

ЕКОНОМІКА ТА УПРАВЛІННЯ ПІДПРИЄМСТВАМИ

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NATIONAL CONTEXT OF THE STUDY OF THE PROBLEM OF DIGITAL MARKETING MANAGEMENT IN SCIENTOMETRIC DATABASES

НАЦІОНАЛЬНИЙ КОНТЕКСТ ДОСЛІДЖЕННЯ ПРОБЛЕМИ УПРАВЛІННЯ ЦИФРОВИМ МАРКЕТИНГОМ В НАУКОМЕТРИЧНИХ БАЗАХ ДАНИХ

This study attempts to determine the content of the national context for studying issues related to digital marketing management. The research was based on scientific articles by Ukrainian scientists included in the Web of Science scientometric database, with a total of 92 articles. The research was conducted using bibliometric analysis methods, including quantitative analysis, relevance of scientific resources, author relevance, relevance of affiliation, and thematic analysis. The limitation of this study is that it focuses exclusively on data from the Web of Science scientometric database. In future research, a similar analysis using other scientometric databases, such as Scopus, would be appropriate to confirm or expand the results presented in this study.

Key words: digital marketing, management, bibliometric analysis, national context, Web of Science.

Цифровізація створила нові можливості для різних галузей, але вона також поставила нові виклики для систем управління на різних рівнях. У цьому конкретному контексті маркетинг зазнав значних метаморфоз, перемістивши свою увагу з матеріальної сфери на цифрову сферу, що охоплює соціальні мережі, цифрові платформи, веб-сайти тощо. Цифровий маркетинг став важливим інструментом для посилення та підвищення функціонування бізнес-одниць. Тим не менш, впровадження цифрового маркетингу вимагає нових концепцій управління, які стали темою дискусій серед практиків та науковців, а також є предметом систематичного наукового дослідження. Для українського бізнес-середовища проблема набуває особливої актуальності через військову агресію росії проти України. Різні аспекти проблем управління цифровим маркетингом досліджувалися численними вітчизняними науковцями, результати досліджень яких доступні у різних відкритих джерелах, таких як Google Scholar, Scopus, Web of Science тощо. Незважаючи на існуючі результати досліджень, процеси цифровізації все частіше охоплюють різні сфери, тим самим породжуючи нові обставини, небезпеки та перспективи цифрового маркетингу. Отже, створення наукового фундаменту є обов'язковим для розвитку ефективної системи управління цифровим маркетингом. В статті зроблена спроба визначити зміст національного контексту щодо вивчення питань управління цифровим маркетингом. Дослідження ґрунтується на наукових статтях авторів українських науковців, які включені до наукометричної бази даних Web of Science, загальною кількістю 92 статей. Відповідно дослідження провадилося методом бібліометричного аналізу, що охоплює кількісний аналіз, актуальність наукових ресурсів, актуальність авторів, актуальність приналежності та тематичний аналіз. Обмеження представленого дослідження полягає в тому, що воно зосереджується виключно на даних наукометричної бази Web of Science. В наступному дослідженні доцільним буде провести аналогічний аналіз за іншими наукометричними базами, зокрема Scopus, що дозволить підтвердити чи розширити результати представленого дослідження.

Ключові слова: цифровий маркетинг, управління, бібліометричний аналіз, національний контекст, Web of Science.

Problem statement. The digital transformation of the economy has opened new prospects for all sectors of the economy, but at the same time has created new challenges for management systems at different levels.

In this context, marketing has also undergone significant changes, shifting its focus from the physical to digital spheres, such as social networks, digital platforms, websites, and online retailers. Digital marketing has

become a key tool for optimising the activities of economic entities. However, the implementation of digital marketing requires new management concepts, which are the subject of discussion among practitioners and researchers, and systematic scientific research. Simultaneously, Ukrainian practice has been affected by the consequences of Russia's military aggression against Ukraine, which is reflected in the context of digital marketing management.

Analysis of recent research and publications. Various aspects of digital marketing management have been studied by numerous Ukrainian scientists, and the results of their research are available in various open sources such as Google Scholar, Scopus, and Web of Science, etc. This study is based on an analysis of data from the Web of Science scientometric database, which includes 92 articles, and it has been determined that the field of research is diverse.

