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OUTDOOR ADVERTISING EFFECTIVENESS EVALUATION FROM CUSTOMERS' VIEWS

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Abstract. This article aims to explore the techniques and features of outdoor advertising from customers' views. This article analyses outdoor advertising and outdoor advertising effectiveness. The literature analysis showed that previous studies on outdoor advertising peculiarities and effectiveness focused on different aspects of outdoor advertising; factors affecting attitudes towards new items and buying stimuli still need to be explored. This study aims to investigate contemporary methods and characteristics of outdoor advertising. The research questions are related to the purpose of the research. The authors seek to clarify which outdoor advertising elements are most effective and influence purchasing decisions. The study results showed that the most effective types of outdoor advertising were lighting advertising, advertising on outdoor screens, and mass advertising (large letters with brand names), with the new technologies playing the most critical role.

Keywords: outdoor advertising; outdoor advertising effectiveness; customers; customers views; augmented reality; Internet of things; (IoT); innovations; marketing

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1. Introduction

Outdoor advertising is graphic, textual or other advertising information presented on unique stationary structures, in an open place or outside. It is one of the critical forms of marketing. Advertising in shopping centres, cinemas, gas stations or business centres is also classified as outdoor advertising. Outdoor advertising is compatible with creative solutions and innovations. Most often, these are interestingly designed showcases, raffles, or even the installation of instant cameras in the showcase. Outdoor advertising can also include other senses - window displays are created that can warm on cold winter days, play music of your choice, charge your phone or spread the smell of freshly baked buns and fragrant coffee. The planning of outdoor advertising depends on the set goals of the campaign, the target audience and the available budget. When investing in and actively using outdoor

advertising, it is recommended to conduct additional research - whether consumers saw the advertisement, how they understood the main message, and what they remembered. Many authors have studied outdoor advertising and its effectiveness, e.g. Belch and Belch (2004), Leppäniemi and Karjaluoto (2008), Ajzen (2012), Mohammadian and Pour Hosseini (2012), Vehovar et al. (2016).

At present, the effect of industrial outdoor advertising has intensified. Outdoor advertising is related to sales growth and higher demand. The current situation is problematic because the effectiveness of outdoor advertising needs to be a better-developed topic in the scientific literature. The research investigates the peculiarities of outdoor advertising effectiveness through customers' lenses.

Objectives of the research are:

- to present outdoor advertising and outdoor advertising effectiveness concept;
- to apply the survey method relating it to outdoor advertising effectiveness in practice;
- to create recommendations based on the result of the research to develop outdoor advertising.

The article uses the method of theoretical analysis and quantitative research – the organisation of an online survey.

2. Theoretical background of outdoor advertising

Lichtenthal et al. (2006) stated that the use of outdoor advertising is deductively based on the unique characteristics of business markets, such as the geographic concentration of buyers, the need to direct members to the buying centre, the advantages of integrated communication, the ability to create derived demand and orientation to exhibitions. Outdoor advertising is a traditional type of advertising. Many small, medium and large business representatives choose outdoor advertising and agree that this is a great way to reach customers. Outdoor advertising encourages the behaviour of potential customers. Lopez-Pumarejo and Bassell (2009) mentioned that outdoor advertising is a good way of getting the target audience because it is becoming difficult for advertisers to reach people through other media.

Li (2019) noticed that advertisers also began to pay constant attention to outdoor advertising tools to increase the volume of advertising itself. Leonova et al. (2022) agreed and defined outdoor advertising as one of the essential components of mass media. Çiftçi and Karabulutlu (2020) mentioned that the most critical feature that distinguishes outdoor advertising from other types of advertising is that there is no additional need to pay any price to access the advertisement when it is showcased. This sector started with signboards or advertisements painted on buildings and has a very rapid development and change process. Murwonugroho and Wudarwati (2020) noticed that outdoor media is a form of advertising performed in public space, although its existence does not necessarily exclude the increasing use of social networks. However, at some point, people get tired of looking at a monitor or smartphone screen.

Many types and forms of outdoor advertising can be used to market a brand. Oni et al. (2019) defined different billboards used in non-commercial premises such as standing, portal, roof, curtain wall and street furniture. Swallehe et al. (2022) stated that billboards are the most visible form of advertising. Lai et al. (2017) said that digital outdoor advertising type makes outdoor advertising more flexible and allows advertising to respond to changes in target audience over time. To maximise the effectiveness of outdoor digital advertising, advertising should be targeted to deliver the right content in the proper format, at the right time, and in the right place.

