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TARGET ADVERTISING TECHNOLOGIES: ESSENCE AND EFFICIENCY

Abstract. The article develops and substantiates the areas of evaluation of the effectiveness of targeted advertising, clarifies its essence, and identifies key technologies for targeted advertising in modern business conditions. Targeted advertising is considered to be one of the types of advertising used in the Internet environment, aimed at a specific audience, the parameters of which are set by the advertiser. The following factors of targeting advertising are substantiated: demographic data about consumers (age, sex, marital status), geographical data of consumers (country, city, region), social status of consumers (place of work or study, position), interests, hobbies, programs, communities consumers. The results of the effectiveness of targeted advertising are determined, which include: increasing the loyalty of visitors; increase conversions; saving the advertising budget. The key technologies of targeting advertising are the following: keyword targeting, geographic targeting, time targeting, socio-demographic targeting, thematic targeting, behavioral targeting, dynamic retargeting, search retargeting, CRM-retargeting. The following algorithm for determining the effectiveness of targeted advertising is proposed: calculating the cost of transition, determining the price of ice, calculating the size of the conversion, determining the CPA, calculating the ROMI, calculating the ROI. Based on the proposed algorithm, the effectiveness of the targeted advertising campaign was evaluated on the example of the Instagram page of the Avel.shoes shoe store. It has been proven that targeted advertising is one of the promising marketing tools in the context of doing business with the use of Internet technologies, which helps to improve the efficiency of the business entity in the field of sales and in general in the context of financial performance.

Keywords: targeting, advertising, efficiency, marketing, targeting technologies.

JEL Classification M37, M39

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ТЕХНОЛОГІЇ ТАРГЕТИНГОВОЇ РЕКЛАМИ: СУТНІСТЬ ТА ЕФЕКТИВНІСТЬ

Анотація. Розроблено та обґрунтовано напрями оцінювання ефективності таргетингової реклами, з'ясовано її сутність і визначено ключові технології здійснення таргетингової реклами в сучасних умовах ведення бізнесу. Під таргетинговою рекламою встановлено вважати один із видів реклами, яка застосовується в Інтернет-середовищі, спрямований на конкретну аудиторію, параметри якої ставить сам рекламодавець. Обґрунтовано такі чинники націлювання таргетингової реклами: демографічні дані про споживачів (вік, стать, сімейний стан), географічні дані споживачів (країна, місто, область), соціальний статус споживачів (місце роботи чи навчання, посада), інтереси, захоплення, програми, спільноти споживачів. Ключовими технологіями таргетингової реклами визначено такі: таргетинг за ключовими словами, географічний таргетинг, часовий таргетинг, соціально-демографічний таргетинг, тематичний таргетинг, поведінковий таргетинг, динамічний ретаргетинг, пошуковий ретаргетинг, CRM-ретаргетинг. Запропоновано такий алгоритм визначення ефективності таргетингової реклами: обчислення ціни переходу, визначення ціни ліду, розрахунок розміру конверсії, визначення коефіцієнта CPA, обчислення показника ROMI, розрахунок коефіцієнту ROI. На підставі запропонованого алгоритму здійснено оцінку ефективності таргетингової рекламної кампанії на прикладі сторінки в соціальній мережі Instagram магазину взуття Avel.shoes.

Визначено результати ефективності таргетингової реклами, до яких віднесено: підвищення лояльності відвідувачів, збільшення конверсії, економію рекламного бюджету. Доведено, що таргетингова реклама є одним із перспективних маркетингових інструментів в умовах ведення бізнесу із застосування Інтернет-технологій, який сприяє підвищенню ефективності функціонування суб'єкта господарювання у сфері продажу і загалом у контексті зростання фінансових показників діяльності.

Ключові слова: таргетинг, реклама, ефективність, маркетинг, таргетингові технології.

Формул: 6; рис.: 2; табл.: 3; бібл.: 10.

