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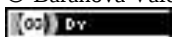
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Digitalization of marketing: challenges and opportunities of metaverse integration

Abstract. The object of the study is marketing in the metaverse, which is a new frontier of digital marketing, based on the use of virtual worlds to interact with the target audience and integrate brands into the digital environment. It is proven that the transformation of marketing in the metaverse is becoming one of the main directions of development of modern entrepreneurship, aimed at expanding the company's presence on the Internet, forming and maintaining the loyal attitude of consumers of various target groups.

Problem statement. It is established that in today's conditions, digitalization of marketing contributes to a more complete coverage of the company's target audience, allows you to convey information about the brand to consumers faster and more efficiently, to form an idea of the competitive advantages of products and services offered by the company. An assumption is made about the decisive influence that the process of forming and developing the metaverse has on marketing. The need for a thorough analysis of trends associated with the spread of this phenomenon, as well as outlining the opportunities and challenges that it creates in the field of marketing, is proved.



Unresolved aspects of the problem. Recent research on the formation and development of the metaverse and its impact on marketing activities is reviewed. It is found that the opportunities and challenges associated with the integration of the metaverse into marketing require clarification.

Purpose of the article. The purpose of the research is to analytically study the processes associated with the active spread of the metaverse in society and specify its impacts on marketing, which are manifested in the generation of opportunities for improving marketing activities based on digital technologies and the emergence of challenges associated with this process.

Presentation of the main material. The latest research and analytical materials on the spread of digital technologies in the economy and social life, individual indicators characterizing historical data, the dynamics of the Metaverse, forecasts and plans, as well as assessments and impacts related to the spread of this phenomenon are analyzed. It is established that the metaverse in the current conditions demonstrates a steady growth trend. This allows its development to be considered one of the main trends of modernity, which should be taken into account, in particular in the field of marketing. The opportunities and challenges that the metaverse creates for marketing are considered.

Conclusions. The results of the study show that the metaverse creates unprecedented opportunities for marketers to expand and improve the effectiveness of interaction between the company and consumers. The challenges associated with the integration of the metaverse into digital marketing are also identified, which are due to the presence of current problems in the areas of regulating interactions in the metaverse, security, and adaptation to change. It is proven that taking into account the identified opportunities and challenges will allow making the right management decisions related to marketing in the metaverse.

Keywords: *marketing, marketing communications, digital marketing, digital economy, behavioral economics, digital transformation, digitalization, e-commerce, metaverse, innovation, marketing tools.*

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Introduction. In the conditions of the formation and development of the metaverse, transformational processes are taking place that affect the functioning of business structures. In particular, marketers, whose activities take on a different content and form, feel a tangible impact. Marketing in the conditions of the metaverse can be considered a new frontier of digital marketing, because it is based on the use of virtual worlds for interaction with the target audience, as well as on the integration of brands into the digital environment. One of the main directions of development of modern entrepreneurship, aimed at expanding the company's presence on the Internet, forming and maintaining the loyal attitude of consumers of various target groups, is the transformation of marketing in the conditions of the metaverse. Digitalization of marketing contributes to a more complete coverage of the company's target audience, allows consumers to convey information about the brand faster and more efficiently, and to form in them an idea of the competitive advantages of products and services offered by the company. At the same time, it is necessary to take into account both the opportunities that transformational processes open up for marketers and the challenges that their activities must meet.

Literature review. The metaverse (in another translation - metaspace) is the object of research by many scientists, whose works, among others, consider issues related to the transformation of marketing in new conditions.

Kornivska V. considers the metaverse in the context of logical-historical methodology and modern philosophical knowledge. The author compares the metaverse with the physical economy in the following aspects: conditions of operational activity, the degree of individualization, mechanisms for retaining the user in the ecosystem of the provider (agent of the metaverse), decision-making and time conditions of operational activity [9].

Sverdlichenko V. considers the metaverse from the position of jurisprudence, emphasizing that this concept can be understood as a special virtual space created by computer technologies, in which users can interact with each other, with various digital objects and the digital environment thanks to created avatars - virtual digital images. The metaverse can be called a copy of the real

world, but in a virtual space, where modern technologies, virtual and augmented reality, three-dimensional graphics, artificial intelligence, social networks, as well as other advanced innovative technologies are combined [18]. Also, in our opinion, the scientist's statement that the transition of humanity to virtual life, the center of which can be the metaverse, creates a large number of legal issues that need to be investigated and ways to solve them are apt.

Kostenko O., Mangora V. also considered the metaverse from a legal point of view, trying to analyze the directions of development and regulation of social relations associated with the use of electronic avatars, artificial intelligence and electronic personality in the metaverse. Scientists conclude that the development of metaverse law is the first stage of the projection of the laws of physical society onto electronic social relations. The metaverse is cosmopolitan, therefore the projection of the laws of different countries will not ensure their effective regulation. Instead, the development of global electronic legislation of the metaverse will give impetus to the modernization and improvement of national legislation [10].

