Report on youth exposure to alcohol commercials on television in Europe:

Volume of youth exposure in Germany

Results of monitoring televised alcohol commercials in Germany in 2010

AMM**I**E

Alcohol Marketing Monitoring in Europe

Report on youth exposure to alcohol commercials on television in Europe: Volume of youth exposure in Germany

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1.Introduction

According to recent sample surveys the percentage of German youth (12 to 17 years), featuring regular consumption of alcoholic beverages, has declined within the past few years (ESPAD 2007, BZgA 2009). This downward trend is opposed to a great number of alarming developments. The drinking initiation age decreases consistently and risky drinking patterns such as the episodic binge drinking remain at a high level within the youth population. Particularly alarming is the increase of acute alcohol intoxication among young people. With regard to the Federal Statistic Office [Statistisches Bundesamt] (2010), in 2009 around 26.500 adolescents aged between 10 and 19 years have been admitted to hospital because of alcohol abuse. This represents an increase of 175% compared to 2000.

The reasons for these hazardous trends are variegated. Within several scientific studies alcohol marketing has been identified as one of the risk factors for youth drinking uptake and risky consumption patterns. Particularly in the past few years, the evidence has grown stronger that exposure to large volumes of alcohol advertising has an undesirable impact on the drinking behaviour of young people.

This report has been written for the "Alcohol Marketing Monitoring in Europe (AMMIE)" project. Its overall goal is to protect young people against the harmful effects of alcohol marketing.

.Within the project, which started in 2009, NGOs from five EU countries (Bulgaria, Denmark, Germany, Italy and the Netherlands) have monitored alcohol marketing following a method developed by the Dutch institute for alcohol policy. The results of the project will give insight in the overall presence of alcohol marketing in the five countries and describe the content and the amount of alcohol advertising, with special attention to the opinion and exposure of young people. Furthermore, the project will describe the functioning of the alcohol marketing regulation systems; this will lead to recommendations to improve the regulatory system in order to protect young people against the harmful influence of alcohol advertising.

In Germany the project is funded by the European Commission and the Federal Ministry of Health.

The present report focuses on the exposure of underage youth to alcohol advertising on German television in 2010. In the first chapter the theoretical background constituting the basis of the further sections is presented. Therefore the effects of alcohol marketing on youth drinking behaviour as well as the German regulations on the volume of alcohol advertising are disclosed. Chapter two describes the method of monitoring the exposure of children and youngsters to alcohol marketing activities on German television, while chapter three displays the results of the monitoring process. Chapter 4 and 5 finally present the conclusions and recommendations regarding the outcomes of this project part.

1.1 Details about the volume of alcohol advertising

1.1.1 Effects of alcohol advertising on the drinking behaviour of young people

In the past few years, a large number of scientific studies have examined the impact of exposure to alcohol marketing on youth drinking behaviour. The following sections of this chapter provide an overview of longitudinal as well as experimental surveys focusing on this issue.

1.1.2 Effects of alcohol advertising on the long term

Recent longitudinal studies found convincing evidence of a causal relationship between the exposure to alcohol marketing practices and the drinking behavior of young people (Anderson et al., 2009; Smith & Foxcroft, 2009).

Anderson et al. (2009) reviewed thirteen longitudinal studies, mostly conducted in New Zealand, Australia and the United States, in which a total of over 38.000 youngsters aged 10-21 were followed over time. The studies estimated the exposure to advertising and promotion in various ways, including estimates of the volume exposure of media and advertising, ownership of branded merchandise, recall and receptivity, and expenditures on advertisements. Twelve of the thirteen studies found an impact of exposure to alcohol marketing practices on subsequent alcohol use, including initiation of drinking and heavier drinking amongst existing drinkers. The thirteenth study found an effect on the intention to drink (Pasch et al., 2007). The strength of the impact differed between the studies, but the review showed that there is conclusive evidence that exposure to alcohol marketing is associated with the initiation of alcohol use and with increased drinking among already drinkers.

To illustrate some of the findings of the longitudinal studies some examples are provided below:

- 12-year olds who are highly exposed to overall alcohol advertising (75th percentile) are 50% more likely to start drinking a year later compared to 12 year olds who are lightly exposed to alcohol advertising (25th percentile). (Collins et al., 2007).

- Youngsters who watch 60% more alcohol advertisements on television than average are 44% more likely to have ever used beer, 34% more likely to have ever used wine/hard liquor and 26% more likely to have ever used 3 or more drinks during 1 occasion (Stacy et al. 2004).

- Exposure to 'in-store beer displays' such as refrigerators and beer displays predicts the age of onset of drinking in non-drinking 13 year olds (Ellickson et al., 2005).

- Every additional alcohol advertisement seen by youngsters increases the alcohol consumption with 1% (Snyder et al., 2006).

- Youngsters who are highly exposed to alcohol commercials will drink more alcohol when they are in their twenties. However, the alcohol consumption stabilizes for youngsters who have been lightly exposed to alcohol commercials (Snyder et al., 2006).

- Possession of a 'promotional item' such as caps, t-shirts or posters of an alcohol producer is a strong predictor of both drinking intention as well as alcohol consumption of 12-year olds (Collins et al. 2007).

- Non-drinking 12 year olds who possess a promotional item of an alcohol producer or would like to have one, have a 77% higher chance of drinking one year later compared to children who are not sensitive to alcohol marketing (do not possess a promotional item and do not have a favorite alcohol brand) (Henriksen et al., 2008).

- Controlling for a broad range of confounding variables, it was shown that both the possession of a promotional item as well as an attitudinal susceptibility towards alcohol, predict the age of onset of drinking amongst 10-14 year olds. Also binge drinking could be predicted by these two variables. As such, alcohol branded merchandise ownership becomes a causal factor in the initiation of (binge) drinking (McClure et al., 2009).

1.1.3 Effects of alcohol advertising on the short term

Besides the above mentioned longitudinal studies that consistently find effects of exposure to alcohol marketing on drinking behavior on the longer term, several experimental (lab) studies have been conducted showing the effect of alcohol advertising on drinking behavior on the *short term*. In these studies, led by the Radboud University of Nijmegen in the Netherlands, several direct effects of exposure to alcohol cues in movies and alcohol commercials were found on the drinking behavior of adolescents. Typically, in these kinds of studies adolescents in their early twenties are invited to the lab in pairs to watch a movie. They have free access to a fridge with beer, wine and sodas. The participants watch a movie interrupted by commercial breaks and do not know that their alcohol use and 'sipping behavior' are registered as main dependent variables.

The findings of these types of studies indicate that seeing alcohol cues on the screen (either in movies or in commercials) directly influences the actual drinking behavior (Engels et al., 2009). It is hypothesized that this has to do with the more or less unconscious process of imitation of what is seen on the screen: if the main character in a movie is portrayed drinking alcohol, the participant unconsciously 'imitates' this behavior and takes a sip as well (Koordeman et al., 2011c). This behavior might very well be influenced by so called 'mirror neurons' in the brain. The effects seem to be stronger in men – who usually drink more in the first place (Koordeman et al., 2011a; 2011c) and in heavier drinkers (Koordeman et al., 2011b).

Some examples of short term effects of exposure to alcohol (advertising) on drinking behavior, found in experimental studies:

- Young men who watch a movie in which a lot of alcohol is displayed ('American Pie 2'), interrupted by commercial breaks with alcohol advertising drink twice as much alcohol during this period compared to men who see a more 'neutral' movie ('40 days and 40 nights') interrupted by neutral commercial breaks (Engels et al. 2009). This sipping behavior seems to occur relatively 'unconsciously' (an imitation effect).

- Young men who watch the original 'alcohol' version of the movie 'What happens in Vegas', drink almost twice as much alcohol as men who watch a 'censured' version of the same movie, in which the alcohol slots had been removed (Koordeman et al. 2011a). For women, no significant effect was found. Subsequent analysis on the 'sipping behavior' revealed that exposure to actors who were sipping in the movie, had an immediate impact on the drinking behavior of the (male) viewers, through the mechanism of imitation (Koordeman et al. 2011c).

- Regular alcohol users (> 7 glasses per week) drink 2,5 times more alcohol in the cinema after having seen several alcohol commercials preceding the movie ('Watchmen') compared with regular alcohol users who saw several neutral commercials (Koordeman et al. 2011b). This effect was not found for the participants with a relatively low alcohol use (< 7 glasses per week).

1.1.4 Wide support

Taken together, both longitudinal studies (long term effects) as well as experimental studies (short term effects) indicate that exposure to the *amount/volume* of alcohol advertising and marketing influences youth drinking behavior. This conclusion is supported by various scientists in this field such as associate professor David Jernigan (2008) and Professor Peter Anderson (2009). It has also been confirmed by a review of Smith and Foxcroft (2009) and by the Science Group of the Alcohol and Health Forum of the European Commission (2009).

The conclusion is moreover confirmed by a German cross-sectional survey being recently conducted by Morgenstern et al. (2011a) and examining the link between the exposure to alcohol advertising and teen drinking. The survey involved a total of 2130 sixth- to eighth-grade students from 29 public schools in 3 German Federal States, being non-drinkers at baseline (Morgenstern et al. 2011b). The exposure to marketing strategies was measured with masked images[1] of nine alcohol and eight non-alcohol advertisements. In this context, the students had to indicate the brand names as well as the frequency of seeing the prevailing ads.

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[1] Brand information was digitally removed.

The results of the study emphasise a positive association between the exposure to alcohol advertising and multiple youth drinking outcomes. For instance, a total of 581 students (28%) started to drink alcohol within the observation period.

1.2 German regulations on the volume of alcohol advertising

In the understanding of the AMMIE project, the volume of alcohol advertisement refers to the amount of advertisements broadcasted on television, the time of broadcast and the type of the advertised product as well as a program coverage relating to a minor audience.

In Germany neither a statutory (e.g. Law against Unfair Competition, Youth Protection) nor a non-statutory (Code of Conduct on commercial communication for alcoholic beverages) advertising regulation cover these kinds of specifications.

In most of the European countries a particular threshold is anchored within the existing advertising regulations, stipulating e.g. that alcohol marketing activities should not reach an audience which consists of more than 30% minors (30%-threshold).[2] In Germany, however, such a threshold is not even mentioned within the existing advertising regulations.

Similarly, there are no bans or restrictions concerning the amount of advertisements, the type of product and the broadcasting time for alcoholic beverages on German television. The only German time-related regulation is anchored in the "Protection of Young Persons Act" and considers public movie performances. Thus, § 11 "Movie performances", part 5 of this law emphasizes that "commercials and advertising programmes for tobacco products and alcoholic drinks must not be shown before 6 p.m […]".But as the AMMIE project focuses on the volume of alcohol advertisement on German Television, the article is irrelevant for the further course of this report.

1.3 The AMMIE project

The AMMIE project (Alcohol Marketing Monitoring in Europe) started in 2009. Although alcohol marketing is an important topic within the EU Alcohol Strategy (Commission of the European Communities, 2006), it was not yet monitored systematically and independent from commercial interests in most of the European Member States. Within the AMMIE project, NGOs from five EU countries (Bulgaria, Denmark, Germany, Italy and the Netherlands) monitored alcohol advertising practices and marketing activities in 2010. During the project a systematic monitoring 'tool' was developed following a method that has been used by the Dutch Institute for Alcohol Policy (STAP) for several years. Furthermore, the AMMIE project aims to investigate the effectiveness of the alcohol marketing regulation systems. The results of the AMMIE project give insight into the overall presence of alcohol marketing in the five countries and describe the content and the amount of alcohol advertising. Special attention is given to the opinion of young people about the attractiveness of alcohol advertising practices and the amount of exposure to alcohol advertising. Each participating country delivered four country reports which concerned the following topics:

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[2] The percentages vary from different countries. In the Dutch self-regulating code for alcoholic beverages, a 25% threshold is required.

- Complaints filed on alcohol advertising and the opinion of young people versus the Advertising Code Committee on these advertising practices ("Complaints on alcohol marketing: report on complaints and the complaint system of alcohol marketing": www.eucam.info/eucam/home/ammie-complaints.html);
- The volume of alcohol advertising on television and exposure of minors ("Report on youth exposure to alcohol commercials on television in Europe"; www.eucam.info/eucam/home/ammie-volume.html);
- Sport sponsorship by alcohol producers ("Alcohol related sports sponsorship: report on sport sponsorship by alcohol producers; www.eucam.info/eucam/home/ammie-sports-sponsoring.html) and
- Trends and innovations with regard to alcohol marketing ("Trends in alcohol advertising: report on trends and innovations in alcohol marketing"; www.eucam.info/eucam/home/ammie-trends.html).
- In addition, a European report was written on the topic of Complaints ("To appeal or not to appeal: testing self regulation of alcohol advertising"; www.eucam.info/eucam/home/ammie-complaints.html) in which the data of the five countries on these topics were combined.