Introduction. In today's global and domestic business environment, Internet marketing is playing an increasing role in shaping the economic processes of business entities. Under the influence of the Internet, technology is changing consumer behavior, their preferences, and choice of goods and services. Therefore, given the impact of digitalization processes on the activities of market participants need to research modern tools to promote products and services on the Internet - the environment. One of these new tools is targeted advertising. In this case, the technology of such advertising should be constantly managed by monitoring and periodic analysis to ensure maximum effectiveness and consumer involvement. That is why the topic of the research is quite relevant in the current environment of entrepreneurial activity.

Study analysis and problem statement. Research on the development of targeted advertising has been studied by many foreign and domestic scientists.

In particular, researchers H. Kox, B. Straathof and G. Zwart point out that targeting advertising can benefit consumers by reducing the price of access to websites. However, if consumers do not like websites collecting their personal information, their well-being may decline [1, p. 558].

At the same time, according to K. Kaspar, S. Weber and A. Wilbers, along with the growth of global investment in online advertising, Internet users often avoid viewing online ads. Therefore, according to scientists, demographic targeting of targeting ads will overcome this trend, attracting the attention of users to more self-relevant advertising content [2].

According to a study by the European Parliament's Economic, Scientific, and Quality of Life Policy Department, targeted ads are becoming increasingly popular among marketers because these ads are more effective and have a higher return on investment than standard non-targeted ads. Targeted advertising is a particularly fast-growing market segment, with revenues already totaling more than 21.4 billion euros in Europe [3].

Researchers J. Shin, J. Yu focus on the fact that advertising targeting consumers can influence their conclusion about the expected utility of a product. Based on a micro-model created where multiple firms compete through targeted advertising, the researchers conclude that in a market equilibrium environment relative to the targeted firm, consumers make more positive inferences about the product category and firm quality [4].

It should also be taken into account that, according to V. Marotta, Y. Wu, K. Zhang and A. Acquisti, targeting advertising technologies offer firms the opportunity to reach desired audiences through intermediary platforms. The platforms produce real-time auctions to show ads on Internet sites, using consumers' personal information collected online to personalize the ads. In doing so, the targeted advertising industry argues that targeted advertising benefits advertising firms (i.e., merchants who want to target ads to desired consumers), consumers who see ads for desired products, and intermediary platforms that connect consumers with firms [5].

At the same time, researchers S. Hrynkevych, Zh. Sorokina and M. Sitarchuk note that «targeting advertising in social networks can be an ideal option for attracting new potential customers or re-engaging loyal customers» [6, p. 116].

In addition, according to O. Yevseitseva, D. Merkulova, targeting is a complex mechanism with many aspects that must be considered when launching such advertising — «starting with the selection of the audience and ending with the design and design of the advertising message. At each

stage, you should analyze, pay attention to detail, and when running advertising based on the results» [7, p.113].

Moreover, according to A. Romanova, Z. Andrushkevych, O. Valkova, at the moment «targeting advertising in social networks is one of the most promising areas of online advertising. Its main advantages are interactivity, the ability to instantly obtain qualitative and quantitative indicators of the advertising campaign, and cost-effectiveness» [8, p. 210].

Thus, given the results of these scientific studies, the definition of the features of targeted advertising and its effectiveness remains relevant.

The aim of the study is to determine the essence, technology implementation, and economic efficiency of targeted advertising in modern enterprise activities in a market environment.

Research methodology and methods. The research procedure contains the following steps:

1. Collection of materials from scientific, periodic, and statistical sources of information in accordance with the specific topic of the study.
2. Formulation of the essence of targeted advertising by scientific interpretation of the position of scientists and regulatory sources.
3. Systematization of the benefits of targeted advertising.
4. Analysis of targeting factors of targeting advertising.
5. Identification of targeting advertising techniques.
6. Making an algorithm for assessing the effectiveness of targeting advertising.
7. Determination of the effectiveness of targeting advertising.

Analysis and synthesis methods were used to determine the characteristics of targeting advertising of modern enterprises. The method of comparison was used to determine the characteristics of targeting advertising technologies. For a detailed study of the factors and algorithm of targeting advertising effectiveness, the monographic method was used.