Wang S., Zhang H. examine the impact of digital capabilities on entrepreneurial orientation and entrepreneurial productivity in the metaverse. Drawing on the theoretical framework of the resource approach and dynamic capabilities theory, the researchers identify mechanisms through which three aspects of digital capabilities (infrastructure, business reach, and proactive stance) form an ecosystem aimed at promoting improved entrepreneurial performance in the metaverse [20].

Ali S.A., Khan R. consider the metaverse as a phenomenon of the modern world that promises to revolutionize the ways in which consumer brands and firms interact and transact in the near future. The authors note that metaverse marketing is still in its infancy and consider its differences from digital marketing in terms of ownership, transactions, advertising, control, e-commerce search methods, merchandising, and the need for warehouse space [1]. These differences should be taken into account by entrepreneurs when developing specific marketing strategies aimed at effectively promoting goods and services in the metaverse.

Tavman E.V. explores the concept of the metaverse and compares traditional and electronic retail with retail in the metaverse, believing that the key difference of the latter is its focus on creating an exciting experience for the customer. The researcher identifies for each type of trade the place of contact, key actors, the nature of interaction, key benefits and limitations, and areas of integration with the consumer. The scientist emphasizes that today many retailers open stores in the metaverse, but creating a unique customer experience is much more than just replicating physical or online stores in the metaverse [19]. In our opinion, it is worth agreeing that it is precisely on its creation that modern marketers who want to achieve success in this sector should focus, first of all, on.

The evolution of retail from traditional to electronic and meta-universe retailing, and the ways in which meta-universes influence this evolution, are also explored in their article by Bourlakis M., Papagiannidis S., Li F. The authors conclude that retailers need to use a holistic and comprehensive approach when developing their advertising strategies, especially if they also aim to operate at the meta-universe stage [4].

Barrera K. G., Shah, D. consider issues related to the essence of the metaverse, its meaning and scope, and opportunities for marketers in the field of designing and developing consumer experiences in the metaverse. The authors propose a new organizational structure that allows practitioners to develop new marketing initiatives and consumer experiences in the metaverse [3]. The formation of such an organizational structure can undoubtedly be considered one of the tools for improving the format of conducting business in modern conditions, when the metaverse is increasingly expanding the boundaries of its influence.

Chandiwala M., Patel P., Mehta A. consider the manifestations of the metaverse in four key areas: customer experience, customer trust, active customer participation, and advertising. It is necessary to agree with scientists who emphasize that marketers should be aware of the latest technological developments, in particular those related to the spread of the metaverse and the

opportunities it provides [6]. At the same time, marketers should exercise caution and caution when developing a marketing plan for the metaverse.

Richter S., Mohammadhossein N., Richter A., Trier M., studying the metaverse, emphasize that as this phenomenon continues to develop, the integration of different technologies will open up unprecedented opportunities and potential challenges, including in the field of marketing. Early identification and understanding of these dynamics allows stakeholders to develop strategies that exploit the benefits of technologies while reducing risks. The main challenge is to ensure that the integration of different technologies into the metaverse promotes innovation and responsible development [17].

Lowry P. B., Boh W., Petter S., Leimeister J. M. In one of their studies, they studied the fundamental components and factors that contribute to the development of the metaverse. Scientists have identified the levels on which the metaverse is based: communication and infrastructure technologies of the metaverse (the first level), fundamental technological mechanisms of the metaverse (the second level), technologies that facilitate the virtual-physical connection for the metaverse (the third level). The authors analyze the differences of the metaverse and emphasize: “to succeed in the space of the developing metaverse, organizations should not simply transfer known, existing business models to the metaverse and expect overwhelming success; they should explore and understand the developing markets and their specific challenges and opportunities” [13].

Cantú C., Franco C. and Frost J. also note that the metaverse is built on several technological levels. Sectors are the applications that the end user will interact with. Software and platforms facilitate the distribution and discovery of content, experiences, and applications. They include the core set of tools for creating 3D experiences, including design, game engines, and AI services. Access/interface includes the device hardware, components, accessories/peripherals, and the operating system (OS), which is part of the human interface layer. Infrastructure refers to the components such as cloud computing, semiconductors, networks, etc. that power the metaverse. Provisioning tools are the specific tools that power the metaverse economy, manage digital identity, and govern content governance, privacy, and moderation. Many metaverse applications aim to achieve a change in the way economic activities—including services—are perceived, performed, and monetized in both real and virtual environments [5]. It is the consequences of the development of the Metaverse related to the above that are important to consider when making management decisions.