- A final report was written to summarize the conclusions and recommendations evolving from the AMMIE project. Commercial promotion of drinking in Europe ("Key findings of independent monitoring of alcohol marketing in five European countries"; www.eucam.info/eucam/home/ammie-report-europe.html).

The results of comprehensive monitoring will allow the European Commission and the Member States of the European Union to improve the existing regulation of alcohol marketing in order to better protect young people against its proven harmful influence.

1.4 This report

Because of the importance of the volume (amount) of alcohol advertising, the present report focuses on this topic. The AMMIE reports "Complaints on alcohol marketing" and "Trends and Innovations in alcohol advertising", however, concentrate on issues regarding the content of alcohol advertising.

Since the majority of the alcohol marketing expenditures on 'traditional' media (e.g. radio, TV, print, outdoor and cinema) are still on the medium television, the data for the present report concern alcohol commercials broadcasted on television.

With the data, we will try to give an answer to the following questions:

1. What are the characteristics of the advertisements broadcasted in May and October 2010?

2. How many exposures to alcohol advertising occurred in May and October 2010?

3. How much exposure do different age groups have to alcohol advertisements?

4. Which brands are generating the greatest youth (over-)exposure?

5. Would a 30%-threshold protect large numbers of minors in Germany from being exposed to alcohol advertising?

6. What could be the possible effect of different time bans on television with respect to the exposure of minors?

2.Method

Dataset

In order to assess the exposure of minors to alcohol advertisement on German TV, television data referring to the three channels being watched the most by German adolescents aged between 13 and 17 years were acquired.

The purchased data set included all alcohol commercials that were broadcasted in Germany within May and October 2010. For each alcohol spot again the channel, the program (before and after the commercial), the duration, the date as well as the time of broadcast, the name and the brand of the advertised product, the name of the respective advertiser and the number of spectators were provided. With regard to the reach of certain audience groups, the number of spectators was separately given by the total number of viewers that was reached (4+), the number of children aged between 13 and 17 years watching TV (13-17), the number of young adults between the age of 18 and 34 watching TV (18-34) and the number of people being 35 years old and older (35+).

The data were provided by "media control GmbH & Co. KG" registering the viewing figures in Germany, and "Nielsen Media Research" (in the Netherlands) delivering the data about alcohol advertising.

TV universe

In this report all calculations were performed on the basis of the German "TV population" or "TV universe". This implies the total number of possible viewers (aged 4 years and older) since they are in the possession of a television.

In Table 1 the size of the TV universe is been provided, including the distribution over all relevant age groups.

Table 1: German TV Universe (2010)

Age group	TV population N	TV population %
4+	71.686.292	100,0
4-17.	10.078.963	14,1
4-12.	5.749.121	8,0
13-17	4.329.841	6,0
18+	61.607.330	85,9
18-34	14.390.255	20,1
35+	47.217.074	65,9

Source: Nielsen Media Research 2010

Volume Protocol

While analyzing and working with the data all AMMIE partners followed a specially developed Volume Protocol, written by the Dutch Institute for Alcohol Policy (STAP) (Van den Broeck & Van den Wildenberg, 2011). STAP provided the main variables for all partners e.g. ID number per alcohol commercial, absolute number of viewers reached by an ad, Gross Rating Points or GRPs (which give insight into the number of viewers reached within a certain age group), % Program (which gives insight into the distribution of the age of the viewers of a certain program) and the TV universe.

The majority of the analyses were performed in Excel 2007, some additional analyses took place in SPSS 17.0.

In developing the protocol STAP was advised by associate professor David Jernigan and Craig Ross from the Johns Hopkins Bloomberg School of Public Health who have been working with similar data in the past and can be called experts in this field (see e.g. Jernigan & Ross 2010).

3.Results

In the present part of the report the results of the data analyses will be described.
Thus, the chapter is divided into four parts respectively referring to

- The characteristics of the data.
- The exposure to alcohol advertising.
- Hypothetical thresholds with respect to the reach of minors.
- Possible effects of a hypothetical time ban
- A combination of a hypothetical threshold and a possible time ban

3.1 Characteristics of the data

As mentioned in chapter 2, the data set, being acquired for the AMMIE project, refers to the three TV channels being most watched by 13 to 17 year olds in Germany. In May as well as in October 2010 this turned out to be the channels RTL, Pro7 and Sat1.

While in May a total of 2.028 alcohol commercials have been broadcasted, in October only around half as many spots (that is 1.193) were shown on the depicted channels. Possibly this difference is due to the Football World Cup haven taken place in summer 2010 and generally offering a wide scope for alcohol producers to promote their products.

3.1.1 Number of ads per day of the week

Taking a closer look at the number of ad per weekday, it is striking that Sunday is the most popular day to broadcast alcohol commercials (see figure 1). In May 2010 a high peak can also be stated for the Saturday.

Figure 1: Distribution of alcohol commercials on TV, per day of the week (3 channels, May and October 2010)
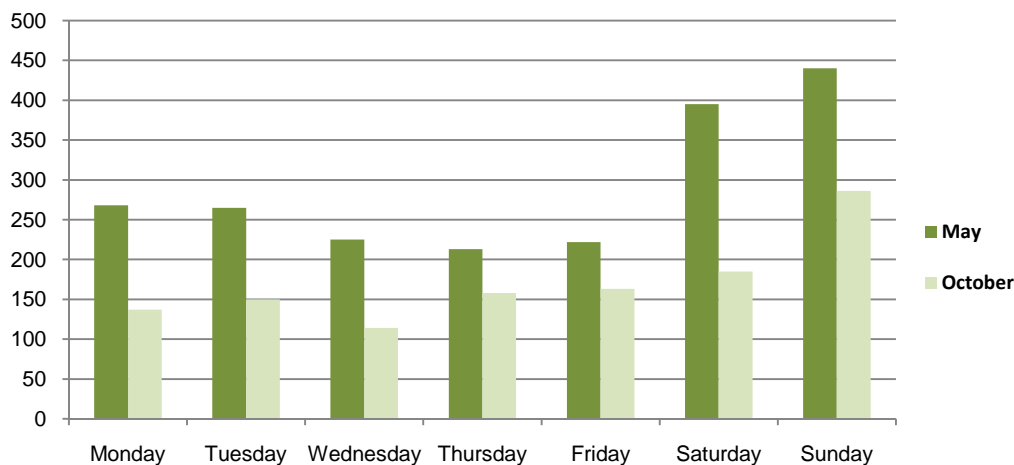
Note. The number of ads in these two months is based on the TOP 3 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here.

Source: Nielsen Media Research & media control GmbH & Co. KG 2010

3.1.2 Number of ads per hour of the day

As described in chapter 1.2 neither in German law nor in the existing self-regulation system a time ban for alcohol advertising is anchored or rather suggested. For this reason, alcohol commercials in Germany are broadcasted 24 hours a day.

As seen in figure 2, in May (75,7%) as well as in October (75,8%) more than three-quarters of all alcohol spots were shown between 19:00 and 1.00. In both months the broadcast peaked late in the evening, between 23:00 and 24:00. Before 19:00 and after 1:00 proportionally small amounts of alcohol commercials were broadcasted in both May and October. However, in May between 13:00 and 14:00 as well as between 17:00 and 19:00 the amount of advertising was a bit higher than within the other hours of the time period between 1:00 and 19:00.

The exact numbers of alcohol commercials per hour of the day can be found in Appendix 1.

Figure 2: Number of alcohol advertisements per hour of the day in May and October 2010 (3 TV channels)

Note. The number of ads in these two months is based on the TOP 2 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here.

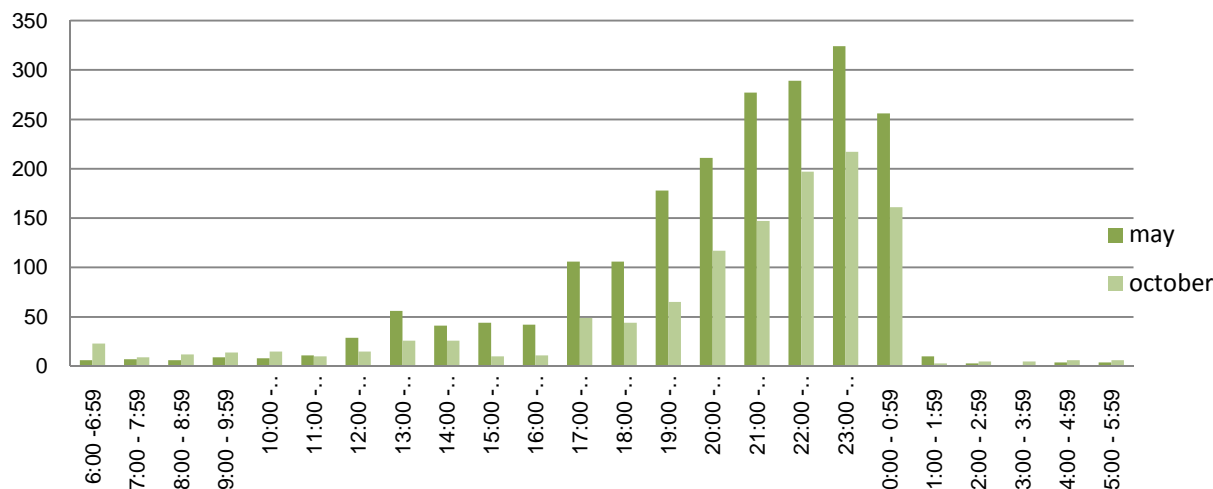Source: Nielsen Media Research & media control GmbH & Co. KG 2010

3.1.3 Number of alcohol ads per product category

Regarding the type of alcoholic beverages being promoted in Germany within May and October 2010, it was first of all striking that commercials for alcohol-free beer and wine are registered as alcohol advertising.

Within the content-related monitoring of alcohol advertising in Germany, the DHS filed several complaints against marketing activities for alcohol-free beers towards the German Advertising Standards Council. The latter constantly rejected these objections for the ostensible reason that advertisements for alcohol-free beverages cannot be applied to the self-regulating "Code of Conduct on Commercial Communication for alcoholic Beverages" as it exclusively refers to alcoholic beverages[3]. However, in the statistics of Nielsen Media Research, regularly registering advertisements for Germany (and others), commercials for non-alcoholic beer and wine do count as alcohol advertising. As depicted in table 2, alcohol-free beer was promoted about twice as often as sweet beverages like Vermouth or Alcopops, and even more often than wine, sparkling wine and champagne within the two considered months. These high numbers as well as the fact that marketing activities for non-alcoholic products are registered as alcohol advertisement leads within the statistical measurement of advertisement, deduces the demand that the promotion for alcohol-free beverages should be judged within the alcohol-related self-regulating rules in Germany.

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[3] For further information, see the AMMIE "Report on the complaints and the complaining system of alcohol marketing – Results of monitoring alcohol advertising in Germany in 2010".

Table 2: Number of ads per product category

Product category	May		October		Total May and Oct.	
	N	%	N	%	N	%
Beer	1164	57,40	818	68,57	1982	61,56
Beer - alcohol free	218	10,75	92	7,71	310	9,62
Spirits	276	13,60	232	19,45	508	15,76
(Sweet) beverages*	127	6,26	0	0	127	3,93
Wine**	238	11,74	27	2,26	265	8,23
Wine - alcohol free	5	0,25	24	2,01	29	0,90
Total	2028	100	1193	100	3221	100

*This category comprises: Vermouth, Cider, Alcopops and/ or other (sweet) alcoholic beverages < 15 volume percent.

**This category comprises: Wine, Sparkling Wine and Champaign.

Note. The number of ads in these two months is based on the TOP 2 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here.

Source: Nielsen Media Research & media control GmbH & Co. KG 2010

Within the process of analyzing the advertisement per product category, it was moreover found that beer commercials dominate the market of alcohol advertisement on German TV. In both months more than 60% of all alcohol spots refer to alcohol beer beverages. This may be inter alia due to the fact that beer producers are funding sports programs on public and private TV on a disproportionately high level.[4]

The second beverage type being substantially promoted in Germany is spirits. Around 16% of all ads were for products e.g. rum and vodka and different types of liqueurs. It is moreover that one in ten alcohol commercials on TV was for alcohol-free beer.

Little advertising on television takes place for sweet alcoholic beverages with a lower alcoholic content. While in my 127 spots were broadcasted, in October not a single commercial referred to this kind of alcoholic products. Thus, marketing for sweet alcoholic products just makes 3,93% of the total number of alcohol ads. Finally the difference between the amount of these ads in May and October probably has to do with seasonal influences on the advertising pattern.