Dhandyal et al. (2020) noticed that outdoor advertising is vital in reinforcing brand messages among people. Outdoor media encourages more research about brands among target customers. Dhanalakshmi and Geevarathna (2021) noticed that outdoor advertising is an effective way to advertise goods or services while simultaneously

conveying a brand message to a target audience in a more concentrated form. Simatupang et al. (2021) mentioned that outdoor advertising around the streets had become a typical sightseeing example in some cities. Fasi and Begum (2017) stated that outdoor advertising remains a popular form for companies that can afford mass media advertising. Companies like IBM, McDonald's, etc., spend thousands of dollars on outdoor advertising yearly. This interest has grown steadily over the years.

Gebreselassie et al. (2019) mentioned that colour is essential in increasing the recognition of outdoor advertising. If that colour is a corporate colour, consumers may think of that advertised company brand when they see it outside advertisements because corporate colours symbolise the product's image. That is, users will come up with advertising companies when ads use company colours advertised companies and consumers know what the colour is.

Kovačič (2012) article showed that there are vital initiatives to build more and more panels for outdoor advertising. His research presented the inability to escape from the effect of outdoor advertising - as the quantity of outdoor advertising is increasing, consumers are becoming more influenced by this media, especially when implementing modern 3D technologies. Grigaliūnaitė et al. (2016) conducted the eye tracking experiment to measure users' visual attention to specific criteria of internal factors affecting the effectiveness of outdoor advertising. The selected criteria were the font size of the headline, the number of elements in the advertisement and the dominant elements (visual or textual). The study's main results revealed that when the surface size of visual and text elements of outdoor advertising is equal, text elements attract more visual attention than visual elements, and advertisements with many elements attract more visual attention than those with a small number of elements. Gebreselassie et al. (2019) mentioned that colour is essential in increasing the recognition of outdoor advertising. If that colour is a corporate colour, consumers may think of that advertised company brand when they see it outside advertisements because corporate colours symbolise the product's image.

Nowadays, outdoor advertising is based on new technologies. Adel (2021) declared that the rapid development of new technologies had given organisations many opportunities to rethink new alternatives for communication and interaction with customers through technologies. Altrjman et al. (2022) agreed that leading companies are increasingly using advanced technologies that offer a dynamic way to interact with consumers. Many examples of technology usage can appear in scientific papers. Vangelov (2022) analysed digital outdoor advertising in Shanghai metro station, which promotes Nescafé products through an interactive, engaging and immersive experience – a game on a digital screen. Gan and Tsai (2021) stressed that using new technologies in outdoor advertising makes it possible to interact with consumers' sensory systems, such as vision, hearing, smell, taste, and touch.

Wei et al. (2021) mentioned that consumers might be exposed to outdoor advertising in many technologically innovative ways, and their purchasing behaviour or decision-making may be unintentionally influenced by such exposure. With the rapid development of the Internet and "big data", outdoor advertising is no longer content with posters or electronic displays. The increasing use of mobile phones in public places makes it convenient for consumers to scan Quick Response (QR) codes on outdoor advertisements for information. This also benefits marketers as they can attract more potential consumers. Even Google Street View can be used when detecting the attention of outdoor ad panels in images; it could replace the publicity appearing inside the boards with another from a different company (Morera et al., 2020). Augmented reality could be defined as one of the most frequently investigated features of outdoor advertising (Ciftci, Karabulutlu, 2020).

The effectiveness of outdoor advertising has been analysed in research papers. Donthu (1995) noticed the importance of external advertising of services and investigated the influence of consumer-related factors on its effectiveness. The results show that outdoor advertising is very effective. Gurumoorthy (2015) mentioned that despite the infrequent mention of the outdoors as an industrial advertising part, such marketing tools could be

very effective. Wilson and Till (2011) have used associative learning techniques to investigate the effects of outdoor advertising environments on attitudes, beliefs, and purchase intentions of the advertised brand. The four experiments showed that outdoor advertising is an effective marketing tool, and even the background environment does not affect the effectiveness of advertising. Lesser et al. (2013) mentioned that outdoor advertising is limited by the difficulty of determining how ads are noticed during a given period.