Lebedenko S. tried to form his own understanding of the future of e-commerce in the metaspaces. At the same time, the author's thoughts on the components of the process that lead to a sense of immersion during the virtual reality experience, which combine its technological and cognitive dimensions, are of particular interest. According to the author, digital marketers who are used to adhering to tried and tested methods of online marketing may find it difficult to experiment with complex but exciting metaplatforms. The full integration of the “metalanguage” into digital marketing will depend on how ready the organization is for experiments. This will require significant investments in technical and specialized equipment, qualified human resources, ensuring cybersecurity and attracting other organizational resources [12].

Gnitetsky E., Lebedenko S. and Lyamar O., studying the features of marketing in new conditions, note that due to the correct selection of marketing tools in the metaverse, potential consumers will receive a new exciting experience, and enterprises will be able to sell virtual digital products directly to the digital “identities” of consumers, while simultaneously increasing the recognition of their brand [8].

It should be noted that there are quite a few analytical platforms that, in one way or another, in their research touch on the topic of the spread of digital technologies, the metaverse, and the transformation of marketing in the context of digitalization [2; 7; 11; 14; 15; 16; 21]. It is the statistical data from these sources that can become the basis for further analytical research in order to identify key trends in the selected industry.

Despite the close attention of scientists to the transformation of the processes of company functioning in the metaverse, it is relevant to conduct a thorough analysis of the trends associated with the spread of this phenomenon, as well as to outline the opportunities and challenges that it creates in the field of marketing.

Purpose, objectives and research methods. The purpose of the study is to carry out an analytical study of the processes associated with the active spread of the metaverse in society and to specify on this basis its effects on marketing, which are manifested through the generation of opportunities for improving marketing activities based on digital technologies and the emergence of challenges associated with this process.

The study used methods of dynamic, structural, comparative analysis and logical generalization, which allowed not only to analyze trends in the spread of digitalization processes and the emergence and development of the metaverse as a separate phenomenon of modern life, but also to identify opportunities and challenges in the field of integrating the metaverse into marketing activities at the current stage.

Research results. First of all, when studying the issue of digitalization of marketing in the conditions of the metaverse, it is worth focusing on identifying the main trends in the spread of digital technologies in society.

Analyzing the Digital 2025: Global Overview Report, which reflects the most relevant and latest data on the global state of digital technologies around the world, you can get a generalized idea of the spread of digitalization achievements in modern conditions.

Thus, according to this report, among the 8,20 billion people living on Earth, 5,78 billion people today use mobile phones (70,5 % of the total world population), 5,56 billion people use the Internet (67,9 %), 5,24 billion people are users of social networks (63,9 %). At the same time, the number of unique mobile subscribers increased by 2,0 % compared to last year, the number of Internet users increased by 2,5 %, while the total number of social media users increased the most dynamically - by 4,1 percent over the past 12 months [11].

According to separate studies, the percentage of website traffic from mobile devices worldwide over the past ten years, although characterized by minor fluctuations, had a tendency to increase (table 1).

Table 1. Dynamics of the percentage of website traffic from mobile devices worldwide

Year, data as of the 4th quarter	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Indicator value	38,43	48,33	51,12	47,19	52,60	52,20	54,40	59,16	54,67	62,54

Source: prepared by the author on the basis of [16]

As shown in Table 1, at the beginning of the study period, website traffic from mobile devices accounted for only 38,43 % of total traffic. At the end of the study period, the situation changed dramatically. In the fourth quarter of 2024, 62,54 % of website traffic was already from mobile devices. This indicates a reorientation of people towards using the mobile Internet, which is due to its advantages, including mobility and flexibility, a sufficiently high data transfer speed, ease of connection without complex cable networks, the possibility of a stable connection even while moving, as well as access to a wide range of online services and communication capabilities regardless of location.

As a result of this change in the priorities of Internet users, the percentage of website traffic from mobile devices in the world increased by 24,11 % in 2015-2024. That is, the average annual growth of this indicator was 2,68 %. Some years were characterized by a slight decrease in the studied indicator compared to the data of previous periods, however, such a decrease turned out to be temporary and did not affect the general growth trend.

According to the Digital 2025: Global Overview Report, the reasons that motivate users to use the Internet are quite diverse. Thus, 62,8 % of consumers used the Internet to search for information, 60,2 % - to maintain contact with friends and family, 55,0 % - to stay up to date with news and events, 54,7 % - to watch videos, TV programs or movies, 51,1 % - to learn how to do certain things. These are the reasons for using the Internet that are most common among users. Slightly less common reasons for using the Internet are searching for new ideas and inspiration (46,9 %), listening to music (46,5 %), filling free time and general browsing (45,2%), researching products and brands (45,2 %), researching places, including vacations and travel (38,9 %), studying and related goals (38,7 %), managing finances and savings (35,9 %), and researching health and healthcare issues (35,4 %). Using the Internet to access gaming content is important for 30,4 % of users, and research related to business activities is important for 30,1 % of people who use the Internet [11].

