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HOW MUCH ATTENTION DOES OUTDOOR ADVERTISING ATTRACT AND WHO PROFITS?

Andrej Kovačič¹

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Abstract

Outdoor advertising is a special media you can not escape. A research measured on 9 different locations showed that for 15.2% of consumers standard poster advertisement attracted more than 500 ms of attention. When using a 3D lenticular poster visual attention was reported with an outstanding 25.9 %. Attracting so much attention can be a potential threat to consumers as unlike with other media the consumer has a very limited possibility to turn off the reception of the outdoor media.

Key words: Outdoor advertising, attention, threats

Introduction

The focus of outdoor advertising in targeting consumers when they are 'on the go' in public places, in transit, waiting, or in specific commercial locations. The term outdoor (also referred to as out-of-home advertising) has expanded to cover a number of advertising formats like billboards (400 cm x 300 cm or 504 cm x 238 cm), city-lights (118.5 cm x 175 cm), digital panels, transit and alternative. In USA, the share of billboards in all outdoor advertising is 62% (Outdoor Advertising Association of America [OAAA], 2009).

Despite revenue growth, outdoor advertising remains "one of the least researched of any mass media" (Katz, 2003). The main reason for less research as compared to other media research is in the theoretical, methodological and empirical difficulties in the area. The main difficulties present difficulties in identification, measurement, classification and observation of data (Taylor, Franke and Bang, 2006). Acquiring the

¹ Andrej Kovačič is a researcher at the Faculty for Media – Institute for Media Research. He has acquired a degree at the Faculty of Economics (Ljubljana, Slovenia) and postgraduate degree at Humboldt University (Berlin, Germany). Being CEO of a research and advisory company he has conducted numerous qualitative and quantitative consumer related surveys. His current research is focused on the responses of consumers to different visual media and is part financed by the EU – Investing in your future – OPERATION PART FINANCED BY THE EUROPEAN UNION, EUROPEAN SOCIAL FUND.

necessary data is one of the biggest problems in outdoor research as the exposure time is short, the number of exposures is high, and the responses from consumers are difficult to measure. In addition, as Lombardot (2007) explains, individuals, when measured with traditional self-report measures, may have had a tendency to underestimate the amount of attention paid to the advertisement because of the sensitive nature of its subject matter. The actual amount of attention paid to outdoor advertisements is often greater than measured and autonomic measures are preferred.

This paper aims to answer the following research questions:

- Have multinational advertisers in Slovenia gained power to (ab)use outdoor advertising to influence consumers and to what extent?
- Does outdoor advertising attract attention in Slovenia?
- Who gains the most?

First this paper will show the increase in quantity of outdoor advertising and the restrictions in this field. Then to prove the importance of outdoor advertising attention to influence consumers as evidence from neuroscience is presented. This is followed by a behavioural research in order to connect the number of exposures to attention. Finally the article critically focuses on who is gaining the most from outdoor advertising and what price the consumers are paying for this.

The importance of outdoor advertising - Case study Slovenia

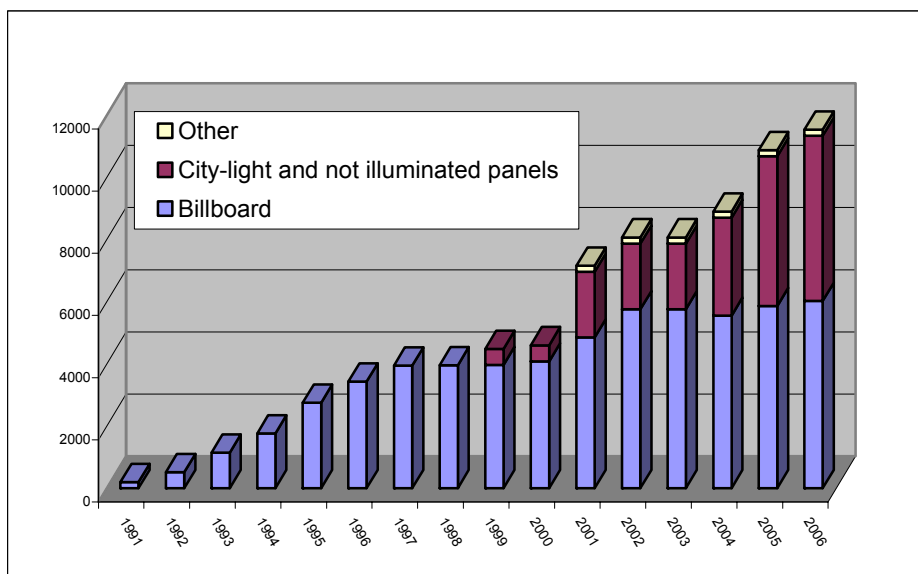
Only after declaring the independence, our country was first introduced to systematic construction of outdoor advertising panels. The first 200 (12m² each) billboards were built by an Austrian company Proreklam in 1991. After the initial effort the increase was systematic ranging from 0% to 77% per year in the period between 1994 and 2006 (Prepeluh, 2006) - an increase from zero to 11,500 advertising panels. In Slovenia in 2006 outdoor advertising billboards surfaces (12m² or larger) were estimated at around 6,000 (Prepeluh, 2006).