3.1.4 Number of ads per alcohol producer and product

In May and October 2010 a total of 30 different producers were promoting alcoholic products on the three considered TV channels. Together they advertised within 63 different alcohol spots comprising commercials, sponsoring advices and clips promoting sweepstakes that were taken out by a special alcohol producer (see table 3 for a complete overview). The majority of alcohol spots were broad-

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[4] For further information, see the AMMIE "Report on sport sponsorship by alcohol producers – Results of monitoring alcohol advertising in Germany in 2010".

casted by **Krombacher** (N=547). As already implied, this may be due to the fact that Krombacher is funding programs about the German Football League and the UEFA-Champions League as well as the popular crime program *Tatort* on public television and the broadcast of the Formula 1 on private television[5].

The second largest producer was the **Binding Brauerei** with 341 commercials in total, followed by the **Radeberger Exportbrauerei** (N=286).

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[5] For further information, see the AMMIE "Report on sport sponsorship by alcohol producers – Results of monitoring alcohol advertising in Germany in 2010" and the AMMIE "Report on trends and innovations on alcohol marketing - Results of monitoring alcohol advertising in Germany in 2010".

Table 3: Number of ads pre producer and brand in May and October 2010

Producer	Total May & Oct. N	Total May & Oct. %	Brand	May N	May %	October N	October %
Bacardi	66	2,05	Bacardi Mojito	17	0,84	0	0,00
			Bacardi Weißer Rum	11	0,54	0	0,00
			Martini Rosato	38	1,87	0	0,00
Becks Brauerei	158	4,91	Becks Pilsener	5	0,25	79	6,62
			Becks Biermix	74	3,65	0	0,00
Berentzen-Gruppe	21	0,65	Berentzen Fruchtige Spirituosen	21	1,04	0	0,00
Berliner-Schultheiß-Brauerei	51	1,58	Berliner Pilsener	47	2,32	4	0,34
Binding Brauerei	341	10,59	Schöfferhofer Weizenbier	38	1,87	0	0,00
			Schöfferhofer Grapefruit SP	77	3,80	75	6,29
			Schöfferhofer Bier Mix	36	1,78	0	0,00
			Clausthaler Alkoholfrei Pils	57	2,81	50	4,19
			Clausthaler Alkoholfrei Pils SP	8	0,39	0	0,00
Bitburger Brauerei	61	1,89	Bitburger Pils	0	0,00	26	2,18
			Bitburger Alkoholfreies Bier	35	1,73	0	0,00
Borco-Marken-Imprt-Matthiesen	16	0,50	Peachtree Pfirsich Likör	0	0,00	16	1,34
Brown-Forman	10	0,31	Jack Daniels Whiskey	0	0,00	10	0,84
Campari Dt.	186	5,77	Campari	49	2,42	0	0,00
			Campari/ GWS MSC Kreuzf.	25	1,23	0	0,00
			Aperol Aperitif	72	3,55	0	0,00
			Ouzo 12	4	0,20	18	1,51
			Licor 43	0	0,00	18	1,51
Diageo Dt.	104	3,23	Captain Morgan Orig. Spiced Gold	52	2,56	16	1,34
			Smirnoff Vodka	0	0,00	18	1,51
			Baileys Irish Cream Likör	0	0,00	18	1,51
Drinks&Foods	2	0,06	Flaeminger Jagd Kräuterlikör	0	0,00	2	0,17
Erdinger	31	0,96	Erdinger Weizenbier	31	1,53	0	0,00
Freixenet	68	2,11	Freixenet Sekt	64	3,16	4	0,34
Friesisches Brauhaus zu Jever	232	7,20	Jever Pilsener	74	3,65	42	3,52
			Jever Pilsener Fun Alkoholfrei	74	3,65	42	3,52
Hasseröder Brauerei	28	0,87	Hasseröder Pils	27	1,33	1	0,08
Henkel & Co. Sektkellerei	150	4,66	Söhnlein Brilliant Sekt SP	39	1,92	0	0,00
			Söhnlein Brilliant Sekt	22	1,08	0	0,00
			Gorbatschow Wodka SP	45	2,22	44	3,69
König Brauerei	68	2,11	König Pilsener	36	1,78	32	2,68
Köstritzer Schwarzbierbrauerei	19	0,59	Köstritzer Schwarzbier	9	0,44	10	0,84
Krombacher Brauerei	547	16,98	Krombacher Pils SP	173	8,53	170	14,25
			Krombacher Pils	62	3,06	83	6,96
			Krombacher Bier Range	27	1,33	32	2,68
Mast-Jägermeister	62	1,92	Jägermeister Likör	29	1,43	33	2,77
Paulaner Brauerei	88	2,73	Paulaner Weizenbier	44	2,17	0	0,00
			Paulaner Weizenbier Alkoholfrei	44	2,17	0	0,00

Pernot Richard Dt.	52	1,61	Ramazotti	20	0,99	32	2,68
Radeberger Exportbierbrauerei	286	8,88	Radeberger Pilsener SP	106	5,23	72	6,04
			Radeberger Pilsener	53	2,61	55	4,61
Rotkaeppchen-Mumm Sektkellerei	154	4,78	Rotkäppchen Sekt	24	1,18	3	0,25
			Rotkäppchen Sekt Alkoholfrei	5	0,25	3	0,25
			Rotkäppchen Sekt/ Video	0	0,00	7	0,59
			Rotkäppchen Wein	5	0,25	1	0,08
			Jules Mumm Sekt SP	50	2,47	12	1,01
			Chantre Weinbrand	10	0,49	0	0,00
			Jules Mumm Sekt	34	1,68	0	0,00
Sektkellerei Schloss Wachenheim	21	0,65	Light Live Sekt Alkoholfrei	0	0,00	21	1,76
Semper Idem Unterberg	17	0,53	Moskovskaya Vodka	10	0,49	7	0,59
Spaten-Franziskaner Bräu	70	2,17	Franziskaner Weizenbier Range	70	3,45	0	0,00
Veltins C. & A. Brauerei	200	6,21	Veltins Pilsener	2	0,10	40	3,35
			Veltins Pilsener SP	28	1,38		0,00
			Veltins V+ Grapefruit	57	2,81	3	0,25
			Veltins V+ Energy SP	0	0,00	36	3,02
			Veltins V+ Kuruba SP	0	0,00	34	2,85
Warsteiner Brauerei	110	3,42	Warsteiner Premium Bier Range	72	3,55	0	0,00
			Warsteiner Premium Pils SP	16	0,79	16	1,34
			Warsteiner Premium Pils	0	0,00	6	0,50
Wernesgrüner Brauerei	2	0,06	Wernersgrüner Pils Legende	0	0,00	2	0,17
Total	**3221**	**100,00**		**2028**	**100,00**	**1193**	**100,00**

*SP: Abbreviation for Sponsoring Advice

Note. The number of ads in these two months is based on the TOP 3 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here.

Source: Nielsen Media Research & media control GmbH & Co. KG 2010

3.1.5 Summary characteristics

To sum up, a total of 3.221 alcohol commercials were broadcasted in May and October 2010 on those three TV channels that were most watched by youngsters aged between 13 and 17 years. Most advertising occurred in May (N =2.028). The favorite day for alcohol advertising appeared to be Sunday and the largest amounts of alcohol commercials were broadcasted between 19:00 and 1.00. The majority of alcohol commercials in Germany refer to beer (61,56%), followed by spirits (15,76%) and alcohol-free beer (9,62%). In May and October 2010 a total of 30 different producers were promoting alcoholic products on the three considered TV channels. Together they advertised within 63 different alcohol spots comprising commercials, sponsoring advices and clips promoting sweepstakes that were taken out by a special alcohol producer. Most commercials were broadcasted by Krombacher (N = 547) regularly sponsoring sports programs and popular crime programs on German TV.

3.2 Exposure to alcohol advertising

In the prevailing section the amount of exposure to alcohol advertising, e.g. by different age groups, will be displayed. In order to do this, Gross Rating Points (GRPs) will be used. GRPs are a standard to measure the exposure to advertising *per capita*. GRPs are calculated by dividing the number of exposures to an ad within a certain age group by the total number of possible viewers (television universe) within this same age group.

Gross Rating Points (GRPs) tell us two things:

- The percentage of people in a specific age group that was reached by an ad
- The average number of alcohol ads a person in an age group was exposed to

GRPs = Impressions (no. of exposures)$_d$ / Population$_d$ x 100
(d = a specific demographic age group)

Before discussing GRPs and percentage thresholds regarding the exposure of minors, the total amount of exposure to alcohol advertising in May and October 2010 will be discussed.

3.2.1 Advertising amongst minors in May and Oct 2010

The total number of times a minor aged 4 to 17 was exposed to an alcohol commercial in the selected period on the Top 3 channels was over 615 million. In other words, 615 million times a minor saw an alcohol ad on television in May and October 2010 (this number is an underestimation because only data of three channels were bought). This number does not mean that 615 million minors were exposed. One person can be exposed several times, while others have not been reached at all. But one can conclude that 615 million times 'one minor saw one commercial'.

32,9% of the alcohol advertising impressions being seen by minors (aged 4 to 17) were consumed by the youngest age group of 4 to 12 year old children (2,9% / 8,8%, Table 4). The remaining 67,1% (5,9% / 8,8%) of the impressions reaching minors were seen by the 'older' age group of 13 to 17 years old.

3.2.2 Differences in exposure per age group

The absolute number mentioned above is impressive, but does not say anything about the 'average number' of alcohol commercials someone from a specific age group was exposed to in May and Octo-

ber. In order to calculate this, GRPs are introduced. GRPs take the size of the different age groups into account, which allows saying something about the *average* exposure per group.

Table 4: Average exposure per person per age group

Age group	GRPs	Average number of exposures per person in the age group over 2 months (GRP/100)**	Average number of exposures per person in the age group over 2 months (GRP/90)**
4+	9.754,20	97,5	108,4
4-17.	6.104,10	61,0	67,8
4-12.	3.503,10	35,0	38,9
13-17	9.572	95,7	106,4
18+	10.351,40	103,5	115,0
18-34	14.182,30	141,8	157,6
35+	9.183,80	91,8	102,0

Note. The number of ads in these two months is based on the TOP 3 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here.

*GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. GRPs are the number of exposures within a certain age group divided by the number of possible viewers (television universe) within this same age group * 100

**Using the simplifying assumption that 90-100% of the age group was reached with alcohol advertising in the selected period. Since a reach of 100% is rather unrealistic, also the average number of ads seen per age group with a reach of a more realistic 90% has been calculated. A reach of 100% leads to an underestimation of the real number of ads seen per person. The lower the reach of the ads has been in practice, the higher the average number of ads seen per person.

Source: Nielsen Media Research & media control GmbH & Co. KG 2010

Average Exposure: GRPs

The *total* number of GRPs per age group (Table 4, column 2) is calculated by dividing the total number of impressions or exposures (e.g. 615 million in the case of 4 to 17 year olds) by the size of the TV population of that particular age group (around 10 million in the case of 4 to 17 year olds), times 100. In order to get the *average* number of alcohol commercials a person in a specific age group was exposed to (columns 3 and 4), the total number of GRPs has been divided by 100 (column 3, assuming a 100% reach; Jernigan and Ross 2010) and by 90 (column 4, assuming a more realistic reach of 90%).

Table 4 reveals that the subgroup of young adults between 18 and 34 years generated by far the most GRPs in May and in October 2010. Assuming a 90 to 100% reach, an adult of this age group saw on average 142 to 158 alcohol commercials (columns 3 and 4) within the three selected channels. This is significantly more than the group of 35 year olds and older (35+) who saw on average 92 alcohol commercials in the two considered months.

Regarding the *underage viewers*, the group of 4 to 17 year olds generated 6.104,10 GRPs. Thus, with the same assumption of reach, a minors would have been exposed by 61 to 68 alcohol commercials in

the selected period. However, when looking at the difference between the 'younger' minors (4 to 12) and the 'older' minors (13 to 17), it becomes clear that the older subgroup saw much more alcohol ads than the younger ones. While children between 4 and 12 years saw on average 35 alcohol commercials, the 'at risk' population of 13 and 17 year olds saw almost three times as much alcohol ads (on average 95,7). This number of almost 96 ads is closer to the number of commercials seen by the young adults (18-34, who saw around 142 ads) than to the number of commercials seen by the youngest children (4-12, who saw 35 ads).

It should be noted that these average numbers of alcohol commercials that were seen by someone belonging to a certain age group are **underestimations** for two reasons:

- Within the prevailing analyses merely the data from the Top 3 TV channels most often watched by minors aged between 13 and 17 years in May and October 2010 was considered. In Germany there are currently existing more than 59 TV channels of which more than half are broadcasting alcohol advertising.

- In this project the simplifying assumption that the reach of alcohol advertising within the selected months was 90 to 100%. Assuming a reach of 100% is a rather conservative approach, since in practice the reach is never 100% but somewhat lower. In the U.S. e.g. it comes down to approximately 91%. Thus, using a 100% reach instead of a lower, and more realistic, reach leads to an *under*estimation of the average number of exposures (e.g. assuming a reach of 90%, minors aged 13 to 17 years would not have been reached by an average of 96 commercials, but 106). Given this practical issue, the average number of ads seen per person will in reality be more equal to the numbers presented in the final column of Table 4 (90% reach).

