ADAPTIVE STRATEGIC MANAGEMENT
IN A DIGITAL BUSINESS ENVIRONMENT

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Abstract. The authors of the article hypothesize the positive impact of the global digitalization of business on the development of adaptive management of the company in a changing business environment. Based on a thorough analysis of recent publications on the subject of adaptive strategic management, it was found that under the conditions of digitalization of business relationships, indicative tools and flexible methods of management decisions are activated. The purpose of the article is to develop conceptual and applied foundations of adaptive strategic management in the context of digital transformation of business. To implement this goal, the authors justified the principles and approach of adaptive strategic management in the digitalization of business, systematized the actual methods of diagnostics of prerequisites for the implementation of the strategy, the choice and implementation of its optimal variant, defined the tools of adaptive management. Methodological basis of research are system-structural and dialectical methods to substantiate the essence of the processes of digitalization of the business environment and determine their impact on strategic decision-making; modeling to develop a mechanism for implementing adaptive strategies of companies; method of algorithmization, integrated approach and system analysis to develop a mechanism as a complete system and determine the sequence of its action. Scientific novelty of the study consists in the development of adaptive management mechanism of strategy implementation in an activated digital environment, promoting the spread of situational approach in management, updating of indicative tools, more flexible methodologies for management decisions. The mechanism of realization of the adaptive strategy assumes functioning of three subsystems: diagnostics of preconditions of realization of strategy, selection of an optimum variant of strategy and introduction of the strategic scenario. The authors have developed tools for subsystems, proposed methods to achieve the objectives, disclosed the functions in the overall mechanism. At the input to the mechanism are the interests of the client, determining the positioning of the company in the foreign and domestic market. As a result of the mechanism, the company adapts to the changing external environment, providing a stable competitive market position and operational action of all structural units, adequately and quickly responding to market conditions and changes. The authors also investigated the applied aspects of the mechanism’s action, and listed its functions and tasks in the digital environment, as well as the resources for its functioning. The authors consider the complexity of counteracting the high risks of digitalization of business to be significant limitations of the mechanism, which determines new directions for further research and opportunities for improvement of the mechanism. The authors consider the risk management of adaptive strategies, the dissemination of indicative methods for diagnosing the digital environment, and the development of strategic adaptive management models to be promising directions for scientific developments in this area. The practical significance of the study lies in the possibility of using its results in the practice of management of modern companies in order to ensure sound management decisions and strategic development in the context of global digitalization of business.

Key words: adaptive management, situational approach, strategy, digital environment, digitalization of business, globalization.

JEL Classification: F20, M19

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1. Introduction

Today’s business realities mean more and more digitalization of business relationships occurring on a global scale. The new forms of interaction between partners, the development of e-commerce, the active functioning of marketplaces, and the spread of the sharing economy require a rethink of business principles and a focus on more flexible approaches to decision-making. Under such conditions, the concept of adaptive management, based on constant monitoring and maximum adaptation to changes in the external environment, is particularly relevant.

Adaptive management is implemented at both the tactical and strategic levels of decision-making. If specific solutions to respond to market changes are developed and implemented precisely at the tactical level, the strategic adaptive management involves the systematic use of adaptive methods and tools, indicative planning, sustainable and regular procedures for monitoring and diagnostics of the business environment. This is a new business philosophy based on evolutionary development and constant updating of management approaches and principles, depending on economic, social and technological changes. The product of adaptive strategic planning is a strategy that provides the main priorities, methods and forms of adaptation of companies, their sequence of application, as well as clearly defined tools of response to changes in environmental indicators.

In scientific terms, the concept of adaptive management began its development with the spread of the situational approach in management. The most consistent development of the foundations of adaptive control was in the work of P. R. Lawrence, J. W. Lorsch “Organization and Environment” (Lawrence & Lorsch, 1969). Its starting point is the assertion that there is no single or only one way of organizing and that different approaches to organizational forms of business are necessary at different stages of the development of a particular company. This discourse was continued in the works of a leading researcher of industrial and organizational psychology – the founder of the situational theory of management, F. E. Fiedler, who first established the dependence of the effectiveness of leadership style on the specific circumstances (Fiedler, 1994).