The latest GWI survey shows that adult Internet users now spend an average of 6 hours and 38 minutes online every day. Analysts note that this figure is close to the value recorded at the end of 2019, just before the outbreak of the Covid-19 pandemic. At the same time, the Digital 2025: Global Overview Report noted that people already spend approximately 40 percent of their non-sleep time actively interacting with digital devices and services [11]. Given this, it should be concluded that these figures will remain relatively stable in the near future.

The research also focuses on the growing popularity of artificial intelligence, which is manifested in the continuous increase in the number of unique users of individual applications related to it, emphasizing that the statistics of individual tools do not provide a representative picture of the implementation of artificial intelligence. According to the latest analytical data, there are all signs that the popularity of artificial intelligence will continue to gain momentum in 2025.

The spread of artificial intelligence technologies is closely related to the development of such a phenomenon as the metaverse. Many analytical resources are devoted to the study of this phenomenon. Among the data presented, we can highlight key statistical indicators that, in our opinion, most accurately characterize the spread of the metaverse. At the same time, individual indicators characterize historical data, metaverse dynamics, forecasts and plans, as well as assessments and impacts.

The study presented by Wifi Talents Team provides statistical data related to the metaverse, which allows us to attribute it to the most important trends of recent years. Thus, according to researchers, approximately 70 % of large technology companies have launched or are developing Metaverse projects [15]. This indicates that the management of companies involved in the development and implementation of new technologies see investing in Metaverse projects as one of the most promising directions for their further development.

At the same time, almost 25 % of Fortune 500 companies, the ranking of the largest corporations in the world, have invested in metaverse technologies or projects. According to the latest statistics, the total amount of investment in metaverse startups has exceeded \$10 billion, and the average revenue per user in the metaverse is estimated at \$150. In addition, statistics show that 92 % of brands are researching or actively investing in metaverse marketing strategies [15]. Other analytical studies also confirm the significant amount of investment in the metaverse. In particular, according to Blogging Wizard, Meta annually invests about \$10 billion in the metaverse [21].

Enterprise Apps Today data shows that in terms of economic sectors, companies in the IT and computer sectors invest the most in the metaverse (Table 2).

As can be seen from the data in Table 2, 17 % of companies that invested in the metaverse belong to the IT and computers sector, 12 % to the education sector. Among the leaders in terms of investment in the metaverse are the sectors of finance (11 %), marketing and advertising (10 %), medicine and healthcare (9 %), technology and innovation (7 %), and travel and hospitality (6 %). In other sectors, the volume of investment in the metaverse is less significant and does not exceed 5 % of the total.

Table 2. Investing in the Metaverse by sector

Sector	Share of companies that invested in the Metaverse
IT & Computers	17 %
Education	12 %
Finance	11 %
Marketing & Advertising	10 %
Medical & Healthcare	9 %
Technology & Innovation	7 %
Travel & Hospitality	6 %
Construction	5 %
Transportation	5 %
Customer Service	4 %
Manufacturing	3 %
Food & Beverage	3 %
Services	3 %
Art & Design	2 %
Retail	2 %
Defense	1 %

Source: prepared by the author on the basis of [7]

According to Wifi Talents Team, more than 50 % of content creators in the metaverse receive income through virtual events, sales or digital assets. At the same time, the five countries with the highest income from the metaverse include the USA, China, Japan, South Korea and Germany [15].

Regarding the dynamics of the metaverse, analysts note a constant growth in the indicators that characterize it. In particular, it is worth noting that according to Wifi Talents Team, the number of enterprises creating virtual offices in the metaverse is constantly growing (by 60 % in 2023), the number of virtual events with metaverse support (by more than 200 % from 2021 to 2022), the number of active virtual worlds (by 35 % in 2023, reaching over 300 platforms worldwide), the implementation of blockchain technology in the metaverse (by 85 % since 2022), the use of AI-based avatars in the metaverse (by 70 % annually), the volume of user-generated content in the metaverse (by 150 % between 2021 and 2023) [15].

