



Innovative Development of Kazakhstan as an Experience for the Economic Development of Russia

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Abstract

The opportunities for the growth of the Kazakh economy are currently laid in the area of digital technologies. The economy of Kazakhstan will not be able to reach a high stage of recovery and an adequate level of national competitiveness if the mechanism of its innovation activity is not fully involved. In 2017, Kazakhstan adopted the state program “Digital Kazakhstan,” the implementation of which is carried out in 2018–2022 in 5 directions. One of the directions concerns the digitalization of economic sectors, which will transform the traditional sectors of the economy of the Republic of Kazakhstan, achieve an increase in labor productivity, and increase the capitalization of enterprises. This experience is vital for the development of the Russian economy.

Keywords

Transnational corporations · International business · Innovation · Efficiency of companies · Scientific and technological progress · Digital platform

JEL Codes

E24 · F22 · J24 · P51

1 Introduction

Informatization and automation are the fundamental basis for the transition of the Kazakh economy to the digital format. In 2017, Kazakhstan adopted the state program “Digital Kazakhstan,” the implementation of which is carried out in the period 2018–2022 in 5 areas (President of the Republic of

Kazakhstan, 2018). One of the directions concerns the digitalization of economic sectors, which would make it possible to transform the traditional sectors of the economy of the Republic of Kazakhstan, achieve an increase in labor productivity, and increase the capitalization of enterprises. Growth opportunities for the Kazakh economy are currently embedded in the area of digital technologies. The economy of Kazakhstan will be able to reach a high stage of recovery and an appropriate level of competitiveness of the state only as a result of the activation of the mechanism of its innovative activity in all sectors of the economy. The study of the digital economy is carried out by such foreign scientists as Bukht and Hicks (2018), Brenner et al. (2019), Bauer et al. (2017), Klimovets (2021b), and Panshin (2019). A certain contribution to the study of the digital economy was made by Russian economists, including Veduta (Pritvorova et al., 2020), Avdokushin (2018), and others. Among the Kazakh economists dealing with the problems of studying the digital economy, it is necessary to mention Ageev and Smirnova (2018), Avdokushin (2018), as well as Gawer and Cusumano (2014). Most economists-researchers predict the sustainable formation of network structures and their impact on the stabilization of the economy in the context of digitalization (Harrison et al., 2018; Klimovets, 2021a; Ovchinnikova et al., 2020). The features of the formation of digital platforms and the organizational basis for managing them must form the basis for the development of digital technologies and be studied in various industries and sectors of the economy, especially in relation to industrial enterprises (Chandra & Wilkinson, 2017; Klimovets, 2016; Prokhorov & Konik, 2020). In Kazakhstan, research on the analysis and evaluation of digital technologies in the industry is just being developed. This issue, with rare exceptions, has not been practically considered through the prism of IT services (Ageev & Smirnova, 2018; Avdokushin, 2018; Belokopytova et al., 2014).

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2 Materials and Methods

During the research, the author applied tools of deductive and inductive analysis, which made it possible to combine the conclusions of individual authors and formulate their vision of the problem. The method of analysis was also applied.

3 Results

According to a survey conducted by the author of the article in 2020, during the implementation of projects related to the use of digital technologies, enterprises faced a wide range of problems, including the following:

- Weak technological competence of service consumers;
- Lack of experience in implementing similar projects;
- Inaccurate definition of the timing of the project;
- Lack of qualified managers;
- Lack of coordination in the interaction of departments;
- Weak involvement and interest of service consumers.

The considered list of problems should be conditionally divided into two levels. The first one includes problems associated with the management of companies and structural divisions, as well as with the final consumers of digital technologies. The following issues can be included in this group:

- Lack of support from top management;
- Project results are not always realistic;
- Goals and objectives of the project are often set incorrectly;
- Insufficient funding and provision of other resources;
- Violation of the terms of provision of resources;
- Weak involvement in the project implementation;
- Lack of technological competence of users.

The second group of problems is related to the implementation of the project and the team providing it. It includes the following issues:

- Lack of experience in the implementation of such projects;
- Lack of qualified management personnel;
- Errors in planning the types and sequence of work;
- Inaccurate estimate of the deadlines for the implementation of the project;
- Technical solutions are chosen incorrectly;
- Weak interaction of structural divisions;
- Changes in requirements and specifications.

It should also be noted that the problems associated with the organization of the project are quite significant for enterprises from the first and second groups. Another characteristic feature of the weak level of organization and implementation of the digitalization process of Kazakh companies is the absence or insufficient elaboration of strategies for the development and implementation of digital technologies: 30% of companies have no clear plan for the introduction of digital technologies in the medium or long term (Bukht & Hicks, 2018).