One of the irrational management concepts developed within the situational approach can be considered the existential concept of management proposed by G. S. Odiorne in “The Management Theory Jungle and the Existential Manager”. The original postulate of the concept is the denial of the ability to bring management activities under certain laws, rules, and norms. According to the author, it is fundamentally impossible to create a permanent system of management, since the realities of business determine ...'situationality' of the manager, who, not having time to get out of one critical situation, immediately finds himself in another, since he lives and acts in a constantly changing environment with many uncertainties” (Odiorne, 1966, p. 110). The ideas of the leading representatives of the situational approach in management do not lose relevance in the XXI century.

The article "Does a strategic planning process that combines rational and adaptive characteristics pay off? Evidence from European firms” by Mohamed Laid Ouakouak is interesting from the perspective of conceptualizing adaptive management processes. Based on the systematization of best practices of 365 European companies, the author proposes a conceptual model of strategic management, combining rational planning with adaptive mechanisms of decision-making. The author proves that the combined approach of strategic planning, which involves the constant alignment of the external parameters of the business environment and organizational capabilities, has a positive impact on the financial results of the company (Ouakouak, 2018). However, what the author neglects is the impact of the processes of digitalization of business on the successful implementation of the proposed approach, which limits the understanding of its adaptability.

More detailed issues of the impact of the digital transformation of the business environment on the spread of adaptive approach in strategic management are considered in the article "Adaptive Strategies of External Environmental Effects in Digital Entrepreneurship in the Strategic Management Perspective" (Fauzi, Harits, Danial & Komariah, 2020). The results of the study of the above authors show that unlike conventional companies, which respond to technological progress, require technological progress as a surplus value of their products and services, digital entrepreneurship uses technological progress as a major part of product development and value creation. The authors of the study recognize the important role of adaptive strategies for digital entrepreneurship and prove that the transition from technological effects to integrated digital entrepreneurship can digitize value creation and business management opportunities based on digital technologies. However, the authors do not explain the essence of the processes of adaptation to the digital environment.

The processes of adaptation of the company to the changing environment are considered in the article "How Adaptive Strategy Is Adapting" (O’Donovan, Kasper & May, 2018). The authors give special importance to innovations, both technological and managerial, in these processes. According to the authors, by integrating the results of innovation into strategic management, companies can begin to continuously adapt in such a way as to turn strategy
into an active process, as much as possible focused on changes in the business environment. This opinion is shared by the author of the article "An adaptive strategy for managing knowledge in organizations" K. Sherif, which proves the connection between adaptive management strategy, innovation and dynamic capabilities (Sherif, 2006). The centerpiece of the article is that organizations that follow adaptive, complex knowledge management processes compete better in the marketplace today. The dynamic capabilities gained by the organization as a result of adaptive management is the subject of another article, namely "Configuring dynamic capability architecture for understanding changes" (Singh & Burhan, 2018). However, it should be noted that these authors, like the previous ones, do not consider those triggers of innovation processes, which are caused by the digitalization of business.

The impact of digitalization on strategic decision-making is considered by many scientists in the context of the development of individual areas of company management and given the conditions of specific markets. For example, an article by a team of Italian scholars (Pereira, de Oliveira, Portela Santos & Frazzon, 2018) entitled "Predictive and Adaptive Management Approach for Omnichannel Retailing Supply Chains" focuses on developing a reference model of adaptive management approach for a multichannel retail chain. Using new information and communication technologies. Applied aspects of adapting the marketing management system in the tourism market segment are considered in the article "Conceptual Model of Adaptive Management of Strategic Marketing: A System Approach" (Osovtsev, Przhedetskaya & Sagidullaeva, 2018). Adaptive capabilities of strategic management of the construction company are investigated in the article "Organisational strategy making and first-line manager challenges: a building and dwelling perspective" (Gjoasater & Kyvik, 2021).

