

THE ROLE OF DIGITAL MARKETING AND LOGISTICS IN THE OPTIMIZATION OF BUSINESS PROCESSES OF AGRICULTURAL ENTERPRISES

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Abstract

The scientific paper analyzes the influence of digital marketing and logistics on the optimization of business processes of agricultural enterprises. In the article, the authors used special and general scientific research methods: induction and deduction, scientific abstraction and systematization, analysis and synthesis, abstract-logical generalization, dialectical method and graphic method. A scheme for the analysis of business processes of agricultural enterprises in the context of the development of digital marketing and logistics is proposed. The main areas that will contribute to the optimization of business processes of agricultural enterprises have been determined. It is substantiated that the balanced organization and rationalization of business processes are important for achieving the effectiveness and efficiency of the activities of enterprises in the field of agriculture, and digital marketing and logistics play an important role in the optimization of business processes of agricultural enterprises, ensuring effective management of resources, increasing productivity and competitiveness.

Keywords: *business processes, digital marketing, logistics, agricultural enterprises, optimization, personnel, personnel management, financial management.*

JEL Codes: *O1, O2, O4.*

Introduction

Consolidation of marketing activities and logistics plays an important role in increasing the innovative activity of agricultural enterprises. Marketing activity is important in the promotion and implementation of innovations in the market. Digital marketing allows agricultural enterprises to effectively communicate with consumers, promote their

innovative products and services, and monitor the market's reaction to new solutions. Marketing research, analysis of the market and consumer needs help identify opportunities for innovative development and determine strategies for promoting new products. Logistics is also crucial for effective innovation development. Optimum management of logistics

business processes allows for fast and efficient delivery of innovative products to consumers (planning of deliveries, warehouse management, optimization of transportation and selection of optimal logistics routes). In addition, logistics can provide flexibility and adaptability of production processes, which is important in the context of innovative development.

The combination of marketing activities and logistics allows agricultural businesses to effectively innovate in the market, create competitive advantages and ensure successful commercialization of their products. The interaction between these two areas of activity helps to understand market needs, ensure proper customer support, effectively manage supplies and supply chains, and reduce the time and cost of implementing innovative solutions. All of this in its entirety determines the need for further research into the impact of digital marketing and logistics on the optimization of business processes of agrarian enterprises, taking into account the innovative and digital

trends of economic development.

The purpose of the article is to study the role of digital marketing and logistics in the optimization of business processes of agricultural enterprises.

Literature review

Investigating the role of marketing and logistics systems in the optimization of business processes of agricultural enterprises in the conditions of digitalization, a significant number of scientific studies should be noted (Fig. 1). The issue of optimizing business processes of agricultural enterprises was considered by scientists Butko et al. (2019, 2021), within which the case for the Ukrainian agro-industrial complex regarding the introduction of innovations in human resources management in the context of European integration was investigated, and a strategy for the formation and development of an innovative agro-industrial cluster of the region was proposed.

