

Review Paper

Strategy for Developing Competitive Advantages of Market Entities in the Era of Digitalization

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ABSTRACT

The issue of forming competitive advantages for market actors in the context of sustainable development priority and current challenges of globalized digitalization is highly relevant. The article aims to develop a methodological platform and practical tools for the strategic development of market competitiveness through digital optimization. The study was conducted using general scientific methods of cognition: logical and structural analysis, comparison, theoretical modeling, abstraction, induction, and deduction. The authors also applied the following methods: specification, generalization, formalization, tabular, and graphical interpretation of theoretical information. During the study, the authors investigated the current state of digitalization processes in the economic sector, as well as the infrastructure and information support of market players. It is determined that the effective use of digitalization opportunities is an essential prerequisite for intensifying the productivity and competitiveness of market players. The article highlighted the priority vectors of digital optimization of the economic potential of market actors that form their competitive advantages. The authors have developed a standard model of effective digitalization of market players' activities as part of the strategy for developing their competitive advantages. The practical significance of the research findings is seen in the possibility of their application during the development of corresponding programs. These programs aim to improve the efficiency of managing functional economic processes and increase production productivity and competitiveness of market players. Such programs also seek to form a stable and effective model of digital optimization for economic processes.

HIGHLIGHTS

- ① The study concludes that effective digital optimization is crucial for enhancing the productivity and competitiveness of market entities, emphasizing the need for a comprehensive approach that integrates digital tools, communication quality improvement, and management system optimization.
- ① The research underscores the multifaceted nature of digitalization in market transformations, advocating for a strategic shift towards digital tools, artificial intelligence, and innovative technologies to form a sustainable and efficient economic environment for market actors.

Keywords: Competitive advantages, market entities, strategy, development, digitalization

The relevance of the irreversible process of all production sectors' transition to the principles of sustainable development necessitates revision and optimization of market players' activities. This trend is catalyzed by the global tendency of digitalization of all spheres related to socio-

economic activity. An active introduction of the latest information technologies, digitalization of

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economic and production processes, and expansion of the communication environment necessitate a constructive reform of the modern management model for the formation of competitive advantages of market players.

Many studies by contemporary scholars are devoted to the essence, principles, and analysis of the effectiveness of digital optimization tools in a market economy. Some scholars (Blyzniuk *et al.* 2023) define digitalization as a process that aims to generate helpful information to optimize the activities of market players. Other scientists argue that digitalization is the use of information in order for a business entity to formulate optimal decisions and create the preconditions for their implementation (Tomakh, 2023).

As of today, market relations are experiencing a process of destruction of the productivity of business entities. This is largely caused by the instability of the economy and a decline in production. Nowadays, modern scientists (Kotelnikova, 2022; Shkolenko *et al.* 2023) see the essence of the impact of negative factors in the fact that many market players develop without any synergy with the principles of balanced sustainable development. They experience inadequate material and technical production base, lack of possibility to use innovative technological solutions, and established economic relations. Some scholars have described the phenomenon of disproportion in economic processes due to price liberalization, weakening of state regulation, increased inflation, and complications of credit policy (Shevchenko, 2020).

The general challenges of opportunities and risks of digitalization for market players have been studied in depth by teams of modern scientists (Khandii *et al.* 2023). Specific issues of increasing the productivity and competitiveness of market formations are reflected in the papers by other scholars (Kalicheva, 2021; Mytianska, 2022). However, the issues related to analyzing the algorithm for successful digital optimization of the economic potential of market players, as well as the effective management of their activities using digitalization capabilities aimed at increasing competitiveness and productivity, remain insufficiently researched today and require further scientific examination.

This study aims to formulate an optimal paradigm for digital optimization of the strategy for developing competitive advantages, which would apply to most market players.

Literature Review

The theoretical background of the study is formed by the results of fundamental, analytical, and generalizing scientific research in an interdisciplinary concept.