Thus, the issue of adaptive management is relevant in the scientific discussion, but the impact of digital transformations of modern business relationships on the system of strategic decision-making has been studied fragmentarily. The lack of unified approaches of adaptive strategic management in an intensified digital business environment determines the timeliness of this study.

The aim of the article is to develop conceptual and applied frameworks for adaptive strategic management in the context of digital business transformation. In order to realize this goal the following tasks were set:
- formulate the principles and approach of adaptive strategic management in the context of digitalization of business;
- develop a mechanism for implementing adaptive business strategies in the digital environment;
- investigate applied aspects of the mechanism in a changing environment.

Methodological basis of research includes system-structural and dialectical methods to substantiate the essence of the processes of digitalization of the business environment and determine their impact on strategic decision-making; modeling to develop a mechanism for implementing adaptive strategies; method of algorithmization, integrated approach and system analysis to develop a mechanism as a complete system and determine the sequence of its action.

2. Conceptual foundations of adaptive strategic management in the digital transformation of business

Adaptive strategic management implies an indicative assessment of the external environment, based on agile management and focused as much as possible on customer satisfaction. The basic principles of adaptive management are agile principles borrowed from software development methodology. This is a new focus on the management system, implying cyclical interactions between the stages of decision-making, decentralization of responsibility, liberalization of the relationship between management and executives, and self-organization. In the era of digital business transformation, this flexibility of the strategic management system is very important because it allows you to respond quickly to market challenges, to change not when there is an opportunity, but when there is a need. Adaptive management is implemented through strategies that are developed in the process of performing the task and have an arsenal of tools for rapid adjustment of decisions based on the accumulation of new information about the possible results of their implementation.

Implementation of conceptual approaches to adaptive management is possible through the mechanism of implementation of adaptive strategy (Figure 1), which allows to diagnose the current state of the business, to ensure the implementation of adaptive strategy to attract the latest opportunities as the market, and the company itself to create its positive image, to activate the potential towards customer satisfaction in a digital environment.

Digitalization of business complements traditional methods of strategic management with new tools. Modern companies increasingly use cloud technologies, Mobile First, Big Data and Artificial Intelligence tools, scenario approach, CRM technologies, Scrum and Kanban methods in their activities. Their combination into a single mechanism allows you to consider today’s business needs and to mobilize all the possibilities of strategic management to achieve results in a very dynamic environment where, thanks to the spread of digitalization, the
Figure 1. Mechanism for implementing adaptive business strategies in the digital environment

**Subsystem of diagnostics of prerequisites for strategy implementation**

**Functions**
1. Assessment of the potential for strategic development due to the digitalization of business
2. Diagnosis of the prerequisites for the formation of an adaptive strategy
3. Analysis of contact audiences
4. Evaluation of the business environment, the state of digitalization of business relations and monitoring of stakeholder interests.

**Methods**
- Indicative assessment
- Strategic analysis
- Sociological surveys
- Customer segmentation
- Scenario approach
- Index method
- Big Data.

**Toolkit**
- Scripts
- Indices
- Indicators
- Forecasts
- Ratings
- Questionnaires
- SWOT-, PEST-, STEP-, SPACE-matrices
- Software framework.

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**Adaptive strategy goals and priorities**

**Functions**
1. Determination of business priorities
2. Selection of the strategy scenario
3. Development of models of adaptation to market conditions
4. Formation of tools and stages of strategy implementation
5. Definition of indicators which will be used to evaluate the effectiveness of its implementation
6. Formation of a strategic action plan
7. Assessment of the risks of implementing the strategy

**Methods**
- Prioritization methods
- Detailing
- Modeling
- Project Approach
- Matrix method
- Marketing mix
- Mobile First.