For example, Oklander M. and Oklander T. studied digital marketing in the private sector, focusing on a complex of digital marketing communication. The risks of e-commerce and optimization systems were the subject of research by Natorina A. A group of authors including Vdovichen A., Vdovichena O., Chychun V., Zelich V., and Saienko V. examined communicative management as a tool for product promotion in the context of digitization. The issue of the need for implementing trusted marketing in the context of digital transformations was studied by Popova N., Kataiev A., Skrynkovskyy R., Nevertii A. Pushkar O., Kurbatova Yu., Druhova O., and Radzikhovska Y. studied the problem of consumer behaviour in a digital environment.

Despite existing research results, digitisation processes are increasingly covering more areas, creating new conditions, risks, and opportunities for digital marketing. This requires a scientific basis to develop an effective digital marketing management system.

The purpose of the article to determine the content of the national context in order to study the problem of digital marketing management.

Presentation of the main material. Due to digitisation processes at all levels, from the end consumer of goods/services to state institutions, etc., digital marketing has become a powerful tool for economic activity. The specific feature and difference of digital marketing is its interdisciplinary nature, which requires new concepts for implementing marketing activities in the context of digitisation. The COVID-19 pandemic and quarantine restrictions, as well as Russia's invasion of Ukraine, have made the issue of digital marketing management more relevant.

This article presents the results of a study of the national context for studying the problem of digital marketing management in scientometric databases

using bibliometric analysis tools and the Bibliometrix software product. The research is based on data from the Web of Science article scientometric database. As a result of the analysis, it was determined that the problem of digital marketing management is studied by 247 Ukrainian scientists (including 16 authors of single-authored documents), whose results are presented in 92 articles. International co-authorships account for 19.57%.

For the first time in the Web of Science scientometric database, research on the problem of organizing marketing activities in the context of new digital technologies was presented by Oklander M., Oklander T. [1] and Pushkar O., Kurbatova Yu., Druhova O. [2] in 2017, see Fig. 1.

From 2019 to 2021, there has been a growing trend in the activity of researching the problem of digital marketing management, caused by the COVID-19 pandemic and the introduction of corresponding strict quarantine restrictions in all spheres, and as a result, the transition of most business processes to the digital environment, which required a different marketing concept that would focus specifically on the digital environment with appropriate tools.

Most often (23%), Ukrainian authors highlighted the results of their scientific research on the problem of digital marketing management in the journal "Baltic Journal of Economic Studies" (Latvia) – 21 articles, Fig. 2.

In addition, 15% of publications are represented in "Estudios De Economia Aplicada" (Spain), 13% – "Academy Review" (Ukraine), 11% – "Economic Annals-XXI" (Ukraine) and "Marketing and Management of Innovations" (Ukraine), 4% – "Economics, Ecology, Socium" (Ukraine) and "Innovative Marketing" (Ukraine).

The leader in institutional affiliation of researchers is the "Alfred Nobel University" – 16 articles, Fig. 3.

Among the leading affiliations are Kyiv National University of Trade and Economics (14 articles), Taras Shevchenko National University of Kyiv (14 articles) and Simon Kuznets Kharkiv National Economic University – 11 articles. In addition, the top ten institutions studying the problem of digital marketing management include Dmytro Motorny Tavria State Agrotechnological University, Odesa National University of Economics, Lviv Polytechnic National University, State University of Telecommunications, Sumy State University, and Chernihiv Polytechnic National University. It can be assumed that it is based on these institutions that scientific schools have been created on the problem of digital marketing management.

To determine the key subtopics within the general problem of digital marketing management, a thematic map was constructed. A thematic map is a very intuitive