Youth overexposure: GRP ratios

In the following section youth exposure to alcohol advertising will be compared to the exposure of (young) adults. In this context, attention is paid to the group of 13 to 17 year olds, who are just starting to drink alcohol and are therefore more vulnerable to the effects of alcohol advertising. Jernigan and Ross (2010) also emphasize the importance of paying particular attention to this group of minors, since they are at risk for underage drinking and are exposed to the majority of the alcohol advertising reaching minors (67% in the US and also 67% in Germany, see § 3.2.1 above).

In order to calculate a GRP ratio of possible 'youth overexposure', the total number of GRPs in the 'at risk' group (13 to 17) must be divided by the total number of GRPs of the comparison group (e.g. young adults (18-34) or the entire adult population (18+)). If the ratio equals 1, both minors and (young) adults are exposed to an equal amount of advertising. If the ratio is larger than 1, this means that youth are relatively overexposed to alcohol advertising compared to (young) adults.

Table 5 shows that both GRP ratios are lower than 1 (0,92 resp. 0,67). This is an indication that the 13 to 17 year olds were not seeing more alcohol advertising per capita compared to adults. Apparently,

13 to 17 year olds receive 92% of the exposure of adults (18+) and 67% of the exposure of young adults (18-34). In other words, for every 10 alcohol ads seen by (young) adults, youth aged 13 to 17 years old see 7 to 9 alcohol commercials.

Table 5: Comparing the exposure of different age groups to alcohol advertisements in May and October 2010

Groups compared	GRP ratio*	Percentage of overexposing ads	Percentage of exposure from overexposing ads
13-17 / 18+	0,95	1.360/3.221 = 42,2	66,7
13-17 / 18-34	0,65	488/3.221 = 15,2	21,9

*GRP ratio = Gross Rating Points ratio: the total number of GRPs for age group 12-17 divided by the total number of GRPs for the age group 18+ resp. 18-34. A GRP ratio > 1 is an indication that youth are being exposed to more advertising per capita than (young) adults. Source: Nielsen Media and SKO, 2010.

Percentage of youth overexposure

Nearly half of the 3.221 alcohol commercials youth aged 13 to 17 years turned out to be relatively overexposed compared with adults (that is, more minors were reached in relation to the size of the own age group, compared with adults in relation to the size of this age group). In 42,2% of all commercials being broadcasted relatively more 13 to 17 year olds were reached compared with adults (18+). This percentage of overexposure was around three times higher when comparing the youngsters with young adults aged 18 to 34 years: 15,2% of the commercials exposed relatively more 13 to 17 year olds (see Table 5).

Percentage of youth exposure resulting from overexposing ads

When the total number of GRPs generated by the overexposing ads is divided by the total number of GRPs for 13 to 17 year olds, it becomes clear that more than half (66,7%) of the total exposure to alcohol advertising amongst 13 to 17 year olds is coming from the overexposing ads where youth on a per capita basis receive more exposure compared with adults (see Table 5, final column).

3.2.3 Differences in exposure for different types of alcohol

The following section examines whether certain types of beverages are reaching relatively more youth compared with adults.

Table 6 reveals that in Germany minors between 13 and 17 years are slightly (13%) more exposed to commercials promoting sweet alcoholic beverages (e.g. vermouth, cider and alcopops) than adults of 18 years and older (18+). It is moreover striking that within the other categories of beer, alcohol-free beer, spirits, wine and alcohol-free wine minors aged 13 to 17 years and adults of 18 years and older are generally almost equally exposed to alcoholic commercials.

Comparing the "at risk" subgroup of 13 to 17 year olds with young adults aged between 18 and 34, there is no indication for an overexposure of minors within a certain category of alcoholic beverage.

Table 6: Exposure per product category

Category	GRPs			GRP ratio		% Overexposing ads		% Exposure from over-exposure	
	Age 13-17	Age 18+	Age 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34
Beer	5.853	6.444	8.712	0,91	0,67	42,70	14,60	67,40	22,30
Beer - alcohol free	959	1.023	1.420	0,94	0,68	39,03	11,30	66,10	15,00
Spirits	1.418	1.560	2.220	0,91	0,64	39,40	12,00	63,60	19,40
(Sweet) beverages*	462	409	687	1,13	0,67	48,00	15,00	73,80	17,30
Wine**	782	819	1.034	0,95	0,76	43,80	27,20	62,50	32,80
Wine - alcohol free	92	95	101	0,97	0,91	55,20	41,40	78,50	41,30
Total	**9.566**	**10.350**	**14.175**	**0,92**	**0,67**	**42,20**	**15,20**	**66,70**	**21,90**

*This category comprises: Vermouth, Cider, Alcopops and/ or other (sweet) alcoholic beverages < 15 volume percent.

**This category comprises: Wine, Sparkling Wine and Champaign.

Note. The number of ads in these two months is based on the TOP 3 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here.

Numbers in red indicate that more than half of the exposure results from overexposing ads where youth receive more exposure on a per capita basis compared with adults. Numbers printed in red indicate youth over exposure (GRP ratio > 1 or a percentage > 50% with regard to the amount of exposure resulting from overexposure).

Source: Nielsen Media Research & media control GmbH & Co. KG 2010

GRP ratios

Apart from the category '(sweet) beverages' the highest GRP ratio was found for alcohol-free wine as well as for alcoholic wine. The GRP ratios for exposure of 13 to 17 year olds compared with adults resp. young adults to ads for alcoholic wine were ,e.g., 0.95 resp. 0,76. Thus, for every 10 wine commercials a (young) adult was exposed to, a 13 to 17 year old saw 8 to 9 of these.

Percentage of youth overexposure

For the product categories one can see that 39 to 55 percent of the 12-17 year olds were relatively overexposed compared with older viewers (a higher percentage of minors -within the age group of minors- saw the commercial, compared with adults -within the age group adults). The percentages of overexposing ads are highest among the category of sweet alcoholic beverages (approx. 48%) and alcohol free wine (approx. 55%) and lowest for the category of alcohol free beer ads and spirits ads (approx. 39%). The number of overexposing ads for beer and wine lies somewhere in between (approx. 43%).

Percentage of youth exposure resulting from overexposing ads

The final column in Table 6 reveals that almost over two third of the total youth exposure results from the overexposing beer and alcohol free wine ads where youth receive more advertising per capita

compared with adults. But when youth 12-17 are compared to young adults, it turns out that less than a quarter (21,9%) of the total youth exposure to alcoholic beverages results from the overexposing ads with 41,3% of the youth exposure to alcohol free wine ads result from overexposure of minors compared to young adults.

3.2.4 Differences in exposure for different brands

Regarding youth overexposure at the brand level, the next part examines if there are certain brands that exposure relatively more minors than adults. In Table 7 all 63 brands are provided together with the total number of GRPs per age group and the GRP ratios indicating overexposure (ratio > 1) or not (ratio < 1).

Table 7. Exposure per brand

Brand	GRPs			GRP ratio		% Overexposing ads		% Exposure from overexposure	
	Age 13-17	Age 18+	Age 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34	13-17 / 18+	13-17 / 18-34
Aperol Aperitif	292	249	422	1,17	0,69	44,44%	11,11%	76,28%	9,49%
Bacardi Mojito	49	35	64	1,39	0,76	70,59%	23,53%	86,73%	44,55%
Bacardi Weisser Rum	39	28	56	1,42	0,74	72,73%	27,27%	90,64%	42,69%
Baileys Irish Cream Likoer	36	52	49	0,70	0,74	27,78%	27,78%	35,67%	43,31%
Beck's Biermix vb	235	234	374	1,01	0,63	47,30%	13,51%	73,46%	17,73%
Beck's Pilsener	203	220	308	0,92	0,66	41,67%	9,52%	60,76%	19,34%
Berentzen Fruchtige Softspirituosen	40	59	55	0,68	0,72	19,05%	14,29%	43,60%	26,74%
Berliner Pilsner	201	137	289	1,47	0,70	72,55%	21,57%	89,66%	20,24%
Bitburger Alkoholfreies Bier	166	145	238	1,14	0,70	48,57%	2,86%	72,28%	3,48%
Bitburger Pils	85	100	134	0,85	0,64	50,00%	11,54%	62,77%	13,86%
Campari	124	142	159	0,87	0,78	34,69%	20,41%	64,94%	31,35%
Campari/gws msc kreuzfahrten	38	58	56	0,65	0,68	11,54%	19,23%	46,67%	42,42%
Captain Morgan orig.spiced gold	207	179	372	1,16	0,56	47,06%	4,41%	81,39%	8,57%
Chantre Weinbrand	28	31	45	0,91	0,63	40,00%	0,00%	53,28%	0,00%
Clausthaler alkoholfr.pils	314	347	433	0,91	0,73	39,25%	17,76%	60,62%	28,07%
Clausthaler alkoholfr.pils sp	35	23	52	1,53	0,67	50,00%	0,00%	86,93%	0,00%
De kuyper peachtree pfirsich liqueur sp	58	41	66	1,41	0,88	100,00%	25,00%	100,00%	33,73%
Erdinger Weizenbier	49	179	97	0,27	0,50	0,00%	3,23%	0,00%	5,19%
Flaeminger Jagd Kraeuter-likoer	14	19	18	0,75	0,79	0,00%	0,00%	0,00%	0,00%

Franziskaner Weizenbier range vb	243	216	360	1,13	0,68	51,43%	8,57%	76,49%	12,99%
Freixenet sekt	155	233	223	0,66	0,70	20,59%	27,94%	32,95%	35,62%
Gorbatschow Wodka sp	315	290	484	1,09	0,65	46,07%	5,62%	71,82%	8,57%
Hasseroeder Pils/gws partner	50	117	82	0,43	0,61	0,00%	17,86%	0,00%	18,60%
Jack Daniel's whiskey	20	20	41	1,00	0,50	50,00%	0,00%	73,86%	0,00%
Jaegermeister	198	224	324	0,88	0,61	40,32%	8,06%	54,56%	14,25%
Jever Fun Pilsener alko-holfrei	303	374	495	0,81	0,61	34,48%	10,34%	62,70%	12,65%
Jever Pilsener	312	381	511	0,82	0,61	34,48%	10,34%	64,01%	12,25%
Jules Mumm Sekt	76	96	104	0,79	0,73	35,29%	23,53%	45,29%	34,65%
Jules Mumm Sekt sp	177	147	230	1,20	0,77	61,29%	32,26%	79,66%	40,09%
Koenig Pilsener	277	207	353	1,34	0,78	72,06%	23,53%	87,97%	32,19%
Koestritzer Schwarzbier	76	71	116	1,08	0,66	57,89%	10,53%	78,46%	19,68%
Krombacher Bier range sp vb	71	214	150	0,33	0,47	8,47%	8,47%	34,35%	30,78%
Krombacher Pils	411	551	639	0,74	0,64	26,90%	8,28%	46,76%	14,65%
Krombacher Pils sp	740	1.230	1.118	0,60	0,66	19,53%	16,62%	41,85%	33,34%
Licor 43 Likoer	28	42	51	0,68	0,56	27,78%	5,56%	45,53%	17,07%
Light live alkoholfrei sekt	44	57	44	0,76	1,00	38,10%	52,38%	54,50%	70,37%
Martini Rosato	122	125	201	0,97	0,61	44,74%	18,42%	62,57%	24,95%
Moskovskaya Wodka	37	61	67	0,61	0,55	17,65%	17,65%	32,50%	32,50%
Ouzo 13	48	88	66	0,55	0,72	13,64%	22,73%	31,88%	39,62%
Paulaner Weizenbier	141	134	202	1,06	0,70	40,91%	6,82%	73,41%	8,16%
Paulaner Weizenbier alkoholfrei	141	134	202	1,06	0,70	40,91%	6,82%	73,41%	8,16%
Padeberger Pilsner	263	321	394	0,82	0,67	32,41%	12,04%	55,15%	17,02%
Padeberger Pilsner sp	797	560	1.035	1,42	0,77	76,40%	23,60%	88,31%	25,18%
Ramazzotti Kraeuterlikoer	129	184	236	0,7	0,54	30,77%	11,54%	43,83%	26,42%
Rotkaeppchen Sekt	81	112	105	0,72	0,77	29,63%	14,81%	46,19%	23,34%
Rotkaeppchen Sekt alko-holfrei	49	38	57	1,29	0,85	100,00%	12,50%	100,00%	15,20%
Rotkaeppchen sekt/videoload	25	34	34	0,72	0,73	14,29%	28,57%	16,82%	28,97%
Rotkaeppchen Wein	22	28	36	0,78	0,60	33,33%	16,67%	54,30%	30,82%
Schoefferhofer Bier mix vb	190	147	302	1,3	0,63	69,44%	5,56%	87,86%	4,49%
Schoefferhofer Grapefruit sp	302	264	519	1,14	0,58	53,95%	7,89%	79,30%	22,34%
Schoefferhofer Weizenbier	180	144	279	1,25	0,65	68,42%	13,16%	81,74%	14,81%
Smirnoff Vodka	57	43	74	1,32	0,78	72,22%	16,67%	88,26%	24,70%
Soehnlein Brillant sekt	60	64	76	0,94	0,79	45,45%	36,36%	66,28%	46,74%
Soehnlein Brillant sekt sp	187	105	227	1,78	0,82	79,49%	25,64%	90,49%	22,96%
Veltins Pilsener	98	120	137	0,82	0,72	38,10%	11,90%	60,38%	27,36%
Veltins Pilsener sp	54	118	105	0,46	0,52	7,14%	0,00%	4,26%	0,00%
Veltins v+ Curuba sp	133	83	151	1,6	0,88	94,12%	32,35%	98,43%	47,04%
Veltins v+ Energy sp	140	84	153	1,67	0,91	88,89%	44,44%	93,21%	55,30%
Veltins v+ Grapefruit sp	200	139	276	1,43	0,72	66,67%	31,67%	79,32%	42,61%