GamesPad analysts note that the metaverse is a rapidly growing virtual reality world that has been gaining momentum over the past few years. The GamesPad portal provides statistical information characterizing the development of the metaverse. According to the data provided on the portal, more than 400 million people use the metaverse every month, using it for education, business, entertainment, etc.; the number of users of the Web 3.0 Metaverse virtual worlds has exceeded 50 thousand; more than 160 companies are actively working on its development and improvement, creating new opportunities for an exciting experience in the virtual world, and most people are willing to spend up to \$ 100 per month on such activities in the metaverse as games and shopping. At the same time, according to GamesPad estimates, 36 % of this market falls on virtual and augmented reality (VR and AR) technologies. Analysts also note that the global market value of the metaverse in 2022 was \$ 47,48 billion, and its average annual growth rate was 39,44% [14].

Interesting analytical data was collected by Blogging Wizard specialists. According to analysts, 74 % of Internet users are considering joining the metaverse, expressing a desire to communicate with others in this space (40 %), consider it a positive way to bring people together (38 %), use the metaverse as an opportunity for learning (28 %) or a way to escape from reality (28 %), or for other reasons. According to GamesPad, virtual reality (VR) occupies 48 % of the market among all metaverse technologies, augmented reality (AR) has a 34 % market share, while mixed reality (MR) has an 18 % market share [21].

The development of the metaverse is significantly impacting modern socio-economic relations. This is evidenced, in particular, by data collected by Wifi Talents Team, according to which:

- 80 % of technology company executives consider the metaverse a strategic priority for the next five years;
- 60 % of organizations implementing metaverse projects report increased customer engagement;
- over 30 % of metaverse users participate in educational or training activities in virtual environments;
- over 65 % of young people (aged 18-24) have used the metaverse for gaming or social interaction;
- over 52 % of consumers are interested in using the metaverse for shopping;
- over 40 % of Generation Z and millennials express a high interest in remote work in the metaverse;
- 58 % of consumers believe that the metaverse will change the way they communicate;
- most young people believe that the metaverse will become as integral to their lives as smartphones are today;
- over 60 % of consumers are willing to pay more for products and services that provide an immersive metaverse experience [15].

Enterprise Apps Today provides a breakdown of experts' opinions on the current state of the metaverse, according to which 15 % noted that the metaverse is currently at the peak of its capabilities, 68 % predict a boom in this area over the next 5 years, 14 % - over the next 10 years, 3 % - in more than 10 years, and 1 % believe that this area will never enter the boom stage [7].

According to analysts Wifi Talents Team, in the future the volume of the metaverse will constantly and relentlessly grow. For example, the global metaverse market is projected to reach \$824,5 billion by 2030, and the global AR and VR market, which is closely related to the metaverse, is projected to reach \$209,2 billion by 2028. Wifi Talents Team predicts that the metaverse will create more than 4 million jobs worldwide by 2026. The number of active metaverse users is projected to exceed 5 billion by 2030, and virtual event attendance in the metaverse is expected to double over the next five years. Analysts also expect the global cloud infrastructure supporting metaverse applications to grow by 30 % annually, and predict that global advertising spending in the metaverse will grow to reach \$30 billion by 2027. At the same time, it is predicted that by 2027, sales of virtual goods in the metaverse will reach \$50 billion per year [15].

The forecasts of GamePad analysts are also optimistic, although more restrained. Analysts expect the metaverse sector to have an average annual growth rate of 34 % and its value will reach \$678,80 billion by 2030 [14].

Blogging Wizard analysts note, citing forecasts published in a McKinsey & Company report, that the impact of the metaverse on the e-commerce market will be from \$2 to \$2,6 trillion in the near future, on the academic virtual learning market - from \$180 to \$270 billion, on the advertising market - from \$144 to \$206 billion; on the gaming market - from \$108 to \$125 billion [21].

According to a survey conducted by Blogging Wizard, 54 % of experts believe that the metaverse will become an important aspect of everyday life for half a billion people by 2040, and 66 % of Internet users believe that the metaverse has the potential to replace social networks as we know them. It is predicted that by 2026, 25% of consumers will spend at least one hour per day in the metaverse. Given the above, 65 % of marketers are ready to work with influencers from the metaverse, although 16 % are not interested in expanding their marketing campaigns into the virtual world, and four out of ten marketers would prefer to work with influencers who are not members of the metaverse [21].

Similar predictions are given in their review by Enterprise Apps Today. As stated in this study, it is expected that in the near future 25 % of people will spend more than 1 hour per day in the metaverse; by 2030, the market share of the metaverse will reach \$13 trillion, and the number of

users will exceed 5 million, about 1 billion people around the world will undergo various trainings with the effective help of the metaverse [7].

As can be seen from the data presented above, most analysts emphasize the growth of the metaverse, although the predicted rates of increase in the scale of this phenomenon vary quite significantly. One thing is undeniable - the metaverse really demonstrates growth, which allows its development to be considered one of the main trends of our time, which should be taken into account, in particular in the field of marketing.

According to Deloitte research, the attachment of people from different generations to the metaverse varies (table 3).

