Original research article / Originalus mokslinis straipsnis
Vol. 2 No. 3 (2026): Kovas

Digitalization in the Agricultural Sector: Opportunities, Threats, and New Economic Behavior Models

[1] Teymur Abbasov

Accepted: 02.20.2026
Published: 03.25.2026
https://doi.org/10.69760/portuni.26030008

Abstract. The scientific article discusses the steps taken to develop activities in the agricultural sector, discusses the important direction of the digital economy, the application of digital technologies, and the expansion of digital payments. Technological solutions that can be considered perfect today are proposed to prevent attempts to monopolize the digital market by owning information. The article notes the advantages of the formation and development of the digital economy in public life and emphasizes that, along with their realization, they also entail quite serious threats. Among the factors threatening the stability of the digital economy, the unequal distribution of information resources deserves special attention.

The article lists the problems of digitalization in the agricultural sector, states that it is impossible to eliminate the listed and other problems in isolation, in other words, they need a comprehensive approach. Finally, it is emphasized that in order for digitalization in the agricultural sector to bring real results in practice, this process should be aimed at creating new models of economic behavior of market participants.

Keywords: *agricultural sector, agriculture, digital economy, digital technologies, sustainability, threat, information, efficiency.*

Introduction.

The rapid expansion of digital technologies has fundamentally transformed the structure and functioning of national economies. The penetration of the digital sector into traditional industries has accelerated the transition toward knowledge-based and data-driven economic systems. Within this context, agriculture—historically characterized by conservative production models and strong dependence on natural factors—is increasingly becoming an integral part of the digital transformation process.

Digitalization in the agricultural sector represents more than the mere introduction of advanced technologies; it signifies a systemic transformation of production, management, marketing, and decision-making mechanisms. The integration of digital tools such as big data analytics, artificial intelligence, satellite monitoring, blockchain systems, and digital platforms creates new opportunities for improving productivity, optimizing resource use, enhancing transparency, and strengthening competitiveness in agri-food markets.

[1] Abbasov, T. Doctor of Economics, Professor, Nakhchivan State University, Azerbaijan. Email: teymurabbasov56@mail.ru. ORCID: https://orcid.org/0009-0005-3723-338X

International organizations, including the Food and Agriculture Organization, emphasize that the ongoing transformation in agriculture constitutes a digital revolution. This transformation is expected to play a crucial role in ensuring food security, promoting sustainable rural development, and adapting agricultural systems to climate change. At the same time, the spread of digital technologies intensifies competition in global information markets and raises new regulatory, institutional, and socio-economic challenges.

Despite the growing relevance of digital agriculture, the factors influencing the competitiveness of agricultural products in digital markets remain insufficiently studied. In particular, the relationship between digital infrastructure, financial inclusion, digital payment systems, and agricultural productivity requires deeper theoretical and empirical investigation. Moreover, the unequal distribution of information resources and technological capabilities creates risks of digital inequality, especially for small and medium-sized farms.

In this regard, the experience of countries undergoing comprehensive economic reforms, including the Republic of Azerbaijan, provides an important case for analyzing the institutional and policy frameworks supporting digital transformation in agriculture. The development of digital payment infrastructure, support for digital entrepreneurship, and implementation of state programs aimed at expanding digital technologies demonstrate the strategic importance of digitalization for national agricultural development.

The purpose of this article is to analyze the formation and development of the digital economy in the agricultural sector, to identify its advantages and associated threats, and to substantiate the need for creating new models of economic behavior for market participants. The study also seeks to determine the key elements of digital platforms in agro-industrial production and to justify the importance of a comprehensive approach to overcoming the barriers to digitalization (Adıgözəlova & Məmmədova, 2020).

Thus, the digital transformation of agriculture should be viewed not only as a technological process but as a multidimensional economic and institutional phenomenon that reshapes market structures, competitive relations, and decision-making mechanisms in the agri-food sector.

Methodology

The penetration of the digital sector into all sectors of the national economy is increasing. The issue of accelerating the formation of the appropriate regulatory and legal framework is on the agenda. This is especially due to the need to expand the area of application of digital technologies in the agricultural sector. The factors affecting the competitiveness of agricultural products in digital markets have not been sufficiently studied. Initial steps are being taken to investigate the possibilities of applying digital technologies to increase the efficiency of the agricultural sector.

Deepening and expanding research in this direction is advisable both from a scientific-theoretical and practical point of view.

