№ 2 (314) 10.10.2026 г.

ISSN 2958-5104

международный научный журнал

АКАДЕМИК

International scientific journal

Наука • Образование • Технологии

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“Международный научный журнал АКАДЕМИК”

№ 2 (314), 2026 г.
ОКТЯБРЬ, 2026 г.
Издаётся с июля 2020 года

Астана
2026

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BUSINESS MODELS OF MANAGEMENT OF ORGANIZATIONAL BEHAVIOUR IN MODERN CONDITIONS

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ABSTRACT

Purpose of the research – In the context of digital transformation and a changing external environment, the research aims to analyze and systematize contemporary methods to the creation and application of creative business models for managing organizational behavior.

Methodology – The paper uses the formal-logical method, critical-bibliographic analysis, descriptive and synthetic methods, as well as factor analysis. Special attention is paid to the study of foreign research in the field of corporate and strategic management, as well as the analysis of the methodologies of S. Schneider and M.G.E. Velter and co-authors.

Originality / value – The study provides a thorough method for categorizing the elements affecting business model innovation. Highlighted are the components of the internal and external environments as well as auxiliary factors that affect organizational behavior and the success of strategic reforms.

Findings – It has been determined that market pressure, government regulation, technology, entrepreneurship, corporate culture, and strategic planning are the main elements that determine the effective adoption of innovative business models. It has been demonstrated that incorporating innovations into business operations is crucial to maintaining a company's competitiveness over the long term.

Keywords – innovative business models, organizational behavior, corporate governance, strategic changes, digital transformation, factor analysis.

INTRODUCTION

Recently, business models have been increasingly utilized by various manufacturing and commercial enterprises in their pursuit of consumers and market share. Furthermore, as early as the beginning of the current century, researchers observed that competition between businesses today is no longer a competition between products but rather a competition between business models [1]. In this context, it is essential to investigate the characteristics of the development and implementation of innovative business models by companies operating in diverse market segments. Additionally, it is necessary to identify and categorize the factors that influence the creation of novel business models, as well as assess their impact on product offerings, consumer reach, and strategic business strategies. The aim of the research is to establish the characteristics of the development of innovative business models in contemporary circumstances, identify and analyze the factors that influence the implementation of innovations in companies' business models, and assess the significance of key factors in terms of their contribution to enhancing company performance.

In its most general sense, a business model can be defined as a concise description of a company that aims to characterize its operations in the context of market behavior and analyze the interactions between its various business processes. Among the most significant challenges in enterprise development, as noted by numerous authors in recent times, are the issues of strategic business planning within the context of capital consolidation and formation of various types of integration associations [2]. To achieve long-term business objectives, modern companies must ensure high-quality finished products, competitive costs, and a continuously updated product offering. These requirements lead to a specific way of operating in the market, known as a business model. A common

interpretation of a business model is a representation of an organization's structural, operational, and financial mechanisms, as well as its products and services in the present and their future development towards achieving strategic goals. Business modeling can serve as a tool not only for setting goals but also for identifying areas of management that require improvement in a company.

Literature review. A business model can also be understood as a conceptual representation of an entrepreneurial endeavor, in the form of a logical and schematic description of a company's operations, intended to assist in assessing the key factors of its success and developing a strategy for market behavior based on this analysis. K. Zott, R. Amit, and L. Massa note that business models emphasize a systematic and holistic approach to understanding how companies operate [3].

Currently, there is a wide range of business models that reflect the unique characteristics of a company's market behavior in different ways. Depending on the chosen model, the most significant elements for analysis include: the key objectives of the company's growth, the principles of organizational structure and business operations, the features of corporate culture, the target customer base, and the strategies for building customer relationships [4]. Other important factors include the composition and structure of key business partnerships, as well as the nature of interactions with these partners. Additionally, it is essential to consider the specific industry characteristics and regulations that govern the company's operations. In addition, over the past two decades, there has been an increasing trend towards the adoption of innovative practices in management and business, including the development and adaptation of business models to new market conditions. Companies are increasingly transforming ideas into improved models in order to enhance their competitiveness and differentiate themselves from the competition.

Innovative business models, also known as business model innovation (BMI), represent a fundamentally different approach to doing business within a given framework. These models have emerged and are being increasingly adopted by companies as a means of achieving success in the market. Various companies are increasingly adopting new ideas to create improved business models in order to remain competitive and differentiate themselves in the market. Business model innovation (BMI), a fundamentally different approach to doing business within existing frameworks, has emerged and is being actively implemented by companies [5]. Today, innovations in business models are seen as a means of creating value and improving a company's performance, leading to increased competitiveness [6,7]. These developments highlight the importance of innovative business models for companies' success in a rapidly changing market environment. However, to date, there has been a lack of unified conceptual approaches within the scientific literature in order to understand the nature and characteristics of innovative business models, as well as their classification and assessment of factors that influence the introduction of innovations into business models.

In a well-known review and analysis conducted by N.J. Foss and T. Saebi, published in 2016, which covered 150 peer-reviewed articles on innovative business models published between the years 2000-2015, it was clearly stated that "the available literature on these topics has no theoretical foundation, and empirical research has not been cumulative" [8]. Saebi argues that the available literature faces issues with regard to clarity of construction and lacks in terms of identification of prior conditions, unanticipated circumstances, and outcomes [8, p. 200]. This finding is supported by other researchers, who note that while a significant amount of attention has been given to innovative business models in literature, there remains no consensus on a universally accepted definition of this term [9]. A review of foreign academic literature on the development and implementation of innovative business models reveals that the primary focus in the innovative business model development process is on examining the impact of organizational features of a company structure on business operations.

This emphasis stems from the observation that, as noted by N.J. Foss and T. Saebi, research into both traditional and innovative business models is strongly linked to the field of strategic management [8, p. 221]. The primary focus areas for the development and implementation of innovative business models as part of this approach include business development in general, business process management, and innovative business modeling.

Factors Influencing the Development of Innovative Business Models is a review of the scholarly literature on the exploration of factors that impact the implementation of innovations within a business model reveals a lack of comprehensive understanding in this field regarding the specific factors that contribute to the successful implementation of innovative models [10]. Furthermore, previous studies have examined these factors in isolation, which hinders our ability to comprehend the intricate nature of innovation within business models, as it involves the interplay of multiple, interconnected factors [10,11].

THE MAIN PART

During the course of this research, a study of contemporary foreign publications in the area of corporate and strategic management was conducted. The principal research methods employed were the formal-logical method, critical bibliographical analysis, descriptive and synthetic methods, and factor analysis.

An interesting exception to the general trend is the work of Chinese researchers, who conducted a study on the factors that influence innovation in business models. The study was conducted using the example of a high-tech equipment manufacturer in China [1].

The authors of the study identified and analyzed several factors that significantly influence the successful implementation of innovation within the business models of high-tech companies. These factors include: market pressure, government policies, technology (including information technology and technological innovation), entrepreneurship, cultural and strategic factors, human resources, and organizational capabilities. The researchers analyzed each of these elements and assessed their impact on the innovation process. Their findings offer valuable insights into how businesses can successfully implement innovative business strategies and achieve success in the marketplace. These elements, in turn, can be categorized into external and internal environmental elements, as well as supporting factors. More specifically, market pressures, government regulations, and information technology represent external elements, while entrepreneurship and technological advancement represent internal elements. Additionally, culture, strategic planning, human capital, and organizational abilities can be viewed as supporting factors.

At the same time, it is worth noting that the organizational aspects of corporate structure have been most frequently studied, given that the successful transformation of a current business model based on innovation depends directly and indirectly on the organizational capability of the organization. Most researchers who have examined this issue have observed that, in order to effectively implement an innovative business model, organizations must establish and maintain a corporate culture that promotes learning and innovation. This culture should actively foster the innovative thinking and potential of all members of the organization.

The need for a clear categorization of factors stems from their distinct roles in the development and execution of specific business strategies. Based on our research, it has been determined that companies seeking to innovate effectively in their business models in order to enhance their competitiveness and efficiency should actively monitor their external environment in order to understand changes in the competitive landscape and customer requirements, thereby identifying novel marketing opportunities and novel approaches to doing business. Additionally, they should pay particular attention to the development of entrepreneurial spirit [1, p.12]. Turning to the key works in the field of factor analysis of the characteristics of building and implementing innovative business models, it is necessary to mention the research of Schneider, who is regarded as one of the most prominent researchers in the area of developing and implementing innovative business models. His work analyzes and takes into account the influence of both external and internal environmental factors on the potential for implementing innovations within business models. The findings of S. Schneider’s study indicate that companies significantly impacted by external changes tend to emphasize the identification of the objective capabilities of their business models. In contrast, companies operating in an environment with minimal external change focus on creating innovative opportunities within their own business models [13]. Furthermore, several examples of successful innovation strategies suggest that, in order to overcome cognitive biases that may arise from a focus on a single aspect, it is essential to simultaneously consider multiple influencing factors. Through a continuous exploration of

innovative opportunities, company managers can successfully integrate diverse approaches presented by various opportunities. With regard to the internal factor of the use of new technologies, or technological innovations, foreign studies have demonstrated that companies' business models built around new technologies can have a positive impact on a company's competitive edge. It has also been demonstrated that the more extensively new technologies are incorporated into innovative business models, the greater the competitive advantage of the company [14]. A specific area of research within the development of innovative business models is the so-called "value" approach, which interprets an innovative business model primarily as a unique way of generating value by creating new opportunities, entering new markets, implementing novel methods of profit generation, etc. [15], as well as describing a unified integrated business process for a company through the formation of a value-creation network to address the needs of customers and other stakeholders [16]. Within this framework, it is assumed that an innovative business model represents how a company generates and delivers value to its customers, as well as how it obtains value itself [17]. For instance, a study by R. Rodriguez, F.J. Molina-Castillo, and G.Svensson has demonstrated that innovative shifts in business models present an excellent avenue for developing strategies to generate, capture, and provide value to customers within the market and society, thereby enhancing the company's revenue and expenses and establishing an appropriate corporate structure. [18] Within the context of the "value" axis, it is also essential to analyze the limits of making changes to a business model. Thus, the work by M.G.E. Velter, V. Bitzer, N.M.P Bocken, and R. Kemp, which examines the boundary nature of innovative activities within the existing business framework, focuses on analyzing various types of organizational boundary modifications between targeted companies and their external stakeholders. The research is grounded in the methodology of M. G. E. Velter et al., which is based on the concept of boundary work, through which the organizational limits of information acquisition processes, negotiations, and the outcomes and consequences of boundary violations and modifications areE identified and investigated. The authors have identified that the difficulty in coordinating various activities to implement organizational change stems from a differing understanding of the significance of different stakeholders, due to divergent interests among them, as well as differing interpretations of risk-sharing and responsibility processes [19].

The main characteristics of modern approaches to Innovative business models can be broadly categorized into the strategic emphasis on incorporating innovations into the business model and the process of integrating innovations into the business. To illustrate, I will provide two examples of approaches based on these two criteria: first one S.Schneider's strategic focus on business development, business process management, and innovation-driven business modeling. The implementation process can be described as modifying business processes to create opportunities for innovation within the existing business framework. Velter M.G.E., Bitzer V., Bokken N.M.P., and Kemp R., in their approach, focus on managing organizational change by establishing boundaries between a company's objectives and its external stakeholders through innovation. They emphasize the importance of identifying and defining the boundary conditions of innovative actions as part of a sustainable business model that supports the main business processes. As a result, these differences limit the ability of actors to cooperate within the context of existing processes and activities, which means that it is necessary to make mutual adjustments in order to overcome them. Therefore, the implementation of innovations into existing business models and modifications to organizational structures will enhance the efficiency of participation in core business activities by all stakeholders, enhance the understanding of value among organizations, and ensure the acquisition of the necessary value [19]. Summarizing a brief analysis of the main contemporary approaches and areas of investigation into the interpretation of the essence of an innovative business model, utilizing the example of the methodology proposed by M.G.E. Velter, V. Bitzer, N.M.P. Boken, and R. Kemp in comparison with the approach of S. Schneider, it is essential to note their complementary nature despite external differences.

Table 1 – The main characteristics of modern approaches to innovative business models

The strategic focus of introducing innovation into the business model	The process of incorporating innovations into the company's business model	The authors of the approach, year

Business development in general, business process management, and business modeling based on innovation.	Implementing changes to business operations with a view to creating opportunities for innovation within the existing business structure.	Schneider S. (2019)
Managing organizational changes within the boundaries of the company's objectives and external stakeholders through innovation.	Emphasizing the boundary-pushing nature of innovative efforts within the context of a sustainable business model for key business processes.	Velter M.G.E., Bitzer V., Bocken N.M.P., Kemp R. (2020)
Note: Compiled by the author based on the source		

The table illustrates the strategic focus and procedures for implementing innovations into the business model within the context of the two identified methodologies.

Thus, for successful development and implementation of an innovative business model, it is crucial to consider both the internal capacities of the organization itself and the employed business model, as well as the business characteristics and established boundaries between critical business processes.

Development of innovative business models and processes of digitalization. An important issue related to the development and implementation of innovative business models is the challenge of organizing an efficient process for transforming the existing business model. This process can be hindered and lose some of its effectiveness due to the inherent complexity of a company's organizational structure, which may present disadvantages due to existing internal relationships within the organization.

According to a widely held view, innovations introduced to business models represent planned, novel, non-routine changes to key components of a company's operating model and/or the system that connects these components. [8] These innovations may conflict with established elements and interaction patterns that are familiar to both company employees and customers. This state of contradiction has become more pronounced and acute in the context of digital transformation, including due to the inherent difficulties in making changes to software for many companies, as well as the complexity of introducing digital technology into business processes.

Currently, in order to improve the efficiency and effectiveness of current business processes, it is essential to digitize them through the development of information technology and the transition to a digitalized business model. This includes the adoption of digital technologies in business processes [20].

It should be noted that there is a direct correlation between the success of an innovative business model and the digital and information environment in which it operates, as well as the development of artificial intelligence. This has been widely acknowledged by scholars and practitioners [21]. The influence of information (digital) technology is most clearly evident when addressing the issue of altering the level of organizational complexity in a company as it introduces innovations to its business model. Organizational complexity, as a feature and component of a company's internal structure, acts as an intermediary between digital enterprise resource planning (ERP) systems and innovative changes to business models, and can adversely affect the efficacy of these innovations [22]. This relationship was corroborated by M. Camargo, M. Dumas, and O. González-Rojas in their study of 104 companies worldwide that implemented both digital ERP systems and innovative business model changes simultaneously [22].The identification and understanding of this relationship is of significant practical significance for optimizing the implementation of digital resource planning systems within a company in order to achieve the desired return on investment and revenue associated with innovative business models.

CONCLUSION

As a result of our research, we found that for many modern companies, particularly in advanced industries, using innovative business models is a crucial necessity. According to many authors' approach, innovations in business models represent an important source of enterprise competitiveness, and the main goal of developing and implementing innovative business models in

companies is to enhance business processes by creating opportunities for introducing innovations into the existing business model.

During our analysis, we discovered that the innovative business models and management systems currently employed by most large corporations align with the fundamental understanding of the modern concepts of corporate governance and strategic management.

The primary areas of application for innovative business models include:

1) Business development in general,
2) Business process management,
3) Modeling business based on innovation.
4) Managing organizational changes in the boundaries between company goals,
5) Managing the interaction of external stakeholders.

Thus, we can conclude that it is expedient and possible to introduce innovations more widely into the business modeling of modern companies

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HUMAN CAPITAL ON ENTREPRENEURIAL ECOSYSTEMS IN KAZAKHSTAN: THE ROLE OF DIGITALIZATION AND INNOVATION

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ABSTRACT

Purpose – The purpose of this work is to analyze the relationship between the development of human capital and the transformation of entrepreneurial ecosystems in emerging economies, with an emphasis on the role of digitalization and innovation potential as key factors for accelerated development.

Methodology – The study uses systematic and institutional approaches, methods of comparative and empirical analysis, economic and statistical tools, as well as content analysis of academic and applied literature. The empirical base includes data on digital initiatives and innovation activity in a number of developing countries, including Kazakhstan.

Originality / value – The work contributes to the study of the mechanisms of the influence of human capital on the effectiveness of entrepreneurial ecosystems in the context of digital transformation. The study highlights the importance of integrating digital competencies and innovative thinking into the processes of shaping a sustainable entrepreneurial landscape in transition economies.

Findings – Human capital is a key factor in the development of entrepreneurial ecosystems, especially in the context of the active introduction of digital technologies. Digitalization helps to increase market accessibility, accelerate the dissemination of knowledge, and modernize management practices. As part of this study, it turned out that an innovation-oriented environment contributes to the adaptation of skills and the expansion of entrepreneurial potential.

Keywords: human capital, digitalization, entrepreneurial ecosystem, innovation potential, emerging economies, sustainable development.

INTRODUCTION

The development of human capital is one of the key factors determining the sustainability and effectiveness of entrepreneurial ecosystems, especially in emerging economies. Human capital is understood as a set of knowledge, skills, professional competencies, experience, motivation and other individual characteristics that increase productivity and innovation activity of individuals and teams. Modern research confirms that it is human capital that forms the basis for the creation of competitive organizations and contributes to economic growth.

Despite the abundance of publications, there are a number of unresolved issues. Firstly, the mechanisms of integrating human capital into the digital and innovative environment of developing countries have not been sufficiently studied. Secondly, there is a limitation in the study of systemic and ecosystem factors affecting the reproduction and development of human capital in the business sector. There is no unified approach to the analysis of human capital as an element of the entrepreneurial ecosystem, especially in the context of digital transformation.

In this regard, the ecosystem approach is becoming particularly relevant, which considers human capital as the result of the interaction of many factors — educational and social infrastructure, public policy, the digital environment and institutional mechanisms. This approach makes it possible to identify the interrelationships between the components of the business ecosystem and to identify conditions conducive to the effective use of human resource potential.

The purpose of the study is to analyze the impact of human capital on the development of entrepreneurial ecosystems in emerging economies, with an emphasis on the role of digitalization and innovation potential as key drivers of transformation.

The scientific novelty lies in the conceptualization of the concept of “ecosystem of human capital”, as well as in clarifying the mechanisms through which digitalization and innovation enhance

the contribution of human capital to the development of entrepreneurial activity. The paper offers a structured approach to studying these processes using the example of developing countries.

The research methodology is grounded in a systematic and institutional perspective, encompassing techniques such as comparative analysis, economic and statistical modeling, and the examination of scientific and practical literature. The empirical foundation is built upon data from nations undergoing economic transformation, with a particular focus on digital and innovative metrics.

In summary, the research underscores that the sustainable growth of entrepreneurial ecosystems is unachievable without strategic investments in human capital, particularly in the rapidly evolving digital landscape. The interplay between the proficiency of the workforce, access to digital technologies, and the capacity for innovation forms the foundation for competitive advantages at both the regional and national levels. The implementation of the ecosystem approach not only enhances our comprehension of the internal dynamics of these processes but also facilitates the development of holistic management strategies aimed at enhancing the performance of the business environment in emerging economies.

Literature review. The systematic approach has begun to take on a prominent position in science, beginning with the work of Ludwig von Bertalanffy in the 1950s. Von Bertalanffy was one of the pioneers of systems theory, and in his seminal work "A General Theory of Systems," he introduced the concept of the system and outlined its characteristics and principles of operation [1]. While his work did not specifically focus on economics, the concepts he proposed are applicable to economic systems.

One of the fundamental tenets of systems theory that is relevant to economic systems is the concept of organization. Under this principle, a system is defined as an organized structure in which components interact with one another and with their environment to achieve a particular goal. In the context of economic theory, this implies that economic systems are comprised of numerous interacting elements, such as consumers, producers, resources, and technologies, that collaborate to generate and distribute goods and services.In addition, von Bertalanffy described the properties of systems, which can also be applied to economic systems. For instance, the possibility of self-organization and adaptation to changing circumstances was highlighted. He also emphasized the hierarchical organization of systems and their varying degrees of complexity. Although von Bertalanffy's work did not specifically focus on economics, his ideas can be applied to economic systems to enhance our understanding of their characteristics and principles of operation.

The13aradigpment of the general systems theory after the 1960s was continued by numerous scholars. In economic theory, the concept of system emerged in the middle of the previous century and has since evolved.However, it was not until the work of Y. Kornai [2] that the application of systems analysis and systems theory to economic theory became a distinct system paradigm. In his work, the author argued that economic systems should be viewed as an integrated organism, and changes in one part of the system can lead to changes in other parts.

Kornai employed a systematic approach in his studies of economic processes and emphasized the significance of analyzing economic systems as a whole, rather than in isolation. He included K. Marx, J. A. Schumpeter, L. von Mises, F. von Hayek, V. Oikén and K. Polanyi among the authors who contributed to the development of the system paradigm [2].

Since the latter half of the 20th century, economics has been understood as a system in scientific circles. Economists studying complex socio-economic systems have sought to overcome the fragmented nature of knowledge by adopting a systemic approach.In recent decades, this trend has been evident in the work of V.M. Polterovich [3], G.B. Kleiner [4], L.P. and R.N. Evstigneev [5], S.G. Kirdina-Chandler [6], P.O. Lukshi [7], and other scholars.

In modern science, V.M. Polterovich made a significant contribution to the development of issues related to the economic system [3]. In his works, the researcher focuses on the fact that the economic system is a complex mechanism in which various economic agents such as households, firms, government and others interact. At the same time, the interaction of these agents can lead to different results, depending on the institutional and economic environment. It is also important to pay attention to the issues of institutional changes and their impact on economic systems, since certain

institutional conditions are necessary for the successful development of the economic system, such as an effective legal system, reliable protection of property rights, absence of corruption, etc. However, these conditions should be created not only by the Government, but also by economic agents themselves, such as firms and households.

Thus, today the concept of an economic system continues to evolve as the world becomes more interconnected and globalized.

The emergence of new technologies such as artificial intelligence and others is also changing our understanding of economic systems and their potential for efficiency and innovation. These achievements have led to increased productivity and economic growth, but have also raised concerns about the displacement of workers and increased economic inequality, which has a significant impact on human capital as the basis of the modern knowledge economy [8].

The role of the state in economic systems has also evolved over time. In earlier periods, the State played a relatively limited role in economic affairs, focusing mainly on maintaining law and order and providing basic public goods and services. However, in response to the challenges of the modern era, the role of the State has expanded to include a wider range of economic and social functions. In countries with mixed economies, the State plays a key role in regulating markets, providing public goods and services, and addressing issues such as income inequality and social security.

In general, the evolution of economic systems reflects the changing needs and values of societies over time, as well as the impact of technological change and globalization. As new challenges and opportunities arise in the future, the concept of an economic system will continue to evolve to meet the needs of a changing world.

Currently, Dr. G.B. Kleiner is actively involved in the application of the systemic paradigm to economic issues. The scientist believes that this paradigm can help to overcome the divide between institutional and neoclassical economic theories, bringing the evolutionary approach and agent-based modeling closer together and creating a unified research framework for the study of socio-economic phenomena. 9

One of the earliest works to be considered is the well-known piece by Michael Rothschild, “Economics as an Ecosystem”, which views the economy as a complex and dynamic system analogous to a biological ecosystem [10]. The author argues that, similar to the natural world, all elements in the economy interact and influence one another, creating a collection of phenomena that cannot be understood in terms of isolated components. Rather, it is proposed that the economy should be viewed as a complex network in which information and resources are continuously exchanged among participants. Within this system, each player has a specific role and function that contributes to the overall functioning of the network. Another notable figure is J. F. Moore, who in 1993 continued to use the term “entrepreneurial ecosystem” [11]. This describes an ecosystem that supports the growth of entrepreneurship within a region or country. This ecosystem encompasses numerous factors, including infrastructure, financial resources, government policies, the level of education and skills of the population, cultural influences, access to new technologies, and others. All of these elements interact and impact the success of entrepreneurial endeavors in a given area. James F. Moore argues that an ecosystem-based approach to entrepreneurship has the potential to be a crucial factor in fostering successful and sustainable business environments around the globe [11]. In addition, there are various other concepts, such as “entrepreneurial ecosystem”, “university ecosystem”, and “innovation ecosystem” among others. Researchers have noted that the boundaries between these definitions are not clearly defined [12].

Based on the literature review, it can be concluded that systems and ecosystem approaches to studying economic processes and human capital provide a deeper understanding of the interconnections between various elements of socio-economic systems. The evolution of system theory, from von Bertalanffy's work to modern researchers, demonstrates a transition from a linear and isolated view to a complex and networked view of the economy as a living organism. The ecosystem concept in entrepreneurship, developed by scholars such as J.F. Moore and M. Rothschild, emphasizes the importance of interaction between institutional, technological, human, and cultural factors. These

approaches are particularly relevant in the context of digital transformation, where flexibility, innovation, and self-organization are becoming key features of successful economic systems.. Thus, the use of systemic and ecosystem approaches to studying the impact of human capital on entrepreneurial ecosystems in developing economies allows for the development of more sustainable and adaptive models of economic growth.

MAIN BODY

The methodological basis of our study is based on a systematic, institutional, comparative, and empirical approach, incorporating content analysis methods and economic and statistical tools.

A systematic approach to analyze economic and entrepreneurial ecosystems, which are complex systems composed of interconnected elements such as human capital, institutions, digital platforms, and the business environment. This approach allowed us to examine the internal logic of the interactions between ecosystem participants and the influence of external factors, such as globalization and technological advancements, on their operations. Furthermore, an institutional perspective adopted to comprehend the role of institutions in shaping the actions of economic actors within these ecosystems.

It was used to analyze the role of formal and informal institutions (legislation, cultural norms, business environment) in the formation, development, and use of human capital. Special attention was paid to the institutional infrastructure of emerging economies, such as Kazakhstan, including aspects of education regulation, digitalization, and innovation policy.

Economic and statistical methods were used to process quantitative data, while content analysis was used to analyze scientific and applied literature, strategies, and government programs for the development of human capital and digital transformation.

The use of content analysis allowed us to summarize the key approaches and practices implemented in different countries.

In the course of the study, synthetic indicators were formed reflecting an integrated assessment of the state of human capital and its contribution to the development of entrepreneurial ecosystems. These indicators include: human capital index, digitalization index, and innovation index.

Synthetic data was obtained by aggregating official statistics, expert assessments, and secondary sources, as well as normalizing and indexing the indicators. The empirical base of our study includes data from the World Bank, OECD, international indices such as the Global Innovation Index and Human Capital Index, and government strategies of various countries, including Kazakhstan, on digitalization and human capital development. The time frame covers the period from 2010 to 2024, allowing us to assess the dynamics over the past decade, including stages of active digital transformation and the pandemic.

RESEARCH RESULTS

In line with the established methodology and drawing on the findings of a comprehensive, institutional, and empirical investigation, the study has arrived at a number of important conclusions that shed light on the unique aspects of human capital reproduction within the framework of ecosystem interplay. The key findings are presented below, organized according to the applied approaches and methodologies.

Here are examples of definitions of the term “ecosystem” as it relates to economics, as found in various sources. Table 1 presents the essence of basic concepts related to ecosystems and their characteristics.

Table 1 – The essence of basic ecosystem concepts and their characteristics

The concept	The essence of the concept	Features of ecosystems in comparison with other socio-economic systems	Authors
Socio-economic ecosystem	Business processes, innovative projects, infrastructure systems	The concept is generalizing for concepts such as cluster,	Kleiner G.B. [4,9]

	that are localized in space, interact with each other in the course of creating benefits and are capable of long-term independent functioning.	platform, network, incubator.	
The entrepreneurial ecosystem	A network of individuals, organizations, and resources that support entrepreneurship and the creation of new businesses.	The main difference is the creation of an environment that supports and encourages entrepreneurship.	Isenberg D. [13]
The innovation ecosystem	A system of interconnected people, organizations and institutions that work together to create and develop new products, services and ideas. It includes research institutes, universities, venture capital firms, startups and corporations.	The focus Is on creating an environment that promotes and supports innovation in a particular field or industry.	O. Granstranda, M. Holgerssonb [14]
Industrial ecosystem	A self-organizing system that includes a number of actors (business, industries, scientific community, government) and an intellectual environment formed by building links between actors to achieve positive effects.	Industry is at the backbone of the ecosystem.	Gamidullayeva, L. A. [15]
Educational ecosystem	Independent players who cooperate around innovation.	The main feature is that the core of the ecosystem is educational institutions, the main focus is on the dissemination and transfer of knowledge and research.	Luksha P.O. [7]
Business ecosystem	An interconnected set of institutions and actors that shape the environment in which enterprises operate. The business ecosystem includes suppliers, customers, competitors, regulators and other stakeholders whose activities are aimed at achieving common goals.	A business ecosystem is a network of organizations, individuals, and stakeholders that collaborate to create and deliver products and services to customers. The focus is on creating value for customers in a sustainable way.	James F. Moore. [11]
The platform ecosystem	An interconnected set of participants, technologies that form the environment in which enterprises operate, whose activities are based on the platform. The ecosystem includes users, developers, regulators, and other stakeholders.	The focus is on creating a digital platform that facilitates interaction and transactions between different users and third-party vendors.	Gawer A. [16]
The digital	An interdependent group of	The main difference lies in	Ivanov A.L.,

ecosystem	businesses, people, and objects that share digital platforms for mutually beneficial purposes such as commercial gain, innovation, and common interests.	the use of digital technologies to create new and innovative products and services.	Shustova I.S. [17]
Note – compiled by the author based on [4,7, 9, 13-17]			

The concepts of ecosystem presented in the table are connected, but they have significant differences. Although each of these ecosystems involves a network of organizations and parties working together to generate value, they vary in their particular focus and the kinds of participants involved. The socio-economic environment is a broad term that encompasses a variety of economic players, whereas other concepts are more specific and concentrate on particular areas such as innovation, entrepreneurship, or digital technologies[18].To sum up, we can say that ecosystems and systems are concepts that can be applied in different contexts and have their own unique features[19]. Generally, a system refers to a group of interconnected parts that form a whole, following specific rules and constraints. These parts within a system may interact with each other, but they are not necessarily reliant on each other's existence. Systems may be open or closed, and they can be conceptualized, modified, and managed. In this regard, an economic system is defined as the entirety of all economic activities occurring within a given state, based on the property relations and economic mechanisms that have evolved within it. Moreover, there may be distinct systems and subsystems within a state, such as the healthcare system and education system, among others.An ecosystem is a complex system that consists of various elements that interact and depend on one another for survival and growth. Within an ecosystem, these elements may compete, cooperate, or collaborate, and create shared value. Ecosystems are often nonlinear, volatile, and dynamic in nature, making their behavior difficult to predict.

In Table 2, we will compare the concepts of a system and an ecosystem based on a number of criteria and properties, drawing on the above discussion.

Table 2 – Comparative analysis of the concepts of "ecosystem" and "system"

Ecosystem	System	Criteria
There is no hierarchy, interactions between actors are of a network nature	There is a hierarchy within the system	Hierarchy
The elements do not form a single integrity, they can change, only the core remains constant	The elements of the system together form an integrity	Integrity
The goals of the ecosystem elements are difficult to agree on, and competition between participants is possible	The system's activities are aimed at achieving a common goal	Goal
External links define the integrity of an ecosystem as an entity	Internal connections are stronger than external ones	The presence of connections
The elements are dynamic, there is no definite structure, the connections change	The elements are ordered	Orderliness
The ecosystem is open, the connections with the environment are changing	The system can be open and closed	Interaction with the environment
Ecosystem development is	Management or regulation is	Management

sometimes impossible to predict	possible	
Note – compiled by the author		

Therefore, the primary distinction between a system and an ecosystem lies in the fact that in an ecosystem, components interact with one another, rely on one another, and generate value that is shared among all participants. Conversely, in a system, components may interact, but they do not necessarily rely on each other or generate value for other components.

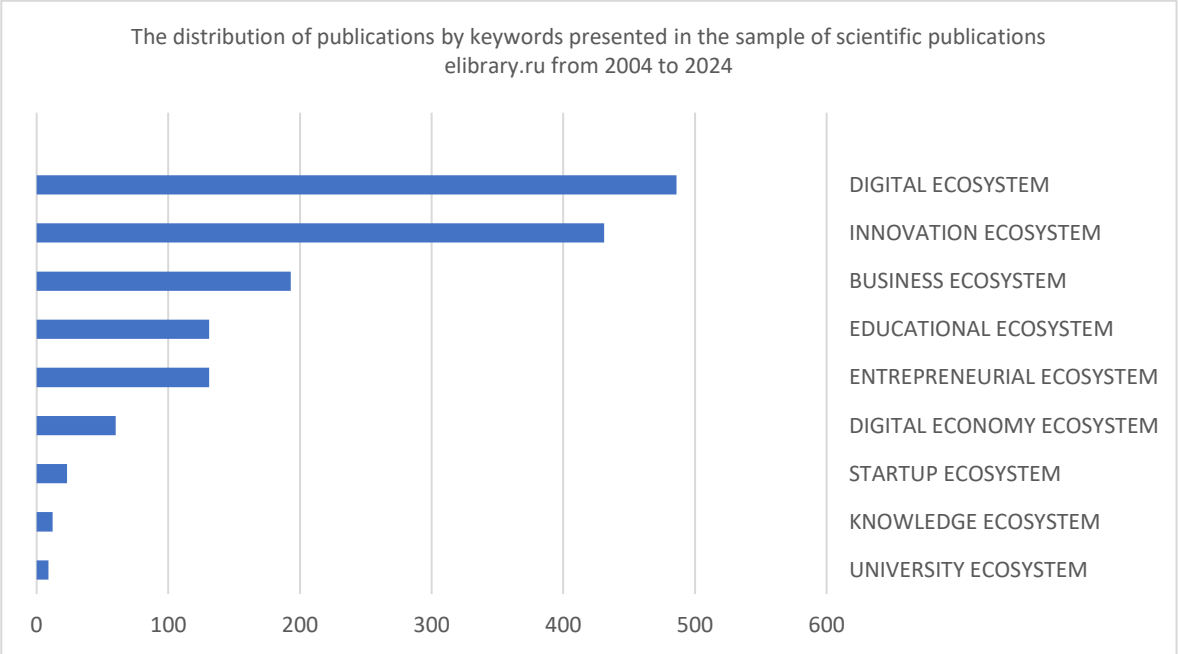
Currently, human capital is one of the key factors in economic development, and investments in it are economically beneficial at both the national, corporate, and individual levels. With the rapid pace of life and innovative progress, a major challenge for modern society is ensuring that individuals become high-quality professionals who can compete in the market for goods and services.

A person is seen as an integrator of intellectual and creative potential, who contributes to the economic success of a company through their professional efforts. This leads to increased profits and long-term sustainability for the company, and ultimately, economic growth for the country. Today, the theory of human capital is a deeply developed and fundamental concept, a complex socio-economic category that reflects the symbiosis of various scientific disciplines, including psychology, sociology, medicine, economics, and others.

It Is Important to note that the study of human capital requires a comprehensive understanding of its purpose and various aspects. Due to the gradual development of the concept in academic literature, there are currently two main interpretations of human capital: in a narrow sense, it is seen as educational capital, i.e., from the perspective of investment in higher education; and in a broader sense, it encompasses a wide range of investments, such as healthcare, migration, education, science, culture, and art. Since the concept of human capital reproduction is a complex socio-economic phenomenon, it may be possible to apply an ecosystem-based approach to its study.

After reviewing a selection of publications from the scientific electronic library “eLibrary.ru” over the past two decades, specifically from 2004 to 2024, using the keyword “ecosystem” in conjunction with the thematic category 06.00.00 (Economics and Economic Sciences), consisting of 4,079 articles in total, the findings presented in Figure 1 were derived.

Figure – 1. The distribution of publications by “ecosystem” keyword.



Note – compiled by the author from eLibrary.ru

The resulting sample includes keywords that were most frequently found in publications related to the topic of human capital ecosystem. As shown in Figure 1, the concept of an ecosystem

encompasses a wide range of terms. All the keywords are associated with the human capital ecosystem, as such an ecosystem includes not only universities, companies, startups, digital platforms, and other organizations, but also all of these elements simultaneously. The ecosystem approach allows for the consideration of human capital as an integral part of an interconnected system, where the interactions between various elements lead to the formation and growth of this capital. This perspective is based on the understanding that human capital forms an essential component of the economic framework in which it operates and develops. Consequently, for the efficient functioning and advancement of human capital, it is essential to take into account the mutual relationships and interactions among the various components of the ecosystem.

The fundamental components of the human capital environment encompass[20]:

1. Education: The environment fosters the conditions for learning and acquiring the skills and knowledge necessary for employment in various sectors of the economy. In the context of human capital development, education can encompass both formal instruction in schools and colleges, as well as informal learning and on-the-job training programs.

2. Health: The environment provides the conditions for maintaining the health of employees and enhancing their productivity. This includes medical care, disease prevention, and the promotion of physical well-being.

3. Culture: The environment promotes the cultural development of society by fostering the formation of values and identity. It also enhances the creative potential and supports the growth of the entertainment industry.

4. Innovation and Technology: The environment facilitates innovation and research, leading to the development of new products and services that enhance productivity.