Warsteiner Premium Bier range vb	264	247	372	1,07	0,71	41,67%	12,50%	71,75%	11,25%
Warsteiner Premium verum Pils	21	17	21	1,23	1,01	66,67%	50,00%	92,39%	68,48%
Warsteiner Premium verum pils sp	112	209	229	0,53	0,49	0,00%	0,00%	0,00%	0,00%
Wernesgruener Pils leg-ende	4	3	6	1,59	0,73	50,00%	50,00%	73,68%	73,68%
Total	**9.566**	**10.350**	**14.175**	**0,92**	**0,67**	**42,21%**	**15,15%**	**66,73%**	**21,94%**

Note. The number of ads in these two months is based on the TOP 2 TV channels most often watched by 13 to 17 year olds. Therefore, the total number of ads within this period is in fact higher than depicted here. GRPs = Gross Rating Points; a standard to measure per capita exposure to advertising. GRPs are the number of exposures within a certain age group divided by the number of possible viewers (television universe) within this same age group *100. Numbers printed in red indicate youth over exposure (GRP ratio > 1 or a percentage > 50% with regard to the amount of exposure resulting from overexposure). Source: Nielsen Media Research & media control GmbH & Co. KG 2010

Comparing the exposure of the risky subgroup (13 to 17 year olds) with young adults (18 to 34), it can be underlined that relatively more young adults were exposed to alcohol commercials than the considered minors within May and October 2010. Just two brands slightly (1%) reached more youth compared to young adults: The alcohol-free *Light Live Sekt* and the *Warsteiner premium verum pils.*

The comparison between adolescents and adults (18+) is quite different from the previous one. Almost half of the advertised beverages (29 out of 63) reach more youngsters than adults. Particularly the brand "Söhlein Brilliant Sekt (sp)" (78%) as well as the pre-mixed beer beverages "Veltins V+ Curuba" (60%), Veltins V+ Energy" (67%) and Veltins V+ Grapefruit" (43%) of the brand Vplus were disproportionately reaching more minors aged from 13 to 17 years than adults of 18 years and older.

The brand "Jack Daniel's Whiskey" equally reaches minors and adults. Alcohol advertisements with a relatively low GRP ratio are promoting "'Erdinger Weizenbier" (0,27) and "Veltins pilsener (sp) (0,46).

Percentage of youth overexposure

When looking more closely at the percentage of ads which are overexposing youth compared with adults (18+), brands with a relatively low GRP ratio e.g. Erdinger Weizenbier and Veltins Pilsener also have relatively lower percentages of ads that overexpose youth. However, other brands e.g. Veltins v+ Curuba sp or De Kuyper Peach Tea overexpose youth in more than 94 or even 100% of their broadcast ads. However, compared to young adults (age 18-34) minors are not overexposed by the alcohol commercials examined.

Percentage of youth exposure resulting from overexposing ads

After calculating the percentage of youth exposure resulting from the overexposing ads (compared to 18+ population), it turns out that two-third of the brands generate more than half of their total youth exposure from the overexposing ads (see final column, Table 7). It concerns a large majority of the alcohol brands.

3.2.5 Summary Exposure Data

Taken together, the data on the exposure to alcohol advertising on television in May and October 2010 reveals that 91,2% of all advertising was seen by adults (18+), whereas minors (4 to 17 years) saw 8,8% of the broadcasted advertising impressions. 32,9% of the alcohol advertising impressions reaching minors were seen by 4 to 13 year old children and 67,1% were seen by the 'older' age group of 13 to 17 year olds.

On average, most alcohol ads were seen by young adults aged between 18 and 34 years (on average 141,8 alcohol commercials), followed by the "at risk" group of 13 to 17 year old adolescents (just starting to drink), who saw on average 95,7 alcohol impressions within the two considered months. The children aged 4 to 12 saw on average 35 alcohol commercials, while adults of 35 years and older consumed on average 91,8 alcohol commercials.

There was little evidence for youth overexposure in general. The GRP ratio of 0,92 shows that 13 to 17 year old minors are almost equally exposed to alcohol commercials compared to adults of 18 years and older. The ratio of 0,62, however, indicates that the "at risk" subgroup is not relatively more exposed to alcohol impressions than young adults aged 18 to 34 years.

Regarding specific types of alcoholic beverages it was found that in Germany minors between 13 and 17 years are slightly (13%) more exposed to commercials promoting sweet alcoholic beverages (e.g. vermouth, cider and alcopops) than adults of 18 years and older (18+). It was moreover striking that within the other categories of beer, alcohol-free beer, spirits, wine and alcohol-free wine minors aged 13 to 17 years and adults of 18 years and older are generally almost equally exposed to alcoholic commercials.

Finally, on the brand level, 29 out of 63 different advertisements could have been identified to overexpose youth (13 to17) relative to adults (18+) which reflects 66% of the total youth exposure. Particularly the brand "Söhlein Brilliant Sekt (sp)" (78%) as well as the pre-mixed beer beverages "Veltins V+ Curuba" (60%), Veltins V+ Energy" (67%) and Veltins V+ Grapefruit" (43%) of the brand Vplus were disproportionately reaching more minors aged from 13 to 17 years than adults of 18 years and older.

3.3 Thresholds in exposure to alcohol advertising

As already mentioned in chapter 1.2, in most of the European countries a so-called "30%-threshold" is anchored within the existing advertising regulations, stipulating that alcohol marketing activities should not reach an audience which consists of more than 30% minors. This threshold originates from the United States of America, where it has been based on the proportion of minors relative to the total population. However, in the US, the minority comes up to the age of 21 years, rather than with the age of 18 as in Europe. Therefore, the proportional standard of 30% might be applicable to the US (and even this can be called into question, see CAMY 2005; Jernigan & Ross 2010), but will be by far too high for European countries, simply because the proportion of minors on the total size of the population is much smaller.

In contrast to the US and many European countries, the self-regulating system in the Netherlands stipulates a 25%-threshold saying that "no advertising of alcoholic beverages in any form may reach a public that consists of more than twenty-five percent of minors.

The German Code of *Conduct on Commercial Communication for Alcoholic Beverages* stipulates indeed that alcohol advertising shall not be conveyed by media in which the majority of the editorial content addresses minors. Specifications about a concrete threshold are, however, not anchored within the existing advertising regulations. Therefore, in the following sections a hypothetical threshold of 30% is assumed and tested.

3.3.1 Testing a possible 30% threshold

With respect to the present data, a 30% threshold would imply that alcohol commercials broadcasted on TV should not reach an audience consisting of more than 30% minors. In order to examine the possible adherence to such a 30% threshold, the percentage of minor viewers (aged 4 to17), watching a particular program as well as the alcohol commercials along this program, was calculated for May and October 2010 and set in relation to the total number of viewers.

The calculations reveal that in Germany there wouldn't have been any breaches against a possible 30%-threshold; even a 25%-threshold would not have been violated in the two considered months. At the first glance, this seems to be very positive. But a more detailed analysis of the prevailing data reveals that small percentages are not able to protect large numbers of minors from being exposed to alcohol commercials.

The examples illustrated in Table 8 show that low percentages can be accompanied by high and low absolute numbers of minor viewers, but also that high percentages can be accompanied by both.

In the first case (first row) 22,55% of the viewers in the German TV universe are under aged, which would be allowed, assuming a hypothetical threshold of 30%. Nevertheless, 1.590.000 minors have been exposed to the alcohol commercial broadcasted along the illustrated program. This is 15,8% of the total number of minors in the TV universe aged 4 to 17 years in Germany. The second line represents a comparable percentage of viewers (21,05%). The absolute number of under aged viewers,

however, just comes up to 240.000, representing 2,4% of the total underage population in the TV universe.

Table 8

Brand	Program	% of viewers aged 4-17	N aged 4-17
Radeberger pilsner sp	Example 1 – Prime time comedy	22,55%	1.590.000
Bitburger pils	Example 2 – Prime time comedy	21,05%	240.000
Bitburger pils	Example 3 – Late night sports program	4,61%	620.000
Jever pilsener	Example 4 – Late night drama	4,17%	20.000

Source: Nielsen Media Research & media control GmbH & Co. KG 2010

The last two cases (row 3 and 4) illustrate examples of very low percentages. Both, however, represent total different numbers of under aged viewers. While in the first example 4,61% of minor viewers makes up a total of 620.000 spectators, the percentage of 4.17 in the second case just covers 20.000 under aged persons of the German population in the TV universe.

These differences are caused by the different (absolute) numbers of adults that are watching the respective programs at the same time.

The examples stress that even low percentages that do not violate the assumed 30% threshold do not protect large numbers of minors from being exposed to alcohol commercials.
Thus, in the following chapter a more proportional threshold corresponding to the composition of the German TV universe population will be generated.

3.3.2 Generation of a 'proportional' threshold

As mentioned above, there are several drawbacks to an assumed 30% threshold in relation to the exposure of minors. The percentage has been based on the U.S. population, which consists of more minors than the European populations.
Therefore, it will be more protective to adjust this assumed threshold which is common in most European countries to a lower standard that corresponds better with the composition of the 'European' (e.g. German) TV population.

Proportional standard: all minors?

According to the Center on Alcohol Marketing and Youth (CAMY 2005) a standard of 30% would provide adequate protection from overexposure in the U.S. if alcohol advertising impressions were evenly

distributed among the 2 to 20 year old population (because 2 to 20 year olds make up slightly less than 30% of the US population). However, 12 to 20 year olds receive more than two thirds of all advertising impressions among 2 to 20 year old population. Therefore, it makes much more sense, to adjust the standard to the group of minors that is relatively 'overexposed' and runs more risk at underage drinking (CAMY 2005). The German data showed a similar distribution: 13 to 17 year olds receive more than two thirds of all alcohol advertising reaching minors. Therefore, it is very plausible to apply the same way of reasoning for the German situation.

Proportional standard: select the 'at risk' youth population

Selecting a proportional standard based on the relatively 'higher risk group' of minors, this would be 12 to 20 in the U.S. and 12 to 17 in Europe. Children under the age of 12 generally do not drink alcohol, have a low level of awareness of alcohol advertising, and are not being overexposed to alcohol advertising (CAMY 2005). Thus, protecting the older group of minors will automatically protect the younger viewers as well.

For these reasons the National Research Council and Institute of Medicine in the U.S. have recommended moving towards a 15% threshold in the U.S. (instead of 30%), based on the size of the 12 to 20 year old population (National Research Council and Institute of Medicine, 2004). In addition, 20 state attorneys general requested the Federal Trade Commission to discuss this new proportional standard of 15% with the industry (FTC, 2006).

In Germany the 'at risk' group aged 13 to 17 years comprises approximately 6,04% of the entire TV population (see Table 4). Following the recommendations made by Jernigan and Ross (2010), the National Research Council and Institute of Medicine (2004) and the plea by 20 state attorneys general discussed above, ***the recommendation for the German situation would be a proportional standard of 6% (instead of the assumed 30% threshold).***

Recommendation concerning a proportional standard for Germany

- <u>US: proportional standard of 15%</u> (instead of 30%) based on proportion of 12 to 20 year olds is recommended by the National Research Council and Institute of Medicine (2004), 20 state attorneys general (2006) and scientists e.g. Jernigan and Ross (2010).
- <u>Germany: proportional standard of 6%</u> based on proportion of 13 to 17 year olds within the entire German TV population.

Possible effect of a proportional standard of 6%

Possible effect of a proportional standard of 6%

Theoretically, in case of a proportional standard of 6% would be have been implemented in Germany the total number of GRPs for 13 to 17 year olds could have roughly decreased from 9.572 (see Table 4) to 2.789, ceteris paribus. In case 13 to 17 year old adolescents are better protected, 4 to 12 year olds will automatically be exposed to less alcohol advertising as well.