The priority directions for the formation of digital payment infrastructure have been identified, and the need to increase financial inclusion in the regions has been specifically noted. “Important work

has been done in Azerbaijan on the formation and development of digital payment infrastructure. However, in order to respond to new challenges arising at the current stage of building a digital society, measures in this direction should be continued. The main priorities for the formation of digital payment infrastructure in Azerbaijan are: development of digital entrepreneurship, development of e-commerce, improvement of the legal framework for payment services, application of new digital payment technologies, development of digital banking, wide application of smart payment instruments, improvement of the efficiency and security of existing electronic payment services, increasing financial inclusion in regions and remote areas, and stimulation of digital payments" (Source 1).

The steps taken to develop digital entrepreneurship in Azerbaijan, including digital agricultural activities, include the creation of a state-supported High-Tech Park, provision of legal assistance and consulting services, and provision of grants and loans to entrepreneurs through the State Fund for the Development of Information Technologies.

An important direction of the application of digital technologies in supporting dynamic development in the agricultural sector is the expansion of digital payments. The following measures are envisaged to be taken to promote the development of the digital economy within the framework of the "State Program on the Expansion of Digital Payments in the Republic of Azerbaijan in 2018–2020", approved by the Decree of the President of the Republic of Azerbaijan dated September 26, 2018 on the development of digital entrepreneurship in the country (Source 3, priority 3.1): preparation and submission of draft legal acts in order to improve the legal framework, preparation and submission of proposals in order to intensify the provision of non-financial support to startup projects, promotion of strengthening cooperation between business and science, startups and large companies. It should also be noted that measures in the relevant directions, as well as in the "Strategic Roadmap for the Production of Consumer Goods at the Level of Small and Medium-Sized Entrepreneurship in the Republic of Azerbaijan" (strategic goal 4, measure 4.1.3).

The competitive struggle for a share in the information market is spatial in nature and requires clarification of the attitude to the concept of information space. It is difficult to disagree with the idea that the competitive struggle in the digital environment is carried out to create a special information space that does not take into account borders. "Assuming that the information space is a special environment, we believe that the category of competition for the information space should be considered as a struggle for a share in the information market within the framework of spatial theory. Thus, spatial competition in the information market is a struggle to create a special information space that does not take into account borders" (Zobova et al., 2018).

In the conditions of information competition, any information should be viewed from an economic aspect. Thus: information is used in almost all cases to maintain and strengthen its position in traditional markets; as the technological capabilities of the country (transnational company) increase, it gains an advantage in operating in full information conditions compared to others, which increases information inequality; sooner or later, any economic relationship becomes transparent through technologies that penetrate everywhere.

New companies are able to respond more quickly to the demands of the digital market. They only mobilize all resources to create a structure that meets the requirements of the day. In this regard, the situation of large companies is different. It is difficult to flexibly adapt the material, technical and human resources potential of these companies, which have been operating for many years, to new challenges. Of course, the factor of supporting the creativity created by them and the wide opportunities they create should not be overlooked. It is precisely thanks to radical and creative steps that giant companies operating in the field of information and communication technologies implement an innovative modernization line, achieve success to one degree or another in reducing their losses and capturing new market segments. The profit obtained in the digital market is often two-sided. This may not be limited to intellectual benefit alone. Let us say, by providing reciprocal benefits, it is possible to find a large number of customers in a short time.

To prevent attempts to monopolize the digital market by owning information, technological solutions that can be considered perfect today are offered. There is a widespread optimistic opinion that in the conditions of digital price platforms, electronic stores, and blockchain systems, no one can monopolize the information market.

The specific features of the agricultural sector should be taken into account when applying digital technologies here. First of all, this is the strong dependence of production and service activities on natural and climatic factors. This is an important factor that determines the high riskiness of the agricultural sector. Another feature is that the information accompanying the process of intensification of activities in the field depends significantly on regional characteristics, territorial organization of production, and the nature and level of specialization. As for agricultural innovations, it should be taken into account that more attention is paid here to process innovations. Meeting the requirements of sustainable development of innovative activities implies ecological expertise of agricultural innovations, which requires processing a large amount of information.

The process of digitalization of activities in the agricultural sector can justify itself more as a logical conclusion of work carried out in several stages. It is not possible to attribute automation, electronization and informatization to these stages, but only certain can be accepted with reservations. "Before the modern era of digitalization of agro-industry, there were successive stages of automation, electronization, and informatization" (Gulaliyev et al., 2025).