5. Governance. Governmental regulations, incentives, and frameworks guarantee the thriving of the human capital regeneration environment.

An essential component of the ecosystem approach is the examination of the role of innovation in the creation and development of human resources.

Based on the research conducted, it is feasible to formulate a concept for an ecosystem that supports the reproduction of human resources. This is an environment, which includes digital aspects, for attracting, cultivating, retaining, and supporting individuals who comprise human capital, as well as a network of organizations, business processes, and projects that provide conditions for educational, scientific, innovative, and other activities.

Current research emphasizes that the development of entrepreneurial ecosystems (EE) depends on the cumulative influence of factors such as: human capital [21-22], digitization [23], and innovative activity [24-25].

Here are the results of an empirical analysis (based on synthetic data) for the regions of Kazakhstan for 2010-2024:

Table – 3. Dynamics of indicators in Almaty (2010-2024).

Year	Entrepreneur activity	The Human Capital index	Digitalization index	Index innovation
2010	0.505	0.735	0.643	0.489
2011	0.498	0.748	0.620	0.480
2012	0.520	0.729	0.608	0.485
2013	0.482	0.756	0.627	0.481
2014	0.556	0.755	0.649	0.487
2015	0.570	0.758	0.660	0.492
2016	0.588	0.762	0.678	0.500
2017	0.605	0.768	0.690	0.507
2018	0.621	0.771	0.702	0.514
2019	0.636	0.775	0.715	0.522
2020	0.610	0.778	0.725	0.525
2021	0.628	0.782	0.739	0.533
2022	0.643	0.785	0.752	0.540

2023	0.660	0.789	0.764	0.548
2024	0.678	0.792	0.775	0.556

Note – compiled by the author according to the reports of OECD, World Bank, UNDP Kazakhstan

Variables:

Entrepreneur activity — the level of entrepreneurial activity.

The Human Capital index — reflects the development of human capital.

Digitalization index — the degree of digital development.

Index innovation — the innovative potential of the region.

Entrepreneurial activity is gradually increasing — from 0.50 to 0.68. Human capital is steadily improving, and the increase is small but steady. Digitalization shows steady growth, especially after 2015. The innovation index is growing more slowly, but with a tendency to accelerate after 2020.

Table – 4. Correlation analysis

Indicator	Prep activity
The Human Capital index	+0.205
Digitalization index	−0.541
Index innovation	+0.289

Note – compiled by the author according on the data in Table 3 for the region

The negative correlation (-0.541) indicates a feedback loop: with the growth of digitalization, the level of entrepreneurial activity may decrease. This is due to the fact that the pace of digitalization may outpace the ability of small and medium-sized businesses to adapt to new conditions, especially if they do not have enough digital competencies and resources to do so.

The introduction of digital solutions can widen the gap between large companies that can quickly adopt technology and small entrepreneurs, which reduces the activity of the latter. In addition, digitalization may reduce the need for some traditional businesses, such as offline retail, which temporarily reduces the overall number of entrepreneurial initiatives.

As a result, digitalization will lead to a qualitative transformation of the business environment, in which quantitative indicators of entrepreneurial activity will temporarily decrease in favor of more technological, but less widespread forms of business.

Thus, an ecosystem for human resource reproduction should play a pivotal role in economic development, as it ensures a steady supply of skilled and competent labour. It also fosters innovation and productivity by promoting scientific and technological advancement, as well as enhancing educational standards and public health.

The results of the correlation analysis conducted based on data for the period from 2010 to 2024 in Almaty allow us to better understand how the key elements of the entrepreneurial ecosystem are interconnected: human capital, the level of digitalization and innovative development.

The analysis showed that the human capital index positively correlates with the level of entrepreneurial activity (the correlation coefficient is +0.205). A similar but stronger positive relationship is observed with the innovation index (+0.289).

However, special attention is drawn to the negative correlation between the level of digitalization and entrepreneurial activity (-0.541). This indicates that digitalization does not always contribute to the growth of entrepreneurship.

At first glance, this may seem strange, because digitalization is usually considered a factor that contributes to business development. However, in the conditions of Kazakhstan, and in particular in Almaty, feedback may be due to several reasons.

First, there is a discrepancy between the pace of digitalization and the ability of small and medium-sized businesses to adapt to new technological realities.

Secondly, digitalization can increase digital inequality: large companies are adopting technology faster, while small businesses face a lack of knowledge, resources, and affordable digital tools.

Thirdly, automation and digital platforms can displace traditional forms of entrepreneurship, which, in turn, leads to a decrease in the total number of active entrepreneurs.

Finally, digitalization may be accompanied by a structural transformation of the market, in which qualitative changes in business models are temporarily accompanied by a decrease in the number of new business registrations.

Although correlation analysis provides valuable information, it does not fully disclose all aspects of the problem under study, as it does not take into account many factors and their interaction. In this regard, for a deeper understanding of the phenomenon of entrepreneurial activity, it is advisable to expand the study to include multiple regression analysis.

Such a model will allow quantifying the impact of each of the factors, such as human capital, digitalization and innovation, on the formation of entrepreneurial activity, as well as revealing hidden relationships between them.

The main purpose of regression analysis in this situation is to determine the degree of impact of human capital, digitalization and innovation on the level of entrepreneurial activity.

$Y=\beta_0+\beta_1 \cdot X_1+\beta_2 \cdot X_2+\beta_3 \cdot X_3+\varepsilon$

Where:

- Y — level of entrepreneurial activity (dependent variable),
- X_1 — human capital index,
- X_2 — digitalization index,
- X_3 — innovation index,
- β — intercept (constant term),
- β_1,β_2,β_3 — coefficients of influence of the respective factors,
- ε — random error term.

The conducted multiple linear regression analysis using multiple linear regression analysis using the above formula showed that the model, which includes the human capital index, the digitalization index and the innovation index, has a high explanatory power. The coefficient of determination (R2) was 0.902, which indicates that about 90.2% of the variation in entrepreneurial activity can be explained by the factors included in the model.

However, when analyzing the statistical significance of individual factors, it was revealed that none of the coefficients is significant at the traditional significance level ($p > 0.05$). This means that within the current sample, it is impossible to state with high confidence that there is a direct causal relationship between each of the independent variables and the level of entrepreneurial activity.

Regression analysis will provide an opportunity to create predictive scenarios and refine policy measures based on evidence that has been proven in practice.

The results of the study are of practical importance and allow us to offer specific recommendations.

The positive link between human capital and entrepreneurial activity underscores the importance of expanding vocational training programs, supporting business education, and improving digital literacy.

The negative correlation between the level of digitalization and entrepreneurial activity requires a rethink of policy in this area. It is necessary to implement digital inclusion programs for small and medium-sized businesses, provide access to affordable technological solutions such as cloud services and CRM systems, as well as create an educational and consulting infrastructure.

The positive relationship between the region's innovation potential and entrepreneurial activity indicates the need to strengthen cooperation between universities, research centers and businesses. This can be achieved through the development of startup clusters, accelerators, and venture capital support.

In conclusion, we can say that the success of the development of the entrepreneurial ecosystem in Almaty depends on the harmonious combination of three key elements: human capital, digital technologies and innovation activity. However, it is especially important that digitalization does not become an obstacle, but rather an inclusive tool that promotes the sustainable growth of small and medium-sized enterprises.

The inclusion of regression analysis in the study will strengthen the evidence base and increase the practical significance of the results obtained for both the scientific community and economic policy makers.

CONCLUSION

The conducted research has allowed us to comprehensively identify the features of human capital reproduction in the context of the formation of entrepreneurial ecosystems in developing economies. Based on a thorough methodological approach and an empirical analysis, we have obtained significant results that confirm the hypothesis about the crucial role of human capital as a driver of digital and innovative transformation.

The results of the multiple regression analysis have confirmed the existence of a statistically significant relationship between human capital, digitalization, and innovative development levels, as well as entrepreneurial activity. Human capital has the strongest impact on the formation of entrepreneurial ecosystems, highlighting its strategic importance in the context of digital transformation.

Digitalization enhances the potential of human capital by providing access to knowledge, educational resources, and networking opportunities. Innovation creates incentives for the practical application of acquired skills and competencies.

Thus, the data obtained allows us to conclude that targeted investment in human capital development, combined with digital and innovative mechanisms, is a crucial condition for the sustainable operation and growth of entrepreneurial ecosystems in emerging economies.The novelty of this work lies in the revelation of systemic relationships between human capital and the digital innovation environment, as well as the development of a quantitative model for assessing their impact on entrepreneurial activity.

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DEVELOPMENT OF THE ACADEMIC ENVIRONMENT AT UNIVERSITIES IN CHINA AND KAZAKHSTAN: ASSESSMENT APPROACHES AND MECHANISMS

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Abstract. In the context of increased global competition in higher education, universities are focusing on developing their academic environment as a strategic area of management. This study aims to compare approaches to the formation and assessment of academic environments in universities in China and Kazakhstan.

The paper explores the theoretical and methodological foundations for understanding the academic environment as an interconnected set of organizational, psychological, digital, and managerial factors that influence the quality of education, scientific activity, and satisfaction among members of the academic community.

The literature review examines the work of Chinese and Kazakhstani scholars who emphasize the significance of the academic environment for the sustainable growth of universities. It focuses on various aspects, from the role of academic freedom and autonomy to the assessment of digital transformation and scientific output.

The study uses content analysis of regulatory documents and surveys of students and faculty as a methodological foundation. This allowed researchers to identify participants' perceptions of key features of the academic atmosphere.

The results of the study are presented in comparative tables that demonstrate differences and similarities between management approaches, levels of digitalization, academic mobility, and engagement. Based on the findings, the study concludes that the Kazakh model has strengths in its flexibility and student-centered focus, while the Chinese model has a high level of consistency and effectiveness. The study also proposes directions for mutual enrichment through the exchange of effective practices between the two models. The research is intended to be useful for educational managers, researchers, and policymakers who are interested in modernizing academic environments at universities.

Key words: academic environment, universities of China, universities of Kazakhstan, academic mobility, academic freedom, digitalization of education, quality assessment

Introduction. In the era of globalization and digitalization of education, the evolution of the academic landscape is becoming a crucial aspect in guaranteeing the excellence of higher education, the creation of a competitive workforce, and the advancement of science.

In China and Kazakhstan, universities are undergoing substantial changes in their academic environment, driven by both internal reforms and international educational trends. This article aims to compare the approaches to developing the academic environment in these countries and explore the methods used to evaluate it.

The academic environment encompasses the organizational, cultural, physical, and communication aspects of a university that support the educational, research, and social activities of students and faculty.

Approaches to fostering an academic atmosphere encompass a range of tactics, initiatives, and procedures designed to cultivate and sustain an environment conducive to scholarly pursuits.

The instruments for evaluating the academic milieu encompass a variety of techniques, instruments, and metrics employed to assess the condition and evolution of the academic milieu using both qualitative and quantitative data.

Despite the existence of separate initiatives and practices aimed at improving the academic environment in universities in China and Kazakhstan, the issue of developing an effective system for assessing its state and development remains unresolved. The existing assessment models are fragmented and often fail to take into account national, cultural, and institutional peculiarities, which limits their applicability for making informed management decisions. Moreover, in the context of the rapid advancement of digital technologies and the international integration of educational systems, there is a need for adapting and comparing approaches used in different countries.

This research aims to examine and compare methods and mechanisms for assessing the academic environment in universities in China and Kazakhstan, identify their strengths and weaknesses, and provide recommendations for improving national practices in the context of global trends.

Literature review. The topic of the academic environment in universities has been extensively studied in the context of the modernization of higher education systems, which has been a prominent trend in recent decades. Researchers have focused on the academic environment as a holistic system that influences the quality of the educational process, scientific productivity, academic motivation, and the overall well-being of all members of the university community.

In the scientific literature of both Kazakhstan and China, the academic environment is examined from both the perspective of infrastructure and the values, culture, and management aspects.

Among Kazakhstani scholars, Zhukabayeva T. et al., which explored the effects of digitalization, academic mobility, and the implementation of innovative educational platforms on the transformation of university settings[1]. Giesenbauer B., Müller-Christ G. concluded that fostering a sustainable academic environment necessitates the active integration of digital technologies, encouragement of student research, and the development of horizontal connections between universities and scientific institutions[2].

Dumchak I. et al. examined the academic environment from a socio-cultural standpoint[3]. They emphasized that universities in Kazakhstan are undergoing a process of institutional reevaluation, during which it is crucial to foster academic culture – a framework of values, norms, and behavioral standards that create an environment of trust, intellectual freedom, and academic integrity.

The topic of developing the academic environment is also extensively discussed in Chinese academic literature, particularly in the context of internationalization and modernization of universities.

Zhuang T., Liu B. regarding how the organizational culture and the quality of the academic environment contribute to the development of the innovative potential of Chinese universities[4]. They concluded that the academic environment, characterized by the freedom of scientific research, openness, and interdisciplinary approach, serves as the foundation for the enhancement of scientific productivity.

Yan D., Lingfei L., Xi L. highlights the significance of shifting to a student-centered approach in the management of academic environments[5]. They argues that traditional models, which prioritize control and hierarchy, are becoming outdated. Instead, it is crucial to foster a flexible and inclusive environment that empowers students to actively engage in decision-making and the educational process as a whole.

Hu X., Ghasemy M. explored various methods for evaluating the academic environment, including regular surveys, internal audits, and international accreditations[6]. They concluded that a comprehensive assessment of the academic environment is essential for enhancing management and identifying potential issues within the university system.

Scholars from both Kazakhstan and China highlight the significance of fostering a resilient, diverse, and progressive academic atmosphere. Despite variations in institutional and cultural frameworks, scholars from both nations concur that the successful advancement of the academic

environment is unattainable without a comprehensive evaluation of its condition, the proactive participation of students and educators, and the adaptation to the contemporary demands of the digital era.

Method and materials. The study, which aimed to compare and contrast the development of the academic environment in universities in China and Kazakhstan, employed a combination of theoretical, analytical, and empirical methods. The primary objective was to identify similarities and differences in the processes of establishing, operating, and assessing the academic environment in universities with distinct educational systems, cultural backgrounds, and institutional frameworks.

Four prominent universities were chosen as the focus of the research: two from Kazakhstan – Al-Farabi Kazakh National University and L. N. Gumilyov Eurasian National University, and two from China – Beijing University and Shanghai University of Transport. These universities were selected based on their positions in national and international rankings, as well as their active involvement in initiatives to transform the academic environment and implement innovative approaches to educational management.

The second method, internal regulations, was conducted to gather feedback from students and teachers. The survey was designed to assess the current state of the academic environment and identify areas for improvement. The survey included questions about the quality of teaching, the availability of resources, the effectiveness of academic policies, and the level of student satisfaction. The results of the survey were analyzed and compared with the findings of the content analysis.

The second approach employed, comparative analysis, enabled us to draw parallels between the experiences of China and Kazakhstan in the realm of academic environment development and evaluation. The comparison was conducted based on a range of criteria, including the existence of a formalized system for monitoring the academic environment, the level of institutional support for academic initiatives, the mechanisms for feedback, and the involvement of students and teachers in the management of the educational process.

The combined application of these methods provided a holistic examination of the subject matter and allowed us to identify both the distinctive characteristics of each national context and the general trends in the development of the academic environment in the context of globalization and the digital transformation of higher education.

Results. The findings of the research uncovered both similarities and dissimilarities in the methods employed for the development and evaluation of the academic environment at universities in China and Kazakhstan.

To begin with, a thorough examination of strategic and regulatory documents has demonstrated that both China and Kazakhstan regard the academic environment as a fundamental aspect of the quality of higher education. Nevertheless, the emphases and techniques employed differ significantly. Table 1 outlines the primary distinctions in the approaches taken by universities in the two countries.

Table 1. Comparative Characteristics of Approaches to Academic Environment Development

Criterion	Kazakhstani Universities	Chinese Universities
Main Focus	Academic freedom, support for initiatives	Scientific productivity, institutional discipline
Student Engagement Level	High, student-centered approach developed	Moderate, formalized
Academic Mobility	Supported through international programs	Actively implemented through government initiatives
Faculty Support	Through grants and professional development	Through rankings, KPIs, and incentive schemes
Management Principles	Flexibility, collegiality	Centralization, hierarchy
Tools for Assessing the Academic Environment	Internal surveys, departmental reports	Digital platforms, internal and external audits

The comparative study revealed that the academic environment at universities in China and Kazakhstan is shaped by distinct strategic objectives, managerial practices, and cultural nuances.

In Kazakhstani universities, the development of the academic environment is centered around fostering academic freedom, nurturing individual and collective endeavors, and cultivating democratic and adaptable management models. A distinctive aspect is the active participation of students and faculty in decision-making processes, with a focus on the needs of all stakeholders in the educational process. However, there is a lack of coherence in approaches to evaluating the quality of the academic environment and a lack of a unified assessment methodology.

In contrast, Chinese universities exhibit a high level of institutional organization and prioritize enhancing scientific productivity, optimizing administrative decisions, and enhancing global competitiveness. The strength of the Chinese model lies in its well-structured system for evaluating the academic environment through digital tools, key performance indicators, and external expertise. However, the high degree of formalization and centralization may hinder individual academic subjects' initiative and involvement.

Therefore, both models have their advantages and disadvantages. The Kazakh approach offers greater flexibility and emphasis on personal development, but it requires strengthening institutional assessment mechanisms. The Chinese approach ensures consistency and effectiveness, but it needs to strengthen the elements of academic autonomy and dialogue. Both countries can learn from each other's best practices to create a balanced and effective academic environment.

Secondly, the survey collected opinions from more than 50 participants from each country on their satisfaction with the academic environment. These results are summarized in Table 2.

Table 2. Comparative Characteristics of Approaches to Academic Environment Development

Criterion	Kazakhstani Universities	Chinese Universities
Main Focus	Academic freedom, support for initiatives	Scientific productivity, institutional discipline
Student Engagement Level	High, student-centered approach developed	Moderate, formalized
Academic Mobility	Supported through international programs	Actively implemented through government initiatives
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Management Principles	Flexibility, collegiality	Centralization, hierarchy
Tools for Assessing the Academic Environment	Internal surveys, departmental reports	Digital platforms, internal and external audits

As illustrated in Table 2, the academic environment in Chinese universities is generally perceived as more satisfying by both teachers and students, particularly in terms of scientific activities and international mobility. Additionally, Kazakhstan exhibits a higher level of student and faculty participation in decision-making processes.

Furthermore, a comparative analysis reveals that the assessment systems for academic environments in Kazakhstan are still in the process of development. There is a predominance of scattered initiatives, such as student surveys, internal departmental reports, and, to a lesser extent, external expertise. In contrast, China adopts a more centralized and systematic approach, incorporating digital dashboards, annual reports on key metrics, and the involvement of international experts.

To conclude, it is evident that universities in both countries are committed to enhancing their academic environment. However, they do so in a manner that is tailored to their unique cultural, administrative, and economic contexts. The Chinese approach is distinguished by its clear structure and efficiency, while the Kazakh approach is characterized by its adaptability and emphasis on academic autonomy. Both approaches have the potential to mutually benefit from the exchange of best practices.

Discussion.

The comparative study revealed that the academic environment at universities in China and Kazakhstan is shaped by distinct strategic objectives, managerial practices, and cultural norms.

In Kazakhstani universities, the development of the academic environment is centered around promoting academic autonomy, fostering individual and collective endeavors, and establishing democratic and adaptable management frameworks. A distinctive aspect is the active participation of students and faculty in decision-making processes, as well as the emphasis on the requirements of participants in the educational process. However, there is a lack of coherence in approaches to evaluating the quality of the academic environment and a lack of a unified assessment methodology.

In contrast, Chinese universities exhibit a high level of institutional organization and prioritize enhancing scientific productivity, optimizing management decisions, and improving global competitiveness. The advantage of the Chinese model lies in its well-structured system for evaluating the academic environment through digital tools, key performance indicators, and external expertise. However, the high degree of formalization and centralization may hinder the initiative and engagement of individual academic entities.

Therefore, both models have their strengths and weaknesses. The Kazakh approach offers greater flexibility and emphasis on personal development, but it requires strengthening institutional assessment mechanisms. The Chinese approach ensures consistency and effectiveness, but it needs to strengthen the elements of academic autonomy and dialogue. Both countries can learn from each other's best practices to further develop a balanced and effective academic environment.

Conclusion. The advancement of the academic landscape in universities in China and Kazakhstan reflects the shared ambition of both nations to modernize their higher education systems in response to global challenges and domestic strategic objectives. Despite their shared goal of enhancing the quality of education and the competitiveness of their universities, China and Kazakhstan pursue this objective through distinct managerial and institutional strategies.

Kazakhstani universities emphasize the importance of democratizing the educational process, fostering academic freedom, and encouraging initiatives from both faculty and students. The key strengths of the Kazakh model lie in its openness, adaptable governance, emphasis on personal growth, and active participation of all stakeholders. The lack of coherence in the evaluation of the academic environment and the fragmented nature of approaches hinder the ability to conduct sustainable and unbiased assessments of progress.

Chinese universities, in contrast, have a well-structured management system, stringent procedures, and advanced digital tools for quality control. The Chinese model emphasizes scientific productivity, international competitiveness, and strategic stability. However, this model may lack academic autonomy, flexibility, and a more informal approach to student and faculty involvement in management.

The findings of the study demonstrate that each country has achieved notable success, but also faces obstacles that necessitate adaptation and the sharing of best practices. It would be beneficial for Kazakhstan to incorporate elements of system evaluation and digital monitoring that are typical of the Chinese model. Conversely, China could benefit from studying Kazakhstan's experience in strengthening academic freedom and engagement.

Therefore, a comparative examination of the academic landscape in universities in China and Kazakhstan enables not only to discern the advantages and disadvantages of national models, but also to envision the potential for their convergence through the process of mutual enhancement and internationalization of educational practices.

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CULTURAL BRANDING: TAILORING BRAND STRATEGIES FOR DIFFERENT CHINESE REGIONS

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This article explores the process of cultural branding as a strategic approach for securing competitive advantages in specific regions or markets characterized by distinctive cultural contexts. The primary objective of cultural branding is to analyze and integrate the cultural differences and particularities of a region or state. In the era of globalization and digitalization, international cultural and economic arenas are increasingly shaped by technologies that construct meanings and enable companies to exert a manipulative influence on society. Consequently, branding functions as a deliberately crafted cultural phenomenon that introduces new meanings and patterns while remaining anchored in the existing cultural paradigm. Consumers, in turn, not only receive the product but also experience the cultural and psychological impacts of effective regional branding. Cultural branding encompasses several core components that facilitate a company's ability to present its products favorably within a specific culture, align with the local cultural framework, and enhance sales performance. This study considers the experiences of international companies entering the Chinese regional market, which is notable for its significant diversity, distinct cultural differences from Western cultures, and rapid economic and cultural development.

Key words: cultural branding, Chinese internal market, marketing strategies, adaptation of brand strategy.

Introduction.

This article examines the process of cultural branding as a special effective strategy aimed at obtaining competitive positions in a certain region, a certain market, which, among other things, contains a fairly unique cultural context, the brand strategy should set as its main goal to study cultural differences and features of the region/state. In the context of globalization and digitalization, international cultural and economic spaces are filled with technologies for constructing meanings that allow companies to exert a manipulative influence on people and society. In this regard, the brand acts as a purposefully created cultural phenomenon that brings new meanings and patterns from abroad, while based on the existing cultural paradigm. Consumers of this product, in addition to receiving this product itself, also experience the direct cultural and psychological influence of the product that has undergone successful regional branding.

Cultural branding consists of several main parts that allow a company to create a convenient and favorable appearance of its own products within one culture, to join the framework of the local cultural paradigm and to increase the efficiency of its own sales. The study takes into account the experience of foreign companies entering the Chinese regional market. The Chinese market is very diversified, represents several regions within the PRC, has strong cultural differences compared to typical Western culture and is also relevant because of the current pace at which the Chinese economy and culture are developing.

This article examines the adaptation of brand strategies in Chinese regions in order to successfully compete on Chinese internal market. The purpose of the study is to provide essential insights into past brands' experience and Chinese consumer preferences and creating a guideline with key cultural factors for multinational brands entering or planning to enter the Chinese market by

understanding these attitudes. With this knowledge, companies will be able to enter the Chinese market with a strong presence and introduce popular products that appeal to Chinese consumers.

Materials and methods

The concept of brand essence has been studied for many years and is mostly associated with the developments of researchers from the field of advertising and marketing. The ideas of the unique selling proposition (USP) by R. Reeves [1]; the positioning theory of E. Rice and J. Trout [2]; the model of strategic brand management based on the creation of consumer value by K. L. Keller [3]; the branding theory of D. Aaker [4], and many others, formed the basis of Western brand theory. Cultural branding as a new paradigm, theory and strategy of marketing is presented in a series of works by some independent researchers from over the globe, for example, the head of the branding company Cultural Strategy Group – D. B. Holt [5].

Therefore, the methodological basis of the article lies in theoretical and empirical studies in the fields of advertising and marketing, quantitative and qualitative data based on case studies and examples of cultural branding of foreign companies that has already occurred in China, as well as the analytical approach.

According to Yu and Dong, Chinese consumers on average highly rate foreign companies' attempts to localize their own product, and also do not have negative stereotypes about the quality of foreign goods, it can be concluded that although the quality of goods is important to the Chinese buyer, he also wants to get localization and compliance with the cultural code from a foreign brand. How effectively and efficiently a company has carried out cultural branding directly affects the number of sales and the quality of customer reviews [6].

When entering the Chinese market, foreign businesses should pay special attention to local competition and how competitors from China interact with their consumers. Most of the problems in the process of cultural adaptation of the brand lie in a poor understanding of Chinese culture. Although globalization has allowed modern Chinese to know and recognize foreign brands, and has also increased trust in foreign manufacturers of goods, the factors of national and cultural preferences, as well as existing competition, remain the most important [7].

The Chinese have historically viewed foreigners as "barbarians", Is preferring Chinese products over foreign ones. According to existing data from studies on the cultural adaptation of brand strategies in the world, consumers from developing countries are more likely to use the services and goods of foreign companies that have carried out successful localization. Research by Xie et al. shows that localization almost always leaves a favorable impression on local customers. It can be concluded that those foreign brands that are engaged in cultural adaptation of the brand in the local market attract much more positive feedback from customers [8]. Demonstrating loyalty to Chinese culture, in addition to being a convenient option for adapting a brand strategy in China, researchers recommend paying primary attention to the company logo, adding traditional elements, hieroglyphs or using calligraphy – these are the simplest and most accessible methods of adaptation.

Cultural differences within business refer to the way people from other countries live according to certain patterns of behavior, which affects the possibility and effectiveness of transferring existing practices and business methods from one country to another [9].

Results and discussion

The problem of the need to form new adaptation strategies for foreign companies is discussed in modern science. The purpose of this article is to identify the main aspects of brand adaptation for the Chinese regional market. Some experts believe that standardized goods and services should be sold all over the world. The standardization strategy undoubtedly has significant economic advantages for manufacturers of goods, such as cost savings, an acceptable price level, and a sufficient level of profit. In addition, it can be extended to regional and global markets. Adaptation should be understood as changes in the product itself and its marketing aspects aimed at taking into account the preferences and requirements of consumers. The adaptation (modification) strategy is associated with redesigning the product for each market, taking into account national, cultural, behavioral characteristics, consumer customs, and consumption traditions [10]. The level of economic development and the competitive environment are taken into account. It is the market niche (segment), as well as state standards and

production capabilities, that are a kind of adaptation framework. China, with a population of over 1.4 billion people, is not just a large market, but a complex of smaller (yet still huge by international standards) local/regional markets within China.

International businesses that want to achieve successful sales in the Chinese market should not just conduct some cultural branding, but literally try to localize their brand. In addition, having a deep understanding of Chinese consumers is necessary in terms of how to localize. Obviously, proper localization will help sales, but it is also necessary to study existing local competitors when planning a brand's entry strategy into China.

The view of cultural branding as a functional necessity is the result of a large and long-term processes of globalization of the market for goods and services is the key to understand the main challenges of such an approach. Cultural differences have greatly influenced not only the strategies for adaptation to foreign markets but also provided useful insights into the differences in marketing strategies in the West and the East. The main change in brand strategies abroad are the necessity to always keep in mind cultural differences and other culture's values.

Previous studies have promoted that Chinese marketing often refers to CRM, communication between the consumer and the manufacturer, as well as long-term emotional connection and technical support for customers [11]. Western marketing places greater emphasis on brand and storytelling. Thus, for successful adaptation in China, special attention should be paid to communication with customers, so those businesses that have paid sufficient attention to social research, local culture and traditions succeed in the Chinese market.

Among the brands that have applied cultural branding in China and are successfully developing in the Chinese market, study can note: Nestle, Red Bull, BMW, IKEA, Coca-Cola, McDonald's, and others. Considering the experience of localizing the Coca-Cola brand in China, the following marketing strategies of the company, which allowed it to take a leading position in the market of carbonated sweet drinks in the Land of the Rising Sun reveal:

2. The 2008 Olympic Games in Beijing.

The 2008 Olympic Games were a very important event for China, which allowed it to show its achievements to the whole world. In this regard, the brands that collaborated with the organizers of the Olympics can be considered as very close to Chinese culture. Coca-Cola is just one of such brands. As everyone knows, Coca-Cola design uses red as the main color, considering that red is also the color of wealth, luck and success in Chinese culture, we can conclude that not only the taste and quality of the product has allowed Coca-Cola to enter the discourse of national Chinese culture [12].

2. Personalized inscriptions on cans.

This is a global marketing campaign by Coca-Cola offering personalized cans of the drink. This strategy allows the company to create an emotional connection with its customers, and among other things, it creates a successful way of further self-reproduction of advertising through customers who have already made a purchase (social networks, real family or friendly ties) [13].

3. Social networks and youth.

This is a new direction for the company, which over time increasingly uses new digital technologies and creates a favorable image of its company on the Internet [14].

Coca-Cola used the so-called emotional branding strategy, this strategy allows you to build customer loyalty by evoking an emotional response from the consumer. This strategy mainly uses psychological tricks that allow you to build an effective and positive image of the company against the background of localization of emblems and slogans, as well as the accompanying high quality of products.

Emotional marketing as a brand adaptation strategy in the foreign domestic market is based on customer loyalty to the company's brand against the background of positive emotions, allowing you to create a favorable group of consumers who perceive the brand well. The appearance of the product (packaging, slogan, emblem) and emotional marketing are two components that allowed Coca-Cola to succeed in the Chinese market. Coca-Cola's marketing strategy in China made extensive use of cultural branding, using many elements of local culture: music, colors, logos, slogans, etc. As a result, the company managed to win the hearts of the Chinese people.

Despite the success, Coca-Cola is not the only dominant carbonated drink, which the company was able to achieve in other countries, the company is currently trying to use new digital technologies to increase the number of customers and sales.

In the context of cultural branding of a foreign company, it is worth noting the important concept of “guanxi”, which relates primarily to interpersonal relationships. Often, guanxi goes hand in hand with the concepts of “renqing” and “mianzi”, social cooperation and social status, respectively. Many studies have recognized that following the concept of guanxi is the key to success for foreign business in China [15].

Guanxi provides many different bonuses for a foreign brand. For example, it improves its position in the market and strengthens the company against the background of competitors, since it provides an opportunity to cooperate with a large number of related companies.

The history of guanxi as a concept is very ancient and goes back to the Chinese tradition of Confucianism and family relations. Guanxi networks are the so-called circles of influence, which include close family members, distant relatives, classmates, friends, acquaintances, etc.

The findings of Luo show that local partnerships with international business create positive performance for new company in Chinese market [15]. The People’s Republic of China, as has already been said above, is a huge market. On such a scale, the importance of regions in developing a foreign brand in the Chinese market cannot be overestimated. To understand with what kind of specific one’s business will deal in China we should take a closer look onto Chinese regional diversity and cultural differences.

The study divides China into 4 main regions: South, North, West and East.

1. Southern region: Greater Bay Area;
2. Northern region: Beijing-Tianjin-Hebei;
3. Western region: Chengdu-Chongqing;
4. Eastern region: Shanghai-Jiangsu-Zhejiang.

More specifically, the differences between the regions are that the *southern* region – Guangzhou and Shenzhen are not only industrial centers of China, but also, due to their proximity to the sea, are windows to the world. It is the access to the sea in the southern provinces that allows them to become increasingly important hubs for international trade. Consumers in the southern regions are more educated, have a broad understanding of foreign countries, and at the same time respect and honor their southern origins. To successfully trade in the southern regions, brands should maintain a balance between global and local approaches.

Beijing and Shenzhen *(North)* are the technological center of China, where local traditions are combined with innovation and technological achievements. The fusion of tradition and innovation – this is how one can characterize the region. For this reason, local consumers are well aware and versed in technological innovations, while being on the horizon of Chinese culture. Brands should take this information into account when strategically planning their marketing in this region. Chengdu and Kunming, *Western* China is a region that is undergoing a certain transition and expecting big changes (both demographically and economically). The region has challenges in the form of infrastructure and the very nature of an emerging market. When approaching the Western regions, one should view potential challenges as opportunities for growth and development. Cities like Shanghai, located in the *east* of the country, are not just huge megacities, but unique, inner state-like phenomena that combine all possible manifestations of Chinese culture. Brands trying to develop a strategy for promotion in this region should keep in mind that the east is a region of luxury and opportunities, so the fusion of traditional and modern is a very good option [16].

Translation of slogans, names, logos into Chinese is probably one of the first and most important stages of marketing localization for China. It is quite difficult to count on successful promotion of the product without proper translation. Local administration guards the purity of the native Chinese language. Even giant international companies have to adapt to these requirements. For example, Apple was lucky with the brand’s logo: an apple is an apple even in China. On the other hand, one of the largest chain of stores “Best Buy” signed up for its failure in advance, having translated as “Think a hundred times before you purchase”. Of course, such mistakes are done unintentionally, it was simply

an unfortunate combination of hieroglyphs that let it down. Therefore, serious businesses coming to China are simply obliged to first consult with Sinologists and business consulting agents from local citizens [17].

The perfect situation if the Chinese translation matches the original in both meaning and sound. Coca-cola, as was mentioned before, was translated into Chinese "Kekou-Kele". But sometimes you have to sacrifice something. Especially if you want your brand to sound equally good for different dialects of China. There are many, but the three main variants of Chinese are considered to be:

1. Taiwanese: 55 million speakers. Taiwan has preserved its own dialect and traditional writing of hieroglyphs.

2. Hong Kong: 7 million speakers. Hong Kong has also remained faithful to the good old writing system. And since it was part of Great Britain for more than a hundred years, the local dialect has acquired a distinctive sound, little understood by the mainland of China.

3. Mandarin: 960 million speakers. But the majority of the population of the PRC speaks Putonghua, or Mandarin. It is based on simplified hieroglyphic writing. As a rule, marketing materials are translated into this variant of Chinese first.

So, the importance of a proper language use is quite crucial for cultural branding. Besides that, study shows that among language other aspects of culture could play badly in localization process, for example, the experience of "Zara" brand, when the Chinese women model Jing Wen became the face of their brand. As a rule, freckles are hidden under a layer of makeup for photo shoots, but Zara marketers decided that this cute highlight of their model should not be hidden. However, they did not take into account that in China, snow-white skin is considered the standard of beauty. As a result, the display of Jing Wen's freckles was regarded by the Chinese as disfigurement of Chinese women, and this incident affected both the reputation and sales of the company [18]. For China, traditional values are a source of national pride, and they extend beyond beauty standards. Respectful treatment of customers and clients is also part of the generally accepted etiquette. Loud phrases like "we have the lowest prices" and insidious small-print notes "only for those who have signed up for an annual subscription" are unlikely to please local censors. In China, advertising must be clear, distinct and as honest as possible.

Chinese government also prohibited all demonstrations of cruelty, disrespect for the older generation, any promotion of gambling, use of national symbols, presence of tattooed people in photos or videos, etc. History knows many cases when companies were either blacklisted (Google, Facebook, Instagram, Twitter) or blocked by individual online platforms due to non-compliance with cultural and legal standards. This fate did not bypass the Dolce & Gabbana brand. In the fall of 2018, the famous fashion house launched a new advertisement ahead of the Shanghai show. In the video, a Chinese model was offered to eat various Italian dishes using only chopsticks. The voiceover made fun of the woman's futile attempts to grab a slice of pizza, elusive spaghetti or giant cannoli. This caused a wave of anger in China. Dolce & Gabbana was accused of racism and disrespect for the traditions of the Chinese culture, after which the planned fashion show was cancelled and some retailers refused to sell the brand's products. The consequences of this incident are still felt [19].

Study shows that it is important to establish trust with Chinese customers. Nevertheless, often the brand's originality is more important. In 2017, the cruise company Norwegian Cruise Line launched a new liner "Joy" in China. Everything was adapted and localized, from the Chinese interior to restaurants with traditional cuisine, tea houses, mahjong games, etc. However, local residents were disappointed. They expected a completely different experience from the cruise – Western luxury and foreign exoticism, and not a familiar home environment. Therefore, the company had to completely rework the concept, abandoning 100% adaptation [20]. This event appeared that it is not always appropriate if your brand is designed for modern Chinese youth, independent, curious and ready to experiment. Unlike the older generation, the young audience is more open to Western trends, and moving away from traditions can, on the contrary, fuel their interest in the brand.