Alavijeh et al. (2019) stated that outdoor advertising is designed to attract the audience's attention. Authors have identified outdoor advertising effectiveness indicators: broad access and high frequency, geographic flexibility, creativity, high recall power, short and limited messages, and quite a low cost. Wei et al. (2021) defined three factors of incentive framing: call to action, definiteness, and incentive forms to identify the most effective ways to design incentives for outdoor interactive advertisements. Urban et al. (2020) recognised the association method as a possibility to evaluate the effectiveness of outdoor billboards. Wang et al. (2022) stated that the exposure strength, advertisement matching degree, and advertising repetition effect could characterise the advertising influence and effectiveness. Huang et al. (2021) research was based on models of how to control digital billboards based on when and where the specific ads appear. The results show that maximising the target audience and environment should be an efficiency criterion. Czajkowski et al. (2022) proposed a theoretical outdoor advertising model. They showed how the economic value of externalities associated with outdoor advertising in an urban environment could be assessed using specified preference methods.

According to Pluciennik and Heldak (2019), outdoor advertising significantly influences public space - advertisements can refer to a place, promote a brand, sign and image company; outdoor advertising has become an integral part of cities. Othman et al. (2020) agreed and examined how outdoor billboards explain advertising visuals' role in forming social spaces.

Despite the analysis of previous research, all investigations are focused on different areas of outdoor advertising, the attitudes towards new elements factors, and their influence on the purchase decision needs to be sufficiently detailed. This study aims to investigate the methods and peculiarities of outdoor advertising. Research questions are based on the aim of the study: which outdoor advertising elements can be the most effective and influence the purchase decision?

3. Research methodology and methods

The research is based on the quantitative research methodology. The purpose of quantitative analysis is to identify and isolate specific variables in the research context and to look for correlation, connections and causality (Park & Park, 2016). Using quantitative research, the objective is determined through empirical evaluation involving numerical measurement and analysis (Cooper & Schindler, 2012). This method uses scales that directly or indirectly provide numerical values. These values are then used in mathematical and statistical analysis to test and confirm the hypotheses (Degen, 2017). The research process often includes the following stages: hypothesis formulation, model creation, data collection, analysis and presented results (Cooper & Schindler, 2012; Park & Park, 2016; Degen, 2017). Thus, using quantitative research, it is possible to obtain detailed data from respondents and conduct proper research.

The research questionnaire is designed as an exploratory study. Collecting the data from respondents' perspectives towards outdoor advertising has helped in testing hypotheses designed for the study:

H0 - Respondents' selected factors, which encourage greater interest in outdoor advertising, do not depend on the level of influence (strong or weak) of outdoor advertising on the purchase decision.

Ha - Respondents' selected factors encourage greater interest in outdoor advertising, depending on the level of influence (strong or weak) of outdoor advertising on the purchase decision. An online questionnaire was distributed to find out the respondent's views and perceptions on outdoor advertising, and from there, the primary data for the research analysis was gathered. To gather the primary data in the form of survey answers online, a free online survey form by Google was used and distributed. The survey was based on the previous theory and research presented in this paper.

Due to limited resources, a non-probability sampling type was chosen for conducting the survey. Non-probability sampling is a sampling method which assumes that not all population is available to participate in the survey. Thus a small sample out of the whole population is being selected (Vehovar et al., 2016). Non-probability sampling does not treat the participants' possibilities equally, while probability sampling assumes that the whole population has identical odds of being chosen. The methods used for the distribution of the questionnaires were Snowball sampling method and Convenience sampling. The online survey was distributed from 1st October – 5th November, 2022. The total amount of participants is 300 people.

The questionnaire consists of 15 questions. The first set of questions introduces the topic and generates the overall perspective of participants' general attitude towards the issue of investigation. The second set of questions defines factors encouraging more significant interest in outdoor advertising. The third group of questions is dedicated to evaluating the content of outdoor advertising and the effectiveness of different types of outdoor advertising. Finally, the last section of the questionnaire is based on the demographical information of the participants, including gender and age (the questionnaire used is presented in the Annex).

Some questions were close-ended (Yes/No), elective, and the 5-point Likert scale was used. A 5-point Likert scale was used to measure the results, as suggested by Ajzen and Fishbein (2012). Based on the theoretical review of the literature, the main independent variables were chosen – attitude towards outdoor advertisement and purchase intention.

The collected data was exported from Google Forms and then submitted to the IBM SPSS program. Since all the questions were mandatory in the Google Forms, all questions were answered. This is why there has been no need to code the missing data fields explicitly. All the answers were transformed into numbers ranging from 1 to 5. The numbers were analysed using the IBM SPSS system to find the correlation between the respondents' responses and the research problems and to define if the raised hypothesis was correct.