**Toolkit**
- Prioritization matrices
- Business interaction model
- The project
- Program
- Brand
- Roadmap.

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**Subsystem for selecting the best strategy option**

**Functions**
1. Development of measures to achieve the set goals
2. Implementing business priorities in the digital environment
3. Minimizing the risks of adaptation failure
4. Implementation of projects to create an attractive image
5. Formation of favorable prerequisites for business activation
6. Analyzing the effectiveness of using the company’s potential

**Methods**
- Positioning
- Project approach
- Distancing from negative characters
- Risk Management
- Comparison Method
- Branding
- Scrum and Kanban.

**Toolkit**
- Project
- Event technology
- PR-technologies
- CRM-technologies
- ML-algorithms.

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**Subsystem for the implementation of the strategic scenario**

**Functions**
1. Development of measures to achieve the set goals
2. Implementing business priorities in the digital environment
3. Minimizing the risks of adaptation failure
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**Adapting to the digital environment**

**Subjects of adaptive strategy formation:**
company management, representatives of the consulting business

**Customer Interests**

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**Factors of digitalization of business**

**Adapting to the digital environment**

**Attractive brand**

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**Principles:**
- Objectivity of completeness and verification of information of a comprehensive approach
- Planning, predictability, stages, managerial efficiency, effectiveness, sequence
- Adaptability; efficiency; orientation to meet the needs of target audiences; the formation of a culture of consumption; rationality; cyclicality.

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**Adaptive strategy scenario**

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**Principles:**
- Planning,
- Predictability,
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- Effectiveness,
- Sequence.

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**Principles:**
- Adaptability;
- Efficiency;
- Orientation to meet the needs of target audiences;
- The formation of a culture of consumption;
- Rationality;
- Cyclicality.

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**Subjects of adaptive strategy formation:**
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**Adapting to the digital environment**

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**Resources:**
- Material and technical, financial, human, intellectual, information, corporate values, organizational and managerial.
interaction with customers is as personalized as possible.

3. Applied aspects of implementing adaptive strategies in the digital environment

The mechanism of realization of adaptive strategy of the company assumes functioning of three subsystems: a subsystem of diagnostics of preconditions for realization of strategy, a subsystem of selection of an optimum variant of strategy and a subsystem of implementation of the strategic scenario. Each of subsystems has the toolkit, methods of achievement of tasks, functions in the general mechanism. At the input of the mechanism are the interests of the client, determining the positioning of the company on the external and internal market. As a result of the mechanism, the company adapts to the changing external environment, ensuring a stable competitive market position and prompt action of all structural units, adequately and quickly responding to market conditions and changes.

All resources of the mechanism can be divided by the nature of their origin and application into:
– material and technical – resource potential, production base, technical equipment, energy resources, infrastructure, characterizing the production capabilities of the company and ensuring the implementation of its strategy;
– financial – cash income and receipts that are at the disposal of the business and can be used to implement strategic objectives;
– human resources – qualified personnel involved in the process of developing and implementing the strategy and who are the drivers of systemic change;
– corporate values – the company's history, business philosophy, the system of traditions, the image formed, which will be the basis for the perception of the strategy by both external audiences and its own staff;
– informational – a set of documented and undocumented information in information systems and databases of the company, as well as methods and approaches to work with it; the category is very broad, because it covers not only the totality of data, but also the technological component;
– intellectual – a set of accumulated knowledge, ideas, competencies that have scientific and commercial value and can be used in strategy development; this type of resources, although informational in nature, is related to human resources, but because of the importance of company development in a digitalized business and the specificity of management approaches, they constitute a separate group;
– organizational and managerial abilities and capabilities of company management to initiate, organize, direct business development in a changing environment, motivate all participants in these processes, control and analyze the results of this activity.

The subsystem of diagnostics of prerequisites for implementation of the adaptive strategy provides such functions as assessment of potential opportunities for strategic development, diagnostics of prerequisites for formation of the adaptive strategy, analysis of contact audiences, assessment of the business environment, the state of digitalization of business relations and monitoring of stakeholders' interests.

Diagnosis of the prerequisites of an adaptive strategy involves analysis of the factors influencing the processes of selecting the most favorable option for business development in a digital environment. The management system is considered separately, and the internal resource of power, the degree of its mobilization, the motivation of the company's development, readiness for structural changes, competence and awareness are evaluated (Finagina, Prodanova, Buriak, Gavrylovskiyi, Khoroshun, Zinchenko, 2021).