The Investigation also demonstrates the circumstance that unites Chinese of all ages – they cannot imagine their life without a smartphone. The phone was and remains their main window to the world: with its help they communicate, order services, make purchases, play, study and work.

Therefore, if you want to localize a site, first of all you should take care of the attractiveness of its mobile version.

Conclusion

It can be said that modern times are characterized by significant changes in the nature and forms of international trade, which contributes to the increase in importance, as well as the development and improvement of the forms and methods of international marketing.

When developing an adaptation strategy and planning starting business to any country, especially China, the following steps should be taken:

1. Conduct a SWOT analysis to assess the strengths and weaknesses of the business based on reviews and studies of the Chinese market. Compare your product with local competitors
2. Develop a localization plan starting from the language.
3. Hire a Chinese specialist consultant, or create a whole department in order to evade future localization issues. Examine other international businesses experience in your field.
4. Study the current standards of local market and legal situation.
5. Determine your capabilities and correlate them with the needs of the product market.
6. Forecast sales volumes for the coming years.

These findings show that in order to successfully enter the market of a particular country, each company must first of all conduct a broad and high-quality analysis of the cultural, social, geographical and other characteristics of the country. Such analysis allows you to better understand the target audience, its behavioral characteristics and preferences, and on this basis build a competent and effective marketing campaign. In such a unique, specific country as China, marketing research is becoming increasingly important. Properly selected marketing tools and adaptation of brand marketing to cultural standards increase the chances of companies to successfully enter the markets of any country in the world, and especially in such a unique country as China. A reliable built marketing policy is the key to successful entry into a foreign market and a guarantee of future progressive income.

This study examined the cultural branding as an adaptation of brand strategies process in Chinese regions. The study suggests to take such localization processes seriously, the essential insights for specific Chinese language, beauty standards, perception of advertisement, customer decision-making were showed and analyzed. Brands' experience and mistakes were shown and examined closely. The final output was brought in a form of suggestion plan for business managers. With knowledge provided by this study, companies will be able to enter the Chinese market with a strong presence and introduce popular products that appeal to Chinese consumers.

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CURRENT SITUATION AND TREND OF PROPERTY MANAGEMENT DEVELOPMENT IN KAZAKHSTAN

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ABSTRACT

The purpose of the study – is to analyze the current situation and trends in the development of real estate management in Kazakhstan by identifying key factors affecting the real estate market, evaluating the effectiveness of existing management models and developing recommendations for improving real estate management taking into account modern economic changes.

Methodology – As part of the quantitative approach, statistical data on the real estate market in Kazakhstan were analyzed, including indicators of price dynamics, supply and demand. Qualitative methods included conducting interviews with real estate market experts and were based on an analysis of foreign real estate management experience with an emphasis on the use of digital technologies.

Originality / value of the research – The research is of particular value due to the analysis of the introduction of digital technologies, such as real estate management systems and blockchain for registration of real estate transactions. The relevance is due to the fact that it examines the impact of recent economic and legal reforms on the real estate market in Kazakhstan, as well as identifies the potential for sustainable growth of this sector.

Findings – The study showed that the real estate market in Kazakhstan is at the stage of active digitalization and integration of new technologies into the real estate management process. Key trends were identified, such as interest in «smart buildings», the development of platforms for renting and buying real estate online, as well as government involvement in regulating the real estate market.

Keywords – real estate, real estate management, real estate market of Kazakhstan, digitalization, real estate investments

INTRODUCTION

The article was prepared within the framework of the grant financing project of the Science Committee of the Ministry of Science and Higher Education («Study of the impact of macroeconomic, political and digital processes on the financial stability of Kazakhstan» IRN AP19674948.)

The real estate market in Kazakhstan has been undergoing significant changes in recent years, related to both internal economic processes and global trends in digitalization and the introduction of new technologies. Real estate management in the country, which previously had a traditional character with minimal use of modern technologies, is now becoming a key area for the application of digital solutions to increase the efficiency and transparency of real estate transactions.

One of the bright trends is the active development of digital platforms for renting and buying real estate. Examples of platforms such as Krisha.kz, Homsters.kz, Livin.kz They show that digitalization not only improves the availability of real estate information, but also simplifies the process of searching and concluding transactions. Such platforms provide users with the opportunity to monitor changes in the market in real time, which makes real estate management more transparent and accessible[1].

An important role in real estate management is also played by the state, which actively implements digital solutions in administrative processes. One of the significant steps in this direction was the creation of a Unified state Register of Real Estate. It is a digital system that allows you to register property rights, carry out real estate transactions and ensure data protection. The implementation of such solutions helps to reduce fraud risks and increase transparency of transactions, which is important for attracting investors to this sector[2].

In addition, there is a growing interest in the concept of “smart buildings” in Kazakhstan. These properties are equipped with modern management systems that allow you to optimize energy consumption, ensure security and manage the internal infrastructure in automatic mode. An example is the newly built Esentai Tower business center in Almaty, which uses smart technologies to improve energy efficiency and ease of operation[3].

However, despite the positive changes, real estate management in Kazakhstan is facing a number of challenges. One of the key issues remains the lack of transparency in real estate transactions, especially in the secondary housing and commercial real estate market. In this area, the mechanisms of digital identification of owners and automation of transactions are still insufficiently developed, which may slow down further market growth.Also an urgent problem is the lack of qualified personnel in the field of real estate management, especially those who have the knowledge and skills to work with new digital solutions. This creates an additional barrier to the effective implementation of advanced technologies and increases the need for training and advanced training of specialists.

In general, the real estate market in Kazakhstan demonstrates significant development prospects due to the use of new technologies and active government support. However, in order to fully realize this potential, it is necessary to continue working on improving the legal framework, developing digital infrastructure and creating conditions for attracting investment in the real estate sector.

The purpose of this article is to analyze the current situation and trends in the development of real estate management in Kazakhstan. Within the framework of this study, key factors affecting the real estate market will be analyzed, evaluating the effectiveness of existing management models and developing recommendations for improving real estate management taking into account modern economic changes.

Literature review Real estate management in Kazakhstan has been going through significant changes in recent decades, due to the transition to a market economy, global trends in digitalization, increasing urbanization and changing requirements for the quality of property management. A theoretical analysis of the existing literature makes it possible to identify key aspects affecting the real estate market and to form a conceptual model of real estate management in the context of modern changes. The theory of transaction costs, proposed by Ronald Coase, emphasizes that every market exchange is associated with the costs of concluding a transaction, collecting information, verifying the parties and registering ownership rights. This is especially important in real estate management, as real estate transactions often involve high legal and administrative costs. In Kazakhstan, these costs are increasing due to bureaucratic barriers and opaque procedures for registering property rights[4].

In recent years, Kazakhstan has been taking steps to reduce such costs by introducing e-government and digital property registration systems, such as the Unified State Register of Real Estate. However, these solutions are not yet fully integrated, which creates an opportunity for further improvement of real estate management.

The next one is the theory of the life cycle of real estate. According to this theory, real estate objects go through various stages: design, construction, operation, modernization and disposal. Each stage requires a specific management approach to ensure maximum profitability and safety of the facility. In Kazakhstan, real estate management, especially at the operational stage, requires a more systematic approach. Current research shows that many facilities, especially those built in the 1990s, need major repairs and modernization[5]. The lack of investment in operation and maintenance reduces the market value of facilities, which highlights the need for more modern real estate management systems such as Property Management Systems[6] and Building Information Modeling[7].

The theory of sustainable developm”nt e’phasizes the need to take into account environmental and social aspects in economic development. In relation to real estate, this means focusing on sustainable construction and facility management, taking into account energy conservation, the use of green technologies and the creation of a comfortable living environment[8]. In Kazakhstan, the concept of sustainable real estate development is just beginning to develop. The most striking examples include the use of “green” standards in the construction of large facilities in Astana and

Almaty, such as Abu Dhabi Plaza. However, the implementation of these practices is still limited in the mass construction sector, which requires further efforts on the part of developers and the state[9].

Based on the theoretical analysis, the following conceptual model of real estate management in Kazakhstan can be proposed, reflecting current trends and offering directions for further development:

Digitalization is the development of digital platforms and management systems such as PMS, BIM and blockchain to improve transparency, efficiency and reduce transaction costs.

Sustainable development is the integration of «green» standards and sustainable development technologies into construction and real estate management to improve energy efficiency and reduce environmental stress.

Institutional reforms are about improving the legal framework, increasing transparency of transactions and fighting corruption through institutional reforms and the introduction of international management standards.

Professional development is the training and education of specialists in the field of real estate management who have the skills to work with digital technologies and an understanding of the principles of sustainable development.

Data and analysis integration is the implementation of analytical systems for monitoring the real estate market and forecasting its development based on big data and artificial intelligence.

Thus, a review of the literature and theoretical analysis show that real estate management in Kazakhstan is going through a stage of digital transformation and institutional changes. There is significant potential for the development of the real estate market through the introduction of advanced technologies and increased transparency of transactions. The conceptual model of real estate management in Kazakhstan, based on theoretical approaches, emphasizes the importance of digitalization, sustainable development and institutional reforms for the future success of this sector.

THE MAIN PART OF THE RESEARCH

The study of the current situation and trends in the development of real estate management in Kazakhstan is based on an integrated approach, including both quantitative and qualitative methods. This approach allows you to analyze in detail various types of real estate (residential, commercial, universities, industrial parks, hospitals, transport hubs) and identify key trends in their management. The use of both quantitative and qualitative methods made it possible to evaluate key aspects of real estate management in different sectors (residential, commercial, industrial, social and infrastructural real estate).

The study analyzed statistical data, collected data on the development of the real estate market in Kazakhstan over the past 10 years, including data on price dynamics, transaction volume, investments in various types of real estate (residential, commercial, infrastructure).

Correlation and regression analyses were carried out to identify the relationship between economic factors (GDP, investments, government programs) and changes in the real estate market.

The trend in real estate management in other countries was studied to compare with the Kazakh experience and identify best practices.

And qualitative methods, namely, in-depth interviews with experts were conducted, interviews were conducted with representatives of development companies, management organizations, government agencies, as well as with owners of real estate. This allowed us to get insights about the problems and challenges faced by the real estate market in Kazakhstan.

The laws and regulations governing real estate management in Kazakhstan have been studied to understand their impact on the market and property management. Examples of successful real estate management projects in Kazakhstan were analyzed, such as the development of new transport hubs (for example, the new Nur Sultan airport), industrial parks and residential complexes.

The analysis of statistical data showed that the real estate market of Kazakhstan is in the stage of growth, despite economic fluctuations. In particular, the largest growth is observed in the residential real estate sector in the cities of Astana and Almaty, where real estate prices have increased by 15-20% over the past 5 years. In the commercial sector, especially office and retail facilities, growth is more

moderate, but there is a steady demand for high-quality office and retail spaces.Econometric analysis has revealed a strong correlation between economic growth and activity in the real estate market. The positive correlation between GDP growth and real estate investment, especially in the commercial real estate segment, confirms that economic reforms and government programs contribute to the development of the market. In addition, there is a strong correlation between the volume of investments in infrastructure facilities and activity in the commercial real estate market.Comparative analysis has shown that Kazakhstan lags far behind developed countries in real estate management, especially in the field of digital technologies and sustainable development. In countries with a more developed real estate market, technologies such as Building Information Modeling and Property Management Systems are widely used, whereas in Kazakhstan their application is at an early stage. In-depth interviews with experts have revealed several key problems in real estate management. One of the main ones is the lack of qualified specialists, especially in the residential real estate segment. Experts also note that facility management systems (for example, PMS) are being implemented in large facilities such as shopping malls or office buildings, but have not yet become widespread in the residential sector. Insufficient attention is paid to energy efficiency and sustainable development of real estate, which is a challenge for developers and management companies.An analysis of legal documents has shown that the legal framework for real estate management in Kazakhstan is improving, but remains incomplete. Legislation governing the registration of real estate rights, lease, building management and protection of property owners' rights needs to be finalized to eliminate corruption barriers and increase transparency of transactions. This is confirmed by complaints from experts about complex and opaque bureaucratic procedures in the field of registration of property rights. A case analysis of successful projects, such as the construction and management of new airports in Nur Sultan and Almaty, as well as the development of industrial parks, showed that effective management of infrastructural real estate is possible if digital management systems are used and international experience is attracted. These facilities demonstrate high operational efficiency through the integration of advanced technologies such as logistics and energy efficiency management systems.

The results of the methods showed the need for further reforms and innovations in real estate management, as well as strengthening government regulation to increase transparency of transactions and improve professional training of specialists.

Residential real estate is one of the most active and dynamically developing real estate industries in Kazakhstan. The main focus in the management of residential facilities is on improving energy efficiency and using modern technologies. In particular, the trend towards the introduction of «smart» houses in large cities such as Almaty and Astana allows residents to manage resources (water, electricity) remotely. Nevertheless, one of the problems in the management of residential facilities remains the lack of professionalism in the maintenance and operation of old residential buildings[10].

An important trend is the growing demand for rental housing due to the increasing level of urbanization and internal migration. Management companies are increasingly using digital platforms for renting and managing facilities, which increases the transparency of transactions and reduces transaction costs.

There is a significant transformation in the management of commercial real estate (office centers, shopping complexes) associated with digitalization and automation of processes. In large shopping malls such as Esentai Mall in Almaty and Mega Silk Way in Astana, real estate management systems are being implemented that automate rent payment control, visitor traffic monitoring and energy efficiency.One of the trends in the commercial real estate sector is the adaptation of office spaces to the new realities of the post-pandemic time. Management companies are increasingly using flexible office spaces and coworking, which reduces fixed building maintenance costs and attracts small and medium-sized enterprises[11].

Industrial parks play a key role in the economic development of Kazakhstan, especially given the country’s desire for industrialization. Industrial park management includes infrastructure control, security, logistics and energy efficiency. One of the successful examples is the SEZ “Khorgos–East Gate”, where management is aimed at improving the logistics infrastructure and attracting foreign investment[12].

Infrastructure facilities such as new airports, including Nursultan International Airport, are managed using the latest technologies to ensure efficient passenger service and logistics. The introduction of automated air traffic control and logistics operations systems improves operational efficiency.

Educational and medical institutions in Kazakhstan also need effective real estate management, as these facilities require regular maintenance, modernization and optimization of space use. Examples include university campus modernization projects, such as the Nazarbayev University campus, where energy-saving systems and intelligent technologies are used to manage infrastructure[13].

Hospital property management focuses on maintaining a safe and technologically advanced environment for medical services. Climate, energy consumption and patient safety monitoring systems are actively used in new hospitals and clinics, especially those built within the framework of state health modernization programs.

An analysis of real estate management in Kazakhstan shows that more and more companies and government agencies are turning to digitalization and automation of real estate management processes. The use of digital technologies helps to reduce transaction costs, increase transparency of transactions and improve the quality of service facilities. However, despite the positive trends, there are serious challenges, such as the lack of qualified personnel in the field of real estate management, especially in the residential and social real estate segments.

In addition, insufficient attention to the modernization of old facilities, especially residential buildings and public infrastructure, slows down the development of the market. For the further development of real estate management in Kazakhstan, it is necessary to strengthen institutional reforms aimed at improving the legal framework and increasing transparency of operations[14].

It is also important to note the growing interest in the sustainable development of real estate. In the future, we should expect an increase in the number of projects aimed at creating “smart” and energy-efficient buildings, which will contribute to improving the environmental situation and reducing the cost of operating real estate[15].

CONCLUSION

The study showed that real estate management in Kazakhstan is going through a stage of transformation caused by digitalization, increasing urbanization and the introduction of new technologies. The introduction of modern real estate management systems and digital platforms, as well as the use of sustainable solutions in construction are the main trends. Nevertheless, for the full development of the sector, it is necessary to solve the issues of modernization of old facilities and improve the professional training of specialists in this field.

Based on the conducted research of the current situation and trends in the development of real estate management in Kazakhstan, several key recommendations and proposals have been developed aimed at improving the efficiency of real estate management and improving the market situation. These recommendations cover various aspects, from institutional reforms to the introduction of digital technologies and sustainable development.

Digitalization plays a key role in improving the efficiency of real estate management, especially in the context of increasing urbanization and increasing demand for services. To do this, it is recommended to introduce wider use of Property Management Systems (PMS). The introduction of automated real estate management systems will improve control over facilities, increase transparency of transactions and reduce transaction costs. Such systems can be integrated into both commercial and residential real estate to monitor leases, payments, the condition of facilities and energy consumption.

Accelerate the implementation of Building Information Modeling (BIM). To improve the management of facilities at all stages of their life cycle — from design to operation and modernization — it is recommended to implement BIM technologies. This will provide more accurate control over construction processes, forecasting operating costs and reducing the cost of maintaining real estate. To develop digital platforms for real estate transactions, it is important for the development of transparent and accessible online platforms for real estate transactions, such as Krisha.kz to increase the confidence of market participants, reduce bureaucratic barriers and transaction costs.

One of the key problems of real estate management in Kazakhstan remains a complex and bureaucratic legal system. To improve the situation, it is proposed to simplify and modernize the procedures for registration of property rights, further development of electronic systems for registration of real estate and transactions with it is necessary. This will reduce the time for registration of rights and increase the transparency of transactions.

It is recommended to develop and implement real estate management standards for management companies, which will improve the quality of facilities maintenance, ensure respect for the rights of owners and tenants, and reduce corruption risks.Strengthening anti-corruption measures and the introduction of digital solutions for tracking real estate transactions will significantly improve the investment climate and confidence in the real estate market.

Taking into account global trends towards sustainable development and Kazakhstan's commitments to reduce its carbon footprint, it is recommended to focus on the following aspects, promote standards of «green» construction, which means it is necessary to encourage developers to use energy-efficient and environmentally friendly materials and technologies in the construction of new real estate. The introduction of tax incentives or subsidies for companies implementing green construction projects will be a significant incentive for the development of a sustainable real estate sector.To develop programs for the modernization of the old housing stock. Old residential buildings require major repairs and upgrades to improve energy efficiency and increase safety. Government support and private investment can play an important role in addressing this issue.

One of the key problems in the real estate market in Kazakhstan is the lack of qualified personnel, especially in the field of real estate management. To improve the situation, it is recommended to create educational programs on real estate management, an important step will be the development of specialized training programs and courses for training specialists in the field of real estate management. These can be both university programs and advanced training courses for current employees.

For effective management and long-term development of real estate in Kazakhstan, it is important to pay special attention to infrastructure projects, continued investments in the development of industrial parks and transport hubs, industrial parks such as the SEZ “Khorgos–East Gate”, and transport hubs such as new airports and railway hubs require constant attention and investment to increase their efficiency and integration into international logistics chains. It is important not only to invest in large cities (Astana, Almaty), but also to develop infrastructure in the regions, which will attract investment and reduce the burden on megacities.

The implementation of the above recommendations and proposals will significantly improve the quality of real estate management in Kazakhstan, increase transparency of transactions, reduce transaction costs and ensure sustainable development of the sector. Digitalization, reform of the legal framework, professional development and promotion of environmentally friendly technologies are key areas that will help Kazakhstan become more competitive in the global real estate market and create comfortable living and business conditions within the country.

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CORPORATE CULTURE AS A FACTOR OF INCREASING THE EFFECTIVENESS OF THE ORGANIZATION: INTERNATIONAL EXPERIENCE AND PRACTICE OF KAZAKHSTAN

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Abstract. This article explores the significance of corporate culture as a crucial element in enhancing organizational performance, with a focus on a comparative analysis of Kazakhstani and international companies. The study is grounded in the growing awareness of corporate culture as a strategic asset that influences internal operations, boosts employee engagement, and fosters innovation. Despite the formal adoption of corporate values and ethical standards in many Kazakhstani organizations, their practical implementation remains limited and often exhibits a top-down and declarative approach.

Based on a comparative analysis of 12 of Kazakhstan's largest companies across various industries, and by comparing them with global leaders like Google, Toyota, and Unilever, this article explores the differences in how corporate culture is integrated into business operations.

The study employed a comparative approach, utilizing publicly available corporate data, including mission statements, human resources policies, and organizational practices.

The key findings indicate that while companies like Kaspi.kz and Air Astana exhibit more dynamic models of a culture of participation, many others still lack mechanisms for assessing and developing their internal culture. The study underscores the importance of cultural audits, employee engagement tools, and the contextual adaptation of values.

The novelty of this study is the comprehensive examination of local and international approaches, providing actionable insights for enhancing corporate culture in Kazakhstan. The paper emphasizes the significance of aligning stated values with actual conduct for the long-term success of an organization in today's economic landscape.

Key words: organizational efficiency, cultural audit, corporate culture, Kazakhstan, international comparison, employee engagement, innovation climate

Introduction. In the context of the rapid changes in the economy, technology and society taking place in the modern world, the internal resources of organizations are becoming especially important. Corporate culture occupies a key place among these resources.

Corporate culture is a system of values, norms of behavior, traditions and management methods that create a unique atmosphere within the company and determine its interaction with the outside world. In world practice, corporate culture has long been recognized as an important factor in sustainable development and increasing the competitiveness of companies, especially in highly competitive and globalized environments.

However, despite the active use of various management tools in Kazakhstani companies, the issues of formation and development of corporate culture often remain underestimated.

At the same time, Kazakhstan has not yet formed a unified corporate culture model that would take into account national peculiarities and would be integrated into international practice. This can negatively affect the effectiveness of organizations and hinder their innovative development.

The purpose of the study is to study the role of corporate culture in improving the effectiveness of organizations based on international experience and adapt it to the conditions of Kazakhstan. The study will help identify the most successful approaches and practices that can be applied in domestic management.

In the middle of the 20th century, the concept of corporate culture began to actively develop in Western countries, especially in the context of the growth of international corporations and the growing interest in organizational behavior. However, Kazakhstan does not yet have a unified corporate culture model that would take into account national peculiarities and would be integrated into international practice. This can negatively affect the effectiveness of organizations and hinder their innovative development.

The purpose of the study Is to study the role of corporate culture In Improving the effectiveness of organizations based on international experience and adapt it to the conditions of Kazakhstan. The study will help identify the most successful approaches and practices that can be applied in domestic management.

In Kazakhstan, interest in corporate culture arose after the transition to a market economy, when there was a need to improve management efficiency and adapt to international business standards.

The study presents a comprehensive comparative analysis of international models of corporate culture and their application in organizations in Kazakhstan, taking into account national characteristics.

The practical significance of the research lies in the fact that its results can be used in the development of organizational development programs, employee motivation, leadership development and corporate values, as well as in the process of management modernization in Kazakhstani companies.

Corporate culture, being a powerful tool for improving efficiency, opens up new prospects for stable growth of organizations in the digital economy and global challenges.

In the context of the digital economy and global challenges, companies that strive for sustainable development are increasingly paying attention to corporate culture as a key tool for increasing inner harmony, creating a favorable psychological atmosphere and strengthening employee loyalty.

Research shows that organizations with a developed corporate culture show better performance, adapt better to changes in the external environment, and innovate faster. Therefore, it is extremely important to study and put into practice successful international methods that contribute to creating an effective working environment conducive to human development.

This problem is becoming especially important in Kazakhstan, as it is necessary to find harmony between national cultural customs and the requirements of the international business world.

Materials and methods. A wide range of theoretical and practical methods of analysis was used to achieve the research goals and solve the tasks set.

The research is based on an interdisciplinary approach that encompasses theories of management, organizational behavior, sociology, and cultural studies. During the work, official documents, corporate development strategies, internal regulations, corporate codes and reports of Kazakhstani companies were analyzed.

The data for the study were collected as a result of an analysis of the corporate culture of several Kazakhstani medium and large business companies, including companies with foreign participation.

Statistical data from the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, reports from international research centers such as McKinsey, Deloitte and PwC, as well as information from international ratings, including the Global Competitiveness Report and the World Values Survey, were used.

To analyze the received data, we used the content analysis method.

One of the key approaches in our research was the analysis of the content of corporate documents and open sources of information, such as company websites, corporate codes, internal instructions and reports on social responsibility.

Thanks to this method, it was possible to identify the main values, goals, priorities and management methods that are fixed in the official documents of the organizations. This gave us the opportunity to draw conclusions about the nature and level of development of corporate culture in the studied companies, as well as compare them with international standards. Another important tool was the comparative analysis, which made it possible to compare the features of the formation and functioning of corporate culture in Kazakhstan with the experience of other countries.

During the analysis, we compared HR management strategies and models, as well as formal and informal aspects of culture, such as rituals, symbols, and values, in Kazakhstani and international companies.

The comparison took into account differences in cultural aspects, which, according to Hofstede, play an important role in shaping a business. In addition, we drew attention to the level of digitalization, the role of the state in the development of the business environment, and approaches to performance assessment.

This comprehensive approach has made it possible to identify both unique national characteristics and universal elements of corporate culture that play a key role in achieving the success of the organization.

Results and discussions. The study of corporate culture as a subject of scientific analysis began to develop actively in the second half of the 20th century, when theories of organizational behavior and management began to form. The first theoretical concepts appeared that examined the influence of internal values and rules on employee behavior and management effectiveness.

In the field of corporate culture studies, one of the key works was the work of American psychologist Edgar Shein[1]. In it, he proposed a three-level model of corporate culture that includes artifacts, proclaimed values, and basic assumptions.

Another important contribution was the work of Gert Hofstede[2]. He conducted a large-scale international study of IBM employees and identified cultural differences between countries. He introduced concepts such as “individualism versus collectivism”, “power distance” and other dimensions of culture that are applicable at the organizational level.

S. D. B. Ghaleb in their famous work showed how a strong corporate culture contributes to the success of leading American companies[3]. Their ideas formed the basis of concepts related to corporate identity and commitment to the organization.

In the context of the development of corporate culture in the context of globalization, the works of O. V.Akpa, U. O.Asikhia, E. N.Nneji are of particular importance, who considered organizational culture as a dynamic system of meanings formed in the process of communication between employees[4]. This gave rise to the study of hybrid cultural models in international companies.

In post-Soviet countries, interest in corporate culture began to form, when the transition to a market economy was taking place. In Kazakhstan, key research in this area was conducted by such authors as S.Zharkynbekova, A.Aimoldina[5]. They analyzed the features of the organizational culture of local enterprises and the issues of its transformation.

Modern research in Kazakhstan also highlights the need to integrate international experience into the organization's management. In the works of D.Amirbekova, T.Narbaev, M.Kussaiyn[6], the methods of creating corporate culture in international companies are analyzed.

The study shows that the theory and practice of corporate culture have come a long way — from theoretical models to practical solutions aimed at improving the efficiency of organizations.

Today, it is important to adapt international approaches to the national characteristics of emerging economies, including Kazakhstan.

The findings of this study have revealed the essential aspects of the development and impact of corporate culture on organizational performance in Kazakhstan, in comparison with international practices. These findings not only enhance our scientific comprehension of this issue, but also provide a solid foundation for the scientific novelty of the research, considering the existing theoretical and empirical data.

Unlike many foreign studies that focus on corporate culture in countries with well-established market institutions (such as the United States, Japan, and Germany), this research explores the corporate culture in the transition economy of Kazakhstan, where it is still in the process of development.

This study is the first to employ a dual methodological approach, combining content analysis and comparative analysis, to assess the officially declared and actually implemented corporate values in organizations in Kazakhstan(table 1).

Table 1 – Comparative analysis of corporate culture: Kazakhstan vs. international companies

Criterion	Kazakhstani Companies	International Companies (e.g., Google, Toyota)
Existence of a corporate code	Present, but often generic and templated	Clearly structured and aligned with corporate strategy
Implementation of values in practice	Partially implemented, often declarative	Systematically integrated into motivation systems and processes
Internal communication	Limited, mostly vertical	Well-developed horizontal and feedback-based communication
Support for innovation	Declared, but rarely encouraged in practice	Core element of the culture, actively incentivized
Employee role in shaping culture	Low involvement, top-down management approach	Employees are actively involved through surveys, initiatives
Assessment of culture effectiveness	Absent or formal only	Regularly conducted using KPIs, surveys, and cultural metrics
Consideration of cultural differences	Weakly expressed, uniform approach to all	Takes into account national, regional, and individual differences

The source was compiled based on the data [7-9]

Based on the comparative analysis, it is evident that Kazakhstani organizations lag behind in terms of the advancement of their corporate culture. The primary disparities are evident in the extent to which values are integrated into daily operations and the extent to which employees actively participate in cultural development.

Whereas international companies view corporate culture as a strategic management instrument, Kazakhstani companies often limit themselves to the declarative level.

The study also revealed that Kazakhstani companies with elements of a proactive culture, such as internal initiatives, mentoring programs, and recognition programs, exhibit higher levels of employee engagement and productivity. This underscores the direct correlation between the development of corporate culture and business performance.

Below is a more detailed list of 12 Kazakhstani companies whose corporate codes, missions, strategies, and reports have been thoroughly examined as part of our research. These companies represent various industries, including oil and gas, finance, telecommunications, transportation, retail and manufacturing, which allows for a broad and versatile analysis(table 2).

Table 2 – Overview of corporate culture in 12 major kazakhstani companies

Company Name	Industry	Notes on Corporate Culture
JSC «KazMunayGas» (KMG)	Oil & Gas Industry	Active development of corporate standards, but a predominantly vertical management model
JSC «Kazpost»	Logistics, Communications	Updated mission and values in the context of digitalization; low employee engagement
JSC «KEGOC»	Energy Sector	Clear mission, high formalization of culture, lack of feedback mechanisms
JSC «Kazakhtelecom»	Telecommunications	Advanced IT infrastructure, values implemented through HR, but weak personalization
JSC «Samruk-Energo»	Energy Sector	Corporate code exists, but regular engagement surveys are not conducted
JSC «Halyk Bank»	Financial Sector	Well-developed internal communications system and staff training
Kaspi.kz	Fintech, Banking Services	Example of partially flexible culture, result-oriented with innovation focus
JSC «Air Astana»	Aviation	Well-established corporate ethics, strong

		HR strategy, high customer orientation
JSC “Kazakhstan Temir Zholy” (KTZ)	Transport & Logistics	Strong hierarchical structure, slow transition to modern cultural models
JSC «Kcell»	Telecommunications	Innovation is declared, but limited internal implementation
Magnum Cash&Carry	Retail	Internal culture exists, but lacks a publicly declared value strategy
JSC «ArcelorMittal Temirtau»	Metallurgy	Formalized safety-oriented culture, but weak employee engagement

The source was compiled based on data from [10-12].

These companies were selected because of their critical role in the Kazakh economy and availability of corporate materials such as mission statements, codes of conduct, corporate strategies, and public reports. The sample includes state-owned, private enterprises, and companies with foreign investment to ensure a comprehensive and representative analysis.

Data was gathered from open sources including official websites, annual reports, ESG disclosures, and corporate codes. The aim was to evaluate how these companies approach corporate culture, how values are communicated and implemented, and how it affects organizational performance.

To summarize, the study reveals that while many Kazakhstani companies have established formal codes and principles for corporate culture, the extent to which these are effectively implemented varies significantly. In some cases, the stated principles remain theoretical and disconnected from actual company operations. However, some companies, particularly in the financial, aviation, and financial technology sectors, provide promising examples of incorporating corporate culture into management systems, employee training programs, and innovative strategies. This emphasizes the need for a broader institutionalization of culture-based management practices in the corporate sector of Kazakhstan.

A review of the corporate documents, missions, strategies, and reports of 12 companies in Kazakhstan revealed that collaboration, social responsibility, a performance-oriented approach, and innovation are the most frequently mentioned values. However, a comparative analysis showed that the actual implementation of these values is not as strong as in Western companies, where they are not just stated but integrated into the system of incentives, key performance indicators, and corporate training.

Comparing with international companies like Google, Toyota, and Nestle, we see that in developed countries corporate culture is seen as a strategic asset rather than just a declaration. In Kazakhstan, companies have formal cultural documents but often limit themselves to superficial implementation, which leads to low employee engagement and high staff turnover.

It has also been found that the level of corporate culture development is positively correlated with organizational performance indicators such as employee productivity, loyalty, and innovation. Companies with a well-established culture tend to have a better understanding of change, greater adaptability, and higher levels of trust within their teams.

There are some challenges that need to be addressed. These include the lack of a systematic approach to building a culture from the ground up, limited internal communication, and a disconnect between the company’s vision and the daily tasks of its employees. These factors set Kazakhstani organizations apart from international counterparts where corporate culture is nurtured through the involvement of all levels of management and is seen as a strategic asset.

The findings of the research demonstrate that corporate culture is not just a peripheral aspect of an organization, but a crucial asset in the era of global competition and digital transformation. For Kazakhstan, this means the need to formalize culture as a part of organizational governance.

The findings of this study emphasize the complexity and ever-changing nature of corporate culture in Kazakhstan. While most major companies acknowledge the importance of corporate culture by adopting codes of ethics, mission statements, and internal communication strategies, the actual implementation of these principles remains inconsistent.

One of the main challenges identified is the gap between stated values and practical implementation. In several government-run companies and traditionally structured organizations, such as Kazakhstan Temir Zholy, Kazpost, and Samruk-Energo, the corporate culture is often hierarchical, bureaucratic, and top-down, limiting employee engagement and creativity. Despite the existence of codes of conduct and strategic documents, these practices are not often integrated into daily management or employee development programs.

In contrast to more traditional companies, some organizations, such as Kaspi.kz, Halyk Bank, and Air Astana, have a more innovative and flexible approach to corporate culture. These companies prioritize transparency, communication, and employee involvement in shaping their culture.

Kaspi.kz places a strong emphasis on innovation as a core value, creating a corporate environment that encourages agility and problem-solving. Air Astana invests in HR systems and feedback mechanisms to promote a culture of excellence in service.

While these organizations have made significant strides in creating a positive work environment, there is still room for improvement. A challenge facing many companies is the lack of systematic evaluation of their corporate culture. Most companies do not regularly assess cultural alignment, employee satisfaction, or the impact of cultural initiatives on performance.

International companies like Google, Toyota, and Unilever have a different approach. They conduct regular cultural audits, surveys, and feedback sessions to ensure alignment with their values and goals. These practices help these companies stay ahead of the curve and continue to innovate.

Cultural adaptation and localization pose a significant challenge for businesses in Kazakhstan. Many companies adopt uniform corporate standards without taking into account the diverse workforce, including regional, generational, and professional differences. This “one-size-fits-all” approach often leads to low employee engagement and undermines long-term commitment to company values.

Comparing with international best practices, there is a significant gap in cultural integration and employee engagement in Kazakhstan. Global companies view culture as a strategic asset that aligns with innovation, customer focus, and business goals, investing in cultural training, leadership development, and communication with staff. Unfortunately, these practices are still at an early stage of development in Kazakhstan.

In summary, the study found that while many Kazakh companies have basic elements of a corporate culture, there is still room for improvement. To enhance the role of corporate culture in driving organizational success, it is essential to improve internal communication, promote employee engagement, measure cultural impact, and adapt values to the specific needs of the organization.

Conclusion. This research has shown that corporate culture is a crucial factor in improving organizational performance, yet its potential is often underutilized in many companies in Kazakhstan. While many large organizations have formally adopted elements such as codes of conduct, mission statements, and ethical guidelines, the practical implementation of cultural values in daily operations, management approaches, and employee engagement remains limited. The comparison between companies revealed a clear divide: those operating in more dynamic and competitive sectors, such as Kaspi.kz, Halyk Bank, and Air Astana, demonstrate a stronger alignment between their stated values and actual practices. These companies actively promote innovation, encourage open communication, and involve employees in shaping their corporate identity - characteristics that are more in line with international best practices.

Many state-owned or traditionally structured enterprises continue to adhere to rigid, top-down cultural frameworks. These organizations often lack the mechanisms to assess or update their internal culture, resulting in employee disengagement and hindering their ability to adapt to a rapidly changing economic landscape.

A crucial deficiency is the absence of systematic tools for measuring the effectiveness of corporate culture. Without cultural assessments, performance-based feedback, or employee input mechanisms, many initiatives remain superficial and symbolic.

International experience demonstrates that corporate culture is not merely a collection of formal rules, but a strategic asset that can significantly enhance productivity, foster innovation, and bolster

long-term competitiveness. In Kazakhstan, there is a clear need to transition from declarative to actionable cultural models, ensuring that values are not just stated but lived.

To fully utilize the power of corporate culture, Kazakhstani businesses must:

- Incorporate cultural principles into their strategic and operational frameworks.
- Foster collaborative and inclusive management practices.
- Implement regular processes for evaluating and refining internal culture.
- Adopt international best practices, adapting them to the local context.
- These measures will enable corporate culture to serve as a catalyst for organizational change, innovation, and long-term growth.