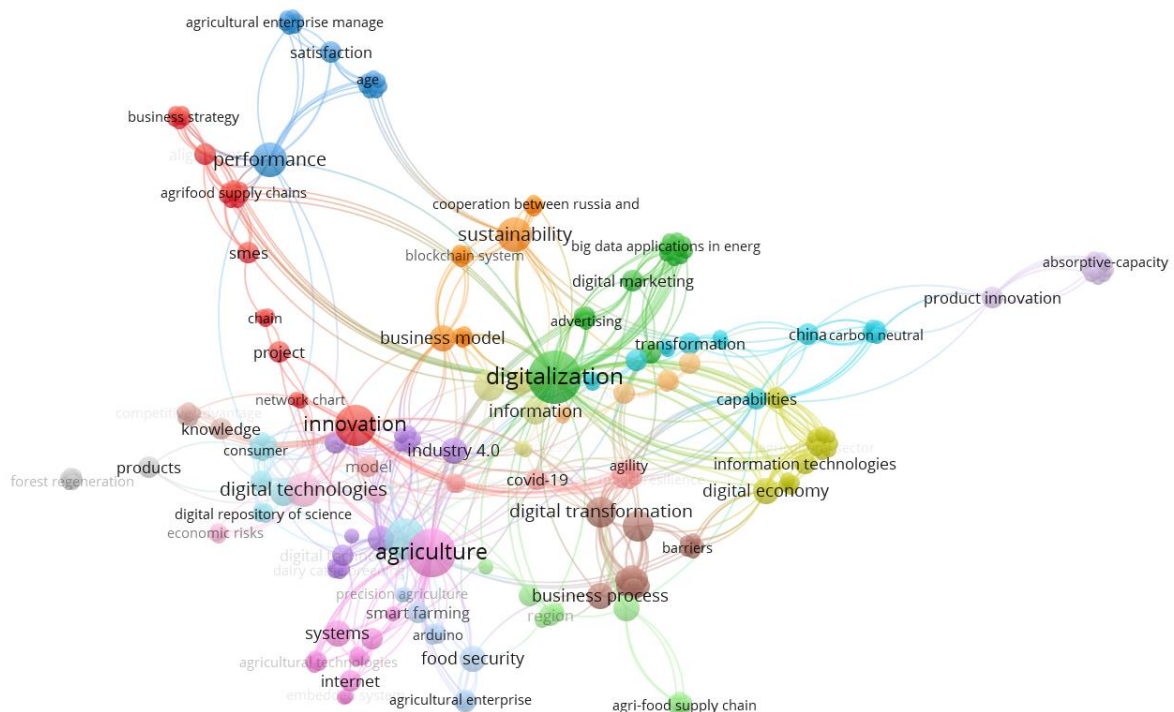


Figure 1. Visualization of scientific studies that contain words «business processes», «digital agricultural enterprises», «management» in the titles of articles

**Source: compiled by the authors based on the information from the Web of Science database using VOSviewer tools.*

The articles of scientists Grosu et al. (2021), Zhavoronok et al. (2022) present the conceptualization of the model of financial management in Romanian agriculture, as well as consider the peculiarities of regulatory policy. Brzakovic et al. (2021) conducted an empirical analysis of the impact of digital marketing elements on the quality of services of small and medium-sized enterprises. Hauer et al. (2021) analyzed how digital transformation affects the success of enterprises, and also investigated the characteristics of cooperation between marketing and sales departments in German organizations. Sasongko et al. (2023) analyzes the impact and role of digital marketing on Indonesian businesses. Su et al. (2023) investigated the issue of forming and developing digital marketing strategies in small and medium-sized enterprises. Lachenmaier et al. (2023) devoted his research to the study of corporate information systems versus digital twins in the logistics sector. Le Viet et al. (2023) analyzed factors that have a direct impact on digital transformation in logistics enterprises in Vietnam.

However, the development of digital marketing and logistics presents agricultural enterprises with new challenges and opportunities. These technologies make it possible to improve the efficiency of business processes, reduce costs, increase the quality of products and the competitiveness of enterprises. In order to achieve the optimal functioning of agricultural enterprises in this context, it is necessary to conduct further research on the issue of business processes' optimization.

Methodical approach

The research is based on a systematic approach that contributes to the achievement of a synergistic effect in the process of using digital marketing and logistics in the optimization of business processes of agricultural enterprises. In the article, the authors used special and general scientific research methods.

When substantiating the importance of organizational balance and rationalization of business processes to achieve the effectiveness and efficiency of agricultural enterprises, as well as the role of digital marketing and logistics in optimizing business processes and ensuring effective management of resources, increasing productivity and competitiveness, the authors used methods of induction and deduction, scientific abstraction and systematization. The methods of analysis and synthesis, abstract-logical generalization, as well as the dialectical method contributed to the determination of the main trends affecting the optimization of business processes of agricultural enterprises; proving the expediency of using information and communication technologies as an important tool of marketing and logistics in the innovative activity of agricultural enterprises in the context of optimizing their business processes. With the help of a graphic method, a scheme for the analysis of business processes of agricultural enterprises in the context of the development of digital marketing and logistics is proposed, which involves the analysis of business processes of agricultural enterprises to determine their current state, identify problematic aspects and identify opportunities for improvement.