There are the next problems of the “internal customer”:

- Insufficient involvement, interest of users;
- Opposition to the introduction of fully automatic distribution of goods in stores (retail);
- Lack of qualified personnel for the implementation of the project, 1C programmers;
- Technological problems;
- Lack of maturity of decisions made;
- Poor automation of processes;
- Underdeveloped competencies;
- Poor professional training of IT employees.

Existing barriers hinder and slow down the wider adoption of digital technologies in the company (Alshanskaya & Sadykov, 2018). These barriers can be grouped as external and internal in relation to the company.

External barriers include barriers that characterize the socio-economic policy of the country and are associated with other companies, including the following:

- Suppliers and consumers who adhere to the “traditional model” and do not want to increase their costs caused by the introduction of digital technologies;
- Users with great difficulty refuse familiar products.

Simultaneously, as the main factor hindering the introduction of digital technologies in enterprises and organizations, the financial component should not be written off.

The internal barriers to the use of digital technologies in the activities of Kazakh companies include the following:

- Shortage of personnel versed in the use of digital technologies;
- Misunderstanding of the global problem of the transition of society to the use of the platform economy and the general digitalization of processes;
- The inability to coordinate production relations during the introduction of new digital technologies;
- The impossibility of simultaneous introduction of digital innovations in all related companies connected by single production cooperation.

One of the most important problems in the development of the digital economy of Kazakhstan is the weak protection against criminal attacks due to external barriers in relation to the enterprise (particularly with state regulation) and the lack of a regulatory framework that allows regulating the introduction and use of digital technologies, misunderstanding of the possibilities of their functioning, efficiency, and impact on society as a whole.

The digitalization of industry must be one of the drivers for increasing the efficiency and competitiveness of Kazakh industrial enterprises. Currently, the basis of the economy of Kazakhstan, with insufficient development of the manufacturing sector, is the raw material sector. Labor productivity remains low; technological equipment is insufficient compared to industrialized countries.

4 Conclusion

For the innovative development of Kazakhstan, it is required to create a unified and integral system of legal documents that allow regulating problems emerging in the implementation of information systems and technologies, highlighting issues that are subject to regulation by state structures. The country that must take on the most large-scale legislative changes and local regulations must also regulate point changes in the implementation of digitalization in companies. Foreign experience confirms the importance of involving business structures and civil society in lawmaking in the area of the digital economy, which will lead to a balance of interests of the government, society, and innovative companies.

The state's legal regulation of digitalization must take upon the creation of a system of legal relations for the control, functioning, synchronization, optimization, and security of innovative companies and the operations that are carried out. In conditions when Kazakhstan has a very low level of trust between partner companies and poorly developed management of horizontal communications, national legislation must primarily support the basic principles and conditions for the introduction of digital technologies, and then create horizontal links, develop industry and professional self-regulation, and promote mutual interest between partners participating in the digitalization process.

It should be noted that there are also such problems as the inability to identify terms, definitions, and concepts related to digital technologies in the Kazakh language. Participants have no legal status in digital legal relations; their activities are not legally defined, etc.

Standard models of legal relations that will contribute to legal regulation and resolution of problems of the conceptual apparatus, the legal status of the subject must be worked out. The main types and models of relationships between participants and business partners of innovative

transformations must be formalized legally, and the main functions and the legality of their status must also be determined.

The Internet is becoming a virtual platform where suppliers and consumers of goods and services enter into contracts every second according to predetermined rules. Without this, it is impossible to develop online commerce. Currently, Kazakh legal acts do not comply with unified international standards and do not exist at all. This situation leads to the loss of foreign business partners and disruption of contracts. Moreover, it does not contribute to the growth of the competitiveness of Kazakh goods and services, which ultimately leads to a decrease in foreign trade turnover and a shortfall in profits for business participants from Kazakhstan.

Nowadays, the key problem for the introduction of digital technologies in the economy of Kazakhstan is to create and ensure the free functioning of the market for the exchange of information. Simultaneously, constantly modernizing information processing capabilities change the risk levels of infringement on the rights of legal participants in legal relations; this must be regulated at the state level. The accelerating pace of development of digital technologies requires the creation of updated regulations for the regulation and processing of personal data, contributing to the provision of adequate protection and the corresponding principle of the free exchange of information. It is necessary to create a simplified circulation of information to make it an object of sale and purchase. The government must protect personal data and private life with a reasonable balance of interests.