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RECONFIGURING INTERNATIONAL MARKETING CAPABILITY IN CHINA–KAZAKHSTAN CULTURAL INDUSTRIES IN THE AI ERA: HUMAN–AI COLLABORATION, CULTURAL MEANING, AND RESPONSIBLE GOVERNANCE

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Abstract. Purpose. This article explains how artificial intelligence (AI) changes the international marketing capability of cultural-industry organizations and how China–Kazakhstan collaboration can convert technological resources into culturally meaningful market value. Methodology. The study combines an integrative review of marketing-capability, AI, creativity, authenticity, and customer-engagement research with a structured comparison of Chinese and Kazakhstani AI and cultural-policy documents. Thirty high-relevance sources—21 peer-reviewed studies and nine authoritative institutional documents—were coded by capability level, value-creation mechanism, consumer response, and governance risk. Findings. AI does not constitute a stand-alone marketing tool or guarantee international performance. It reconfigures capability at three interdependent levels: foundational capabilities for data, AI literacy, multilingual operations, and market sensing; core capabilities for cross-cultural interpretation, human–AI co-creation, relationship intelligence, and cultural-meaning translation; and strategic capabilities for innovation, ecosystem orchestration, business-model renewal, and international scaling. The proposed AI-enabled BRIDGE–IMC framework shows that these capabilities create value through culturally grounded content integration, digital intelligence, relationship building, global adaptation, and consumer engagement. Human creative agency, perceived authenticity, transparency, trust, and responsible governance condition this process. Originality/value. The paper contributes, first, a macro–meso–micro capability architecture linking institutional conditions, organizational reconfiguration, and consumer value. Second, it places cultural meaning and responsible human–AI collaboration at the center of international cultural marketing. For China and Kazakhstan, the practical implication is a complementary rather than symmetrical partnership: China contributes deployment scale and platform experience, while Kazakhstan contributes Kazakh–Russian linguistic knowledge, Eurasian cultural brokerage, and emerging sovereign AI infrastructure.

Keywords: artificial intelligence; international marketing capability; cultural industries; human–AI collaboration; responsible AI governance

1. Introduction

Generative AI has moved from a specialized analytical technology into the everyday infrastructure of content production, translation, recommendation, customer service, and marketing experimentation. Its diffusion is unusually rapid: the 2026 AI Index Report records simultaneous growth in model capability, investment, adoption, and public-policy activity, while also showing that the global AI system remains concentrated and uneven (Stanford Institute for Human-Centered Artificial Intelligence [Stanford HAI], 2026). For cultural industries, this transition is particularly

consequential. Film, animation, games, music, publishing, digital heritage, crafts, and experience-based cultural services compete not only through functional utility but through stories, symbols, identity, emotion, and claims of authenticity. The same technology that lowers the cost of multilingual production can therefore also flatten cultural difference, reproduce bias, obscure authorship, or weaken consumer trust.

The China–Kazakhstan relationship offers a theoretically useful and managerially important setting in which to examine this tension. Bilateral cooperation under the Belt and Road Initiative (BRI) includes digital connectivity, cultural exchange, tourism, audiovisual collaboration, education, and emerging AI cooperation. The 2024 joint statement between the two governments explicitly supports joint cultural production, broadcasting cooperation, museum and exhibition exchange, professional training, and tourism cooperation (Ministry of Foreign Affairs of the People's Republic of China, 2024). These domains create a practical bridge between industrial policy and market-facing cultural activity. They also reveal asymmetry: China possesses a large digital-platform economy, extensive deployment experience, and scale in AI research and applications; Kazakhstan has a smaller domestic market but distinctive Kazakh–Russian linguistic assets, Central Eurasian cultural networks, and an explicit strategy to develop sovereign AI infrastructure and broad AI literacy (Ministry of Artificial Intelligence and Digital Development of the Republic of Kazakhstan [MAIDD], 2025a, 2025b).

Existing research provides important but fragmented explanations. Marketing-capability scholarship shows how firms deploy knowledge and resources to sense markets, implement strategy, and generate performance (Morgan et al., 2009; Morgan et al., 2012; Vorhies & Morgan, 2005). AI research identifies organizational resources required to build AI capability and distinguishes automation, analytical intelligence, and relational or "feeling" intelligence (Huang & Rust, 2021; Mikalef & Gupta, 2021). Creative-industry research shows that AI can augment production and experimentation, yet its value depends on human-centered design and creative judgment (Anantrasirichai & Bull, 2022; Zhou & Lee, 2024). Consumer research, meanwhile, warns that people may resist machine involvement in hedonic and symbolic consumption and may perceive AI-generated brand content as less authentic (Brüns & Meißner, 2024; Granulo et al., 2021; Longoni & Cian, 2022). These streams rarely meet in an international cultural-marketing framework, and they pay limited attention to cross-border institutional differences.

This article addresses that gap by asking four questions. First, which international marketing capabilities are reconfigured by AI in cultural industries? Second, through which organizational and consumer mechanisms are AI resources converted into culturally meaningful international market value? Third, how do human–AI collaboration and responsible governance condition this conversion? Fourth, what complementary roles can China and Kazakhstan play in a bilateral capability system? The article develops an AI-augmented hierarchy of cultural-industry international marketing capability (CIIMC) and embeds it in an AI-enabled BRIDGE–IMC process: Belt and Road context, Relationships, Integration of cultural resources, Digital intelligence, Global market adaptation, and Engagement. The central argument is simple but demanding in practice: AI creates cultural-market value only when organizations combine technological efficiency with human responsibility for meaning, context, authorship, and trust.

The paper makes two theoretical contributions. First, it connects macro-level institutions, meso-level capability reconfiguration, and micro-level consumer response in a dynamic architecture, thereby extending marketing-capability theory beyond technology adoption. Second, it incorporates cultural meaning, authenticity, and responsible human–AI collaboration into international marketing theory as value-creation mechanisms and boundary conditions rather than as peripheral ethical concerns. For practitioners and policymakers, the framework provides a staged agenda for developing bilateral cultural-market projects without if more automation necessarily produces more value.

Literature Review

International marketing capability and dynamic reconfiguration

Marketing capability is commonly understood as the organizational ability to deploy market knowledge and other resources through coordinated processes. It is not equivalent to possessing data, technology, or talented individuals. Capabilities reside in routines that allow an organization to learn about customers and competitors, design and implement market programs, coordinate channels, and renew its value proposition. Empirical work has linked stronger marketing capabilities to superior market and financial outcomes and has shown that market orientation and capability deployment act as complementary assets (Morgan et al., 2009; Vorhies & Morgan, 2005). In export ventures, performance depends not only on strategy formulation but also on the capabilities that translate strategy into coordinated international action (Morgan et al., 2012).

Dynamic-capability theory deepens this view by focusing on sensing change, seizing opportunity, and transforming the organization under conditions of uncertainty (Teece, 2007). This perspective is appropriate for the AI era because AI does not merely automate an unchanged marketing process. It alters the speed of experimentation, the economics of content variation, the granularity of market sensing, the location of creative work, and the boundaries between firms, platforms, creators, and consumers. Digital transformation research similarly distinguishes limited digitization from deeper organizational and business-model change (Verhoef et al., 2021). A cultural organization that uses an AI translator for isolated posts has adopted a tool; an organization that redesigns multilingual content governance, customer insight, partner coordination, and IP management has reconfigured a capability.

International cultural marketing creates additional complexity. Cultural products are interpretation-intensive and often travel through large “psychic” and institutional distances. Their market acceptance depends on the ability to maintain a recognizable cultural core while providing contextual access for foreign audiences. Literal translation, generic localization, and excessive adaptation can all fail: the first may be inaccessible, the second culturally superficial, and the third may erase the difference that makes the product valuable. Accordingly, CIIMC is defined here as an organization’s learned and coordinated capacity to sense international cultural markets, interpret and integrate cultural resources, design and communicate culturally meaningful offers, build cross-border relationships, engage consumers, and renew these processes across institutional environments.

AI capability and human–AI collaboration

Organizational AI capability is a configuration of tangible, human, and intangible resources rather than an algorithm in isolation. Mikalef and Gupta (2021) identify data, technology, basic resources, technical skills, business skills, interdepartmental coordination, and organizational change capacity as mutually reinforcing elements. Jöhnk et al. (2021) similarly show that strategic alignment, resources, knowledge, culture, and data-related conditions shape organizational readiness. These studies imply that an enterprise cannot buy international marketing capability “off the shelf.” It must connect models and data to domain expertise, workflows, decision rights, and learning routines.

Marketing research has progressively moved from task substitution to collaboration. Davenport et al. (2020) describe AI applications across customer understanding, targeting, service, and strategy, while Huang and Rust (2021) distinguish mechanical, thinking, and feeling AI across marketing research, strategy, and action. Their later collaborative-AI framework argues that the division of labor should reflect the comparative strengths of humans and machines (Huang & Rust, 2022). Generative AI further expands the range of possible outputs—from text and images to product concepts and personalized communication—but also makes governance and consumer response central to innovation outcomes (Cillo & Rubera, 2025; Grewal et al., 2025).

The automation–augmentation distinction should not be reduced to a moral choice between “bad replacement” and “good assistance.” Raisch and Krakowski (2021) demonstrate that automation and augmentation are interdependent and can produce paradoxical organizational effects. Repetitive

formatting, initial translation, audience clustering, anomaly detection, and versioning may be automated, while cultural interpretation, creative direction, ethical judgment, partner negotiation, and final accountability remain human-led. However, today's automation changes tomorrow's skill base: if junior translators, designers, or marketers no longer perform developmental tasks, the organization may weaken its future human expertise. Effective human–AI collaboration therefore requires deliberate task allocation, feedback, and capability renewal.

Creative-industry evidence supports an augmentation logic. A broad review concludes that AI is most valuable when it assists human creativity rather than being treated as an autonomous creator (Anantrasirichai & Bull, 2022). Analysis of digital artists also finds that text-to-image systems can raise productivity and average audience evaluation, while their effect on novelty is uneven: peak novelty can expand even as average novelty declines (Zhou & Lee, 2024). For cultural organizations, this means output volume is a poor proxy for creative or international marketing capability. The more relevant capability is the ability to generate options, recognize culturally promising variants, reject inappropriate outputs, and learn from audience response without converging on generic patterns.

Cultural meaning, authenticity, and consumer engagement

Cultural value is not embedded in an artifact as a fixed technical property. It emerges through interpretation and the relationship between the object, its producer, a cultural referent, and the consumer. Moulard et al. (2021) clarify brand authenticity through correspondences such as being true to facts, ideals, and the self. This approach is useful for AI-mediated cultural marketing because a synthetic image can be technically impressive but perceived as culturally false, opportunistic, or disconnected from legitimate custodians. Conversely, transparent AI assistance can support authenticity when it improves access while preserving authorship, provenance, cultural accuracy, and the producer's stated values.

Consumer research indicates that AI acceptance varies by context. People tend to prefer AI recommendations when utilitarian attributes are salient and resist them when hedonic attributes dominate (Longoni & Cian, 2022). They also prefer human labor more strongly for products with high symbolic value, partly because human production signals uniqueness (Granulo et al., 2021). Cultural goods—stories, performances, games, heritage experiences, crafts, and identity-linked tourism—typically contain hedonic and symbolic components. The implication is not that AI should be hidden. Brüns and Meißner (2024) show that generative-AI involvement in social-media content can reduce perceived brand authenticity. Concealment may intensify this effect if audiences later discover synthetic production. A more defensible strategy is calibrated disclosure combined with visible human creative responsibility.

Customer engagement is the deliberate stimulation of consumer behaviors beyond immediate purchase, including contribution, recommendation, feedback, and co-creation (Harmeling et al., 2017). AI can reduce language barriers, personalize discovery, and support conversational participation, but algorithmically optimized engagement may also reward sensationalism, stereotype, or short-term attention. Puntoni et al. (2021) emphasize that consumer experiences with AI include agency, sociality, and perceived control, not merely accuracy. In cultural industries, the micro-level outcome should therefore be assessed through a bundle of relevance, cultural comprehension, authenticity, trust, participation, perceived value, and willingness to support the brand—not clicks alone.

Responsible AI governance as a market capability

Responsible governance is often treated as a compliance constraint imposed after innovation. In cross-border cultural marketing it is a productive capability because provenance, rights, disclosure, linguistic inclusion, and accountability directly affect trust and license to operate. The Recommendation on the Ethics of Artificial Intelligence calls for transparency, human oversight, cultural and linguistic diversity, privacy, and accountability (United Nations Educational, Scientific

and Cultural Organization [UNESCO], 2021). UNESCO's subsequent report on AI and culture stresses the need to protect artistic freedom, creators' rights, local cultural ecosystems, and cultural sovereignty across the value chain (UNESCO, 2025). The Organisation for Economic Co-operation and Development (OECD, 2025) likewise notes that generative AI may improve productivity and innovation while its effects depend on skills, complementary investments, market conditions, and risk management.

Governance is especially salient in the China–Kazakhstan setting because cultural content crosses legal, linguistic, platform, and data environments. Kazakhstan's Law No. 230-VIII "On Artificial Intelligence," adopted in November 2025, establishes a national legal foundation for AI systems, including general principles of safety, transparency, accountability, and protection of rights (Republic of Kazakhstan, 2025). China's 2025 "AI Plus" action opinion places AI within cultural production, communication, and exchange and encourages culturally grounded content and new cultural business forms (State Council of the People's Republic of China, 2025). These policy directions create opportunities, but firms still need operational routines: approved-data inventories, rights and consent records, human sign-off, synthetic-content disclosure, cultural review, bias testing, incident response, and auditable model/vendor choices.

The literature therefore suggests a missing integrative construct. AI capability explains whether organizations can mobilize technology; marketing capability explains whether resources reach markets; creativity research explains co-production; consumer research explains acceptance and authenticity; and governance frameworks explain legitimacy. CIIMC in the AI era must connect all five.

Methodology

Research design

The study uses a theory-building design combining an integrative literature review with structured comparative institutional analysis. An integrative review is appropriate when a phenomenon span established but disconnected literatures and when the objective is conceptual synthesis rather than estimation of a pooled effect. The unit of analysis is not the AI tool but the capability configuration through which cultural-industry organizations create international market value.

The search and selection process was organized in three stages. First, high-impact peer-reviewed research was identified through Web of Science, Scopus, Google Scholar, and publisher databases using combinations of "artificial intelligence," "generative AI," "marketing capability," "international marketing capability," "creative industries," "human–AI collaboration," "brand authenticity," "symbolic consumption," and "customer engagement." Second, authoritative institutional sources were retrieved from UNESCO, OECD, Stanford HAI, the Government of China, and the Government of Kazakhstan. Third, backward and forward reference checks were used to retain foundational marketing-capability and dynamic-capability studies and recent AI–marketing studies with direct conceptual relevance.

Sources were included when they met at least one of four criteria: (1) they defined or measured marketing or AI capability; (2) they provided peer-reviewed evidence on human–AI creativity, authenticity, trust, or engagement; (3) they established an authoritative international governance principle; or (4) they documented the current Chinese, Kazakhstani, or bilateral policy context. Technical papers without an organizational or market implication, generic commentaries, vendor claims, and documents without identifiable provenance were excluded. The final analytical corpus comprised 30 sources: 21 peer-reviewed articles and nine authoritative policy or institutional documents. This deliberately compact corpus prioritizes theoretical influence, direct relevance, and traceability over citation volume.

Analytical procedure

Each source was coded along four axes: level of analysis (institutional, organizational, consumer); capability function (sensing, creating, communicating, engaging, transforming); human–AI task allocation (automation, augmentation, oversight); and value/risk outcome (productivity, novelty, cultural relevance, authenticity, trust, rights, bias, or performance). The coded findings were compared to the previously developed CIIMC hierarchy and BRIDGE–IMC logic. Concepts were retained when they were supported across at least two literature streams or when an authoritative policy source established a material institutional condition. Iterative comparison produced three capability levels, five conversion mechanisms, a set of consumer-level mediators, and six research propositions.

China–Kazakhstan comparison is structured rather than statistically symmetric. The two countries differ markedly in market size, language ecology, infrastructure, platform structure, and industrial depth. The analysis therefore compares functional contributions and constraints rather than rankings. Official policy documents describe institutional intentions and legal conditions; they are not treated as evidence that implementation outcomes have already been achieved. Similarly, the framework is conceptual. It does not report interviews, survey data, or causal tests, and the propositions require subsequent empirical validation.

Table 1. Analytical synthesis and role in framework construction

Evidence domain	Main question	Representative sources	Role in the framework
Marketing and dynamic capabilities	How are market resources coordinated and renewed?	Morgan et al. (2009, 2012); Teece (2007); Vorhies and Morgan (2005)	Defines capability, hierarchy, and transformation logic
Organizational AI and marketing	Which resources and tasks enable AI value?	Davenport et al. (2020); Huang and Rust (2021, 2022); Jöhnk et al. (2021); Mikalef and Gupta (2021)	Defines readiness, task allocation, and AI-enabled routines
Creativity and human–AI collaboration	When does AI augment creative work?	Anantrasirichai and Bull (2022); Raisch and Krakowski (2021); Zhou and Lee (2024)	Defines complementarity and human creative agency

Evidence domain	Main question	Representative sources	Role in the framework
Consumer meaning and engagement	How do audiences evaluate AI-mediated culture?	Brüns and Meißner (2024); Granulo et al. (2021); Harmeling et al. (2017); Longoni and Cian (2022); Moulard et al. (2021); Puntoni et al. (2021)	Defines authenticity, trust, meaning, and engagement mechanisms
Institutions and governance	Which public conditions shape cross-border use?	UNESCO (2021, 2025); OECD (2025); Chinese and Kazakhstani policy documents	Defines legitimacy, governance safeguards, and bilateral conditions

Results and Discussion

AI as a context for capability reconfiguration

The first result is conceptual: AI should be modeled as a reconfiguration context and resource system, not as a single independent variable. A firm may use generative AI frequently yet lack a coherent capability if the use is fragmented, ungoverned, or disconnected from market learning. Conversely, a smaller organization may build strong AI-augmented CIIMC by focusing on a narrow set of high-value routines and combining external models with distinctive cultural knowledge. This distinction separates access from orchestration. Access to models is increasingly commoditized; cultural data, interpretive judgment, relationship legitimacy, organizational learning, and accountable execution remain heterogeneous.

At the macro level, policy, law, infrastructure, language resources, data access, platform rules, IP regimes, and bilateral relations shape the feasible opportunity set. At the meso level, organizations configure people, processes, models, data, and partners. At the micro level, consumers evaluate whether the resulting experience is relevant, culturally comprehensible, authentic, trustworthy, and worthy of participation. Performance emerges only if these levels align. This is why a technically efficient campaign can fail: it may optimize production at the meso level while violating cultural expectations at the micro level or data and disclosure requirements at the macro level.

The global AI environment also reinforces the need for relational international strategy. The United States remains dominant in frontier-model production and private investment, while China is a major center of AI publications, patents, model development, and deployment (Stanford HAI, 2026). Kazakhstan cannot and need not replicate either system. Its strategic opportunity lies in developing sovereign and multilingual infrastructure, public AI competence, domain-specific datasets, regional testbeds, and trusted connections between global technologies and Central Eurasian contexts. Kazakhstan’s current digital strategy and national AI reporting emphasize AI literacy, infrastructure, startup development, and locally relevant models (MAIDD, 2025a, 2025b). For cultural industries,

these assets are valuable when linked to creators, archives, universities, tourism organizations, platforms, and international marketers.

A three-level architecture of AI-augmented CIIMC

The synthesis identifies three interdependent capability levels. Their hierarchy is developmental rather than bureaucratic. Foundational capabilities make reliable AI use possible; core capabilities convert technical resources into culturally meaningful market action; strategic capabilities renew the organization and coordinate ecosystems. Weakness at a lower level constrains the next, but feedback from core and strategic work also determines which foundations must be strengthened.

Foundational capabilities

Foundational capability has four components. The first is data and model readiness: access to lawful, documented, representative, and usable cultural and market data; appropriate model and vendor selection; secure infrastructure; and evaluation procedures. The second is AI and cultural-data literacy across both technical and nontechnical staff. Prompting alone is insufficient; staff must understand model limits, hallucination, bias, provenance, confidentiality, and the difference between translation accuracy and cultural adequacy. The third is multilingual digital operations, including terminology management, Kazakh–Chinese–Russian–English workflows, human review, and reusable knowledge bases. The fourth is AI-supported international market sensing, which combines social listening, search behavior, platform data, partner intelligence, and qualitative cultural interpretation.

These foundations are necessary but not differentiating by themselves. Competitors can often procure similar tools. Advantage comes from routines that connect datasets to cultural domain knowledge and from the accumulated feedback generated by real campaigns and relationships. Jöhnk et al. (2021) and Mikalef and Gupta (2021) support this configuration view: readiness includes strategy, skills, data, coordination, culture, and change capacity, not only computing resources.

Core capabilities

Core capabilities perform the difficult conversion from information to meaning. Cross-cultural interpretation identifies the values, narratives, symbols, sensitivities, humor, aesthetic codes, and institutional expectations that shape reception. Cultural-meaning translation redesigns the access points to a cultural work without erasing its source identity. This may involve paratext, story framing, subtitles, interface design, community explanation, educational material, or partner selection rather than alteration of the work itself.

Human–AI co-creation assigns machines to option generation, variation, rough translation, pattern recognition, and rapid prototyping while assigning humans to intent, selection, contextual judgment, sensitive representation, final authorship, and accountability. The division should vary by cultural sensitivity and symbolic intensity. A routine service message may permit extensive automation; a heritage narrative, representation of a minority group, or core brand story requires stronger human leadership. Relationship intelligence integrates AI-supported customer and partner knowledge with human trust-building. In BRI cultural markets, relationships with local creators, distributors, museums, festivals, universities, tourism bodies, fan communities, and regulators often provide legitimacy and interpretation that digital data cannot supply.

Strategic capabilities

Strategic capability includes cultural innovation, business-model reconfiguration, ecosystem orchestration, and international scaling. Cultural innovation uses AI to open new forms of storytelling, accessibility, participation, or cultural experience while preserving a defensible cultural proposition. Business-model reconfiguration may connect media, games, live experiences, tourism, education, licensing, and digital collectibles, but should begin with consumer and cultural value rather than technological novelty. Ecosystem orchestration coordinates rights holders, creators, data custodians, AI providers, platforms, distributors, and public partners across borders. International scaling develops

reusable modular assets—terminology bases, approved visual systems, cultural review protocols, localized community playbooks, and governance controls—without imposing a single global template.

This hierarchy extends the earlier CIIMC concept by treating AI as a connective layer. Digital marketing remains foundational, cross-cultural communication remains core, and innovation remains strategic; however, every level now includes explicit data, model, human-role, and governance design.

Table 2. Hierarchy of AI-augmented international marketing capability in cultural industries

Level	Capability bundle	Typical AI-enabled activities	Distinctive human responsibility	Principal failure risk
Foundational	Data/model readiness; AI literacy; multilingual operations; market sensing	Data classification, initial translation, social listening, audience clustering, workflow automation	Define data legitimacy, evaluation criteria, confidentiality, and cultural-quality thresholds	Biased or unlawful data; false precision; fragmented tool use
Core	Cross-cultural interpretation; meaning translation; human–AI co-creation; relationship intelligence	Content variation, contextual adaptation, conversational service, partner/customer insight	Set intent, interpret context, select outputs, protect cultural integrity, build trust	Generic localization; stereotyping; authenticity loss; relational damage
Strategic	Innovation; business-model renewal; ecosystem orchestration; international scaling	Experience design, scenario generation, portfolio experimentation, reusable market modules	Choose strategic direction, allocate rights/value, govern ecosystems, accept accountability	Technology-led novelty without value; dependency; IP conflict; scale without legitimacy

AI-enabled BRIDGE–IMC: from resources to cultural-market value

The three-level architecture explains what organizations must be able to do. The AI-enabled BRIDGE–IMC process explains how those capabilities reach international audiences. Belt and Road context represents the institutional opportunity space: bilateral relations, digital connectivity, cultural

agreements, tourism flows, and public cooperation. Relationships convert formal cooperation into trusted networks among firms, creators, intermediaries, institutions, and communities. Integration combines cultural IP, heritage, contemporary creativity, technological resources, and complementary organizational assets. Digital intelligence uses AI to sense, create, test, personalize, translate, and learn. Global adaptation configures the offer for particular markets while preserving cultural identity. Engagement enables audiences to interpret, participate, recommend, co-create, and build brand relationships.

This process corrects two common misconceptions. First, "digital" is not synonymous with international. Platform reach may produce exposure without comprehension, distribution, trust, or payment. Second, "integration" is not simple content aggregation. It is an organizational capability to combine cultural resources while clarifying rights, meaning, and value distribution. AI can accelerate each BRIDGE element, but acceleration only creates value if the elements remain connected.

Figure 1 presents the full mechanism. Macro conditions influence the organization's foundational, core, and strategic capability system. These capabilities activate the BRIDGE–IMC process. At the consumer level, cultural relevance and comprehension support authenticity and trust, which enable engagement, brand competitiveness, and international market performance. Responsible governance surrounds the process as both an enabling infrastructure and a moderating condition. Market feedback then renews data, routines, partnerships, and strategy.

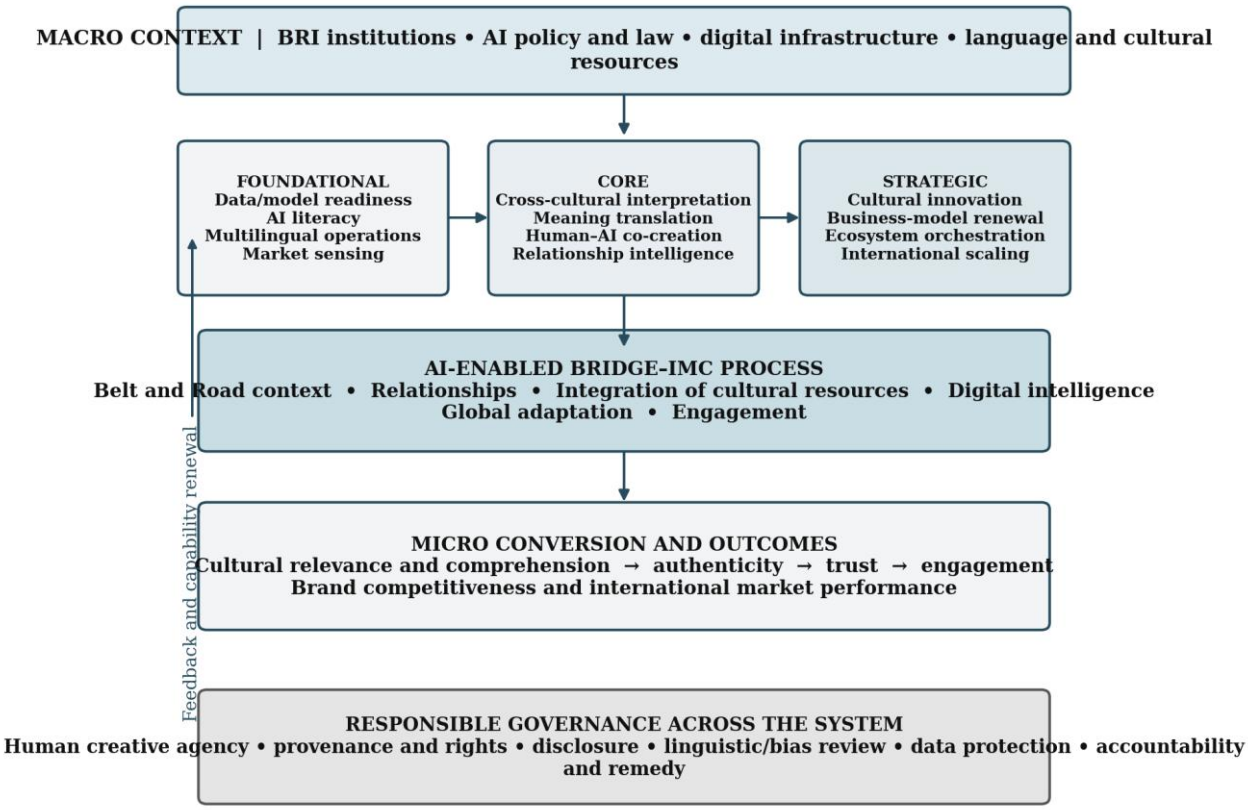

Figure 1. AI-augmented CIIMC and the BRIDGE–IMC cultural-market value conversion framework

Cultural meaning and human agency as conversion mechanisms

AI's contribution to cultural marketing is probabilistic. It increases the range and speed of possible outputs, but it cannot determine which meaning should be advanced, which cultural

compromise is legitimate, or who has the authority to speak. Human cultural judgment is thus not a residual task left after automation. It is the mechanism that converts model output into an accountable market proposition.

Meaning translation differs from language translation in three respects. It is relational because meaning depends on the audience's knowledge and identity. It is institutional because representations may involve communities, rights holders, public memory, and national narratives. It is strategic because the choice of what to explain and what to leave culturally distinctive shapes brand positioning. AI can support this work through comparative corpus analysis, multilingual drafts, audience-question synthesis, and rapid testing. Yet final interpretation should involve cultural experts, creators, local partners, and—where appropriate—community representatives.

Authenticity is the consumer-facing test of this conversion. From the entity–referent perspective, consumers ask implicitly whether the offer corresponds to facts, ideals, source identity, producer identity, or their own identity (Moulard et al., 2021). AI may strengthen factual and experiential access—for example, through high-quality subtitles, personalized learning, or restoration—while weakening perceived human origin or integrity. Managers should therefore design an "authenticity architecture" specifying which elements must remain human-authored, which can be AI-assisted, what provenance is retained, how synthetic elements are disclosed, and how cultural claims are verified.

This approach also reconciles efficiency and symbolic value. Evidence that consumers prefer human involvement in symbolic contexts (Granulo et al., 2021) and resist AI recommendations in hedonic contexts (Longoni & Cian, 2022) does not imply blanket rejection of AI. It implies that the visible human role and the framing of AI use matter. A label such as "AI-generated" without explanation can signal absence of craft. A transparent account that AI supported multilingual access while named creators retained artistic control signals augmentation. Thus, responsible disclosure is part of positioning, not merely legal text.

Responsible governance as an enabling boundary condition

The framework identifies seven governance routines that should operate across the capability hierarchy and BRIDGE–IMC process: (1) cultural-data provenance; (2) rights, consent, and permitted-use records; (3) human creative direction and final accountability; (4) culturally appropriate synthetic-content disclosure; (5) multilingual bias and representation testing; (6) security, privacy, and cross-border data controls; and (7) incident response, correction, and stakeholder remedy. These routines make projects slower at selected decision points but faster to scale responsibly because they reduce rework, conflict, and reputational surprise.

Governance should be risk-tiered. Low-risk internal ideation can use light controls, whereas public-facing heritage representation, realistic synthetic persons, minors' data, voice cloning, political or historical narratives, and community-owned knowledge require enhanced review. The design is consistent with UNESCO's human-rights and cultural-diversity approach and with Kazakhstan's emerging legal framework (Republic of Kazakhstan, 2025; UNESCO, 2021, 2025). For bilateral projects, the stricter relevant requirement should normally become the operational baseline, supplemented by contractual rules on model training, IP ownership, revenue sharing, correction, and archive preservation.

Responsible governance also has a positive strategic function. Traceable provenance can increase brand credibility; controlled cultural datasets can improve localization quality; clear human authorship can support authenticity; and trusted cross-border data arrangements can make institutional partners more willing to participate. In this sense, governance becomes a difficult-to-imitate relational asset.

China–Kazakhstan complementarity

The comparison suggests that the most promising bilateral model is complementary rather than symmetrical. China's potential contribution lies in deployment scale, integrated digital platforms, commercial experimentation, production capacity, and experience converting cultural IP into multiple formats. Kazakhstan's potential contribution lies in Kazakh–Russian language and cultural knowledge, connections across Central Eurasia, institutional proximity to local communities, and an emerging policy commitment to sovereign AI capability and broad public training. Neither side's contribution should be romanticized: Chinese scale can produce standardized output or platform dependence, while Kazakhstan's smaller market may constrain investment, specialized talent, and data availability. Complementarity must therefore be designed through governance and joint capability-building.

Three operating models follow. In a co-creation studio, mixed teams of creators, cultural experts, translators, marketers, and AI specialists develop content with shared rights and explicit human authorship. In a cultural intelligence lab, universities, firms, archives, and tourism/cultural institutions build multilingual terminology, audience insight, and evaluation resources with controlled access. In a third-market accelerator, China–Kazakhstan teams test culturally adapted offerings for Central Asian, Chinese, Russian-speaking, and selected global audiences using modular content and locally accountable partners. These models translate high-level BRI cooperation into repeatable organizational routines.

Table 3. Bilateral complementarity and joint capability-building priorities

Dimension	China: potential contribution	Kazakhstan: potential contribution	Joint priority and safeguard
Technology and deployment	Platform experience, production scale, application ecosystems, rapid experimentation	Sovereign infrastructure agenda, targeted local models, smaller test environments	Interoperability, vendor transparency, local capability transfer, avoidance of lock-in
Language and cultural knowledge	Chinese-language resources, global diaspora channels, extensive cultural IP	Kazakh–Russian multilingual knowledge, Central Eurasian context, local legitimacy	Curated corpora, human cultural review, community-sensitive data governance
Market access	Large consumer market, media and e-commerce channels, commercialization capacity	Regional brokerage, local institutions, tourism and cultural networks	Reciprocal distribution, fair visibility, locally grounded partner selection

Dimension	China: potential contribution	Kazakhstan: potential contribution	Joint priority and safeguard
Creative production	Cross-media adaptation, games/animation/short-video expertise, integrated supply chains	Heritage, music, film, crafts, contemporary Eurasian narratives and creators	Joint authorship, provenance, equitable IP and revenue arrangements
Governance	Expanding AI application and cultural-policy framework	National AI law and responsible/sovereign AI agenda	Bilateral code of practice, risk-tiered review, disclosure, remedy, and auditability

Research propositions

The conceptual synthesis yields six propositions for subsequent testing.

Proposition 1. Organizational AI readiness—comprising data/model readiness, AI and cultural-data literacy, multilingual operations, and strategic alignment—positively influences foundational CIIMC.

This proposition distinguishes organizational readiness from mere tool use. Cultural enterprises require coordinated technical and business resources before AI can reliably support international market sensing or multilingual execution (Jöhnk et al., 2021; Mikalef & Gupta, 2021).

Proposition 2. Foundational AI-augmented capabilities improve core cross-cultural and co-creative capabilities only when market learning and human cultural expertise are integrated into AI workflows.

The relationship is conditional because more data and automation can amplify error when the organization lacks interpretive judgment. Human experts transform model outputs into reusable knowledge and update evaluation criteria through feedback.

Proposition 3. Core and strategic AI-augmented CIIMC positively influence international cultural brand competitiveness and market performance through the BRIDGE–IMC process.

This proposition treats BRIDGE–IMC as a conversion mechanism. Capabilities have no market consequence unless they are activated through relationships, cultural-resource integration, digital intelligence, global adaptation, and engagement.

Proposition 4. Cultural relevance and comprehension, perceived authenticity, and trust sequentially mediate the relationship between AI-enabled BRIDGE–IMC execution and consumer engagement.

Audiences must first access and understand the cultural offer, then evaluate its truthfulness and integrity, and finally decide whether the organization is trustworthy enough to support, recommend, or co-create with it.

Proposition 5. Human–AI complementarity strengthens, whereas perceived human substitution weakens, the effect of AI-enabled international cultural marketing on authenticity and engagement; this difference is stronger for culturally sensitive, hedonic, and symbolic offers.

The proposition follows the context-dependent acceptance of AI and the symbolic value attached to visible human creative labor (Granulo et al., 2021; Longoni & Cian, 2022).

Proposition 6. Responsible AI governance strengthens the positive relationship between AI-augmented CIIMC and international market performance by increasing transparency, legitimacy, partner confidence, and consumer trust while reducing rights, bias, and reputational risks.

Governance is therefore modeled as a capability and boundary condition, not as a separate ethical appendix.

Managerial and policy implications

For cultural enterprises, implementation should begin with a small number of value-chain bottlenecks rather than an enterprise-wide mandate to "use AI." A useful sequence is: identify a market problem; map cultural and legal sensitivity; allocate human and machine roles; test with local partners and audiences; measure meaning, authenticity, trust, and engagement; and then codify successful routines. Managers should maintain an AI use register and a cultural review record for significant public content. Performance dashboards should combine efficiency indicators—time, cost, version speed—with cultural-market indicators such as comprehension, authenticity, trust, partner quality, conversion, repeat engagement, and international revenue.

For China–Kazakhstan projects, bilingual or trilingual competence must be embedded in teams rather than outsourced at the final communication stage. A Kazakh or Russian translation generated after a Chinese campaign has been completed is localization; the involvement of Kazakhstani creators and market experts during concept formation is co-creation. Contracts should clarify training-data use, adaptation rights, named human authorship, synthetic-content labeling, model/vendor responsibility, correction rights, and the allocation of value from derivative formats.

For policymakers, subsidies and cultural-exchange programs should evaluate capability transfer and audience value, not only content quantity or event count. Joint programs could fund verified cultural datasets, terminology resources, creator fellowships, AI literacy, university–industry labs, and cross-border pilot projects. Procurement and grant criteria should require provenance, human oversight, linguistic inclusion, and measurable international engagement. Public institutions can also act as trusted intermediaries when archives, museums, community knowledge, and commercial models intersect.