Results

Agriculture plays a key role in the economy of Ukraine. It accounts for a significant share of the gross domestic product and is an important bio-producing industry. Distinctive characteristics of agriculture are determined by a set of intra-farm business processes, which have both a production and non-production nature.

The main production business processes in agriculture include farming, i.e. tillage, sowing, watering, plant care, harvesting, etc. Animal husbandry, breeding and maintenance of livestock, poultry farming, etc. are also important elements. These processes make it possible to ensure the food security of the country and the export of agricultural products.

Non-manufacturing business processes include logistics, warehousing, inventory management, marketing, financial management, personnel management, accounting and control. These processes ensure effective organization of economic activity, rational use of resources, control over financial activities, development planning and strategic management.

Management processes related to the management of the agricultural enterprise as a whole are also distinguished. They include strategic planning, project management, decision-making, monitoring and evaluation of enterprise activity, analytics and reporting.

Development processes are aimed at finding new opportunities, introducing innovations and increasing the competitiveness of an agricultural enterprise. They include research and development, innovation projects, marketing research, development planning and strategic management.

Optimizing these business processes and their interaction is an important task for agricultural enterprises, as it helps to ensure the efficient use of resources, reduce costs, improve product quality and the competitiveness of the enterprise.

In the context of the development and appearance of new marketing tools and for the purpose of analyzing opportunities for optimizing logistics processes using digital technologies, it is important to assess the

business processes of agricultural enterprises, which includes an assessment of their efficiency, quality of execution and ability to meet the strategic goals of the enterprise (Fig. 2).

Analysis of business processes of agricultural enterprises is an important step for determining their current state, identifying problematic aspects and identifying opportunities for improvement. The first step in the analysis of business processes of agricultural enterprises is to determine the purpose that can be used to identify weak points, find opportunities for optimization, increase efficiency, etc. Collection and processing of data about each business process, its input and output data, resources, duration of execution, costs, product quality, etc. may include observation, interviewing employees, analysis of documentation.

Analyzing the effectiveness of each business process using indicators such as productivity, product quality, production cost, lead times, and customer satisfaction helps identify problematic aspects and potential areas for improvement.

Identification of problematic aspects in business processes, such as excessive costs, low efficiency, deficiencies in the organization of work, insufficient automation allows to identify opportunities for improvement, including the use of new technologies, process changes, optimization of resource use.