Europlakat d.o.o. market share was 88.7 % in 2008, achieved by acquisitions of competitors (Mediana, 2008). With 19.7 million € revenues and 4.4 million € profit before taxes in fiscal year 2008, Europlakat group is a very profitable business (Europlakat, 2009). Other providers are small companies. Slovenian outdoor advertising market share is 7.0 % of total advertising (Mediana, 2008) and has become similar to the world market share, which is 6.9% (Zenith Optimedia, 2009). Since reliable data is hard to obtain it is the Europlakat's financial report and market share that allow us to make direct projections and

good estimations of the total market revenues, community taxes paid, rent paid to landowners and potential consumer exposures.

Prepeluh claims that in Slovenia outdoor advertising will increase further and although not stating the estimation of this increase, he is providing a very convincing self-explanatory graph (2006).

Figure 1: Number of outdoor advertising panels in Slovenia 1991 – 2006



Source: Adapted from Prepeluh (2006)

World trends are that the quantity of outdoor advertising will increase further in its total advertising share as well as in revenues. New outdoor media like digital billboards ² all contribute to the increase of the popularity of outdoor advertising. The world market share of outdoor advertising is expected to rise to 7.0 % (33,385 million US\$) in 2011 (Zenith Optimedia, 2009). Given different ROIs (returns on investments) in different media and changes in ROI over time, advertisers should

² Digital billboards are a fast-growing segment of the outdoor advertising market (USA). The number of digital billboards has more than doubled since 2007 to about 1,800 of 450,000 total billboards (Copeland, 2010). In USA 39 states allow digital billboards, whereas others, mainly because of the road distraction, do not (Copeland, 2010). In Slovenia there are no restrictions.

increase their share of outdoor budget. The optimal share should be 16% of the total advertising budget (Outdoor Advertising Association [OAA], 2009). This projected increase could mean more than doubling the current number of advertising panels.

Key advantage of using outdoor advertising is the number of exposures

Obstacles in advertising derive from the volume of advertising to which consumers are exposed every day. Media Dynamics publication states that an average American adult is daily exposed to about 600-625 ads in any form. (Media Matters, 2007). The average number of noticed ads is 285 ads a day for males and 305 for females. Thus the main advantage of outdoor advertising is the number of potential exposures and a large share of the total ads consumers are exposed to. It is important to consider that in a small country like Slovenia for "mere" 30,000 € (without VAT) outdoor advertising expenditures advertisers can reach 70 % of the population (Europlakat, 2010a). The importance of the frequency of exposures in advertising can be seen in Osborne and Coleman research (2008) where a person's attitudes toward non-persuasive stimuli are positively associated with the number of exposures. Moreover, Osborne and Coleman suggest repetition has greater effects when consumers lack the motivation to scrutinize the validity of a message. This is certainly the case in outdoor advertising because the involvement of consumers in receiving the advertising message is usually very limited. Of the 19 different structural features of the billboards there were only three that showed significant differences in their effect on aided recall. These were awareness of the product or service, length of the campaign, and technology³ used in outdoor advertising (Osborne and Coleman, 2008). Companies can thus increase the effect of advertising by increasing the repetition of stimuli to which a consumer is exposed. Similarly Bhargava and Donthu (1999) have shown that the number of billboards was the most important factor in analyzing the connection between billboard efficiency and sales result, followed by billboard location and possible promotional offer.

Can outdoor advertising be effective despite short exposure time and low involvement of consumers?