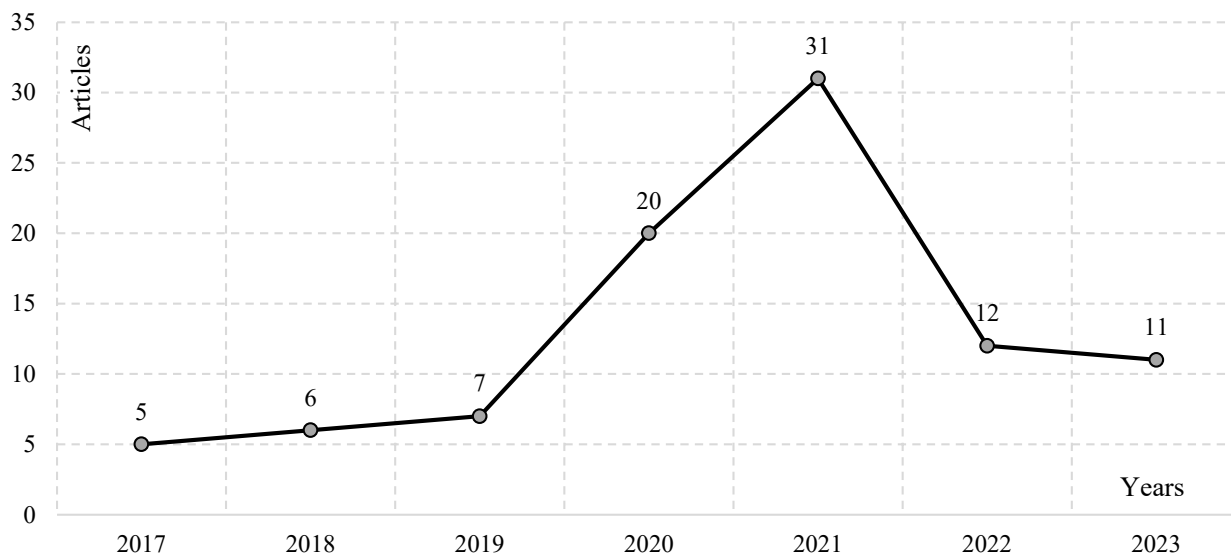


Figure 1. Annual Scientific Production in the direction of "Digital Marketing Management" in the scientometric database WoS, Ukrainian scientists (2017–2023)

Source: compiled by the author

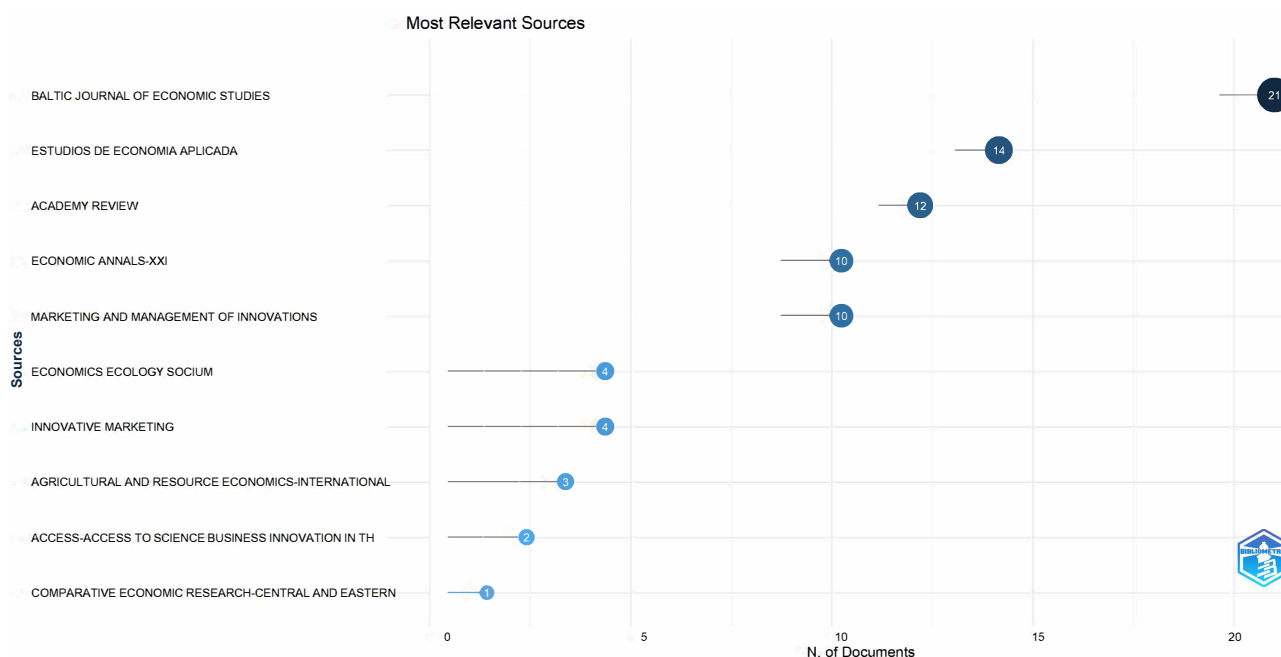


Figure 2. Most Relevant Sources in the direction of "Digital Marketing Management" in the scientometric database WoS, Ukrainian scientists