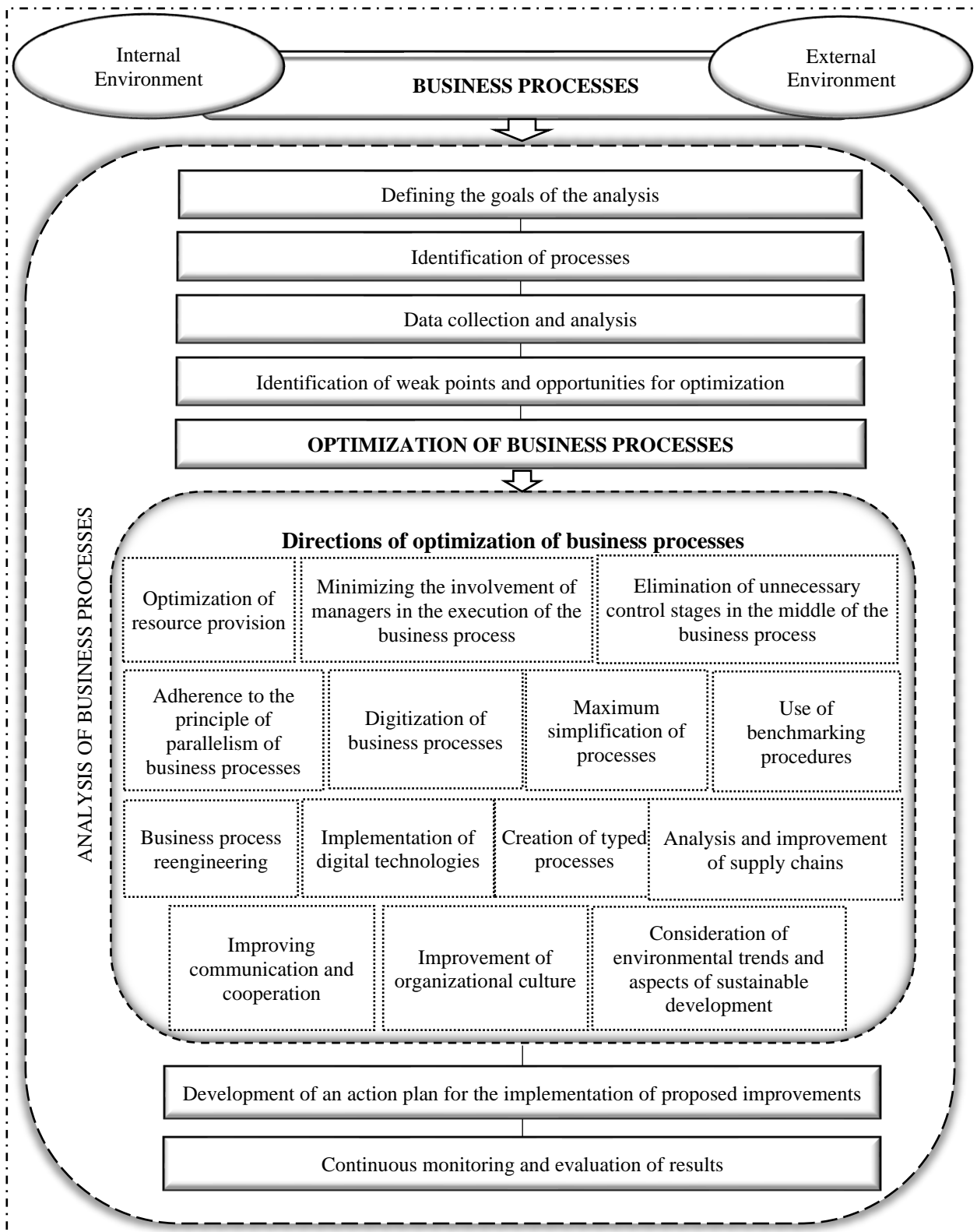


Figure 1. Scheme of analysis of agricultural enterprises' business processes in the context of the development of digital marketing and logistics

**Source: developed by the authors.*

Development of an action plan for implementation of proposed improvements may include prioritization, allocation of resources, development of new processes and improvement of existing ones, training of personnel, implementation of new technologies. Constant tracking of the results of the implementation of improvements, control over the implementation of new processes and performance indicators allows you to make adjustments to the strategy and improve it.

Therefore, the analysis of business processes of agricultural enterprises in Ukraine allows identifying problems and opportunities for improvement, which contributes to increasing production efficiency, reducing costs, improving product quality and enterprise competitiveness.

Optimization of business processes can be carried out in many ways (Fig. 2).

For example, the implementation of typification of most processes is an important step in the optimization of business processes of agricultural enterprises. It helps to automate, standardize and improve the efficiency of processes, which are important success factors in today's digital environment.

The benchmarking procedure allows you to learn the best practices and apply them in your own business with the aim of achieving similar results. This includes the use of effective strategies and methods that allow the enterprise to become more successful and competitive.

In the context of the development of digital marketing tools and effective logistics strategies, the directions that will contribute to the optimization of business processes of agricultural enterprises include:

1. Use of modern digital solutions, such as automated farm management systems, monitoring and forecasting systems, logistics management systems, which will allow to optimize and automate processes, reduce

manual work, facilitate access to data and improve decision-making.

2. Evaluation and optimization of all supply chains, including supply of raw materials, production, storage, transportation and distribution of finished products (implementation of effective logistics strategies such as Just-In-Time) - can improve the speed and efficiency of logistics processes.