As can be seen from the table, a significantly higher percentage of people from Generation Z and Millennials use the metaverse for the purpose of virtual travel, meeting with friends and family members, for educational purposes, for remote attendance of cultural events, and for purchasing goods. On average, Generation Z and Millennials are 1,7 times more likely to use the metaverse in various directions than Generation X, boomers, and adults. The difference between the degree of commitment of different generations to virtual reality should be taken into account when developing activities aimed at promoting goods for different target audiences using metaverse platforms.

Table 3. Percentage of consumers interested in regularly using of VR

Usage	Generation Z and Millennials	Generation X, boomers, and adults
Virtual travel to explore different locations, such as foreign cities or historical sites	29%	21%
Meeting with friends or family members	26%	15%
Learning with others in a virtual classroom	24%	12%
Remotely attending a live music concert or festival	24%	17%
Shopping in a virtual clothing and home goods store	23%	12%

Source: prepared by the author on the basis of [2]

Despite the spread of the metaverse, television advertising is still the top source of brand discovery for Internet users aged 55 to 64, ahead of search engines, word of mouth, and any type of online advertising [11].

Overall, the typical adult Internet user learns about brands and products from an average of 5,8 different sources. Globally, search engines remain the top source of brand awareness for connected consumers worldwide, with 32,8 % of people discovering new brands and products through online search. Television advertising, word-of-mouth recommendations, and social media advertising rank second, third, and fourth (32,3 %, 29,9 %, and 29,7 %, respectively). Brand websites round out the top five sources of brand and product awareness (25,8 % of respondents) [11].

As can be seen from Table 4, the popularity of sources of information about trademarks varies for different age groups.

As can be seen from the table, social media advertising is the most popular source of information about brands among younger age groups. It ranks 1st in popularity among the population aged 16 to 24 and 25 to 34. Among the population aged 35 to 44 and 45 to 54, social media advertising ranks third and fourth, respectively, while the population in older age groups does not prefer other sources of information.

Search engines, word of mouth, and television advertising are among the top five sources of information about brands and products across all age groups, although with varying degrees of prioritization.

For the 16-24 and 25-34 age groups, search engines are the second most popular source of information about products, for the 35-44 and 45-54 age groups, they are the first source of information, and for older age groups, they are second to other sources of information (for the 55-64 age group, they are third, for those over 65).

Television advertising ranks third among the sources of brand information among people aged 16 to 24 and 25 to 34. The importance of this source of information increases with age. Thus, television advertising is the second most popular source of brand information for people aged 35 to 44 and 45 to 55, while it ranks first for people aged 55 to 64 and over 65.

Table 4. The most popular sources of information about trademarks

Age group	The most popular sources of information about a trademark		
	Place	Source of information	Percent, %
16 to 24 years old	1	advertising on social networks	32,6
	2	search engines	28,6
	3	television advertising	28,4
	4	word of mouth	26,6
	5	advertising in mobile applications	24,7
25 to 34 years old	1	advertising on social networks	31,1
	2	search engines	30,1
	3	television advertising	28,8
	4	word of mouth	26,9
	5	brand web-sites	25,3
35 to 44 years old	1	search engines	33,6
	2	television advertising	31,5
	3	advertising on social networks	30,4
	4	word of mouth	29,6
	5	brand web-sites	27,1
45 to 54 years old	1	search engines	36,3
	2	television advertising	35,6
	3	word of mouth	32,9
	4	advertising on social networks	28,9
	5	brand web-sites	26,9
55 to 64 years old	1	television advertising	38,8
	2	search engines	38,2
	3	word of mouth	35,7
	4	in-store promotions	28,9
	5	brand web-sites	26,8
65 and older	1	television advertising	52,1
	2	word of mouth	42,6
	3	search engines	37,8
	4	in-store promotions	33,2
	5	retail websites	30,4

Source: prepared by the author on the basis of [11]

Word of mouth ranks fourth in popularity among the first three age groups, third for the 45-54 and 55-64 age groups, and second for those over 65.

At the same time, among the top five most popular sources of information about brands for people aged 16 to 24, fifth place is taken by advertising in mobile applications. This source does not have a similar popularity among any of the older age groups.

For the second, third, fourth, and fifth age groups, brand websites are a fairly popular source of information about brands. This source ranks fifth in popularity among these age groups. For the population over 65, this source of information is not among the top five.

Meanwhile, in-store promotions are the most popular source for people aged 55-64 and over 65, with retail websites being the most popular source for people aged 65 and over, with this source coming in at fifth place for this age group, overtaking brand websites.