Source: compiled by the author

figure that allows analyzing topics according to the quadrant in which they are located: (Q1) upper right quadrant: motor topics; (Q2) lower right quadrant: main topics; (Q3) lower left quadrant: emerging or disappearing topics; (Q4) upper left quadrant: very specialized/special topics [1].

Figure 4 shows the thematic map of the key subtopics of research on the problem of digital marketing man-

agement by Ukrainian scientists in the period 2022/2023.

It is noteworthy that the figure shows that such topics as "globalization" and "digital" are located on the border of Q1 and Q2, well-developed, and able to structure the research field. That is, globalization and digitalization remain leading subtopics in the main research. The direction of digital marketing, presented in Q2, is the main and very important for the development of the industry.

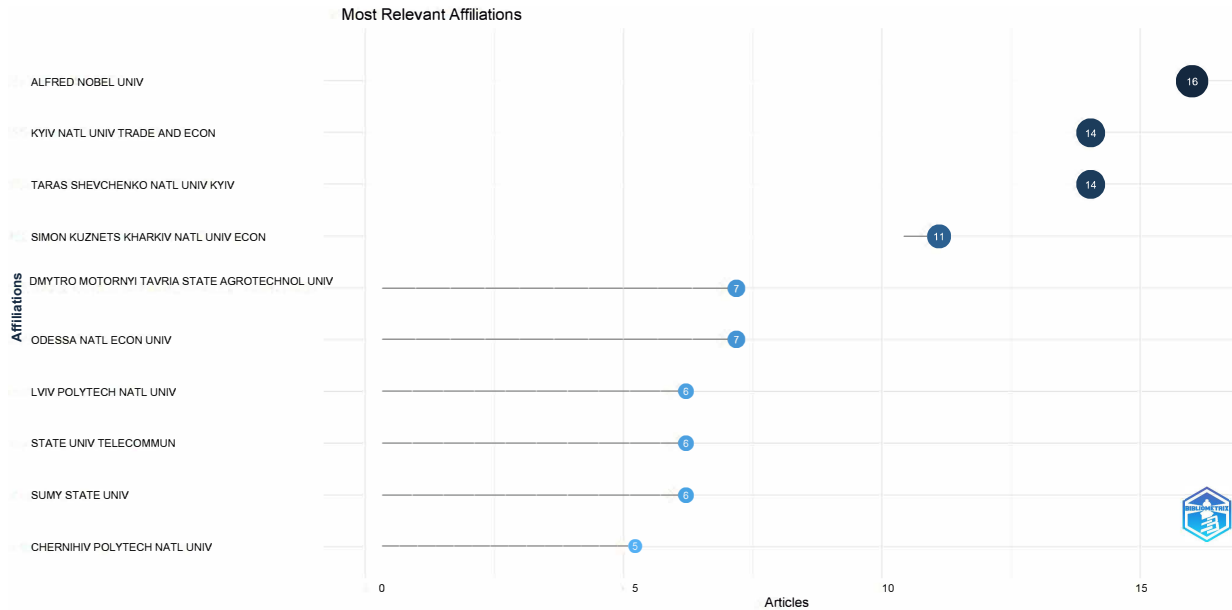


Figure 3. Most Relevant Affiliations

Source: compiled by the author

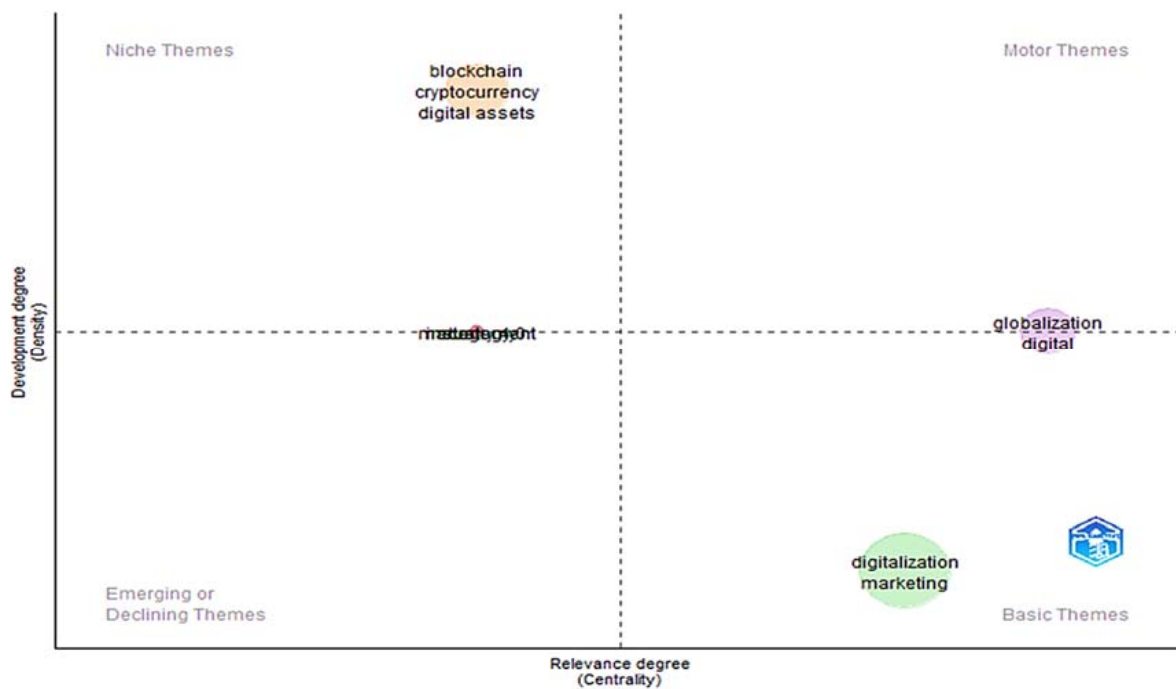


Figure 4. Thematic Map of Topics Discussed by Ukrainian Scientists in the Period 2022-2023

Source: compiled by the author

The topics in Q4 have developed internal connections but still have a small contribution to the development of the field of digital marketing management. This conclusion suggests that subtopics in Q4, such as blockchain, cryptocurrency, and digital assets, are potential topics that need to be more connected to digital marketing management. Researchers in this field can study these financial instruments (cryptocurrency

and digital assets) and technological approaches (blockchain) to create an effective system of digital marketing management in the context of Industry 5.0. Topics in Q3, "management", "economy", "strategy" and "industry 4.0" intersect with Q4, indicating that some of its components are underdeveloped ("management", "economy", "strategy"), the presence of "industry 4.0" in this quadrant is explained by a decrease in interest

