of alcohol products. Such advertising commonly crosses country borders or involves events organized on an international level. As has been the case with tobacco products, the differences in national legislation are likely to give rise to increasing barriers to the free movement between countries of the products or services that serve as the support for such advertising. There is a strong argument that these barriers should be eliminated and, to this end, the rules relating to the advertising of alcoholic products should in specific cases be approximated across Europe. In particular, there is a need to specify the extent to which alcohol advertising in certain categories of media and publications is allowed. It has been noted in European case law that it is in fact undeniable that advertising acts as an encouragement to consumption, that restrictions on the volume of advertising are appropriate to ensure their aim of protecting public health, and do not go beyond what is necessary to achieve such an objective (European Court of Justice 2004).

3 Young people and alcohol consumption

Young people are at particular risk of alcohol-related harm, showing greater vulnerability due to their smaller body size and lack of experience with alcohol. Adolescents are particularly vulnerable due to the brain development that takes place at this time, which is particularly sensitive to the impact of alcohol. The greater the amount of alcohol consumed during adolescence, the greater the risk of problems as a young adult, including an increased risk of becoming dependent on alcohol. Although trends over the last 10 years do not suggest that young people are drinking more alcohol, there is evidence that they are starting to drink at a younger age, and are drinking in a more risky pattern, concentrating their alcohol consumption into a fewer number of days. Young people bear the brunt of alcohol related harm, including an increased risk of accidents and injuries and premature death. There is considerable evidence that particular beverage alcohol brands that appeal to young people are both manufactured and targeted to young people. Young people are particularly responsive to the price of alcohol and availability of alcohol. The more affordable alcohol is, and the more available it is, the greater the risk of heavier alcohol consumption and alcohol-related harm.

3.1 Are young people at risk of alcohol-related harm?

Greater vulnerability of young people

Children have greater vulnerability to alcohol than adults. As well as usually being physically smaller, they lack experience of drinking and its effects. They have no context or reference point for assessing or regulating their drinking, and, furthermore, they have built no tolerance to alcohol. From mid-adolescence to early adulthood there are major increases in the amount and frequency of alcohol consumption and alcohol-related problems (Wells et al. 2004; Bonomo et al. 2004). Those with heavier consumption in their mid-teens tend to be those with heavier consumption, alcohol dependence and alcohol related harm, including poorer mental health, poorer education outcome and increased risk of crime in early adulthood (Jefferis et al. 2005). During adolescence, alcohol can lead to structural changes in the hippocampus (a part of the brain involved in the learning process) (De Bellis et al. 2000) and at high levels can permanently impair brain development (Spear 2002).

Binge drinking amongst young people

Nearly all 15-16 year old European students (>90%) have drunk alcohol at some point in their life, on average beginning to drink at 12 1/2 years of age, and getting drunk for the first time at 14 years. The most common place for them to have drunk alcohol is at their own or someone else's home, although sizeable numbers also drink in outdoor public spaces and bars. The average amount drunk on the last occasion by 15-16 year olds is over 60g of alcohol, and reaches nearly 40g even in the lower-consuming 15-16 year old southern Europeans. Over 1 in 8 (13%) of 15-16 year olds have been drunk more than 20 times in their life, and more than 1 in 6 (18%) have 'binged' (5+ drinks on a single occasion) three or more times in the last month. Although two countries saw more drunkenness on some measures in girls than boys for the first time in 2003, boys continue to drink

more and get drunk more often than girls, with little reduction in the absolute gap between them overall.

Most countries show a rise in binge-drinking for boys from 1995/9 to 2003, and nearly all countries show this for girls, Figure 1. This is due to a rise in binge-drinking and drunkenness across most of the EU during 1995-9, with a more mixed trend between 1999 and 2003. A narrowed gap between eastern and western Europe is also visible for binge-drinking and drunkenness, due to both the size of the changes and a continued rise in parts of eastern Europe, particularly for girls, and accompanied by rises in other aspects of consumption (e.g. last occasion consumption). Trends are more ambivalent for many other aspects of drinking, however, such as frequency of drinking and estimated total consumption. While there is, therefore, no evidence that young people's use of alcohol has increased in the last decade, it does appear that there is a trend towards increased risky use, particularly in eastern Europe.

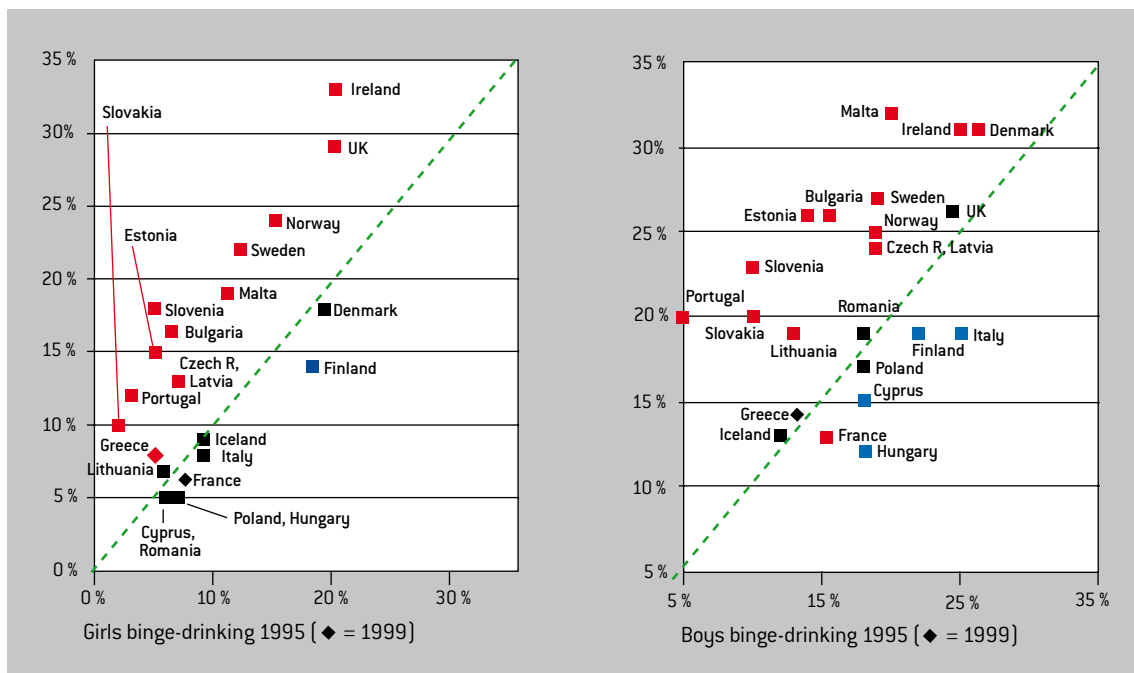


Figure 1 Trends in binge-drinking in 15-16 year old girls and boys, 1995-2003
5+ drinks on a single occasion 3+ times in last 30 days. Source: ESPAD surveys (Hibell et al. 1996; 2000; 2004) A point above the dashed line means that binge-drinking has increased. Countries in red have seen more than a 2% increase; countries in blue have seen more than a 2% decrease. Countries in black have seen less than a 2% change.

The harm done by alcohol amongst young people

The burden of ill-health due to alcohol is disproportionately shouldered by young men in Europe, 13,000 of who die from an alcohol-related condition in the EU each year. This represents 1 in every 4 deaths of young men, rising to nearly 1 in 3 in the newer EU10 countries. Alcohol is responsible for a slightly smaller but still substantial death toll in young women, with the 2,000 deaths corresponding to 11% of female mortality at this age across the EU. The extent to which this is a greater burden than at any other age is shown by Figure 2, illustrating how the proportion of deaths due to alcohol is greatest on those aged 15-29 for both men and women. The high level of harms to young people is due to the importance of intentional and unintentional injury as primary causes of death in young people.

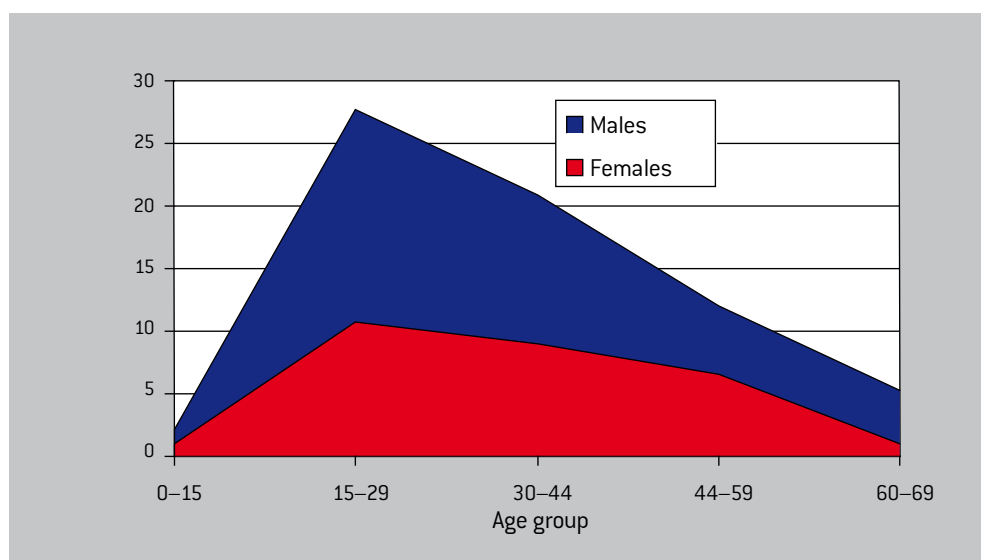


Figure 2 The share of deaths attributable to alcohol in EU citizens younger than age 70 years (year 2000). Source: GBD data (Rehm 2005).

Alcohol-related crime and disorder is also considerable among young people, with the only comparison to adults (from Estonia) suggesting that alcohol plays a greater part in assaults committed by juveniles than adults. A third of a million 15-16 year old students in the European Union report fights due to their own drinking (8% of boys and 4% of girls), although less in the South of the EU15 and, for girls, less in the EU10 (Hibell et al. 2004). Similarly, 220,000 students report getting into trouble with the police due to their drinking (4%), with higher rates for central European students and northern European girls than elsewhere. These figures are likely to be even higher for older young adults (17-30 year olds), as shown in Danish and Polish research. Young people also seem to see alcohol as an important cause of aggressive behaviour (in research from the Netherlands, the most important cause; KPMG 2001).

Other results from the ESPAD survey suggest that over 5% of 15-16 year old students have regretted sex they had due to alcohol. Worryingly from a public health perspective, 200,000 students (3.6%) report unprotected sex due to drinking – with girls in some countries being substantially more likely than boys to report this (UK, Sweden, Iceland, Finland). To a lesser extent, students also report having problems at work/school (2.4%) or with their teachers (1.2%) due to their drinking. Drinking by adolescents and young adults is associated with automobile crash injury and death, suicide and depression, missed classes and decreased academic performance, loss of memory, blackouts, fighting, property damage, peer criticism and broken friendships, date rape, unprotected sexual intercourse that places people at risk for sexually transmitted diseases, HIV infection and unplanned pregnancy (Williams and Knox 1987).

3.2 Are there categories of products that are developed, targeted or appealing to young people?

New development of alcoholic beverages has been particularly active since the 1990s (Jackson et al. 2000; Mosher and Johnsson 2005), and started with designer drinks characterised by brightly coloured and innovative packaging, delivering the product benefits of strength, flavour and portability, such as bottled ciders and fortified fruit wines. The boom in designer drinks lasted until the mid-1990s, when a new range of alcoholic soft drinks, which became known

as 'alcopops', emerged. Alcopops were then superseded by 'pre-mix cocktails' (blends of spirits, soft drinks and other unique flavourings that are not readily concocted by consumers themselves), and a trend towards mixing high energy soft drinks (such as Red Bull) with spirits (such as vodka). A development of this trend has been the introduction of 'ready-to-drink' alcoholic energy drinks that are sold on the basis of their stimulant properties. These drinks contain a blend of vodka, caffeine, glucose and taurine and have an average alcohol content of 5.4%. Another type of product – strong spirits designed to be consumed in one mouthful from small 'shot' glasses - is becoming increasingly popular. Brands include 'Aftershock' and 'Goldshlager', and are chosen by young drinkers because their strength gives an immediate hit, and their strong flavours (for example cinnamon), brand names and packaging have created associations with daring behaviour (see Hastings et al. 2005).

Whether they be wine coolers, (Goldberg et al. 1994), designer drinks (McKeganey et al. 1996), or alcopops (Barnard and Forsyth 1998), studies of young people's attitudes and behaviour in several countries have documented that such new products are the drinks of choice of young people and can contribute both to heavier drinking and to lowering the age of onset of drinking. In some instances, these products seem to be competing directly with the youth market for illegal drugs (Jackson et al. 2000).

The brand imagery of designer drinks - in contrast to that of more mainstream drinks - matched many 14 and 15 year olds' perceptions and expectations of drinking, with consumption of designer drinks tending to be in less controlled circumstances and associated with heavier alcohol intake and greater drunkenness (Hughes et al. 1997). Data from the Health Behaviour in School-aged Children study found that in Wales, alcopops consumption matched the entire increase in weekly drinking of alcohol between 1994 and 1996 among 11 and 12 year olds, half the increase for 13 and 14 year-olds, and most of the increase for 15 and 16 year old girls (Roberts et al. 1999). Swedish surveys have found that alcopops and sweet ciders accounted for more than half the recorded increase in alcohol consumption among 15 and 16 year old boys between 1996 and 1999, and two-thirds of the increase in consumption among girls, at a time when alcohol consumption among Swedish adults remained stable (Romanus 2000).

Industry representatives do not deny the importance of new products designed to reach "new drinkers" or "entry-level drinkers" or some similar term: "No matter where in the world they are drunk, and at what kind of occasion, there is no doubt that FABs (flavoured alcoholic beverages) are consumed by younger drinkers. The combination of packaging, taste and alcoholic content gives them little appeal to older drinkers" (Euromonitor 2004; 6, Section 22.15).

3.3 Do the price of alcohol and sales promotion influence the age of first drink, alcohol consumption and alcohol-related harm?

Studies have found that increases in the price of alcohol reduce the alcohol consumption of young people, with a greater impact on more frequent and heavier drinkers than on less frequent and lighter drinkers (Grossman et al. 1987; Coate and Grossman 1988; Laixuthai and Chaloupka 1993; Chaloupka and Wechsler 1996; Cook and Moore 2002). Beyond levels of drinking, price has also been found to influence drinking to intoxication. One large survey in the US found that a 10% increase in price would decrease the number of intoxication episodes per month by 8% (defined as consuming 5+ drinks on one occasion; Sloan et al. 1995). The impact of alcohol taxes differs with age, with the impact of increasing age in youth possibly swamping the impact of price (Gius 2005).

Although alcoholic beverages appear to behave in the market like most other consumer goods, the demand for alcoholic beverages in some consumers may differ from other products because of the addictive nature of alcohol. The addictive nature of alcohol implies that an increase in the past consumption of alcohol would raise the current consumption; and thus the price elasticity in the short-term, which holds past consumption constant, would be smaller in absolute value than the price elasticity in the long-term, which allows past consumption to vary. For example, a price increase in 2004 would reduce consumption in 2004, with consumption in previous years held constant. Because of the addictive nature of alcohol, it would be expected that consumption in 2005 and in all future years would also fall. Consequently, the reduction in consumption, observed over several years (i.e., in the long term) after the price increase, would exceed the reduction observed in 2004 (i.e., in the short term). Studying the relationship between price and alcohol consumption by young adults ages 17 to 29 has found this to be the case (Grossman et al. 1998). Ignoring previous years' consumption (and thus the addictive aspects of alcohol) the price elasticity of demand for alcohol was -0.29. However, when previous years' consumption (and thus the addictive aspects of alcohol) was taken into account, the estimated long-term price elasticity of demand was more than twice as high at -0.65, indicating that price had a much greater influence on alcohol consumption. This also means that about one half of the reason that heavy drinking young adults do not reduce their consumption is the difficulty (costs) of overcoming the addictive nature of alcohol.

A wide range of studies have found that increasing the price of alcohol and beer reduces road traffic accidents and fatalities particularly for younger drivers (Saffer and Grossman 1987a,b; Kenkel 1993; Ruhm 1996; Dee 1999; Mast et al. 1999; Dee and Evans 2001; Chaloupka et al. 2002 Saffer and Chaloupka 1989; Evans et al. 1991; Chaloupka et al. 1993; Sloan et al. 1994a; Mullahy and Sindelar 1994a).

Increases in alcohol prices reduce intentional and unintentional injuries (Sloan et al. 1994; Grossman and Markowitz 1999). Higher beer prices have been shown to lead to reductions in rapes and robberies (Cook and Moore 1993), homicides (Sloan et al. 1994), crime (Saffer 2001), violence at universities (Grossman and Markowitz 2001), and violence-related injuries (Matthews et al. 2005).

Further, special taxes for spirit based sweet pre-mixed drinks lead to reductions in sales and consumption of the specific drinks, Figure 3.

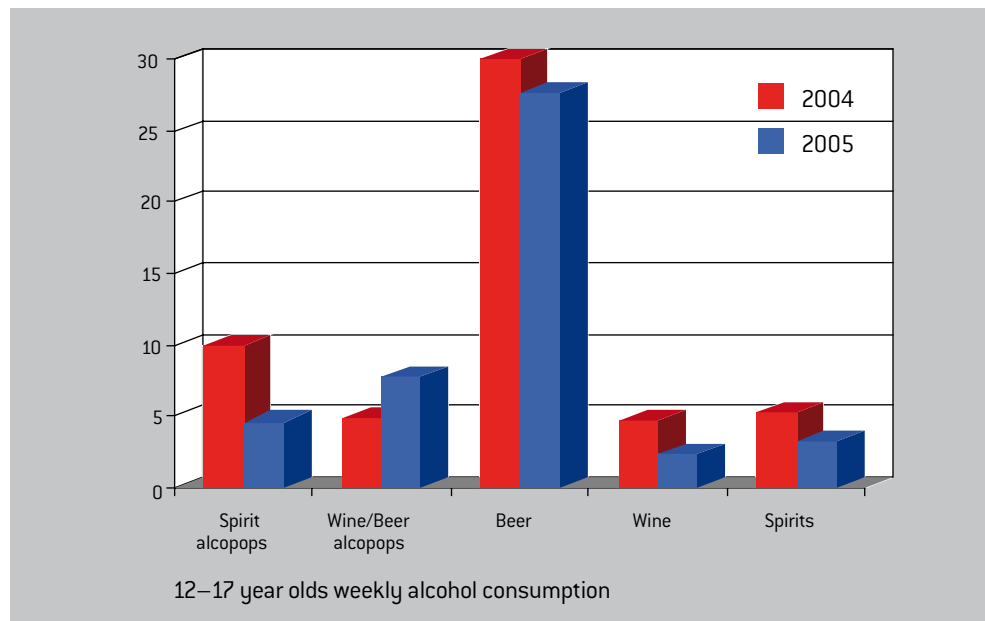


Figure 3 Impact of specific tax introduced in 2004 on spirits based alcopops on 12-17 year olds weekly consumption, Germany. Source: Ministry of Health, Germany (2006).

There has been a considerable trend towards popular drinking venues offering promotional deals and ‘happy hours’ (temporary price-cuts) on products regularly consumed by young drinkers (see Hastings et al. 2005). Examples include: a never ending vodka glass (purchase one glass of vodka and refill it as often as you like); buy-one-drink and get-one-free happy hours, and cheap deals on popular drinks on particular nights of the week. Alcohol price promotions are associated with increased binge drinking (Kuo et al. 2003).

3.4 Does the availability of alcohol influence the age of first drink, alcohol consumption and alcohol-related harm?

For young people, laws that raise the minimum legal drinking age reduce alcohol sales and problems among young drinkers (Grube and Nygaard 2001; Babor et al. 2003). Although legal restrictions on the age at which young people may purchase alcohol vary widely from country to country, ranging typically from 16 to 21 years of age, almost all countries legally restrict these sales. A review of 132 studies published between 1960 and 1999 found very strong evidence that changes in minimum drinking age laws can have substantial effects on youth drinking and alcohol-related harm, particularly road traffic accidents, often for well after young people reached the legal drinking age (Waagenar and Toomey 2000). Many studies have found that raising the minimum legal drinking age from 18 to 21 years decreased single vehicle night time crashes involving young drivers by 11% to 16% at all levels of crash severity (Klepp et al. 1996; Saffer and Grossman 1987a,b; Wagenaar 1981 1986; Wagenaar and Maybee 1986; O’Malley and Wagenaar 1991; Voas and Tippet 1999). Changes in the minimum drinking age are related to changes in other alcohol-related injury admissions to hospitals (Smith 1988) and injury fatalities (Jones et al. 1992). One study from Denmark, where a minimum 15-year age limit was introduced for off-premise purchases, found that there was an effect in reducing teenagers’ drinking, but that the drinking of those above as well as below the age limit was affected (Møller 2002).

The full benefits of a higher drinking age are only realized if the law is enforced. Despite higher minimum drinking age laws, young people do succeed in purchasing alcohol (e.g. Forster et al. 1994, 1995; Preusser and Williams 1992; Grube 1997). In most EU countries in the ESPAD study, a majority of 15-16 year old students thought that getting any type of alcoholic beverage was fairly easy or very easy, rising to 70%-95% for beer and wine (Hibell et al. 2004). Such sales result from low and inconsistent levels of enforcement, especially when there is little community support for underage alcohol sales enforcement (Wagenaar and Wolfson 1994 1995). Even moderate increases in enforcement can reduce sales to minors by as much as 35% to 40%, especially when combined with media and other community activities (Grube 1997; Wagenaar et al. 2000).