However, since it is highly unlikely that the advertisers do not change their advertising patterns in order to make up for the lost GRPs, we also calculated the net effect which results after the policy has been completely nullified (compensated for). In other words, the number of adult GRPs lost will be completely compensated by the advertisers by additional broadcasting.

Three important assumptions are associated with this type of analysis:

1. The alcohol companies purchase additional ads in permitted timeslots and on programs with the proper audience composition with the same distribution as current advertising and

2. There is sufficient capacity to absorb the shifting advertising in late night programming and

3. If the alcohol industry increases advertising above and beyond the amount that is shifted to make up for lost reach, it purchases new programs with the same distribution as current programs.

<u>Note:</u> Unless a proportional standard accompanies any time ban, then assumptions #1 and #3 can be called unrealistic and alcohol companies can purchase ads on programs with very high youth audience composition in late night programming.

After running the analysis of introducing a 6% proportional standard, nullified for the loss of adult GRPs, the following results emerge (see Table 9). The policy would lead to a drop in adult GRPs from 10.350 to 5.767 which implicates a loss of 4.583 adult GRPs. Assuming that the advertisers will at least try to make up for this loss, the number of additional GRPs for youth has been calculated, based on the GRP ratio between youth and adults which remained after the introduction of the proportional standard.

That is: it is estimated that the number of additional youth GRPs comes down to 4.583 times 0,48 =2.217[6]. This results in a net change in youth GRPs of -4.560 GRPs (on the total of 10.350). This represents a decrease of 47,7% in youth exposure to televised alcohol ads. Due to the compensation in GRPs for adults, there will be no change in the reach of adults (although more ads need to be broadcast to remain at the same level of reach).

Table 9: The possible effect of a 6% proportional standard including a compensation for lost adult GRPs.

	13-17 GRPs	18+ GRPs	GRP ratio 13-17/18+
Total current GRPs	9.566	10.350	0,92

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[6] Numbers can differ somewhat due to rounding errors. Calculations have been made in excel in which numerous decimals were used.

GRPs left after 6% prop. standard	2.789	5.767	0,48
Change in GRPs	-6.777	-4.583	
Change in adult exposure needed to nullify time ban		4.583	
Effect on youth GRPs (times ratio)	2.217		
GRPs left	5.006	10.350	
Net change in GRPs	**-4.560**	**0**	
Percentual change in GRPs	**-47,70**	**0**	

3.3.3 Summary thresholds

In the US as well as in a multiplicity of European countries an adverting volume restriction is anchored within the existing alcohol advertising self-regulations. This restriction refers to a 30% threshold (25% in the Netherlands) stipulating that alcohol marketing activities should not reach an audience which consists of more than 30% minors (25%). In Germany, however, such a volume-related restriction does not exist.

Assuming a hypothetical threshold of 30%, there wouldn't have been any breaches within the German advertising landscape. But a detailed analysis reveals that low exposure percentages do not protect large numbers of youngsters from being exposed to large numbers of alcohol commercials.

Moreover an assumed 30% standard is not proportional to the 'at risk' youth population (aged 13 to 17) who are starting to drink, are more sensitive to advertising and see more ads. The 30% standard regarding 'all minors' allows the alcohol advertisers to relatively overexpose the 13 to 17 year olds, compared with children aged 4 to 12 years.

Therefore more proportional standard of 6% is proposed for Germany. This is based on the German 'at risk' population of 13 to 17 year olds which comprises around 6% of the total TV population. This new standard is quite similar to the 15% proportional standard that is being advocated for in the U.S. - which is based on the size of the 12 to 20 age group on the total U.S. population. Introducing a 6% proportional standard could lead to a reduction in youth exposure of approximately 48%, even if the number of adult GRPs lost by the policy is completely compensated for.

3.4 Possible effects of a time ban on exposure to alcohol advertising

Due to the 'prohibition on infringing on the freedom of speech' as regulated by the First Amendment to the U.S. Constitution, it is difficult in the United States to regulate the volume of alcohol advertising by law. Therefore, in the U.S. a lot of attention is being paid to achieving reductions in youth exposure to alcohol advertising by 'voluntarily' lowering the industry standard from 30% to a more proportional standard of 15% (as discussed above). This has thus far not been achieved yet[7].

However, in Europe other legislation prevails, which makes it more 'easy' to legally restrict alcohol advertising. Thus, a large majority of the European countries (21 out of 27 EU Member States) has imposed a legal partial or even a complete ban on the broadcast of alcohol advertising on television (STAP 2009)[8]. In Germany, however, time and/or product bans on commercial communication for alcoholic beverages are not anchored within the existing legal system.

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[7] The U.S. standard used to be a fairly meaningless 50% and was lowered in 2003 to a more proportional 30%, see CAMY, 2005. A recent official request by the Federal Trade Commission's Bureau of Consumer Protection asked the industry to move to 25% in December 2010. The industry declined.

[8] See Appendix 3 for an overview of television time bans in all EU-27 Member States.

For this, in the following section the "gain" in GRPs as an effect of an introduction of a hypothetical time ban in Germany is estimated. Within this estimation process special attention is paid to the age groups of 4+ and 13-17.

3.4.1 Shifts in GRPs after introducing a time ban

In Table 10 (middle columns) it is shown what the possible effects of different time bans (e.g. until 22h, 23h etc.) could be on youth exposure (13 to 17 year olds), assuming that advertisers find ways to at least make up for the loss in adult GRPs (see Appendix 4 for the detailed calculations).

The results show that after nullifying the effect of the different time bans, still a decrease in number of youth GRPs is found. However, this decrease in youth GRPs is not as large when compared with a proportional standard of 6% (see Table 9). Introducing a proportional standard would result in a decrease of around 48% of youth GRPs. In Table 10 one can see that the net decrease in GRPs after implementation of a time ban ranges from 3,4% (-325 GRPs; at 21h) to 20,1% (-1.920 GRPs; at 1h), again, provided that the advertisers succeed in shifting their patterns in such a way that they can make up for the lost adult GRPs.

Within the introduction of a time ban in Germany from 6h to 23h, the net effect would be a decrease of 1.999 youth GRPs (from 9.566), after compensating the lost adult GRPs. This represents a decrease of approximately 20,9% in exposure.

It might well be possible that in absolute numbers fewer minors are reached after 23.00h, but a relatively small group of youngsters that watches late night television will be reached excessively. Research has shown that having a TV in the bedroom predicts the initiation of (harmful) drinking (Hanewinkel & Sargent, 2009). Furthermore, unpublished research by Ross shows that bedroom media is associated with lower parental monitoring (personal communication, June 2011). Therefore, one might infer that this small group of youngsters watching late night TV without much parental control is a higher risk group that should be protected rather than bombarded with alcohol ads late at night.

Shifts in advertising are highly likely to occur

It is highly likely that shifts in alcohol advertising will occur after the introduction of a watershed. As an example we can refer to the recent situation in The Netherlands. The recently introduced watershed of 6.00-21.00 resulted in a shift of the broadcasting of alcohol commercials on television. All commercials that were usually broadcast before 21.00 are now being broadcast after 21.00h and even more (Nielsen Media, 2010; STAP, 2011a). Compared with 2008, when the time ban was not yet in place, in 2010 the number of alcohol commercials after 21.00 has more than tripled. The data revealed that after 21.00h more youngsters are now being reached by more alcohol commercials than before the time ban came into force. In other words, the net effect of the ban has been negative, especially for the 12-17 year olds who see significantly more alcohol ads now, in a shorter period of time. Before 21.00h children do not see any alcohol commercials anymore, but sponsoring of programs is still allowed and made use of frequently. A similar shift is likely to occur in Germany if such a watershed is to be introduced without further legal limitations.

3.4.2 Summary time bans

To summarize, in Europe, rather than in the U.S., legal time restrictions on alcohol advertising are currently often in place. A majority of 21 out of 27 EU Member States has time or product bans for alcohol advertising on television. Since it is unclear what will happen exactly with the pattern of broadcasting after a watershed comes into force, it is difficult to do firm 'predictions' on the exact effect of a time ban.

The next section of the report focuses on a hypothetical combination of a proportional standard with a time ban.

3.5 Combination of proportional standard and time ban

Finally, it is interesting to calculate what the possible effect of a combination of both policies could be. In Table 10 (final columns) the effect of a proportional standard of 6% in combination with different time bans is shown (see Appendix 5 for the specific calculations). Again, also in this analysis the assumption was that the advertisers can and will at least nullify the effect of the policy (compensate the number of adult GRPs lost).

Not unexpectedly, the results reveal that combining the 6% proportional standard with a time ban is more protective than applying both measures separately. Implementing a time ban from 6h to 23h in combination with a 6% standard would reduce youth exposure with 48,3%, while the per capita adult exposure remains the same (see Table 10).

Table 10: Change in 13-17 GRPs after 3 different policies (proportional standard of 6%, time bans, and combination of standard and bans)

Hour	Current GRPs		Proportional standard 6%			Different time bans			Prop. standard + time bans	
	13-17	*18+*	*Change 13-17 GRPs*	*%*	Time ban until	*Change 13-17 GRPs*	*%*		*Change 13-17 GRPs*	*%*
< 21	4.029	4.149			21h	-325	-3,40%		-4.178	-43,70%
21-22	2.115	2.058			22h	-1.017	-10,60%		-4.343	-45,40%
22-23	1.792	1.914			23h	-1.999	-20,90%		-4.621	-48,30%
23-24	1.051	1.458			24h	-1.787	-18,70%		-4.811	-50,30%
24. Jan	523	694			01h	-1.920	-20,10%		-4.888	-51,10%
01. Feb	43	50								
> 02	14	27								
Total	9.566	10.350	-4.560	-47,70%						

Note: See Appendix 4 for the specifications of the effects of the final two policies (different time bans and the combination between a 6% proportional standard and different time bans)

The reductions in exposure of 13 to 17 year olds (13-17 GRPs) as a result of three different policies are graphically represented in Figure 3.

Figure 3: % Reduction in exposure to alcohol advertising for 13 to 17 year olds (13-17 GRPs) with three different policies (after compensating the loss of adult GRPs)
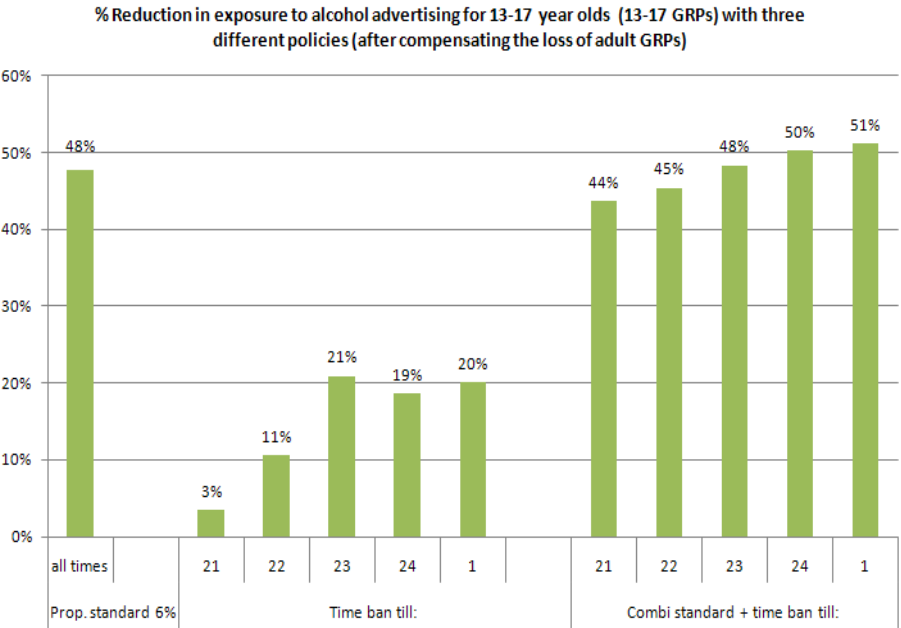
The percentage of reduction in exposure to alcohol advertising (13-17 GRPs) at three different policies: a) implementation of a 6% proportional standard, b) implementation of different time bans, and c) implementation of a combination of a 6% proportional standard and a time ban. In all outcomes an entire compensation for the total number of adult GRPs lost due to the policy has been taken into account. Source: Nielsen Media, 2010.

4. Policy Interventions in practice

In this report two possible policy interventions that restrict the volume of televised alcohol commercials have been described: a proportional standard and a watershed. The proportional standard restrict broadcasting alcohol commercials in television programs with a certain amount of minors watching compared to adults (e.g. 30%). A watershed is a time ban that restricts broadcasting of alcohol commercials within certain periods of time (e.g. between 6 am and 9 pm).