in the topic due to the transition and the need to create corresponding systems in the conditions of Industry 5.0.

Therefore, the thematic analysis shows that more efforts need to be made to develop such topics as "cryptocurrency", "digital assets", "blockchain", "management", "economy", and "strategy" to establish more connections with "digital marketing", which can significantly contribute to the creation of effective systems of digital marketing management.

The most productive Ukrainian authors in the direction of "Digital Marketing Management" are presented in Fig. 5.

The productivity of the top 10 authors over the years: the row represents the chronology of the authors; the size of the bubbles is proportional to the number of documents created by the author per year; the colour intensity of the bubble is proportional to the total number of citations per year; the first bubble in the row indicates when the author started publishing in the field; the larger the bubble, the more articles published by the author per year; bubbles with higher colour intensity indicate a higher number of citations [1].

Pushkar O., Kurbatova Yu. and Druhova O. [2] was one of the first to raise the issue of consumer behaviour in the context of digital transformations. The authors focused on the important problem of managing consumer behaviour in the online environment in the context of digital marketing. Based on the deductive method, the authors developed recommendations for managing consumer behaviour in the experience

economy, focusing on the importance of considering human biological rhythms and the emotional content of advertising. In general, their findings indicate the potential benefits of this approach for companies engaged in advertising activity on social networks and using contextual advertising and direct marketing.