Finally, sovereign AI should be interpreted functionally. Complete technological self-sufficiency is neither realistic nor necessary for every cultural organization. What matters is whether critical cultural and linguistic resources remain governable; whether organizations can choose and evaluate models; whether sensitive data can be protected; whether outputs can be challenged and corrected; and whether local creators and institutions retain agency in value creation.

Conclusion

This article examined how AI reconfigures international marketing capability in China–Kazakhstan cultural industries. It argued that AI is neither a stand-alone marketing capability nor an automatic source of international performance. Its value depends on a three-level architecture. Foundational capabilities establish data/model readiness, AI literacy, multilingual operations, and market sensing. Core capabilities translate technology into cross-cultural interpretation, cultural meaning, human–AI co-creation, and relationships. Strategic capabilities renew offerings, business models, ecosystems, and international scale. The AI-enabled BRIDGE–IMC process links this

architecture to consumers through institutional context, relationships, cultural-resource integration, digital intelligence, global adaptation, and engagement.

Two contributions follow. First, the paper offers a macro–meso–micro model in which institutions shape organizational reconfiguration, and organizational capabilities create performance only through consumer-level meaning, authenticity, trust, and engagement. This provides a dynamic-capability perspective on AI in international cultural marketing. Second, the paper positions human creative agency and responsible AI governance as productive elements of market capability. They do not simply limit automation; they protect cultural distinctiveness, enable legitimate collaboration, and support durable brand value.

The China–Kazakhstan comparison indicates that bilateral advantage is likely to come from orchestrated difference. China's deployment scale and platform experience can be combined with Kazakhstan's linguistic and cultural knowledge, Eurasian networks, and emerging sovereign AI agenda. Realizing this complementarity requires joint authorship, reciprocal market access, locally grounded review, transparent rights and data arrangements, and institutional mechanisms for learning.

The study has limitations. Its conceptual propositions are based on an integrative review and comparative document analysis, not causal evidence. Public policies indicate direction but not implementation effectiveness. The framework also aggregates heterogeneous cultural sectors whose audience relationships and risk profiles differ. Future research should test the six propositions using multi-group SEM with cultural enterprises and consumers in China and Kazakhstan; compare AI disclosure and human-authorship cues through experiments; examine sectoral differences among games, film, animation, heritage, crafts, and cultural tourism; and conduct longitudinal case studies of bilateral projects. A further research priority is to develop validated measures of cultural-meaning translation capability, human–AI complementarity, and responsible AI marketing governance. Such work would move the debate from broad claims about AI adoption to evidence about when AI helps cultural difference travel, remain credible, and create shared market value.

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GREEN FINANCE AND INTEGRATED ENERGY SYSTEM TRANSFORMATION: EVIDENCE FROM KAZAKHSTAN'S NATIONAL OIL AND GAS COMPANY

CONDENSED AND REVISED ENGLISH VERSION (2015–2024)

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Abstract. Whether green finance can be effectively translated into low-carbon action by energy enterprises in resource-dependent economies remains underexplored using continuous firm-level evidence. This study employs KazMunayGas (KMG), Kazakhstan's national oil and gas company, as a single case and examines the relationship between green finance and integrated energy system (IES) transformation using annual data for 2015–2024. Environmental protection expenditure is used as a proxy for green finance, while the associated petroleum gas (APG) utilization rate measures IES transformation. Firm size, leverage, operating cash flow, and the Brent crude oil price are included as controls. The analysis combines a policy timeline, trend and correlation analysis, hierarchical ordinary least squares (OLS) regressions, one-period lagged regressions, and robustness tests using HC3 robust standard errors, standardized regression, a parsimonious model, and first differences. The results show a strong positive correlation between green finance and IES transformation ($r = 0.766$). In the bivariate model, the green finance coefficient is 0.276 and significant at the 1% level; after controls are introduced, the coefficient remains positive but becomes statistically insignificant. Lagged green finance is positive and marginally significant at the 10% level in the parsimonious model, but loses significance in the full specification. Across the robustness tests, the coefficient on green finance remains positive, although statistical significance is limited. These findings indicate that green finance provides directionally consistent but independently limited support for KMG's energy-system transformation, and the hypotheses receive partial support. Policy should strengthen green-project classification and disclosure, improve coordination between financing instruments and emissions trading system (ETS) constraints, and enhance the transformational efficiency of green capital through leverage control, stronger project governance, and longer performance-evaluation horizons.

Keywords: green finance; integrated energy system; energy transition; KazMunayGas; Kazakhstan; small-sample regression

1. Introduction

The global energy transition is shifting from the substitution of individual fuels toward systemic coordination among electricity, heat, natural gas, oil, and renewable energy. Integrated energy systems can improve efficiency and reduce emissions through multi-energy coupling, energy recovery, and digital dispatch. Their development, however, generally requires large investments, long payback periods, and substantial technological risk, making them vulnerable to financing constraints. By lowering the cost of capital for low-carbon projects, extending financing maturities, and improving risk sharing, green finance can help enterprises translate environmental objectives into equipment upgrades, APG recovery, energy-efficiency improvements, and renewable-energy investment.

Kazakhstan is a typical resource-dependent economy. Coal, oil, and natural gas have long dominated energy production and consumption, while national energy security, fiscal revenues, and exports remain closely tied to conventional energy industries. Kazakhstan established a national emissions trading system (ETS) in 2013 and approved its Strategy for Achieving Carbon Neutrality by 2060 in 2023. Nevertheless, low carbon prices, free allowance allocation, limited market liquidity, and the multiple strategic objectives of state-owned energy enterprises weaken the ability of carbon constraints alone to generate sufficient low-carbon investment incentives. Coordination among green financing, regulatory support, and corporate financial capacity may therefore explain enterprise transformation more effectively than any single policy instrument.

Existing research is concentrated mainly on mature or large-scale carbon markets in the European Union and China, where firm-level panel data are commonly used to identify the causal effects of emissions trading, green finance, and green innovation. Research on resource-dependent Central Asian economies focuses more heavily on institutional assessment. Continuous annual firm-level evidence remains scarce, particularly regarding the relationship among green expenditure, corporate financial constraints, and specific energy-utilization outcomes.

Using KMG as a representative case and annual data for 2015–2024, this study addresses two questions: whether green-finance investment is positively associated with enterprise-level IES transformation, and whether this relationship remains stable after controlling for financial conditions and oil prices, allowing for a one-period lag, and accounting for common trends. The study contributes by treating Kazakhstan's ETS and energy-transition policies as the institutional context, constructing a testable micro-level mechanism using corporate environmental expenditure and the APG utilization rate, and applying a parsimonious, transparent, and cautious exploratory approach to a dataset containing only ten annual observations.

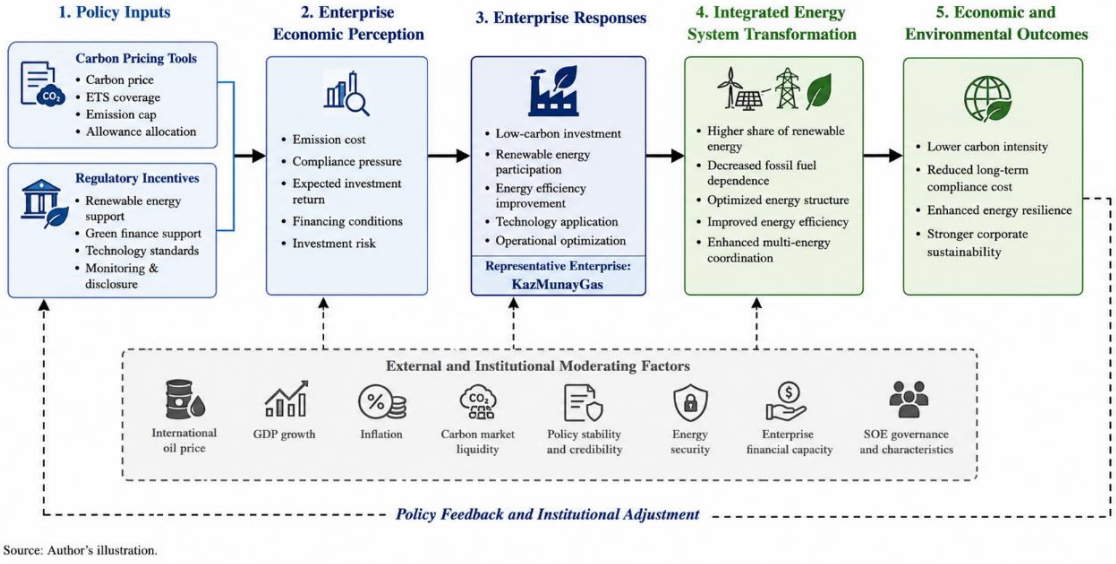
2. Literature Review and Analytical Framework

Environmental economics suggests that policy and financing instruments can alter the relative costs of high-carbon activities and low-carbon investment, thereby encouraging firms to incorporate environmental externalities into capital allocation. The Porter hypothesis further proposes that appropriately stringent and credible environmental regulation can stimulate technological upgrading and managerial improvement. Corporate investment theory emphasizes that the implementation of low-carbon projects depends on expected returns, financing conditions, cash flow, leverage, and payback periods. The effects of green finance are therefore not automatic, but are jointly shaped by firm capabilities and the institutional environment.

Recent studies indicate that stronger carbon-price signals are generally associated with lower corporate emissions, higher capital investment, and improved energy efficiency (Adamolekun, 2024; Kalantzis et al., 2025; Liu et al., 2025). Global comparative research also shows that the effectiveness of carbon taxes and ETSs depends heavily on price levels, allowance design, market liquidity, and complementary policies (Pan et al., 2024). Studies of Kazakhstan find that energy-security pressures, low-cost fossil fuels, regulatory inconsistency, limited market competition, and the special position of state-owned enterprises weaken incentives for proactive corporate decarbonization (Howie & Akhmetov, 2024; Akhmetov & Howie, 2024).

Accordingly, this study treats the ETS and the long-term low-carbon strategy as the institutional background and green finance as direct financial support for enterprise transformation. The core mechanism is as follows: institutional constraints and green financing improve the relative returns and bankability of low-carbon projects; firms then increase energy utilization through environmental investment, APG recovery, and operational optimization, ultimately reducing flaring intensity. International oil prices, firm size, leverage, and cash flow may strengthen or

weaken this transmission process. Based on this mechanism, the study proposes H1: green finance is positively associated with KMG's IES transformation; and H2: this effect may occur with a one-period lag. Given the limited sample size, both hypotheses are evaluated on the basis of directional and robustness evidence rather than strong causal inference.



Source: Author's illustration.

Figure 1. Analytical framework linking policy, enterprise responses, and integrated energy system transformation

3. Research Design

3.1 Case, Sample, and Data

KMG is one of Kazakhstan's largest national oil and gas enterprises. Its operations cover exploration and production, transportation, refining, and sales. The company performs energy-security and fiscal functions while facing pressure to reduce methane emissions, recover APG, and expand low-carbon investment. The study uses ten annual observations from 2015 to 2024. Firm-level data are drawn from KMG annual reports, sustainability reports, and ESG disclosures; oil-price data come from internationally recognized commodity-price databases; and information on the ETS and low-carbon policies is obtained from Kazakhstan government documents and public sources including the International Carbon Action Partnership. All variables were checked on a consistent annual basis. Carbon-intensity data are unavailable for 2015, so analyses involving this variable use nine observations for 2016–2024.

3.2 Variables and Models

The dependent variable is IES transformation (IES), measured by KMG's APG utilization rate (%). This indicator directly reflects the company's capacity to recover and reuse gas and to reduce flaring during oil and gas production. The key explanatory variable is green finance (GF), proxied by KMG's annual environmental protection costs in KZT billion. The controls are firm size (the natural logarithm of total assets), leverage (total liabilities divided by total assets), operating cash flow (operating cash flow divided by total assets), and the annual average Brent crude oil price. Carbon intensity, measured as APG flaring intensity, is used as a supplementary outcome to validate the environmental meaning of the transformation indicator.

$$IESt = \alpha + \beta_1 GFt + \gamma Xt + \varepsilon t$$

$$IESt = \alpha + \beta_1 GF\{t-1\} + \gamma Xt + \varepsilon t$$

where Xt denotes the set of control variables. Because the full model contains only ten observations and five explanatory variables, hierarchical regression is employed. The bivariate

relationship between green finance and IES transformation is estimated first, after which controls are added sequentially. Robustness tests include HC3 heteroskedasticity-robust standard errors, standardized regression, a parsimonious model retaining only green finance and leverage, and a first-difference model designed to weaken common time trends. The regression results are used to identify direction, stability, and lag structure and are not interpreted as strict causal effects.

Table 1. Definitions of the core variables

Variable	Symbol	Measurement	Unit	Role
IES transformation	IES	Associated petroleum gas utilization rate	%	Dependent variable
Green finance	GF	Environmental protection costs	KZT billion	Core explanatory variable
Firm size	SIZE	ln(total assets)	—	Control variable
Leverage	LEV	Total liabilities/total assets	Ratio	Control variable
Operating cash flow	CF	Operating cash flow/total assets	Ratio	Control variable
Brent oil price	OP	Annual average price	USD/barrel	Control variable
Carbon intensity	CI	Associated gas flaring intensity	Index value	Supplementary outcome variable

4. Policy Background and Trend Characteristics

Kazakhstan’s low-carbon institutional framework underwent clear phases between 2015 and 2024. The ETS was suspended and restructured in 2016–2017, trading resumed in 2018, the new Environmental Code strengthened carbon-unit trading and monitoring, reporting, and verification (MRV) requirements in 2021, a new allocation plan was implemented in 2022, and the 2023 carbon-neutrality strategy further stabilized long-term expectations. Policy intensity increased markedly after 2021, although free allowances and weak price signals continued to limit the direct constraint imposed by the ETS. Green finance and internal environmental expenditure consequently became important complements for translating policy objectives into project investment.

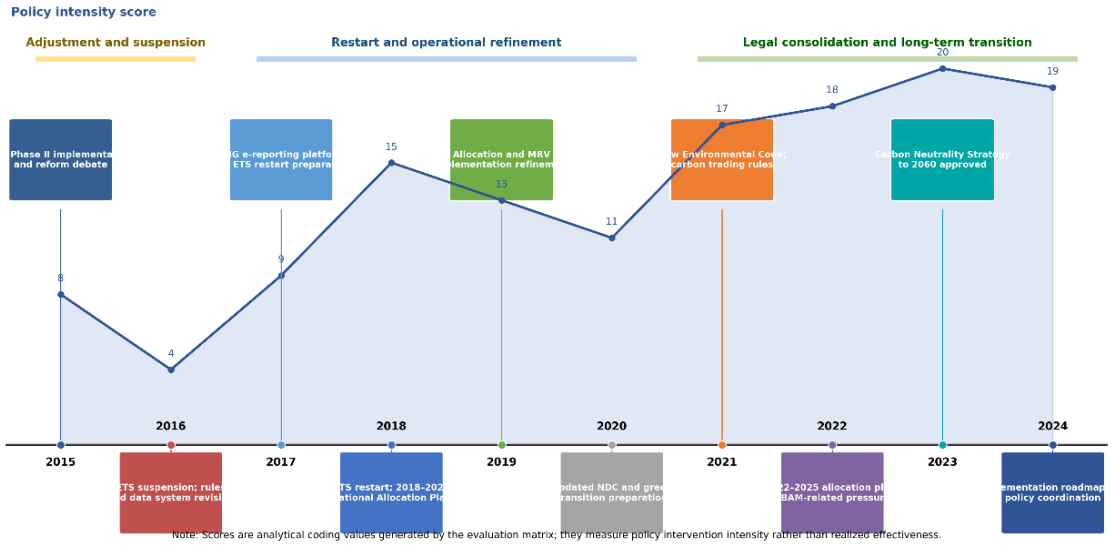


Figure 2. Kazakhstan policy timeline and annual policy intensity, 2015–2024

During the sample period, KMG's environmental protection costs increased overall but fluctuated from year to year. The APG utilization rate rose from approximately 85% to nearly 99% and gradually approached its technical ceiling in the later years, while carbon intensity declined continuously from a high initial level. Firm size expanded steadily, leverage generally decreased, and cash flow and oil prices exhibited cyclical fluctuations. These common trends suggest a possible positive relationship between green investment and IES transformation, but also indicate potential confounding effects from firm expansion, declining leverage, and the passage of time.

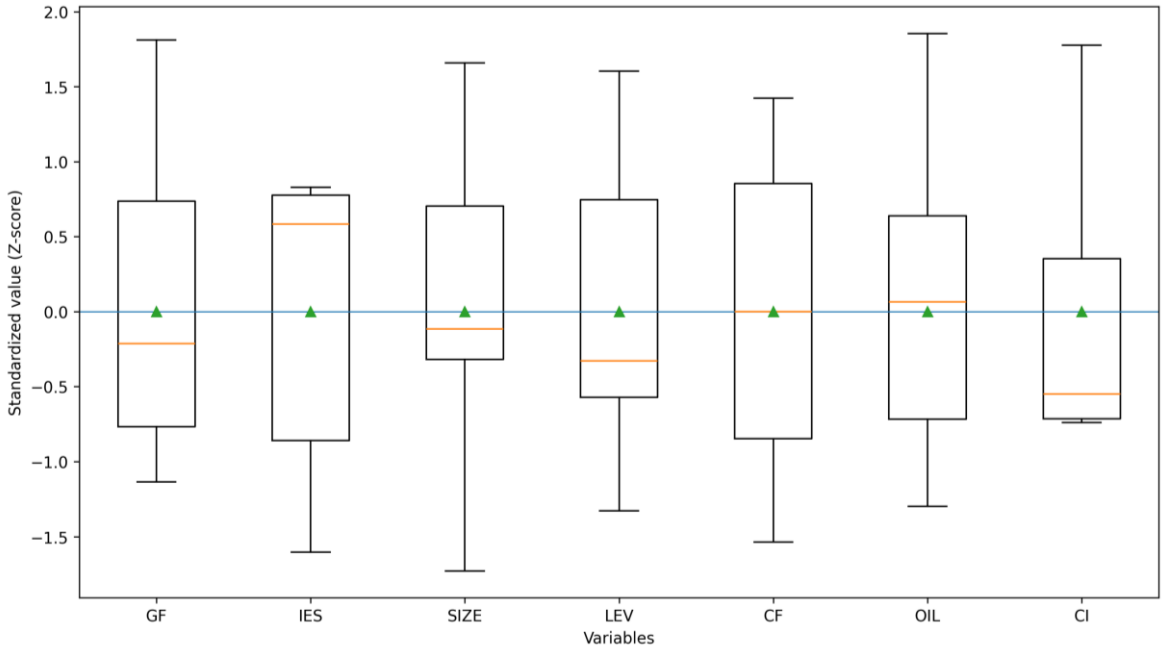


Figure 3. Standardized trends of the main variables, 2015–2024

5. Empirical Results

5.1 Descriptive Statistics and Correlations

The mean value of green finance is KZT 28.990 billion, while the mean IES transformation rate is 94.160%, indicating substantial increases in both environmental expenditure and APG utilization during the sample period. The maximum IES value is 98.900%, revealing a pronounced ceiling effect in the later years. Carbon intensity has a mean of 4.511 during 2016–2024 and displays considerable variation, primarily reflecting its persistent downward trend.

Table 2. Descriptive statistics

Variable	N	Mean	Std. dev.	Minimum	Maximum
Green finance	10	28.990	15.854	11.000	57.700
IES transformation	10	94.160	5.714	85.000	98.900
Firm size	10	16.477	0.168	16.187	16.757
Leverage	10	0.429	0.044	0.370	0.499
Cash flow	10	0.065	0.037	0.009	0.117
Oil price	10	66.328	18.860	41.838	101.317
Carbon intensity	9	4.511	4.215	1.400	12.000

Pearson correlation analysis shows that green finance and IES transformation are positively correlated at 0.766 ($p < 0.01$), while the correlation between IES transformation and carbon intensity is −0.995. Green finance is correlated with firm size at 0.798 and with leverage at −0.759, indicating that common trends and multicollinearity cannot be ignored. Preliminary variance inflation factor (VIF) values for leverage and carbon intensity are 12.47 and 22.82, respectively. Carbon intensity is therefore not included in the core regression together with IES, and the control variables are introduced sequentially.

Table 3. Pearson correlation matrix

Variable	Green finance	IES transformation	Firm size	Leverage	Cash flow	Oil price	Carbon intensity
Green finance	1.000	0.766***	0.798***	-0.759**	0.378	0.442	-0.736**
IES transformation	0.766***	1.000	0.754**	-0.823***	0.077	0.620*	-0.995***
Firm size	0.798***	0.754**	1.000	-0.595*	0.362	0.705**	-0.739**
Leverage	-0.759**	-0.823***	-0.595*	1.000	-0.21	-0.469	0.870***

Variable	Green finance	IES transformation	Firm size	Leverage	Cash flow	Oil price	Carbon intensity
					5		
Cash flow	0.378	0.077	0.362	-0.215	1.000	0.390	0.094
Oil price	0.442	0.620*	0.705**	-0.469	0.390	1.000	-0.602*
Carbon intensity	-0.736**	-0.995***	-0.739**	0.870***	0.094	-0.602*	1.000

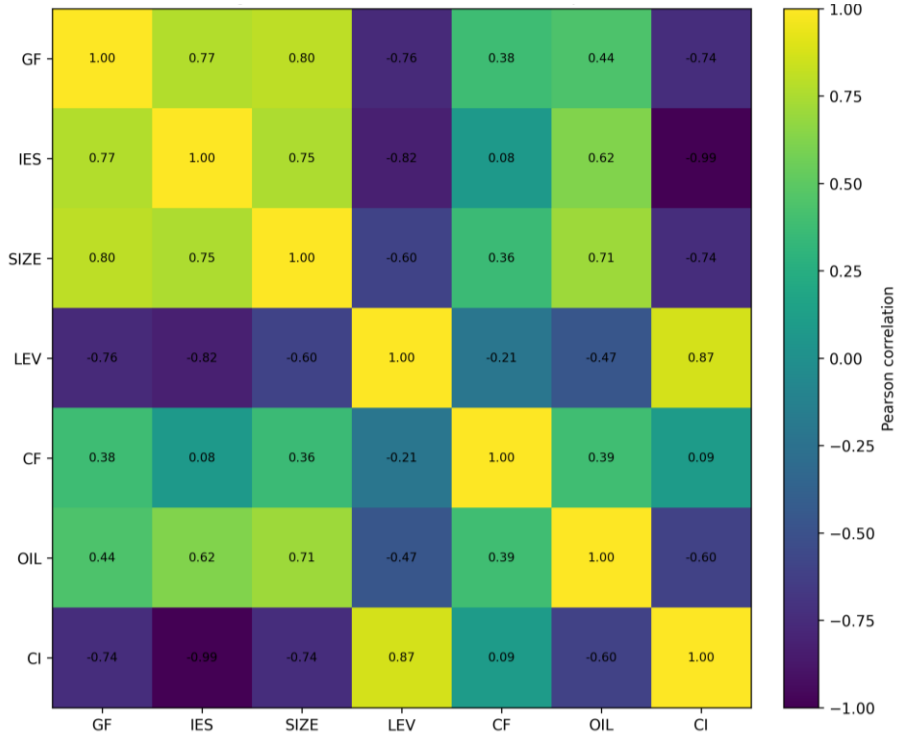


Figure 4. Pearson correlation heatmap

5.2 Baseline Regression

Table 4. Hierarchical OLS regression results (dependent variable: IES transformation)

Variable	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Green finance	0.276***	0.163	-0.000	0.031	0.100

Variable	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
	(0.082)	(0.135)	(0.140)	(0.138)	(0.159)
Firm size		13.311	13.877	15.152	6.189
		(12.713)	(10.642)	(10.401)	(14.414)
Leverage			-75.393*	-70.298	-56.610
			(37.711)	(36.911)	(40.399)
Cash flow				-36.404	-46.270
				(31.304)	(33.604)
Brent oil price					0.085
					(0.093)
Constant	86.157***	-129.905	-102.162	-123.900	10.927
	(2.675)	(206.378)	(173.252)	(169.413)	(226.673)
Observations	10	10	10	10	10
R^2	0.587	0.643	0.786	0.831	0.860
Adjusted R^2	0.535	0.541	0.678	0.696	0.686
F-statistic	11.363	6.298	7.329	6.157	4.933
Prob(F)	0.0098	0.0272	0.0197	0.0360	0.0736
Durbin–Watson	1.580	1.318	1.003	1.783	1.957

In Model (1), the coefficient on green finance is 0.276 and significant at the 1% level. Without controlling for other factors, an increase of KZT 1 billion in environmental protection costs is associated with an average increase of approximately 0.276 percentage points in the APG utilization rate. After firm size is introduced, the coefficient falls to 0.163 and becomes insignificant. When leverage is added, the green-finance coefficient approaches zero, while the leverage coefficient is −75.393 and marginally significant at the 10% level. In the full model, the coefficient on green finance is 0.100 ($p = 0.564$), remaining positive but statistically insignificant. The full model has an R^2 of 0.860, but only four residual degrees of freedom; the high goodness of fit therefore cannot be treated as strong evidence. Overall, H1 receives only partial support: green finance has a significant unconditional association with IES transformation, but its independent marginal effect is not statistically robust after controlling for firm size, leverage, cash flow, and oil prices.

5.3 Lagged Effects and Robustness Tests

Table 5. One-period lagged regression results (dependent variable: IES transformation)

Variable	Model (1)	Model (2)	Model (3)
Green finance (t−1)	0.235*	-0.056	-0.008
	(0.102)	(0.128)	(0.120)
Firm size		8.250	-3.736
		(13.225)	(12.977)
Leverage		-102.106*	-104.538*
		(40.972)	(34.912)
Cash flow			-52.079
			(29.893)
Brent oil price			0.105
			(0.074)
Constant	88.450***	3.924	198.018
	(3.153)	(223.784)	(217.279)
Observations	9	9	9
R^2	0.432	0.794	0.915
Adjusted R^2	0.351	0.671	0.774
F-statistic	5.328	6.434	6.475
Prob(F)	0.0543	0.0361	0.0776
Durbin–Watson	1.047	1.359	3.309

In the parsimonious model, the coefficient on one-period lagged green finance is 0.235, with a p-value of 0.0543, making it marginally significant at the 10% level. This finding suggests that green investment may affect performance in the following year through project approval, construction, and commissioning. After firm size and leverage are introduced, however, the lagged coefficient becomes −0.056 and statistically insignificant; in the full model, it is −0.008. H2 therefore receives only weak or partial support, and the results do not establish a stable lagged causal effect.

Table 6. Robustness test results

Variable	HC3 robust SE	Standardized regression	Parsimonious model	First-difference model
Green finance	0.100	0.278	0.120	0.047
	(0.257)	(0.442)	(0.110)	(0.116)

Variable	HC3 robust SE	Standardized regression	Parsimonious model	First-difference model
Firm size	6.189	0.182		
	(26.811)	(0.425)		
Leverage	-56.610	-0.436	-74.084	-56.681
	(71.183)	(0.311)	(39.538)	(34.816)
Cash flow	-46.270	-0.297		
	(77.310)	(0.216)		
Brent oil price	0.085	0.280		0.066
	(0.167)	(0.306)		(0.079)
Constant	10.927	-0.000	122.449***	0.439
	(431.176)	(0.187)	(19.509)	(1.250)
Observations	10	10	10	9
R^2	0.860	0.860	0.725	0.368
Adjusted R^2	0.686	0.686	0.646	-0.011
Prob(F)	0.0736	0.0736	0.0109	0.4758

Using HC3 robust standard errors, the coefficient on green finance remains 0.100, but its p-value rises to 0.716. The standardized coefficient is 0.278, the parsimonious-model coefficient is 0.120, and the first-difference coefficient is 0.047. The green-finance coefficient is positive in all four tests, but none reaches conventional levels of statistical significance. Leverage remains negative across several models, suggesting that higher leverage may constrain long-term green investment capacity, although its significance must also be interpreted cautiously given the small sample. Taken together, the results support a conclusion of stable direction but limited significance rather than a robust independent causal effect.

6. Discussion

The findings illustrate the complexity of green-finance transmission within Kazakhstan's resource-dependent economic structure. KMG's environmental expenditure and APG utilization rate rose together, suggesting that green capital can support gas recovery, emissions-control equipment, and operational optimization. The loss of significance after controls are introduced, however, indicates that transformation is not driven by financing alone. KMG simultaneously pursues commercial returns, national energy security, and industrial-policy objectives, and its low-carbon investment is jointly shaped by asset size, capital structure, oil-price cycles, and regulatory requirements.

The consistently negative relationship between leverage and IES transformation has important economic implications. Integrated energy projects generally require high upfront capital expenditure and have long payback periods. Higher leverage raises financing costs and intensifies short-term cash-flow constraints, encouraging firms to prioritize core oil and gas operations. Oil

prices have a dual effect: high prices expand internal funding capacity, but also increase the expected returns on conventional assets and may crowd out low-carbon investment. Green finance can generate a stronger independent effect only when project standards are clear, financing maturities are aligned with project cycles, and the capital structure remains sustainable.

The lagged models provide only limited evidence, which is consistent with the investment cycle of energy infrastructure but is also affected by the reduced sample size and the fact that the IES indicator approaches a technical ceiling of 99%. Once the dependent variable has little room to vary, additional expenditure cannot be expected to produce an equivalent increase in performance, compressing both regression coefficients and statistical significance. Future assessments of green-finance performance should therefore not rely solely on the APG utilization rate, but should also incorporate methane emissions, energy intensity, renewable-energy capacity, abatement costs, and project cash flows.

As in the European Union and China, Kazakhstan requires a combination of carbon constraints, green financing, and technology policy, but mature-market models cannot simply be transplanted. Low carbon prices, free allowances, limited market liquidity, and the governance structure of state-owned enterprises mean that increasing the supply of finance alone is insufficient to redirect capital allocation. A more appropriate pathway is to strengthen the long-term credibility of the ETS, link green-financing conditions to verifiable emissions-reduction performance, and use national development institutions and international financial institutions to reduce the early-stage risks of large transformation projects.

7. Conclusions and Policy Implications

7.1 Conclusions

Using annual KMG data for 2015–2024, this study examines the relationship between green finance and IES transformation. Green finance is strongly and positively correlated with the APG utilization rate, and the bivariate regression yields a significant positive coefficient. After firm size, leverage, cash flow, and oil prices are included, the coefficient remains positive but becomes statistically insignificant. The one-period lagged model is marginally significant only in the parsimonious specification. The HC3, standardized, parsimonious, and first-difference tests all preserve a positive direction but do not produce stable statistical significance. Green finance therefore receives directional and limited empirical support as a driver of KMG's energy transition, and both H1 and H2 are partially supported. The study does not establish strict causality; its main value lies in revealing the interaction among financing, financial constraints, and the institutional environment in the transformation of a resource-based state-owned energy enterprise.

7.2 Policy Implications

First, Kazakhstan should establish a unified and verifiable taxonomy and disclosure framework for green projects. Green loans, green bonds, and sustainability-linked financing should be tied to specific performance indicators for APG recovery, methane abatement, energy-efficiency improvements, and renewable energy, thereby reducing information gaps between environmental expenditure and actual transformation outcomes.

Second, coordination between green finance and the ETS should be strengthened. The scarcity of allowances and market liquidity should be gradually increased to create more stable long-term expectations of carbon costs. At the same time, concessional loans, guarantees, and blended finance should be used to reduce the early-stage risks of low-carbon projects, allowing "raising the cost of high-carbon activities" and "lowering the cost of low-carbon activities" to operate simultaneously.

Third, corporate capital structure and project governance require greater attention. Because the results suggest that leverage may be an important constraint, KMG and similar state-owned energy enterprises should apply separate budgets, life-cycle cash-flow evaluation, and stage-based performance reviews to green projects, preventing short-term debt pressure from crowding out long-term low-carbon investment.

Fourth, policy-performance evaluation periods should be lengthened and outcome indicators broadened. Energy projects involve construction and commissioning lags; policy evaluation should therefore use rolling three- to five-year windows and consider methane emissions, carbon intensity, energy intensity, abatement costs, and renewable-energy assets rather than relying on a single annual indicator.

Fifth, international experience should be adopted selectively. Kazakhstan can learn from the European Union's MRV and disclosure systems and China's green-credit and policy-finance instruments. These practices should, however, be adapted to Kazakhstan's energy-security objectives, state-owned enterprise governance, and fiscal dependence on oil and gas, with risk-sharing mechanisms provided by international financial institutions to support large transformation projects.

7.3 Limitations

This study examines only one enterprise and ten annual observations, resulting in limited statistical power and an inability to fully control for time trends, endogeneity, and structural changes. Environmental protection costs are only an approximate proxy for green finance and may include both compliance and ecological-governance expenditure. The APG utilization rate also approaches its technical ceiling in the later years, restricting its variation. Future research could extend the analysis to oil and gas, power, and mining enterprises in Kazakhstan, construct a firm-level panel dataset, and combine specific green-financing instruments with project-level investment and emissions data to achieve more rigorous identification.

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IMPOSTOR SYNDROME IN LEADERSHIP: THEORETICAL APPROACHES AND EMPIRICAL EVIDENCE

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Abstract

The impostor phenomenon represents a persistent belief held by an individual that their achievements are undeserved and their competence is overestimated by others. Although the phenomenon was first described more than four decades ago, its manifestations in the context of formal leadership remain insufficiently studied. This review synthesizes contemporary theoretical models and empirical evidence concerning impostor syndrome among leaders. It examines the structural characteristics of the leadership role that contribute to the emergence of this phenomenon, its consequences for managerial decision-making, and existing gaps in the research literature. Particular attention is given to the distinction between adaptive and maladaptive manifestations of the phenomenon in managerial contexts.

Keywords: impostor syndrome, leadership, decision-making, managerial role, self-perception, emotional intelligence.

The phenomenon known as "impostor syndrome" was first described by Pauline Clance and Suzanne Imes in 1978 in a study devoted to the psychological characteristics of high-achieving women. The authors defined it as an "internal experience of intellectual phoniness," in which an individual, despite objective evidence of competence, maintains the belief that they are deceiving others. According to contemporary estimates, 70 to 80 percent of people experience such feelings at some point in their careers.

Of particular interest is the manifestation of this phenomenon among individuals holding formal leadership positions. The leadership role is inherently associated with heightened visibility, responsibility, and expectations, which creates a potentially favorable environment for the emergence of doubts regarding one's own legitimacy. Nevertheless, as noted by Kotanko (2025), empirical studies of impostor syndrome specifically among senior leaders remain scarce, indicating a gap between academic knowledge and managerial practice.

The purpose of this review is to synthesize existing theoretical approaches and empirical evidence on impostor syndrome in the context of leadership, as well as to identify key research gaps.

Traditionally, impostor syndrome has been viewed as a stable individual characteristic rooted in early family experiences and socialization patterns. However, accumulated evidence points to the need for a broader conceptualization. Research indicates that impostor syndrome scores decrease as professional experience accumulates, suggesting that occupying a new role in itself provokes corresponding experiences. Furthermore, the phenomenon's prevalence is higher among employees who perceive a lack of organizational support.

Kark, Meister, and Peters (2022) proposed a conceptual model of "leader impostorism," in which central importance is assigned to the structural characteristics of the leadership role. The authors argue that social roles, including that of a leader, are accompanied by socially shared standards and expectations that can activate a sense of inadequacy. The leadership position possesses three key features that amplify vulnerability: exceptionality, high visibility, and isolation.

According to Kark and colleagues' model, leader impostorism arises under the influence of several groups of factors. First, the novelty of the role and the lack of relevant experience cause leaders to doubt their competence. Second, belonging to groups that are underrepresented in leadership amplifies the feeling of "foreignness" and non-conformity to the expected image of a leader. Third,

features of the organizational context, such as a low-support environment, also contribute to the emergence of doubts.

An additional factor identified in the literature is perfectionism. Aparna and Menon (2022) note that leaders with high standards of quality tend to perceive any deviation from the ideal as confirmation of their own incompetence, which intensifies impostor experiences.

A systematic review by Kotanko (2025), covering nineteen peer-reviewed sources, indicates that the consequences of impostor syndrome for leaders are heterogeneous. On the one hand, some leaders report increased modesty and receptivity to feedback. On the other hand, negative manifestations are recorded, such as risk avoidance, decision paralysis, overcompensation, and emotional burnout.

This heterogeneity suggests that the effect of impostor syndrome is mediated by additional variables — in particular, individual coping strategies and characteristics of the organizational environment. Aparna and Menon (2022) demonstrate that leaders with a high tendency toward self-reflection more often employ constructive coping strategies, whereas a low tendency negative toward self-reflection leads to avoidant behavior.

The most significant consequence for managerial practice appears to be the impact of impostor syndrome on decision-making. A study conducted among nursing service managers revealed a persistent association between the severity of impostor syndrome and confidence in decision-making. This means that doubts regarding one's own legitimacy directly undermine a leader's ability to act decisively.