Research has examined the associations between outlet density and measures of student and underage drinking. Outlet density has been found to be closely related to heavy drinking and drinking-related problems among college students (Weitzman et al. 2003); other associations were found for the number of commercial sources of alcohol and binge drinking and drinking in inappropriate places for students age 16 to 17 years (Dent et al. 2005).

Alcohol advertising can also take place at the point of purchase, including exterior and interior advertisements for alcoholic beverages; alcohol-branded functional objects provided free to retailers (e.g., counter change mats with an alcohol company logo); beer placement (e.g., single cans or bottles chilled in buckets near checkout locations); and the presence of low-height advertisements (i.e., advertisements placed in the sight line of children and adolescents as opposed to adults) (CDC 2003). For non-drinkers aged 12-13 years, exposure to in-store beer displays are predictive of drinking onset by age 14-15 years (Ellickson et al. 2005) (see Chapter 6).

3.5 Conclusions

Young people are at particular risk of alcohol-related harm, including accidents and injuries and untimely death. There is evidence that over the last 10 years that young people all over Europe have been increasingly consuming alcohol in a more risky fashion. What is particularly worrying is that the earlier the age young people start to drink, and the more they drink at a young age, the more likely they are to suffer alcohol related harm and to become dependent on alcohol as a young adult. Young people are influenced by the availability of targeted products, but are also particularly responsive to increased prices and reduced availability of alcohol. To reduce the harm done by alcohol to young people, there are strong arguments for restricting the production of alcoholic beverages that are specifically produced and targeted at children and adolescents, and strong arguments for ensuring that alcoholic beverages do not become more affordable for young people, and that restrictions on the availability of alcohol to young people are widely enforced. As shall be seen in Chapter 9, these policy measures are complimentary to regulations and restrictions on alcohol advertising and, as shall be seen in Chapter 8, educational approaches are not an effective alternative to them.

4 Young people and commercial communications

The adolescent brain undergoes major development, which makes them more vulnerable to impulsivity and greater sensitivity to pleasure and reward. Young people who already have problems related to alcohol are likely to be particularly vulnerable to alcohol advertising, with the vulnerability increasing with increasing alcohol consumption. Alcohol advertising manipulates adolescents' vulnerability by shaping their attitudes, perceptions and particularly expectancies about alcohol use, which then influence youth decisions to drink. All types of media are used for commercial communications, including television, music and music videos, films, paid placements in films and TV shows, the Internet, grass roots word of mouth, and sports sponsorship. Some of these media are easy to regulate (for example television and sports sponsorship), whereas others are more difficult to regulate, including the Internet, which appears to be increasing as a medium for alcohol commercial communications. There is considerable evidence, although mostly from the United States, that commercial communications for alcohol are targeted to young people.

4.1 Are young people vulnerable to alcohol advertising?

Adolescents have three distinctive vulnerabilities: impulsivity, linked to a temporal gap between the onset of hormonal and environmental stimuli into the amygdala and the more gradual development of inhibitory control through the executive planning and decision-making functions of the pre-frontal cortex; self-consciousness and self-doubt, attributable at least in part to the emergence of abstract thinking, but evident in the greater frequency and intensity of negative mood states during adolescence; and elevated risk from product use, including impulsive behaviour such as drinking and driving, but also greater susceptibility to toxins because of the plasticity of the developing brain as well as greater sensitivity to the brain's "stamping" functions identifying pleasure and reward (Pechmann et al. 2005).

Adolescents aged 14 to 17 years with alcohol use disorders showed substantially greater brain activation to alcoholic beverage pictures than control youths, predominantly in brain areas linked to reward, desire, and positive affect (Tapert et al. 2003). The degree of brain response to the alcohol pictures was highest in youths who consumed more drinks per month and reported greater desires to drink, Figure 4.

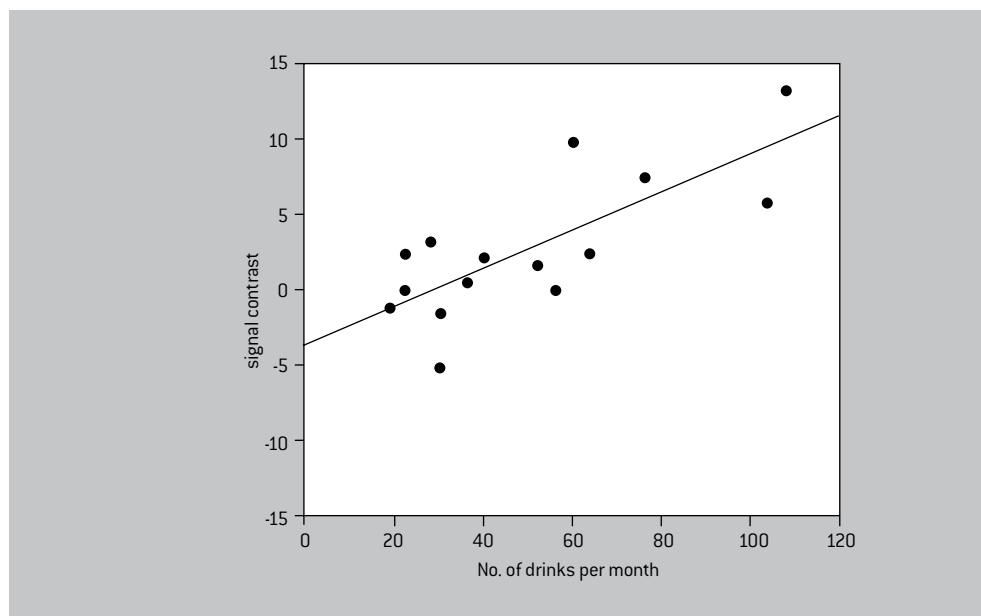


Figure 4 Blood oxygen level-dependent response signal contrast in the right precuneus/posterior cingulated region during exposure to alcoholic beverage pictures relative to non-alcoholic beverage pictures plotted as a function of drinks consumed per month for adolescents with alcohol use disorders. Source: Tapert et al. (2003)

Early work on alcohol advertising and youth tended to rest on a simple theoretical basis: exposure to alcohol advertising influences youth drinking behaviour. However, more recent studies have pointed to the importance of alcohol advertising in shaping youth attitudes, perceptions and particularly expectancies about alcohol use, which then influence youth decisions to drink (Grube and Waiters 2005). There seems to be a cognitive progression from liking of alcohol advertisements (an affective response associated with the desirability of portrayals in the advertisements and a resulting identification with characters in the advertisements) to positive expectancies about alcohol use, to intentions to drink or actual drinking among young people (Austin and Knaus 2000; Austin et al. 2000). What young people appear to like in alcohol advertising is elements of humour and story, with somewhat less appreciation of music, animal characters and people characters. Liking of these elements significantly contributes to the overall likeability of specific advertisements, and then to greater likelihood of intent to purchase the brand and product advertised (Chen et al. 2005).

Cross-sectional analysis of an American study found that adolescents progressively internalized messages about alcohol, and that these messages affected their drinking behaviours. Young people who watched more primetime television found portrayals of alcohol in alcohol advertising more desirable, and showed greater desire to emulate the persons in the advertisements. These were associated with more positive expectancies about alcohol use, which then positively predicted liking beer brands as well as alcohol use (Austin 2006). Further analysis found a positive relationship between liking of alcohol advertisements at baseline and alcohol consumption over a follow-up period of three years, among a cohort of 9- to 16-year-olds from nine counties in the San Francisco Bay Area. The effects of liking the advertisements were mediated through expectancies about alcohol use, as well as through normative effects of the exposure to alcohol advertising. Young people who liked alcohol advertising not only believed that positive consequences of drinking were more likely, but also were more likely to believe that their peers drank more frequently, and that their peers approved more of drinking. All these beliefs interacted to produce a greater likelihood of drinking, or of intention to drink within the next year (Chen and Grube 2004).

4.2 What types of media are used for commercial communications?

Television portrayal of alcohol use has been given a lot of attention. When people are seen drinking on television they seem to be drinking alcohol most of the time (Brown and Witherspoon 2002). Pendleton et al. (1991), for example, found that every 6.5 min a reference to alcohol was made in their sample of 50 programmes on British television. Especially in fictional series the consumption of alcohol was prominently present. Furnham et al. (1997) concentrated on the portrayal of alcohol and drinking in six British soap operas and concluded that 86% of all programmes contained visual or verbal references to alcoholic beverages. More alcohol was consumed than any other kind of drink, but the sample of programmes almost never referred to the hazards of alcohol consumption.

Content analyses of portrayals of alcohol use on television suggest that incidences of drinking occur frequently and that these portrayals present drinking as a relatively consequence-free activity (Christenson et al. 2000; Grube 1993; Mathios et al. 1998; Wallack et al. 1990). Television characters who drink tend to be “high status” characters who are wealthy, successful, attractive, and in senior-level occupations. Their drinking is often associated with happiness, social achievement, relaxation, and camaraderie (Hundley 1995; Wallack et al. 1990).

Content analyses of the appeals used in alcohol advertisements suggest that drinking is portrayed as being an important part of sociability, physical attractiveness, masculinity, romance, relaxation and adventure (Grube 1993; Finn and Strickland 1982; Madden and Grube 1994). Many alcohol advertisements use rock music, animation, image appeals, and celebrity endorsers, which increase their popularity with underage television viewers (Aitken 1989; Grube 1993; Jones and Donovan 2001; Martin et al. 2002; Waiters et al. 2001). Not surprisingly, then, alcohol commercials are among the most likely to be remembered by teenagers and the most frequently mentioned as their favourites (Aitken 1989; Aitken et al. 1988; Aitken et al. 1988; Grube 1993).

Music and music videos An analysis of music that is popular with youth found that 17% of lyrics across all of the genres contained references to alcohol (Roberts et al. 1999). Alcohol was mentioned more frequently in rap music (47%) than in other genres, such as country-western (13%), top 40 (12%), alternative rock (10%), and heavy metal (3%). A common theme is getting intoxicated or high, although drinking also is associated with wealth and luxury, sexual activity, and crime or violence. As with television and film, consequences of drinking are mentioned in few songs and anti-use messages occur rarely. Product placements or brand name mentions occurred in approximately 30% of songs with alcohol mentions and are especially common in rap music (48%). From 1979 to 1997, rap music song lyrics with references to alcohol increased fivefold (from 8% to 44%); those exhibiting positive attitudes rose from 43% to 73%; and brand name mentions increased from 46% to 71% (Herd 2005). There were also significant increases in songs mentioning champagne and liquor (mainly expensive brand names) when comparing songs released after 1994 with those from previous years. In addition, there were significant increases in references to alcohol to signify glamour and wealth, and using alcohol with drugs and for recreational purposes. The findings also showed that alcohol use in rap music was much more likely to result in positive than negative consequences.

A similar pattern is found for music videos. DuRant et al. (1997) found that rap music videos contained the highest percentage of depictions of alcohol use, whereas rhythm and blues videos showed the least alcohol use. Additionally, alcohol use was found in a higher proportion of music videos that had any sexual content than in videos that had no sexual content. Both the content, which has

been shown to glamorize the use of alcohol, and the advertisements surrounding the music videos have a potential to make drinking alcohol more enticing to young viewers.

Films Content analyses indicate that alcohol is shown or consumed in most films. Thus, 92% (185) of the 200 most popular US movies for 1996–1997 contained images of drinking (Roberts et al. 1999). Underage use of alcohol occurred in approximately 9% of these films. In general, drinking was associated with wealth or luxury in 34% of films that contained alcohol references and pro-use statements or overt advocacy of use occurred in 20% of these films. Statements that advocated against drinking appeared in only 9% of the films with alcohol references. In all, 57% of films with alcohol references portrayed no consequences to the user at all. Similar findings have emerged from other content analyses (Everett et al. 1998). Surprisingly, an analysis of children’s animated feature films found that 47% of them depicted alcohol or drinking (Thompson and Yokota 2001). None of these animated films contained an overt health warning about alcohol use and good or neutral characters accounted for most of the drinking portrayals.

In terms of images of drinkers, a content analysis of 100 films from 1940 to 1989 compared drinkers with non-drinkers; drinkers were depicted more positively than non-drinkers (McIntosh et al. 1999). Specifically, drinkers were rated as having a higher socio-economic status, being more attractive, having more romantic and sexual involvements, and being more aggressive than non-drinkers. These films, however, presented negative consequences associated with drinking, such as death and loss of loved ones, on an equal basis with positive consequences, such as wealth and romance. A similar analysis of films produced from 1906 to 2001 found alcohol use to be portrayed predominantly in a normalized fashion, compared with demonized portrayals of illicit drugs, such as cannabis (Cape 2003).

Paid placements Paid placements of products in films, television, books, and video games is another way to embed alcoholic beverages in the daily lives of young people. Media placement decisions are the result of extensive market research and the use of standard market research databases to assess the demographic profiles of the audiences for various media vehicles, as well as the effectiveness of such vehicles in delivering target audiences to firms interested in placing advertising in them (Jernigan and O’Hara 2005).

Internet The rapid rise of information technology and, in particular, the Internet has given manufacturers a new promotional opportunity. Sophisticated web sites have been created using technology to produce interactive arenas with impressive graphics and eye-catching animation. Research on alcohol portrayals on the Internet has focused on youth access, exposure to alcohol marketing, and the potential attractiveness of commercial alcohol web sites to youth. Research has not addressed the content of non-commercial web sites that focus on alcohol products or drinking cultures. Similarly, no study has addressed the potential effects on consumption by youth of exposure to alcohol portrayals and promotion on the Internet. The Center for Media Education (quoted in Grube and Waiters (2005)) found that commercial alcohol web sites are easily accessible to youth, and are often accessed from search engines through non-related key word searches for games, entertainment, music, contests, and free screensavers. Content analyses of web sites that are registered to large alcohol companies revealed that young drinkers are targeted through a glorification of youth culture that offers humour, hip language, interactive games and contests, audio downloads of rock music, and community-building chat rooms and message boards. Overall, these sites were found to promote alcohol use. Only a handful of them included any information on the harm done by alcohol.

Grass roots and viral Grass-roots level marketing has also increased during the 1990s through the use of technologies such as the Internet, the adoption of racial, ethnic, and other holidays and celebrations and the expansion of sponsorship from sporting events to popular music concerts as alcohol marketing opportunities (McBride and Mosher 1985:143; Alaniz and Wilkes 1998), to events in which alcohol is often a central part of the activities, thereby embedding products in young people's lifestyles and daily practices (Aaker 1996; Fleming and Zwiebach 1999). Viral marketing techniques are also popular to encourage users to bring their friends to Internet sites, including features that permit users to send e-mail and mobile phone text messages to friends (Cooke et al. 2002). Little research has been done to date on the impact of such marketing on young people.

Sports sponsorship Commercial sponsorship has expanded greatly since the 1980's, led by the tobacco industry, but with the alcohol industry in second place (Meenaghan 1991, Meerabeau et al. 1991; Cooke et al. 2002). As a result, alcohol sponsorship has become common across Europe in all the key areas of youth culture: music, sport, dance, film and television.

Sponsorship brings a number of potential benefits to the sponsor. It can provide a means of avoiding regulations on direct advertising (Meerabeau et al. 1991). It is an inexpensive form of advertising which can easily reach favoured market segments (young males are both the keenest sports fans and the heaviest drinkers), and these consumers are less critical of it than traditional forms of advertising. Further, sponsorship of large international sports events can allow a company's brand to cross borders into countries where direct alcohol marketing may be severely restricted or even banned.

4.3 Are commercial communications targeted to young people?

Research in the United States shows that alcohol companies have placed significant amounts of advertising where youth are more likely per capita to be exposed to it than adults (Jernigan et al. 2005). In 2002 in the US, underage youth saw 45% more beer and ale advertising, 12% more distilled spirits advertising, 65% more low-alcohol refresher advertising, and 69% less advertising for wine than persons 21 years and older (Jernigan et al. 2004). Girls aged 12 to 20 years were more likely to be exposed to beer, ale, and low-alcohol refresher advertising than women in the group aged 21 to 34. Girls' exposure to low-alcohol refresher advertising increased by 216% from 2001 to 2002, while boys' exposure increased by 46%.

Magazines are the most tightly targeted of the measured media. Two studies to date have looked at alcohol advertising in this medium. Following on research suggesting that cigarette brands popular among youth ages 12 to 17 were more likely than other brands to be advertised in magazines (King et al. 1998), Sanchez et al. (2000) selected a convenience sample of 15 magazines, 11 with the highest youth readership (greater than 1.9 million readers) and 4 with the lowest youth readership (less than 0.8 million), and assessed the volume of influence by counting advertising pages for alcohol and tobacco in each magazine. The authors found a relationship between the size of youth readership and alcohol and tobacco advertisements, with magazines with more youth readers containing more alcohol and tobacco advertisements. Similar findings were made by Garfield et al. (2003), who found that after adjustment for other magazine characteristics, the advertisement rate ratio was 1.6 more times for beer and spirits for every additional one million adolescent readers. Wine industry advertising was not associated with adolescent readership, Figure 5.

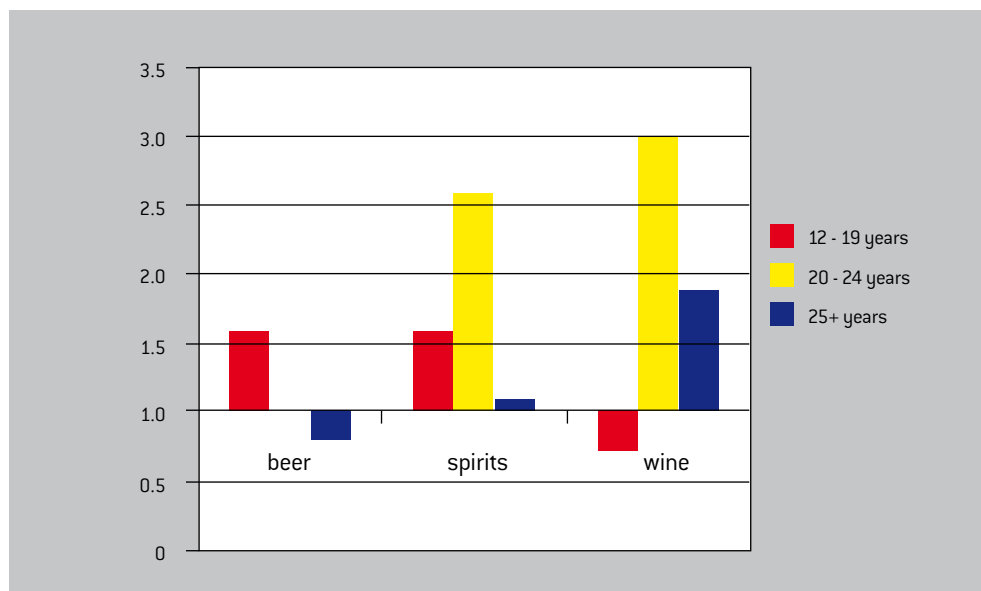


Figure 5 Magazine readership and alcohol advertisements. The advertisement rate ratio for every additional 1 million adolescent readers. For example, a US magazine that has 1 million more readers aged 12-19 years than another US magazine will have 1.6 times the number of beer and spirits advertisements. Source: Garfield et al. (2003).

4.4 Conclusions

Due to the biological changes of adolescence, young people are particularly vulnerable to alcohol advertisements, which manipulate adolescents' vulnerability by shaping their attitudes, perceptions and expectancies about alcohol use. This vulnerability is exacerbated by the enormous exposure to commercial communications, not only through traditional media, which are highly targeted to young people, but also through mobile phones and the Internet, which have particular appeal to young people. Article 95(3) of the Treaty of the European Union requires the Commission, in its proposals for the establishment and functioning of the Internal Market concerning health, to take as a base a high level of protection. An approximation of the European countries' advertising laws, including statutory regulations and a ban in certain media would protect young people, by regulating the promotion of alcohol, an addictive product responsible for over 25% of young male deaths and over 11% of young female deaths, and avoid a situation where young people begin using alcohol at an early age and in a risky fashion as a result of promotion and thereby become dependent.

5 Commercial communications and youth attitudes and desires to drink

There is an enormous wealth of evidence that alcohol advertisements are related to positive attitudes and beliefs about alcohol amongst young people. In addition, the content of advertisements is related to expectancies about the use of alcohol amongst young people and the role of alcohol in their lives. Young people are particularly drawn to elements of music, characters, story and humour. Young people who like advertisements believe that positive consequences of drinking are more likely, their peers drink more frequently, and their peers approve more of drinking. These beliefs interact to produce a greater likelihood of drinking, or of intention to drink in the near future. These results are not surprising, given that increased desires to drink must be one of the main aims of commercial communications.

5.1 Do commercial communications change young people's attitudes and desires to drink?

Social norms reflect one's beliefs about both the normality and appropriateness of particular beliefs and behaviours and, as a result, often create pressure to conform and behave in a particular way (Aas and Klepp 1992; Austin and Johnson 1997a; 1997b; Austin and Knaus 2000; Austin and Meili 1994; Austin and Nach-Ferguson 1995; Thomsen and Rekve 2004). In most cases, this pressure is internal and reflects what we think others will expect of us in particular situations. As suggested by social cognitive theory, social norms are often learned through observation and various experiences. Teenagers, for example, who see other teenagers drink – on television or in a real-life setting – may come to believe that all teenagers drink, in turn creating pressure to conform to this normative standard (Aas and Klepp 1992). The problem is that teenagers tend to overestimate the frequency of drinking by other teenagers, thus creating beliefs and related pressures that are not consistent with reality (Aas and Klepp 1992).