Study results. Targeted advertising (from the word «target») is one of the types of advertising used in the Internet environment. This type of advertising is aimed at a specific audience, the characteristics of which are set by the advertiser. In this case, the differentiated characteristics for the selection are age, gender, location, interests, hobbies, tastes, and preferences of the target audience of consumers. This feature of targeting advertising provides an effective result of the impact of the advertiser on the consumer, who ultimately will buy the goods or services of the advertiser or customer of advertising services.

The content of targeted ads is always of interest to target consumers because such ads are shown based on processed data about the interests of that audience. Targeted advertising is used in the Internet environment, in particular, often in social networks (Facebook, Instagram, Twitter, etc.).

Targeting of targeted advertising is carried out by several factors (*Fig. 1*).

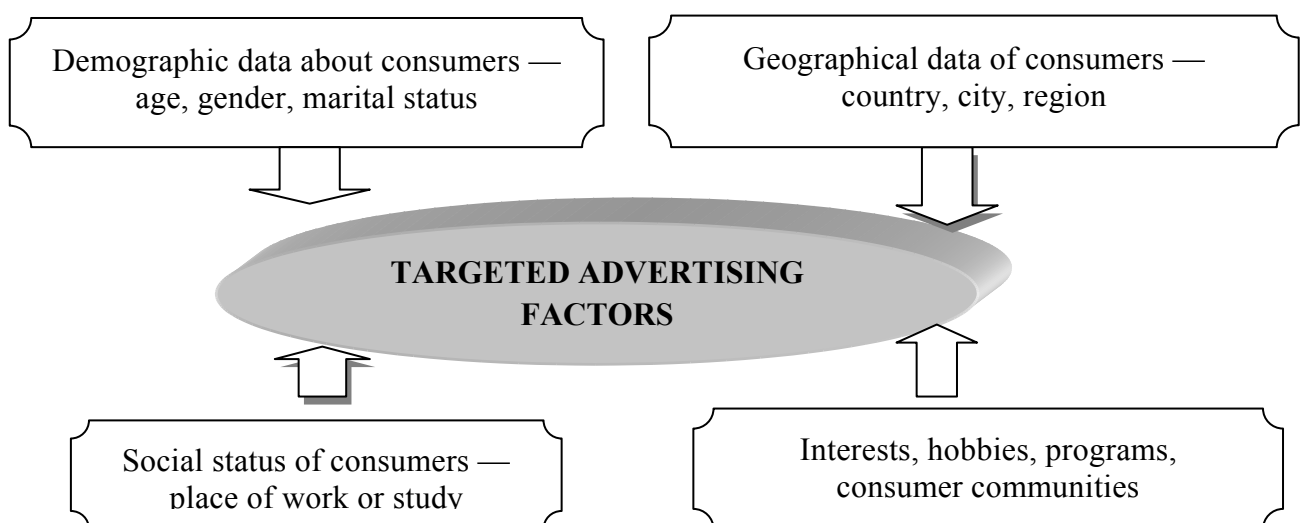


Fig. 1. Targeted advertising factors

Source: drawn up by the author based on [6—10].

There are several technologies of targeted advertising, consider the main ones (*Fig. 2*).