3. Ensuring effective communication and collaboration between all levels and functional divisions of the enterprise through the use of digital tools for collaboration, data exchange and coordination can significantly improve the execution of business processes.

4. Creating an organizational culture that contributes to the continuous improvement of business processes by involving employees in the process of initiating changes, identifying problems and suggestions for improvement, as well as providing opportunities for their implementation.

5. Consideration of agrarian business processes from the point of view of environmental sustainability and impact on the environment through the introduction of environmentally friendly technologies, energy-efficient solutions and balanced use of resources - can improve the quality of production and contribute to sustainable development.

We can highlight a number of advantages of business process optimization (Fig. 3).

Optimization of processes allows you to eliminate delays and duplication of work, as well as implement automation, which helps increase worker productivity and reduce the time required to complete processes. Optimizing business processes allows you to identify and eliminate unnecessary costs, redundant resources and costs (reducing the number of working hours, rationalizing the use of materials and energy, as well as reducing maintenance and management costs).

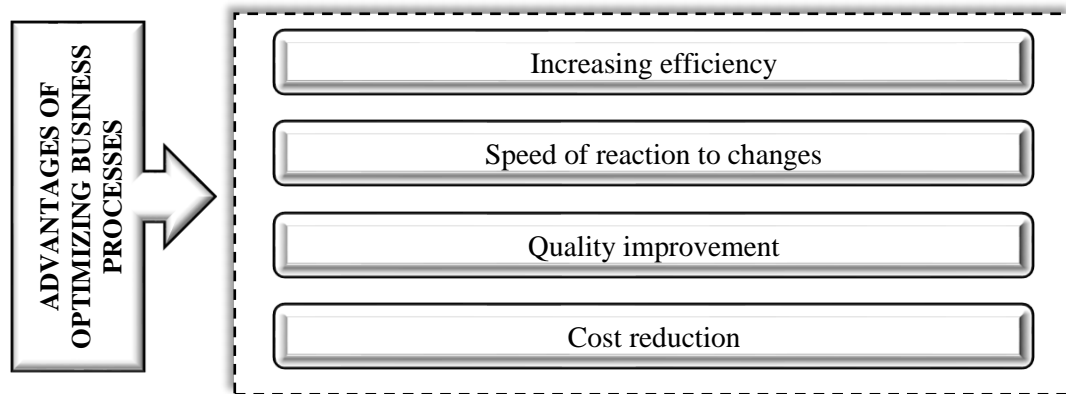


Figure 3. The main advantages of optimizing business processes

**Source: developed by the authors.*

Optimization of processes also helps to improve the quality of production and service provision. It allows you to identify and eliminate errors, reduce deviations from quality standards, increase the accuracy and reliability of processes, which leads to an increase in the level of customer satisfaction, an increase in their loyalty and a positive reputational impact on the company.

Therefore, the optimization of business processes can serve as one of the key factors for the success of agricultural enterprises, as it contributes to improving efficiency, reducing costs, increasing quality and adapting to changes.

The development of the Ukrainian economy and digitalization processes stimulate agricultural enterprises to actively use marketing tools. This means using digital communication channels such as the website, social media, e-mail, search engines to promote products and services, attract customers, analyze the market and communicate effectively with consumers. Digitalization also affects the collection and analysis of data, which allows agribusinesses to better understand their customers, identify their needs and implement personalized marketing strategies.

Digitalization provides agricultural sector enterprises with a number of competitive advantages on the market, such as: improving service quality and providing additional product value; strengthening the relationship with customers and the target

audience, improving the company's image through quick communication with customers, reducing costs thanks to the automation and digitization of processes, ensuring the transparency of the company's internal and external processes, increasing customer loyalty to the company. Important in this context is the development of a digital-oriented marketing strategy with an emphasis on Internet marketing. It is worth noting that the effectiveness of the application of the Internet marketing complex depends on various factors, such as the type of market, product features and the level of competition in the market. The agricultural sector has its own specific features and limitations that must be taken into account when implementing Internet marketing.