For children and adolescents who have not yet begun to drink, expectancies (i.e., expectant or accepting of the reality of future drinking) are influenced by normative assumptions about teenage drinking as well as through the observation of drinking by parents, peers, and models in the mass media (Aas 1993; Ary et al. 1993; Cumsille et al. 2000; Curran et al. 1997; Grube and Wallack 1994; Jackson et al. 1999; Webb et al. 1996). A growing body of research has linked exposure to portrayals of alcohol use in the mass media with the development of positive drinking expectancies by children and adolescents (Andsager et al. 2002; Austin and Johnson 1997a; 1997b; Austin and Knaus 2000; Austin and Meili 1994; Aitken 1989; Aitken et al. 1988; Austin and Meili 1994; Austin and Nach-Ferguson 1995; Austin et al. 2000; Dunn and Yniguez 1999; Grube and Wallack 1994; Kelly and Edwards 1988; Kotch et al. 1986; Martin et al. 2002; Hill and Caswell 2001).

Many studies suggest that portrayals of incidental drinking in entertainment media and messages and images in advertising influence beliefs and behaviours in those who are under the legal drinking age (Aitken 1989; Atkin 1990; Connolly et al. 1994; Jones and Donovan 2001; Martin et al. 2002; Waiters et al. 2001;

Wyllie et al. 1998). Positive alcohol expectancies, in turn, have also been linked to current adolescent alcohol use (Aas 1993; Aas et al. 1995; Aas et al. 1998; Austin and Johnson 1997a; 1997b; Brown et al. 1987; Connelly et al. 1994; Grube and Wallack 1994; Kotch et al. 1986). Some of these studies, however, have been criticized in that they have not provided sufficient empirical support to assert a causal link between media exposure and attitudes and behaviours (Kohn and Smart 1984; Smart 1988), and also because some have reported very small effect sizes (Beccaria 2001; Grimm 2002; Nelson 1999; Strickland 1983).

Content analysis suggests that many alcohol advertisements link drinking with valued personal attributes (e.g., sociability, elegance, physical attractiveness) and with desirable outcomes (e.g., success, relaxation, romance, adventure) (Strickland et al. 1982). In general, children and adolescents find alcohol advertising with celebrity endorsers, humour, animation, and popular music to be particularly appealing (Chen and Grube 2002; Atkin and Block 1983). Adolescent boys are especially attracted to alcohol advertisements that depict sports (Slater et al. 1996; 1997).

One relatively large study looked into connections between children's awareness of alcohol advertising and their knowledge and beliefs about drinking (Grube 1995; Grube and Wallack 1994). The students' awareness of alcohol advertising was ascertained through presentations of a series of still photographs taken from television commercials for beer, with all references to the product or brand deleted. The children were asked if they had seen each advertisement and, if so, to identify the product being advertised. Children who were more aware of advertising had increased knowledge of beer brands and slogans as well as more positive beliefs about drinking. Although attempts were made to account for the possibility that prior beliefs and knowledge could affect the children's awareness of the advertising, it is still possible that the relationship is due to children who hold more positive beliefs about drinking being those who are more aware of advertising.

Another study found that young people with more positive affective responses to alcohol advertising held more favourable drinking expectancies, perceived greater social approval for drinking, believed drinking was more common among peers and adults, intended to drink more as adults, and drank with higher frequency and in greater quantities (Chen and Grube 2002). Again, although an attempt was made to control for the reciprocal effects of alcohol consumption, intentions, and beliefs on positive effect toward alcohol advertising, it remains possible that the relationship is due to children who drink alcohol and in larger quantities hold more positive responses to alcohol advertisements.

A number of studies have attempted to find out whether children and adolescents who like alcohol advertisements have different drinking behaviours from those who do not like the advertisements. In one study of 213 children aged 7 to 12 years, the more the children liked alcohol advertisements, the more likely they were to have experimented with alcohol (Austin and Nach-Ferguson 1995).

A study of 500 New Zealand children aged between 10 and 17 years found that the degree to which the children liked a set of beer advertisements influenced how much they expected to drink at age 20 years (Wyllie et al. 1998a). Statistical analysis concluded that, while liking alcohol advertising influences current drinking status and intentions, the reverse does not seem to be true. In a similar study of an older age group, stronger results were reported in 1,012 randomly-selected 18- to 29-year-olds (Wyllie et al. 1998b). In this case, the more the respondents liked the alcohol advertisements, the more likely they were to drink at greater rates and to agree with positive belief statements such as "Drinking is a good way to escape from the hassles of everyday life." Most important, the more

they liked the advertisements, the more they reported drinking problems such as getting into a physical fight because of drinking. Statistical modelling was used to propose that alcohol advertising and responses to alcohol advertising influence drinking beliefs, behaviours, and problems rather than the other way around.

Amongst 15 to 20 year olds, alcohol advertising is influential in shaping young people's attitudes and perceptions about alcohol advertising messages, which are in turn predictive of both positive expectancies and intentions to drink, suggesting that the effects of alcohol advertising on intentions to drink are mediated by cognitive responses to advertising messages and positive expectancies (Fleming et al. 2004). Fourteen year olds with greater exposure to advertisements in magazines, at sporting and music events and on television are more advertisement-aware than those with less exposure, as are teens who watch more TV, pay attention to beer advertisements and know adults who drink (Collins et al. 2003). Amongst 10-17 year olds, the perceived likeability of beer advertisements is a function of the positive affective responses evoked by the specific elements featured in the advertisements. Liking of specific elements featured in beer advertisements significantly contributed to the overall likeability of these advertisements and subsequently to advertising effectiveness indicated by purchase intent of product and brand promoted by these advertisements (Chen et al. 2005).

A number of studies have attempted to understand the process by which exposure to alcohol advertising and incidental portrayals of drinking on television and music videos (DuRant et al. 1997; Robinson et al. 1998) influence alcohol-related beliefs and behaviours in children and adolescents. Aas and Klepp (1992), Atkin (1990), and Austin and Meili (1994) have argued that alcohol use is a learned behaviour, part of the adolescent socialization process. They contend that adolescents, particularly those who have not yet begun to experiment personally with alcohol, actively and deliberately seek information about alcohol from cultural sources as well as family and peers. One of the primary sources is television, which may present only a distorted view of the realities of alcohol use (Atkin 1990; Austin and Nach-Ferguson 1995; Christenson et al. 2000; Grube 1993; Kelly and Donohew 1999; Mirazee et al. 1989; Wallack et al. 1990). Heavier viewers are more likely than lighter viewers to agree that "people who drink are happy" and "you have to drink to have fun at a sporting event" (Neuendorf 1985).

Studies of the effects of exposure to depictions of drinking in films on youth are rare (Thompson 2005). In one study, college students were exposed to one of two versions of *A Star is Born*; one depicted the negative consequences of drinking for the lead character, whereas the other version had the negative consequences deleted (Bahk 1997; 2001). Viewing the version that had deleted scenes led to more favourable attitudes toward drinking and to stronger intentions to drink. In a similar study, college students were exposed to a series of film clips that depicted negative consequences of spirits consumption, positive consequences, or a control condition with no drinking (Kulick and Rosenberg 2001). Results indicated that participants who viewed the clips that showed positive consequences of drinking had significantly higher positive alcohol expectancies compared with controls. The control group and the group that viewed the clips that showed negative consequences did not differ in their intentions to drink spirits in the next week.

5.2 Conclusions

There can be little doubt that alcohol advertisements are related to positive attitudes and beliefs about alcohol amongst young people, and that the content of advertisements are related to expectancies about the use of alcohol amongst young people and the role of alcohol in their lives. As was presented in Chapter 2, there are clear differences between European countries' laws, regulations and administrative provisions on the advertising of alcohol products, and there is no body of evidence that reports on the adherence of alcohol advertisements to codes of content. Since the differences in national legislation are likely to give rise to increasing barriers to the free movement between countries of the products or services that serve as the support for such advertising, there are strong arguments to approximate the laws that deal with content across Europe. One example of such a law is the French Loi Evin, which limits the messages and images of alcohol advertisements to only refer to the quality of the product.

6 Commercial communications and youth drinking behaviour

6.1 Do commercial communications change young people's behaviour?

Six US-based well designed longitudinal studies and one Belgian well designed longitudinal study show that the volume of advertisements and media exposure increase the likelihood of young people starting to drink, the amount they drink, and the amount they drink on any one occasion (see Table 8). There have been no published longitudinal studies that do not find such an effect. These findings are similar to the impact of advertising on smoking and eating behaviour, and are not surprising, given that increased drinking must be the main hoped for outcome of commercial communications. It is difficult to study the relationship between expenditure on commercial communications, or whether or not there are bans on alcohol advertisements in a jurisdiction and drinking by young people. Where this has been done, some studies have found that increased expenditure on advertising is associated with increased alcohol-related harm amongst young people, and that total bans have reduced alcohol-related harm, whereas others have not. In general, later studies seem to have found more of an effect of commercial communications.

Smoking

The impact that advertising can have on young people's behaviour is well illustrated by smoking, where it has been accepted that advertising is associated with cigarette use. A systematic review of nine longitudinal studies that followed up a total of over 12,000 baseline non-smokers found that exposure to tobacco advertising and promotion was associated with the likelihood that adolescents will start to smoke (Lovato et al. 2003). Based on the strength of this association, the consistency of findings across numerous observational studies, the temporality of exposure and smoking behaviours observed, as well as the theoretical plausibility regarding the impact of advertising, the review concluded that tobacco advertising and promotion increases the likelihood that adolescents will start to smoke.

Food preferences

Similar results have been found for food preferences, where a systematic review found: reasonably strong evidence, from 14 studies, that exposure to food promotion influences children's food preferences; strong and consistent evidence, from 7 studies, that exposure to food promotion influences children's purchasing and purchase-related behaviour; modest evidence, from 11 studies, that exposure to food promotion influences children's food consumption behaviour; evidence from 6 studies of a significant relationship between television viewing and diet, obesity and cholesterol; evidence from one study that greater exposure to food adverts was associated with higher snacking and calorific consumption; evidence, from 8 studies, that food promotion exerts an influence on children's food behaviour and diet independently of other influences such as parents' behaviour or price; and, importantly, evidence, from 13 studies that food promotion influences children's brand preferences and their category preferences (Hastings et al. 2003).

Drinking alcohol

Early survey research of children and adolescents provided some evidence of links between alcohol advertising and a greater likelihood of drinking (Aitken et al. 1988; Atkin and Block 1980; Atkin et al. 1983 1984; Austin and Meili 1994; Austin and Nach-Ferguson 1995; Grube 1995; Grube and Wallack 1994; Wyllie et al. 1998a,b). The effects were small, however, and a few studies found no significant relationships (Adlaf and Kohn 1989; Strickland 1982 1983). Further, the survey study designs were unable to establish whether, for example, the advertisements caused the behaviours, or whether pre-existing behaviours led to an increased awareness of the advertisements.

High school boys who are heavier television viewers drink more than lighter viewers (Tucker 1985; Atkin 1990), although this is not the case for all programme viewing (Klein et al. 1993). More recently, it was found that television viewing was related to initiation of drinking over an 18-month period (Robinson et al. 1998). Each 1-hour increase in television viewing at baseline was associated with a 9% increased risk for initiating drinking during the following 18 months.

One New Zealand study that tracked a random sample of 677 teenagers over several years found that young men who, at age 15 years, could recall more alcohol commercials (mostly beer advertisements) drank greater quantities of beer when they were 18 than did those who could recall fewer commercials at age 15 (Connolly et al. 1994). However, opposite results were found for women.

Use of alcohol by adolescents has been associated with higher levels of music video exposure (Robinson et al. 1998; Durant et al. 1997; Brown and Witherspoon 2002). Robinson et al. (1998) found a 31% increased risk of drinking initiation over 18 months for each 1-hour increase in watching music videos. Another study of the effects of popular music videos on adolescent risk behaviour found a positive association between exposure to rap music videos and an increased likelihood of alcohol use among African American female adolescents (Wingood et al. 2003). Results of a 12-month follow-up showed that adolescents with a greater exposure to rap music videos were 1.5 times more likely to have used alcohol than were adolescents with less exposure to rap music videos. A Belgian study examined the association between music video viewing and the amount of drinking in adolescents (Van Den Bulck and Beullens 2005). The results showed that the quantity of alcohol consumed while going out in February 2004 was related to the adolescents' overall TV viewing and their music video exposure a year earlier. Even after controlling for gender, school year, and drinking in 2003, these results remained significant.

Other research showed a positive correlation between parental restrictions on non-childhood movies and a decreased likelihood of adolescent drinking. Dalton et al. (2002), for example, found that the prevalence of drinking among middle school students decreased as parental restrictions that were placed on viewing films increased. The prevalence of having tried alcohol was 46% for youth with no parental viewing restrictions, 16% for youth with partial restrictions, and 4% for those with complete restrictions. These prevalence rates held constant, even after controlling for other variables, such as student and parenting characteristics.

In the United States, Ellickson et al. (2005) followed over 3,000 13–15-year-olds for three years. Comparing drinkers and non-drinkers at baseline, they found that exposure to in-store beer displays predicted drinking onset for non-drinkers after 2 years, and exposure to advertising in magazines and beer concession stands at sports or music events predicted frequency of drinking after two years. They found no significant predictive effect of exposure to television advertising for either drinkers or non-drinkers. However, Stacy et al. (2004) did find effects

for television advertising. They began with a cohort of 2,250 12–13-year-olds and, using a combination of exposure and recall variables, found that, if a 11-12 year old, compared with the average, watched 60% more alcohol advertisements on TV, one year later, they were 44% more likely to have used beer, 34% more likely to have ever used wine/liquor, and 26% more likely to have had 3 or more drinks on one occasion.

Table 8 Results of longitudinal studies on impact of media and advertising exposure on alcohol use

Study	Country	Age group (years)	Follow-up (months)	Outcome at follow-up
Robinson et al (1998)	US	14-15	18	Each 1-hour increase in television viewing associated with a 9% increased risk for initiating drinking. Each 1-hour increase in watching music videos associated with a 31% increased risk for initiating drinking.
Wingood et al 2003	US	14-18	12	High exposure to rap music leads to 1.5 times greater likelihood to use alcohol over 12 month period compared with low exposure.
Stacy et al. (2004)	US	11-12	12	Those who watched 60% more alcohol advertisements on TV were 44% more likely to have used beer, 34% more likely to have ever used wine/liquor, and 26% more likely to have had 3 or more drinks on one occasion.
Van Den Bluck & Beullens (2005)	Belgium	13 + 16	12	Quantity of alcohol consumed while going out related to overall TV viewing and their music video exposure.
Ellickson et al. (2005)	US	13-15	36	Exposure to in-store beer displays, advertising in magazines and beer concession stands at sports or music events predicted drinking onset for non-drinkers after 2 years.
Snyder et al. (2006)	US	15-26	21	For every 4% more alcohol advertisements seen on TV, radio, billboards and in magazines drank 1% more drinks per month, and for every 15% more exposure in their media market on alcohol advertising, drank 3% more drinks per month.
Sargent et al (2006)	US	10-14	12-24	Significant linear and quadratic relationship between movie alcohol exposure and initiation of drinking, with a higher dose-effect relationship at lower movie alcohol exposure levels compared to higher levels.
McClure et al. (2006) [Same study as Sargent et al (2006)]	US	10-14	12-24	Owners of alcohol branded merchandise had higher rates of alcohol initiation (25%) compared with non-owners (13.1%).

Sargent and colleagues (2006) combined a school-based cross-sectional survey of 4655 adolescents between the ages of 10 and 14 from New Hampshire and Vermont with longitudinal follow-up of the 2406 respondents who reported never drinking to assess the impact of exposure to alcohol use in motion pictures on early onset of teen drinking. The researchers found alcohol use in 92% of a sample of 601 contemporary films, with median screen time for such use of 2.5 minutes. After controlling for sociodemographics, personality characteristics,

school performance, parenting style, and smoking experimentation, they found a direct linear relationship in the cross-sectional survey between exposure to movie alcohol use and prevalence of early-onset drinking. This linear relationship held for the longitudinal analysis as well, with the effect strongest at the lower levels of exposure. According to the authors, this strengthened the case for an independent effect of exposure to alcohol use in films on early-onset drinking, as opposed to the observed relationship being simply an artefact of the frequent movie-watching of poorly supervised or academically disengaged young people. The same survey also looked at ownership of alcohol-branded merchandise and its relationship to early-onset drinking. Alcohol producers distribute branded clothing, toys, game equipment and so on as part of embedding their brands in daily life. After adjusting for the confounders described above, young people who owned alcohol-branded merchandise were significantly more likely to have started to drink alcohol compared with students who did not own any such merchandise (McClure et al. 2006).

Research on the effects of sponsorship is limited, and much more is needed. Sponsorship produces higher levels of awareness than advertising amongst both users and non-users of the brand being examined (Hoek et al. 1997). For non-drinkers aged 12-13 years, exposure to beer concession stands at sporting events displays is predictive of drinking onset by age 14-15 years (Ellickson et al. 2005). Further, attendance at family entertainment venues associated with sporting events is predictive of alcohol consumption amongst 12-13 year olds (Thomsen et al. 2004).

6.2 Commercial communications and population level effects

Another way to study the impact of commercial communications on alcohol is to consider the relationship between expenditure on commercial communications, or whether or not there are bans on alcohol advertisements in a jurisdiction and drinking by young people. There have been different findings from such studies, Table 9 (see Calfee and Scheraga 1994; Saffer 1995 1996). A UK study suggested that a 1-percent decrease in alcohol advertising would be associated, at most, with a 0.1-percent decrease in consumption (Godfrey 1994). U.S. data from 1970 through 1990 has also been analyzed to investigate changes in per capita consumption as a function of changes in advertising. Although the years with higher total wine and spirits advertising had higher relative levels of consumption, a model that accounted for changes over time found no evidence that changes in advertising were related to changes in consumption (Fisher and Cook 1995). The results did indicate that increased advertising of spirits was linked to a drop in the market share for wine, suggesting that such advertising may realign market share.

Table 9 Results of econometric studies of advertising on alcohol use and harm variables ¹

TIME SERIES STUDIES	Jurisdiction	Time period	Effect
Blake and Nied (1997)	UK	1952-1991	Small positive effect of advertising
Bourgeois and Barnes (1979)	Canada	1951-1974	No effect of advertising
Calfee and Scheraga (1994)	France Germany, Netherlands Sweden		No effect of advertising
Duffy (1987)	UK	1963-1983	No effect of advertising
Duffy (1991)	UK	1963-1985 quarterly	No effect of advertising
Duffy (1995)	UK	1963-1988 quarterly	No effect of advertising
Duffy (2001)	UK	1964-1996 quarterly	No effect of advertising
Franke and Wilcox (1987)	US	1964-1984 quarterly	Small positive effect of beer and wine advertising
Grabowski (1976)	US	1956-1972	No effect of advertising
Lee and Trembley (1992)	US	1953- 1983	No effect of advertising
McGuinness (1980)	UK	1956-1975	Small positive effect of spirits advertising
McGuinness (1983)	UK	1956-1979	Small positive effect of beer advertising
Nelson (1999)		US quarterly	No effect of advertising
Nelson and Moran (1995)	US	1964-1990	No effect of advertising
Selvanathan (1989)	UK	1955-1975	Small positive effect of beer advertising
CROSS-SECTIONAL STUDIES	Jurisdiction	Time period	Effect
Goel and Morey (1995)	US	1959-1982	Positive effect of advertising
Saffer (1997)	US	1986-1989 quarterly	Positive effect of advertising
BAN STUDIES	Jurisdiction	Time period	Effect
Interrupted Time Series			
Makowsky and Whitehead (1991)	Saskatchewan		No effect of advertising
Ogborne and Smart (1980)	Manitoba		No effect of advertising
Smart and Cutler (1976)	British Columbia		No effect of advertising
Multivariate			
Ornstein and Hanssens (1985)	US	1974-1978	Positive effect of price advertising
Saffer (1991)	OECD	1970-1990	Negative effect of bans
Young (1993)	OECD	1970-1990	Mixed results
Nelson and Young (2001)	OECD	1970-1990	Positive effect of bans
Saffer and Dave (2002)	OECD	1970-1995	Negative effect of bans

¹ Taken from Saffer and Dave (2003).

Later studies have suggested significant effects of alcohol advertising on alcohol consumption and alcohol-related problems (Saffer 1991 1997; Saffer and Dave 2004), although the effects may be small (Saffer & Dave 2006). Countries with partial restrictions had 16% lower alcohol consumption rates and 10% lower motor vehicle fatality rates than did countries with no restrictions, and countries with complete bans on television alcohol advertisements had 11% lower consumption rates and 23% lower motor vehicle fatalities rates than did countries with partial restrictions (Saffer 1991 1993b). After accounting for regional price differences and population variables such as income and religion, increases in alcohol advertising were found to be significantly related to increases in total and night time vehicle fatalities across US states (Saffer 1997). It was estimated that a total ban on alcohol advertising might reduce motor vehicle fatalities by as much as 5,000 to 10,000 lives per year.

One US study that used longitudinal data showed that market-level alcohol advertising expenditures were related positively to self-reported exposure to alcohol advertising and to individual-level alcohol consumption among youth and young adults, although the effects were small (Snyder et al. 2006). Amongst American 15-26 year olds (who at baseline, on average, saw 23 advertisements per month, were exposed to \$3.4 per adult worth of advertisements per year, and who consumed 38.5 drinks per month), 21 months after baseline, for every 4% more alcohol advertisements seen on TV, radio, billboards and in magazines at baseline, they drank 1% more drinks per month, and for every 15% more exposure in their media market on alcohol advertising, they drank 3% more drinks per month (Snyder et al 2006). In the US, it has been estimated that an advertising ban would reduce deaths from harmful drinking by over 7,000, and result in a 16% decrease in alcohol-related life-years lost (Hollingworth et al 2006).