The peculiarities of forming a strategy for the development of competitive advantages of market players are described in the studies of several modern scientists (Levchenko *et al.* 2021). Some papers analyze the legal, technological, environmental, social, and economic aspects of the digital optimization trend in optimizing market players' competitiveness (Nahorniak *et al.* 2023). Savytska N. and Chmil H. (2022) include:

- ♦ the analysis of market needs and expectations,
- ♦ its importance and functions in the internal management system of companies, and
- ♦ the prospects for transforming existing business models of enterprises in the context of the priority of sustainable development principles.

Considering the essence of digital optimization of economic processes, contemporary researchers (Trevisan, 2021; Coskun-Setirek and Tanrikulu, 2021) decompose it into specific vectors. They include the goal, means, and communication between the process participants. The authors emphasize that digitalization has significant opportunities to increase the economic potential of market players and their competitiveness.

Some representatives of modern scientific schools have made a significant contribution to the study of the strategy for developing the competitive advantages of market players based on digitalization (Ernstsen, 2020; Awan *et al.* 2021). Their research focuses on the possibilities of digital optimization of all stages of market actors' activities. Scholars also describe in detail the algorithms and tools of digitalization, the benefits, and risks of the process of digital optimization of the market and economic relations (Cagno *et al.* 2021).

Several studies by contemporary scholars have examined the risks accompanying digitalization

(Kouhizadeh *et al.* 2020; Ranta *et al.* 2021). Various modern researchers have focused on some aspects of the possibilities of using artificial intelligence when optimizing the competitiveness of market players (Vinuesa *et al.* 2020).

Despite the significant volume of research results, there are still unresolved issues regarding forming a strategy for developing the competitive advantages of market actors in terms of digitalization and considering the priority of sustainable development. The study of the possibilities of practical digital optimization of investment and market processes remains an urgent problem due to their prospects and multi-functionality.

MATERIALS AND METHODS

This study employed a range of general scientific and special methods of cognition, including logical, structural, functional, comparative analysis, abstraction, induction, and deduction, as well as methods of specification and formalization. Specifically, the methods of analysis and synthesis were used to identify the stages and factors of development, as well as the most influential elements of the object under study.

The inductive method was used for the predictive analysis of the expected efficiency. The abstraction method was employed to form the concept of the integral process of the digitalization system in the market economy sector as a structural and consequential system of interrelationships. The analytical process is prominent along with the main production and organizational factors. The formalization method is utilized at the stage of deriving priority vectors for optimizing the system of managing the competitiveness of market players based on the principles of digital optimization and sustainable development, as well as while recording the research findings.

The theoretical and methodological basis of the study is formed by the dialectical method, the systematic approach, and the priority principles of conducting comprehensive research. The systematic approach allowed the authors to analyze the object and subject of the study as a system in the entire set of interrelations.

RESULTS

The era of new management algorithms at all

levels of the economic system, along with the intensification of the implementation of the principles of sustainable development, requires an institutional transformation of the economic environment for the implementation of market relations. The rapid diversification of existing management practices and large-scale technological and innovative development in the context of globalization leads to the formation of a concept of increasing production efficiency and economic processes.

Ensuring the effective functioning of market entities, the growth of their productivity, and economic efficiency requires solving a whole range of problems that include:

- ♦ the growth of competitiveness, innovative development prospects;
- ♦ the introduction of the latest effective management tools;
- ♦ the development of a set of appropriate measures that could mitigate adaptation processes in the face of increased competition.

At the same time, the main conceptual foundations of such transformations are currently based on the capabilities of the digital economy.

The main tasks of digital optimization of the economic potential of market players include:

- ♦ maximization of digitalization opportunities;
- ♦ improvement of communication quality;
- ♦ optimization of the management system;
- ♦ growth of functional production capabilities.

It should be noted that digital optimization is a continuous process inextricably linked to innovative technologies. It aims to meet market expectations and increase productivity and competitiveness.

Considering the current situation, the role of digital optimization in the strategy structure for developing the competitive advantages of market players can hardly be overestimated. It is worth noting that the effect obtained may have different forms of expression, as well as be achieved by different methods and means.