The analysis of the contact audience is aimed at identifying and segmenting potential customers. The attitude of these groups to the company is assessed, the problem of positive perception is established, and conclusions about reputation are drawn. In this way the image of the company is created, thanks to a successful adaptive strategy it turns into a positive image. Stakeholders, the degree of their interest, the main motives and incentives, the possibility of involvement in the actions of the strategy implementation are defined.

It is important to assess the potential of digital drivers to activate business: electronic business interaction platforms, marketplaces, digital payment systems, the possibility of effective positioning of the company in social networks.

Among the limitations of adaptive strategic management is the system of business regulation in the context of the development of e-commerce in the world and in the country in particular. It is about such areas of regulation as customs and tax law, logistics, currency control, the use of electronic money, and measures to protect consumer rights (Nikolaiev, 2021).

A special place in the diagnostic subsystem is occupied by the assessment of market potential from the position of its attractiveness for the company. It implies the analysis of financial and credit potential, material and technical base, economically active labor resources, and market infrastructure (Nikolaiev, 2021).

The effective tools of the mechanism subsystem are formed under the influence of the spread of the scenario approach, indicative planning, rating assessments, as well as strategic analysis technologies. In the context of digitalization of business, Big Data or Artificial Intelligence technologies, which allow the accumulation and processing of large flows of information,
on the basis of which options for strategies are developed, adapt them to specific market requirements and predict the behavior of customers, should be highlighted in particular. For example, the means of mass-parallel data processing systems category NoSQL, algorithms MapReduce, software frameworks simplify the processing of large arrays of data, facilitate the development of complex systems, contribute to fast decision-making.

The selection subsystem involves the justification of the optimal strategy option and the development of a scenario for its implementation. Its main functions are: the choice of a scenario strategy to identify business priorities, development of models for adapting to market conditions, the formation of tools and stages of implementation of the strategy, the definition of indicators on which to evaluate the effectiveness of its implementation, the formation of a strategic action plan, the selection of approaches and methods to assess the risks of implementing these measures.

Based on the results of the analysis, certain strategic priorities are set, linking the subsystem of diagnostics and the subsystem of strategy implementation. Strategic analysis in this context serves as the main diagnostic tool, and further on the basis of strategic priorities specific activities are developed. Priority is a kind of reflection of the goal in a certain space, taking into account the perception of a particular audience, forms a system of business objectives, laying the foundation for the basic characteristics of the strategy (Lepeyko & Kryvobok, 2015).

On the basis of priorities scenarios of development of the company under specific market conditions are developed. Scenario forecasting involves the use of methods of expert evaluation of strategic directions of development, finding market breakthroughs with a long-term perspective of radical influence on the positioning of the company in the market. The scenario includes a plan of action for all components of the marketing mix: product, price, place, promotion. As a result of a comprehensive analysis, the choice of the most optimal scenario is made.

Based on the scenarios, a "roadmap" is formed that presents a future-oriented view of the company's chosen range of priorities and the activation of its potential. The roadmap provides a comprehensive, interconnected view of the company's development prospects, allowing you to mutually link strategic plans, research and marketing activities, as well as showing their relationship to the planned goals of the company's strategic development (Finahina, Pavlovskaya, Mylnichenko, 2019).

Analysis of the effectiveness of the strategy involves assessing the potential of the company, the conditions and results of the strategy, the level of competition in the markets, the performance of the company (Zinchenko, Malyshko, 2016). Based on this assessment, decisions will be made on how to create and promote value, and models of interaction with customers and branding of the company will be determined.

The subsystem of the implementation of the strategic scenario defines specific measures to achieve the goals set, the implementation of business priorities in a dynamic environment. Channels of distribution of products (services) are selected, their workload is determined by market requirements, the production program is developed, the current priorities of management system requirements are formed, the existing marketing and logistics system is adapted to the requirements of the chosen strategy.