Amongst US 12 to 16 year-olds, the elasticity of advertising expenditure with respect to past month alcohol use was estimated at about 0.08 and with respect to past month binge participation at about 0.14 (Saffer and Dave 2003; Saffer and Dave 2006). The data suggested that the complete elimination of alcohol advertising could reduce adolescent monthly alcohol use by about 24% and binge participation by about 42%. The size of the effect was similar to a doubling of the price of alcohol, which was estimated to reduce adolescent monthly alcohol use by 28%, and binge drinking by 51%.

Econometric studies of the impact of advertising have a number of weaknesses that stem from the fact that they are dependent on the construction of complex equations to model an extremely sophisticated social phenomenon (Smart 1988; Godfrey 1989; Harrison and Godfrey 1989; Saffer 1996); data on key variables, most notably advertising expenditure, are often missing; advertising spending is assumed to be an accurate marker of advertising effectiveness, whereas content is also important (Strickland 1982); models do not account for consumers' active involvement in the communication process (Casswell 1995), leading to more effective advertisements (Casswell and Zhang 1998); complications such as feedback, the potential reciprocity of advertising and consumption levels, and advertising wear-out are frequently ignored; and they focus on advertising and ignore the integrated nature of marketing.

Not surprisingly, therefore, other studies have concluded that a total ban on broadcast alcohol advertising has no measurable effects on alcohol consumption, probably and largely due to substitution effects (Nelson 2003).

6.3 Conclusions

As with the impact of advertising on smoking and eating behaviour, there is now a body of evidence from six good quality longitudinal studies which shows that the volume of advertisements and media exposure increase the likelihood of young people starting to drink, the amount they drink, and the amount they drink on any one occasion. Chapter 2 concluded that the rules relating to the advertising of alcoholic products should in specific cases be approximated across Europe, and that, in particular there is a need to specify the extent to which alcohol advertising in certain categories of media and publications is allowed. The evidence presented in the present chapter would suggest, as is the case with tobacco, that consideration should be given to the prohibition of advertising of alcohol products on television and radio and in specified certain print media.

7 Non-statutory regulation of commercial communications

Although there is a reliance on ‘self-regulation’ of alcohol marketing in many countries, there is no scientific evidence available that tests the effectiveness of self-regulation or shows that it works in regulating the content of advertisements. There is evidence that codes of content do not deal with the elements of advertisements that young people find particularly appealing, such as humour. There are discrepancies between the views of marketing experts and self-regulatory bodies in the interpretation of codes, with experts tending to consider that a larger number of alcohol advertisements breach codes than self-regulatory bodies. More importantly, young people’s interpretation of commercial communications goes well beyond what can be captured in codes of content. There is no scientific evidence available that tests the effectiveness of self-regulation or shows that it works in regulating the volume of advertisements. There is evidence that where they have been in place, codes of volume have been repealed.

The claimed advantages of self-regulation over governmental regulation include efficiency, increased flexibility, increased incentives for compliance, and reduced cost. For example, it is argued that industry participants are likely to have superior knowledge of the subject compared to a government agency (Michael 1995). This factor may be particularly important where technical knowledge is needed to develop appropriate rules and determine whether they have been violated. Second, it is argued that self-regulation is more flexible than government regulation (Michael 1995). It is easier for a trade association to modify rules in response to changing circumstances than for a government agency to amend its rules. Moreover, self-regulation can be more tailored to the particular industry than government regulation. Another argument in support of self-regulation is that it provides greater incentives for compliance (Swire 1997). It is thought that if rules are developed by the industry, industry participants are more likely to perceive them as reasonable. Companies may be more willing to comply with rules developed by their peers rather than those coming from the outside. Fourth, it is argued that self-regulation is less costly to the government because it shifts the cost of developing and enforcing rules to the industry (Campbell 1999).

Critics of self-regulation question the basis for the arguments in favour of self-regulation. For example, while acknowledging that industry may possess greater technical expertise than government, it has been questioned whether companies will use that expertise to the benefit of the public, suggesting instead that they are more likely to employ their expertise to maximize the industry’s profits (Swire 1997). Similarly, the idea that industry will comply more willingly with its own regulations than those imposed from the outside might seem somewhat weak where industry is actively involved in developing regulations. Leaving regulation to the industry can create the possibility that industry may subvert regulatory goals to its own business goals (Baker and Miller 1997). Self-regulatory groups may be more subject to industry pressure than government agencies. Moreover, the private nature of self-regulation may fail to give adequate attention to the needs of the public or the views of affected parties outside the industry. Many question the adequacy of enforcement in self-regulatory regimes, recognizing that industry may be unwilling to commit the resources needed for vigorous self-enforcement

(Balkam 1997). It is also unclear whether industry has the power to enforce adequate sanctions. At most, a trade association may punish non-compliance with expulsion. Whether expulsion is an effective deterrent depends on whether the benefits of membership are important (Perrit 1997). Where a company can make greater profit by ignoring self-regulation than complying, it is likely to do so, especially where non-compliance is not easily detected by the consumer or likely to harm the particular company's reputation (Swire 1997).

7.1 Does non-statutory regulation regulate the content of commercial communications?

Codes of content typically include commitments not to couple alcohol with social and sexual success, and not to show intoxication or link alcohol with younger people or with driving. Research has consistently shown that the interpretation of these provisions varies depending on whether the review is being conducted by an industry appointed body, representatives of the public or the specific target audience involved. For example, an Australian study reported that representatives of the general public found a large sample of advertisements in violation of the relevant voluntary code, while the industry review board did not (Saunders and Yap 1991). As noted above, the content of contemporary marketing is increasingly sophisticated, subtle and interactive. This presents an increased challenge for monitoring and control of content. Brown (1995) identifies increasing use of post-modern elements in modern advertising – scepticism, subversiveness, irony, anarchy, playfulness and paradox. The fact that viewers are “active recipients” of advertising creates another major difficulty for the application of codes of content. Advertising messages are received and understood in the context of the recipients' lived experience. For example, advertisements that contain cues to indicate intoxication, without expressly showing it, can reinforce the norms supportive of heavy drinking. Research has documented that young people interpret advertisements as indicating drinking to intoxication (Wyllie et al. 1997; 1998) but these advertisements would not necessarily be perceived as such by all viewers. Similarly, while many codes restrict the use of young people in advertisements, having them present is not necessary for an advertisement to be appealing to under-age drinkers – it is enough to show the lifestyles to which young adults aspire (Hill and Caswell 2001). Thus, much alcohol marketing is likely to be effective in appealing to underage young people without violating the codes.

In the United States, the Federal Trade Commission (FTC) (1999) questioned in the past the efficacy of self-regulatory provisions. In August 1998, the FTC began an inquiry into the advertising practices of eight of the nation's top marketers of beer, wine, and spirits. It specifically sought information about how the companies had implemented Code provisions that prohibited advertising intended to appeal to or reach persons below the legal drinking age. At the same time, the FTC (1998) filed a complaint against a beer advertisement that depicted young adults partying and drinking beer on a sail boat. The complaint noted that the advertisements were inconsistent with the Beer Institute's Code because they portrayed boating passengers drinking beer “while engaged in activities that require a high degree of alertness and coordination to avoid falling overboard.” These actions by the FTC suggested that the self-regulatory codes of the alcoholic beverages industry were not being effectively enforced.

In 2003, the Federal Trade Commission commented that self-regulation practices had improved since the 1999 Report, although it expressed concern “that unless care is taken, alcohol advertisements targeted to young legal drinkers also may

appeal to those under the legal age". However, the reliability of its conclusions have been questioned (Mosher and Johnsson 2005).

In its 2003 report, the National Committee for the Review of Alcohol Advertising (NCRAA) in Australia found that approximately 5% of all complaints received by the Advertising Standards Board (ASB) related to alcohol advertising. None of the 361 complaints about a total of 48 different alcohol advertisements were upheld. The alcohol advertising code, the Alcohol Beverages Advertising Code (ABAC), was established by the alcohol beverage industry and dealt with alcohol-specific advertising issues, such as appeal to young people and alcohol consumption being linked to sporting or sexual success. The industry established an Adjudication Panel to hear complaints which fall under the ABAC Code. Since its establishment in 1998, the ABAC Adjudication Panel had heard a total of 20 complaints. Of this total, five were upheld and thirteen were dismissed. Between May 1998 and April 1999, 11 alcohol advertising complaints (relating to 9 separate advertisements) were lodged with the Advertising Standards Board (ASB) by members of the general public. Marketing experts and advertising students were asked, without knowing the ASB's rulings, to judge whether the advertisement(s) breached any of the clauses of the Australian Association of National Advertisers' Code of Ethics or Alcoholic Beverages Advertising Code (Jones and Donovan 2002). A majority of the expert judges perceived breaches of the Codes for seven of the nine advertisements. For all nine of the advertisements, a majority of the university students felt that each of the advertisements was in breach of one or more of the Codes of Practice. The ASB had ruled that none of the advertisements breached any of the Codes. During its review, NCRAA concluded that the current system did not address public health concerns about alcohol advertising and use: the general public was largely unaware of the complaint resolution system and, in particular, how to make complaints; there was insufficient reporting of how complaints were adjudicated and the outcomes of those complaints; the current system did not apply to all forms of advertising, for example, internet advertising and promotions; and the effectiveness of the current system was compromised by the amount of time taken to resolve complaints.

The importance of how young people perceive advertisements is illustrated by a study in which three groups of US college students (two-thirds of whom were aged 20 years or below) were exposed to the same set of two beer advertisements (Proctor et al. 2005). In these advertisements, the codes stipulated that the actors were not to be younger than 25 years of age and were not supposed to appear to be younger than 21 years of age. The results showed that while all actors were perceived to be, on average, older than the legal purchase age (21 years), the actors in one of the advertisements appeared younger than the minimum (real) age requirement of 25 years. All characters in the advertisements were perceived as attractive, with the female character being rated the highest. Although neither of the commercials depicted the physical act of drinking, the student raters nevertheless perceived the characters to be binge drinkers, in one advertisement perceived as consuming more than 5 drinks on normal occasions and more than 10 drinks on celebratory occasions. These data suggest that the information content of some advertisements, reflected perhaps in the actors' behaviour, appearance, language and situational context, conveys the message that the characters are heavy episodic drinkers, something that is not easily captured by advertising codes.

7.2 Does non-statutory regulation reduce the volume of commercial communications?

There is no scientific evidence available to determine whether or not non-statutory regulations reduce the volume of commercial communications. On the other hand, an example of the fragility of self-regulatory systems that have attempted to deal with the volume of advertisements comes from the advertising of spirits on US television, as reported by Campbell (1999): “The broadcast advertising of spirits was prohibited by the “Code of Good Practice” of the Distilled Spirits Council of the United States (DISCUS 1995), the national trade association of producers and marketers of distilled spirits. In March 1996, Seagram, the second largest marketer of distilled spirits, violated the Code of Practice by airing a spirits advertisement on a small sports cable network. A few months later, it violated the ban again by airing an advertisement on an ABC affiliate in Corpus Christi, Texas. Instead of imposing sanctions, however, DISCUS voted in November 1996 to repeal the voluntary prohibition (see Campbell 1999). According to DISCUS’s President, the association saw no basis for allowing the broadcast advertising of beer and wine and not other alcoholic beverages. The members of DISCUS were undoubtedly aware of the Supreme Court’s decision in *44 Liquormart, Inc. v. Rhode Island* announced in May 1996, which struck down a state law prohibiting the advertisement of spirits prices. This decision effectively removed the credible threat of government regulation. Although DISCUS repealed the ban on broadcast advertising, other provisions of the DISCUS Code of Practice remained in effect. For example, the Code cautioned that distilled spirits should be portrayed ‘in a responsible manner’ and ‘should not be advertised or marketed in any manner directed or primarily intended to appeal to persons below the legal purchase age.’”

7.3 Conclusions

There is no scientific evidence available that tests the effectiveness of non-statutory regulation or shows that it works in regulating the content of commercial communications or in reducing the volume of commercial communications. On the other hand, there is documentation and experience that shows that self-regulation does not prevent the kind of marketing which can have an impact on younger people. It could be argued that self-regulation could work to the extent that there is a current and credible threat of regulation by government. Further, it could be considered that, unless industry processes related to alcohol advertising standards come under a legal framework, and are monitored and reviewed by a government agency, governments may find that allowing industry self-regulation results in a loss of policy control of the marketing of a product that impacts heavily on public health.

8 Commercial communications and other related alcohol policy measures

8.1 Are other communication-related approaches, such as education, an effective antidote to commercial communications?

A variety of educational approaches have been used in an attempt to reduce the harm done by alcohol, including: education of younger people in classroom settings; information campaigns using mass media, including the use of drinking guidelines; school based activity carried out as part of school plus family initiatives and as part of community action projects; and community initiatives aimed to challenge norms around alcohol consumption and distribution. Whilst the provision of information and persuasion to reduce alcohol related harm might seem appealing, particularly in relation to younger people, theoretical evidence would suggest that it is unlikely to achieve sustained behavioural change in an environment in which many competing messages are received in the form of marketing and social norms supporting drinking, and in which alcohol is readily available. Many careful systematic reviews have failed to detect an impact of such educational approaches, and thus they are not an alternative to effective regulation of commercial communications. On the other hand, there is some evidence to support combining school and community interventions, in part because the community interventions may be successful in restricting access to alcohol by young people.

Although most media portrayals of alcohol are in the form of commercial advertisements, public health and safety perspectives are also portrayed in the mass media. Public service announcements on television or radio, paid counter-advertisements, billboards, magazine articles, newspaper pieces, and news or feature stories on television and radio all attempt to provide information about the risks and complications associated with drinking.

Public service announcements (PSAs) are messages prepared by non-governmental organizations, health agencies or by media organizations for the purposes of providing important information for the benefit of a particular audience. In contrast to paid advertising, PSAs depend upon donated time or space for distribution to the public. When applied to alcohol, PSAs usually deal with “responsible drinking,” the hazards of driving under the influence of alcohol, and related topics. Despite their good intentions, PSAs are considered an ineffective antidote to the high-quality pro-drinking messages that appear much more frequently as paid advertisements in the mass media (see Ludwig 1994; Murray et al. 1996).

In many cases the messages in PSAs are intended to be particularly relevant to drinking by youth (Connolly et al. 1994; Holder 1994). Reviews point to the limited impact on alcohol use and alcohol-related problems from mass media interventions that use a universal strategy (Gorman 1995). Nevertheless, a Canadian study (Casiro et al. 1994) found that after a TV campaign on the dangers of alcohol consumption during pregnancy, more women concluded that drinking would put their baby at risk, and attributed this information to television. In general, there is a need for more research to find out what audiences perceive and understand from mass media campaigns (Martin 1995). Looking at how

media set the public policy agenda is potentially more fruitful (Casswell 1997). For example, portrayal of alcohol issues in the news media (print, TV and radio) tends to be simplistic, sensational and dramatic (Gusfield 1995), and focuses on stories about individual people rather than alcohol in its social perspective. These portrayals raise interesting questions about the way news reporting may shape public attitudes and policy about alcohol, but this area has not been extensively researched.

Counter-advertising involves disseminating information about a product, its effects, or the industry that promotes it, in order to decrease its appeal and use. It is distinct from other types of informational campaigns in that it directly addresses the fact that the particular commodity is promoted through advertising (Stewart 1997). Tactics include health warning labels on product packaging and media literacy efforts to raise public awareness of the advertising tactics of an industry, as well as prevention messages in magazines and on television. Counter-advertising may also be a module in community or school prevention programs (e.g. Giesbrecht et al. 1990; Greenfield and Zimmerman 1993), and be used as part of the multiple agenda of government spirits board retail systems (Goodstadt and Flynn 1993).

In most countries, the number of public service announcements and counter-advertisements on alcohol issues are at best a small fraction of the volume of alcohol advertisements (see Fedler et al. 1994; Wyllie et al. 1996) and are rarely seen on television. Moreover, the quality of counter-advertising is often poor. A study of high school students in the Moselle region in France (Pissochet et al. 1999) found that respondents considered alcohol risk prevention advertising to be less effective than alcohol advertising, and daily drinkers were more critical than intermittent and non-drinkers.

Media advocacy However, mass media marketing can be used to reinforce community awareness of the problems created by alcohol use and to prepare the ground for specific interventions (Casswell et al. 1990; Holder and Treno 1997). Education and public information approaches can be used not just to seek to persuade the individual drinker to change his or her behaviour, but also to mobilise public support for prevention approaches that have demonstrated effectiveness (Casswell and Gilmore 1989), including limiting the availability of alcohol, drinking and driving counter measures, and regulation and harm reduction in and around drinking environments. Media advocacy can also be used to support a shift in public opinion for policy changes (Wallack et al. 1993), for example, the introduction of standard drinks labelling on all Australian alcohol containers (Stockwell and Single 1997).

Warning labels Warning labels on beverage containers that are required in Canada and the United States typically emphasize the potential for birth defects when alcohol is consumed during pregnancy and the danger of alcohol impairment when drinking and driving or operating machinery. Health risks are also mentioned. Some states require posted warnings of alcohol risks in establishments that serve or sell alcohol.

A fairly extensive amount of research has been conducted in connection with mandated warning labels on alcoholic beverage containers in the United States, (Kaskutas 1995). Studies have found that a significant proportion of the population report having seen warning labels (Hilton 1993; Graves 1993; Greenfield et al. 1993; Kaskutas and Greenfield 1992), and there is some evidence that warning labels may increase knowledge regarding the risks of drinking and driving and drinking during pregnancy (Kaskutas and Greenfield 1992; Greenfield 1997; Greenfield and Kaskutas 1998; Greenfield et al. 1999; Kaskutas and Greenfield 1997), with some evidence for a dose-response relationship between pregnancy-related conversations about drinking while pregnant and the

number of types of messages seen (Kaskutas et al. 1998). No direct impacts of warning labels on consumption or alcohol-related problems have been reported (MacKinnon et al. 1993; Grube and Nygaard 2001; Agostinali and Grube 2002). However, where there is a risk to health in consuming alcoholic beverages, and, in particular, during pregnancy, when taking medication or when driving or operating machinery, consumers should be informed about the risks, even if the evidence is limited for the impact of warning labels.

These findings contrast to evidence from tobacco where there is evidence of impact but this may reflect the nature of the warning labels. Recent research suggests that the introduction of more graphic and larger warnings for cigarettes has impacted on behaviour (Hammond et al. 2003) and is a source of information for consumers (Hammond et al. 2006).

School-based education While the provision of information and persuasion to reduce alcohol related harm might seem appealing, particularly in relation to younger people, it is unlikely to achieve sustained behavioural change in an environment in which many competing messages are received in the form of marketing and social norms supporting drinking, and in which alcohol is readily available. Many careful systematic reviews have evaluated school based education which aimed to reduce alcohol related harm, and found that classroom based education is not an effective intervention to reduce alcohol related harm; although there is evidence of positive effects on increased knowledge about alcohol and in improved attitudes, there is no evidence for a sustained effect on behaviour (see Anderson and Baumberg 2006).

A good example of a well-designed study is the School Health and Alcohol Harm Reduction Project (SHAHRP study) from Australia, which aimed to reduce alcohol-related harm in secondary school students. The study found that the intervention group (which received eight to ten 40 to 60 minute lessons on skill-based activities to minimize harm at age 13 years, and twelve further skills based activities delivered over 5-7 weeks at age 14 years) consumed significantly less alcohol at 8-month follow-up (31% difference), and were less likely to consume to risky levels (26% difference), by 17 months after the intervention, the total amount of alcohol consumed by intervention and comparison groups had lessened to a 9% difference and the difference in risky drinking to 4%.

Public education campaigns In general, public information campaigns are also an ineffective antidote to the high quality, pro-drinking messages that appear far more frequently in the media (see Anderson and Baumberg 2006). The exception to these rather negative effects is the evidence for the impact of mass media campaigns to reduce drinking and driving, particularly in jurisdictions with strong policies in place concerning drinking and driving.

Drinking guidelines Whilst drinking guidelines have been used in a number of countries, there have been no evaluations that find an impact of these guidelines on alcohol related harm (see Anderson and Baumberg 2006). The United Kingdom's 'sensible drinking guidelines' when relied upon as a key prevention strategy in a liberalizing policy environment failed to deter increases in alcohol consumption.

Industry responsible advertising While most alcohol advertising on television is for alcohol products, alcohol companies also place substantial amounts of what are dubbed "responsibility" advertisements, which may discourage drinking-driving or underage drinking, or otherwise encourage people to use alcohol responsibly and in moderation. According to the Center on Alcohol Marketing and Youth, from 2001 to 2003 alcohol companies placed 21,461 such advertisements, compared with 761,347 product advertisements. Youth were substantially more likely to be exposed to product than to responsibility advertisements: in 2003, they were

96 times more likely to see a product advertisement than an industry-funded advertisement about underage drinking, and 43 times more likely to see a product advertisement than an industry advertisement about drinking-driving (Center on Alcohol Marketing and Youth 2005). A recent study attempted to assess the impact of these messages on young people, and concluded that the advertisements were examples of strategic ambiguity, defined as “the strategic and purposeful use of messages with high levels of abstraction to simultaneously accomplish multiple, and often conflicting, organizational goals” (Smith et al. 2006, 2). More so with teens (age 16 to 18 years in the study’s sample) than with young adults (age 19 to 22 years), young people drew diverse messages from the advertisements. In the context of little evidence that such advertising is effective in encouraging responsible drinking behaviour (DeJong et al. 1992), the study found that young people’s evaluative responses about the brewers who placed the advertisements were predominantly favourable, while interpretations taken from the advertisements were mostly pro-drinking.