Notably, work experience emerged as one of the few demographic factors significantly associated with decision confidence. The majority of participants had between one and ten years of managerial experience, suggesting that new leaders are the most vulnerable.

Kotanko (2025) notes that decision paralysis is particularly pronounced in situations of high uncertainty, when a leader cannot rely on past experience. Under such conditions, doubts about one's own competence block the adoption of even relatively simple managerial decisions.

Kark and colleagues (2022) describe another mechanism: leaders with high levels of impostorism may demonstrate increased dependence on subordinates in matters of power. This manifests in seeking approval and validation from employees. Under conditions of high power distance orientation, the opposite reaction is also possible — the use of undermining behavior to restore hierarchical order.

Aparna and Menon (2022) point out that hypercompensation in the form of excessive control and rigidity may serve as a defensive reaction to an internal sense of inadequacy. Such behavior, however, leads to decreased trust within the team and a deterioration of the psychological climate.

A systematic review by Gullifor and colleagues (2024), covering 188 publications from 1978 to 2023, points to conceptual ambiguity and fragmentation of the theoretical network in the study of impostor syndrome in the workplace. One of the key limitations is insufficient attention to situational factors.

In the context of leadership, this limitation is particularly evident. Kotanko (2025) states that, despite recognition of the phenomenon's prevalence among leaders, studies specifically devoted to this group remain rare. Existing works either focus on early-career professionals or treat leaders as part of a broader sample without accounting for the specifics of their role.

An additional gap is the lack of cross-cultural research. As Aparna and Menon (2022) note, features of organizational culture, including the degree of power distance and tolerance for errors, may substantially modify the manifestations of impostor syndrome. A systematic comparison of leaders across different cultural contexts has not yet been conducted.

Impostor syndrome among leaders is a phenomenon conditioned not only by individual characteristics but also by the structural features of the leadership role. High visibility, the novelty of the position, and the lack of relevant role models create conditions conducive to the emergence of doubts regarding one's own legitimacy. The most significant practical consequence is reduced confidence in decision-making, which may negatively affect managerial effectiveness.

At the same time, the literature indicates heterogeneity in consequences: under certain conditions, the syndrome leads to decision paralysis and overcompensation; under others, it produces

increased modesty and receptivity to feedback. Key moderators include self-reflection, coping strategies, and the organizational environment.

Thus, impostor syndrome in leadership emerges as a complex, context-dependent phenomenon that cannot be reduced to a purely individual deficiency or a stable personality trait. Its theoretical significance lies in the intersection of role theory, self-perception, and organizational behavior: the leadership role itself, with its inherent visibility, expectations, and isolation, functions as a structural catalyst for impostor experiences. The heterogeneity of observed consequences — from decision paralysis to heightened interpersonal sensitivity — indicates that the phenomenon operates through multiple mediating mechanisms rather than a single causal pathway. Within this framework, the adaptive or maladaptive outcome depends on the interplay between individual self-reflection, coping resources, and the broader organizational environment. Consequently, impostor syndrome in leadership is best understood not as a pathology to be eliminated but as a structural tension inherent to the exercise of authority — a tension whose resolution determines whether it undermines or enhances managerial effectiveness.

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ИНТЕГРАТИВНАЯ MULTI-OMICS МОДЕЛЬ ПАТОГЕНЕЗА LONG COVID: ВЗАИМОСВЯЗЬ ВИРУСНОЙ ПЕРСИСТЕНЦИИ, ИММУНОМЕТАБОЛИЧЕСКОГО РЕМОДЕЛИРОВАНИЯ, ЭНДОТЕЛИАЛЬНОЙ ДИСФУНКЦИИ И АУТОИММУННЫХ МЕХАНИЗМОВ

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6-016 топ

Вклад авторов: Все авторы внесли равноценный вклад в разработку, выполнение обработки результатов и написания статьи. Авторы заявляют, что данный материал ранее не публиковался и не находился на рассмотрении в других издательствах

План статьи

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- Актуальность
- Цель исследования
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- Понятие и актуальность Long COVID
- Современные представления о патогенезе
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2. Проанализировать роль вирусной персистенции.
3. Оценить иммунометаболические и эндотелиальные изменения..

5. Материалы и методы исследования
- Анализ литературы за 2019–2026 гг.
- PubMed, Web of Science, Scopus
- Систематические обзоры, метаанализы, клинические и multi-omics исследования

6. Основная часть
- 6.1. Вирусная персистенция
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- Основные выявленные молекулярные изменения
- Формирование интегративной модели Long COVID

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- Основные результаты
- Научная новизна
- Практическая значимость
- Перспективы применения модели

10. Список литературы

Аннотация

Актуальность: Как будущие врачи, мы выбрали данную тему в связи с высокой клинической значимостью Long COVID и необходимостью глубокого изучения механизмов его развития.

Цель исследования: Изучить основные механизмы патогенеза Long COVID и сформировать интегративную multi-omics модель, объединяющую вирусную персистенцию, иммунометаболические, эндотелиальные и аутоиммунные нарушения.

Материалы и методы: Проведён анализ современных научных публикаций по проблеме Long COVID с использованием баз данных PubMed, Web of Science и Scopus.

Введение

- Понятие и актуальность Long COVID — определение Long COVID, его клиническая значимость и актуальность для современной медицины.
- Современные представления о патогенезе — роль вирусной персистенции, иммунной дисрегуляции, метаболических нарушений, эндотелиальной дисфункции и аутоиммунных процессов.
- Обоснование multi-omics подхода — необходимость комплексного изучения геномных, транскриптомных, протеомных и метаболомных изменений для понимания взаимосвязи механизмов Long COVID.
- 3. Цель исследования

Целью данного исследования является комплексное изучение молекулярно-биологических механизмов развития и персистирования Long COVID с применением современного multi-omics подхода. Исследование направлено на выявление взаимосвязей между геномными, транскриптомными, протеомными и метаболомными изменениями у пациентов после перенесённой инфекции SARS-CoV-2.

- Особое внимание планируется уделить выявлению потенциальных биомаркеров, которые могут быть связаны с длительностью и выраженностью постковидных симптомов. Полученные данные позволят глубже понять патогенез Long COVID, определить возможные молекулярные механизмы его развития и создать основу для ранней диагностики, прогнозирования индивидуального течения заболевания и разработки персонализированных подходов к профилактике и лечению.

4. Задачи исследования

1. Изучить основные механизмы патогенеза Long COVID.
2. Проанализировать роль вирусной персистенции в развитии постковидных симптомов.
3. Оценить иммунные, метаболические и эндотелиальные изменения при Long COVID.
4. Изучить молекулярные изменения с помощью multi-omics подхода.

5. Выявить потенциальные биомаркеры для диагностики и прогнозирования течения Long COVID.

6. Определить перспективы персонализированного подхода к диагностике и лечению.

7. 5. Материалы и методы исследования

- Проведён анализ научной литературы за 2019–2026 гг.
- Поиск источников осуществлялся в базах PubMed, Web of Science и Scopus.
- В исследование включены систематические обзоры, метаанализы, клинические исследования и современные multi-omics исследования.
- Основное внимание уделялось работам, посвящённым патогенезу, биомаркерам и молекулярным механизмам Long COVID.

6. Основная часть

6.1. Вирусная персистенция

Роль сохранения вирусных компонентов SARS-CoV-2 и их возможное влияние на длительное воспаление.

6.2. Иммунная дисрегуляция

Изменения врождённого и адаптивного иммунитета, хроническое воспаление и аутоиммунные механизмы.

6.3. Иммунометаболические и эндотелиальные нарушения

Нарушения метаболизма, функции эндотелия и микроциркуляции при Long COVID.

6.4. Молекулярные изменения

Геномные, транскриптомные, протеомные и метаболомные изменения, выявляемые у пациентов.

6.5. Multi-omics подход

Интеграция различных уровней молекулярных данных для комплексного понимания патогенеза заболевания.

7. Результаты

- Определены основные молекулярные, иммунные и метаболические изменения, характерные для Long COVID.
- Выявлены возможные взаимосвязи между вирусной персистенцией, иммунной дисрегуляцией и клиническими проявлениями.
- Определены перспективные биомаркеры для диагностики и прогнозирования.
- Сформирована интегративная модель патогенеза Long COVID.

8. Обсуждение

- Сравнение полученных результатов с данными современных международных исследований.
- Анализ возможных механизмов выявленных молекулярных изменений.
- Обоснование значения multi-omics подхода для более глубокого понимания Long COVID.
- Обсуждение перспектив применения биомаркеров в клинической практике.

9. Заключение

- Обобщение основных результатов исследования.
- Определение научной новизны и вклада multi-omics подхода в изучение Long COVID.
- Оценка практической значимости полученных данных.

1. Перспективы использования интегративной модели для ранней диагностики, прогнозирования и персонализированной терапии

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Аннотация

Өзектілігі: Болашақ дәрігерлер ретінде біз Long COVID тақырыбын оның жоғары клиникалық маңыздылығына және даму механизмдерін терең зерттеу қажеттілігіне байланысты таңдадық.

Зерттеу мақсаты: Long COVID патогенезінің негізгі механизмдерін зерттеу және вирустық персистенцияны, иммундық-метаболикалық, эндотелийлік және аутоиммундық бұзылыстарды біріктіретін интегративті multi-omics моделін қалыптастыру.

Материалдар мен әдістер: Long COVID мәселесіне арналған 2019–2026 жылдардағы ғылыми жарияланымдарға PubMed, Web of Science және Scopus дерекқорлары негізінде талдау жүргізілді.

Кіріспе: Long COVID — SARS-CoV-2 инфекциясынан кейін ұзақ уақыт сақталатын симптомдармен сипатталатын жағдай. Оның патогенезінде вирустың персистенциясы, иммундық дисрегуляция, метаболикалық және эндотелийлік бұзылыстар, аутоиммундық процестер маңызды рөл атқарады. Осы механизмдерді кешенді бағалау үшін multi-omics тәсілін қолдану маңызды.

Зерттеу міндеттері:

1. Long COVID патогенезінің негізгі механизмдерін зерттеу.
2. Вирустық персистенцияның рөлін бағалау.
3. Иммундық, метаболикалық және эндотелийлік өзгерістерді зерттеу.
4. Multi-omics тәсілі арқылы молекулалық өзгерістерді анықтау.
5. Диагностикалық және болжамдық биомаркерлерді анықтау.
6. **Персоналдандырылған диагностика мен емдеу мүмкіндіктерін бағалау.**

Негізгі бөлім: Вирустық персистенция, иммундық дисрегуляция, иммундық-метаболикалық және эндотелийлік бұзылыстар, сондай-ақ геномдық, транскриптомдық, протеомдық және метаболомдық өзгерістер қарастырылады.

Нәтижелер: Long COVID-ке тән негізгі молекулалық, иммундық және метаболикалық өзгерістер анықталып, олардың өзара байланысы қарастырылды. Потенциалды биомаркерлер анықталып, Long COVID патогенезінің интегративті моделі ұсынылды.

Қорытынды: Multi-omics тәсілі Long COVID патогенезін терең түсінуге, потенциалды биомаркерлерді анықтауға және болашақта ерте диагностика, болжамдау және персоналдандырылған терапияны дамытуға мүмкіндік береді.

—

Abstract

Relevance: As future physicians, we selected this topic due to the high clinical significance of Long COVID and the need for a deeper understanding of its underlying mechanisms.

Aim: To investigate the main mechanisms of Long COVID pathogenesis and develop an integrative multi-omics model combining viral persistence, immunometabolic, endothelial, and autoimmune abnormalities.

Materials and Methods: Scientific publications on Long COVID published between 2019 and 2026 were analyzed using PubMed, Web of Science, and Scopus databases.

Introduction: Long COVID is characterized by persistent symptoms following SARS-CoV-2 infection. Its pathogenesis may involve viral persistence, immune dysregulation, metabolic and endothelial dysfunction, and autoimmune processes. A multi-omics approach may provide a comprehensive understanding of these interconnected mechanisms.

Objectives:

1. To study the main mechanisms of Long COVID pathogenesis.
2. To assess the role of viral persistence.
3. To evaluate immune, metabolic, and endothelial alterations.
4. To investigate molecular changes using a multi-omics approach.
5. To identify potential diagnostic and prognostic biomarkers.
6. **To assess prospects for personalized diagnosis and treatment.**

Main Part: Viral persistence, immune dysregulation, immunometabolic and endothelial abnormalities, as well as genomic, transcriptomic, proteomic, and metabolomic changes are analyzed.

Results: Major molecular, immune, and metabolic alterations associated with Long COVID were identified. Potential relationships between viral persistence, immune dysregulation, and clinical manifestations were assessed, and potential biomarkers were identified. An integrative model of Long COVID pathogenesis was proposed.

Conclusion: The multi-omics approach may improve understanding of Long COVID pathogenesis, facilitate biomarker discovery, and provide a basis for future early diagnosis, prognosis, and personalized treatment.

ҚЫЗҒАЛДАҚ

Төлепберген Жамиля

Қазақстан — қызғалдақтың отаны. Қызғалдақтар көктемде түрлі-түсті түстерімен елді мекенімізді кілемдей құлпыртып, қазақ жерінің сұлулығын көрсетеді. Көктем бастала келе, қызғалдақтардың маусымы басталады.

Халқымыз қызғалдақ гүлдерін әсемдіктің, нәзіктіктің символы ретінде бағалап, дүниеге келген қыз балаларына Қызғалдақ атымен атайды. Қазақ үй-жиһаздарына, ыдыс-аяққа, ұлттық киімдер, қыз-келіншектердің ұлтттық киімдерінде, қыз балалардың әшекей бұйымдарында, киіз үй әбзелдерінде қызғалдақ оюларының түрлерімен өрнектейді Үш, ,төрт, бес жапырақты қызғалдақ элементтерімен өрнектеп сәндейтін болған.

Қазақстанда қызғалдақтың 35 түрі өседі, оның 18-і сирек кездесетін және жойылып кету қаупі бар түрлер болып табылады. Олардың арасында тек Қазақстанда ғана кездесетін түрлері бар. Мәселен, Грейг қызғалдағы, Кауфман қызғалдағы, Шренк қызғалдағы сияқты түрлері Қазақстанның оңтүстік аймақтарында және Ақтөбе облысындағы Ырғыз ауданының оңтүстік - шығыс жағында, Шалқар ауданы шығысында өседі. Сонымен бірге Қызылорда облысында Арал теңізі маңында Борщов қызғалдағы кездеседі. Бұл қызғалдақ- өте әдемі, сирек кездесетін өсімдік, қорғауға алынды. Осы түрлердің барлығы Қазақстанның Қызыл кітабына енгізілген.

2016 жылы Қазақстан Тәуелсіздігінің 25 жылдығына орай облыс әкімі Бердібек Сапарбаев бастауымен 25 метрлік қызғалдақ мүсіні орнатылды. Себебі қызғалдақ қаланың символы саналады. 2018жылы 21қараша айында еліміздің тұңғыш президенті Нұрсұлтан Назарбаев «Ұлы даланың жеті қыры» атты мақаласы жарияланды. Бұл мақалада «Қазақстан –алма мен қызғалдақтың отаны» деп дәлелдеген. Елбасының бастамасымен Қазақстанның жеті қырына Қызғалдақ гүлі енді.

Елдің сәні,
Қызғалдақ гүл құлпырған
Жердің сәні -деп халқымыз қызғалдақты аса қадірлеп,нәзіктікке балап, сәнге, балауса қызға теңеген.

Бұл гүлдер табиғат сүйер қауым үшін көктемнің жарқын, айқын сәттерін бейнелейді. Олар жәй ғана гүл емес, сонымен бірге ел мәдениетінің, туризм саласының бір бөлігі, әсіресе Қазақстанның символдарының бірі. Қазірде Қазақстанда бұл гүлдердің жойылуының қаупі бар. Осыған орай, гүлдерімізді қорғау мақсатында олардын өсетін аймақтарында арнайы қорғауға алынған. Сондықтан да еліміздің болашағы үшін табиғатты аялап, сақтауға тырысайық.

Көктем гүлі-қызғалдақ

Қыр гүлі- қызыл сары қызғалдақтар,
Сан түрлі әсем ойға саласыңдар.
Жайқалып жердің көркі алуан дақтар,
Табиғат шебер өрнек саласыңдар.

Гүл көктем көздің жауы қызғалдақтар.
Сағынып қапты дала көктем гүлін
Ал қызыл бала мінез қызғалдақтар.
Әр қазақ бұйымында мәңгі сақтал!

ОЦЕНКА СЕЙСМИЧЕСКОГО ВОЗДЕЙСТВИЯ МАССОВЫХ ВЗРЫВОВ НА ПРИБОРТОВОЙ МАССИВ КАРЬЕРА ДАЛЬНЕЗАПАДНЫЙ-2

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АННОТАЦИЯ

В статье представлены результаты натурных исследований сейсмического воздействия буровзрывных работ на прибортовый массив карьера Дальнезападный-2 месторождения Жайрем, выполненной по договору №3110/2026-1663 от 06.08.2026г.

Актуальность исследования определяется необходимостью контроля динамического воздействия массовых взрывов на устойчивость бортов карьера в условиях сложного геологического и структурно-тектонического строения массива. Исследования выполнены с использованием цифровых сейсмографов ZETLAB ZET 7152-N, размещённых с учётом выделенных геотехнических доменов. Проанализированы масса одновременно взрываемого взрывчатого вещества, расстояние от взрываемого блока до пункта наблюдения и зарегистрированные скорости колебаний по направлениям X и Y. Показано, что интенсивность сейсмического отклика определяется совокупностью параметров взрыва, расстояния и структурно-геомеханических особенностей массива. Дополнительно рассмотрено применение регистратора Instantel Micromate для сопоставления результатов измерений. Полученные данные могут использоваться при актуализации трёхмерной геомеханической модели и разработке рекомендаций по параметрам буровзрывных работ на конечном контуре карьера.

Ключевые слова: карьер, взрыв, устойчивость, откос, массив, сейсмодатчики, мониторинг, геология, гидрогеология, деформация.

Введение

Буровзрывные работы являются одним из основных технологических процессов при открытой разработке месторождений. Одновременно они представляют собой источник динамического воздействия на массив горных пород. При инициировании взрыва в окружающем массиве распространяются упругие и сейсмические волны, интенсивность которых определяется массой взрывчатого вещества, схемой инициирования, расстоянием до объекта наблюдения, свойствами среды и структурной неоднородностью массива.

Для глубоких и развивающихся карьеров контроль динамического воздействия приобретает особое значение на этапах приближения горных работ к проектному конечному контуру. Повторное воздействие взрывных волн на прибортовый массив может сопровождаться изменением напряжённо-деформированного состояния, раскрытием существующих трещин и активизацией структурных поверхностей ослабления. Поэтому оценка фактических параметров сейсмических колебаний непосредственно в массиве является важной частью геомеханического сопровождения горных работ.

Для достижения поставленной цели решались задачи анализа горно-геологических условий, применяемых способов взрывания, проведения полевых измерений с применением сейсмодатчиков и анализа полученных данных с учётом геотехнических доменов и поддоменов.

Важной особенностью работы является сочетание инструментального мониторинга с геомеханическим зонированием. Такой подход позволяет рассматривать зарегистрированный сейсмический отклик не только как функцию расстояния и массы заряда, но и как результат прохождения волн через неоднородный массив, различающийся по степени трещиноватости, выветрелости и структурной нарушенности.

Объект и методы исследования

Объектом исследования является прибортовый массив карьера Дальнезападный-2 АО «Жайремский горно-обогатительный комбинат», подвергающийся динамическому воздействию буровзрывных работ. Барит-полиметаллическое месторождение «Жайрем» расположено в административных границах Жанааркинского района области Улытау на территории Атасуйского рудно-промышленного региона (рисунок 1). В рамках НИР были изучены геологические и структурно-тектонические особенности месторождения, гидрогеологические условия, физико-механические свойства пород, геометрия бортов, а также результаты современных сейсмических измерений. Цель исследования состоит в оценке воздействия взрывов на прибортовый массив с учётом геологических, гидрогеологических и структурных особенностей участка.

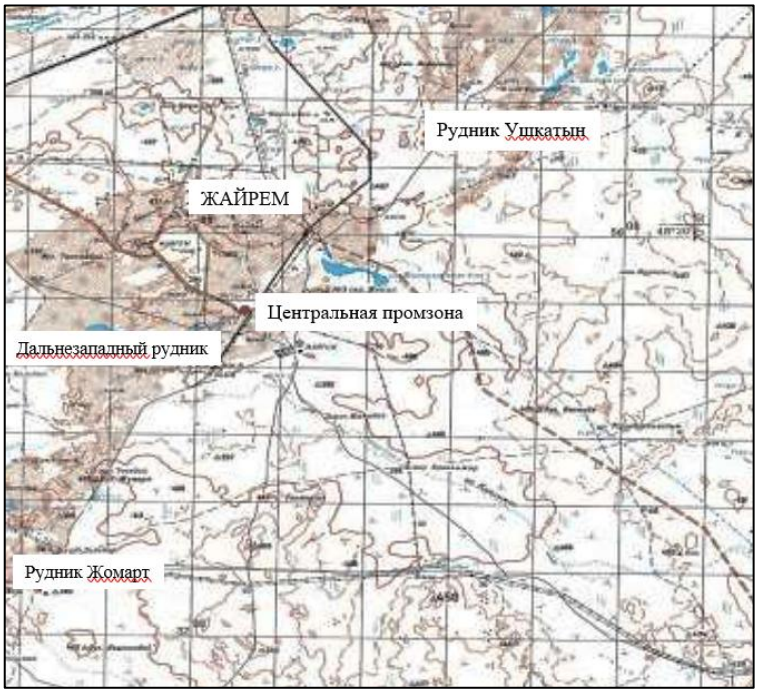

Рисунок 1. Обзорная карта района горных работ

Добычные работы АО «Жайремский ГОК» в настоящее время сконцентрированы на карьере «Дальнезападный-2», тогда как карьеры «Западный» и «Дальнезападный-1» временно законсервированы. Район месторождения представляет собой слабопересеченную равнину, перекрытую эоловыми бугристыми песками, с плавным изменением абсолютных отметок от 375 м на западе до 405–425 м на севере.

Материалы и методы.

Особое значение для устойчивости прибортового массива имеет мезозойская кора выветривания, мощность которой в отдельных участках достигает 100 м. Зоны выветривания и интенсивной трещиноватости характеризуются пониженными механическими

характеристиками и могут формировать потенциально ослабленные участки. Субширотные крутопадающие разломы дополнительно усложняют строение прибортового пространства и определяют возможные направления локальной деформации.

С учётом структурных особенностей массива выделены четыре геотехнических домена: STR1_NW, STR2_NE, STR3_S и STR4_SW (рис. 2). Их выделение позволяет разделить прибортовый массив на участки с относительно сходными структурными условиями и использовать данное зонирование при интерпретации результатов сейсмического мониторинга.

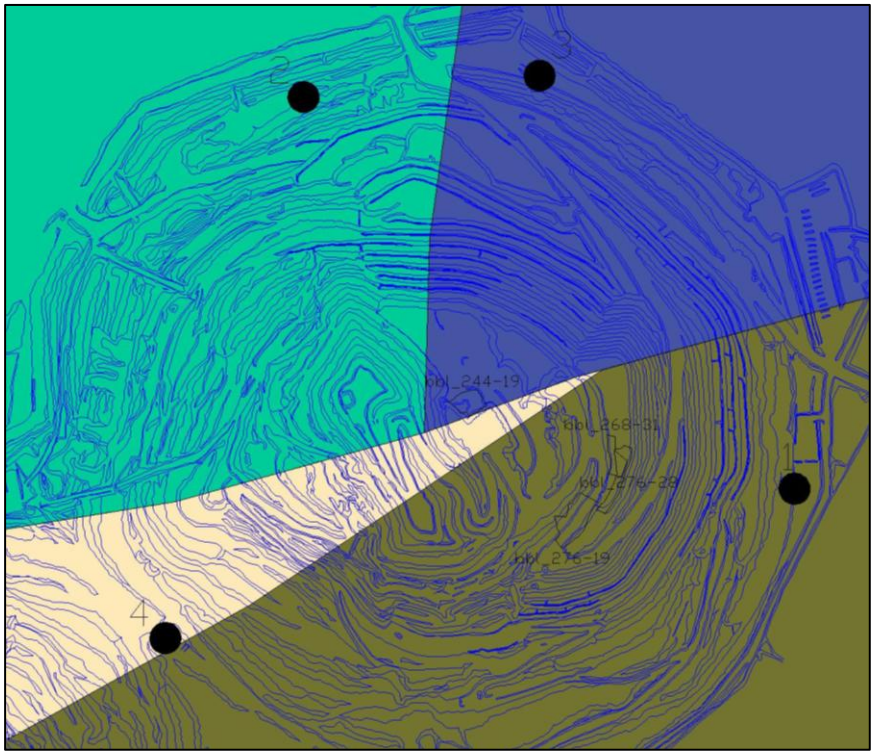

Рисунок 2. Схема расположения сейсмографов и взорванного блока

Гидрогеологические условия также являются значимым фактором устойчивости. Верхние уступы могут испытывать сезонное повышение порового давления в периоды снеготаяния и интенсивных осадков. В рамках подготовки исследуемого участка была выполнена масштабная откачка воды, что позволило снять гидростатическое давление на нижние уступы и обнажить прибортовый массив. Это создало условия для проведения натурных сейсмических измерений в осушенном массиве. Регистрация динамического воздействия выполнялась цифровыми сейсмографами ZETLAB ZET 7152-N. Используемый комплекс предназначен для регистрации параметров динамических и сейсмических воздействий и обеспечивает цифровое накопление зарегистрированных сигналов с возможностью последующей визуальной и математической обработки.

До проведения сентябрьской серии измерений в рамках исследования были систематизированы результаты 35 натурных инструментальных замеров, выполненных в период с марта 2025 года по апрель 2026 года. Измерения проводились в районах влияния взрывов и на объектах, для которых требовалась оценка сейсмического воздействия. Средние расстояния от взрываемых блоков до измерительных пунктов в предыдущей серии составляли 1,1–1,6 км.

В сентябре 2026 года два сейсмографа были размещены с учётом расположения четырёх геотехнических доменов. В результате были получены данные для четырёх массовых взрывов. Для каждого события фиксировались дата, горизонт и номер блока, геотехнический домен, масса одновременно взрываемого взрывчатого вещества, расстояние до датчика и значения скоростей колебаний по координатам X и Y.

Дополнительная регистрация выполнялась с помощью сейсмоакустического регистратора Instantel Micromate. Он был установлен в тех же точках, что и система ZETLAB, что позволило обеспечить сопоставимость результатов разных измерительных систем. Данные Instantel были импортированы и обработаны для опытно-промышленных массовых взрывов, в том числе для блока №28 на горизонте +284…+276 м.

В качестве основных анализируемых параметров в данной работе приняты скорость колебаний по направлениям X и Y, масса одновременно взрываемого взрывчатого вещества и расстояние от источника до пункта наблюдения. При интерпретации результатов дополнительно учитывалось расположение датчика в соответствующем геотехническом домене.

Ожидаемые результаты

Результаты четырёх полевых замеров, выполненных в сентябре 2026 года, представлены в таблице 1.

Таблица 1 – Результаты инструментальных замеров сейсмического воздействия

№	Дата	Горизонт и номер блока	Название домена, где установлен сейсмографов	Масса ВВ, кг	Датчик №1		Датчик №2	
					Расс-тояние, м	Скорость колебания по XY, мм/с	Расс-тояние, м	Скорость колебания по XY, мм/с
1	17.09.26	+284-276м Блок №28	STR3_S	17428	328	X=0,436 Y=0,339	328	X=0,406 Y=0,341
2	18.09.26	+252-244м Блок №19	STR1_NW	17783	643	X=0,139 Y=0,127	-	-
3	21.09.26	+284-276м Блок №19	STR2_NE	10829	803	X=0,093 Y=0,086	803	X=0,094 Y=0,088
4	24.09.26	+276-268м Блок №31	STR4_SW	21559	904	X=0,824 Y=1,058	904	X=0,921 Y=1,142

Из таблицы видно, что масса одновременно взрываемого взрывчатого вещества изменялась от 10 829 до 21 559 кг, а расстояние от взрываемого блока до измерительного пункта — от 328 до 904 м. Максимальная масса ВВ была зарегистрирована при взрыве блока №31 24 сентября 2026 года. Минимальная масса соответствовала взрыву блока №19 21 сентября 2026 года.

Наибольшие значения скорости колебаний получены при взрыве блока №31 в домене STR4_SW: 0,824 мм/с по X и 1,058 мм/с по Y. Наименьшие значения зафиксированы в домене STR2_NE: 0,093 мм/с по X и 0,086 мм/с по Y. Для домена STR3_S при расстоянии 328 м значения составили 0,436 и 0,339 мм/с, а для STR1_NW при расстоянии 643 м — 0,139 и 0,127 мм/с.

Полученные данные не позволяют свести сейсмический отклик только к влиянию расстояния. Так, при наиболее удалённом пункте наблюдения — 904 м — зарегистрированы максимальные значения. Это указывает на существенное влияние геологических и структурных условий распространения волн. Одновременно необходимо учитывать различия массы заряда и конкретной схемы взрыва.

Для анализа направленной составляющей колебаний можно отметить, что в трёх случаях значения по X и Y достаточно близки. Наиболее выраженное различие наблюдается для блока №31, где скорость по Y превышает скорость по X. Такая анизотропия может быть связана с особенностями распространения волн в неоднородном трещиноватом массиве и ориентацией структурных элементов относительно направления от источника к датчику.

Обсуждение результатов

Основной результат проведённых исследований заключается в установлении выраженной пространственной изменчивости сейсмического отклика. Зарегистрированные значения различаются более чем на порядок, хотя исследованные события относятся к одной технологической категории — массовым взрывам на карьере.

Наиболее важным является то, что максимальное зарегистрированное значение не соответствует минимальному расстоянию. При расстоянии 328 м в STR3_S скорость по Y составила 0,339 мм/с, тогда как при расстоянии 904 м в STR4_SW она достигла 1,058 мм/с. Следовательно, простая оценка затухания только по геометрическому расстоянию не отражает всей сложности процесса.

Одним из объяснений является структурная неоднородность массива. Сейсмическая волна при распространении пересекает участки с различными физико-механическими свойствами, трещинами, разломами и зонами выветривания. На границах таких зон возможно изменение характера распространения и перераспределение энергии. Поэтому расположение пункта наблюдения относительно геотехнического домена является принципиально важным.

Другим фактором является масса одновременно взрываемого взрывчатого вещества. Для четырёх исследованных событий диапазон составил от 10 до 21,5 т. Однако имеющихся четырёх наблюдений недостаточно для построения статистически устойчивой зависимости между массой ВВ и скоростью колебаний. Поэтому полученные данные следует рассматривать как экспериментальную основу для накопления последующей серии наблюдений.

Для дальнейшего анализа целесообразно формировать единую базу, в которой для каждого взрыва будут фиксироваться масса ВВ, расстояние, глубина и геометрия скважин, схема инициирования, положение блока, геотехнический домен, литологический состав, ориентировка структурных нарушений и три компоненты зарегистрированной скорости. Это позволит перейти от разрозненных измерений к регрессионной оценке параметров сейсмического воздействия.

Дополнительное применение Instantel Micromate является важным элементом верификации. Размещение двух измерительных систем в одинаковых пунктах позволяет сопоставлять результаты и выявлять возможные различия в регистрации отдельных параметров. В дальнейшем совместная обработка массивов ZETLAB и Instantel может повысить надёжность оценки динамического воздействия.

Практическая значимость и направления дальнейших исследований

Практическая значимость работы заключается в возможности использования фактических инструментальных данных при обосновании безопасных параметров буровзрывных работ. В отличие от расчётной оценки, основанной только на эмпирических зависимостях, натурный мониторинг позволяет учитывать конкретные условия распространения волн в исследуемом прибортовом массиве.

Полученные данные могут быть использованы при калибровке и актуализации трёхмерной геомеханической модели карьера. Сейсмические параметры целесообразно сопоставлять с геометрией уступов, расположением разломов, зонами повышенной трещиноватости и результатами геотехнического мониторинга.

Особое внимание в дальнейших исследованиях необходимо уделить домену STR4_SW, в котором при взрыве 24 сентября 2026 года были зарегистрированы наиболее высокие значения скорости колебаний. Для подтверждения устойчивости выявленной закономерности необходимо провести дополнительные измерения при различных массах заряда и расстояниях.

Перспективным направлением является разработка пространственно дифференцированной модели затухания сейсмических волн. В такой модели коэффициенты затухания могут определяться отдельно для различных геотехнических доменов с учётом литологии и структурной нарушенности. Это позволит более обоснованно оценивать динамическое воздействие при проектировании последующих массовых взрывов.

Накопление длительного ряда наблюдений также позволит определить повторяемость повышенных сейсмических откликов, установить диапазоны параметров взрыва, при которых формируется повышенная динамическая нагрузка, и использовать результаты в системе оперативного геомеханического контроля.

Заключение

Геолого-структурные условия участка Дальнезападный-2 осложнены разновозрастными породами, корой выветривания мощностью до 100 м и крутопадающими разломами. Структурно-ослабленные и трещиноватые зоны характеризуются пониженной устойчивостью и требуют контроля как потенциальные поверхности скольжения при динамических нагрузках.

Водоносная система месторождения имеет двухэтажное строение и разделена неогеновым водоупором мощностью около 30 м. Верхние уступы подвержены сезонному повышению порового давления. Полная откачка воды снизила гидростатическое давление и создала условия для изучения затухания взрывных волн в осушенном массиве.

Данные сейсмического мониторинга за 2025–2026 гг. и сентябрьских полевых исследований сформировали основу для последующего геомеханического моделирования и подготовки итогового отчета. Особую ценность представляют показатели пиковой скорости смещения частиц (PPV), зарегистрированные приборами ZETLAB ZET 7152-N и Instantel Micromate.

Благодарности

Авторы выражают благодарность АО «ЖГОК» за предоставленные исходные материалы и поддержку работ

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БІР МОНЕТАДАҒЫ ҒЫЛЫМ: ҚАЗАҚСТАН НИОБИЙДІ НЕГЕ ТАҢДАДЫ?

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Қазақстан Ұлттық банкі жаңа коллекциялық 1000 тг монета шығарады. Оның ерекшелігі - күміспен қатар, заманауи технологияларда қолданылатын ниобий элементінің пайдаланылуы. Бұл шағын бұйымның артында үлкен ғылыми әлем жатыр.

Күнделікті өмірде біз смартфон қолданамыз, медициналық тексеруден өтеміз, ұшақпен сапарлаймыз. Алайда осы технологиялардың дамуына үлес қосатын химиялық элементтер туралы көп ойлана бермейміз. Солардың бірі - ниобий. Енді Қазақстанның жаңа коллекциялық монетасы осы металға назар аудартпақ.

Қазақстан Ұлттық банкі «Қазақстанның жер қойнауы» сериясынан ниобийге арналған монетаны 2026 жылғы 12 қазаннан бастап интернет-дүкенде сатылымға шығарады. Монета 925 сынамалы күмістен жасалған, салмағы - 32,8 грамм, номиналы - 1000 теңге. Таралымы небәрі 1000 дананы құрайды.

Ниобийдің ерекшелігі неде? Көзге көрінбейтін, бірақ маңызды металл. Ең алдымен, оның өндірісте қолданылу мүмкіндіктерінде. Бұл металл болаттың беріктігін арттыруға көмектеседі, ал оның кейбір қорытпалары жоғары температура жағдайында жұмыс істейтін құрылғыларда пайдаланылады.

Ниобий-титан қорытпаларының тағы бір қызықты қасиеті бар: олар асқынөткізгіш магниттер жасауға мүмкіндік береді. Мұндай магниттер магниттік-резонанстық томография (МРТ) аппараттарында қолданылады. Яғни, медициналық диагностикада пайдаланылатын күрделі технологиялардың артында да осы элементтің үлесі болуы мүмкін. Бір қарағанда, химия оқулығындағы кезекті элемент сияқты көрінетін ниобийдің заманауи өнеркәсіп үшін маңызы осындай.

Неліктен монетаға ниобий қосылды?

Қазақстан Ұлттық банкінің «Қазақстанның жер қойнауы» сериясы елдің минералдық байлығына назар аудартады. Ниобийге арналған монета да осы бағыттың жалғасы. Ол Қазақстан теңге сарайында дайындалған. Мұнда бір қызық жайт бар: коллекциялық монета тек төлем құралы немесе жинақ бұйымы ғана емес, белгілі бір тақырыпты танытудың тәсілі де бола алады. Көпшілік үшін химиялық элементтер кестедегі таңбалармен ғана байланысты болса, мұндай монеталар олардың шынайы өмірдегі маңызын білуге себеп болуы мүмкін. Дегенмен монетаның шығарылуы адамдардың ғылымға қызығушылығын міндетті түрде арттырады деп айтуға әлі ерте. Оның нақты әсерін анықтау үшін аудиторияның пікірін зерттеу қажет.