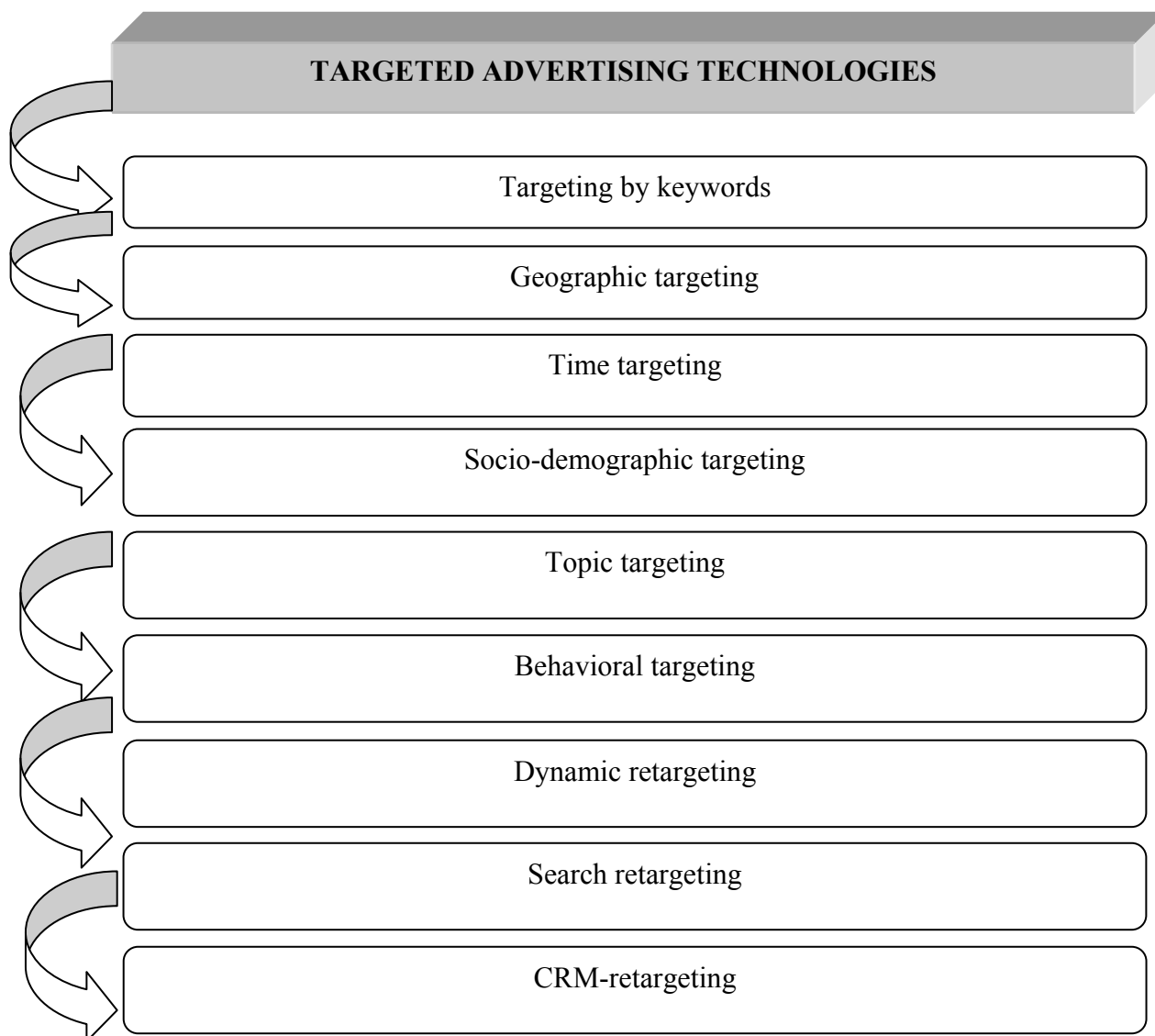


Fig. 2. Technologies of targeted advertising

Source: drawn up by the author based on [1; 4; 6—10].

Targeted advertising by keywords allows you to attract the most interested visitors to your site. By setting up the context, you can specify certain keywords that are relevant to your topic. Each user will be shown an ad for such targeted advertising when a phrase or word is entered into the search box.

Geographic targeted advertising allows ads to be shown in the regions where potential customers are searched for. Data on the user’s location is determined using his IP address. Time-targeted advertising can help limit ad impressions over time for optimal spending of your advertising budget. By analyzing the daily spending on the advertising campaign, determine the times when such spending is maximal, and adjust it so that ad impressions are stopped during periods of high competition.

Socio-demographic targeting advertising allows you to display ads based on consumer characteristics such as age, gender, marital status, income, and other parameters of the target audience.

Thematic targeting refers to displaying ads in search engine results and thematic resources of social communities. For example, in Google AdWords, you can specify one or more thematic sites where ads will be shown to users.

Behavioral targeting allows you to display ads to users based on their interests on different sites, based on previous search queries and views.