School and community approaches In contrast to the rather negative picture of the impact of educational approaches, there is evidence that supports combining school and community interventions, in part because the community interventions may be successful in restricting access to alcohol by young people (see Anderson and Baumberg 2006). An important component of community action programmes which has been shown to impact on young peoples’ drinking and alcohol related harm such as traffic crashes and violence is media advocacy, which can educate the public and key stakeholders within the community by increasing the status of alcohol on the political and public agenda and reframing the solution to alcohol related problems to include a co-ordinated approach by relevant sectors such as health, enforcement, non-governmental organizations, and municipal authorities. Thus, education and public information approaches can be used to mobilise public support for prevention approaches that have demonstrated effectiveness and media advocacy can also be used to support a shift in public opinion for policy changes.

8.2 Conclusions

Although educational approaches to reduce the harm done by alcohol to young people are intuitively appealing, theoretical evidence would suggest that they are unlikely to achieve sustained behavioural change in an environment in which many competing messages are received in the form of marketing and social norms supporting drinking, and in which alcohol is readily available. This is confirmed by a substantial body of evidence, which shows that educational approaches are largely ineffective in reducing the harm done by alcohol to young people. Thus, educational approaches cannot be considered as alternative alcohol policy options to the regulation of the marketing of alcohol, including price, availability and advertising.

9 Regulating commercial communications and other policy measures

The vast majority of European citizens agree with the statement that alcohol advertising targeting young people should be banned throughout Europe. It is possible to regulate commercial communications, including those in magazines, advertising and promotion campaigns, television portrayal, music and music videos, films, paid placements, Internet, grass roots and viral, and sponsorship. Even the most definitive regulation of commercial communications, an advertising ban would have no noticeable or very small adjustment costs in the advertising sector as a whole. Comparing five different policy options, brief advice to hazardous and harmful consumers, drink driving measures, taxation, restricted sales and an advertising ban, a World Health Organization model concluded that taxation, restricted sales and an advertising ban were the most cost effective options in reducing alcohol-related ill-health and premature death in the European Union.

9.1 Public Opinion and commercial communications

A 2006 Eurobarometer survey found that 76% of the European Union population would approve the banning of alcohol advertising targeting young people in all Member States (Eurobarometer 2007), Figure 6. Every second respondent (50%) said that they “agree totally” with this idea.

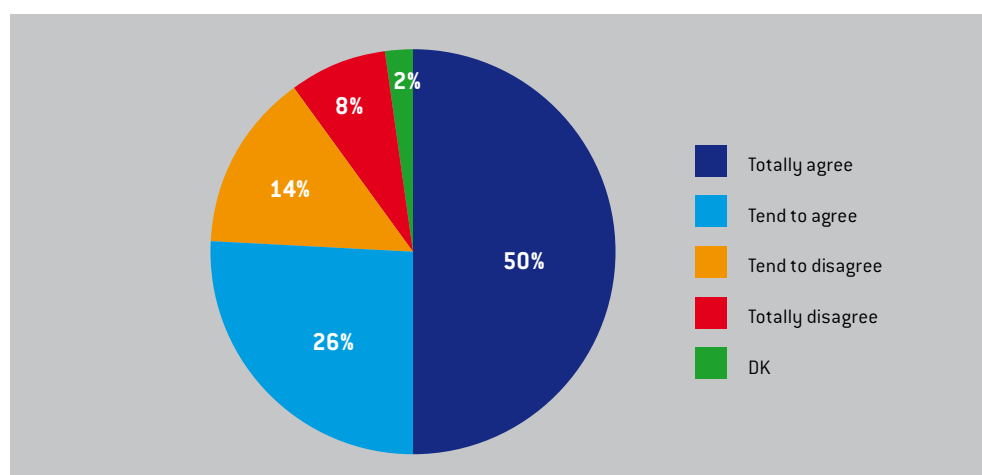


Figure 6 The extent to which European citizens agree with the statement that alcohol advertising targeting young people should be banned in all Member States. Source: Eurobarometer (2007).

A country-by-country analysis shows that in all polled countries the majority of respondents would favour such a ban, Figure 7. Respondents from Slovakia are the strongest supporters (93% (“totally agree” 68%)), while respondents from Luxembourg (58% (“totally agree” 41%)) and Denmark (59% (“totally agree” 37%)) seem to be the least committed in this respect.

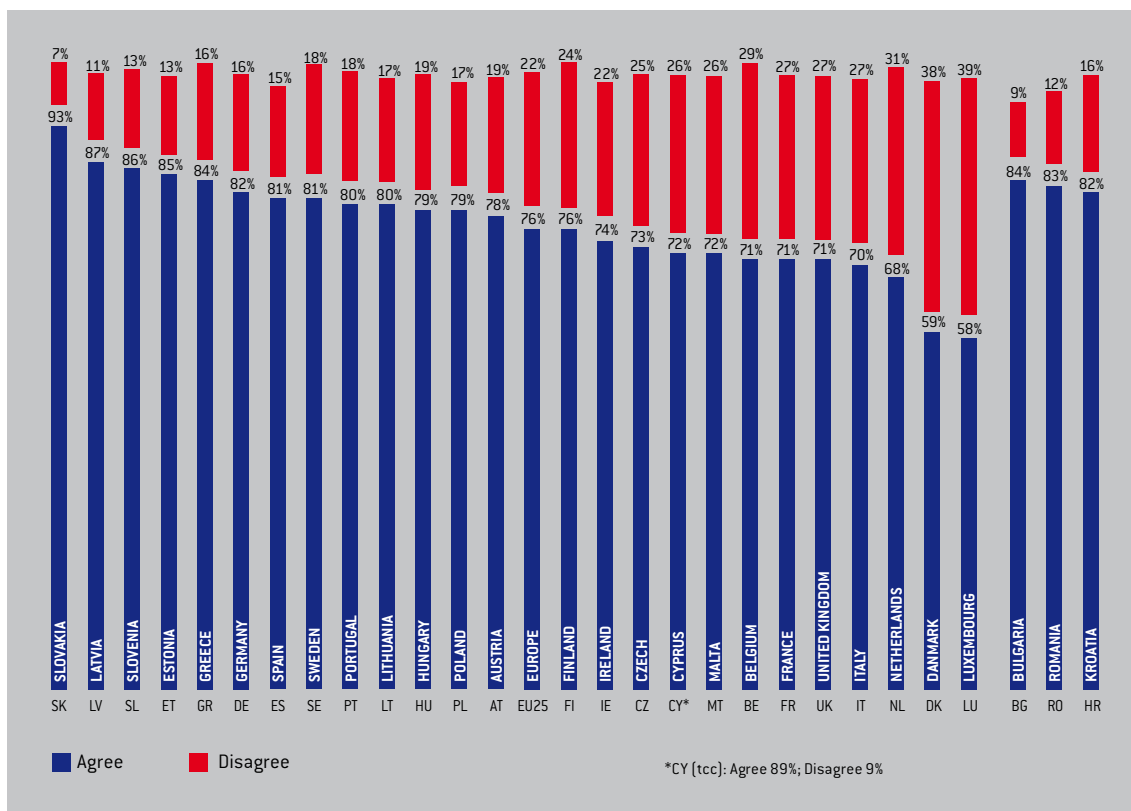


Figure 7 The extent to which European citizens agree with the statement that alcohol advertising targeting young people should be banned in all Member States. Source: Eurobarometer (2007).

9.2 Regulating commercial communications

Regulating commercial communications

There is considerable experience and precedence in regulating commercial communications at European and country levels, for both traditional and more modern media.

For example, the 2003 advertising and sponsorship of tobacco products Directive¹ places bans related to advertising of tobacco products in printed media and information society services, radio advertising and sponsorship, and sponsorship of events, with a requirement of countries to bring into force the laws, regulations and administrative provisions necessary to comply with the Directive, as well as communicating to the Commission the text of the main provisions of national law which they adopt in the field covered by the Directive.

Information society services, including the Internet, mobile phones and viral marketing are subject to a wide range of existing Directives, Recommendations and Consultations on the improvement of technologies, including a year 2000 Directive on information society services² and a 2002 Directive on the protection of privacy in the electronic communications sector³ that both deal with unsolicited communications for purposes of direct marketing, a 2003 Directive on Privacy and Electronic Communications⁴ that deals with marketing by electronic means, including telephone marketing, fax marketing, marketing by electronic mail, text, picture and video messaging, and viral marketing, a 2006 Recommendation that deals with the protection of minors within the audiovisual and on-line information

¹ <http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l152/l15220030620en00160019.pdf>

² http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&numdoc=32000L0031&model=guichett

³ <http://europa.eu/scadplus/leg/en/lvb/l24120.htm>

⁴ <http://www.opsi.gov.uk/si/si2003/20032426.htm>

5 <http://europa.eu/scadplus/leg/en/lvb/l24030b.htm>

6 http://ec.europa.eu/information_society/activities/sip/public_consultation/index_en.htm

services industry through regulatory, self-regulatory and co-regulatory means⁵, and a 2006 Consultation Paper on child safety and mobile phone services that considers techniques to protect children ranging from light approaches through to content rating, opt out, opt-in, and total banning, relying on procedures like age verification, filtering, blocking, notice and take down⁶.

Impacts of regulations

The advertising policy option that would have the most impact on young people's alcohol consumption is a complete ban on advertising. In the long-run, most economists would expect the effect on employment overall to be effectively zero (see Baumberg 2006). If people spend less money on alcohol then they will spend more money on other goods, which will create jobs elsewhere in the economy. The costs that therefore should be considered are the adjustment costs in the short-run.

Adjustment costs in the alcohol production sector will depend on the situation within a given country, and will be much lower for slow consumption declines than fast ones. A greater number of jobs are linked with alcohol in other sectors, particularly retail and the hotels, restaurants and catering (Horeca) sector. But, here, adjustment costs will be much lower in these sectors than for drinks production (Baumberg 2006).

Service sectors such as the media and advertising sector where only a small minority of turnover is related to alcohol are likely to have very low adjustment costs. Such considerations in the tobacco field have led to one consulting firm to state that *"it cannot accurately be concluded that a job in which only a small percentage of time is devoted to tobacco, and from which only a small percentage of income is derived from tobacco, is actually dependent upon the industry for existence in any real sense"* (Arthur Andersen Economic Consulting 1993, page 4).

Advertising expenditure typically fluctuates both overall and between advertising media and sectors; the Global Marketing Report shows that advertising expenditure in the 3 largest telecommunications companies rose by 33% between 2003 and 2004, while the lowest rise was in the six biggest alcoholic drinks companies at only 4% (Advertising Age Global Marketing Report 2005). The combination of the trend towards increasing advertising expenditures, the significant typical year-on-year fluctuations, and the low reliance on alcohol advertising within the sector means that while the *adjustment costs for particular firms may be noticeable, the adjustment costs of alcohol policies in the advertising sector as a whole will be very small.*

9.3 Comparison with other alcohol policy measures

The World Health Organization's CHOICE project (Chisholm et al. 2004) modelled five policy options: drink-driving laws, adjusted for the current level of implementation and enforcement via random breath testing; the impact of a tax on alcohol set at the current level increased by 25%, compared with no tax at all, and adjusted for the observed or expected level of unrecorded use; reduced access to and availability of alcohol through estimating what would happen if alcohol could not be purchased for a 24-hour period at the week-end; brief interventions such as physician advice provided in primary health care to 50% of the at risk population (adjusted to 25% for the present calculations); and the impact of advertising controls based on a 2%-4% reduction in the incidence of hazardous alcohol use, derived from international time-series analyses of the impact of an advertising ban (Grube and Agostinelli 2000; Saffer 2000; Saffer and Dave 2002).

1 A DALY (Disability-Adjusted Life Year) is a measure of the number of healthy years of life lost due to a specific risk factor (in this case alcohol). While a year of perfect health will count as 1 and a year of death will be 0, a year of damaged health that significantly affects Quality of Life will be somewhere in between. DALYs measure a gap in health between the current position and what could be achieved. Each DALY can be considered as one year of ill-health or premature death

A summary of the estimated impact of the five different interventions, (DALYs¹ prevented per million people per year) compared to a Europe with none of these policies is shown in Figure 8, and the estimated costs (Euro per 100 people per year) in Figure 9, for the three regions of the European Union, based on the WHO classification, Table 10.

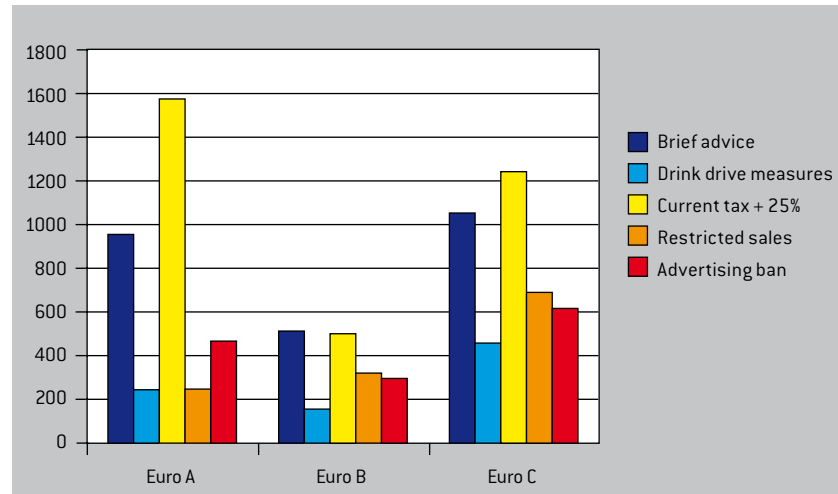


Figure 8 The impact of different policy options (DALYs prevented per million people per year) in the three sub-regions of European Union. Source: Chisholm et al. (2004), adapted.

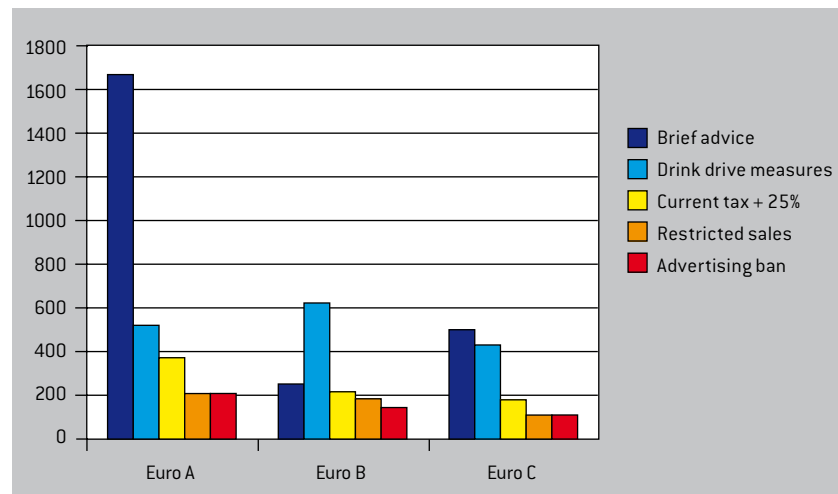


Figure 9 The cost of different policy options (per 100 people per year (€)) in the three sub-regions of European Union. Source: Chisholm et al. (2004), adapted.

Table 10 WHO classification of European Union countries based on mortality rates.

Europe A		Europe B	Europe C
Very low child and very low adult mortality		Low child and low adult mortality	Low child and high adult mortality
Austria	Italy	Cyprus	Estonia
Belgium	Luxembourg	Poland	Hungary
Czech Republic	Malta	Slovakia	Latvia
Denmark	Netherlands		Lithuania
Finland	Portugal		
France	Slovenia		
Germany	Spain		
Greece	Sweden		
Ireland	United Kingdom		

Were an advertising ban to be implemented throughout the Union, the model estimated that it can prevent between 300 (EuroB countries) and 616 (EuroC countries) DALYs per million people per year, at a cost of between € 12 (EuroC countries) and € 23 (EuroA countries) per 100 people per year. The model estimated that a ban on advertising implemented throughout the Union, could prevent 202,000 years of disability and premature death, at an estimated cost of € 95 million each year.

In all three regions of the European Union, taxation (current tax levels with a 25% increase in tax, compared to no tax) has the greatest impact in reducing the harm done by alcohol, followed by brief interventions delivered by primary health care providers to 25% of the at risk population. The three regulatory measures, (taxation, restricted sales and advertising controls) are the cheapest in terms of cost to implement, with drink driving measures and brief interventions being the most expensive.

Figures 10 to 12 show the cost effectiveness of the different interventions, singly and in combination. The vertical axis (log scale) is the cost (€) per 100m people per year and the horizontal axis (log scale) is the number of DALYs prevented per million people per year. The blue diagonal lines (also on a log scale moving from right to left) show the cost effectiveness in Euros per DALY prevented, ranging from € 100 per DALY (bottom right) to € 10,000 per DALY (top left). So, for example, in Figure 10, it is estimated that a ban on advertising at a cost of € 23 per 100 people per year could prevent 440 DALYs per million people per year with a cost effectiveness ratio of € 500 per DALY prevented.

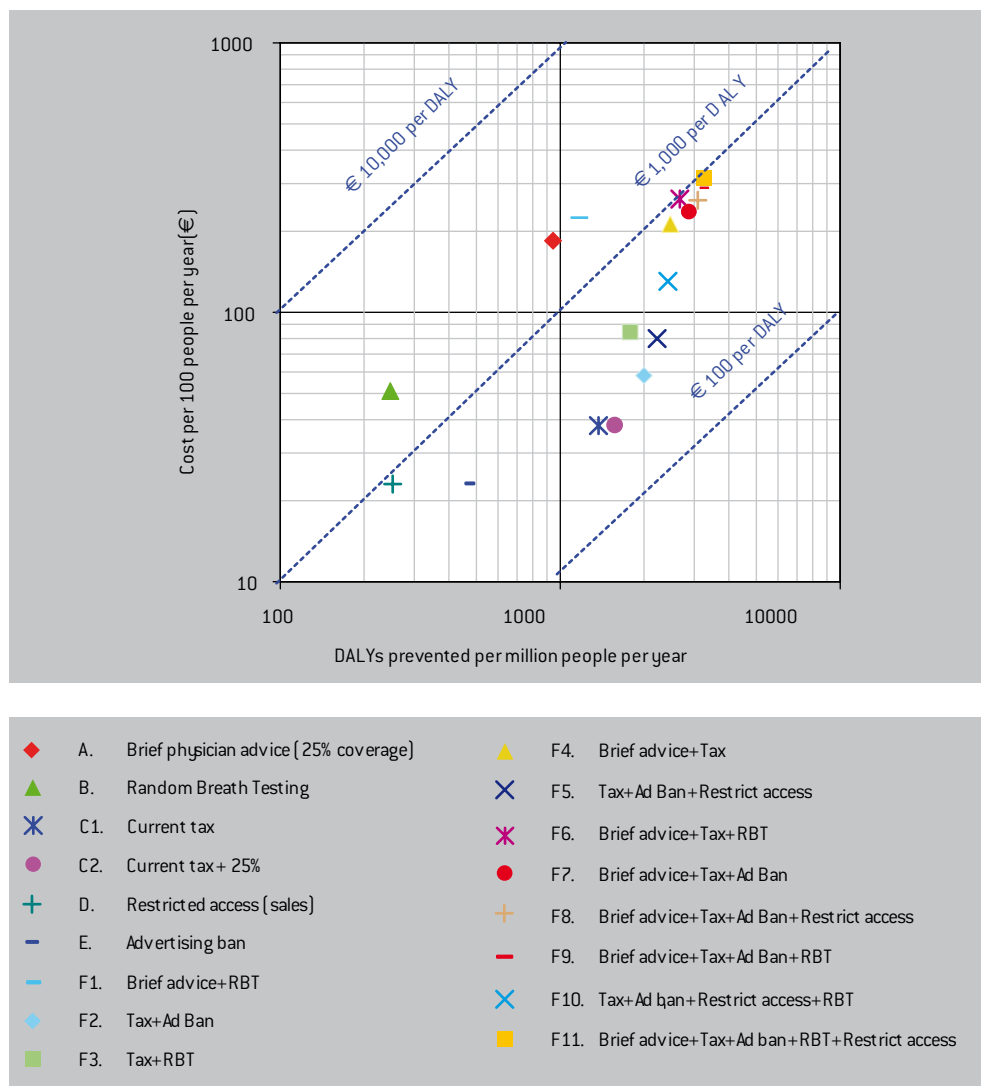


Figure 10 Cost effectiveness of different policy options for EU A countries (log scales). Diagonal lines show cost effectiveness in € per DALY prevented. (Legend, see below). Source: Chisholm et al. (2004) (adapted).