As Lombardot explains, attention-getting process is first and foremost emotional (2007) and occurs entirely before any cognitive analysis of the advertisement. This means that regardless of what we think of an ad emotional and cognitive processes have already started. Only later, in

³ Regular billboard or digital billboard

order to be able to manage this volume of information, consumers control their own information processing and engage in selective perception, which leads to processing only a limited number of advertisements and ignoring others (Taylor et al., 2006). To construct a regression model analyzing factors influencing the effectiveness of outdoor advertising Meurs and Aristoff (2009) have measured the speed of recognition of a product or brand from outdoor (comparable) advertising stimuli. The measured time for recognizing the brand/product from a format sized 175 x 118.5 cm varied from only 0.67 to 1.00 second. Raymond (2003) points out that minimal time of exposure to a complex image is between 100–200 ms. Most authors researching with eye-tracking explain exposure has to last at least between 200 in 500 milliseconds to be effective (Josephson, 2005).

How much attention does outdoor advertising attract

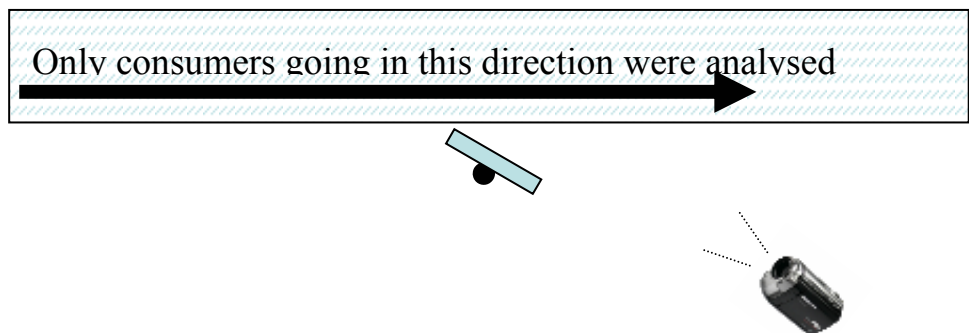
When deciding on the research model we argue that the only relevant measure of attention must be executed in a realistic environment. With this respect to the context of this research we suggest an alternative method for measuring the combined effect of attention (conscious) and engagement (subconscious) in outdoor advertising. To measure the power of an advertisement to stimulate the need for additional information we define attention as stopping power. If advertisers want to achieve overall effective advertising they need to achieve engagement or attention that can be seen in existence of stopping power. In the respect of the overall effectiveness of outdoor advertising we acknowledge the stopping power as a necessary but not self-sufficient measure. As it is only important when it leads to other positive effects for example a change of consumer attitude and purchase intention we discuss the content strategies in the following section.

In order to analyze the power outdoor advertising has on attracting consumers' attention we have conducted a study to analyze how many people look a poster in a shopping environment for more than 500 ms. Direct exposure (a look at a poster at a 1-5 degrees visual angle) as suggested by Josephson (2005) was thus the only variable in this research. In other words the poster had to stop the walking consumer. The interval 500 milliseconds (half of a second) should be long enough for inputs of adaptive importance to be perceived, to influence behavior, and to be represented in the next stage of retention, short-term memory, while inputs without significance can disappear. Implications of this research are that consumers have enough time to recognize the brand name and a short message of practically any visible poster. Even though exposure time is short, the emotional and cognitive processes are

unstoppable. Only after an ad has already been evaluated memory filter is applied.

The main idea of this research was to observe consumers in a real time environment without any interaction to make this evaluation as objective as possible. Thus we have created two posters of the same size (1.07 m x 0.85 m) and motive but printed in different techniques (standard 2D and lenticular 3D) and placed them according to Figure 1. We have switched between the two posters every hour to satisfy the condition for comparison analysis and recorded behavior using HD surveillance camera. Consumers did not know they were observed as the camera was a part of a surveillance camera used in shopping centre and marked only on entrance doors to the centre.

Figure 1: The setting of the poster and the recording camera.