There are also retargeting technologies (retargeting), i.e., advertising mechanisms by which targeting ads are directed to users who have already viewed the advertised product by visiting its web page. According to statistics, more than 90% of users leave the site without committing any actions and do not return to the services of the company. Through retargeting technologies can return the user to the site [9]. In this case, there are 3 main retargeting technologies: dynamic, CRM and search.

Dynamic retargeting allows you to automatically generate a banner and show it to a person who has just visited the company’s site and has not taken the desired action. The principle of action is that the user goes to the advertiser’s site, looks at products or several sections of the site, and leaves the site. The user system remembers (notices with cookies) and shows a banner with the products he recently viewed on another site. Search engine retargeting is a form of behavioral retargeting. When using this technology, the user searches for information by entering search terms. And later in the internet environment sees ads related to his search queries. CRM-targeting allows you to show ads to users, taking into account their behavior and data stored CRM-system (a special computer program that allows you to schedule jobs and monitor their performance, keep records of customers, store documents on projects and automate its creation and much more).

Let’s look at an example, the proposed evaluation of the effectiveness of targeted advertising. Let’s choose the Instagram page of the shoe store «Avel.shoes» for the study. The advertising budget of targeting advertising was 1200 UAH. General characteristics of the advertising campaign are shown in *Table 1*.

Table 1

**Total Avel.shoes targeting ad campaign in Instagram and Instagram Stories
from Jan. 24 to Jan. 30, 2022**

№	Indicator name	Units	Value
1	Transitions to the site of the online store Avel.shoes	quantity	268
2	Amount of advertising expenses	UAH	1200,00
3	Average spending on targeted ads	UAH	171,48
4	Average price per 1,000 impressions of targeted ads	UAH	258,81
5	The average price of a transition to an Avel.shoes page	UAH	4,47

In addition, based on the systematization of practical and scientific approaches, we propose the following algorithm for assessing the effectiveness of targeting advertising (*Fig. 3*).

EVALUATING THE EFFECTIVENESS OF TARGETED ADVERTISING

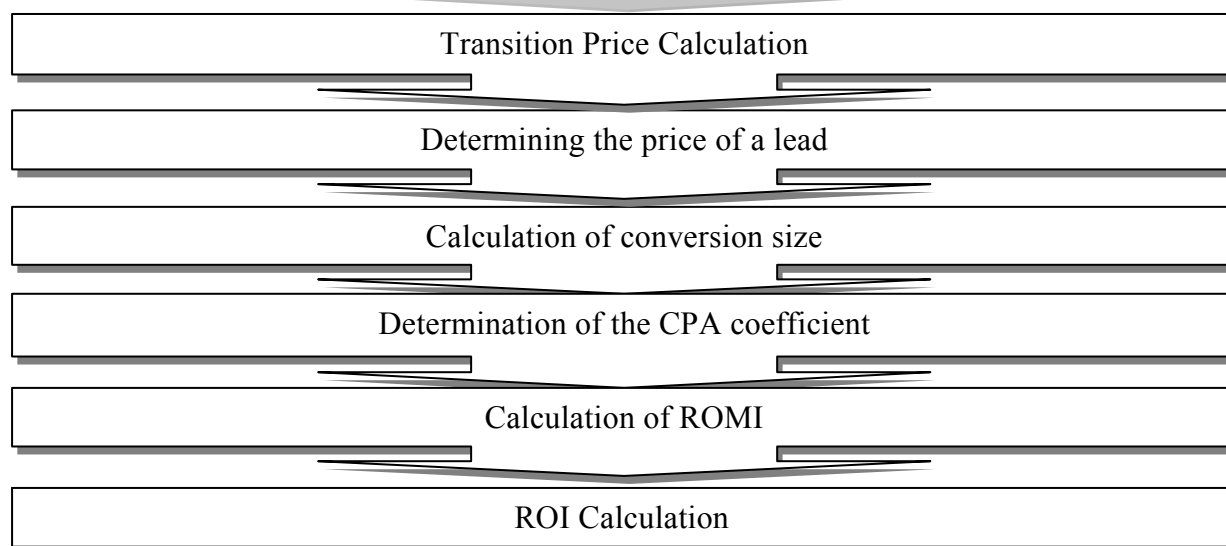


Fig. 3. The algorithm for assessing the effectiveness of targeted advertising

Source: drawn up by the author based on [2; 3; 6; 7; 9; 10].