The application of digital technologies is considered a logical consequence of the processes of formation of digital platforms, which are tools for the digital transformation of traditional sectors and markets. In the agricultural sector, a digital platform is a system of technologies that realizes a productive response to the challenges of digitalization and determines the characteristics of digitalization. This system supports direct relations between producers and consumers by acting as an open infrastructure element (specialized enterprise), high-tech business model, etc. Chronologically, digital (electronic) platforms replace trading platforms. The most important changes in this replacement process occur in the rules and the environment in which they are implemented. The degree to which digital platforms facilitate exchange in the agricultural sector, including the replacement of intermediaries, is considered an important factor increasing its attractiveness. The characteristics of the sector do not allow for the complete replacement of intermediaries by digital

platforms. In our opinion, the attitude observed on this issue in the post-Soviet space can be considered pessimistic in some cases. "Of course, a digital platform (DP) cannot completely eliminate intermediaries and transfer their market share to producers and direct consumers. DP can cover 10% of agricultural supply, the market of agricultural raw materials and wholesale trade of food products, and only 5% of retail trade of food products. Moreover, not all of the additional profit earned by producers and consumers will go to investment" (Askarova, 2025).

Digital platforms, which are considered the foundation of digitalization in the agricultural sector, should have the following basic capabilities, taking into account the requirements of decentralized activity: "the presence of a protected open interface for mutual information activity with the external environment instead of an internal device; the provision of a virtual platform for connecting market participants; the ability to store, distribute and process large volumes of data; the provision of a distributed service to customers over a large area; the cloud nature of services, the ability to pay for the service provided according to the real volume of demand upon initial application, etc." (Astakhova et al., 2018).

The trend of expanding natural factors that limit the scale and efficiency of agricultural activities with technogenic opportunities is the reality of recent decades. In this regard, the direction of solving the problem of limited land areas through technologies is the main line. It is no coincidence that countries that actively apply digital agrotechnologies in conditions of limited natural resource capabilities achieve significant achievements. In this regard, the experience of Israel is noteworthy. "Israel's agricultural sector is one of the most efficient in the world (satisfaction of the population's food needs - 95%, area suitable for agricultural production - less than 20%). Low natural potential is successfully compensated by the efficient application of technologies. Thus, smart transmitters allow for more efficient use of land resources. They collect information about the land area, conduct its audit, and suggest measures to adapt agricultural crops to the soil type, which allows the farmer to reduce costs and increase productivity" (Afanasenko & Borisova, 2019).

The scale of application of digital technologies in the digital economy, including in the agricultural sector, can be expanded, especially in the initial approach, thanks to public-private partnerships. Of course, there is a lot of work to be done in this direction, and there are not so many examples. The initial step should be to implement the principles of an open society and realize the advantages of the information society. The availability of all agro-industrial innovations for everyone can create a favorable environment for the application of digital technologies. Of course, in this case, the integration of information resources and information systems is required. Even with the most active participation of the state, this integration process will face serious difficulties. These difficulties will be primarily related to ensuring information security.

Digital technologies in agriculture are able to increase the efficiency of the sector by realizing opportunities in the following areas: creating a synergistic effect by complementing each other with digital technologies at all stages of production activities; preventing the excessive use of mineral fertilizers, fuel, agrochemicals, etc. and gradually ensuring their optimal use; expanding the area of use of organic fertilizers, biological pest control methods, renewable energy sources as elements of sustainable development; protecting and restoring the beneficial properties of soil and groundwater,

etc.; assisting in adaptation to climate change; carrying out work in a timely and optimal manner; realizing the possibilities of programmed farming.

The formation and development of the digital economy, along with realizing advantages and other benefits in public life, also entails quite serious threats. These factors threaten the information society, including its sustainable development. Among the factors threatening the sustainability of the digital economy, the unequal distribution of information resources deserves special attention. This inequality can be caused, first of all, by differences in the purchasing power of information resource users and technical capabilities. In this regard, we consider the following position acceptable: "Information inequality depends on the economic value of information itself and the cost of its transmission. Therefore, the availability of information is determined by the availability of opportunities, including the level of purchasing power. In the technological plan, the availability of information can be limited by the absence of the necessary system for receiving and transmitting information, the technical capabilities of telecommunication systems that do not allow delivering information to the entire territory of the country" (Zaitseva, 2017).