The analysis of basic strategic principles in digitization, as observed in developed countries within the global community, forms a firm conviction

regarding the necessity of synergy in efforts to actively implement digitization tools simultaneously with ensuring the realization of security strategy in the digital space. It is worth noting that currently, there is no single algorithm for the digitization mechanism of production-economic processes of market entities. The spectrum of imperatives demands the effective implementation of the analytical component of the conceptual structure of the transformation algorithm. Besides, analytical processes should be the effective precondition for the successful digitization of the industry.

It is necessary to emphasize that typically, any decision formed in analytical-informational activity significantly differs from the formed practice. As a result, its implementation requires participants in the transformation system to anticipate changes in knowledge and qualifications, actively perceive innovations, and find and effectively implement solutions to problematic moments that constantly arise in the production process. In this case, it is essential to highlight the need for optimization of internal management of market entities, allowing the automation of most internal processes, distancing certain aspects, and forming a corporate culture of a new model. From the perspective of economic efficiency, the process should have a constant character and be positioned as a long-term priority. This process should initiate positive dynamics of transformations within the enterprise and stimulate it for continuous self-development.

Among the main formats of digital optimization of the economic potential of market entities, it is worth highlighting the following ones:

- ◆ an increase in the competitiveness of the final product of activity;
- ◆ the reduction of its cost;
- ◆ the formation of an effective organizational structure of enterprise management systems;
- ◆ an active implementation of innovative technologies;
- ◆ the reduction of destructive pressure on the environment.

In this context, the main vectors of digital optimization of economic potential in the investigated sphere can be positioned as follows:

- ◆ activation of investment activities;

- ◆ improvement in profitability indicators;
- ◆ implementation of an effective system of digital management;
- ◆ maximum utilization of digital technologies' opportunities.

The practice of managing the productivity and competitiveness of market players indicates the need to develop and implement appropriate individual management methods, functions, organizational structure, and management systems as a prerequisite for effective management of enterprise competitiveness.

Based on the analysis of the theoretical foundations of digitalization and the possibilities of their adaptation in today's real conditions, it seems advisable to formulate a concept of strategic management of competitiveness of market actors. This concept aims to improve their productivity and ensures that production is oriented towards demands and current market needs. It also cultivates effective relationships between labor, financial, and information resources and stimulates intentions to increase efficiency while minimizing costs. It is worth noting that effective management requires flexibility, adaptability, and regular revision of the strategy depending on the dynamics of market conditions. In addition, the essential prerequisite for successfully optimizing a system to form the competitive advantages of market players is the use of modern innovative opportunities for digitalizing economic and production potential.

The current strategy of the system of market actors' digitalization should be a kind of hub of interrelated organizational and information principles, tools, and levers that contribute to increasing the level of competitiveness of market formations. At the same time, it should not contradict the current principles of sustainable economic development. In this case, the primary features of an effective digital optimization system for the economic potential of market players include consistency, efficiency, flexibility, balance, and risk minimization.