Detailed costs, clicks, and impressions for each platform of the configured targeted ads are shown in *Table 2*.

Table 2

More information on the Instagram platform and Instagram Stories for the Avel.shoes store

Platform	Scope	Views	Unique clicks	Clicks on the link
Instagram	4941	5277	32	98
Instagram Stories	3624	5672	65	170
Total	8565	10949	97	268

As a result of targeting advertising Avel.shoes attracted 28 new customers, 22 of which joined after the advertising. General monetary characteristics of the store are shown in *Table 3*.

Table 3

Financial performance of Avel.shoes from January 24 to January 30, 2022.

№	Indicator name	Units	Value
1	Income from the sale of goods	UAH	35 623,00
2	The total cost of goods	UAH	24 152,00
3	Targeted advertising costs	UAH	1 200,00

To evaluate the effectiveness of targeted ads, let's calculate the price of conversions:

$$C_p = \frac{B_r}{K_p}, \quad (1)$$

where C_p — transition price, UAH;

B_r — costs of targeted advertising, UAH;

K_p — number of clicks on this ad;

$C_p = 1200 / 98 = 12,24$ (UAH).

The click-through price is 12.24 UAH, which indicates sufficient consumers' interest in this targeting ad.

With the help of the next indicator — the price of the lead — you can determine the intensity of consumer interest in the product offered on this platform. The price of lead is calculated by the following formula:

$$C_l = \frac{B_r}{K_l}, \quad (2)$$

where C_l — lead price;

B_r — placement price;

K_l — number of leads.

$$C_l = 1200 / 32 = 37.5.$$

Consequently, the price of the lead is 37.5 UAH, which characterizes the high effectiveness of this advertising event.

Then let's calculate the conversion rate. This indicator allows you to determine the percentage of really interested people in the product in relation to the people who were interested in the ad.

The size of conversion will be:

$$K = \frac{Kl}{Kn} \cdot 100\%, \quad (3)$$

$$K = (32 / 98) \cdot 100\% = 32.65\%.$$

The conversion rate is 32.65%, which is a high indicator of interest.

Let's calculate the cost of CPA conversion (Cost Per Action):

$$CPA = \frac{B_r}{K_l}, \quad (4)$$

where K_l — the number of committed target actions (in our case, the number of new clients attracted);

$$CPA = 1200 / 22 = 54.55 \text{ (UAH)}.$$

Thus, CPA was 54.55 UAH, which is a relatively high level of this indicator.

Next, let's calculate the return on investment of marketing channels $ROMI$:

$$ROMI = \frac{K_l \cdot \bar{D} - B_r}{B_r}, \quad (5)$$

where \bar{D} — average revenue from the sale of products, UAH.

$$ROMI = (22 \cdot 524 - 1200) / 1200 = 8.61.$$

Consequently, the coefficient of $ROMI$ was 8.61, i.e., with the cost of targeting advertising in the amount of 1200 UAH the company has received income of 10 332 UAH.

And the next indicator to calculate the effectiveness of targeting advertising rate of return on investment is applied (return on investment):

$$ROI = \frac{D_r - (C_r + B_r)}{C_r + B_r}, \quad (6)$$

where D_r — income from the sale of goods, UAH;

C_r — total cost of goods sold, UAH;

B_r — the cost of targeted advertising.

$$ROI = (356\,323 - (24\,152 + 1\,200)) / (24\,152 + 1\,200) = 0.40.$$

According to the calculations, we can conclude that the targeted campaign is effective because the $ROI > 0$ (0,4).

Conclusions. Consequently, targeted advertising is an effective way to communicate with consumers, confirming the analysis of targeting technologies and the calculations of the effectiveness of the targeting advertising campaign. But in order for such an advertising campaign to be effective, it is necessary to target it rationally using certain attributes, i.e., the prospects for further research is to establish the prerequisites and features of targeting advertising in various types of economic activity.

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