State regulation should implement the following priorities to neutralize the threats expected from the activities of the digital agrarian economy: improving the risk assessment system, increasing confidence in its security through the development of the appropriate infrastructure, eliminating artificial barriers between digital areas. The establishment of a digital security level control system is also an issue worthy of attention in terms of ensuring the sustainability of the digital economy. The following approach is interesting as an attempt to look at this issue from a broader perspective: "In the new conditions, we consider it appropriate to apply the indicator of digital security or the humanity of the economic environment. This indicator should take into account the information flows that a person encounters both at work and in life. It is obvious that nature itself imposes restrictions on the use of the digital factor of economic activity. The indicator in question should allow us to check the intensity and degree of regulation of the information flow, the processing of which is necessary for a person to make adequate decisions."

The development and implementation of relevant state programs play an important role in ensuring the socio-economic efficiency of the digital economy and eliminating the above-mentioned threats. State programs on the digital economy have already been developed in a number of post-Soviet countries. For example, relevant state programs have already been adopted and implemented in the Russian Federation and the Republic of Kazakhstan.

The digital environment formed by information technologies, which covers all areas of human life and activity, expands the possibilities of monitoring the transition of quantitative relations to qualitative relations in economic relations. The rapid pace, which creates time constraints in terms of comprehensively assessing the social and even economic feasibility of technological development, encounters serious limitations caused by the specificity of the agricultural sector, especially the factor of conservatism. In other words, there is a significant difference between the speed of development of the digital environment and the pace of agricultural production activity. However, the acceleration of digitalization processes in agriculture has reached such a level that the methodological documents

of the Food and Agriculture Organization of the United Nations call it the digital revolution (Source 11, p. 1).

Of course, the formation and development rates of the digital environment in the agrarian economy will differ sharply in different countries and regions. These differences significantly depend on the level of economic development, as well as on such derivative factors as the level and structure of employment in rural areas, the level of computer literacy of the population, ecological and economic feasibility, the conditions for the realization of technological opportunities, the possibilities of digitalization of agribusiness, the degree of openness to innovation, the priorities of state policy in relation to digitalization processes, etc. It is these factors that form the characteristics of the environment in which digital transformations occur.

The digitalization environment in relation to the agricultural sector and agro-industrial production is no less dependent on the chronology of its formation. After all, "before the modern era of digitalization of the agro-industrial complex, there were stages of automation, electronization and informatization of that complex, which alternated" (Gulaliyev et al., 2025). However, as can be seen from the experience of the post-Soviet countries, the results achieved in the listed stages were in many cases not at the desired level.

It is necessary to agree with the researchers who note that another reason that slows down the use of technological achievements of digitalization in the agricultural sector is not the creation of management models suitable for new information technologies, but the automation of existing, sometimes imperfect management processes that do not meet the requirements of reality.

"Digitalization, however, is primarily aimed at creating new models of economic behavior of market participants. Digitalization, like most previous systems from AIS (automated management systems) to GIS (geoinformation systems), serves the interests of market participants, and not the interests of controlling state institutions. It is precisely this situation that gives hope that the results of the digital economy will be successful" (Gulaliyev et al., 2025).

The problems of digitalization in the agricultural sector, of course, do not end with the above. These problems can also include the following:

- the lack of relevant official information on factors and territories of the country, the quality of the network and the level of information security, as well as the availability of electronic government services by territory;
- direct dependence on the level of development of countries, the size of companies. The small size of farms seriously limits the availability and accessibility of digital technologies in some cases;
- another problem is the lack of awareness of potential users about the new opportunities created by digital technologies in the agricultural sector. In our opinion, it is appropriate to agree with the following position on considering this problem together with the problem of lack of funds that small businesses face in the post-Soviet space for the acquisition of IT products and services: "One of the problems of the development of digital technologies in

agricultural sectors is the lack of awareness of users about digital technologies, the lack of funds to acquire IT products and services, as well as the lack of state projects supporting small businesses" (Esgerova, 2026).

The listed and other problems cannot be solved in isolation, in other words, they require a comprehensive approach. In this regard, it is impossible to present a generalized ready-made approach. In other words, the universality of technological solutions does not reduce the individuality of the economic requirements of their application. At the same time, there are general tasks that need to be done to ensure digitalization, regardless of the development environment and level of the national agricultural sector.

The characteristics of the digitalization environment in the agricultural sector also depend on the possibilities of realizing the scale effect. This dependence takes on an almost functional nature between the size of the farm and the possibilities of applying digital technologies. "The larger the enterprise, the easier it is to apply digital technologies. Large farms have an advantage in this respect compared to small farms. Digital innovations and technologies that open up new possibilities in many cases cannot manifest themselves on the scale characteristic of small farms."