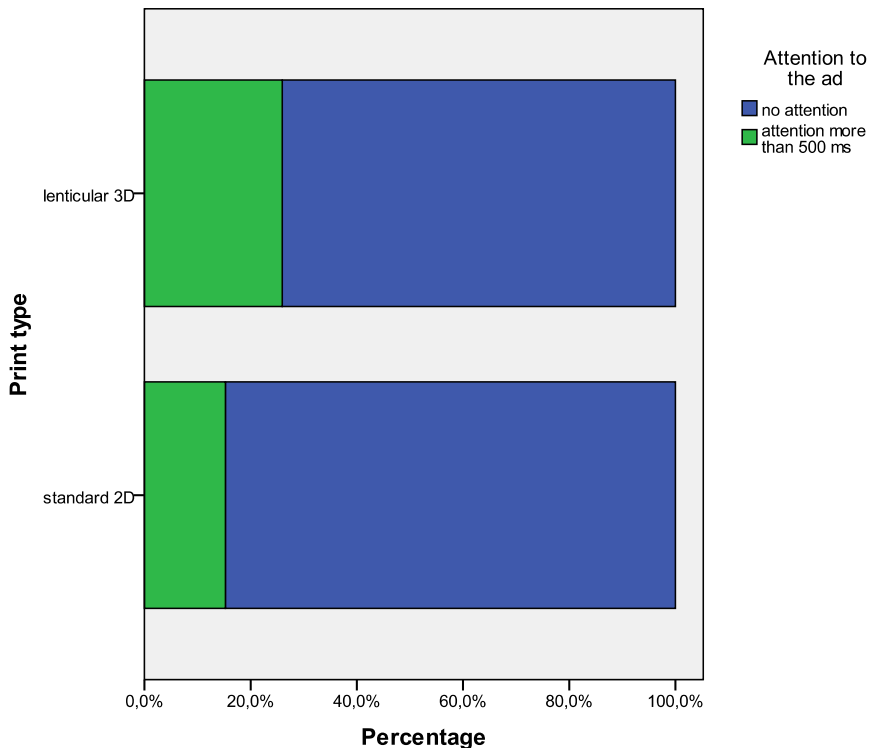


Source: own research

Following the training for the two evaluators, who evaluated the research and were rewarded for this task in money, first 592 consumers were analyzed twice to calculate the inter-coder reliability Krippendorff's alpha (α). The sampling distribution of the means was assumed to be normally distributed as well as the sampling distribution of the scores. Based on the SPSS analysis described in Hayes (2007), Krippendorff's alpha showed fairly high reliability for 592 pairs of analyzed evaluations of the same consumers $\alpha = 0,8835$. Alpha 0,88 means that 88 % of the units tested by evaluators are perfectly reliable while only 12% are the results of chance. Reliability calculations using Krippendorff's alpha for each of the language group shows alphas at 0,90 level, which is to be considered reliable variable for analysis. Krippendorff (2006; 2011) suggest, for example, to rely on evaluators with variables $\alpha \geq 0,80$ although $\alpha \geq .667$ can suffice for drawing tentative conclusions.

After this test total of 5115 consumer reactions to the poster were analyzed. Among these there were 2198 males (43 %) and 2917 females (57 %) equally distributed for 2D (47 %) and 3D lenticular (53 %) advertisement. Results from this study show that on average for 15.2% of consumers standard 2D advertisement attracted more than 500 ms of attention. When using 3D lenticular poster the half a second limit of visual attention was reported with an outstanding 25.9% of consumers.

Figure 2.: Attention in outdoor advertising using 2 D (standard print) and 3D (lenticular print)



Source: own research conducted from November to December 2011

Locations 1 to 7 were urban; locations 8 and 9 were in rural environment. All locations are in Slovenia. Percentages were similar for all 9 locations. Pearson's chi-square was calculated for differences between 2D and 3D for every location (table 1).

Table 1: Results (different locations).

	% of attention standard 2D ad	% of attention standard 3D ad
Location 1 (Interspar, Ljubljana): $\chi^2 (1) = 4.438, p= .035)^*$	18.0	26.1
Location 2 (Interspar, Maribor): $\chi^2 (1) = 8.877, p= .003)^*$	15.7	26.4
Location 3 (Planet Tuš, Novo Mesto): $\chi^2 (1) = 10.990, p= .001)^*$	13.8	25.1
Location 4 (Hofer, Kranj): $\chi^2 (1) = 2.181, p= .140)$	15.9	20.4
Location 5 (Mercator, Nova Gorica): $\chi^2 (1) = 8.332, p= .004)^*$	14.8	23.6
Location 6 (Lidl, Koper): $\chi^2 (1) = 8.251, p= .004)^*$	16.0	25.0
Location 7 (Hofer, Domžale): $\chi^2 (1) = 29.475, p= .000)^*$	16.1	40.6
Location 8 (Mercator, Trzin): $\chi^2 (1) = 20.593, p= .000)^*$	14.3	30.6
Location 9 (Mercator, Ivančna Gorica): $\chi^2 (1) = 22.292, p= .000)^*$	13.5	32.3

