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DAMIR VASILJ*

INJA STOJKIĆ**

NIKICA BUBALO***

ARTIFICIAL INTELLIGENCE IN MARKETING AND PUBLIC RELATIONS OF BUSINESS ORGANIZATIONS

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ABSTRACT

Artificial intelligence is a concept that is frequently the focus of everyday life, and its application leads to changes in various areas of modern business. Today, artificial intelligence has proven to be significant in all social areas of the daily life of individuals and business organizations. The application of artificial intelligence results in the formation of a marketing strategy and a public relations strategy (English abbreviation PR - public relations) about the primary target group for business organizations such as customers or users, employees, suppliers, owners, etc. Using several data such as revenues, market share, brand value, liquidity, long-term customer value and probability of customer retention, artificial intelligence can provide results that we will apply in the creation of strategic plans related to public relations and marketing. Various artificial intelligence systems help analyze large amounts of data and help identify the most loyal customers, classify customers into groups, and plan an appropriate marketing and public relations strategy. This paper aims to show the contribution of artificial intelligence in the creation of strategic plans related to marketing and public relations of business organizations.

Keywords: artificial intelligence, marketing, public relations, strategy.

*University of Mostar, Mostar, Bosnia and Herzegovina, damir.vasilj@sum.ba

**University of Mostar, Mostar, Bosnia and Herzegovina, inja.stojkic@sum.ba

***University of Mostar, Mostar, Bosnia and Herzegovina, nikica.bubalo@gmail.com

INTRODUCTION

Artificial intelligence (AI) for strategic marketing planning, marketing mix, and then public relations has become the focus of many scientific researches. Scientists, as well as business entities, are aware of the importance of artificial intelligence, and the important changes it causes in current and future business. There is a large scope of conducted research on this topic, as well as available literature reviews, however, this topic is becoming more and more attractive in scientific circles every day, therefore it is necessary to keep up-to-date and analyze the latest research related to this issue. The purpose of the literature review is to establish the latest theoretical framework for the use of artificial intelligence in business to contribute to strategic planning and create actions based on the analysis of a large amount of data in business organizations. Digital transformation and the emergence of social networks and platforms have changed standard corporate practices, including those of functions such as marketing and public relations. The use of AI in marketing or PR enables business organizations to develop strategies that are better aligned with the needs and expectations of their target audience, on which business success depends.

ARTIFICIAL INTELLIGENCE

Although a relatively new field, artificial intelligence has received many different definitions. Studying the various literature shows that the definition itself is still variable. The reason for this lies in the fact that the definition itself is affected by the development of technology, which is very advanced nowadays, and novelties appear every day. Artificial intelligence (English artificial intelligence (AI) is a technology, a branch of informatics that studies and develops intelligent machines and software (Tomić, Volarić and Obradović 2022: 8). In addition to areas where artificial intelligence is expected to show its usefulness, such as the area of software development, the area of financial operations, the gaming industry, etc., artificial intelligence also

shows its usefulness in previously unimaginable areas such as art, cinematography, science, etc. Basha (2023: 993) states that the evolution of artificial intelligence (AI) has drastically changed the dynamics of today's business world. By drastic changes, we mainly mean the daily dependence of various business processes on artificial intelligence, its approach, usefulness, processing speed, etc., so that today's business becomes unimaginable without the contribution of artificial intelligence in everyday business decision-making, creation of plans, and implementation. Volarić and Crnokić (2022: 23) state that artificial intelligence represents systems that solve problems based on data sets from the past. AI is used to automate and optimize complex processes in various industries, which mainly results in reducing costs and increasing the efficiency of business processes. The inclusion of new technologies, especially those based on different principles and applications of artificial intelligence (AI), forces modern society to rethink and reorganize existing systems (Tomić, Volarić and Obradović, 2022: 8). Artificial intelligence is recognized as the most influential technology for business, with expected growth from \$10.1 billion in 2018 to \$126 billion by 2025 (Tractica, 2020). One of the prerequisites for the use of artificial intelligence is digital transformation, which has become increasingly pronounced in the last decade. We have witnessed that organizations that did not implement certain aspects of digital transformation did not even achieve organizational success. The rapid evolution of digitalization has a significant impact on corporate industries and serves to provide exciting new opportunities, increase efficiency and cooperation, and reduce costs (Kučina Softić, Odak, and Lasić Lazić, 2021: 21). Efficiency and cost reduction is something that business organizations constantly strive for in their operations, and the same can be achieved by applying artificial intelligence in the implementation of certain activities. *Feldman* (2022) states that media data management, publications of various types (text production, image selection, and editing, motion picture production), including (standard) communications with stakeholders (support, responses) and repetitive and long-term activities,