The subsystem for implementing a strategic scenario translates the desired image of the company into the category of "attractive image", which can be commercialized and serves specific management goals.

The subsystem of the implementation of the strategic scenario involves the following functions: minimizing the risks of adaptation (non-perception of the company's actions by the market), implementation of projects to create an attractive image, the formation of favorable conditions for the revitalization of business, analysis of the effectiveness of the use of existing potential.

An important component of this subsystem is the evaluation of the effectiveness of both external and internal implementation of the strategy, where the first is the ratio between planned decisions and available resources, and the second is the difference between expected and actual reactions in the external market, arising from the adaptation of the company to market requirements.

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In the context of a revitalized digital environment, companies can adopt different positioning strategies aimed at creating content focused on creating a unique brand. An important component of international branding in the digital space is choosing the right consumer culture positioning strategy.

Digitalization of business gives impetus to the development of project technologies. Agile project
management methods Scrum and Kanban become relevant. Scrum methodology allows for a clear allocation of roles in the development and implementation of strategies and teamwork in both the development and implementation of adaptive strategies. It is based on continuous learning and adaptation to changing factors. Kanban methodology involves visualization of project tasks, their structuring, effective distribution between performers. This technique allows to synchronize the work of the project team, to ensure the implementation of tasks "just in time", and to implement cyclical in the processes of implementing adaptive strategies.

Formation of communications in the promotion of the strategy is aimed at creating relevant appeals to consumers, the choice of ways to promote the image of the company, the creation of effective channels of information distribution in the process of implementing the strategy, assessing the possible extent of their workload, the identification of data sources on the adaptation to external market requirements. On the effectiveness of the design of information exchange will depend on the success of the entire process of implementing the strategy.

The final function of the mechanism, which streamlines the activity of all its systems and implements the feedback of its elements, is the analysis of the effectiveness of the adaptive strategy, which is carried out according to the results of achieving certain goals, implementing priorities, comparing the results with the resources spent to ensure effective adaptation to market conditions. It is important to organize ongoing control at all stages of the implementation of the strategy. It is necessary to ensure its regularity and independence from the influence of company management.

The mechanism for implementing adaptive strategies should be embedded in a system of digital business transformation and provide for the functioning of electronic platforms B2B, B2C, D2C – interaction. Effective functioning of the mechanism requires effective infrastructure of e-commerce and e-business (e-contract, e-logistics, e-invoicing, e-docflow), transactional support (online payments, fintech services, cashless tools) and interoperability (API, European ISA standards), interactive services (blockchain, LegalTech, InsurTech, FinTech), industrial digitalization (Industry 4.0), linking digital data to spatial objects (geographic information systems), information security.

4. Conclusions

The mechanism of implementation of adaptive business strategies developed by the authors allows to comprehensively assess the state of the market and evaluate the prospects for the company's development in the digital environment. The flexible tools of the mechanism allow choosing the most favorable scenario for external conditions of the strategy and quickly adjusting it in case of market changes. And the strategy implementation subsystem, based on agile principles, helps the company achieve its priorities in the digital environment.

Each separate subsystem of the mechanism can operate autonomously, because it is equipped with its own tools, decision-making techniques, algorithms for action. However, as a part of the mechanism, a multiplier effect is achieved, when on the basis of constant monitoring of the external environment, which allows the mechanism diagnostic subsystem, the strategy scenario is promptly selected and the market requirements are constantly adjusted. Thus, the speed of decision-making increases, and feedbacks between subsystems of the mechanism ensure the cyclicity of its action.

Among the functional limitations of the mechanism is the complexity of counteracting such risks of digitalization of business as a high level of cybercrime, shadowing of transactions, digital divide. This determines new directions for further research and opportunities to improve the mechanism. Consider as promising research in the field of risk management of adaptive strategies, dissemination of indicative methods of diagnostics of the digital environment, development of models of strategic adaptive management.

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Received on: 3th of August, 2022
Accepted on: 7th of September, 2022
Published on: 30th of September, 2022