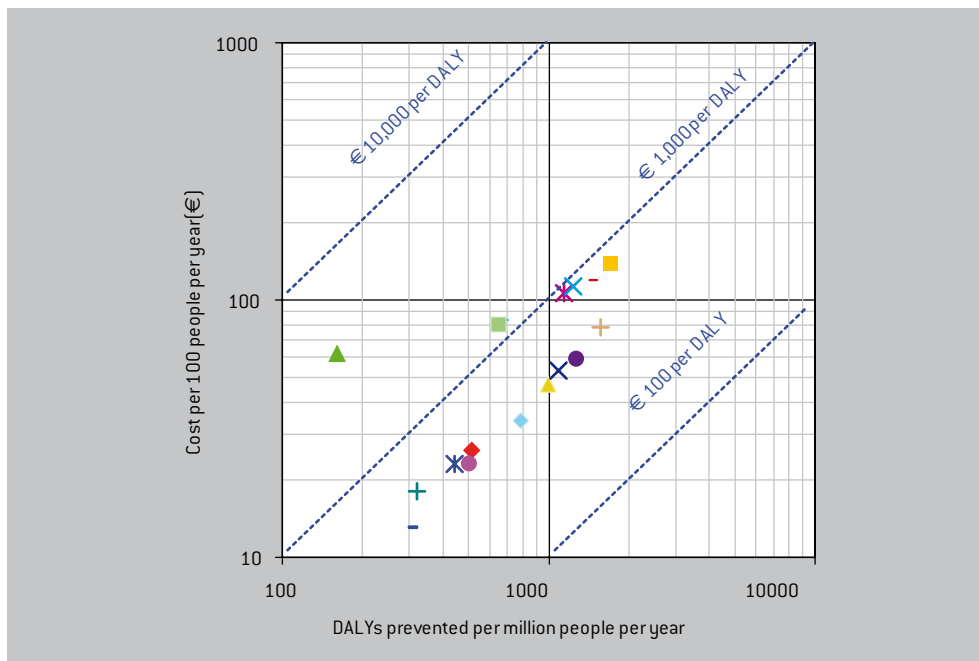


Figure 11 Cost effectiveness of different policy options for EU B countries (log scales). Diagonal lines show cost effectiveness in € per DALY prevented. (Legend, see Figure 10). Source: Chisholm et al. (2004) (adapted).

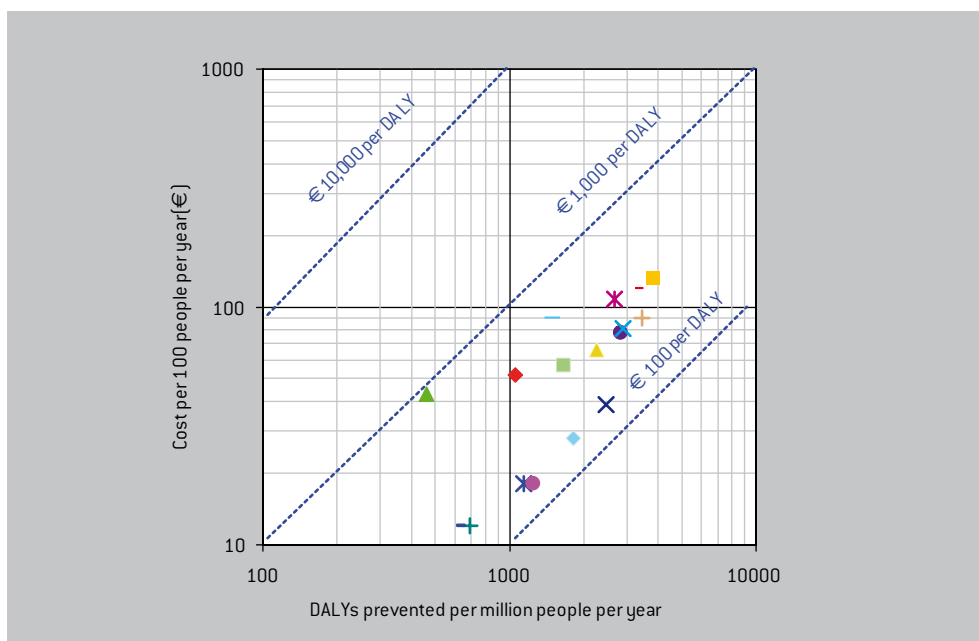


Figure 12 Cost effectiveness of different policy options for EU C countries (log scales). Diagonal lines show cost effectiveness in € per DALY prevented. (Legend, see Figure 10). Source: Chisholm et al. (2004) (adapted).

9.4 Conclusions

Experience from other sectors and directives demonstrate that it is quite possible to regulate commercial communications in both traditional and non-traditional media. The European Union 2003 tobacco directive has shown that it is quite possible to ban the advertising of tobacco products in the broadcast and print media, and to ban relevant sport sponsorship. Were such a ban to be introduced for alcohol products, the adjustment costs to the media sector would be non-existent or very small. Along with taxation and restricted sales an advertising ban would be one of the most cost effective options in reducing alcohol-related ill-health and premature death in the European Union. Three quarters of European citizens approve the banning of alcohol advertising targeting young people throughout Europe.

10 Recommendations for monitoring and evaluating commercial communications

It is clear from previous chapters that there is a deficiency in standardized systems that can monitor and evaluate commercial communications for alcohol. This chapter makes a number of recommendations to rectify this deficiency which should in turn better inform policy making. Using industry-standard data sources and methods that are available to advertisement agencies and advertisers, the volume of commercial communications as measured by expenditure and youth exposure to commercial communications needs to be monitored, tracked and reported for all Member States and the European Union as a whole annually. Youth exposure should be related to youth audience composition. Using governmental and non-governmental data sources, the prevalence, content and adherence to regulations of commercial communications need to be documented, tracked and reported on an annual basis. There needs to be a considerable investment in funding longitudinal studies to assess the impact of commercial communications in a range of media on youth drinking in a variety of European cultures.

10.1 Monitoring the volume of commercial communications

Expenditure as a measure of volume of commercial communications

As shown in Chapter 7, the volume of advertising expenditure is related to youth drinking. Many commercial companies track expenditure on alcohol advertisements. Advertising expenditures should be regularly published for the traditional media of broadcast, print and bill-boards, and the non-traditional media, including sponsorships, product placements, promotions, point-of-purchase advertising, and communications through the Internet and mobile phones.

Youth exposure in traditional media

As shown in Chapters 6 and 7, exposure to alcohol advertisements increases alcohol expectancies and increases youth drinking. There should be monitoring of underage exposure to alcohol advertising on a continuing basis, with regular reports to governments and the public.

Monitoring can be based on industry-standard data sources and methods that are available to advertisement agencies and advertisers as they make their decisions about where to place their advertising. “Reach” refers to the number or percentage of a target population that has the opportunity to see an advertisement or a campaign through exposure to selected media. “Frequency” indicates the number of times individuals are exposed to an advertisement or campaign and is most often expressed as an average number of exposures. “Gross rating points,” or “GRPs,” measure how much advertising exposure is going to a particular population on a per capita basis. For example, the measure of 100 GRPs indicates that the population received an average of one exposure per person (although this could have come from 50% of the population seeing the advertising two times).

GRPs are the mathematical product of reach and frequency: if the reach is 80% and the average frequency is 2.5, then the GRPs total 200. GRPs thus provide a comparative measure of per capita advertising exposure. They incorporate both how many advertisements the average viewer saw (frequency), and what percentage of a particular population was likely to have viewed the advertising (reach).

Monitoring and reporting should include information on the underage percentage of the exposed audience and estimated number of underage viewers for print and broadcasting alcohol advertising in national markets and, for television and radio broadcasting, in a selection of large local or regional markets. Monitoring should be based on different levels of youth audience composition, including those in which the proportion of the audience aged 12-17 years exceeded its proportion in the general population of a given local market, those in which the youth market exceeds its exact proportion of the general population of the audience, and double that proportion.

Alcohol Web sites

Alcohol Web sites should be tracked monitoring the number of in-depth visits from underage youth. The content of alcohol web sites should be monitored, including the presence of interactive games and sports, slot machines, customized music and instant-messaging accessories, high-tech e-mail features and downloadable screensavers and wallpapers.

Description of marketing practices

Including the product itself, the design or form of a marketing practice, sport sponsoring, price advertising, events with youth audiences, such as music events, and newer trends in marketing practices, such as integrated marketing, viral marketing, branding, and underground marketing, such as design competitions, fun quizzes, semi-spontaneous street parties, and broadcasting networks should all be described, monitored, and tracked over time.

10.2 Monitoring the regulation of commercial communications

Prevalence of regulations

The prevalence of regulations at different jurisdictional levels (European, country, regional, and municipal) should be documented, analyzed and tracked over time, with the regulations classified as statutory, non-statutory and co-regulatory; the type of media covered (broadcast, print, bill-boards, internet, mobile phone, and sponsorship); and implementation of European Union Directives and Recommendations that deal with Broadcast media and Information society services, including the Internet, mobile phones and viral marketing.

The articles of the regulations should be described, including those that deal with the volume of advertisements, including bans related to location, time, media, type of product or advertiser, and those that deal with the content of advertisements including humour, styles, involvement of children, drugs, violence, success, sexual success, and encouragement to drink.

Procedures to check violations

The prevalence of procedures to check violations of regulations at different jurisdictional levels (European, country, regional, and municipal) should be documented, analyzed and tracked over time, including such procedures as pre-launch checks, systematic checks, possibilities to complain, together with a description of the sanctions related to the violations, with the procedures classified as statutory and non-statutory.

Adherence to regulations

It is clear from Chapter 2 that there is no body of information which tells us the extent to which existing regulations at European and country levels are implemented and adhered to. Systematic monitoring systems need to be instigated to prepare regular reports on the implementation and adherence to regulations and numbers of violations.

Rating of advertisements

It is clear from Chapter 8, that there can be considerable discrepancies between the views of marketing experts and self-regulatory bodies in the interpretation of codes, with experts tending to consider that a larger number of alcohol advertisements breach codes than self-regulatory bodies. More importantly, young people's interpretation of commercial communications goes well beyond what can be captured in codes of content. Thus, there should be systems to perform regular rating of alcohol advertisements in relation to existing content regulations with panels of advertising experts and young people. The rating should measure the perceptions of experts and young people about marketing practices complying with existing regulations.

10.3 Promoting European research

A Chapter 6 noted, with few exceptions, a large part of the body of evidence demonstrating the impact of the volume of advertisements on youth drinking comes from the United States. The lack of evidence was corrected in the United States following a 1999 U.S. Federal Trade Commission report and a special report to the U.S. Congress in 2000. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) funded four longitudinal studies on this topic, which have been referred to in Chapter 6. There is an urgent need for similar European funding to continue to build up the body of evidence, notwithstanding the fact that the existing evidence strongly supports the conclusion that the volume of advertising does impact on youth drinking.

10.4 Conclusions

Given the estimates for the size of the expenditure on marketing of alcoholic products in Europe (see Chapter 1), and given the importance of the impact of commercial communications on youth expectancies and drinking, it is perhaps surprising the limited availability of European knowledge in this field. There are no obvious publicly available sources that track the volume of commercial communications and youth exposure, despite the possibilities of so doing. The work of the Centre on Alcohol Marketing and Youth of the United States provides one model of tracking and reporting on youth exposure (www.camyo.org). Although the ELSA project has documented the current regulation of commercial communications throughout Europe (<http://www.elsa-europe.org>), one of the surprising conclusions of the project has been the compelling lack of a body of knowledge which assesses the adherence, let alone the impact of the current regulatory systems at European and country level, including a number of European Directives and Recommendations which call for routine monitoring. Urgent attention needs to be given to correcting this poor state of affairs, with the creation of the European equivalent of the Centre on Alcohol Marketing and Youth.

References

- Aaker, D.A.** (1996). Building strong brands. New York: The Free Press.
- Aas, H.** (1993): Adaptation of the Alcohol Expectancies Questionnaire (AEQ-A): A short version For use among 13-year-olds in Norway. *Scandinavian Journal of Psychology* 34: 107-118.
- Aas, H. and Klepp, K.I.** (1992): Adolescents' alcohol use related to perceived norms. *Scandinavian Journal of Psychology* 33: 315-325.
- Aas, H. and Klepp, K.I. and Laberg, J.C. and Aarø, L.E.** (1995): Predicting adolescents' intentions to drink alcohol: Outcome expectancies and self-efficacy. *Journal of Studies on Alcohol* 56: 293-299.
- Adlaf, E. M. and Kohn, P. M.** (1989). Alcohol advertising, consumption, and abuse: A covariance-structural modeling look at Strickland's data. *British Journal of Addictions* 84: 749-757.
- Adolescents' alcohol outcome expectancies. *J Appl Soc Psychol* 31:1492-9.
- Agostinelli, G. and Grube, J.W.** (2002). Alcohol counter-advertising and the media: A review of recent research. *Alcohol Research and Health* 26: 15-21.
- Aitken, P.P.** (1989): Television alcohol commercials and under-age drinking. *International Journal of Advertising* 8: 133-150.
- Aitken, P.P. and Eadie, D.R. and Leathar, D.S. and McNeill, R.E.J. and Scott, A.C.** (1988): Television advertisements for alcohol drinks do reinforce under-age drinking. *British Journal of Addiction* 83: 1399-1419.
- Aitken, P.P. and Leathar, D.S. and Scott A.C.** (1988): Ten to sixteen-year-olds' perceptions of advertisements for alcoholic drinks. *Alcohol and Alcoholism* 23: 491-500.
- Alaniz, M.L., and Wilkes, C.** (1998). Pro-drinking messages and message environments for young adults: The case of alcohol industry advertising in African American, Latino, and Native American communities. *Journal of Public Health Policy*, 19(4), 447-471.
- Anderson, P. and Baumberg, B.** (2006) Alcohol in Europe: A Public Health Perspective -- Report to the European Commission. London: Institute of Alcohol Studies. (http://ec.europa.eu/health-eu/news_alcoholineurope_en.htm)
- Andsager, J.L. and Austin, E.W. and Pinkleton, B.E.** (2002): Gender as a variable in the interpretation of alcohol-related messages. *Communication Research* 29: 246269.
- Arthur Andersen Economic Consulting** (1993). Tobacco Industry Employment: A Review of the Price Waterhouse Economic Impact Report and Tobacco Institute Estimates Of 'Economic Losses From Increasing the Federal Excise Tax'. California, Arthur Andersen Economic Consulting.
- Ary, D.V. and Tildesley, E. and Hops, H. and Andrews, J.** (1993): The influence of parent, sibling, and peer modeling and attitudes on adolescent use of alcohol. *International Journal of the Addictions*.
- Atkin CK, Block M.** (1983). Effectiveness of celebrity endorsers. *Journal of Advertising Research* 23:57-61.
- Atkin, C. K.** (1990) Effects of televised alcohol messages on teenage drinking patterns. *Journal of Adolescent Health Care* 11, 10-24.
- Atkin, C. K. and Block, M.** (1980). Content and effects of alcohol advertising, Washington: Bureau of Tobacco, Alcohol and Firearms.
- Atkin, C. K., Hocking, J. and Block, M.** (1984). Teenage drinking: Does advertising make a difference? *Journal of Communication* 34: 157-167.
- Atkin, C. K., Neuendorf, K. and McDermott, S.** (1983). The role of alcohol advertising in excessive and hazardous drinking. *Journal of Drug Education* 13: 313-324.
- Austin, E.W. and Johnson, K.K.** (1997a): Immediate and delayed effects of media literacy training on third graders' decision making for alcohol. *Health Communication* 9: 329-349.
- Austin, E.W. and Johnson, K.K.** (1997b): Effects of general and alcohol-specific media literacy training on children's decision making about alcohol. *Journal of Health Communication* 2: 17-42.
- Austin, E.W. and Knaus, C.** (2000): Predicting the potential for risky behavior among those "too young" to drink as the result of appealing advertising. *Journal of Health Communication* 5: 13-27.

- Austin, E.W. and Meili, H.K.** (1994): Effects of interpretations of televised alcohol portrayals on children's alcohol beliefs. *Journal of Broadcasting and Electronic Media* 38: 417-435.
- Austin, E.W. and Nach-Ferguson, B.** (1995): Sources and influences of young school-age children's general and brand-specific knowledge about alcohol. *Health Communication* 7: 1-20.
- Austin, E.W. and Pinkleton, B.E. and Fujioka, Y.** (2000): The Role of interpretation processes and Parental discussion in the media's effects on adolescents' use of alcohol. *Pediatrics* 105: 343-349.
- Babor TF, Caetano R, Casswell S, Edwards G, Giesbrecht N, Graham K, Grube JW, Gruenewald PJ, Hill L, Holder HD, Homel R, Österberg E, Rehm J, Room R and Rossow I** (2003). *Alcohol: No Ordinary Commodity. Research and Public Policy.* Oxford, Oxford Medical Publication, Oxford University Press.
- Bahk CM.** (2001). Perceived realism and role attractiveness in movie portrayals of alcohol drinking. *Am J Health Behav* 25:433– 46.
- Baker, D.I. and Miller, W.T.** (1997). Privacy, Antitrust and the National Information Infrastructure: Is Self-Regulation of Telecommunications-Related Personal Information a Workable Tool?, in *PRIVACY AND SELF-REGULATION IN THE INFORMATION AGE (NTIA 1997)*, available at <http://www.ntia.doc.gov/reports/privacy/privacy_rpt.htm>.
- Balkam, S.** (1997). Content Ratings for the Internet and Recreational Software, in *Privacy And Self-Regulation In The Information Age (NTIA 1997)*, available at
- Barnard M, Forsyth AJM.** (1998). Alcopops and under-age drinking: changing trends in drink preference. *Health Educ.* 6:208–12.
- Baumberg, B.** (2006). The global economic burden of alcohol: a review and some suggestions. *Drug and Alcohol Review* 25 527-552.
- Beccaria, F.** (2001): The Italian debate on alcohol advertising regulation. *Contemporary Drug Problems* 28 (4): 48-50.
- Berka, Grabenwarter, Holoubek (ed.)** (2006) *Medienfreiheit versus nhaltsregulierung.* Austria, Vienna: Manzsche Verlags- und Universitätsbuchhandlung.
- Bonomo, Y.A., Bowes, G., Coffey, C., Carlin, J.B. and Patton, G.C.** (2004) Teenage drinking and the onset of alcohol dependence: a cohort study over seven years. *Addiction* 99 1520-1528.
- Brown, J. and Witherspoon, E.** (2002) The mass media and American adolescents' health. *Journal of Adolescent Health* 31, 153–170.
- Brown, S.A. and Christiansen, B.A. and Goldman, M.S.** (1987): The alcohol expectancy questionnaire: An instrument for the assessment of adolescent and adult alcohol expectancies. *Journal of Studies on Alcohol* 48: 483-491.
- Calfee, J. and C. Scheraga,** (1994). The Influence of Advertising on Alcohol Consumption: A Literature Review and An Econometric Analysis of Four European Nations, *International Journal of Advertising*, vol. 13, no. 4, p. 287-310.
- Campell, A.J.** (1999). Self-Regulation and the media. *Federal Communications Law Journal.* 1999:3, 711-772.
- Cape GS.** (2003). Addiction, stigma and movies. *Acta Psychiatr Scand* 10:163– 9.
- Casiro O.G., Stanwick R.S., Pelech A., Taylor, V., Friesen, F, Fast, M., Peabody, D., Alto, L., Edge-Mazowita G, Dean, H, and Esquivel, A.** (1994) Public awareness of the risks of drinking alcohol during pregnancy: The effects of a television campaign. *Canadian Journal of Public Health* 85, 23-27.
- Casswell S, Zhang J.** (1998). Impact of liking for advertising and brand allegiance on drinking and alcohol-related aggression: a longitudinal study. *Addiction.* 93(8):1209–17.
- Casswell S.** (1995). Does alcohol advertising have an impact on public health? *Drug Alcohol Rev.* 14:395–404.
- Casswell S.** (1997) Public discourse on alcohol. *Health Promotion International* 12, 251- 257.
- Casswell, S. and Gilmore, L.** (1989) Evaluated community action project on alcohol. *Journal of Studies on Alcohol*, 50, 339-346.
- Casswell, S. and Maxwell, A.** (2005). Regulation of Alcohol Marketing: A Global View *Journal of Public Health Policy* (2005) 26, 343–358.
- Casswell, S., Ranson, R. and Gilmore, L.** (1990). Evaluation of a mass-media campaign for the primary prevention of alcohol-related problems. *Health Promotion International* 5 9-17.
- CDC** (2003) Point-of-Purchase Alcohol Marketing and Promotion by Store Type --- United States, 2000–2001 April 11, 2003 / 52(14);310-313
- Center on Alcohol Marketing and Youth** (2004). Clicking with Kids: Alcohol Marketing and Youth on the Internet . <http://camy.org/research/internet0304/>.