can be automated, which leads to an increase in the efficiency of organizations. Undoubtedly, today's successful business organizations use artificial intelligence in their operations, especially in repetitive activities that require the analysis of a large amount of data.

APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE MARKETING OF BUSINESS ORGANIZATIONS

Artificial intelligence is becoming an increasingly important term in marketing from a strategic planning perspective. A term, but also a prerequisite for successful business in today's extremely digitized and dynamic market. Artificial intelligence in marketing is a strategy to maximize the use of technology and market data to improve the customer experience (Jain and Aggarwal, 2020). Vlačić et. al. (2021) observes increased attention among scientists, which is reflected in the increase in the number of published scientific papers on the topic of connect-

organizations are able to provide the maximum level of customer satisfaction by improving service and delivering greater value through more efficient management of marketing processes and the ability to manage a large amount of data. It is the management of large amounts of data, which according to most available estimates is doubling every two years, is becoming increasingly important. AI and big data management are interrelated concepts. Without data, an artificial intelligence system would be worthless (Burgess, 2018). AI uses large databases for learning, and is able to analyze and process data, based on them to predict future events and optimize processes by providing a personalized service, all with the incredible speed of analyzing available data. Artificial intelligence encompasses many different possibilities of application in marketing. Some of the currently most important and useful implementations of artificial intelligence in marketing are the personalization of content for users, the implementation of chatbots and virtual assistants, and smart segmentation. By personalizing content, individual needs and ex-

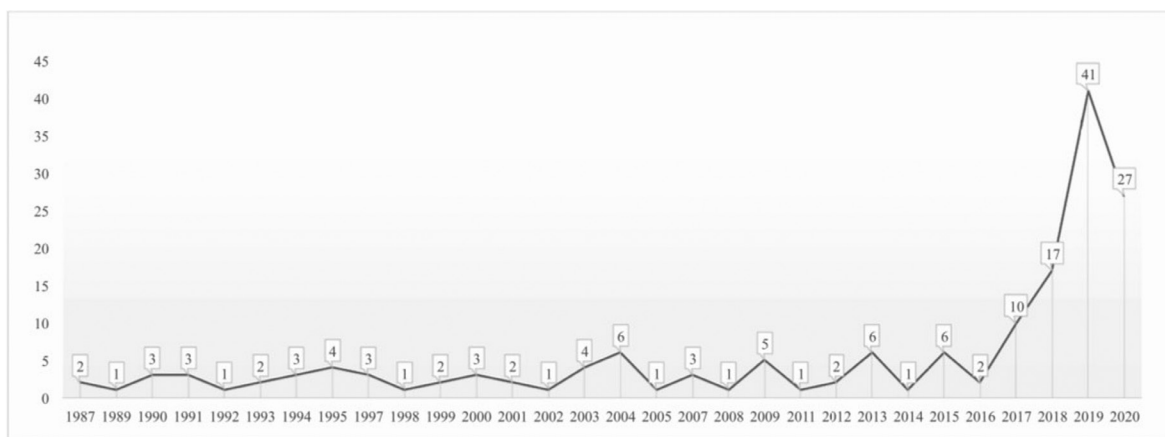


Figure 1. The number of published scientific papers on the topic of connecting artificial intelligence and marketing. Source: Vlačić, B., Corbo, L., Costa e Silva, S., Dabić, M. (2021). *The evolving role of artificial intelligence in marketing. A review and research agenda. Journal of Business Research, 128, 191.*