3. Research results analysis

The survey involved 300 respondents, 32% of respondents were male, and 68% of respondents were female. The vast majority of respondents live in Vilnius and Vilnius district. As Table 1 indicates, having analysed the demographic characteristics of participants in this survey, most of them were over 41 years old (60%), and 26% of the respondents were in the age range of 18–25. The respondents' analysis has considered the influence of outdoor advertising on purchase decisions. The results show that 39% of the respondents evaluated the effect as neutral, 25% selected a very strong or strong impact on purchase decisions, and 21% defined weak influence.

Table 1. The demographic characteristics of the sample

	Frequency	Percentage
<i>Gender</i>		
Female	205	68
Male	95	32
Total	300	100
<i>Age</i>		
18–25	77	26
26–30	10	3
31–34	12	4
36-40	20	7
41 and more	181	60
Total	300	100
<i>Influence of outdoor advertising on purchase decision</i>		
Very strong	14	5
Strong	61	20
Neutral	118	39
Weak	63	21
Very weak	44	15
Total	300	100

During the study, it was essential to investigate the factors encouraging more significant interest in outdoor advertising. Research results show that according to most respondents (33%), integrating new technologies (e.g. display based on virtual/augmented reality) is essential. Links with other elements (e.g. to change the advertising message in outdoor advertising according to the time of day, UV radiation, air temperature, weather forecast, etc.) are defined by 19% of the respondents. 14% of respondents have selected outdoor showcases that can heat on cold winter days, 12% - outdoor showcases that can play music chosen (see Table 2).

Table 2. Factors, which encourage greater interest in outdoor advertising

Answer options	Number	Per cent
Integration of new technologies (e.g. display based on virtual/augmented reality)	202	33%
Links with other elements (e.g., change the advertising message in outdoor advertising according to the time of day, UV radiation, air temperature, weather forecast, etc.)	113	19%
Outdoor showcases that can heat on cold winter days	84	14%
Outdoor showcases that can play selected music	73	12%
Outdoor showcases that can charge the phone	70	11%
Outdoor storefronts that can emit freshly baked muffins and fragrant coffee, and other smells	69	11%

After analysing the factors that encourage greater interest in outdoor advertising, the hypothesis can be checked. The Spearman R - Spearman ordinal correlation coefficient was calculated to test the hypotheses. In this case, it was 0,0259. The significance level $\alpha = 0,05$ was selected. In this case P-level—observational significance level refers to proving H0 hypothesis, and Spearman correlation coefficient is significantly close to zero. Respondents' selected factors, which encourage greater interest in outdoor advertising, do not depend on the level of influence (strong or weak) of outdoor advertising on the purchase decision.

During the study, it was also essential to investigate respondents' evaluation of the unique outdoor advertising content. The study results show that it is difficult for most respondents to evaluate which outdoor advertising

content can be memorable or forgotten. Nevertheless, it can be seen that most of the respondents assessed advertising dominated by visual content (pictures and colours) and advertising dominated by video content (changing images) in a positive approach (4-memorable and 5- very memorable) (Figure 2).

	1 - Very forgotten	2 - Forgotten	3 - Neutral	4 - Memorable	5 - Very memorable
Advertising that contains brand name	8.1	15.1	33.8	27.9	15.1
Advertising dominated by visual content - pictures and colours	3.5	2.8	12.6	32.2	49.
Advertising dominated by video content - changing images	5.7	10.3	20.6	34.5	28.8
Advertising dominated by information-text	24.9	27.5	18.3	19.4	9.9

Fig 2. Respondents' evaluation (%) of what content of outdoor advertising is mostly memorable
Source: authors

Respondents were asked what aspects are most important in outdoor advertising. There can be seen that strategic location (24%), exceptional brightness and uniqueness (22%) and clarity and attractiveness of advertising text (20%) can be defined as the most critical aspects (see Table 3).

Table 3. Aspects that are most important in outdoor advertising

Answer options	Number	Per cent
Strategic location	203	24%
Special brightness and uniqueness	191	22%
Clarity and attractiveness of the advertising text	167	20%
The brand is highlighted symbols: brand, company colours	132	15%
Not too small dimensions	124	14%

Further analysis was focused on respondents' evaluation of the effectiveness of outdoor advertising types from 1- very ineffective to 5- very effective. Brightening advertising, advertising on outdoor screens, and bulk advertising (large letters with brand names) were evaluated as the most effective outdoor advertising types (mostly 4-effective or 5- very effective).