The Digital 2025: Global Overview Report concludes that no single source introduces brands to more than a third of adult internet users [11]. Recent data shows that a combination of digital advertising across channels such as search, social, online video and display will only introduce a brand to around two-thirds of the world's internet users, so even among connected audiences, digital advertising is not a panacea. This means that it is crucial for marketers to use a mix of different channels to achieve their goals, and to continue to balance both online and offline channels.

Thus, the impact of the metaverse on marketing and marketing communications, promotion of goods and services on the Internet, and the transformation of the organization of marketers' work is dualistic. On the one hand, the metaverse creates new opportunities, the use of which will improve the effectiveness of marketing interaction, and on the other hand, it generates challenges that modern marketing must meet in order to achieve the tasks set before it.

Discussion. Arguments regarding the dualistic impact of the metaverse on social processes in general and the marketing sphere in particular are found in the studies of many scientists.

Kornivska V. notes that among the positive effects of the existence of the metaverse are the stability and certainty of the space of operational activity, reduction of transaction costs, saving of time and financial resources necessary to meet needs, convenience and novelty of positive impressions provided by the technology system, the formation of a global consumer and financial space in which a wide range of services is provided, as well as maximum customization of the service provision process. At the same time, it is difficult to disagree with the author that the metaverse is characterized by risks associated with the growth of screen time for all age categories of users, the long-term presence of users in a particularly undemanding social space; the growth of the influence of the digital world on cognitive processes, the growth of the number of people with neuropsychological problems. In addition, according to Kornivska V., the metaverse is also associated with the creation of conditions for the lack of alternative interaction between the user and the agent of the metaverse, the dominance of global-monopolistic information asymmetry, the paternalism of technologies in the process of organizing the operational activity of the user of the metaverse; the neutralization of human subjectivity and the formation of artificial subjectivity, the development of individualism of consumption to the limit of being, etc. [9].

The statement by Ali S.A., Khan R. that the metaverse offers new opportunities for marketers and brands to create new and innovative ways of communicating with their target audience seems fair [1]. The authors associate the future development of the metaverse primarily with the creation of virtual marketplaces that will allow companies to create an engaging and interactive experience for customers and sell their products and services in a virtual environment using virtual currency.

We consider the conclusion to be absolutely correct of Chandiwalla M., Patel P., Mehta A. regarding the significant opportunities for the development of brands and marketing strategies for enterprises offered by the metaverse is absolutely correct. These opportunities are associated with the introduction of new technologies and a sufficient level of acceptance among the general public. However, the authors quite rightly note that the decision to enter the metaverse market should be considered, not spontaneous, and based on a thorough analysis of possible strategic consequences for marketing, management, production, research and development, as well as human resources [6].

In his research, Tavman E. B. also notes that the metaverse offers retailers ample opportunities to interact with potential customers in order to increase brand awareness, increase sales and form customer loyalty [19]. However, successful functioning in the conditions of the metaverse is possible only if the logic of its construction is fully understood, which is difficult to form, given that the metaverse is a relatively new phenomenon, which, moreover, is still in the early stages of its development.

Richter S., Mohammadhossein N., Richter A., Trier M. also focus on additional opportunities that open up for marketing professionals in the conditions of the metaverse. However,

the authors emphasize that organizations in the new conditions should carefully consider the social context and broader social influence, as well as their own technical capabilities [17].

According to the authors Mostova A., Batsenko L., Arakelova I., Halenin R., Klietsova N., Baranova V. & Krasovska A. digital marketing management facilitates access to new markets, enhances the efficiency of promotional activities, strengthens brand communication, and supports customer retention. For Ukrainian SMEs, digital marketing is not only a tool for maintaining business continuity but also a key factor of post-crisis competitiveness. Moreover, available official statistics in Ukraine mainly capture macro-level indicators of digitalization and internet usage, without reflecting how SMEs practically adopt, manage, and integrate digital marketing instruments into their business activities under conditions of prolonged economic instability and military operations. Importantly, the challenges related to digital marketing adoption among SMEs are not caused by the war itself but represent long-standing structural constraints typical for small businesses, which are observed both before the war and in more stable economic environments, including EU countries [22].

Tavman E. B. among the main problems associated with the metaverse notes security problems, the insufficient degree of readiness of retailers to work in the conditions of the metaverse and their lack of understanding of the features of its construction and the specifics of interaction with consumers, their lack of proactive vision, which is vital for increasing brand recognition and achieving brand loyalty. Furthermore, the author notes that in the metaverse, it is crucial for companies to embrace innovations and be flexible enough to adapt them to their marketing strategies to ensure competitive advantage [19].

At the same time, the metaverse creates not only opportunities related to the expansion of trade, entertainment or commercial games, but also to improving opportunities in the field of education, healthcare, and other industries, changing the usual processes of learning, receiving medical services, and conducting business.