Digital marketing and logistics play an important role in increasing the innovative activity of agricultural enterprises in current conditions. For effective innovative development of the national agricultural sector, consolidation of efforts and interaction between authorities, science, education and business is necessary. Only through interaction and joint efforts of authorities, science, education and business can a favorable innovation ecosystem be created, which will contribute to the effective development of the agricultural sector, the introduction of new technologies and the increase in the competitiveness of Ukrainian agricultural enterprises.

Conclusions

Balanced organization and rationalization of business processes are important for achieving effectiveness and efficiency in the activities of enterprises in the field of agriculture. This concerns both individual business entities and the agricultural sector as a whole. Digital marketing and logistics play an important role in optimizing the business processes of agricultural enterprises, ensuring effective management of resources, increasing productivity and improving competitiveness. Systematic analysis of the business processes of

agricultural enterprises allows identifying problem areas and finding ways to optimize and develop using digital marketing tools and by improving logistics processes. Optimization allows you to make business processes more flexible and adaptable to changes in market conditions. It helps the enterprise to respond quickly to new opportunities, to implement innovations and to remain competitive in a fast-changing environment.

The perspective of further research is the analysis of the innovative development of agricultural enterprises in the era of digital transformations.

References

- Brzakovic, A., Brzakovic, T., Karabasevic, D., & Popovic, G. (2021). Empirical analysis of the influence of digital marketing elements on service quality variables in the small-and medium-sized enterprises sector in the republic of serbia. *Sustainability*, 13(18).
- Butko, M., Popelo, O., Pishenin, I. (2019). Innovations in Human Resources Management in Eurointegration Conditions: Case for Ukrainian Agro-industrial Complex. *Marketing and management of innovations*, 2, 74-82.
- Cadavid, L., & Valencia-Arias, A. (2022). Analysis and categorization of studies of digital marketing in small and medium enterprises. *Intangible Capital*, 18(2), 263-289.
- Grosu, V., Kholiavko, N., Zhavoronok, A., Zlati, M.L., Cosmulese, C.G. (2021). Conceptualization of model of financial management in romanian agriculture. *Economic Annals-XXI*, 191(7-8(1)), 54-66.
- Hauer, G., Naumann, N., & Harte, P. (2021). Digital transformation challenges successful enterprises – an exploration of the collaboration of marketing and sales department in german organizations. *Innovation and Management Review*, 18(2), 164-174.
- Lachenmaier, J. F., Weber, P., & Lasi, H. (2023). Enterprise information systems vs. digital twins - A case study on the properties, purpose, and future relationship in the logistics sector. *Paper presented at the Proceedings of the Annual Hawaii International Conference on System Sciences* (pp. 4505-4514).
- Le Viet, H., & Dang Quoc, H. (2023). The factors affecting digital transformation in vietnam logistics enterprises. *Electronics (Switzerland)*, 12(8).
- Popelo O., Butko M., Revko A., Garafonova O., Rasskazov O. (2021). Strategy of the Formation and Development of an Innovative Agroindustrial Cluster of the Region in a Context of Decentralization of the Authoritative Powers. *Financial and credit activity: problems of theory and practics*, 2(37), 219-230.
- Sasongko, A. I., Widjaja, G. C., Theodore, J., Afriliana, N., Matsuo, T., & Gaol, F. L. (2023). The effect of digital marketing on micro, small and medium enterprise in Indonesia. *International Conference on Applied Informatics and Media Design* (pp. 147–156). https://doi.org/10.1007/978-3-031-30769-0_14.
- Su, J., Zhang, Y., & Wu, X. (2023). How market pressures and organizational readiness drive digital marketing adoption strategies' evolution in small and medium enterprises. *Technological Forecasting and Social Change*, 193, 122655.
- Zhavoronok, A., Chub, A., Yakushko, I., Kotelevets, D., Lozychenko, O., Kupchyshyna, O. (2022). Regulatory Policy: Bibliometric Analysis Using the VOSviewer Program. *International Journal of Computer Science and Network Security*, 22(1), 39-48.