	1 - Very ineffective	2 - Ineffective	3 - Neutral	4 - Effective	5 - Very effective
Bulk advertising (large letters with brand names)	3.6	9.4	28.3	35.5	23.2
Brightening advertisement	3.1	3.8	13.5	42.4	37.2
Advertising on outdoor screens	3.1	6.3	21.3	36.	33.2
Advertising stands, panels, awnings	6.4	10.4	38.9	28.6	15.7
Advertising on vehicles	7.5	21.5	31.9	29.	10.
Decoration of showcases	4.6	12.4	32.3	32.6	18.1
Advertising in shop windows	5.7	15.1	29.4	36.2	13.6

Fig 3. Respondents' evaluation of the effectiveness of outdoor advertising types
Source: authors

The presented research of 300 Lithuanian participants have concluded that most of the time, there can be seen neutral, sometimes very strong or strong impact of outdoor advertising on purchase decisions. Also, the factors encouraging more significant interest in outdoor advertising, evaluation of the unique outdoor advertising content

and effectiveness of outdoor advertising types were investigated. Integration of new technologies has shown the most substantial impact on effectiveness.

Conclusions

The analysis of the scientific literature showed that outdoor advertising remains a powerful marketing tool since it brings excellent results, is highly visible, and, by specific indicators, still outperforms its price campaign with other advertising options. Before starting to evaluate the effectiveness of advertising, it is essential to know the purpose of advertising. Many companies choose outdoor advertising to inform the user, attract new customers and, thus, increase the circle of customers and brand awareness. Companies choose this outdoor advertising to provide important information to people who are already aware of that brand.

The survey results show that:

1. According to most respondents, the most critical factor is the integration of new technologies (e.g. virtual/augmented reality display).
2. The factors selected by the respondents that encourage greater interest in outdoor advertising do not depend on the influence (strong or weak) of outdoor advertising on the purchase decision.
3. During the research, it was essential to investigate the respondents' assessment of what outdoor advertising content they remember the most. The study results show that it is difficult for most respondents to assess what outdoor advertising content can be remembered or forgotten. However, it can be seen that advertising dominated by visual content (pictures and colours) and advertising dominated by visual content (changing images) were positively evaluated by the majority of respondents.
4. Brightening advertisement, advertising on outdoor screens, and bulk advertising (large letters with brand names) were evaluated as the most effective outdoor advertising types so it can be recommended the brands rely more on those types of outdoor advertising.

Novelty and research limitations: the study's novelty is in attempts of evaluating the effectiveness of outdoor advertising, which is not very intensively studied in the scientific literature.

Limitations of the study: the study examined the peculiarities of the effectiveness of outdoor advertising in Lithuania, and the conclusions cannot necessarily be applied to other countries.

Annex. Survey questionnaire

1. When is the last time you remember seeing outdoor advertising?

- This week
- Last week
- Last month
- During a period of 3 months
- I don't remember seeing it

2. What content of outdoor advertising do you remember the most? Rate from 1 to 5.

- Advertising that includes the brand name
- Advertising dominated by visual content - pictures and colours
- Advertising dominated by video content - changing images
- Advertising dominated by information-text

3. Rate the effectiveness of types of outdoor advertising from 1 to 5:

- * bulk advertising (large letters with brand names)
- * illuminating advertising
- * advertising on outdoor screens
- * advertising stands, panels, awnings
- * advertising on vehicles
- * decoration of showcases
- * advertising in shop windows
- * other.

4. Choose which aspects are most important in outdoor advertising (you can tick several):

- exceptional brightness and uniqueness
- not too small dimensions
- clarity and attractiveness of the advertising text
- corporate symbols are highlighted: brand, corporate colours
- strategic location
- a long period of use of outdoor advertising

5. Evaluate the influence of outdoor advertising on your decision to buy in a 5-point system (1 - no influence, 5 - very influential)

6. What would encourage greater interest in outdoor advertising? You can select multiple.

- Integration of new technologies (e.g., stands based on virtual/augmented reality)
- links with other elements (e.g., to change the advertising message in outdoor advertising according to the time of day, UV radiation, air temperature, weather forecast, etc.)
- outdoor showcases that can provide warmth on cold winter days
- outdoor showcases that can play music of your choice
- outdoor showcases that can charge your phone
- outdoor display cases that can emit freshly baked muffins and fragrant coffee, and other smells

7. Where do you most often see brand ads?

- In outdoor advertising
- On television
- On the radio
- In the press
- On the Internet

8. Your gender:

- Man
- A woman

9. Your age:

- 18-25 years old
- 26-30 years old
- 31-35 years old
- 36-40 years old
- 41 and over

10. Your place of residence (type by yourself).

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