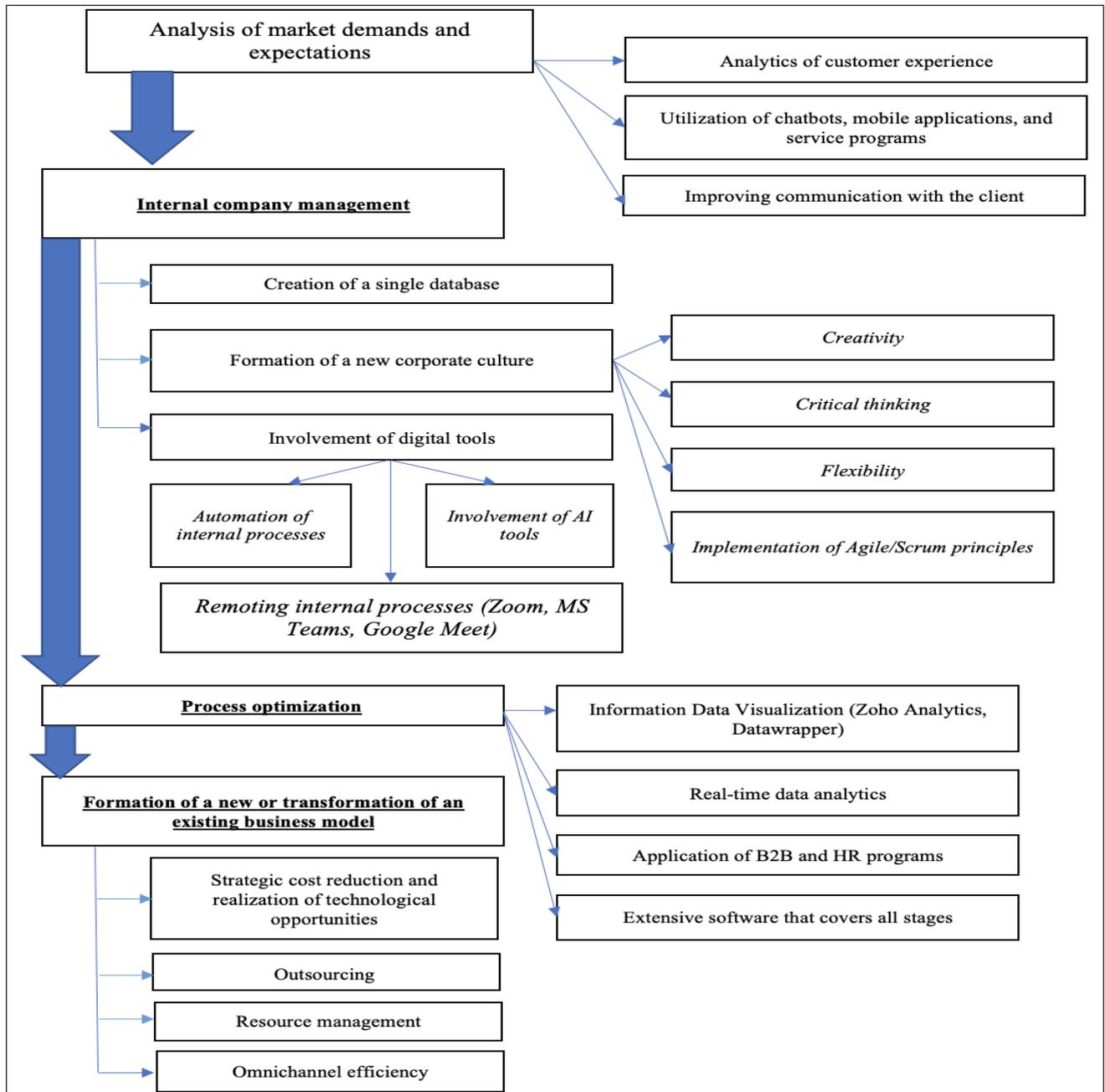
Consequently, the prospects for the economic development of market players should be based mainly on modeling the transformation processes in the entire set of influencing factors and interdependencies. Since any performance indicator depends on the influence of various factors, it is

crucial to identify, predict, and neutralize these factors if they are negative.

The general structure of the process of digital optimization of the economic potential of market actors is shown in Fig. 1.

It is worth highlighting the main principles of forming a model of digitalization of the production and economic functionality of market players, which include:

- ◆ preventive strategic direction and focus on continuous development;
- ◆ a multi-component structure of the operating system;
- ◆ the creation of practical tools on its basis, adaptability to modern technologies;
- ◆ innovative means of working with large amounts of information.



Source: Authors' elaboration.

Fig. 1: Digital optimization of the strategy for forming competitive advantages for market players

When analyzing the foreign experience of successful implementation of digital modernization as a strategy for forming competitive advantages for market players, it is worth noting the most popular areas of digitalization. This includes the application of artificial intelligence and digital marketing tools, like chatbots, service programs, mobile applications, digital archives, and analysis of users' behavior. The promising benefits of active usage of these measures include:

- ♦ personalization of users' experience;
- ♦ optimization of search functionality;
- ♦ increased speed of information processing through interaction with chatbots;
- ♦ analytics of large amounts of data and its statistical processing.