- Center on Alcohol Marketing and Youth** (2005). Alcohol Industry “Responsibility” Advertising on Television, 2001 to 2003. <http://camy.org/research/responsibility2005/>.
- Chaloupka F.J., Saffer H., and Grossman M.** (1993) Alcohol-control policies and motor-vehicle fatalities. *Journal of Legal Studies* 22, 161-186.
- Chaloupka, F.J, Grossman, M. and Saffer, H.** (2002) The effects of price on alcohol consumption and alcohol-related problems. *Alcohol Research and Health*, 26, 22-34.
- Chaloupka, F.J., And Wechsler, H.** (1996). Binge drinking in college: The impact of price, availability, and alcohol control policies. *Contemporary Economic Policy* 14(4):112–124.
- Chen M-J, Grube JW.** (2002). TV beer and soft drink advertising: what young people like and what effects? *Alcohol Clin Exp Res* 26(6):900– 6.
- Chen MJ; Grube JW; Bersamin M; Waiters E; Keefe DB** (2005). Alcohol advertising: what makes it attractive to youth? *J Health Commun Sep;10(6):553-65*.
- Chisholm, D., Rehm, J., Van Ommeren, M., and Monteiro, M.** (2004). Reducing the Global Burden of Hazardous Alcohol Use: a Comparative Cost-Effectiveness Analysis. *Journal of Studies on Alcohol*, 65(6): 782-93.
- Christenson, P.G. and Henriksen, L. and Roberts, D.F.** (2000): Substance use in popular prime time television. Office of National Drug Control Policy: Mediascope.
- Coate D. and Grossman M.** (1988) Effects of alcoholic beverage prices and legal drinking ages on youth alcohol use. *Journal of Law and Economics* 31, 145-171.
- Collins RL; Schell T; Ellickson PL; McCaffrey D** (2003). Predictors of beer advertising awareness among eighth graders. *Addiction Sep;98(9):1297-306*.
- Connolly, G.M. and Casswell, S. and Zhang, J.F. and Silva, P.A.** (1994): Alcohol in the mass media and drinking by adolescents: A longitudinal study. *Addiction* 89: 1255-1263.
- Cook P.J. and Moore, M.J.** (1993) Taxation of alcoholic beverages. *Economics and the Prevention of Alcohol-Related Problems*. National Institute of Alcohol Abuse and Alcoholism, Rockville, MD.
- Cook, P.J. and Moore, M.J.** (2002). The economics of alcohol abuse and alcohol control policies. *Health Affairs* 2002 21 120-133.
- Cooke, E., Hastings, G. and Anderson, S.** (2002) Desk research to examine the influence of marketing and advertising by the alcohol industry on young people’s alcohol consumption. Research prepared for the World Health Organization by the Centre for Social Marketing at the University of Strathclyde.
- Cowan, R., and Mosher, J.F.** (1985). Public health implications of beverage marketing: Alcohol as an ordinary consumer product. *Contemporary Drug Problems*, 12(4), 621-657.
- Cumsille, P.E. and Sayer, A.G. and Graham, J.W.** (2000): Perceived exposure to peer and Adult drinking as predictors of growth in positive alcohol expectancies during adolescence. *Journal of Consulting and Clinical Psychology* 68: 531-536.
- Curran, P.J. and Stice, E. and Chassin, L.** (1997): The relation between adolescent alcohol use And peer alcohol use: A longitudinal random coefficients model. *Journal of Consulting and Clinical Psychology*.
- De Bellis M.D., Clark DB, Beers S.R. et al.** (2000): Hippocampal volume in adolescent-onset alcohol use disorders. *Am J Psychiatry* 157 (5) : 737-744.
- Dee, T.S.** (1999). State alcohol policies, teen drinking and traffic accidents. *Journal of Public Economics* 72(2): 289–315.
- Dee, T.S., And Evans, W.N.** (2001). Teens and traffic safety. In: Gruber, J., ed. *Risky Behavior Among Youth: An Economic Perspective*. Chicago: University of Chicago Press, pp. 121–165.
- DeJong W. and Langford L.M.** (2002) A typology for campus-based alcohol prevention: moving toward environmental management strategies. *Journal of Studies on Alcohol Suppl.* No.14, 140-147.
- Dent CW; Grube JW; Biglan A** (2005) Community level alcohol availability and enforcement of possession laws as predictors of youth drinking. *Prev Med* 2005 Mar;40(3):355-62.
- Distilled Spirits Council of the United States, I.** (1998). Code of good practice for distilled spirits advertising and marketing (1998). Available: <http://www.discus.org/industry/code/>.
- Duffy, M.** (1991). Advertising in Demand Systems: Testing a Galbraithian Hypothesis, *Applied Economics*, 23, 485-496.
- Duffy, M.** (2001). Advertising in Consumer Allocation Models: Choice if Functional Form, *Applied Economics*, 33, 437-456.
- Duffy, M.,** (1995). Advertising in Demand Systems for Alcoholic Drinks and Tobacco: A Comparative Study, *Journal of Policy Modeling*, vol. 17 no. 6, p. 557-577.

- Dunn, M.E. and Yniguez, R.M.** (1999): Experimental demonstration of the influence of alcohol advertising on the activation of alcohol expectancies in memory among fourth and fifth-grade children. *Experimental Clinical Psychopharmacology* 7: 473-83.
- DuRant, R.H. and Rome, E.S. and Rich, M. and Allred, E. and Emans, S. J. and Woods, E.R.** (1997): Tobacco and alcohol use behaviors portrayed in music videos: A content analysis. *American Journal of Public Health* 87: 1131-1135.
- Ellickson PL; Collins RL; Hambarsoomians K; McCaffrey DF** (2005). Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction* Feb;100(2):235-46.
- ELSA** (2007a). Regulation of Alcohol Marketing in Europe: ELSA project overview on the existing regulations on advertising and marketing of alcohol. http://www.stap.nl/elsa/elsa_project/introduction.html.
- ELSA** (2007b). Report on Adherence to Alcohol Marketing Regulations: ELSA project report on the adherence to codes of self-regulation, laws and regulatory systems. http://www.stap.nl/elsa/elsa_project/introduction.html.
- Endicott, R. C.** (2005). "Advertising Age's 19th Annual Global Marketing." *Advertising Age* November 14: 1-53.
- Euromonitor International.** (2004). *The World Market for Spirits and FABs*. Euromonitor International. London, England; Section 22. .
- European Commission** (2006). Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/alcohol_com625_en.pdf
- European Court of Justice** (2004). C-262/02 and C-429/02. <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en&Submit=Submit&docrequire=alldocs&numaff=C-262%2F02&datefs=&datefe=&nomusuel=&domaine=&mots=&resmax=100>
- Evans, W.N., Neville, D., Graham, J.D.,** (1991). General deterrence of drunk driving: evaluation of recent American policies. *Risk Analysis* 11, 279–289.
- Everett SA, Schnuth RL, Tribble JL.** (1998). Tobacco and alcohol use in top-grossing American films. *J Comm Health* 23:317– 24.
- Federal Trade Commission** (1998) Beck's North America, Inc., Complaint, available at <<http://www.ftc.gov/os/1998/9808/9823092.cmp.htm>>.
- Federal Trade Commission.** (1999). Self-regulation in the alcohol industry: A review of industry efforts to avoid promoting alcohol to underage consumers. Washington, DC.
- Federal Trade Commission.** (2003). *Alcohol Marketing and Advertising: A Report to Congress*. Washington, DC: FTC, September 2003.
- Fedler F, Philips M., Raker P.Schefsky, D. and Soluri, J.** (1994) Network commercial promote legal drugs: Outnumber anti-drug PSA's 45-to-1. *Journal of Drug Education* 24, 291-302.
- Finn, T.A. and Strickland, D.E.** (1982): A content analysis of beverage alcohol advertising: II. Television Advertising. *Journal of Studies on Alcohol* 43: 964-989.
- Fisher, J.C., and Cook, P.A.** (1995). *Advertising, Alcohol Consumption, and Mortality: An Empirical Investigation*. Westport, CT: Greenwood Press.
- Fleming K; Thorson E; Atkin CK** (2004). Alcohol advertising exposure and perceptions: links with alcohol expectancies and intentions to drink or drinking in underaged youth and young adults. *J Health Commun Jan-Feb; 9(1):3-29*.
- Fleming, D., and Zwiebach, P.** (1999). UDV unveils global campaign for Johnnie Walker, its first ever. *Impact*, 29(23), 1, 18-19.
- Forster, J.L., McGovern, P.G., Wagenaar, A.C., Wolfson, M., Perry, C.L. and Anstine, P.S.** (1994) Ability of young people to purchase alcohol without age identification in northeastern Minnesota, USA. *Addiction* 89:699-705.
- Forster, J.L., Murray, D.M., Wolfson, M. and Wagenaar, A.C.** (1995) Commercial availability of alcohol to young people: Results of alcohol purchase attempts. *Preventive Medicine* 24:342-347.
- Garfield, C.F., Chung, P.J. and Rathouz, P.J.** (2003). Alcohol advertising in magazines and adolescent readership. *Journal of American Medical Association* 289 2424-2429.
- Giesbrecht N., Conley P., Denniston R., Gliksman L., Holder H.D., Pederson A., Room R., and Shain M.** (eds.) (1990) *Research, Action, and the Community: Experiences in the Prevention of Alcohol and Other Drug Problems*. Rockville, Maryland: Office for Substance Abuse Prevention.
- Gius, M.P.** (2005). An estimate of the effects of age, taxes and other socioeconomic variables on the alcoholic beverage demand of young adults. *The Social Science Journal* 42 13-24.
- Godfrey C.** (1989) Factors influencing the consumption of alcohol and tobacco: the use and abuse of economic models. *British Journal of Addiction*, 84, 1123-1138.

- Godfrey, C.** (1994). Economic influence on change in population and personal substance behavior. In: Edwards, G., and Lader M., eds. *Addiction: Process of Change*. Society for the Study of Addiction Monograph No. 3. New York, NY: Oxford University Press, pp. 163–187.
- Goel, R., and M. Morey,** (1995). The Interdependence of Cigarette and Liquor Demand, *Southern Economic Journal*, vol. 62, no. 2, p. 441-459.
- Goldberg ME, Gorn GJ, Lavack AM.** (1994). Product innovation and teenage alcohol consumption: The case of wine coolers. *J Public Policy and Marketing*. 13(2):218–27.
- Goodstadt M. and Flynn L.** (1993) Protecting oneself and protecting others: refusing service, providing warnings, and other strategies for alcohol warnings. *Contemporary Drug Problems* 20, 277-291.
- Gorman D.M.** (1995) Are school-based resistance skills training programs effective in preventing alcohol abuse? *Journal of Alcohol and Drug Education* 41, 74-98.
- Graves K.** (1993) Evaluation of the alcohol warning label: a comparison of the United States and Ontario, Canada in 1990 and 1991. *Journal of Public Policy and Marketing* 12, 19-29.
- Gray, J.A.M.** (2001). *Evidence-based Health Care*. London: Churchill Livingstone.
- Greenfield T.K.** (1997) Warning labels: Evidence of harm-reduction from long-term American surveys. In: Plant M., Single E., and Stockwell T. (eds.) *Alcohol: Minimizing the Harm*, pp. 105-125. London: Free Association Books.
- Greenfield T.K. and Kaskutas L.A.** (1998) Five years' exposure to alcohol warning label messages and their impacts: Evidence from diffusion analysis. *Applied Behavioral Science Review* 6, 39- 68.
- Greenfield T.K. and Zimmerman R. (eds.)** (1993) *CSAP Prevention Monograph - 14: Second International Research Symposium on Experiences with Community Action Projects for the Prevention of Alcohol and Other Drug Problems*. Washington, US: Department of Health and Human Services.
- Greenfield T.K., Giesbrecht N., Johnson S.P., Kaskutas L.A., Anglin L.T., Kavanagh L., Room R., and MacKenzie B.** (1999) *US Federal Alcohol Control Policy Development: A Manual*. Berkeley, California: Alcohol Research Group.
- Greenfield T.K., Graves K.L., and Kaskutas L.A.** (1993) Alcohol warning labels for prevention: national survey results. *Alcohol, Health and Research World* 17, 67-75.
- Grimm, M.** (2002): A spirited debate. *American Demographics* 24 (4): 48-50.
- Grossman M., Coate, D. and Arluck, G.M.** (1987) Price sensitivity of alcoholic beverages in the United States: Youth, alcohol consumption. In *Advances in substance abuse: Behavioral and biological research. Control issues in alcohol abuse prevention: Strategies for states and communities*, (H.D. Holder, Ed.), pp. 169-198, JAI, Greenwich, CT.
- Grossman, M.** (1993). The economic analysis of addictive behavior. In: Hilton, M.E., and Bloss, G., eds. *Economics and the Prevention of Alcohol-Related Problems*. NIAAA Research Monograph No. 25, NIH Pub. No. 93–3513. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 91–123.
- Grossman, M., And Markowitz, S. Alcohol regulation and violence on college campuses. In: Grossman, M., and Hsieh, C.R., eds.** (2001). *Economic Analysis of Substance Use and Abuse: The Experience of Developed Countries and Lessons for Developing Countries*. Cheltenham, United Kingdom: Edward Elgar, pp. 257–289.
- Grossman, M., Markowitz, S.,** (1999). *Alcohol Regulation and Violence on College Campuses*. Working Paper 7129, National Bureau of Economic Research, Cambridge, MA.
- Grube J, Agostinelli G.** (2000). *Alcohol Advertising and Alcohol Consumption: a review of recent research*. Prevention Research Centre: Berkeley, California.
- Grube JW; Stewart K** (2004) Preventing impaired driving using alcohol policy. *Traffic Inj Prev* 2004 Sep;5(3):199-207.
- Grube, J.** (1997): Preventing sales of alcohol to minors: results from a community trial. *Addiction* 92 [supplement 2]: S251–S260.
- Grube, J. W.** (1993). Alcohol portrayals and alcohol advertising on television. *Alcohol Health and Research World*, 17, 6166.
- Grube, J. W. and Wallack, L.** (1994) Television beer advertising and drinking knowledge, beliefs, and intentions among school children. *American Journal of Public Health* 84, 254–259.
- Grube, J.W.** (1995). Television alcohol portrayals, alcohol advertising, and alcohol expectancies among children and adolescents. In: Martin, S.E., and Mail, P., eds. *Effects of the Mass Media on the Use and Abuse of Alcohol*. NIAAA Research Monograph No. 28. NIH Pub. No. 95-3743. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 105–121.
- Grube, J.W. and Nygaard, P.** (2001) Adolescent drinking and alcohol policy. *Contemporary Drug Problems* 28:87-132.

- Grube, J.W. and Waiters, E.** (2005) Alcohol in the Media: Content and Effects on Drinking Beliefs and Behaviors Among Youth *Adolesc Med* 16 (2005) 327–343.
- Gruenewald P.J., Millar A.B., and Roeper P.** (1996) Access to alcohol: geography and prevention
- Gusfield J.** (1995) Meta-analytic perspective on “alcohol in American culture”. In: Martin S.E. and Mail P. (eds.) *Effects of the Mass Media on the Use and Abuse of Alcohol: NIAAA Research Monograph No. 28*, pp. 31-35. Bethesda, Maryland: National Institute on Alcohol Abuse and Alcoholism.
- Hammond, D., Fong, G.T., McDonald, P., Cameron, R. and Brown, K.** (2003) Impact of the graphic Canadian warning labels on adult smoking behaviour, *Tobacco Control*, 12: 391-395.
- Hammond, D., Fong, G.T., McNeill, A., Borland, R., and Cummings, K.** (2006) Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: findings from the International Tobacco Control (ITC) Four Country Survey, *Tobacco Control*, 15: 19-25.
- Harrison L, Godfrey C.** (1989) Alcohol advertising controls in the 1990's. *Int J Advertising*, 8(2):167–80.
- Hastings GB, Stead M, McDermott L, Forsyth AJM, MacKintosh AM, Rayner M et al.** (2003). Review of Research on the Effects of Food Promotion to Children – Final Report and Appendices. Prepared for the Food Standards Agency. Published on Food Standards Agency website. Available at <http://www.food.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf>, accessed 28 April 2005.
- Hastings, G., Anderson, S., Cooke, E., and Gordon, R.** (2005). Alcohol Marketing and Young People's Drinking: A Review of the Research *Journal of Public Health Policy* (2005) 26, 296–311.
- Hauritz M., Homel R., Townsley M., Burrows T., and McIlwain G. (eds.)** (1998a) An Evaluation of the Local Government Safety Action Projects in Cairns, Townsville and Mackay: A Report to the Queensland Department of Health, the Queensland Police Service and the Criminology Research Council. Australia: Griffith University, Centre for Crime Policy and Public Safety; School of Justice Administration.
- Herd D** (2005). Changes in the prevalence of alcohol use in rap song lyrics, 1979-97 *Addiction* Sep;100(9):1258-69.
- Hibell, B., Andersson, B., Bjarnason, T., Ahlström, S., Balakireva, O., Kokkevi, A., and Morgan, M.** (2004). The ESPAD Report 2003: alcohol and other drug use among students in 35 European countries. Stockholm, Sweden: The Swedish Council for Information on Alcohol and Other Drugs (CAN) and The Pompidou Group at the Council of Europe.
- Hill, L. and Caswell, S.** (2001) Alcohol advertising and sponsorship: commercial freedom or control in the public interest. In Eds. Heather, N., Peters, T.J. and Stockwell, T. *International Handbook of alcohol dependence and problems*. Chichester: John Wiley and Sons Ltd. pp 823-846, 2001.
- Hilton, M. E.** (1993). An overview of recent findings on alcoholic beverage warning labels, *Journal of Public Policy and Marketing* 12(1): 1-9.
- Hoek J, Gendall P, Jeffcoat M, Orsman D** (1997). Sponsorship and advertising: a comparison of their effects. *Journal of Marketing Communications*, 3: 21-32.
- Holder H.D.** (1994) Mass communication as an essential aspect of community prevention to reduce alcohol-involved traffic crashes. *Alcohol, Drugs and Driving*, 10, 3-4.
- Holder, H.D. and Treno, A.J.** (1997). Media advocacy in community prevention: news as a means to advance policy change. *Addiction* 92 S189-199.
- Hollingworth, W., Ebel, B.E., McCarty, C.A., Garrison, M.M., Christakis, D. & Rivara, F.P.** (2006). Prevention of deaths from harmful drinking in the United States: The potential effects of tax increases and advertising bans on young drinkers. *Journal of Studies on Alcohol* 67 300-308.
- Hughes, K., MacKintosh, A.M., Hastings, G., Wheeler, C., Watson, J., and Inglis, J.** (1997) Young People, Alcohol and Designer Drinks *British Medical Journal*, 8 February 1997, 314: 414-418.
- Hundley, H. L.** (1995). The naturalization of beer in Cheers. *Journal of Broadcasting and Electronic Media* 39: 350-359.
- Impact Databank** (2005). *The Global Drinks Market: Impact Databank Review and Forecast*. New York, M. Shanken Communications, Inc.
- Jackson, C. and Henriksen, L., and Dickinson, D.** (1999): Alcohol-specific socialization, parenting behaviors and alcohol use by children. *Journal of Studies on Alcohol*, 60, 362-367.
- Jackson, M.C., Hastings, G., Wheeler, C., Eadie, D., and MacKintosh, A.M.** (2000). Marketing alcohol to young people: Implications for industry regulation and research policy. *Addiction*, 95(Supplement 4), S597-S608.
- Jefferis, B.J.M.H., Powwer, C. and Manor, O.** (2005) Adolescent drinking level and adult binge drinking in a national birth cohort. *Addiction* 100 543-549.

- Jernigan D, O'Hara J.** (2004). Alcohol advertising and marketing. In: National Research Council and Institute of Medicine, Reducing Underage Drinking: A Collective Responsibility, RJ Bonnie and ME O'Connell, eds. (Washington DC: National Academies Press), 625-653.
- Jernigan DH; Ostroff J; Ross C; O'Hara JA** (2004). Sex differences in adolescent exposure to alcohol advertising in magazines. *Arch Pediatr Adolesc Med Jul*;158(7):629-34.
- Jernigan, D. and I. S. Obot** (2006). "Thirsting for the African Market." *African Journal of Drug & Alcohol Studies* 5(1): 57-70.
- Jernigan, D. and O'Hara, J.** (2005). Alcohol Advertising and Promotion. In Eds. Pp 625-653.
- Jernigan, D.H.** (1997). Thirsting for markets: The global impact of corporate alcohol. San Rafael: The Marin Institute for the Prevention of Alcohol and Other Drug Problems.
- Jernigan, D.H., Ostroff, J. and Ross, C.** (2005). Alcohol Advertising and Youth: A Measured Approach *Journal of Public Health Policy* (2005) 26, 312–325.
- Jones, N.E., Pieper, C.F. and Robertson, L.S.** (1992) Effect of legal drinking age on fatal injuries of adolescents and young adults. *American Journal of Public Health* 82:112-115.
- Jones, S.C. and Donovan, R.J.** (2001): Messages in alcohol advertising targeted to youth. *Australian and New Zealand Journal of Public Health* 25: 126-131.
- Jones; S.C., and Donovan, R.J.** (2002). Self-regulation of alcohol advertising: Is it working for Australia? Source: *Journal of Public Affairs*, Volume 2, Number 3, 1 August 2002, pp. 153-165 [13].
- Kaskutas L.A.** (1995) Interpretations of risk: The use of scientific information in the development of the alcohol warning label policy. *International Journal of the Addictions* 30, 1519-1548.
- Kaskutas L.A. and Greenfield T.K.** (1992) First effects of warning labels on alcoholic beverage containers. *Drug and Alcohol Dependence* 31, 1-14.
- Kaskutas L.A. and Greenfield T.K.** (1997) Behavior change: the role of health consciousness in predicting attention to health warning messages. *American Journal of Health Promotion* 11, 183–193.
- Kaskutas L.A., Greenfield T.K., Lee M., and Cote J.** (1998) Reach and effects of health messages on drinking during pregnancy. *Journal of Health Education* 29, 11-17.
- Kelleher, K.J., Pope, S.K., Kirby, R.S. and Rickert, V.I.** (1996). Alcohol Availability and Motor Vehicle Fatalities. *Journal of Adolescent Health*; 19 (5) Nov 96, p.325-30.
- Kelly, K. and Donohew, L.** (1999): Media and primary socialization theory. *Substance Use and Misuse* 34: 1033-1045.
- Kelly, K.J. and Edwards, R.W.** (1998): Image advertisements for alcohol products: Is their appeal associated with adolescents' intention to consume alcohol? *Adolescence* 33: 47-59.
- Kenkel, D.S.** (1993) Driving, driving and deterrence: the effectiveness and social costs of alternative policies. *Journal of Law and Economics*, 36, 877-913.
- King, C., Siegel, M., and Celebucki, C.** (1998). Adolescent exposure to cigarette advertising in magazines: An evaluation of brand-specific advertising in relationship to youth advertising. *Journal of the American Medical Association*, 279, 516-520.
- Klein JD, Brown JD, Childers KW, et al.** (1993). Adolescents' risky behavior and media use. *Pediatrics* 92:24 – 31.
- Klepp, K.I.; Schmid, L.A.; Murray, D.M.** (1996) Effects of the increased minimum drinking age law on drinking and driving behavior among adolescents. *Addiction Research*, 4:237-244.
- Kohn, P.M. and Smart, R.G.** (1984): The impact of television advertising on alcohol consumption: An experiment. *Journal of Studies on Alcohol* 045: 295-301.
- Kotch, F.B. and Coulter, M.L. and Lipsitz, A.** (1986): Does televised drinking influence children's attitudes toward alcohol? *Addictive Behaviors* 11: 67-70.
- Kotler, P.** (1992). *Marketing management: Analysis, planning, implementation, and control* (7th edition). Englewood Cliffs, NJ: Prentice Hall.
- KPMG** (2001). Excessive alcohol consumption in the Netherlands: trends and social costs. Hoofddorp: KPMG Economic Consulting. <http://www.kpmg.nl/bea>
- Kuitenbrouwer, F.** (1997) Self-Regulation: Some Dutch Experiences, in *Privacy And Self-Regulation In The Information Age* (NTIA 1997).
- Kulick AD, Rosenberg H.** (2001). Influence of positive and negative film portrayals of drinking on adolescents' alcohol outcome expectancies. *J Appl Soc Psychol* 31:1492–9.
- Kuo M; Wechsler H; Greenberg P; Lee H** (2003). The marketing of alcohol to college students: the role of low prices and special promotions. *Am J Prev Med* 2003 Oct;25(3):204-11.
- Laixuthai, A., And Chaloupka, F.J.** (1993). Youth alcohol use and public policy. *Contemporary Policy Issues* 11(4):70–81.