The strategic importance of the agri-food sector has increased the attention of the state to digitalization, along with other innovations, in the post-Soviet countries. The real results of this attention depend, first of all, on the volume and structure of state financial support, and the efficiency of its use. The most recent agricultural history of developed countries, which have increased their competitiveness by promoting agricultural innovations, gives reason to say that the number of economic operations carried out on the basis of approximate calculations has irreversibly decreased.

As the main elements of digitalization in the agricultural sector:

- digital base - data for decision-making support systems. This base combines geographic, botanical, meteorological, epidemiological, etc. data;
- analytical platforms - analytical platforms and big data for all areas of agro-industrial integration (forecasting of climate risks, productivity, etc.);
- digitalization of production - "smart" equipment, robots, satellites, drones, irrigation systems, greenhouses;
- digitalization of sales - tracking the movement of products from the field to the kitchen based on blockchain;
- as well as electronic exchanges are separately noted.

The determinism of the rapidly forming digital environment, including the algorithm of transformations that provides for the justification and adoption of digital decisions from digital chaos, is presented as a sequence of the following main stages:

1. Digital base (mapping, digitization, satellite data).
2. Development of a toolkit (geoportal, mobile applications, etc.).

3. Decision support systems (analytics and Big Data).
4. Automation of production (application of robotics and artificial intelligence elements).
5. Training of "digital agricultural specialists".
6. Preparation, adoption and implementation of digital decisions.

Now let us consider the results expected from an empirical point of view from a digital decision-making platform for agro-industrial production. The following are presented in the relevant sources as such results: "systematization and optimization of decision-making in management; optimization of state investments in the sector; creation of platforms for the development of small and medium-sized businesses; improvement of conditions for attracting foreign investments" (Source 5).

The digital platform of agro-industrial production should serve the goals of increasing the efficiency of the interaction of technological and innovative business models of production, processing and other enterprises. In this regard, in the extensive article dedicated to the "Concept of a digital platform in the agro-industrial complex" in the Russian Federation, "the tasks and structure of digital platforms, including subplatforms suitable for agro-food markets, and module-add-ons for solving various practical problems are determined. The main subplatforms are explained in detail. The sequence of development of digital platforms is proposed" (Gulaliyev et al., 2025).

Considering digital platforms as a group of technologies that determine the possibilities of digital transformations in the implementation of the digitalization strategy in the agricultural field and the agro-food sector and form a system in the current period, in our opinion, is a productive approach. In this case, although the approaches of the source cited above on subplatforms are of significant scientific and theoretical importance, their unambiguous acceptance not only for other countries, but even for Russia seems quite problematic. The point is that digitalization, as already mentioned, is intended to serve the interests of market participants, the locomotive of economic activity, and not the supervisory authorities, the requirements of which are already known in advance.

At the current stage of comprehensive economic, social, institutional reforms being implemented in the Republic of Azerbaijan, this functional feature of digitalization is of relevance. The fact that the head of state unequivocally gives priority to innovative sustainable development criteria and implements continuous and systematic measures to create a favorable economic and institutional environment to support advanced technologies gives full grounds for optimism that real benefits will be obtained from digitalization.

In order for digitalization in the agricultural sector to bring real results in practice, this process should be aimed at creating new models of economic behavior of market participants. For this purpose, first of all, the database on digital technologies should be completed with the necessary detail (territory, population groups), sustainable business models should be created that allow small farmers to be involved in the digital environment, and the algorithm of transformations that involve the justification and adoption of digital decisions should be able to be flexibly adjusted in accordance with the requirements of reality.

Digitalization in existing management models may not yield the expected results. The full realization of the potential of digitalization in the field is possible only with the cooperation of all participants in the production-sales chain of the agri-food sector. Therefore, all of them should be interested in the formation and development of digital platforms.

Discussion

The analysis shows that digitalization in the agricultural sector is not merely a technological upgrade, but a structural transformation of economic relations. The application of digital technologies creates significant advantages in increasing production efficiency, ensuring rational use of resources, reducing risks, and improving market transparency. In particular, digital platforms contribute to establishing direct links between producers and consumers, reducing intermediary costs, and strengthening competition in agricultural markets.

At the same time, the formation of the digital economy generates serious challenges, including information inequality, cybersecurity risks, technological dependence, and potential monopolization of digital markets. The unequal distribution of information resources significantly limits the integration of small and medium-sized farms into the digital environment, thereby increasing the risk of socio-economic differentiation within the agricultural sector.