Popova N., Kataiev A., Skrynkovskyy R. and Nevertii A. [3] also devoted their research to the impact of digitalization on consumer behaviour in online shopping and identified trust as a key factor for successful business in this context (trust in websites, information, and brands presented on the Internet). The research results indicate a high demand for the concept of trust marketing, which involves adjusting marketing tools to establish trusting relationships with consumers.

Radzikhovska Y. [4] can be attributed to the behavioural approach to digital marketing management. The author specifies marketing initiatives that affect the values, priorities, and communication methods of different generations of consumers and proposes a matrix structure of advantages and behaviour as online consumers and representatives of generations of baby boomers, X, Y, and Z regarding priorities in online purchases, frequent purchases, reasons for online purchases, reasons for dissatisfaction with purchases, and additional information. Key directions of strategic transformations are identified, including customer service, values, data management, and innovation.

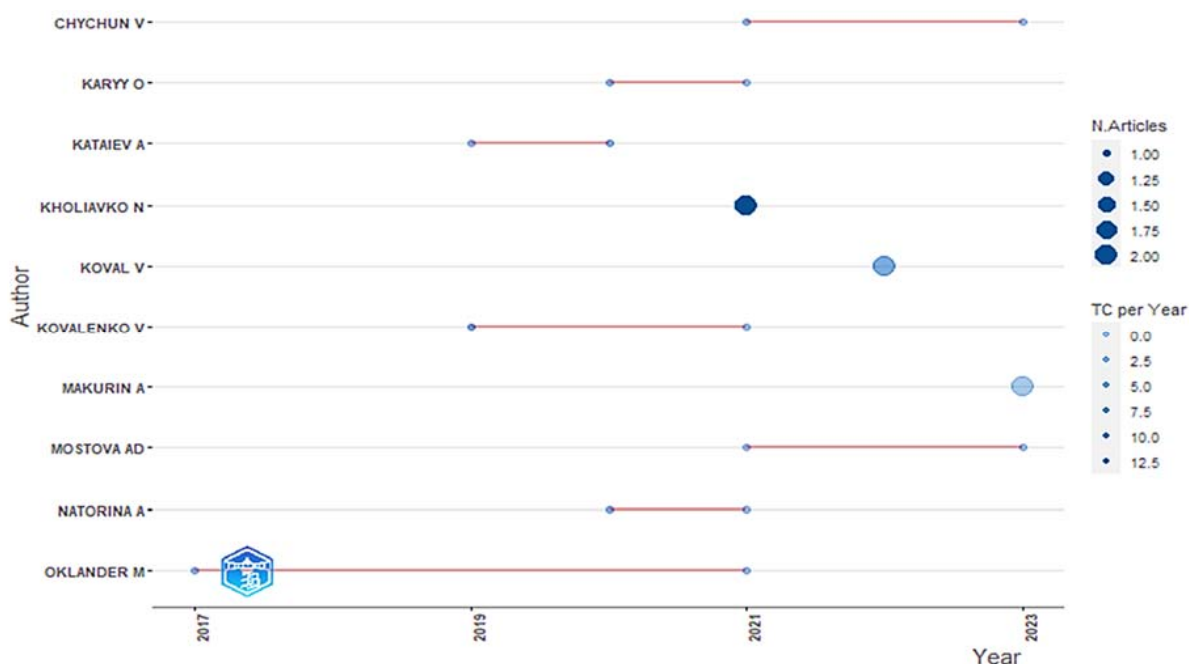


Figure 5. Most Relevant Ukrainian Authors and Authors' Productions over Time in the direction of "Digital Marketing Management" in the scientometric database WoS, 2017–2023

Source: compiled by the author

Oklander M. and Oklander T. [5] identified relevant trends in the field of digital marketing and highlighted that the basis of this phenomenon is the individualization of business processes in the "seller-buyer" system. The peculiarities of advanced digital marketing tools, their capabilities, and advantages in the field of online communications are analyzed, as well as the goals of marketing activities on the Internet. The authors propose a matrix for classifying target segments of online communities, identifying such categories as loyal communities, opponent communities, potentially loyal communities, and complex communities.

Oklander M. and Kudina A. [8] narrowed down the scope of research and considered the use of modern digital marketing tools to promote trendy Ukrainian brands through social networks. The research findings confirm the thesis of the active development of e-commerce as a key direction of development, which accelerated changes in consumer behaviour due to the pandemic. The authors presented recommendations for the effective use of social networks and other digital tools to promote brands, taking into account the specifics of the assortment and target audience.