ing artificial intelligence and marketing. Marketing is one of the areas that is witnessing changes to the greatest extent due to the introduction of AI in business. The advantages of using AI in marketing are numerous, but the main one is that, with the help of this technology, business

expectations of clients are met, which of course leads to more successful business. According to Wodecka et al. (2019), data from systems that register users' behavior enables the creation of profiles of their behavior and interests, which enables multichannel communication systems

to reach users with a personalized message. According to the same authors, the advanced personalization of the interaction with the end user, which uses the latest methods of artificial intelligence, enables the automatic adjustment of the offer to the individual needs of the user, which results in increased sales efficiency, increased customer satisfaction and loyalty; automatic and efficient creation of offers addressed to specific market segments; creation of specialized price lists, taking into account the needs of specific clients and the optimization and personalization of the user experience, with special emphasis on the form of the product or application interface, as well as the shopping area. The personalization models used today include tracking customer activity, collecting data during interactions with multimedia content, web interfaces, other users, and the like. The analysis of this integrated data opens up new possibilities for the development of marketing content components adapted to each individual user. Another important application of AI in marketing mentioned is chatbots, computer programs designed to simulate human conversation, which have evolved significantly thanks to advances in the field of artificial intelligence, becoming more sophisticated and smarter. Research also highlights leading innovations in chatbot technology based on artificial intelligence, such as virtual assistants and chatbots with the ability to recognize voice (Aslam, 2023). Chatbots and virtual assistants used for marketing purposes aim to communicate with users, provide them with the necessary information, answer queries and perform certain tasks. Thus, both chatbots and virtual assistants use artificial intelligence technology, especially natural language processing (NLP) and machine learning, with the task of better understanding user queries and needs. Perhaps the biggest difference between these two terms is that chatbots are used to specialize in specific tasks and provide quick information, while virtual assistants are usually more general and are capable of performing a variety of tasks. Most often, chatbots in marketing are used to solve queries and provide support on websites or social networks. On the other hand, some of the most famous virtual assistants today are Siri, Google Assistant,

Amazon Alexa and Microsoft Cortana. Virtual assistants, using a large amount of collected data, are able to find and propose products or services precisely tailored to the needs of the user. According to Gentsch (2019), the development of this form of communication brings a number of trends, such as a store initiated by voice access that enables advice to consumers and shopping via voice, personal digital assistants that take over shopping, planning and reservations for the user, and algorithmic marketing in which algorithms are integrated ad bots in all steps of the marketing process. Smart segmentation, as one of the important implementations of AI in marketing, means advanced categorization of clients, the use of algorithms enables precise and efficient segmentation of the market. The application of artificial intelligence helps marketers better understand their users and discover what motivates them. This information is critical to building long-term customer relationships.

The application of artificial intelligence in the marketing of business organizations ultimately aims at successful business. Research is available that links the application of artificial intelligence in marketing and business success. Research results show that artificial intelligence in marketing significantly affects financial success, success in relations with customers, success in internal business processes and success in learning and growth of small and medium-sized enterprises (Abrokwah-Larbi and Awuku-Larbi, 2023). Furthermore, AI has improved the efficiency of marketing functions and is now applied in almost all key marketing functions. According to Basha (2023), AI helps develop sales and marketing strategies that result in significant improvements in business success. Such research should encourage business organizations to develop methods of applying AI in marketing with the strategic goal of improving business. In their conclusions, all relevant research predicts the application of AI in marketing to an even greater extent.