Мың дана - мың мүмкіндік пе? Монетаның таралымы 1000 данамен шектелген. Бұл оны коллекционерлер үшін қызықты бұйымға айналдыруы мүмкін. Бірақ оның болашақтағы нарықтық құны туралы нақты болжам жасауға негіз жеткіліксіз.

Монетаның негізгі ерекшелігі - күміс пен ниобийдің бір бұйымда ұштасуы ғана емес. Ол ғылым, технология және ұлттық нумизматика арасындағы байланысты көрсетеді. Бір қарағанда шағын ғана монета бізді қарапайым сұраққа жетелейді: күнделікті өмірімізге әсер ететін технологиялардың артында қандай ғылыми жаңалықтар тұр?

Мүмкін, жаңа монетаның ең маңызды құндылығы да осында шығар: ол бағалы металға назар аудартып қана қоймай, сол металдың құрамындағы элемент туралы көбірек білуге ынталандырады.

EXTERNAL DEBT SUSTAINABILITY IN DEVELOPING COUNTRIES: IMF POLICY AND DEBT RESTRUCTURING INSTRUMENTS

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Abstract

The article examines the external debt of developing countries as a global problem, analyzes indicators of debt burden and factors affecting their balance of payments, and considers the IMF's debt resolution strategy, including the HIPC Initiative. It identifies the causes of the debt crisis and substantiates the need for effective debt management methods and improved international debt restructuring architecture.

Keywords: external debt, debt crisis, balance of payments, IMF, HIPC Initiative, debt restructuring.

External debt or foreign debt refers to debts owed to non-residents in any currency, regardless of where the foreign credit funds were obtained — from abroad or within the borrower's country. External debts can be classified by creditors, by borrowers, and by maturity.

The severity of a country's debt burden is determined by many indicators, the most important of which are the following: the ratio of total external debt to GDP (%); the ratio of total external debt to income from exports of goods and services (%); the ratio of external debt service payments to GDP (%); the ratio of external debt service payments to exports of goods and services (%). A country's debt dependence can be measured by the level of severity of its debt burden on obligations to non-residents. The upper limit of external debt that theoretically allows for timely servicing is considered to be a ratio to GDP of up to 40–60%, as well as a ratio to exports of goods and services of up to 200–250%; the ratio of debt service payments to exports of goods and services of up to 20–25% [1]. The solvency of debtor countries with respect to external obligations is determined by the state of their economies, their adequacy to world economic conditions, their ability to manage their debt, and other factors.

A distinction is made between internal and external factors affecting the balance of payments. On the one hand, it is shaped by processes occurring in the country's economy and provides an indication of the scale, structure, and nature of its foreign economic relations. On the other hand, the balance of payments of developing countries is strongly influenced by external factors related to the state of the world economy, the monetary system, and the policies of developed countries. The following main factors influence the state of the balance of payments.

1. The dependent position of developing countries in the world economy. They account for about 35% of world exports. The exports of most of these countries are dominated by raw materials, energy carriers, and tropical monocultures, whose prices are subject to considerable fluctuation.

2. Cyclical fluctuations in the economies of developed countries. The world economic and financial crises of the 1970s–1990s intensified the instability of developing countries' balances of payments, primarily as a result of falling demand for their products and prices for them.

3. Military expenditures. The increase in imports of military goods worsens the trade balances of developing countries. In the second half of the 1990s, these countries spent more than $40 billion annually on purchasing arms abroad, mainly from the United States, France, and the United Kingdom.

4. Dependence of developing countries on external sources of financing. The inflow of foreign capital has a dual effect on their balances of payments: initially, receipts increase, but as payment deadlines approach, debtor countries are forced to pay the amount of the debt, as well as interest and dividends.

5. Changes in the conditions of international trade. The unequal trade of developed countries with developing countries negatively affects the latter's trade balance. As a result of the policy of price inflation by monopolies on the world market, the growth of the price index for goods exported to developing countries significantly exceeds the increase in the price index for products exported from these countries. Moreover, prices for goods supplied as part of "tied" aid are usually 20–40% higher than average market prices. The activities of transnational corporations (TNCs) intensify the disproportions and instability of the economies and balances of payments of developing countries. International monopolies exploit the growing intra-firm turnover for their own purposes. This affects the price level, the structure of international economic relations, and the distribution of benefits from the international division of labor, and contributes to customs protectionism to the detriment of developing countries.

6. Monetary and financial factors. The instability of leading currencies, in particular the US dollar and the euro, intensifies the instability of developing countries' balances of payments. Periodic declines in their exchange rates bring additional losses, devaluing foreign exchange earnings. When the dollar or euro appreciates, developing countries suffer losses as importers and debtors, since it becomes more expensive for them to acquire these currencies to repay international obligations. The depreciation of the yen in the second half of the 1990s significantly worsened the monetary and financial position of a number of Southeast Asian states, particularly Indonesia, Thailand, and the Philippines. As a result, they were forced to carry out significant devaluations of their currencies. The devaluation of developing countries' national currencies in principle encourages exports and restrains imports of goods. However, the export potential and competitiveness of goods of most of these states are limited, while their import needs are enormous, which reduces the positive impact of devaluation on their balance of payments.

7. Inflation in developing countries negatively affects their balance of payments, since rising prices reduce the competitiveness of national firms, hamper exports, encourage imports of goods, and contribute to capital outflow.

8. Trade and political discrimination against certain developing countries by developed states. The normal development of trade and economic relations is hindered by the policy of economic sanctions pursued by the United States and its partners, up to and including boycotts of certain newly independent states. In the 1980s–1990s and 2000s, sanctions of this kind were imposed against Libya, Nicaragua, Cuba, Afghanistan, Iran, Iraq, and others.

Methods of balancing the balances of payments of developing countries. To cover deficits, temporary methods are traditionally used — foreign credits and capital inflows. Developing countries seek to obtain credits on the Euro market, but access to this source of funds is limited. Typically, Euro banks grant credits to countries that have received at least a small IMF credit and are implementing a stabilization program under its supervision. However, credits from private banks are inaccessible, especially for countries with large debts. Banks have placed some of them on "black" lists. Coordination between private banks and international financial organizations controlled by leading countries also operates to restrict developing countries' access to the world market for loan capital. The active use of foreign credits, including for balancing balances of payments, has led to an unprecedented growth in the external debt of developing countries (more than $2 trillion in the early 2000s), the repayment of which intensifies the instability of their monetary position. The definitive method of covering a balance of payments deficit is the use of official gold and foreign exchange reserves. Developing countries (excluding the PRC and Taiwan) account for 22.2% of the world's total foreign exchange reserves and 1.7% of gold reserves. In cases of extreme necessity, developing countries use gold as emergency world money for international settlements (Iran and Iraq sold several dozen tons of gold to pay for arms purchases in the 1980s) and to repay external debt. Most of these states sold the gold received from the IMF in 1980 as a return of the "gold quota" they had contributed upon joining the organization. Some countries (Mexico, Uruguay), like developed ones (Italy, Portugal), sometimes use gold as collateral for foreign credits to cover balance of payments deficits.

The IMF plays an active role in resolving developing countries' external debt. In the 1980s it developed its own approach to international debt repayment, providing financial support for debt-

reduction operations with foreign commercial banks. In 1989 it adopted special guidelines defining the volume and forms of such support, but direct IMF participation on an individual basis did not become widespread and was abandoned in 2000.

In September 1996 the IMF and the World Bank jointly approved the HIPC Initiative (Heavily Indebted Poor Countries Initiative), substantially revised in September 1999 to provide deeper, broader, and faster debt relief as the enhanced HIPC Initiative. The program provides additional assistance from creditors — governments, international organizations, and private banks — to low-income, heavily indebted countries, reducing their external debt burden to a sustainable level serviceable through export earnings, foreign aid, and capital inflows. Relief involves a substantial reduction of public external debt calculated by the net present value (NPV) method, discounted at market interest rates. Eligible countries must meet criteria for poverty-reduction and growth-oriented credits.

External debt has become a global problem: more than 140 countries are currently debtors to industrialized nations. The inability of many countries to meet external obligations fully and on time has produced a debt crisis — a serious threat of financial and international collapse that also reveals the inadequacy of existing regulatory methods. Experience shows that external debt problems directly affect economic growth and investment: debt service payments become a kind of tax on current and future state income, with an increasing share flowing abroad. This has generated negative foreign trade balances and chronic budget deficits in developing countries, driving further external borrowing.

The timeframe for resolving the problem is hard to predict, given its multifaceted and global scale. Creditors are developed market economies that extend credits and long-term loans both through official intergovernmental channels and through private banks and international economic organizations in which they play a leading role — a mechanism of long-term economic influence by the centers of the world economy over the periphery.

Developing countries in deep financial crisis considered several paths. Ignoring debts would have invited sanctions, so none took that route. Most chose bilateral negotiations with creditors to restructure payment terms — a solution acceptable to both sides. Many commercial creditors, however, required debtors to sign an agreement with the IMF and participate in World Bank and IMF programs [2]. These institutions were established to assist developing countries — the World Bank through long-term programs, the IMF through short-term ones. Developed countries' willingness to provide assistance to "third world" countries declined due to the irrational use of resources by recipients, and aid volumes have fallen in recent years.

The causes of the debt crisis are interrelated. The oil crisis of 1973 forced the governments of poorer countries to borrow heavily in order to purchase goods of political necessity, while rising oil prices generated excess loan capital in leading financial systems until 1980, creating large new reserves that supported active lending. Investment uncertainty in developed countries led banks to aggressively seek new borrowers in developing countries, which in turn sought new borrowed funds. The oil crises of 1973 and 1979 significantly raised world oil prices, increasing the incomes of oil-exporting countries and creating excess liquid resources that were redistributed through international banks to developing countries, contributing to the growth of their external debt; at the same time, oil-importing countries faced balance of payments deficits and had to attract credits to finance imports. Transnational corporations (TNCs) adapted developing economies to their own needs for raw materials, energy, and labor, earning high profits. Finally, the sharp rise in US interest rates in the early 1980s made dollar-denominated debt servicing significantly more expensive, so that the ratio of current loan payments to export earnings in some countries rose from 10% in 1974–1975 to more than 40% in 1981–1982.

Argentina and Mexico were among the first countries to declare default on their external debts in the early 1980s. Argentina faced an economic crisis that led to mass protests and a change of government, while Mexico announced a suspension of debt payments in 1982, signaling to other developing countries the possible consequences of excessive borrowing. Poland, Hungary, and Romania also experienced serious financial difficulties: Poland declared default in 1981, which caused significant social and economic consequences, while Hungary and Romania faced high levels of

indebtedness and economic reforms under pressure from international creditors.

For the first time, the detrimental consequences of external debt manifested themselves on a large scale in the debt crisis of the early 1980s, which began in Mexico and spread to a number of other Latin American countries. In addition to the internal problems of the borrower countries — declining real incomes, economic recession, inflation, political crises, and the collapse of monetary and credit systems — the entire international credit and financial system found itself under threat of disintegration. The main conclusions drawn by the world community after the end of this crisis were as follows: the initial position of the IMF was erroneous in treating the problem of non-payments as a private, local issue caused by a lack of liquidity and solvable through short-term stabilization measures and regular financial assistance; both borrowers and creditors were recognized as responsible for creating the debt crisis, the so-called thesis of shared responsibility, which is largely declarative in nature; the necessity of a political solution to the debt problem was acknowledged; and negotiations were conducted with a group of borrower countries rather than with each of them separately. The enormous debts accumulated within the global financial system increasingly hinder the economic development of many countries, and repaying them is increasingly problematic and often impossible.

According to long-term macroeconomic forecasts, the debt problem will remain relevant for the foreseeable future. On the one hand, this depends on the reproduction of debt on its own basis; on the other hand, it depends on the need for new financing of the public and private sectors of the economy. It is clear that indebtedness is a special form of dependence, more burdensome and dangerous in its consequences than technological or trade dependence. Through it, debtor countries develop in a direction that ensures, above all, the fulfillment of their debt obligations. This is also indicated by the measures imposed on debtor countries by creditors, as well as by the IMF, other international organizations, and the governments of leading countries. They strictly monitor the implementation of these measures [3].

The following ways of resolving the situation are possible. The first is prompt debt management, including debt restructuring and new payment structures. The second is the write-off of part of the debt; in a number of Latin American countries, privatization is used among measures to reduce external debt. The third is the conversion of debt obligations into equity capital of private companies in creditor countries. The fourth is export promotion and encouragement of the activities of national exporting enterprises. The main means of export promotion include state subsidies, concessional lending and export insurance, and exchange rate policy.

To ensure timely relief of the debt burden of heavily indebted developing countries, the international community needs to develop and disseminate effective debt management methods that take into account the social aspect of a sustainable level of indebtedness, and to establish an international working group to study the possibilities for improving the international architecture for debt restructuring.

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ПСИХОЛОГИЯЛЫҚ ЫҚПАЛ ЕТУ АЗАПТАУ НЫСАНЫ РЕТІНДЕ: АНЫҚТАУ ЖӘНЕ ДӘЛЕЛДЕУ ЕРЕКШЕЛІКТЕРІ

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Аннотация. Мақалада психологиялық ықпал етуді азаптаудың дербес нысаны ретінде анықтау және дәлелдеу ерекшеліктері қарастырылады. Зерттеудің өзектілігі Қазақстан Республикасы Қылмыстық кодексінің 146-бабында физикалық қана емес, психикалық азап келтіру де көзделгенімен, психологиялық азаптау фактілерін құқық қолдану тәжірибесінде анықтау мен дәлелдеудің елеулі қиындықтар туғызуымен байланысты.

Психологиялық ықпал ету көзге көрінетін дене жарақаттарын қалдырмауы, жәбірленушінің іс жүзінде тәуелді жағдайында жүзеге асырылуы және қорқыту, үрейлендіру, қорлау, дәрменсіздік сезімін қалыптастыру, ұйқыдан айыру, оқшаулау және адамның еркін басуға бағытталған өзге де тәсілдер арқылы көрініс табуы мүмкін. Қазақстан Республикасының заңнамасы,

Стамбұл хаттамасы және халықаралық стандарттар негізінде осы санаттағы істер бойынша дәлелдемелік базаны қалыптастыру ерекшеліктері талданады. Авторлар мәжбүрлеу жағдайын дәлелдемелік реконструкциялау моделін қолдануды ұсынады, ол оқиға жағдайын, хронологиясын, ықпал ету мазмұнын, цифрлық, құжаттық, куәлік және медициналық-психологиялық деректерді кешенді бағалауды көздейді.

Түйін сөздер: азаптау; психологиялық азаптау; психикалық азап; психологиялық ықпал; дәлелдеу; тергеп-тексеру; криминалистикалық тактика; Стамбұл хаттамасы; цифрлық дәлелдемелер.

ПСИХОЛОГИЧЕСКОЕ ВОЗДЕЙСТВИЕ КАК ФОРМА ПЫТКИ: ОСОБЕННОСТИ ВЫЯВЛЕНИЯ И ДОКАЗЫВАНИЯ

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Аннотация. В статье рассматриваются особенности выявления и доказывания психологического воздействия как самостоятельной формы пытки. Актуальность исследования обусловлена тем, что, несмотря на закрепление в статье 146 Уголовного кодекса Республики Казахстан возможности причинения не только физических, но и психических страданий, выявление и доказывание фактов психологической пытки в правоприменительной практике связано со значительными трудностями.

Психологическое воздействие может не оставлять видимых телесных повреждений, осуществляться в условиях фактической зависимости потерпевшего и проявляться посредством угроз, запугивания, унижения, формирования чувства беспомощности, лишения сна, изоляции и иных способов, направленных на подавление воли человека.

На основе законодательства Республики Казахстан, Стамбульского протокола и международных стандартов анализируются особенности формирования доказательственной базы по данной категории дел. Авторами предлагается применение модели доказательственной реконструкции ситуации принуждения, предусматривающей комплексную оценку обстановки события, его хронологии, содержания воздействия, а также цифровых, документальных, свидетельских и медико-психологических данных.

Ключевые слова: пытки; психологическая пытка; психические страдания; психологическое воздействие; доказывание; расследование; криминалистическая тактика; Стамбульский протокол; цифровые доказательства.

PSYCHOLOGICAL IMPACT AS A FORM OF TORTURE: SPECIFIC FEATURES OF DETECTION AND PROOF

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Abstract. The article examines the specific features of detecting and proving psychological impact as an independent form of torture. The relevance of the study is determined by the fact that, although Article 146 of the Criminal Code of the Republic of Kazakhstan provides for the infliction of not only physical but also mental suffering, the detection and proof of psychological torture in law enforcement practice involve significant difficulties.

Psychological impact may leave no visible bodily injuries, may be carried out in conditions of the victim's actual dependence, and may manifest itself through threats, intimidation, humiliation, inducing a sense of helplessness, sleep deprivation, isolation, and other methods aimed at suppressing a person's will.

Based on the legislation of the Republic of Kazakhstan, the Istanbul Protocol, and international standards, the article analyzes the specific features of forming the evidentiary basis in this category of cases. The authors propose the use of a model of evidentiary reconstruction of the coercive situation, which provides for a comprehensive assessment of the circumstances of the event, its chronology, the content of the impact, as well as digital, documentary, testimonial, and medical-psychological data.

Keywords: torture; psychological torture; mental suffering; psychological impact; proof; investigation; forensic tactics; Istanbul Protocol; digital evidence.

Кіріспе. Азаптауға тыйым салу халықаралық және ұлттық құқықтың іргелі қағидаттарының бірі болып табылады. Қазақстан Республикасының Конституциясы адамның қадір-қасиетіне қол сұғылмайтынын бекітіп, азаптауға, зорлық-зомбылыққа және адамның қадір-қасиетін қорлайтын өзге де қатыгез қарым-қатынас пен жаза түрлеріне жол берілмейтінін айқындайды [1].

Азаптаудың халықаралық-құқықтық түсінігі тек физикалық ауырсынумен шектелмейді. БҰҰ-ның Азаптауға және басқа да қатыгез, адамгершілікке жатпайтын немесе адамның қадір-қасиетін қорлайтын іс-әрекеттер мен жазалау түрлеріне қарсы конвенциясының 1-бабына

сәйкес, азаптау ақпарат немесе мойындау алу, жазалау, қорқыту, мәжбүрлеу не кемсітушілік мақсатында адамға қасақана қатты физикалық немесе психикалық азап келтіруді қамтиды [2].

Ұқсас тәсіл Қазақстан Республикасының қылмыстық заңнамасында да бекітілген. Қазақстан Республикасы Қылмыстық кодексінің 146-бабы заңда көзделген белгілер болған кезде физикалық және (немесе) психикалық азап келтіру үшін қылмыстық жауаптылықты белгілейді [3]. Осыған байланысты психикалық азап азаптаудың дербес қылмыстық-құқықтық белгісі ретінде қарастырылады.

Алайда психологиялық ықпал етуді анықтау және дәлелдеу физикалық күш қолдану фактілерін тіркеуге қарағанда күрделірек. Физикалық зорлық денеде объективті түрде анықталатын жарақаттар қалдыруы мүмкін болса, психологиялық қысым көп жағдайда көзге көрінетін белгілермен қатар жүрмейді. Оның негізгі тетігі адамның санасына, эмоциялық жағдайына және еркін шешім қабылдау қабілетіне ықпал ету арқылы көрініс табады.

Осыған байланысты психологиялық азаптауды анықтау мен дәлелдеуге арналған арнайы криминалистикалық тәсілдерді қалыптастыру өзекті ғылыми және практикалық міндет болып табылады.

Зерттеудің мақсаты – азаптауға қатысты қылмыстық істерді тергеп-тексеру барысында психологиялық ықпал етуді анықтау және дәлелдеу ерекшеліктерін айқындау, сондай-ақ психикалық мәжбүрлеу механизмін қалпына келтіруге бағытталған практикалық ұсыныстар әзірлеу.

Зерттеу барысында формальды-заңдық, жүйелік-құрылымдық, салыстырмалы-құқықтық және криминалистикалық әдістер қолданылды. Теориялық негізін халықаралық құқықтық актілер, Қазақстан Республикасының қылмыстық және қылмыстық-процестік заңнамасы, Стамбұл хаттамасы және криминалистика саласындағы ғылыми еңбектер құрады.

Зерттеудің ғылыми жаңалығы психологиялық азаптауды мәжбүрлеу жағдайын дәлелдемелік реконструкциялау тұрғысынан қарастырудан көрінеді. Бұл тәсіл жәбірленушіге әсер еткен оқиғаның жеке элементтерін емес, оның толық механизмін қалпына келтіруді көздейді.

Азаптау құрылымындағы психологиялық ықпал ету

Психологиялық азаптау әртүрлі нысандарда көрінуі мүмкін. Оларға өлтіру немесе денсаулыққа ауыр зиян келтірумен қорқыту, жақындарына қауіп төндіру, үрейлендіру, зорлық-зомбылық қолдануға дайындықты көрсету, оқшаулау, ұйқыдан айыру, қорлау, дәрменсіздік сезімін қалыптастыру, отбасы мүшелері туралы мәліметтерді қысым құралы ретінде пайдалану және адамның еркін басуға бағытталған өзге де әрекеттер жатады.

Мұндай ықпал етудің ерекшелігі – тікелей физикалық күш қолданудың болмауы мүмкін. Сондықтан дене жарақаттарының болмауын азаптау фактісінің жоқтығымен теңестіруге болмайды. Бұл Қазақстан Республикасы Қылмыстық кодексінің 146-бабының мазмұнына да сәйкес келмейді, өйткені заң психикалық азапты дербес белгі ретінде қарастырады [3].

Сонымен қатар кез келген психологиялық ықпал ету азаптау болып табылмайды. Қылмыстық-құқықтық бағалау кезінде ықпал етудің сипаты мен қарқындылығы, оның ұзақтығы, жәбірленушінің жағдайы, лауазымды адамға тәуелділік дәрежесі, әрекеттің мақсаты және оқиғаның жалпы контексті ескерілуі қажет.

Психологиялық қысымның мақсаты ерекше маңызға ие. Егер қорқыту, үрейлендіру, қорлау немесе өзге де психикалық әсер ету тәсілдері мойындау немесе ақпарат алу, жазалау, қорқыту не белгілі бір әрекетке мәжбүрлеу мақсатында қолданылса, мұндай әрекеттер тиісті қылмыстық-құқықтық бағалауды талап етеді.

2022 жылғы Стамбұл хаттамасында азаптаудың психологиялық дәлелдемелері жеке қарастырылып, жәбірленушінің психикалық жай-күйін, посттравмалық стресстік бұзылыс белгілерін, мазасыздықты, депрессиялық көріністерді, ұйқының, есте сақтау мен зейіннің бұзылуын бағалау қажеттілігі көрсетілген [4]. Алайда психологиялық салдардың болуы өздігінен азаптау фактісін дәлелдемейді. Олар істің басқа да мән-жайларымен жиынтықта бағалануға тиіс.

Психологиялық азаптауды анықтау ерекшеліктері

Психологиялық ықпал етуді анықтаудағы негізгі қиындықтардың бірі – оның жасырын сипаты. Мұндай әрекеттер көбінесе бөгде адамдар қатыспайтын жабық қызметтік үй-жайларда жасалады, ал жәбірленуші құқық қорғау органы қызметкерлеріне нақты тәуелді жағдайда болуы мүмкін.

Жәбірленуші болған оқиға туралы бірден хабарламауы да ықтимал. Бұған қайталама қысымнан қорқу, жақындарының қауіпсіздігі үшін алаңдау, тергеу органдарына сенімсіздік, эмоциялық күйзеліс немесе арызданудың нәтижесіз болатынына сену себеп болуы мүмкін. Сондықтан психологиялық ықпал ету туралы кеш хабарлау оның жалған екендігін білдірмеуге тиіс.

БҰҰ-ның Азаптауға қарсы комитеті Қазақстанның төртінші мерзімді баяндамасы бойынша қорытынды ескертулерінде азаптау туралы шағымдарды жедел әрі тәуелсіз тергеп-тексеру және жәбірленушілер мен куәларды қысымнан қорғау қажеттілігіне назар аударған [5].

Практикалық тұрғыдан маңызды мәселе – психологиялық ықпал етудің кейбір тәсілдерінің сырттай заңды процестік әрекеттерге ұқсас болуы. Мәселен, адамның қызметтік кабинетте болуы өздігінен заң бұзушылықты білдірмейді. Сондықтан оның не себепті сол жерде болғанын, қанша уақыт ұсталғанын, процестік мәртебесін, үй-жайдан еркін шығу мүмкіндігін, адвокатқа қолжетімділігін, онымен қандай лауазымды тұлғалар байланыс жасағанын және қандай талаптар қойылғанын анықтау қажет.

Осы мән-жайлардың жиынтығы заңды процестік әрекетті заңсыз психологиялық мәжбүрлеуден ажыратуға мүмкіндік береді.

Мәжбүрлеу жағдайын дәлелдемелік реконструкциялау

Психологиялық азаптау кезінде болған оқиғаны толық растайтын бір ғана тікелей дәлелдемені алу әрдайым мүмкін емес. Осы себепті тергеп-тексеру оқиғаның толық механизмін кезең-кезеңімен қалпына келтіруге бағытталуы қажет.

Мәжбүрлеу жағдайын дәлелдемелік реконструкциялау барысында мынадай элементтер анықталуға тиіс: кім, кімге қатысты, қай жерде, қашан, қандай жағдайда, қандай тәсілмен, қандай мақсатта ықпал етті, жәбірленуші неге мәжбүрленді, қандай салдар туындады және бұл мән-жайлар қандай объективті деректермен расталады.

Мұнда нақты хронологияны белгілеудің маңызы ерекше. Адамның жеткізілген уақыты, әкімшілік ғимаратқа кірген сәті, әрбір қызметтік үй-жайда болған кезеңі, процестік әрекеттердің басталуы мен аяқталуы, адвокаттың келу уақыты, медициналық тексеру, ұстау немесе босату сәті анықталуы тиіс.

Одан кейін бұл мәліметтер бейнежазбалармен, есепке алу журналдарымен, электрондық жүйелермен және қатысушылардың айғақтарымен салыстырылады. Ресми және нақты хронология арасындағы алшақтықтар тергеп-тексеру үшін елеулі мәнге ие болуы мүмкін.

Мысалы, процестік құжаттарға сәйкес жауап алу сағат 01:30-да басталғанымен, бейнебақылау адамның сағат 22:00-ден бастап қызметтік кабинетте болғанын көрсетсе, осы уақыт аралығында болған оқиғаларды және онымен байланыс жасаған адамдарды анықтау қажет.

Кабинеттің ішінде бейнекамераның болмауы болған оқиғаны дәлелдеуді жоққа шығармайды. Қажетті мәліметтер дәліздегі камераларда, өткізу пунктінің журналында, электрондық кіру жүйесінде, ұялы байланыс деректерінде немесе өзге тұлғалардың айғақтарында сақталуы мүмкін.

Осылайша, психологиялық азаптау кезінде іздер жойылып кетпейді, олардың нысаны мен орналасқан жері өзгереді.

Жәбірленушіден жауап алу тактикасы

Жәбірленушіден жауап алу психологиялық азаптау фактісін анықтауда негізгі тергеу әрекеттерінің бірі болып табылады. Ол қауіпсіз жағдайда, болжамды құқыққа қайшы ықпал ету субъектілерінің қатысуынсыз жүргізілуі тиіс.

Алғашқы кезеңде жәбірленушіге оқиғаны еркін баяндауға мүмкіндік берген жөн. Кейін оның кіммен байланыс жасағаны, қандай үй-жайларда болғаны, қандай талаптар қойылғаны,

қандай сөздер айтылғаны, телефон мен адвокатқа қолжетімділігі, жақындары туралы мәліметтердің пайдаланылуы және ықпал етудің мақсаты егжей-тегжейлі анықталады.

Бұл ретте «Сізге психологиялық азаптау қолданылды ма?» деген заңи сипаттағы сұрақпен шектелу дұрыс емес. Жәбірленушінің міндеті – болған фактілерді хабарлау, ал оларға құқықтық баға беру – сотқа дейінгі тергеп-тексеруді жүзеге асыратын органның міндеті.

Цифрлық және құжаттық дәлелдемелер

Психологиялық ықпал етуге қатысты істерде цифрлық дәлелдемелердің маңызы ерекше. Бейнебақылау жазбалары адамның нақты жерде болғанын, қозғалу бағытын, белгілі бір үй-жайда қанша уақыт болғанын және қандай тұлғалармен байланыс жасағанын растауы мүмкін.

Сондай-ақ электрондық кіру жүйелері, телефон байланысының детализациясы, жеткізілген адамдарды есепке алу журналдары, процестік және медициналық құжаттар дәлелдемелік мәнге ие.

Бейнежазбаларды уақтылы сақтау қажет, себебі техникалық жүйелерде автоматты қайта жазу функциясы болуы мүмкін. Егер белгілі бір уақыт аралығындағы жазба болмаса, камераның жұмыс істеген-істемегені, жүйеге кімнің қол жеткізгені, ақпараттың қашан және қандай себеппен жойылғаны немесе оны қалпына келтіру мүмкіндігі тексерілуге тиіс.

Лауазымды тұлғалардан жауап алу кезінде олардың қысым көрсеткен-көрсетпегені туралы жалпы сұрақтармен шектелмей, нақты уақыт, орын, қатысушылар және әрекеттер анықталуы қажет. Кейін олардың айғақтары объективті деректермен салыстырылады.

Медициналық және психологиялық құжаттау

Көзге көрінетін дене жарақаттары болмаған жағдайда да жәбірленушіні медициналық тексеруден өткізу қажет. Бұл оның жалпы жай-күйін тіркеуге және өзі байқамаған дене зақымдарын анықтауға мүмкіндік береді.

Психологиялық азаптау туралы мәліметтер болған жағдайда адамның психоэмоциялық жай-күйін кәсіби бағалау ерекше маңызға ие. Стамбұл хаттамасына сәйкес мазасыздық, ұйқының бұзылуы, депрессиялық көріністер, посттравмалық реакциялар, есте сақтау мен зейіннің бұзылуы секілді белгілер бағалануы мүмкін [4].

Дегенмен психологтың немесе психиатрдың қорытындысы жеке-дара дәлел ретінде қарастырылмауы тиіс. Медициналық-психологиялық деректер жәбірленушінің айғақтарымен, цифрлық ақпаратпен, құжаттармен және өзге де дәлелдемелермен жиынтықта бағалануы қажет.

Талқылау және нәтижелер

Жүргізілген зерттеу дене жарақаттарын тіркеуге негізделген дәстүрлі тәсіл психологиялық азаптауды тиімді тергеп-тексеру үшін жеткіліксіз екенін көрсетеді.

Р.С. Белкин қылмыс механизмін өзара байланысты элементтердің күрделі жүйесі ретінде қарастырып, оның әртүрлі іздер мен дәлелдемелік ақпарат көздерінде көрініс табатынын атап өткен [6, 214–219 б.]. Е.П. Ищенко мен А.А. Топорков тергеп-тексерудің бастапқы кезеңінде дәлелдемелік ақпаратты уақтылы анықтау мен бекітудің шешуші маңызын көрсетеді [7, 156–165 б.].

Бұл ережелер психологиялық азаптауды тергеп-тексеру кезінде ерекше өзектілікке ие. Мұнда криминалистикалық маңыз тек дәстүрлі материалдық іздерге ғана емес, оқиғаның орны мен уақытына, байланыс ұзақтығына, коммуникация тәсілдеріне, цифрлық деректерге және жәбірленушінің психоэмоциялық жай-күйіне де беріледі.

Қорытынды. Психологиялық азаптау анықтау және дәлелдеу тұрғысынан құқыққа қайшы ықпал етудің күрделі нысандарының бірі болып табылады. Көзге көрінетін дене жарақаттарының болмауы азаптау құрамының жоқтығын білдірмейді, өйткені Қазақстан Республикасы Қылмыстық кодексінің 146-бабы психикалық азап келтіруді тікелей көздейді.

Мұндай фактілерді тиімді тергеп-тексеру физикалық жарақаттарды анықтаумен шектелмей, психологиялық мәжбүрлеудің толық механизмін қалпына келтіруге бағытталуы тиіс. Осы мақсатта жәбірленушінің нақты жағдайы, оның лауазымды тұлғаларға тәуелділігі, ықпал етудің ұзақтығы мен мазмұны, әрекеттердің мақсаты, оқиғаның хронологиясы, цифрлық және құжаттық іздер, куәлардың айғақтары және психологиялық салдар кешенді түрде зерттелуі қажет.

Ұсынылған мәжбүрлеу жағдайын дәлелдемелік реконструкциялау моделі психологиялық ықпал етудің тікелей бейнефиксациясы болмаған жағдайдың өзінде дәлелдемелік базаны жүйелі түрде қалыптастыруға мүмкіндік береді.

Сонымен қатар азаптауды тергеп-тексеретін прокурорлардың кәсіби даярлығын күшейту, оқу бағдарламаларына психологиялық ықпал етуді анықтау, жәбірленушіден жауап алу тактикасы, Стамбұл хаттамасын қолдану және цифрлық дәлелдемелермен жұмыс істеу мәселелерін енгізу орынды.

Осылайша, қазіргі заманғы криминалистикалық әдістеме тергеп-тексеруді денедегі көрінетін іздерді іздеуге ғана емес, адамның еркін заңсыз басу механизмін анықтауға бағыттауы тиіс.

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ОСОБЕННОСТИ КОГНИТИВЫХ ФУНКЦИЙ У ПАЦИЕНТОВ С ХРОНИЧЕСКОЙ ИШЕМИЕЙ МОЗГА В ЗАВИСИМОСТИ ОТ СТЕПЕНИ ТЯЖЕСТИ ЗАБОЛЕВАНИЯ

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Актуальность. Хроническая ишемия мозга (ХИМ) составляет до 75 % всех цереброваскулярных болезней (ЦВБ) и протекает менее драматично, чем острое нарушение мозгового кровообращения, но приводит к выраженным потерям в качестве жизни в популяции людей старшего возраста. Нарушения когнитивных функций являются одними из наиболее распространенных при ХИМ, раннее выявление которых могут в дальнейшем сыграть важную роль в предупреждении инвалидности. По статистике от 3 до 20 % лиц старше 65 лет имеют тяжелые когнитивные нарушения в виде деменции, от 40 до 80 % - легкие когнитивные расстройства. Очень важным является определение степени поражения когнитивных функций у больных с ХИМ, для оценки, состояния которых используют нейропсихологическое тестирование.

Цель исследования. Изучить нейропсихологическую характеристику состояния когнитивных функций при хронической ишемии мозга.

Материалы и методы исследования. Исследовано 66 больных в возрасте от 34 до 88 лет, средний возраст 61 лет; из них 35 лиц (53%) женского пола и 31(47%) мужского пола. Больные с ХИМ были подразделены на подгруппы соответственно стадии заболевания. С ХИМ I было 30 (45 %), с ХИМ II – 24 (36 %), с ХИМ III – 12 (18 %) пациентов. С ХИМ I артериальную гипертензию (АГ) имели 2 пациента; с ХИМ II и ХИМ III все пациенты имели в анамнезе ИБС и АГ, 22 из них дополнительно имели сахарный диабет (СД), у 18 больных регистрировали ХСН, 6 больных в анамнезе перенесли ОНМК, 2 пациента имели постоянную форму фибрилляции предсердий. Исследование проводилось в отделении Неврологии и Ангионеврологии Ташкентского Государственного Медицинского Университета и с использованием международных шкал когнитивной оценки MoCA (The Montreal Cognitive Assessmenttest) и MMSE (Краткая шкала оценки психического статуса -Mini-Mental State Examination). Максимально возможное количество баллов MoCA-теста - 30; 26 баллов и более считалось нормальным, 25 и менее свидетельствовали о наличии когнитивных нарушений. Общий балл по шкале MMSE составлял максимум 30 баллов, 28-30 баллов – норма, 24-27 баллов – преддементные когнитивные расстройства, 23 балла и менее – деменция (ориентировочно 20 - 23 балла - деменция легкой степени выраженности; 11 - 19 баллов - деменция умеренной степени выраженности; 0 - 10 баллов - тяжелая деменция).

Результаты исследования. При ХИМ I результаты тестирования свидетельствует о сохранении когнитивных функций – по данным MMSE средний балл составил 28,5, по данным MoCA - 26 баллов, несмотря на то что пациенты имели жалобы на нарушение памяти и внимания, быструю смену настроения. У пациентов с ХИМ II по результатам MMSE средний балл составил 26,1, по данным MoCA - 21 баллов. Следовательно, пациенты данной группы имеют преддементные когнитивные расстройства с преобладанием нарушения концентрации внимания, памяти, счета, восприятия. В подгруппе пациентов с ХИМ III по результатам MMSE средний балл составил 21,8, по данным MoCA - 16 баллов, что соответствует деменции легкой степени тяжести. В наибольшей степени пациенты данной подгруппы имели нарушения следующих функций как снижение памяти, отсроченное воспроизведение, абстракция, зрительно-конструктивные и исполнительные навыки. У больных с ХИМ II и III, выполнивших задания шкалы MMSE на 26 и менее баллов, отмечено по данным шкалы MoCA снижение до 21 и менее баллов. Результаты нейропсихологических тестов показали крайне высокую распространенность преддементных и легких дементных когнитивных расстройств при ХИМ II и III выраженные при сопутствующей патологии.