We conclude that outdoor advertisements in Slovenia can attract substantial attention in outdoor advertising. In our research attention was between 13.5% to 18% for 2D and between 20.4% and 40.6% for the 3D ad. The results are illustrative as they cannot be used to conclude that every poster attracts this amount of attention. However the purpose of this study was to demonstrate the extent that ordinary posters can attract consumer attention and how it can be measured without the interference of the researcher and thus without the cognitive and researcher's bias. In addition we connect the number of potential exposures with the actual attention we defined as the stopping power of outdoor advertisements.

This research may also serve as a starting point for additional research with similar methodology to additionally verify the results. Future research is especially recommendable for new technologies that are seeking to find their way in outdoor advertising. With the introduction of 3D advertising (lenticular, holographic, 3D TV and other) the ability to stop the consumers will increase dramatically as we have seen when

testing lenticular 3D where it almost doubled for the same motive of the poster (the difference was only the printing technique).

What does it mean when so much attention is obtained in outdoor advertising? We search for the answer in modern neuroscience that has opened a new dimension in advertising research in the last decade. As Ambler, Ioannides and Rose (2000) argue, we can see the effects of advertisements on the brain activity for the first time. In their experiment they used magneto encephalography (MED) to record the brain activity whilst the subject watched cognitive and affective advertising stimuli. Their research showed that affective ads generated greater activation in the ventromedial frontal lobes – the area to be associated with decision making and social sensitivity.

As the authors Ambler, Ioannides and Rose (2000) conclude, scary as it may sound, if an ad does not modify the brains of intended audience then it has not worked. In Slovenia 30,000 € spent on advertising campaign should - according to Europlakat (2010a, 2010b) research - capture 70% of the Slovene population and cause 8,081,345 exposures (four times the population of Slovenia). Aren't we consumers in Slovenia already modifying our brains too much? Calculating brings us to the number that every Slovene would on average have to be exposed to 2961 billboards per year to earn outdoor advertising businesses their yearly revenues. Even more, for every euro landowners and communities earn, 1,056 consumers have to be exposed to a billboard or 11,070 to a city-light⁴.

Outdoor advertising businesses justify the need for outdoor advertising and thus the quantity of exposure to ads as a source for consumers to get valuable information about new products contributing to rational purchase behavior. But is this really the case? The main purpose of companies is to increase return on investment in advertising and marketers are doing their best to convince consumers to purchase the advertised products, rarely by just providing information. As this is not an easy task (the market is flooded with suppliers) the “modern” ads include a variety of tools and technologies (lenticular print, digital billboards or other) to involve consumers emotionally.

There is no academic researcher or practitioner that would not agree that emotions play an important role in advertising. This trend to move towards emotional advertising is analyzed in many academic review

⁴ Calculations are based on the estimated yearly community tax and estimated yearly rent and the exposure date from Europlakat (2010a and 2010b).

articles. There is also evidence of the increase of emotional advertising from econometric studies. Thus Chandy, Tellis, Macinnis and Thaivanich (2001) provide evidence that as consumer markets are getting “older”, consumers are already educated about the rational value of products and services. In these markets argument-based ads are likely to become less effective. On the other hand, emotion-based ads become more effective as markets get older. To express the importance of emotional value in the future of advertising Pawle and Cooper (2006) introduced a new term “lovemarks” defining brands that involved the emotion (love of the product) as an incorporated value. When playing with consumer emotions it often seems that advertisers do not completely “understand” the range of emotional experiences and distraction that their ads evoke.

We have seen examples of just how much exposure consumers get from outdoor advertising. The threat lies, however, not only in the quantity of exposure, but in the contents of ads. By having 11,500 outdoor advertising panels in Slovenia we are already “giving” an enormous power to advertisers, aiming to improve their sales results. If not limiting the quantity of exposures we should at least have an effective control over the contents of the message in order to protect the consumers. Some strategies directly affecting consumers which advertisers use to attract attention, regardless of the social implications they cause, are exaggerated advertising claims, sexuality and nudity and advertising to children.