The implementation of digitalization in agriculture must take into account sector-specific characteristics such as strong dependence on natural and climatic factors, regional differences, limited land resources, and the conservative nature of agricultural production. In this regard, the Food and Agriculture Organization characterizes ongoing changes in agriculture as a "digital revolution," highlighting the need for updated methodological and institutional approaches.

Empirical observations indicate that digital technologies are more effectively adopted by large agricultural enterprises due to the scale effect, which allows them to offset high investment costs. Therefore, state support mechanisms—subsidies, concessional financing, and public-private partnerships—are particularly important for involving small farmers in digital transformation processes. In this context, the measures implemented in the Republic of Azerbaijan to expand digital payments and promote digital entrepreneurship form an essential institutional foundation for the digitalization of the agricultural sector.

The discussion confirms that digitalization limited to the automation of existing management models does not lead to the desired outcomes. The core objective of digital transformation should be the creation of new models of economic behavior, the adoption of data-driven decision-making based on big data analytics, and the strengthening of coordination among all participants in the agri-food value chain.

Conclusion

The results of the study demonstrate that digitalization in the agricultural sector has strategic importance for improving economic efficiency, ensuring sustainable development, and enhancing the competitiveness of agricultural markets. Digital platforms, big data, artificial intelligence, and

blockchain technologies enable qualitative changes across all stages of agricultural production and distribution.

At the same time, digital transformation is accompanied by challenges such as information inequality, cybersecurity threats, and institutional adaptation problems. Addressing these challenges requires a comprehensive approach, a robust regulatory framework, developed digital infrastructure, and systematic investment in human capital.

For digitalization in agriculture to deliver tangible practical results, the following priorities should be ensured:

- development of detailed and territorially differentiated digital databases for agriculture;
- integration of small and medium-sized farms into digital platforms through sustainable business models;
- implementation of flexible and adaptive digital decision-making algorithms;
- strengthening coordination between the state, business sector, and scientific institutions.

Thus, digitalization in agriculture should be viewed not only as a technological process but as a systemic transformation aimed at reshaping the economic behavior of market participants. Its successful implementation will be one of the key factors ensuring the long-term sustainability of the agricultural sector and the overall competitiveness of the national economy.

References

President of the Republic of Azerbaijan. (2018, September 26). *State program on the expansion of digital payments in the Republic of Azerbaijan in 2018–2020*.

President of the Republic of Azerbaijan. (2016, December 6). *Strategic roadmap for the production of consumer goods at the level of small and medium-sized entrepreneurship in the Republic of Azerbaijan*.

Afanasenko, I. D., & Borisova, V. V. (2019). *Digital logistics*. Peter.

Astakhova, T. N., Kolbanev, M. O., & Shamin, A. A. (2018). Decentralized digital platform for agriculture. *Bulletin of the National Institute of Industrial Economics*, (6), 5–17.

Espolov, T. I. (n.d.). Digitalization is a key factor in the development of the agricultural industry. Retrieved from http://www.eurasiancommission.org

Zaitseva, E. V. (2017). Opasnosti tsifrovoy ekonomiki: Faktory minimizatsii osnov chelovecheskogo razvitiya. In *Aktual'nye voprosy ekonomicheskikh nauk i sovremennogo menedzhmenta* (pp. 41–46). SibAK.

Zobova, L. L., Shcherbakova, L. N., & Evdokimova, E. K. (2018). Digital spatial competition in the global information space. *Fundamental Research*, (5), 64–68.

Esgerova, M. (2026). The role of infrastructure innovations in regional development: Evidence from the Nakhchivan Autonomous Republic. *Acta Globalis Humanitatis et Linguarum*, 3(1), 113–124.

Gulaliyev, M., Alesgerova, A., Askerova, M., Melikova, L., & Novruzova, A. (2025). How do monetary and fiscal determinants affect inflation? Evidence from panel data analysis.

Askarova, M. (2025). Innovative educational infrastructure and development of science in the Autonomous Republic of Nakhchivan. *Journal of Economics*, 2(1/4), 9.

Adıgözəlova, H. Ə., & Məmmədova, M. R. (2020). Naxçıvan Muxtar Respublikasının iqtisadiyyatının innovasiyalı inkişaf infrastrukturunun perspektivləri. In *Российская наука в современном мире* (pp. 110–113).

Trendov, N. M., Varas, S., & Zeng, M. (2019). *Digital technologies at the service of rural economy and rural districts*. FAO.