According to the market needs and expectations analysis, the next step is to optimize the company's internal management. It involves creating a single database and maximizing the capabilities of digital tools, including artificial intelligence. It also includes transforming corporate culture in the vectors of creativity, critical thinking, mobility, and implementing Agile/Scrum principles, including a flexible approach and teamwork.

The direct optimization of production and economic processes of the strategy for the formation of competitive advantages of market players should be based on the visualization of information data and their analytics in real-time. Modern programs such as Zoho Analytics or Datawrapper make it possible to obtain large amounts of information in the form of visually perceptible charts, graphs, and tables. This significantly speeds up the information processing process. At the same time, using the capabilities of B2B and HR programs while optimizing the production and economic processes of market players will significantly increase the efficiency of information and economic interaction.

The result of optimization processes should be the formation of a new business model or transformation of the existing business model of market players. Reformatting is aimed at strategic cost reduction and lowering the cost of the final product while realizing the technological capabilities of the enterprise. In addition, it involves efficient resource management and minimizing environmental

impact, the use of outsourcing opportunities, and omnichannel efficiency. The final product of digital optimization of market players' economic potential must meet the goals of sustainable development and, at the same time, implement a security system for the digitalization of economic processes.

Notably, implementing the approach mentioned above requires improving the existing corporate interaction system, strengthening integration processes, and optimizing communication strategies. After all, at the current stage of social communications development, integrating subjects of information and communication interaction is a process of synergy, coordination, and rational organization of resource potential.

Digital optimization of economic and production processes can become a managerial lever. If used effectively, it will allow a significant increase in the productivity of market actors to be achieved. At the same time, their functional activities will remain within the principles of a closed-loop economy and sustainable production.

In this regard, future studies in the field should focus on identifying strategic priorities for the formation of a standard algorithm for digitalizing the activities of market players, as well as the formation and integration of an information monitoring system as the leading initial resource for optimizing the situation. At the same time, an important role is assigned to attracting international practical experience, developing new methods, and improving existing ones within the framework of an integrated multifactorial approach to managing the activities of market players as part of a strategy for developing their competitive advantages.

DISCUSSION

The digital transformation of the economic potential of a modern market actor involves, first and foremost, a fundamental shift in the communication model. According to Krings W., Palmer R., and Inversini A. (2021), the latest version of this model envisions primarily the development of software that comprehensively covers all stages of production and economic activity. Krings W. *et al.* argue that the most optimal approach is to create a product tailored to specific demands, needs, and variations in consumption. It requires the presence of well-

adjusted communication processes and a focus on long-term collaboration.

As indicated by the findings of the research by Aarchi P. (2021), in the current stage of the digital transformation of the system for forming competitive advantages for market entities, we can highlight the following priorities:

- ♦ the rejection of outdated technologies and action algorithms, resource optimization;
- ♦ the establishment of effective internal communication;
- ♦ the utilization of artificial intelligence technologies, along with optimizing investment activities.

Sacks R., Brilakis I., Pikas E., Xie H., and Girolami M. (2020) assert that the priority means of digitizing the investigated sphere include the application of functional chatbots, mobile applications, thematic library blogs, and media products. At the same time, scholars (Pellegrini, 2020) assure that visualization is a fundamental trend in modern economic and information processes. It provides efficiency and universality for a wide range of users. According to scholars, in the era of global digital transformation, market actors must reformat their practical role in social communication, transforming into modern investment and economic hubs.

Innovative events in the field of forming competitive advantages for market entities should be aimed at modernizing the digital toolset, improving the accessibility, completeness, and speed of information retrieval, as well as expanding the boundaries of transformative changes. Some modern researchers are convinced of this (Lu and Liu, 2020). Scholars insist on the need to use existing and develop new interactive tools and expand the variability of services for different user categories.

The results of the above scientific research and investigations are consistent with the conclusions of the current study. They also advocate for the need to optimize communication between market players and customers using modern information tools – websites, repositories, and electronic catalogs. A practical implementation of digitalization tools creates the opportunity to establish feedback and communication with users based on principles of accessibility and openness.