Who are the largest outdoor advertisers?

The first nine out of ten outdoor advertisers in Slovenia are multinationals (table 2), where only Teleray is Slovenia based. The same pattern can be seen in USA where all top 10 companies listed are multinationals. Both tables show us also that the first two companies on the list in Slovenia are telecommunication companies. Similarly in the USA telecommunication sector represent the first three companies. This can also be seen in a comparison table 4.

Table 2: Largest outdoor advertisers in Slovenia

	Outdoor advertising budget in million €	Outdoor advertising budget per capita in €	Share of advertising budget in a company
SIMOBIL	2.11	1.04	24.5
MOBITEL	1.63	0.81	14.8
RANAULT NISSAN SLO	1.59	0.79	28.2
LIDL	1.54	0.76	25.0
MERCATOR	1.38	0.68	12.3
HERVIS	0.66	0.33	37.7
SPAR SLOVENIJA	0.57	0.28	9.1
PORSCHE SLOVENIJA	0.56	0.28	13.5
L'OREAL SLOVENIJA	0.56	0.28	5.7
TELERAY	0.47	0.23	46.9

Source: Mediana (2008)

Table 2: Largest outdoor advertisers in USA

	Outdoor advertising budget in million €	Outdoor advertising budget per capita	Share of advertising budget in a company
AT&T	69.6	0.23	3.4
VERIZON COMM.	40.8	0.14	2.1
SPRINT NEXTEL	38.8	0.13	3.2
TIME WARNER	34.8	0.12	1.8
WALT DISNEY	30.7	0.10	2.1
MCDONALD'S	29.3	0.10	4.0
GENERAL MOTORS	28.9	0.10	1.5
ANHEUSER BUSCH	23.6	0.08	2.7
GENERAL ELECTRIC	18.3	0.06	1.6
COCA-COLA	17.6	0.06	3.5

Source: Outdoor Advertising Association OAA (2009)

Table 3: Advertising budget across sectors in Slovenia and USA

	Slovenia	USA
1	Telecommunication (19.7 %)	Entertainment and services
2	Services (18.8 %)	Insurance and real-estate
3	Retail (18.2 %)	Telecommunication
4	Automotive dealers and services (14.7 %)	Transportation and resorts
5	Food (9.1 %)	Media and advertising
6	Different products (8.8 %)	Retail
7	Cosmetics (5.4 %)	Food
8	Textile (4.2 %)	Financial
9	Home - appliances (1.1 %)	Automotive dealers and services

Source: Mediana (2008) and Outdoor Advertising Association OAA (2009)

No doubt that the last 15 years brought multinationals as outdoor advertisers in Slovenia. Similarities across the sectors are clearly seen in table 3. In Slovenia due to small population size⁵ total expenditures of major companies per capita 5 to 10 times exceed the USA top companies in outdoor advertising. Considering the internal ROI calculations of the listed companies this can only prove that outdoor media in Slovenia is delivering its promise to be able to influence consumers.

The importance of outdoor advertising for advertisers

Outdoor advertising is because of the nature of the media very important for companies. Taylor and Franke (2003) analyzed 352 from a random sample of 1,315 companies that use billboards in USA. The authors concluded that 75.1 % of advertisers claim they would lose sales if outdoor advertising was banned. The average of reported potential loss would be 18.4 % of their sales. Advertisers see billboards as a unique media since the other media (television, radio, newspapers magazines, internet and flyers) do not give the same effect (Taylor and Franke, 2003). In addition the authors present evidence that on-premise signs do not serve the same function as billboards.

⁵ 2,048,000 people lived in Slovenia 1.10.2011 (Statistični urad RS; 2011)

Another research based on 348 companies using outdoor advertising (USA) identified four main factors influencing the decision for using billboards (Taylor, Franke and Bang). The first two factors, regarded as selective - perception issues (visibility and media efficiency), are according to the research more important from the advertiser's point of view than the retail gravity (local presence and tangible response). This indicates that the decision whether to advertise on boards is mainly based on the characteristic of media and not so much on the ability to address consumers locally.