APPLICATION OF ARTIFICIAL INTELLIGENCE IN PUBLIC RELATIONS OF BUSINESS ORGANIZATIONS

Public relations play a key role in managing the perception of the organization and its relations with different publics. Seidenglanz and Baier (2023) state that the rapid development of artificial intelligence will have a huge impact on various industries and professional fields, especially in the field of PR/communications and management, and that there are numerous challenges and changes arising from the use of AI, most recently from tools such as is ChatGPT. The ultimate goal that every organization wants to achieve is good relations with the environment in order to achieve the set business goals. Modern means of communication, the availability of information, the higher level of education of people and, accordingly, the increased possibility of assessment and evaluation of the information that is served to them in public impose the need for quality relations with the public (Vasilj and Korda, 2022: 52). In addition to quality relations with the public, there is a need for fast and efficient relations with the public as a response to the increasingly dynamic and complex environment characterized by modern information technology. One of the tools of modern information technology is artificial intelligence, which can serve the function of public relations for faster and more efficient collection of data related to specific target audiences and their analysis. Galloway and Swiatek (2018) emphasize that with the development of new analytical techniques to help public relations practitioners, the applications of artificial intelligence will expand to the entire context within which professionals operate. The use of artificial intelligence in public relations is possible, as in other areas of social reality, primarily because it can help target the strategic public more precisely, quickly and easily and achieve greater interactivity and media attention (Tomić, Volarić and Obradović, 2022: 9). One of the tasks of public relations in business organizations is the strategic relationship with the primary public such as customers or users. To be able to achieve this, analyzed data about them is needed. Artificial intelligence is one of the tools that can

analyze data about the target audience in order to adjust messages and communication strategy. The aforementioned would enable the public relations function to better target their messages for their business organization and thus increase the interest of different groups of people. Public relations is a function whose task is to nurture the company's image and work on its reputation so that the public recognizes them as an exemplary organization. As such, it is certainly more attractive to investors, customers, the local community, government representatives, etc. The vast majority of successful business organizations have organized systems for communication with users or customers that are managed by artificial intelligence in order to quickly and efficiently answer questions and provide support to users 24/7. This helps in maintaining a positive user experience which helps PR in creating a positive image and reputation. It also reduces the workload of employees and thus the costs of the organization. Undoubtedly, the application of artificial intelligence significantly contributes to the function of public relations in achieving one of its primary goals, which is a positive image of the organization. The management of the public relations function has become significantly more dynamic and complicated with the development of the Internet, the widespread use of social networks and other similar information technology solutions (Vasilj and Ćorić, 2022: 78). With the aim of making information available and cultivating relationships with the target public, business organizations today access social platforms such as Facebook, Instagram or Twitter, etc. Also, in this approach, they use artificial intelligence, which uses its algorithms to detect and aim the target public with customized communication. Of course, messages are shaped by the public relations or marketing function, depending on who carries out the communication-related activities. With the help of artificial intelligence, it is possible to extract useful information about the acceptance of such messages, which, through detailed analysis, enable business organizations to provide feedback that public relations can create according to the results obtained from the analysis. For example, artificial intelligence can quickly analyze data such as the number of views

of a message, retention on a message, comments on a message, determination of the geographical area where the message has been viewed more, etc. The possibilities of applying artificial intelligence to analyze data and collect feedback are enormous, and accordingly it is evident that the same contribute to public relations in the performance of its function. The mentioned activities greatly contribute to achieving organizational and business performance and reducing costs. Based on certain activities, artificial intelligence can analyze data that would predict potential crisis situations and thus enable organizations to prepare in advance for such events.

As business organizations operate more and more in a virtual environment, reputation and image got their extension, i.e., e-image and e-reputation. By e-image and e-reputation we mean digital behavior and perception itself, which result from electronic-digital communication. Kostić and Sindera (2022: 10-11) state that large technological business organizations represent a concentration of digital power because they operate according to a business model motivated by the collection, analysis and monitoring of indiscriminate and mass data. The effectiveness of this model is also evidenced by the revenues these companies generate from advertising, which are the largest in the world. Tapscot (2011: 201) states that it is no coincidence that some of the most successful advertising campaigns targeting young people place their content on popular sites such as YouTube and social networks such as Myspace. Through the aforementioned campaigns and corresponding business practices, large technology companies have “locked in” the logic of this business model and positioned themselves in a central place in the lives of people, organizations, media, other companies and smaller companies. Tomšić (2022: 273) states that e-reputation is related to communication, especially online internal and dominantly, external communication, as well as the behavior of the company, which is directly manifested through the way it approaches the sale of products and the provision of services, and relation to employees. That is why primary stakeholders such as current customers or users,

suppliers, investors and employees who are in direct relationship with the company will be relevant for its design. Representation of business organizations on the Internet and corporate communication through artificial intelligence are the reality of today’s business that affects e-image and e-reputation. The emergence of social networks, artificial intelligence, etc., represent a kind of change for business organizations and thus for the public relations of such organizations. Therefore, the business success of organizations increasingly depends on the success of e-communication.