Заключение. Таким образом, при нейропсихологическом тестировании пациентов с ХИМ I средний балл по результатам тестов MMSE и MoCA соответствует пределам нормы. При ХИМ II результаты нейропсихологического тестирования свидетельствуют об умеренных когнитивных расстройствах (УКР), раннее выявление которых имеет чрезвычайно важное значение для предотвращения перехода в сосудистую деменцию. При ХИМ III результаты соответствуют деменции легкой степени тяжести.

ОРГАНИЗАЦИЯ УПРАВЛЕНИЯ ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТЬЮ В ПОЛИКЛИНИКЕ И ВОЗМОЖНОСТИ ОЦЕНКИ ПРОГРАММЫ ПО ДАННЫМ РЕГИСТРА

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Аннотация

Актуальность. Программы управления хронической сердечной недостаточностью (ХСН) объединяют наблюдение, лечение и поддержку самоконтроля. Оценка их результатов на уровне поликлиники зависит от качества рутинных данных. Цель. Охарактеризовать клинический состав регистра ХСН, сопоставить показатели по функциональному классу и определить возможности совершенствования оценки программы с учётом международного опыта.

Материалы и методы. Выполнен ретроспективный поперечный описательный анализ 47 уникальных записей регистра. Расчётная дата — 30.09.2025. Сравнивались группы I, II и III функциональных классов по классификации Нью-Йоркской кардиологической ассоциации (NYHA). Оценивались возраст, фракция выброса левого желудочка (ФВ ЛЖ), артериальное давление, записи о терапии и дата последней госпитализации. Международные данные рассмотрены в формате целевого повествовательного обзора.

Результаты. Средний возраст составил 64,3 ± 9,0 года, ФВ ЛЖ — 59,2 ± 5,5%. В группы NYHA I, II и III вошли соответственно 14, 18 и 15 пациентов; средняя ФВ ЛЖ составила 63,1; 60,0 и 54,5%. Дата последней госпитализации относилась к периоду 01.10.2024–30.09.2025 у 28 пациентов (59,6%). Отсутствовали значения расчётной скорости клубочковой фильтрации, даты включения в программу и парные измерения.

Заключение. Регистр позволяет описать клинический состав пациентов и определить направления улучшения документирования. Для оценки результатов программы необходимы продольное наблюдение, полный учёт госпитализаций и регистрация содержания вмешательств. Международный опыт обосновывает изучение координированного наблюдения и поддержки самоконтроля, однако имеющиеся данные не позволяют оценить причинный эффект местной программы.

Ключевые слова: хроническая сердечная недостаточность; программа управления заболеваниями; первичная медико-санитарная помощь; регистр пациентов; функциональный класс; организация медицинской помощи.

Введение

Хроническая сердечная недостаточность требует длительного наблюдения, в котором назначение лекарственных средств связано с оценкой симптомов, переносимости терапии и своевременным выявлением ухудшения состояния. Для поликлиники это прежде всего задача непрерывности помощи: клинические решения должны опираться на последовательные измерения, а рекомендации разных специалистов — складываться в единый план ведения пациента. Европейские рекомендации рассматривают мультидисциплинарные программы как способ объединения диагностики, лечения, обучения и последующего наблюдения [1, 2].

Программа управления заболеваниями (ПУЗ) при ХСН может быть описана через несколько взаимосвязанных компонентов: определение группы наблюдения, распределение ответственности в команде, плановые контакты, поддержка самостоятельного контроля и учёт

клинических исходов. В рекомендациях Национального института совершенствования здравоохранения и медицинской помощи Великобритании (NICE) подчёркивается взаимодействие специализированной команды с первичным звеном [3]. Важная роль принадлежит пациенту: обучение должно помогать распознавать изменения самочувствия и обращаться за помощью, а не ограничиваться передачей памятки [4].

Результаты программ зависят от содержания вмешательства. Кокрейновский обзор 47 рандомизированных исследований с участием 10 869 пациентов показал, что индивидуальное сопровождение и мультидисциплинарные модели могут улучшать отдельные исходы; для некоторых моделей, основанных только на работе специализированной клиники, убедительных преимуществ не выявлено [5]. Следовательно, факт нахождения пациента на учёте сам по себе не характеризует ни интенсивность помощи, ни её результативность.

На практике электронный регистр часто содержит последние значения показателей, но не историю их изменений. Такая структура пригодна для описания группы наблюдения, однако её возможности для оценки программы ограничены. Подход Всемирной организации здравоохранения (ВОЗ) HEARTS предусматривает стандартизированный сбор данных и мониторинг сердечно-сосудистой помощи в первичном звене [6]. В настоящей работе эти принципы используются для анализа регистра ХСН и формирования предложений по его развитию. Научный вопрос заключается в том, какие клинические и организационные выводы допустимы на основании доступных рутинных записей.

Цель исследования — охарактеризовать пациентов регистра ХСН, сравнить доступные показатели между функциональными классами NYHA и определить направления совершенствования оценки ПУЗ на уровне поликлиники с учётом международного опыта.

Материалы и методы

Проведено ретроспективное поперечное описательное исследование. Источником служил лист «регистр» электронной таблицы «Итогтовый Регистр ХСН.xlsx»; в обозначении организации в файле указана «Городская поликлиника № 2». Анализ охватывал все 47 заполненных записей с уникальным идентификатором. Пустые строки и повторное представление тех же пациентов на расчётных листах не считались отдельными наблюдениями. Размер выборки определялся количеством доступных записей, а не расчётом мощности для проверки гипотез.

Критерием включения являлось наличие индивидуальной заполненной записи в регистре ХСН. Независимая верификация диагноза по первичной медицинской документации не проводилась. Поэтому принадлежность к регистру рассматривалась как характеристика источника данных, а не как самостоятельно подтверждённый исследователем диагноз. В статье представлены только агрегированные результаты.

Для каждого пациента использовались последние зарегистрированные значения. Возраст рассчитывался на 30 сентября 2025 года как число дней от даты рождения, делённое на 365,25. Эта дата соответствовала наиболее позднему приёму в файле. Даты приёмов находились в диапазоне 13.11.2023–30.09.2025, даты эхокардиографии — 16.11.2023–29.09.2025. Таким образом, расчётная дата не означает, что все пациенты обследованы одновременно.

Переменные включали функциональный класс NYHA, ФВ ЛЖ, систолическое и диастолическое артериальное давление (САД и ДАД), сведения о применении бета-блокаторов, ингибиторов ангиотензинпревращающего фермента или блокаторов рецепторов ангиотензина II (ИАПФ/БРА), антагонистов минералокортикоидных рецепторов (в регистре — «антагонисты альдостерона»), дату последней госпитализации, расчётную скорость клубочковой фильтрации

(рСКФ) и дату вакцинации против гриппа. Значения ФВ ЛЖ, записанные долями единицы, переводились в проценты.

Показатель госпитализации определяли как наличие даты последней зарегистрированной госпитализации в интервале 01.10.2024–30.09.2025 включительно. Он не отражает суммарное число событий, их причины или частоту декомпенсаций ХСН. Для описательной группировки АД использовали сочетание САД <140 и ДАД <90 мм рт. ст.; этот порог не применялся как индивидуальная оценка достижения цели лечения.

Количественные переменные представлены в виде среднего значения и выборочного стандартного отклонения (M ± SD), категориальные — абсолютной частотой и долей, n (%). Знаменателем служило число пациентов всей выборки либо соответствующего функционального класса. Пропуски не заменяли отрицательными ответами. Сравнение групп носило описательный характер; проверка статистических гипотез и корректировка по смешивающим факторам не выполнялись. Прозрачное описание источника, отбора записей и пропусков соответствует задачам рекомендаций RECORD для исследований рутинных медицинских данных [7].

Для обсуждения выполнен целевой поиск публикаций о программах ведения ХСН среди публикаций, индексируемых в PubMed, материалов Кокрейновской библиотеки и официальных документов профессиональных организаций. Использовались сочетания терминов heart failure, disease management, multidisciplinary care, telemonitoring и self-care. Включены рекомендации, систематический обзор и рандомизированные исследования, раскрывающие разные способы организации наблюдения. Обзор является повествовательным, не претендует на полноту систематического поиска и не включает собственный метаанализ.

Результаты

В исследуемом регистре преобладал II функциональный класс NYHA — 18 пациентов (38,3%). К I классу относились 14 (29,8%), к III — 15 (31,9%); IV класс не был представлен. Средняя ФВ ЛЖ составила 59,2 ± 5,5%, диапазон — 50–73%. Общая характеристика выборки представлена в таблице 1.

Таблица 1. Общая характеристика пациентов регистра

Показатель	Значение
Число уникальных пациентов	47
Возраст, годы	64,3 ± 9,0
NYHA I / II / III / IV	14 / 18 / 15 / 0
ФВ ЛЖ, %	59,2 ± 5,5; диапазон 50–73
Систолическое АД, мм рт. ст.	126,1 ± 7,4
Диастолическое АД, мм рт. ст.	80,2 ± 7,1
АД менее 140 и менее 90 мм рт. ст.	36 (76,6%)
Бета-блокаторы, ответ «да»	23 (48,9%)
ИАПФ или БРА, ответ «да»	21 (44,7%)
Антагонисты минералокортикоидных рецепторов	11 (23,4%); 2 пропуска

Показатель	Значение
Последняя госпитализация в периоде 01.10.2024–30.09.2025	28 (59,6%)
рСКФ, заполненные значения	0 из 47
Дата вакцинации против гриппа указана	6 (12,8%)

Примечание. Количественные показатели представлены как M ± SD. Для лекарственных препаратов учитывались ответы «да». Доли рассчитаны от 47 пациентов; наличие назначения не равнозначно оценке его соответствия клиническим показаниям.

Среднее АД составляло 126,1 ± 7,4 / 80,2 ± 7,1 мм рт. ст.; значения ниже обоих выбранных порогов имелись у 36 пациентов (76,6%). Ответ «да» для бета-блокаторов был зарегистрирован у 23 пациентов (48,9%), для ИАПФ/БРА — у 21 (44,7%), для антагонистов минералокортикоидных рецепторов — у 11 (23,4%). По последнему полю две записи не содержали ответа.

При сравнении функциональных классов выявлена последовательность меньших средних значений ФВ ЛЖ от NYHA I к NYHA III (таблица 2). Разность средних между крайними группами составила около 8,7 процентного пункта по неокруглённым значениям. Средние значения САД и ДАД различались незначительно по абсолютной величине. Поскольку анализ поперечный, эта последовательность характеризует разные группы пациентов, а не ухудшение состояния одного пациента во времени.

Таблица 2. Описательное сравнение показателей по функциональному классу NYHA

Показатель	NYHA I	NYHA II	NYHA III
Число пациентов	14	18	15
Доля всей выборки	29,8%	38,3%	31,9%
Возраст, годы	64,0 ± 10,6	62,9 ± 9,0	66,1 ± 7,5
ФВ ЛЖ, %	63,1 ± 4,7	60,0 ± 4,4	54,5 ± 4,2
САД, мм рт. ст.	125,7 ± 8,5	125,8 ± 6,0	126,7 ± 8,2
ДАД, мм рт. ст.	79,3 ± 9,2	81,1 ± 4,7	80,0 ± 7,6
Бета-блокаторы	6 (42,9%)	10 (55,6%)	7 (46,7%)
ИАПФ или БРА	5 (35,7%)	7 (38,9%)	9 (60,0%)
Антагонисты минералокортикоидных рецепторов	2 (14,3%)	2 (11,1%)	7 (46,7%)
Последняя госпитализация в выбранном периоде	7 (50,0%)	10 (55,6%)	11 (73,3%)

Примечание. Доли рассчитаны от всех пациентов соответствующего класса. По антагонистам минералокортикоидных рецепторов два пропуска относятся к NYHA I (2 «да», 10 «нет»); в остальных группах пропусков нет. Выбранный период для даты последней госпитализации — 01.10.2024–30.09.2025.

У 28 пациентов (59,6%) последняя зарегистрированная госпитализация относилась к выбранному году. По классам NYHA доли составляли 50,0; 55,6 и 73,3% соответственно. Разность между III и I классами равнялась 23,3 процентного пункта. В группе NYHA III чаще встречались записи о приёме ИАПФ/БРА и антагонистов минералокортикоидных рецепторов. Эти различия могут отражать клинические показания и особенности состава групп; причинная интерпретация не проводилась.

Значения рСКФ отсутствовали во всех 47 записях. Дата вакцинации против гриппа была указана у 6 пациентов (12,8%). В поле пола содержались 44 записи «жен», одна «муж» и две некорректные записи «нет»; этот показатель не использовался для межгруппового анализа. У всех пациентов имелись дата цели по самоменеджменту и ответ «нет» в поле курения, однако проверить содержание обучения и способ оценки статуса по регистру невозможно.

Отдельные поля для даты включения в ПУЗ и статуса участия отсутствовали. Не было последовательности повторных измерений, полного журнала госпитализаций и причин событий. Поэтому провести сравнение до и после включения либо сформировать группы участников и неучастников программы по этим данным не удалось.

Обсуждение

Основной результат исследования состоит в разграничении двух возможностей регистра: описания клинической группы и оценки изменений, связанных с организацией помощи. Доступные записи позволяют сравнить функциональные классы и обнаружить пробелы документирования, но не содержат временной структуры, необходимой для анализа эффекта ПУЗ. Такое разграничение имеет практическое значение: показатели заполненности и охвата наблюдением следует оценивать отдельно от клинических исходов.

Все зарегистрированные значения ФВ ЛЖ находились на уровне 50% и выше. При этом почти треть пациентов относилась к NYHA III. Это подчёркивает, что сохранённое значение ФВ не исключает выраженных функциональных ограничений. Вместе с тем одной ФВ недостаточно для независимого подтверждения ХСН с сохранённой фракцией выброса: требуется совокупность клинических и объективных диагностических признаков [1]. Наблюдаемую выборку нельзя автоматически считать репрезентативной для всех фенотипов ХСН.

Доля записей о последней госпитализации была выше при NYHA III, чем при NYHA I. Для организации наблюдения такая картина может служить основанием для проверки историй пациентов с выраженными ограничениями и уточнения причин госпитализаций. Однако рассчитанные 59,6% нельзя сопоставлять как равнозначный показатель с частотой повторных госпитализаций в испытаниях: в нашем регистре нет подтверждения причины события, полного перечня повторений и единого начала наблюдения.

Отсутствие рСКФ характеризует качество регистра, а не доказанное отсутствие обследования. Аналогично, отсутствие даты вакцинации не позволяет считать пациента непривитым. Для руководителя поликлиники эти различия принципиальны: улучшение сбора данных и изменение клинической практики — разные управленческие задачи. Их смешение может привести к неверной оценке работы специалистов или необоснованным выводам об эффективности программы.

Международный опыт организации наблюдения

Данные зарубежных исследований показывают, какие компоненты сопровождения можно изучать при совершенствовании ПУЗ. В исследовании DIAL в Аргентине структурированные звонки медицинских сестёр дополняли обычное лечение и включали обучение и контроль

состояния. Комбинированный исход «смерть либо госпитализация по поводу ухудшения ХСН» встречался у 26,3% пациентов вмешательства и у 31,0% группы обычной помощи [8]. Этот результат поддерживает изучение регулярного контакта с пациентом, но не позволяет переносить величину эффекта на другую популяцию.

В немецком исследовании TIM-HF2 дистанционное ведение было связано со снижением доли дней, потерянных из-за незапланированных сердечно-сосудистых госпитализаций и смерти от всех причин, с 6,64 до 4,88% [9]. В то же время исследование Tele-HF в США не выявило преимущества телефонного телемониторинга по сочетанию повторной госпитализации от любой причины или смерти за 180 дней: 52,3 против 51,5%, p = 0,75 [10]. Разнонаправленность результатов указывает на необходимость оценивать конкретную модель помощи, а не считать любой дистанционный контакт эффективным.

В многонациональном исследовании STRONG-HF ранняя оптимизация терапии и интенсивное наблюдение после госпитализации сопровождались меньшей оценочной вероятностью смерти от всех причин или повторной госпитализации по поводу ХСН к 180-му дню: 15,2 против 23,3% [11]. Результат относится к определённой стратегии после острого эпизода и условиям клинического испытания. Для поликлинической программы из него следует необходимость описывать содержание визитов и контроль безопасности, а не воспроизводить интенсивность лечения без индивидуальных показаний.

Таблица 3. Международные исследования организации помощи при ХСН

Исследование и страна	Вмешательство	Исход и результат
DIAL, Аргентина [8]	Структурированное телефонное сопровождение медицинскими сёстрами	Смерть или госпитализация из-за ухудшения ХСН: 26,3% против 31,0%; среднее наблюдение 16 месяцев.
TIM-HF2, Германия [9]	Организованное дистанционное ведение	Доля дней, потерянных из-за сердечно-сосудистой госпитализации или смерти: 4,88% против 6,64%; наблюдение до 393 дней.
Tele-HF, США [10]	Телефонная система мониторинга после госпитализации	Повторная госпитализация от любой причины или смерть за 180 дней: 52,3% против 51,5%; различие незначимо.
STRONG-HF, многонациональное [11]	Оптимизация терапии и частое наблюдение после выписки	Оценочная вероятность повторной госпитализации по ХСН или смерти за 180 дней: 15,2% против 23,3%.

Примечание. В каждой строке сначала приведён результат группы вмешательства, затем обычной помощи. Конечные точки и сроки различаются; таблица не предназначена для ранжирования программ или прямого численного сравнения с регистром 47 пациентов.

Кокрейновский обзор также показывает зависимость результатов от типа сопровождения: индивидуальное ведение, вероятно, снижает повторные госпитализации по ХСН, а для мультидисциплинарных вмешательств определённость результатов различается в зависимости от исхода [5]. В нашей работе зарубежные публикации используются как основание для выбора измеряемых компонентов программы. Они не заменяют собственную контрольную группу и не доказывают эффективность местного наблюдения.

Значение результатов для поликлинической практики

На основании обнаруженных пробелов предлагается выстроить оценку ПУЗ по последовательности «содержание помощи — выполнение запланированных действий — клинические результаты». На первом уровне регистрируется, кто наблюдает пациента и какие вмешательства предусмотрены. На втором — состоялись ли визиты, лабораторный контроль и обучение. На третьем — как изменились симптомы и функциональное состояние, сколько произошло госпитализаций и неотложных обращений. Такая схема позволяет определить, в каком звене возникает проблема, прежде чем судить о программе в целом.

Существующие поля целесообразно дополнить датой включения и статусом участия в ПУЗ, датами каждого измерения и отдельной записью каждого клинического события. Последнюю госпитализацию следует сохранять как часть истории, а не как замену всей истории событий. Для анализа динамики необходимо заранее задать одинаковые интервалы наблюдения и правила работы с неполным сроком, выбытием и отсутствующими данными. Эти предложения вытекают из структуры исследованного регистра и подлежат проверке при последующем внедрении.

План наблюдения должен связывать ответственного врача, медицинскую сестру и пациента. Британская модель NICE акцентирует координацию первичного звена со специализированной командой [3]. Для рассматриваемого регистра применимым организационным шагом было бы документирование ответственного специалиста, даты следующего контакта и выполненного действия. При этом наличие таких полей ещё не подтверждает фактическое взаимодействие: необходима периодическая сверка записей с медицинской документацией.

Самоконтроль требует оценки освоенных навыков. Рекомендации Ассоциации сердечной недостаточности Европейского общества кардиологов охватывают приверженность терапии, наблюдение за симптомами и реакцию на ухудшение [4]. Поэтому одну дату постановки цели можно дополнить краткой записью содержания обучения и проверкой понимания пациентом плана действий. Это позволит отличить формальное заполнение поля от выполненного образовательного вмешательства.

Система мониторинга HEARTS ВОЗ важна здесь как организационный ориентир: единые определения показателей и стандартизированные инструменты сбора облегчают сопоставление результатов [6]. Она не является самостоятельным доказательством эффективности программы лечения ХСН. Для поликлиники предлагается регулярно оценивать долю заполненных ключевых полей и число записей с недопустимыми значениями, а клинические результаты анализировать только после обеспечения сопоставимости данных.

Следующий этап исследования может включать продольное наблюдение с фиксированными сроками до и после включения и, по возможности, сопоставимой группой сравнения. Потребуются сведения о возрасте, сопутствующих заболеваниях, исходной тяжести состояния и причинах назначения терапии. Это позволит учитывать различия состава пациентов. Даже в таком дизайне изменение показателей необходимо интерпретировать с учётом сопутствующих изменений лечения и организации помощи.

Ограничения исследования

Исследование основано на небольшом числе записей одного регистра, отобранных по доступности, и не позволяет оценить репрезентативность для населения или всех пациентов поликлиники. Диагноз, клинические значения и принадлежность записей организации не подтверждались сверкой с первичной документацией. Даты обследований различались.

Неизвестны полнота учёта событий и причины госпитализаций; отсутствуют продольные измерения, дата включения и контрольная группа. Некорректные значения пола и пропуски лабораторных данных ограничивают анализ. Статистическая значимость межгрупповых различий не оценивалась. Повествовательный обзор литературы предполагает избирательность источников. Эти ограничения исключают вывод о причинном влиянии ПУЗ, но не обесценивают описательные результаты и выявленные направления развития регистра.

Заключение

Анализ 47 записей регистра ХСН выявил преобладание NYHA II, среднюю ФВ ЛЖ 59,2 ± 5,5% и описательные различия между функциональными классами. В группе NYHA III отмечались меньшая средняя ФВ ЛЖ и большая доля дат последних госпитализаций в выбранном периоде. Эти характеристики могут использоваться для планирования последующей проверки и наблюдения, но не отражают эффект участия в ПУЗ.

Для перехода от регистрационного учёта к оценке программы необходимы датированные повторные измерения, полный учёт клинических событий и сведения о реально выполненных вмешательствах. Международные исследования обосновывают изучение координации помощи, регулярного контакта и поддержки самоконтроля. Практическая значимость работы заключается в определении конкретных требований к данным, которые позволят в дальнейшем оценивать результаты программы на уровне поликлиники.

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ПРОБЛЕМЫ СОЦИАЛЬНО-ПЕДАГОГИЧЕСКОГО СОПРОВОЖДЕНИЯ СЕМЬИ И РЕБЕНКА

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Аннотация

Перспектива роли семьи и школы более целесообразна, чем подходы, ориентированные исключительно на родителей и воспитание детей. Отношения между семьей и школой обсуждаются в общей учебной структуре.

Системный подход обеспечивает понимание всей семьи, способствуя более всестороннему и эффективному пониманию и вмешательству. Семейная программа, состоящая из нескольких частей, позитивные изменения - оптимизация защитных факторов и снижение риска - могут оказать более длительное воздействие, если семья сосредоточится не только на родителях, но и на семье в целом.

В статье подчеркивается важность социально-педагогического сопровождения социально-уязвимых семей и детей, особенно тех с ограниченными возможностями здоровья. Современным специалистам необходимо быть профессионалами, умеющими находить инновационные формы сотрудничества с такими семьями. Важно разрабатывать методики и инновации для работы с "особыми" детьми и обучать социальных педагогов новым навыкам для эффективного сопровождения.

Ключевые слова: семья, социально- уязвимая семья, образование детей, семейно-школьные отношения, семейное воспитание, роль школы

Problems of socio-pedagogical accompaniment of family and child

Annnotation

The role of family and school perspectives make more sense than A family and school role perspective makes more sense than approaches that focus solely on parents and child rearing. The relationship between home and school is discussed within the overall educational framework.

A systems approach allows us to understand the family as a whole, facilitating more comprehensive and fruitful understanding and intervention. As a multi-component family programme, positive change - optimizing protective factors and minimizing risk - will have a more lasting impact if the focus is on the family rather than just the parents.

The article emphasizes the importance of social and pedagogical support for socially vulnerable families and children, especially those with disabilities. Modern specialists need to be professionals who can find innovative forms of cooperation with such families. It is important to develop methods and innovations for working with “special” children and to train social educators in new skills for effective support.

Key words: family, socially vulnerable family, children’s education, family-school relations, family education, the role of school

Введение

Семья - важнейший институт социализации подрастающего поколения. Современная семья отличается от прошлых лет радикальным изменением эмоциональных и психологических

функций детей, что создает новые проблемы в их образовании, воспитании и общественной жизни. В последние десятилетия отношения между детьми и родителями изменились эмоционально и психологически, поскольку для большего числа людей дети стали одной из основных жизненных ценностей. Но это, как ни странно, не облегчает семейную жизнь, а только значительно усложняет ее.[1]

Тема проблемы социально-педагогического сопровождения является актуальной. С каждым годом возрастает необходимость сопровождения педагогами не только ребенка, но и семьи в целом. В социологии и соц психологии существует отрасль, изучающая семью – социология семьи. Данная отрасль исследует семейные отношения, поведение и характер. В процессе социализации человек занимает определенные позиции и играет свои роли. На протяжении всей жизни человек входит в состав различных групп, которые со временем и потребностями меняются – друзья, школьный класс, трудовой коллектив, спортивные команды, и только такую группу как семья человек не покидает. На взаимоотношения в семье действуют внутренние и внешние факторы. В наше время семьи сталкиваются со множеством проблем. Одной из важнейшей кризисной ситуации социологи и психологи рассматривают смену образа жизни. Немало сельских семей ведут городской образ жизни. Растут запросы людей и требования друг к другу. Имея скромный прожиточный минимум, скромные жилищные условия родители ограничиваются одним ребенком, но при этом пытаются обеспечить его всем необходимым. Если в малообеспеченной семье рождается много детей, то удовлетворить полностью потребности невозможно, начинаются проблемы, меняется психологическое состояние. Ребенок начинает сравнивать себя с окружающими, «чем я хуже всех остальных?». Недаром в школах вводят школьную форму, дети не думают, кто как одет, кто хуже, кто лучше, кто беднее, а кто богаче. Учителя не разделяют детей по возможностям и статусу родителей. В школах проводятся различные методики на выявление и решение возникающих проблем.

Также проблемы появляются у детей, чьи родители на грани или уже находятся в разводе, родители, не исполняющие родительские обязательства. Такие семьи являются неблагополучными и находятся в социально-опасном положении. Данным детям тяжелее адаптироваться в обществе. Человек теряет баланс и целостность семьи.[2]

С целью исключения всех негативных факторов необходима комплексная работа специалиста и воспитанника (ребенок, родитель, семья, педагоги). Только сообща можно выявить проблему и найти оптимальный выход из нее.

Родители играют важную роль в воспитании своих детей, что в свою очередь, немаловажно проанализировать родительские обязанности и последствия. Одна из важных целей родителей — это помочь детям правильно развиваться в безопасной среде. Это задача, требующая нескольких качеств: чувствительности к потребностям ребенка, социального общения, эмоционального выражения и дисциплинарного контроля.

Посредством обучения родителей, матери и отцы учатся лучше понимать отношения, ценности и практики, которые они могут использовать для воспитания своих детей.

Воспитание происходит в среде, которая в основном зависит от трех факторов:

- социальный контекст
- образовательные потребности детей
- возможности родителей.

Сегодня социально-воспитательное сопровождение требуется не только неблагополучным семьям, испытывающим сложности и находящимся в трудной жизненной

[1] Мардахаева, Л.В. Социальная педагогика. Учебник для бакалавров. -7-е издание, перераб.и доп.- М.: Изд-во ЮРАЙТ, 2019.-459с.

2 Лебедева И.А. Психолого-педагогическое сопровождение детей в семье // Психология и образование. – 2019. – №2. – С. 45-53.

ситуации, но и обычным нормальным семьям, проявляющим любовь и уважение к детям, искренне заинтересованным в результативном семейном воспитании ребенка

С первым фактором, который связанный с социальным контекстом, можно провести различие между фактором риском и защитными факторами. Факторы риска повышают вероятность возникновения тип поведения или проблемы, которые могут поставить под угрозу способность ребенка приспосабливаться лично и социально, в свою очередь защитные факторы оказывают положительное влияние на ребенка, поведение, которое мешает ему или ей приобрести потенциально рискованное поведение.

Что касается второго фактора, образовательные потребности детей могут потребовать особого внимания, если в игру вступает ряд различных обуславливающих факторов (т. е. при определенных возраста, если ребенок отстает в учебе или в случае нарушений поведения). Эти обуславливающие факторы порождают различные образовательные потребности.

Что касается третьего фактора, родительских способностей, это обуславливающие факторы, влияющие на методы воспитания, включают способность к наблюдению и размышлению, будущие ожидания в отношении своих детей, навыки решения конфликтов и активное участие в качестве родителя.

Принято различать два типа родительских задач: основные задачи и воспитательные. Можно выделить 5 основных принципов воспитания и обязанностей родителей, которые способствуют позитивному воспитанию детей:

1) Создание безопасной и увлекательной среду, в которой дети могут проводить свои исследования, познавать мир, экспериментировать и развивать свои навыки и таланты.

2) Создание позитивной и доступной среды обучения.

3) Применять строгие формы дисциплинарного воздействия, необходимо быть последовательными и действовать быстро, когда ребенок ведет себя неподобающим образом.

4) Иметь реалистичные ожидания в отношении своих детей и вести себя как ответственный родитель, что означает качество отношений, установление границ, решение проблем, формирование позитивной личности, контроль.

5) Заботьтесь о себе как о родителе и не забывать удовлетворять свои личные потребности.

В настоящее время написано множество работ и проведено достаточно исследований по проблеме сопровождения и поддержки семьи и ребенка, в частности, Е. Б. Хомутовой (2019), Е.И. Гришаева (2021), Иванова Н.Н (2019), Маценко Л.М (2019) и др. Многие зарубежные ученые также считают семью главным аспектом полноценного развития ребенка, в том числе с ОВЗ, что отражено в трудах Ф. Л. Ратнера, Moroni, S., Dumont, H., Trautwein, U., Niggli, A., and Baeriswyl, F, Nelson, J. A. и др. Анализ педагогической теории и практики в исследовании Л. Э. Абдуллиной, посвященном изучению вопросов социально-педагогического сопровождения семей, воспитывающих ребенка с ОВЗ, показывает, что большинство родителей не могут самостоятельно заниматься самообразованием, что связано с утратой семейных традиций, ростом количества неполных семей, возрастанием тревоги родителей, материальной нестабильностью, отсутствием мотивации для осуществления самообразования и саморазвития

Изучив исследования зарубежных ученых (See, B. H., and Gorard, S. (2015-2019). Ю. А. Саммерс, С. Тэйлор Браун и др.)[3], можно сделать вывод, что многие семьи, прошедшие специальное обучение или получившие необходимую консультацию и поддержку специалистов, могут самостоятельно осуществлять образовательный и воспитательный процессы в домашних условиях. За рубежом создано множество центров и учреждений,

[3] Olkhina E. A., Shitikova A. A. Educational needs of the family of a child with disabilities of basic, secondary and higher education. Problemy sovremennogo pedagogicheskogo obrazovaniya [Problems of Modern Pedagogical Education], 2019, no. 63-1, pp. 221-225 (in Russian).

специализирующихся на организации взаимодействия родителей, воспитывающих детей с ограниченными возможностями здоровья, с целью обмена опытом.

Одним из первых, кто обратил внимание на важность семейного воспитания, был известный психолог Эрик Эриксон. Он отмечал:

“Самая важная дорога, по которой должно пройти дитя, — это путь внутрь себя”.

Другой выдающийся педагог и психолог, Жан Пиаже, акцентировал внимание на взаимосвязи между семьей и развитием ребенка:

“Деятельность ребенка есть результат восприятия и осмысления мира в процессе активного взаимодействия с ним”.

Сложность социально-педагогического сопровождения подчеркнула исследовательница Мария Монтессори: “Ребенок сам по себе не может выяснить взаимосвязи между вещами без помощи взрослого”.

Социально-педагогическое сопровождение представляет собой способ решения актуальных проблем во взаимоотношениях между участниками социально-педагогического взаимодействия, который направлен на сохранение их свободы, стимулирование самостоятельного проявления про-социальной активности и взятие ответственности за принятые решения. Его основной отличительной чертой является необходимость поддержания в случае возникновения у участника проблемной ситуации, в решении которой он готов работать совместно с социальным педагогом (или психологом).

Сопровождение — это комплексная методика, которая включает в себя разнообразные виды социально-педагогической работы, такие как диагностика, консультирование, информирование, помощь и поддержка, коррекция, профилактика, организация социально-ценных мероприятий и другие. Все это осуществляется с учетом свободы выбора и осознания семьей принятой ответственности за принятые решения.

Одной из главных целей социальной поддержки является осуществление своих профессиональных полномочий в сфере социальных услуг. Несмотря на некоторые различия, все подходы предполагают следующее взаимодействие:

1) между социальным педагогом, ребенком и его родителями (приемными родителями): первичный

2) общение (эмоциональный и интеллектуальный контакт); расследование и анализ

3) проблемная ситуация; определение общих целей и задач деятельности;

4) изменение отношений человека с социальным окружением и (или) с самим собой; осознание прогресса и общих результатов работы. Эти подходы

5) варианты оказываемой помощи.

Проблемы социальной адаптации нуждаются в квалифицированной психолого-педагогической помощи, способствующей вовлечению родителей в решение проблем адаптации своих детей. Этот момент чрезвычайно важно при выборе методов работы.

Помощь семье может оказывать социальный педагог, обладающий педагогическими и психологическими знаниями о семье, развитии ребенка в дошкольном периоде; знает методы работы с родителями и умеет применять теоретические знания в решении проблем конкретной семьи. Таким специалистом может быть социальный психолог или педагог, деятельность которого ориентирована на семейные исследования,при этом указанное лицо является одновременно исследователем/исследователем и практиком оказание реальной помощи конкретной семье

При решении вопросов социально-педагогической поддержки семьи и детей возможны различные сценарии конфликта интересов, которые усложняют процесс взаимодействия и приводят к успешному завершению программ.

К основным и наиболее распространенным типам конфликтов интересов можно отнести:

Конфликт интересов между семьей и ребенком: данный конфликт возникает из-за различия в интересах детей и их родителей. Родителям может быть сложно найти общий язык и решить проблемы таким образом, чтобы это соответствовало потребностям и желаниям ребенка.

Конфликт, основанный на профессиональных и личных интересах: специалисты, такие как социальные работники и педагоги, могут столкнуться с ситуациями, где необходимо принять решение, которое противоречит их личным принципам или интересам. Это может затруднить объективное и результативное взаимодействие с семьей и ребенком.

Конфликт между основными требованиями общества и целями семьи: общество и государственные структуры зачастую ожидают от семей и детей выполнения определенных социальных функций. Однако эти ожидания могут не совпадать с задачами и проблемами, стоящими перед семьей, что приводит к конфликту интересов в процессе взаимодействия.

Вывод: Резюмируя вышеперечисленное, можно утверждать, что одним из основных направлений работы является разработка и реализация программ, направленных на снижение преступности и поддержку детей и их семей.

Чтобы избежать конфликтов и разногласий между семьей, обществом и школой, необходимо создать условия для активного участия всех сторон в обсуждении и решении возникающих проблем. Коррекция семейных отношений и изменение отношения членов семьи к текущим проблемам очень важны для формирования ощущения благополучия и здоровья семьи, а также для повышения общего уровня удовлетворенности жизнью.

При проведении совместных со специалистами исследований уровня семейного благополучия и причин его формирования можно получить актуальную информацию о ситуации в семье и принимать своевременные и обоснованные решения о предоставлении необходимой помощи и поддержки.

Вовлечение совместных усилий родителей и общеобразовательных учебных учреждений (педагогов, социальных работников, психологов) дают более эффективные результаты, нежели если социальным воспитанием занимается родители или опекуны.

Повышение уровня социальной поддержки, вовлеченной родителей в жизнь детей и воспитания значительно уменьшает пагубное влияние общества на детей, значительно уменьшается поведение с риском для здоровья детей.

Необходимо постоянно разрабатывать и совершенствовать новые программы социально-педагогической поддержки семейного воспитания, а также работать над улучшением моделей взаимодействия образовательных учреждений и семей.

И наконец, наиболее важной задачей современных образовательных учреждений, их руководства и преподавательского состава является обеспечение взаимодействия учителей, родителей, школы (образовательного учреждения), а также адресное оказание помощи семьям в полной реализации образовательной миссии для каждого нуждающегося ребенка.

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“Международный научный журнал АКАДЕМИК”

ISSN 2958-5104

№ 2 (314), 2026 г.
ОКТЯБРЬ, 2026 г.

В авторской редакции
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Международный научный журнал "Академик". Юридический адрес:
010000, Республика Казахстан, г.Астана

Свидетельство о регистрации в СМИ: KZ12VPY00034539 от 14 апреля 2021 г. Журнал зарегистрирован в комитете информации, министерства информации и общественного развития Республики Казахстан, регистрационный номер: KZ12VPY00034539
Web-сайт: www.journal-academic.com
E-mail:info@journal-academic.com

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