Having a complete ban would definitely hurt many companies. However, considering the move to other forms of advertising, it is very difficult to estimate to which extent a media substitution would be effective, and how much revenue would be lost. Taylor and Franke (2003) analyzed the substitution preferences in companies in a "what-if-banned" case. In a real environment where outdoor advertising is already banned more research still needs to be done.

Communities and landowners' point of view - financial benefits of outdoor advertising in terms of taxes and rent paid

In 2008 Europlakat paid 1.9 million € for community tax and 3.0 million € for renting the advertising space (Europlakat, 2009; Europlakat, 2010a). Projecting, we can estimate the total Slovenian community tax paid in 2008 to around 2.2 million € and the total rent paid to 3.3 million €. Financial benefits paid to communities, individuals and companies for advertising space in Slovenia sum up to 5.5 million € per year. This estimation is calculated from Europlakat's financial report and a projection considering their market share. Dividing 5.5 million € by 11,500 advertising spaces the community and landowners get an average of 66.2 € /m² every year for allowing outdoor advertising⁶. This nominal number is not high, but considering that leasing space usually does not bring costs itself, it is a valuable extra income for landowners and communities.

Outdoor advertising is very different from any other media from a consumer's point of view

We have seen that advertisers, outdoor advertising businesses, communities and landowners all benefit from outdoor advertising. What about the largest group – the consumers? In the concept of self

⁶ Dividing the sum of an estimated yearly community tax and estimated yearly rent by the estimated cumulated surface of advertising panels in Slovenia measured in m².

regulatory economy one could argue that a consumer is a rational individual who can decide what is best for him. So if a certain newspaper with a set of ads provokes negative emotions, it might not be bought again. By not buying consumers have a chance to send a message to media companies not to make similar mistakes. If consumers think the ads on TV are not suitable for their children, they can prevent the children from watching them. Again a TV station learns and limits the same ads in the future. With outdoor advertising this is not the case. Here consumers cannot turn off the exposure and distraction (at least to the phase of recognizing brands and messages). They also do not "vote" against the unwanted message. The consequences are that advertisers can use measures for example exaggerated claims, sexual content or ads that aim to appeal minors to get additional attention and an outdoor media business will not suffer a lower number of exposures to consumers. Regardless of the advertised contents the effectiveness of a media in its ability to send messages to consumers is not threatened substantially. The consequence is that an outdoor advertising firm is not so much concerned (compared to a subscription newspaper for example) with the contents being advertised on their panels.

Rosewarne, when referring to outdoor advertising, developed the idea of public space that exists for the enjoyment of all (2005). Her suggestion, based on numerous studies, is that activities in public space have to be regulated and controlled in order to prevent exclusion or inappropriate portrayal of any social group (Rosewarne, 2007). She urges to limit the outdoor media because of the nature of the media itself. Namely medium is visible by all consumers all of the time, it can be placed anywhere and is largely inescapable. That is also the main reason why this medium is so valuable to the advertising industry and why it has to be censored.

Conclusion and further research

This paper shows that despite the current economic crisis there is strong initiative to build more and more panels. In a small country like Slovenia advertisers do not need large outdoor advertising budgets to capture the majority of Slovenian population and thus influence our purchase preferences, influence electoral results, change our advertising tolerance, or change our cultural values and those of our children. Research presented in this article reflects the inability to escape from exposure to outdoor advertising. Regardless of our efforts to avoid them, ads are processed in our brain and are affecting us. Dangers for consumers are of quantitative and qualitative nature. As the quantity of outdoor advertising increases consumers are more and more influenced by this media to process large amount of advertising messages. Our

research showed that the potential for attracting attention is enormous especially with the introduction of modern 3D technologies. Having the consumers' at least subconscious attention modern neuroscience gives us evidence that we are affecting the neurology of our brain. Following that 1,056 consumers have to be exposed to a billboard and 11,070 to a city-light for every euro landowners and communities earn is that not a too high price to pay for one euro of community money? Aren't we consumers modifying our brain too much just so that communities can have a fraction of extra money to spend?

The described threats consumers are exposed to force us to think beyond the financial benefits of landowners and communities in order to protect consumers with effective control of the content and quantity of outdoor advertising. Influencing emotions of the consumers without their consent should be of concern for our government and communities, despite the fact that as elected body themselves (ab)use this media frequently. Self-regulative nature of economy in respect to consumer protection is not sufficient and outdoor advertising has to be put on the legislation agenda before it will become uncontrollable.

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