- Lovato C, Linn G, Stead LF, Best A.** (2003). Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *The Cochrane Database of Systematic Reviews*, Issue 3. Art. No.: CD003439. DOI: 10.1002/14651858.CD003439.
- Lovato C, Linn G, Stead LF, Best A.** (2003). Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *The Cochrane Database of Systematic Reviews*, Issue 3. Art. No.: CD003439. DOI: 10.1002/14651858.CD003439.
- Ludwig M.J.** (1994) Mass media and health education: A critical analysis and reception study of a selected anti-drug campaign. *Dissertation Abstracts International* 55, 1479A.
- MacKinnon D.P., Pentz M.A., and Stacy A.W.** (1993) The alcohol warning label and adolescents: The first year. *American Journal of Public Health* 83, 585–587.
- Madden, P.A. and Grube, J.W.** (1994): The frequency and nature of alcohol and tobacco advertising in televised sports, 1990 through 1992. *American Journal of Public Health*, 84: 297-290.
- Martin, S.E.** (1995) Alcohol and the mass media: Issues, approaches, and research directions. In S. Martin (ed.), *The Effects of Mass Media on the Use and Abuse of Alcohol* (pp. 277-295). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Martin, S.E. and Snyder, L.B. and Hamilton, M. and Fleming-Milici, F. and Slater, M.D. and Stacy, A. and Meng-Jinn, C. and Grube, J.W.** (2002): Alcohol advertising and youth. *Alcoholism: Clinical and Experimental Research* 26: 900-906.
- Mast, B.D.; Benson, B.L.; And Rasmussen, D.W.** (1999). Beer taxation and alcohol-related traffic fatalities. *Southern Economic Journal* 66(2):214–249.
- Mathios, A. and Avery, R. and Shanahan, J. and Bisogini, C.** (1998): Alcohol portrayals on prime-time television: Manifest and latent messages. *Journal of Studies on Alcohol* 59: 305-310.
- Matthews, K., Shepherd, J. and Sivaraajasingham, V.** (2005). The price of beer and violence-related injury in England and Wales.
- McBride, R., and Mosher, J.F.** (1985). Public health implications of the international alcohol industry: Issues raised by a World Health Organization project. *British Journal of Addiction*, 80, 141-147.
- McClure, A. C., S. Dal Cin, et al.** (2006). "Ownership of alcohol-branded merchandise and initiation of teen drinking." *American journal of preventive medicine* 30(4): 277-283.
- McIntosh WD, Bazzini DG, Smith SM, et al.** (1999). Alcohol in the movies: characteristics of drinkers and nondrinkers in films from 1940 to 1989. *J Appl Soc Psychol* 29:1191– 9.
- McKeganey N, Forsyth A, Barnard M, Hay G.** (1996). Designer drinks and drunkenness amongst a sample of Scottish schoolchildren. *BMJ*. 313:401.
- Meenaghan T** (1991). Sponsorship – legitimising the medium. *European Journal of Marketing*, 25(11): 5-10.
- Meerabeau E, Gillett R, Kennedy M, Adeoba J, Bypass M, Tabi K** (1991). Sponsorship and the drinks industry in the 1990s. *European Journal of Marketing*, 25(11): 39-56.
- Michael, D.C.** (1995). Federal Agency Use of Audited Self-Regulation as a Regulatory Technique, *Admin. L. Rev.* 171, 181-82.
- Ministry of Health, Germany** (2006). Entwicklung des Alkoholkonsums bei Jugendlichen http://www.bmg.bund.de/nr_604240/SharedDocs/Download/DE/Themenschwerpunkte/Drogen-und-Sucht/pdf-Alkopops-Studie-pdf,templateId=raw,property=publicationFile.pdf/pdf-Alkopops-Studie-pdf.pdf.
- Mirazee, E. and Kingery, P.M. and Pruitt, B.E.** (1989): Sources of drug information among adolescent students. *Journal of Drug Education* 21 (2): 95-106.
- Møller, L.** (2002) Legal restrictions resulted in a reduction of alcohol consumption among young people in Denmark. In: Room, R. (ed.) *The Effects of Nordic Alcohol Policies: What happens to Drinking and Harm when Controls Change?* Nordic Council for Alcohol and Drug Research: Helsinki. 155-166.
- Mosher, J.F. and Johnsson, D.** (2005) Flavored Alcoholic Beverages: An International Marketing Campaign that Targets Youth *Journal of Public Health Policy* (2005) 26, 326–342.
- Mullahy, J., Sindelar, J.L.,** (1994). Do drinkers know when to say when? An empirical analysis of drunk driving. *Economic Inquiry* 32, 383–394.
- Murray J.P., Stam A., and Lastovicka J.L.** (1996) Paid- versus donated-media strategies for public service announcement campaigns. *Public Opinion Quarterly* 60, 129.
- Nelson J.** (1999). Broadcast Advertising and US Demand for Alcoholic Beverages, *Southern Economic Journal* 65(4) 774-790.
- Nelson J. P. and Young, D. J.** (2001). Do advertising bans work? An international comparison, *International Journal of Advertising*, 20, 273-296.

- Nelson JP, Moran JR.** (1995). Advertising and US alcoholic beverage demand: System-wide estimates. *Applied Economics* 27:1225–36.
- Nelson JP.** (2001). Alcohol advertising and advertising bans: a survey of research methods, results, and policy implications. *Advertising and Differentiated Products* 10:239–95.
- Nelson TF; Naimi TS; Brewer RD; Wechsler H** (2005) The state sets the rate: the relationship among state-specific college binge drinking, state binge drinking rates, and selected state alcohol control policies *Am J Public Health* 2005 Mar;95(3):441-6.
- Nelson, J.P.** (2003). Advertising Bans, Monopoly, and Alcohol Demand: Testing for Substitution Effects using State Panel Data *Review of Industrial Organization* 22: 1–25, 2003.
- Neuendorf KA.** (1985). Alcohol advertising and media portrayals. *Journal of the Institute of Socioeconomic Studies* 10:67– 78.
- O'Malley, P.M. and Wagenaar, A.C.** (1991) Effects of minimum drinking age laws on alcohol use, related behaviors and traffic crash involvement among American youth: 1976-1987. *Journal of Studies on Alcohol* 52:478-491.
- Pechmann, C., L. Levine, et al.** (2005). "Impulsive and self-conscious: Adolescents' vulnerability to advertising and promotion." *Journal of Public Policy and Marketing* 24(2): 202-221.
- Perritt, H.H.** (1997) Regulatory Models for Protecting Privacy in the Internet, in *Privacy And Self-Regulation In The Information Age* (NTIA 1997), available at
- Pissochet P., Biache P., and Paille F.** (1999) Alcool, publicité et prévention: le regard des jeunes [Alcohol, advertising and prevention: young people's point of view] *Alcoologie* 21, 15-24.
- Preusser, D.F. and Williams, A.F.** (1992) Sales of alcohol to underage purchasers in three New York counties and Washington, D.C. *Journal of Public Health Policy* 13:306-317.
- Proctor, D.W., Babor, Y.F. and Xuan, Z.** (2005). Effects of cautionary messages and vulnerability factors on viewers' perceptions of alcohol advertisements. *J Stud Alcohol* 66 648-657.
- Robinson TN, Chen HL, Killen JD.** (1998). Television and music video exposure and risk of adolescent alcohol use. *Pediatrics* 102:e54-9.
- Romanus, G.** (2000). Alcopops in Sweden: A supply side initiative. *Addiction*, 95(Supplement 4), S609-S619.
- Ruhm, C.J.** (1996) Alcohol policies and highway vehicle fatalities. *Journal of Health Economics* 15, 435-454.
- Saffer H, Dave D.** (2002). Alcohol Consumption and Alcohol Advertising Bans. *Applied Economics*, 34: 1325-1334.
- Saffer H.** (1996). Studying the effects of alcohol advertising on consumption. *Alcohol Health Res World*. 20(4):266–72.
- Saffer H.** (2000). Alcohol Consumption and Alcohol Advertising Bans. Working Paper 7758, National Bureau of Economic Research; Cambridge, MA.
- Saffer, H.** (1991). Alcohol advertising bans and alcohol abuse: An international perspective. *J Health Econ* 10(1):65–79.
- Saffer, H.** (1993). Alcohol advertising bans and alcohol abuse: Reply. *J Health Econ* 12(2):229–234.
- Saffer, H.** (1995). Alcohol advertising and alcohol consumption: Econometric studies. In: Martin, S.E., and Mail, P., eds. *Effects of the Mass Media on the Use and Abuse of Alcohol*. NIAAA Research Monograph No. 28. NIH Pub. No. 95-3743. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 83–99.
- Saffer, H.** (1997). Alcohol advertising and motor vehicle fatalities. *Rev Econ Stat* 79(3):431–442.
- Saffer, H.** (2001). Substance abuse control and crime: Evidence from the National Survey of Drug Abuse. In: Grossman, M., and Hsieh C.R., eds. *Economic Analysis of Substance Use and Abuse: The Experience of Developed Countries and Lessons for Developing Countries*. Cheltenham, United Kingdom: Edward Elgar pp. 291–307.
- Saffer, H.** (2002) Alcohol advertising and youth. *Journal of Studies of Alcohol Supply*, 14 173-181.
- Saffer, H. and Chaloupka, F.** (1989). Breath testing and highway fatality rates. *Applied Economics*, 21, 901-912.
- Saffer, H. and Dave, D.** (2003). NBER working paper series alcohol advertising and alcohol consumption by adolescents Working Paper 9676 <http://www.nber.org/papers/w9676>.
- Saffer, H. and Dave, D.** (2004) Alcohol Consumption and Alcohol Advertising Bans. *Applied Economics*, 34, 1325-1334.
- Saffer, H. and Dave, D.** (2006) Alcohol advertising and alcohol consumption by adolescents. *Health Economics* 15 617-637.
- Saffer, H. and Grossman, M.** (1987a) Beer taxes, the legal drinking age, and youth motor vehicle fatalities. *Journal of Legal Studies*, 16, 351-374.

- Saffer, H. and Grossman, M.** (1987b) Drinking age laws and highway mortality rates: cause and effect. *Economic Inquiry* 25, 403-417.
- Sargent, J. D., T. A. Willis, et al.** (2006). "Alcohol Use in Motion Pictures and Its Relation with Early-Onset Teen Drinking." *Journal of Studies on Alcohol* 67(1): 54-65.
- Sanchez-Carbonell, X., Guardiola, E., Belles, A. & Beranuy, M.** (2005). European Union scientific production on alcohol and drug misuse (1976-2000). *Addiction* 100 1166-1174.
- Saunders B, Yap E.** (1991). Do our guardians need guarding? An examination of the Australian system of self-regulation of alcohol advertising. *Drug Alcohol Rev.* 10:15-7.
- Slater M, Rouner D, Domenech-Rodriguez M, et al.** Adolescent responses to TV beer ads and sports content/context: gender and ethnic differences. *Journalism and Mass Communication Quarterly* 1997;74:108- 22.
- Slater M, Rouner D, Murphy K, et al.** (1996). Adolescent male reactions to TV beer ads: the effects of sports content and programming context. *J Stud Alcohol* 57:425-33.
- Slater M.D., Rouner D., Murphy K., Beauvais F, VanLeuven J., and Domenech-Rodriguez M.M.** (1996) Adolescents counterarguing of TV beer advertisements: Evidence for effectiveness of alcohol education and critical viewing discussions. *Journal of Drug Education* 26, 143-158.
- Sloan F.A., Reilly B.A., and Schenzler C.** (1994b) Effects of prices, civil and criminal sanctions and law enforcement on alcohol-related mortality. *Journal of Studies on Alcohol* 55, 454-465.
- Sloan F.A., Reilly B.A., and Schenzler C.M.** (1994a) Tort liability versus other approaches for deterring careless driving. *International Review of Law and Economics* 14, 53-71.
- Sloan, F.A., Stout, E.M., Whetten-Goldsteing, K., and Liang, L.** (2000) *Drinkers, Drivers and Bartenders: Balancing Private Choices and Public Accountability.* Chicago, Illinois: The University of Chicago Press.
- Sloan, F.A.; Reilly, B.A.; and Schenzler, C.** (1995). Effects of tort liability and insurance on heavy drinking and drinking and driving. *J Law Econ* 38(1): 49-77.
- Smart. R.G.** (1988): Does alcohol advertising affect overall consumption? A review of empirical Studies. *Journal of Studies on Alcohol* 49: 314-323.
- Smith, S. W., C. K. Atkin, et al.** (2006). "Are "Drink Responsibly" Alcohol Campaigns Strategically Ambiguous?" *Health Communication* 20(1): 1-11.
- Snyder LB, Fleming-Milici F, Slater, M., Sun, H. & Strizhakova, Y.** (2006). Effects of alcohol advertising exposure on drinking among youth. *Arch Pediatr Adolesc med* 160 18-24.
- Spear L.** (2002) Adolescent brain and the college drinker: Biological basis of propensity to use and misuse alcohol. *J Stud Alc suppl.* 14: 71-81.
- Stewart K.** (1997) Environmentally oriented alcohol prevention policies for young adults. In: *Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention, Secretary's Youth Substance Abuse Prevention Initiative: Resource papers. Pre- publication documents*, pp. 107-157. Rockville, MD: Author.
- Stockwell, T. and Single, E.** (1997). Standard unit labelling of alcohol containers. In Plant, M., E. Single and T. Stickwell (Eds). *Alcohol: Minimizing the harm. What works.* London: Free Association Books.
- Strickland DE, Finn TA, Lambert MD.** (1982). A content analysis of beverage alcohol advertising: I. Magazine advertising. *J Stud Alcohol* 43:655-82.
- Strickland DE.** (1982). Alcohol advertising: content and controversy. *J Advertising.* 1:223-36.
- Strickland DE.** (1982). Alcohol advertising: Orientations and influence. *J Advertising* 1:307-319.
- Strickland, D.E.** (1983). Advertising exposure, alcohol consumption and misuse of alcohol. In: **Swire, P.P** (1997) *Markets, Self-Regulation, and Government Enforcement.* In *Privacy And Self-Regulation In The Information Age (NTIA 1997).*
- Tapert SF; Cheung EH; Brown GG; Frank LR; Paulus MP; Schweinsburg AD; Meloy MJ; Brown SA** (2003). Neural response to alcohol stimuli in adolescents with alcohol use disorder. *Arch Gen Psychiatry* Jul;60(7):727-35.
- Thompson KM** (2005). Addicted media: substances on screen *Child Adolesc Psychiatr Clin N Am* Jul;14(3):473-89, ix.
- Thompson KM, Yokota F.** (2001). Depiction of alcohol tobacco and other substances in G-rated animated feature films. *Pediatrics* 107:1369- 73.
- Thomsen SR; Rekve D; Lindsay GB** (2004). Using "Bud World Party" attendance to predict adolescent alcohol use and beliefs about drinking. *J Drug Educ* 34(2):179-95.
- Thomsen, S.R. and Rekve, D.** (2004). Television and drinking expectancies. *Nordic Studies on Alcohol and Drugs* 21 17-28.

- Tucker LA.** (1985). Television's role regarding alcohol use among teenagers. *Adolescence* 20: 593– 8.
- Van Den Bluck, J and Beullens, K.** (2005) television and music video exposure and adolescent alcohol use while going out. *Alcohol and Alcoholism* 2005 40(3):249-253.
- Voas, R.B. and Tippetts, A.S.** (1999) Relationship of alcohol safety laws to drinking drivers in fatal crashes. Washington, DC: National Highway Traffic Safety Administration.
- Wagenaar A.C. and Toomey T.L.** (2000) Alcohol policy: gaps between legislative action and current research. *Contemporary Drug Problems* 27, 681-733.
- Wagenaar AC; Toomey TL; Erickson DJ** (2005). Preventing youth access to alcohol: outcomes from a multi-community time-series trial *Addiction*, 100 , 335–345.
- Wagenaar, A. C. and Holder, H. D.** (1996) The scientific process works: seven replications now show significant wine sales increases after privatization, *Journal of Studies on Alcohol*, 57, 575–576.
- Wagenaar, A.C.** (1981) Effects of the raised legal drinking age on motor vehicle accidents in Michigan. *HSRI Research Review* 11(4):1-8.
- Wagenaar, A.C.** (1986) Preventing highway crashes by raising the legal minimum age for drinking: The Michigan experience 6 years later. *Journal of Safety Research* 17:101-109.
- Wagenaar, A.C. and Maybee, R.G.** (1986) Legal minimum drinking age in Texas: Effects of an increase from 18 to 19. *Journal of Safety Research* 17:165-178.
- Wagenaar, A.C. and Murray, D.M. and Toomey, T.L.** (2000): Communities Mobilizing for Change on Alcohol (CMCA): effects of a randomized trial on arrests and traffic crashes. *Addiction* 95 (2): 209–217.
- Wagenaar, A.C. and Murray, D.M. and Wolfson, M. and Forster, J.L. and Finnengan, J.R.** (1994): Community Mobilizing for Change on Alcohol: design of a randomized community trial. *Journal of Community Psychology* (CSAP Special Issue): 79–101.
- Wagenaar, A.C. and Wolfson, M.** (1994) Enforcement of the legal minimum drinking age in the United States. *Journal of Public Health Policy* 15:37-53.
- Wagenaar, A.C. and Wolfson, M.** (1995) Deterring sales and provision of alcohol to minors: A study of enforcement in 295 counties in four states. *Public Health Reports* 110:419-427.
- Walters, E.D. and Treno, A.J. and Grube, J.W.** (2001): Alcohol advertising and youth: A focus-group analysis of what young people find appealing in alcohol advertising. *Contemporary Drug Problems* 28: 695-718.
- Wallack, L. and Grube, J.W. and Madden, P.A. and Breed, W.** (1990): Portrayals of alcohol on prime-time television. *Journal of Studies on Alcohol* 51: 428-437.
- Wallack, L., Dorfman, L., Jernigan, D. and Themba, M.** (1993): Media advocacy and public health – power for prevention. Newbury Park, CA: Sage.
- Webb, J.A. and Baer, P.E. and Getz, J.G. and McKelvey, R.S.** (1996): Do fifth graders' attitudes and intentions toward alcohol predict seventh-grade use? *Journal of the American Academy of Child and Adolescent Psychiatry* 35: 1611-1617.
- Weitzman, E.R., Folkman, A., Folkman, K.L. and Wechsler, H.** (2003). Relationship of Alcohol Outlet Density to Heavy and Frequent Drinking and Drinking-related Problems among College Students at Eight Universities. *Health and Place*, 9 (1): 1-6.
- Wells, J.E., Horwood, L.J. and Fergusson, D.M.** (2004) Drinking patterns in mid-adolescence and psychosocial outcomes in late adolescence and early adulthood. *Addiction* 99 1529-1541.
- Williams FG, Knox R** (1987) Alcohol abuse intervention in a university setting. *Journal of American College Health*, 36, 97–102.
- Wingood GM, DiClemente RJ, Bernhardt JM, et al.** (2003). A prospective study of exposure to rap music videos and African American female adolescents' health. *Am J Public Health* 98:437– 9.
- Wyllie A, Holibar F, Casswell S, Fuamatu N, Aiolutepa K, Moewaka Barnes H, et al.** (1997). A qualitative investigation of responses to televised alcohol advertisements. *Contemporary Drug Problems*. 24: 103–32.
- Wyllie A, Zhang JF, Casswell S.** (1998a). Responses to televised alcohol advertisements associated with drinking behaviour of 10-17-year-olds. *Addiction*. 93(3):361–71.
- Wyllie A., Waa A. and Zhang J.F.** (1996) Alcohol and Moderation Advertising Expenditure and Exposure: 1996. Auckland, New Zealand: University of Auckland.
- Wyllie, A.; Zhang, J.F.; and Casswell, S.** (1998b) Positive responses to televised beer advertisements associated with drinking and problems reported by 18- to 29-year-olds. *Addiction* 93(5):749–760.

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