Based on the research findings of some authors (Mourtzis, 2022; López García *et al.* 2019), it can be argued that digitalization has significantly expanded its scope of functioning today, becoming an essential element of the market system. These authors consider digital optimization of economic and production processes to be an essential prerequisite for the development of innovative activities of market actors. Researchers note that increasing productivity based on digitalization principles involves a phased and effective achievement of goals, which include:

- ♦ the optimization of the overall financial-economic situation;
- ♦ efficient resource savings;
- ♦ effective asset utilization;
- ♦ strengthening market status in conditions of a stable economy;
- ♦ the formation of high functionality indicators through the stabilization of resource reserves;
- ♦ the use of risk insurance opportunities.

In their studies, Pan Y. and Zhang L. (2021) argue that the effectiveness of implementing the integration process of digital optimization of the economic potential of market players depends on the efficiency of managing various forms of interaction. Scientists emphasize that information modeling can be positioned as an effective tool for analyzing large volumes of information accumulated at each stage of the project. It is hard not to agree with them. The analysis of the prospects for applying conceptual principles of information modeling in forming competitive advantages of market entities indicates the expediency of its use at all stages of implementing an economic project.

Some scientists (Rusch, 2023) identify the main results of the expected efficiency from the introduction of digitalization tools in economic and production processes. The following results are in line with the results of the current study:

- ♦ rational use of tangible and intangible resources;
- ♦ accessibility and openness of projects and investment sources for new or small-scale market players;
- ♦ minimization of the human factor in information and analytical systems;

- ♦ reduction of total costs;
- ♦ coordination of information flows and innovative projects.

Based on the findings of this study, it is advisable to foresee an increase in the role of digital optimization of economic potential in the strategy for developing the competitive advantages of market players. The proposed approach will significantly improve the level of productivity and efficiency, implement innovative solutions, and guarantee compliance with the requirements of the modern market process under the principles of sustainable development.

CONCLUSION

In the course of the study, we managed to analyze the paradigm of increasing the competitiveness of market actors based on digital optimization. We also assessed the impact of digitalization on the system of economic transformation. The study proves that the effective use of digitalization opportunities is an essential prerequisite for intensifying the productivity and competitiveness of market players. We have identified the priority vectors of digital optimization of economic potential and proposed a universal algorithm for effective digitalization of market players' activities.

It is determined that the digitalization tools provide practical and effective support to market actors who can respond quickly to new challenges. These include the transformation of the market economy in the context of sustainable development, the complication of production standards, increased competition in the field of research, and the need to take into account the factor of degradation of the natural resource base.

The study examines the multifactorial nature of the possibilities of modern digitalization of economic processes and assesses its position in the system of market transformations. It was found that the development of market players' activities in the direction of digitalization plays a significant role in optimizing the quality of communication, strengthening the position of the project participant as an investment and economic hub.

The study proposes a set of measures within the general trend of digital optimization of the functioning of market players. A universal model of digital optimization of the economic potential

of market actors has been developed. This model covers the essential stages of digitalizing production, economic processes, and management systems. The main vectors for adapting the existing principles of market players' activities to the requirements of digitalization are formed. Moreover, we have substantiated the feasibility of such a transformation.

We have proposed priority areas for further scientific research on the relevant topic based on the research outcomes. We have also argued for the need to systematize practical information on digital optimization of the market relations sphere.

A practical approach to the digital optimization system of market actors' economic potential involves a hub of methods and tools in a set of interconnections. These methods and tools can ensure an increase in the level of productivity and competitiveness of market players. It should be based on the implementation of a development strategy formed based on the principles of a sustainable economy as an integral part of the management paradigm.

There is a need for further research into the possibilities of using digitalization tools, with the involvement of international practical experience, to develop and implement optimal programs to increase the productivity of market players. Such measures, in combination, will make it possible to resolve the existing difficult situations in the investment and economic sphere. They will identify reserves for increasing the level of efficiency of its activities, taking into account a combination of factors of influence of the internal and external environment.

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