One of the challenges facing marketers is the need to take into account the different degrees of perception of the metaverse by people from different generations, which was emphasized above. In this context, the model proposed by Gnitetsky E., Lebedenko S. and Lyamar O. is interesting, according to which the choice of marketing tools should be carried out taking into account the peculiarities of consumer behavior of people of different generations depending on the level of integration of the metaverse into their lives [8].

Ali S.A., Khan R. rightly emphasize that the metaverse is still in the early stages of development, and there are several problems that need to be solved in order to fully use its capabilities. Technical issues, privacy and security issues, compatibility issues, monetization issues, regulatory hurdles, and scalability issues are some of the major issues that need to be addressed by developing a clear strategy to overcome these issues and ensure that they create value for users and generate revenue [1].

Conclusions. So, summing up the above, it is worth noting that the metaverse creates unprecedented opportunities for marketers to expand their target audience and increase their influence on the formation of consumer preferences, creating conditions for improving brand awareness and consumer loyalty to it. At the same time, there are relevant problems in the field of regulation (imperfections of the regulatory framework for regulating interactions in the metaverse), in the field of security (the problem of ensuring confidentiality and authenticity, overcoming the threats of cybercrime), in the field of adaptation to changes (insufficient level of technical readiness and management capacity, formation of necessary marketing competencies, insufficiently clear understanding of the peculiarities of work in new conditions). Taking into account the identified opportunities and challenges will allow making the right management decisions related to marketing in the metaverse.

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Цифровізація маркетингу: виклики та можливості інтеграції метавсесвіту

Анотація. Об'єктом дослідження виступає маркетинг в умовах метавсесвіту, який є новим рубежем цифрового маркетингу, що ґрунтується на використанні віртуальних світів для взаємодії з цільовою аудиторією та інтеграції торгових марок у цифрове середовище. Доведено, що трансформація маркетингу в умовах метавсесвіту стає одним із основних напрямків розвитку сучасного підприємництва, націленого на розширення присутності компанії в Інтернет-мережі, формування та утримання лояльного ставлення споживачів різних цільових груп.

Постановка проблеми. Встановлено, що в умовах сьогодення цифровізація маркетингу сприяє більш повному охопленню цільової аудиторії компанії, дозволяє швидше та з більшою ефективністю донести до споживачів інформацію про бренд, сформувати в них уявлення про конкурентні переваги продуктів та послуг, запропонованих компанією. Зроблено припущення щодо визначального впливу, який чинить процес формування та розвитку метавсесвіту на маркетинг. Доведено необхідність проведення ретельного аналізу тенденцій, пов'язаних із поширенням цього явища, а також окреслення можливостей та викликів, які він створює в сфері маркетингу.

Нерозв'язані аспекти. Розглянуто останні дослідження, що стосуються формування то розвитку метавсесвіту та його впливу на маркетингову діяльність. Виявлено, що можливості та виклики, пов'язані із інтеграцією метавсесвіту в маркетинг, потребують уточнення.

Мета статті. Метою дослідження є аналітичне вивчення процесів, пов'язаних з активним поширенням метавсесвіту в суспільстві та конкретизація його впливів на маркетинг, які виявляються у генеруванні

можливостей для вдосконалення маркетингової діяльності на основі цифрових технологій та виникненні пов'язаних із цим процесом викликів.

Основний матеріал. Проаналізовано останні дослідження та аналітичні матеріали стосовно поширення цифрових технологій в економіці та суспільному житті, окремі індикатори, які характеризують історичні дані, динаміку Метавесвіту, прогнози та плани, а також оцінки та впливи, що стосуються поширення цього явища. Встановлено, що метавесвіт в умовах сьогодення демонструє стійку тенденцію до зростання. Це дозволяє його розвиток вважати однією з головних тенденцій сучасності, яка має бути врахована, зокрема в сфері маркетингу. Розглянуто можливості та виклики, які створює метавесвіт для маркетингу.

Висновки: За результатами дослідження встановлено, що метавесвіт створює для маркетологів безпрецедентно широкі можливості для розширення покращення ефективності взаємодії між компанією та споживачами. Визначено також виклики, пов'язані з інтеграцією метавесвіту в цифровий маркетинг, які обумовлені наявністю актуальних проблем в сферах регулювання взаємодій у метавесвіті, безпеки, адаптації до змін. Доведено, що врахування визначених можливостей та викликів дозволить приймати правильні управлінські рішення, пов'язані із маркетингом в метавесвіті.

Ключові слова: маркетинг, маркетингові комунікації, цифровий маркетинг, цифрова економіка, поведінкова економіка, цифрова трансформація, цифровізація, електронна комерція, метавесвіт, інновації, маркетингові інструменти.

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