Possible theoretical effects of introducing or extending these regulations have been calculated. Practice has already shown (e.g. in the Netherlands) that it is highly unlikely that the advertisers do not change their advertising patterns in order to make up for the lost GRPs. Therefore, also the net effect which results after the policy has been completely nullified (compensated for) has been calculated. In other words, the number of adult GRPs lost will be completely compensated by the advertisers by additional broadcasting of alcohol advertisements. The following assumptions have been described in this report:

Three important assumptions are associated when calculating the possible effects of a watershed:

1. The alcohol companies purchase additional ads in permitted timeslots and on programs with the proper audience composition with the same distribution as current advertising and

2. There is sufficient capacity to absorb the shifting advertising in late night programming and

3. If the alcohol industry increases advertising above and beyond the amount that is shifted to make up for lost reach, it purchases new programs with the same distribution as current programs.

Note: Unless a proportional standard accompanies any time ban, then assumptions #1 and #3 can be called unrealistic and alcohol companies can purchase ads on programs with very high youth audience composition in late night programming.

However, when evaluating these policy interventions, also more practical issues have to be taken into account.

Thresholds in exposure to alcohol advertising

In most European countries alcohol advertisers maintain a threshold of 30% (e.g. EFRD, 2009), in the Netherlands a threshold of 25% is in place (Reclame Code 2011). Earlier in the report it has been argued that in order to protect young people in the age of 12-17 against exposure to alcohol commercials on television, a much lower proportional standard of 8% has to be implemented.

At this moment, all kinds of thresholds/proportional standards that are in place are implemented in self-regulation. Self-regulation has been proven insufficient in numerous countries such as: Australia (Jones & Donovan 2002, Jones et al 2008), the Netherlands (Van Dalen & Kuunders 2003); the Unit-

ed Kingdom (KPMG 2008, Hastings et al 2010); and the United States (Gomes & Simon, 2008)and Brasil (Pinsky & Vendrame 2010). There is a general conflict of interest when economic operators have to restrict their own marketing practices (De Bruijn et al 2010). Implementing a proportional standard in self-regulation is especially problematic since:

* Monitoring should be done by bodies independent from economic operators;

* When volume data over a longer period of time is accessible, it is very expensive to purchase these;

* Monitoring can only be done after possible youth exposure ("when harm is already done");

* A system with effective sanctions is generally lacking;

* A legal back stop is missing;

To implement the proportional standard in legislation and to put effective sanctions in place might be difficult to implement and to enforce since the placement of alcohol commercials will be based on audience estimations.

A time ban on exposure to alcohol advertising

A watershed to restrict the placement of alcohol commercials within certain time periods seems to be easier to implement and to enforce into legislation. As Appendix 3 shows, most European countries make use of this intervention in order to protect young people against exposure to alcohol commercials on television. In other countries, such as France, Sweden and Norway, all televised alcohol commercials are banned.

In practice, however, we see that the alcohol producers change their advertising strategy when confronted with this volume restriction. It is highly likely that shifts in alcohol advertising will occur after the introduction of a watershed. In the calculations made in this report, it is assumed that the number of adult GRPs lost after the introduction of a time slot will be completely compensated by the advertisers by additional broadcasting. However, in practice we can see that this might be an underestimation of the total volume to which young people are being exposed after introducing a watershed.

As an example we can refer to the recent situation in The Netherlands. The watershed of 6.00-21.00 resulted in a shift of the broadcasting of alcohol commercials on television. All commercials that were usually broadcast before 21.00 are now being broadcast after 21.00h and even more (Nielsen Media, 2010; STAP, 2011a). Compared with 2008, when the time ban was not yet in place, in 2010 the number of alcohol commercials after 21.00 has more than tripled. The data revealed that after 21.00h more youngsters are now being reached by more alcohol commercials than before the time ban came into force. In other words, the net effect of the ban has been negative, especially for the 12-17 year olds who see significantly more alcohol ads now, in a shorter period of time. Before 21.00h children do not see any alcohol commercials anymore, but sponsoring of programs is still allowed and made use of frequently.

Changing advertising behaviour

Considering marketing expenditures, alcohol advertising via television is still very important for the alcohol industry. Exposure to televised alcohol advertising will increase alcohol consumption among young people (Anderson et al 2009, Smith & Foxcroft 2009). In order to restrict youth exposure to

televised alcohol marketing clear alcohol marketing regulations are necessary. Since self-regulation is insufficient to protect young people, legislation is necessary (Van den Broeck & De Bruijn 2010). However, since alcohol advertisers change their advertising behavior in order to reach as many people as possible, time slots are suggested to have only limited effects in restricting youth exposure. For this reason, an overall restriction of alcohol commercials and promotion is desired to protect young people against exposure to televised alcohol advertising.

5. Conclusions

Based on the data described above some conclusions can be drawn:

About the general characteristics:

- On the three most popular TV channels amongst German youngsters (RTL, Pro7 and Sat1) a total of 3.221 alcohol advertisements was broadcast in May and October 2010.

- The majority (61,56%) of Dutch alcohol commercials are for beer, followed by spirits (15,76%). Little advertising was found for sweet beverages (3,93%) and wine (0,9%).

- A total of 30 different producers of alcoholic beverages were active in May and October. Together they were responsible for the broadcast of 63 different advertisements Most commercials were broadcast by the beer brewer Krombacher (N = 547; 17% of the total number of ads registered).

With respect to (over)exposure:

- Minors (aged 4 to 17 years) saw 8,8% of all advertising, of which 32,9% was seen by the youngest age group (4 to12 year olds) and 67,1% by the 'older' minors (aged 13 to 17 years). Thus, the 'at risk' group of 13 to 17 year olds is relatively overexposed to alcohol advertising within the group of minors

- The total number of times a minor was exposed to an alcohol commercial in May and October 2010 on the three selected channels was over 615 million.

- Children aged between 4 and 12 saw on average 35 alcohol commercials in the selected period, while the older minors (13 to 17 years old) saw on average 97,5 alcohol commercials. This is close to the number of 91,8 ads seen by adults of 35 years and older. Young adults aged between 18 and 34 years saw on average the most ads: 141,8.

- There was little evidence for youth overexposure to alcoholic beverages in general. The GRP ratio of 0,92 shows that 13 to 17 year old minors are almost equally exposed to alcohol commercials compared to adults of 18 years and older. The ratio of 0,62, however, indicates that the "at risk" subgroup is not relatively more exposed to alcohol impressions than young adults aged 18 to 34 years.

- Regarding specific types of alcoholic beverages German minors between 13 and 17 years are slightly (13%) more exposed to commercials promoting sweet alcoholic beverages (e.g. vermouth, cider and alcopops) than adults of 18 years and older (18+). It was moreover striking that within the other categories of beer, alcohol-free beer, spirits, wine and alcohol-free wine minors aged 13 to 17 years and adults of 18 years and older are generally almost equally exposed to alcoholic commercials.

- Finally, on the brand level, 29 out of 63 different advertisements could have been identified to overexpose youth (13 to17) relative to adults (18+). Particularly the brand "Söhlein Brilliant Sekt (sp)" (78%) as well as the pre-mixed beer beverages "Veltins V+ Curuba" (60%), Veltins V+ Energy" (67%) and Veltins V+ Grapefruit" (43%) of the brand Vplus were disproportionately reaching more minors aged from 13 to 17 years than adults of 18 years and older.

With respect to the assumed 30% threshold:

- In the US as well as in a multiplicity of European countries an adverting volume restriction is anchored within the existing alcohol advertising self-regulations. This restriction refers to a 30% threshold (25% in the Netherlands) stipulating that alcohol marketing activities should not reach an audience which consists of more than 30% minors. In Germany, however, such a volume-related restriction does not exist.

- Assuming a hypothetical threshold of 30%, there wouldn't have been any breaches within the German advertising landscape.

- A detailed analysis reveals that low exposure percentages do not protect large numbers of youngsters from being exposed to large numbers of alcohol commercials.

- An assumed 30% standard is not proportional to the 'at risk' youth population (aged 13 to 17) who are starting to drink, are more sensitive to advertising and see more ads. The 30% standard regarding 'all minors' allows the alcohol advertisers to relatively overexpose the 13 to 17 year olds, compared with children aged 4 to 12 years.

- The present analyses confirmed previous observations (e.g. STAP 2008a; 2008b) that the 25% resp. 30% threshold does not prevent large numbers of minors from being reached by alcohol advertising either. The drawbacks of the 25% (30%) threshold arise from the following:

  - The percentage of 30% or 25% selected by the European advertisers has been based on the U.S. population, which consists of much more minors than the European populations;

  - The 25% standard concerns all minors (0-17), and is therefore not proportional to the 'at risk' youth population (aged 13-17) who are starting to drink, are more sensitive to advertising and receive more exposure.

  - The 30% standard regarding 'all minors' (aged 0-17) allows the alcohol advertisers to relatively overexpose the 'older' minors (13-17) compared with 'younger' minors (4-12 or even 0-11) without violating the 30% threshold for 'all minors'. The data show that of all alcohol advertising seen by minors, the youngest age group is reached by approximately one half.

- Low percentages of minors being reached, not violating the 30%-threshold can be much more harmful than (very) high percentages which are violating the threshold. This has everything to do with the absolute number of minors -compared to adults- that are watching. As long as

there are more adults watching relative to minors, the 30% threshold will not be reached. This way, the 30% rule allows large absolute numbers of minors to be reached by alcohol commercials without the Code is being violated.

- Based on the 'at risk' population a new proportional standard for Germany has been calculated. A standard of 6% follows the same reasons as the 15% proportional standard that is being advocated for in the U.S. - which is based on the size of the 12-20 age group on the total U.S. population. However, a proportional standard is in practice always implemented in self-regulation which is problematic in terms of effectiveness.

- Based on the present data, a proportional standard of 6% would have reduced the number of ads seen on average by 13-17 year olds. However, a proportional standard is in practice always implemented in self-regulation which is problematic in terms of effectiveness.

With respect to time bans:
- Legal time restrictions on alcohol advertising are current policy in Europe. A majority of 21 out of 27 EU Member States already has statutory time or product bans for alcohol advertising on television.

- It is uncertain what will happen exactly with the pattern of broadcasting after a watershed comes into force. However, the present data suggest that implementing a time ban from till 23.00h would lead to a decrease in youth GRPs within the watershed (21% in 13-17 GRPs), assuming the advertisers will make up for the loss in adult GRPs.

6. Recommendations

The data presented in the report lead to several recommendations:

- **The 25% or 30% threshold adopted in existing self-regulation codes is generally ineffective:**
- Since the 25% or 30% threshold is based on the composition of the U.S. population rather than the European population, this standard should theoretically be lowered to a more 'proportional standard' for the European population. Since minors aged 12-17 are at risk for (the initiation of) drinking, are more aware of alcohol advertising and are relatively more exposed to alcohol advertising compared with minors aged 6-11, this new proportional standard should theoretically be based on this group (CAMY, 2005; Jernigan & Ross, 2010; National Research Council and Institute of Medicine, 2004; FTC, 2006). For Germany a proportional standard of 6% rather than 30% makes more sense. Introducing an 6% proportional standard could theoretically lead to a reduction in youth exposure of approximately 48%, even if the number of adult GRPs lost by the policy is completely compensated for. However, practical implications (as described in chapter 4) make the effectiveness of a proportional standard questionable.
- The existing threshold or an adjustment of the standard is to be implemented in self-regulation; Self-regulation has proven to be ineffective. There is a conflict of interest when economic operators have to restrict their own marketing practices (De Bruijn et al 2010). Implementing a proportional standard in self-regulation is especially problematic due to its difficulty of monitoring independently and its enforcement.
- Another possibility might be to implement a proportional standards in national or European legislation instead of self-regulation. One way is to adjust the European Audiovisual Media Services Directive (AVMSD) to include a *volume* restriction (proportional standard) besides the currently existing article 15 which restricts only the *content* of alcohol advertising on television. Legal sanctions might, however, be difficult to when alcohol commercials are placed on the basis of audience estimations.
- A possible drawback of a percentage threshold might be the adherence and enforcement of this tightened measure. It is unclear whether it is possible in practice to adhere to a standard of 6% (especially with new television programs of which it is unknown how many minors will be watching). Enforcement of this measure will be rather costly since expensive data need to be bought and analyzed.

Introduce a statutory time ban:
- An advantage of a time ban over a proportional standard is that it is easier to adhere to by the advertisers, because it is clear from what time onwards it is allowed to advertise and between which time frames this is not allowed. It is much harder to estimate which programs (and therefore commercials) will reach an audience consisting of more than 6% minors aged 13-17. Furthermore, a time ban is also easier and less expensive to monitor for third, independent

parties. However, if alcohol producers compensate for the loss of adults GRPs by broadcasting more alcohol commercials later at night, extending the time ban could be counterproductive. Consequently a moral appeal on the alcohol producing sector has to be made to urge them not to increase the volume of alcohol advertising at hours outside the timeslot.