According to Natorina A. [6], in the conditions of digitalization of business processes, optimization of search engines (SEO) is an integral component of an effective marketing strategy, the goal of which is to increase organic traffic and conversion, quickly finding the requested store in search engines and making it attractive to Internet users. The author presents recommendations, the implementation of which will ensure an increase in organic traffic in Google, an increase in conversion and CTR, as well as ensuring the most advantageous position for the retailer in the Local Pack block.

The study of marketing activities in Ukraine during the war in Ukraine [7] indicates positive changes in the gradual update of digital marketing. Korneyev M., Berezniuk I., Dzhyndzhoian V., Kubakh T., Horb K., Oklander M. and Kudina A. propose several recommendations for possible ways to adapt marketing and SMM during the war to restore business in Ukraine in the context of digitalization, grouped by such directions as Marketing tactics, Market changing and target audience selection, Cost optimization, Changing a content strategy, "Have your finger on the pulse of the market" [7].

One of the elements of digital marketing management is risk identification and management. Natorina A. and Butko M. [8] identify groups of risks associated with various aspects of setting up and developing online business in the context of digital transformation: Risks of marketing commodity policy, Risks of marketing communication policy, Risks of marketing sales policy, Risks of marketing pricing policy, Risks

of HR management. The scientific and methodical approach to testing and qualitative evaluation of the probability of identified marketing and management risks of online business is noteworthy. The practical significance of the authors' research [8] is the presence of an algorithm for determining the status of risks of online business, which determines the development and implementation of a risk management plan and the proposed structure of a risk management plan for online business, taking into account triggers and consequences of risk occurrence.

Ugol'kov I., Karyi O., Skybinskyi O., Ugol'kova O. and Zhezhukha V. [9] proposed a system of indicators for assessing the level of economic efficiency of content placement: average cost of attracting one website user, lead generation coefficient of the Internet site, average cost of attracting one lead, content efficiency coefficient, average purchase resulting from content offer, profit from the sale of a product resulting from content offer, profitability of using internet marketing tools. This system of indicators allows for controlling the effectiveness of content at key stages of interaction between the enterprise and the client. It was concluded that only high-quality content delivery can provide the enterprise with a high level of customer conversion and significant visibility of its website in various search engines.

The content and communication are directly related to the effectiveness of digital marketing. The results of the study by Vdovichen A., Vdovichen O., Chychun V., Zelich V. and Saienko V. [10] indicate the key practical directions of communication management in conditions of instability, such as building a strong brand, using digital marketing, and crisis communication strategies.

To implement effective concepts of digital marketing, it is relevant to study the European e-commerce experience [11], according to the results of which the most common models are "Business-to-Business" (B2B), "Business-to-Consumer" (B2C), "Consumer-to-Consumer" (C2C). The least developed model is "Consumer-to-Business" (C2B). Gradually, the business moves away from B2B and B2C models and transitions to a fundamentally new model of "Direct-to-Consumer" (D2C). Each company independently decides which business model to choose for greater effectiveness in e-commerce.

Conclusions. The results of the bibliometric analysis of the results of the study of the problem of digital marketing management by domestic scientists and presented in the Web of Science bibliographic database allowed the forming of certain aspects in the national context. Therefore, the results of the thematic analysis for the period 2022/2023 allowed for forming several recommendations: such subtopics as blockchain, cryptocurrency, and digital assets are potential topics that

are worth exploring in the context of digital marketing management. Scientists in this field are recommended to consider these financial instruments (cryptocurrency and digital assets) and technological approach (blockchain) to create an effective system of digital marketing management in the Industry 5.0 environment; subtopics in digital marketing management, such as "management", "economy", and "strategy", are underdeveloped and can serve as potential directions for further scientific research.

Based on the study of the works of domestic scientists presented in the Web of Science bibliographic database, an attempt was made to highlight the basic accents of digital marketing management, namely: consumer behavior management; content management/communication management; risk management/optimization; and economic evaluation.

The disadvantage of this study is its limitation only to the data of the Web of Science bibliographic database, which will be taken into account in further research.

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