Despite the differences between organizations and practitioners, there is overall positivity about the potential of artificial intelligence to influence communication and to improve the way information is processed and delivered, as well as the potential to provide insights and predictive analysis for communication experts (Tomić, Volarić and Obradović, 2022: 11). One of the biggest benefits for the public relations function and regarding the application of artificial intelligence is the identification of key trends and information about public opinion related to a specific brand or message. It is important to note that the successful application of artificial intelligence in public relations is associated with ethical issues that include data privacy and transparency in the use of the technology. Artificial intelligence can be a powerful tool for the public relations function, but its use must be carefully applied in order to respect one of the most important elements of the very definition of public relations, which is the realization of mutual trust with the public.

CONCLUSION

It is possible to conclude that the capabilities of artificial intelligence are a very complex area that is constantly changing and developing. For the successful implementation of artificial intelligence systems in business organizations, it is extremely important to recognize and identify the capabilities of artificial intelligence that correspond to their business needs. This paper is certainly limited by time and sector. The paper is

based on current conditions and may change with the further development of AI, and the analysis carried out is focused on selected sectors, while other sectors may have specific needs and challenges when applying AI in business.

Strategic managers must recognize the need to take full advantage of the transformation of their companies towards artificial intelligence. This includes a detailed analysis of business needs, education and understanding of the basics of AI, possibilities and limitations, setting goals and metrics, testing and evaluation, as well as forming an expert team. In the long term, there will be no alternative to this transformation. It is impossible not to notice the speed with which this transition is taking place, therefore business organizations will face serious challenges in adapting to the changing marketing environment, but also in finding the best measure of application of artificial intelligence and personal contact in dealing with clients. Recommendations for future research are certainly the implementation of an international comparison with other countries in order to create a global perspective on the application of AI in business, as well as continuous monitoring of the development of AI over time in order to recognize new opportunities and challenges. Finally, in accordance with the above, it is necessary to carry out scientifically based research with the aim of obtaining an answer to the question to what extent and in what way business organizations in the territory of Bosnia and Herzegovina apply artificial intelligence in business.

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UMJETNA INTELIGENCIJA U MARKETINGU I ODNOSIMA S JAVNOŠĆU POSLOVNIH ORGANIZACIJA

SAŽETAK

Umjetna inteligencija predstavlja pojam koji se sve češće nalazi u fokusu svakodnevice, a primjena iste dovodi do promjena na raznim područjima suvremenoga poslovanja. Danas se umjetna inteligencija pokazala značajnom na svim društvenim područjima svakodnevnoga života pojedinaca i poslovnih organizacija. Primjena umjetne inteligencije rezultira oblikovanjem marketinških strategija i strategije odnosa s u pogledu odnosa prema primarnoj ciljanoj skupini za poslovne organizacije kao što su kupci ili korisnici, zaposlenici, dobavljači, vlasnici i sl. Pomoću nekoliko podataka kao što su prihodi, tržišni udjel, vrijednost brenda, likvidnost, vrijednost kupca u dugom roku i vjerojatnost zadržavanja kupca umjetna inteligencija u stanju je dati rezultate koje ćemo primijeniti u kreiranju strateških planova vezanih za odnose s javnošću i marketing. Razni sustavi umjetne inteligencije pomažu analiziranju velikih količina podataka i pomažu identificirati najlojalnije kupce, klasificirati kupce u grupe i planirati odgovarajuću marketinšku strategiju i strategiju odnosa s javnošću. Cilj je ovoga rada prikazati doprinos umjetne inteligencije u kreiranju strateških planova vezanih za marketing i odnose s javnošću poslovnih organizacija.

Ključne riječi: umjetna inteligencija, marketing, odnosi s javnošću, strategija.