A third alternative might be to combine a proportional standard with a statutory time ban.

- Calculations presented in the current report show that there are theoretical advantages of this combination of interventions. The data reveal that combining an 6% standard with a ban until 1h decrease youth exposure by 51%, while the number of generated adult GRPs remains the same as before the introduction of the combined policy. However, due to the important shortcomings of self-regulations regarding the difficulty of monitoring and enforcement, not much benefits are expected from adding proportional standards in self-regulation next to time ban implemented in legislation.

Total ban on alcohol advertising.

- The current report has described the large amount of alcohol commercials to which young people are exposed on television in everyday life. Partial volume restrictions are thought to be insufficient to protect this youth exposure due to expected changes in advertising behavior of the alcohol industry after introducing a (extended) watershed. There is a need to restrict the industry's possibilities to reach young people by televised alcohol advertising and promotion. Obviously the most protective measure would be to implement an EU wide, total ban on alcohol advertising. This way issues with regard to the shifting of advertising, cross-border advertising (is allowed, despite national bans) and the occurrence of sponsorship of and product placement in television programs can also be restricted more effectively. Given the undesirable impact of alcohol advertising on the drinking behaviour of youth, the knowledge that alcohol is a carcinogenic (Baan et al., 2007) and addictive substance (technically it is a hard drug) and the harm it causes to society (Nutt et al., 2010), a total ban on advertising for this product will be entirely justified. A total ban can be implemented stepwise, starting with a ban on television[9] and gradually extending the ban to other media as well. Similar stages have been adopted for the ban on tobacco advertising, which led to a total ban in the European Union, that was implemented in July, 2005. The WHO European Alcohol Action Plan for 2012-2020 (Draft version, 26 April 2011) mentions a total ban on alcohol advertising as the final of four progressive steps to limit the impact of alcohol marketing in order to contribute to a reduction in drinking behaviour of youngsters.

Monitoring alcohol marketing.

- The research discussed above emphasizes the importance of monitoring alcohol marketing activities of the alcohol industry. Otherwise, one would not obtain more detailed insight into the

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[9] The total amount of commercials for alcohol on the total number of commercials broadcast in 2010 in the Netherlands was 1,3% (Nielsen Media, 2010). In other words, the lack of advertising expenditures might be relatively easily compensated for by advertisers for other types of products and brands.

volume of alcohol advertisements and exposure of young people to these ads. In the Council Conclusions on Alcohol and Health of the Council of the European Union (2009) it is stated:

> THE COUNCIL OF THE EUROPEAN UNION: INVITES THE MEMBER STATES TO:
>
> "Ensure that, where in place, self-regulatory standards and codes are developed, implemented and monitored in collaboration with health-promoting entities" (p. 5).
>
> Source: Council Conclusions on Alcohol and Health. 2980th Employment, Social policy, Health and Consumer affairs Council meeting. Brussels, 1 December 2009.

- Also the WHO European Alcohol Action Plan for 2012-2020 (Draft version, 26 April 2011) states that: *"Monitoring of alcohol marketing practices is best done when it is the responsibility of an independent body or a government agency, and when it is performed systematically and routinely"* (p.16).
- It is therefore recommended that Member States are given the opportunity to continue or start with the monitoring of alcohol advertising and marketing reaching youth in their countries.

7. References

- Advertising Code Foundation (2011).

http://www.reclamecode.nl/consument/default.asp?paginaID=93&hID=1, retrieved 09-05-2011.

- Anderson P, de Bruijn A, Angus K, Gordon R, Hastings G. Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. Alcohol Alcohol2009 May-Jun;44(3):229-43.

- Baan et al., (2007). Carcinogenicity of alcoholic beverages. *Lancet Oncology, 8*, 292-293.

- CAMY (2005). Striking a balance: protecting youth from overexposure to alcohol ads and allowing

alcohol companies to reach the adult market. Washington D.C.: CAMY.

- CBS (2010). Census data on the Dutch population, retrieved at

http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=7461BEV&D1=a&D2=a&D3=a&D4=l&HDR=T,G3&STB=G1,G2&VW=T

- Chen, M.-J., Grube, J.W., Bersamin, M., Waters, E., & Keefe, D.B. (2005). Alcohol Advertising: What makes it attractive to youth? *Journal of Health Communication, 10*, 553-565.

- Collins, R.L., Ellickson, P.L., McCaffrey, D., & Hambarsoomians, K. (2007). Early adolescent exposure to alcohol advertising and its relationship to underage drinking. *Journal of Adolescent Health, 40*, 527-534.

- Commission of the European Communities (2006). An EU strategy to support Member States in reducing alcohol related harm. http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/alcohol_com_625_en.pdf

- COUNCIL OF THE EUROPEAN UNION. Council Conclusions on Alcohol and Health. 2980th Employment, Social policy, Health and Consumer affairs Council meeting. Brussels, 1 December 2009. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/lsa/111638.pdf.

- EFRD (2009). Common Standards for Commercial Communications. http://www.efrd.org/communication/docs/EFRD%20CommStand-09-EN.pdf

- Ellickson, P.l., Collins, R.L., Hambarsoomians, K., & McCaffrey, D.F. (2005). Does alcohol alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction, 100*, 235-246.

- ELSA (2007). Regulation of Alcohol Marketing in Europe. ELSA project overview on the existing regulations on advertising and marketing of alcohol. Utrecht: STAP.

- Engels, R.C.M.E., Hermans, R., Van Baaren, R.B., Hollenstein, T., & Bot, S.M. (2009). Alcohol Portrayal on Television Affects Actual Drinking Behavior. *Alcohol & Alcoholism, 44*, 244-249.

- Federal Trade Commission (2006). RE: Alcohol Reports. Paperwork Comment, FTC File No. P064505. A Communication from the Chief Legal Officers of the Following States: Arizona, Connecticut, Delaware, Hawaii, Idaho, Illinois, Iowa, Maine, Maryland, New Jersey, New Mexico, New York, Ohio, Oregon, Rhode Island, Utah, Vermont, Washington, Wyoming [California subsequently signed on], 8 May 2006. Retrieved April 27, 2011, from http://www.ftc.gov/os/

comments/alcoholmanufacadstudy/522852-01287.pdf

- Gomes L, Simon M. Why Big Alcohol can't police itself: Marin Institute; 2008. Available from: http://www.marininstitute.org/site/images/stories/pdfs/08mi1219_discus_10.pdf

- Hanewinkel, R., & Sargent, J.D. (2009). Longitudinal study of exposure to entertainment media and alcohol use among German adolescents. *Pediatrics, 123 (3)*, 989-95.

- Hastings G, Brooks O, Stead M, Angus K, Anker T, Farrell T. Alcohol advertising: the last chance saloon: Failure of self regulation of UK alcohol advertising. BMJ British Medical Journal (International Ed)2010;340:184-6.

- Henriksen, L., Feighery, E.C., Schleicher, N.C., & Fortmann, S.P. (2008). Receptivity to alcohol marketing predicts initiation of alcohol use. *Journal of Adolescent Health, 42*, 28-35.

- Jernigan, D.H. (2008). The Extent of Global Alcohol Marketing and Its Impact on Youth.

- Jernigan, D.H. & Ross, C. (2010). Monitoring youth exposure to advertising on television: the devil is in the details. *Journal of Public Affairs, 10*, 36-49.

- Jones SC, Donovan RJ. Self-regulation of alcohol advertising: is it working for Australia? Journal of Public Affairs2002;2(3):153-65.

- Jones S, Hall D, Munro G. How effective is the revised regulatory code for alcohol advertising in Australia? Drug and alcohol review2008;27(1):29-38.

- Koordeman, R., Anschutz, D.J., van Baaren, R.B., & Engels, R.C.M.E. (2011a). Effects of Alcohol Portrayals in Movies on Actual Alcohol Consumption: An Observational Experimental Study. *Addiction, 106*, 547-554. DOI: 10.1111/j.1360-0443.2010.03224.x

- Koordeman, R., Anschutz, D.J., & Engels, R.C.M.E. (2011b). Exposure to alcohol commercials in movie theatres affects actual alcohol consumption in young adult high weekly drinkers: an experimental study. *The American Journal on Addictions, 20*, 285-291. DOI: 10.1111/j.1521-0391.2011.00134.x.

- Koordeman, R., Kuntsche, E., Anschutz, D.J., van Baaren, R.B., & Engels, R.C.M.E. (2011c). Do we act upon what we see? Direct effects of alcohol cues in movies on young adults' alcohol drinking. Alcohol and Alcoholism, advance access published April 14, 2011. Doi: 10.1093/alcalc/agr028.

- McClure, A.C., Stoolmiller, M., Tanski, S.E., Worth, K.A., & Sargent, J.D. (2009). Alcohol Branded Merchandise and its Association with Drinking Attitudes and Outcomes among U.S. Adolescents. *Archives of Pediatrics and Adolescent Medicine, 163*, 211-217.

- Meier P, Booth A, Brennan A, O'Reilly D, Purshouse R, Stockwell T, et al. The Independent Review of the Effects of Alcohol Pricing and Promotion. Part A Report prepared for the Department of Health Stationery Office: London2008.

- National Research Council and Institute of Medicine (2004). Reducing Underage Drinking: A Collective Responsibility. National Academies Press: Washington, D.C.

- Nutt et al., (2010). Drug harms in the UK: a multicriteria decision analysis. *The Lancet, 376*, 1558-65.

- Parliamentary paper 27 565, nr. 77 (2008). Letter of the minister of Health, Welfare and Sports to the House of Commons about the Expert consultation about alcohol advertising (30 October 2008).

- Pasch, K.E., Komro, K.A., Perry, C.L., Hearst, M.O., & Farbakhsh, K. (2007). Outdoor Alcohol Advertising near Schools: What does it advertise and how is it related to intentions and use of alcohol among young adolescents? *Journal of Studies on Alcohol and Drugs, 68*, 587-596.

- Rowe et al. (2006). A Communication From the Chief Legal Officers Of the Following states: Arizona, Connecticut, Delaware, Hawaii, Idaho, Illinois, Iowa, Maine, Maryland, New Jersey, New Mexico, New York, Ohio, Oregon, Rhode Island, Utah, Vermont, Washington, Wyoming. Alcohol Reports: Paperwork Comment. FTC File No. P064505.

- Science Group of the European Alcohol and Health Forum (2009). Does marketing communication impact on the volume and patterns of consumption of alcoholic beverages, especially by young people? A review of longitudinal studies. Scientific Opinion of the Science Group of the European Alcohol and Health Forum of the European Commission.

- SKO (2010). Jaarrapport. 2010.

- Smith, L.A., & Foxcroft, D.R. (2009). The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: systematic review of prospective cohort studies. *BMC Public Health 2009, 9:51.* Doi:10.1186/1471-2458-9-51.

- Snyder, L., Fleming Milici, F., Slater, M., Sun, H., & Strizhakova, Y. (2006). Effects of alcohol advertising exposure on drinking among youth. *Archives of Pediatrics and Adolescent Medicine, 160*, 18-24.

- Stacy, A.W., Zogg, J.B., Unger, J.B., & Dent, C.W. (2004). Exposure to televised alcohol ads and subsequent adolescent alcohol use. *American Journal of Health Behavior, 28*, 498-509.

- STAP (2008a). Alcoholreclame in Nederland: Zelf regelen of laten regelen? Utrecht: Dutch Institute for Alcohol Policy (STAP).

- STAP (2008b). Bereik van minderjarigen door alcoholreclame op TV in 2007. Utrecht: Dutch Institute for Alcohol Policy (STAP).

- STAP (2009). Overview TV bans/restrictions (time and product) for alcoholic beverages in EU-27. http://www.alcoholreclame.nl/alcoholreclame/alcoholreclamebeleid_in_nederland/europa.html

- STAP (2011a). Evaluatie van de alcoholreclamebeperking op radio en televisie in 2009 en 2010. Utrecht: Dutch Institute for Alcohol Policy (STAP).

- VanDalen W, Kuunders M. Don't ask a bird to clip his own wings 2003. Available from: http://www.alcoholpreventie.nl/bestand/bird.pdf.

- Van den Broeck, A., & Van den Wildenberg, E. (2011). Report on youth exposure to alcohol commercials on television in Europe. Protocol on how to measure youth exposure. Utrecht: Dutch Institute for Alcohol Policy (STAP)

- Van Dalen, W.E. (2011). *To appeal or not to appeal: Testing self-regulation of alcohol advertising. Results of the AMMIE-project (Alcohol Marketing Monitoring in Europe).* Utrecht: Dutch Institute for Alcohol Policy (STAP). Retrieved from: http://www.eucam.info/eucam/home/ammie-complaints.html

- Vendrame A, Pinsky I, SOUZA ES. Assessment of self-regulatory code violations in Brazilian television beer advertisements. Journal of studies on alcohol and drugs2010;71(3):445-51.