To reduce risks and provide the necessary conditions for the introduction of digital technologies in the Kazakhstani economy, it is necessary to develop the main areas of legal coordination:

- To ensure the protection of intellectual property rights in the information environment and legal mechanisms for regulating activities in the area of digital technologies;
- To provide for preferential taxation for companies implementing digital technologies;
- To develop a range of legal norms that optimizes telecommunications activities, contributing to the elimination of the isolation of national markets;
- To update the regulatory and legal regulations of media services;
- To provide a legal justification for the transition to electronic workbooks, the transition to remote forms of functioning of the labor market, including the electronic format for concluding labor contracts;
- To optimize network retail, protect the rights of buyers, interact with foreign partners, and legally formalize claims for damages and supply of defective goods in the area of online commerce;

- To harmonize legislation by concluding contracts in traditional and digital format, including all powers of the relevant authorities in the process of creating an electronic trading platform;
- To create favorable conditions for implementing the activities of international and intersectoral digital platforms.

To effectively implement digital innovations and reduce the risks of countering innovations, it is necessary to create a coordination center for managing this process, which will allow using the intellectual capabilities of companies and teams to the maximum. Innovative approaches in management create the most favorable conditions for maintaining a creative climate, including the following ones:

- All-round encouragement by the management of innovative activities in the team. The support of the top management of companies contributes to the creation of a creative atmosphere in the team, aimed at introducing innovations, a positive attitude towards the free and creative search and implementation of innovations;
- Unconditional support for the authors of innovations in all structural divisions of companies, providing them with conditions for the implementation of their innovative ideas (in the creation of technologies, new products, management, etc.);
- Encouragement of the use of digital technologies and the introduction of telecommunication interactions into the process contribute to the involvement of all team reserves and the formation of new information collaborations, which allow for making optimal decisions. These will speed up the processes of innovative implementation and optimize the interaction of structural units for the exchange of technological information between units and individual employees;
- The use of material and moral incentives, motivational systems, encouragement of innovation, and social and psychological stimulation encourages the innovative activity of employees;
- The involvement of employees in the development and adoption of strategic decisions to promote digitalization at all stages of production or technological processes reduces the resistance of employees to the introduction of innovations, promotes efficient operation, improves the microclimate in the team, and increases labor productivity;
- Constant updating of the level of competencies of employees and advanced training in the face of ever-increasing competition in the labor market and technologies require constant updating of knowledge and its increment. Therefore, the ability and desire to be included in innovative processes must be cultivated in

the team. The development of new products must also become the main factor in commercial success (Bauer et al., 2017). That is why the training and retraining of personnel in the digital economy are becoming an integral part of the production cycle.

Creating an atmosphere of innovative development, supporting innovators in the team, and creating a system to stimulate technological implementation become the main function of the company's management. The success of top management in the digital economy is determined by the ability to encourage people to self-realization and self-development through economic, social, or other incentives. The main thing is the possibility of employees to show their potential to the fullest extent and their aspiration to implement their innovative ideas. The strategic goal of the company's management is the need to maintain an atmosphere of innovative search and technological improvement in the managed company.

The biggest threats posed by digitalization in the area of information security are a reduction in the number of jobs and deterioration of manageability in the short term.

Kazakhstan is currently only trying to get involved in the global process of innovative technical and economic transformation, a component of which is digitalization. Kazakhstan is still far from the leading countries in this process, but the country can use the best practices of those leading the way. Foreign experience allows analyzing the positive and negative consequences of technological breakthroughs and identifying the macroeconomic effect of the introduction of digital technologies. The technological breakthrough will significantly affect the labor market. The introduction of digitalization will significantly change employment. Many professions will leave the labor market, meaning that the labor force, which should be able to retrain new professions quickly, will be released, and the demand for new and more highly qualified workers will increase. Therefore, the government authorities of high-tech countries have to be concerned about solving the problem of reducing social tension.

Digital technologies have a significant impact on society and the economy. The impact is twofold: new opportunities and new challenges. Opportunities include emerging chances to accelerate the pace of economic development of technologically advanced countries and, as a result, to increase their competitiveness. Challenges include the need to change social relations, areas of influence, and traditional business models (Prokhorov & Konik, 2020).

According to the analysis of statistics on the use of digital technologies in Kazakhstan, the role of information and communication technologies in the country's economy is systematically increasing. These trends are most common in

the organization of intra-corporate business and Internet interaction of enterprises with partners: the level of use of ERP systems in Kazakhstan is comparable to Hungary and Latvia. Digital technologies are most actively spreading in the area of trade and communications. Along with this, there are significant lags in the use of information and communication technologies in Kazakhstan to disseminate broadband Internet access, presence in the network, and the use of information systems.

It should be noted that Kazakh companies have distinctive features and pronounced patterns in implementing information technology in economic activity. The top management of Kazakh companies clearly understands the degree of influence of digitalization on the results of their business. Basically, the effect obtained from the introduction of information technologies corresponds to the expected results and often exceeds them. Business processes are accelerated and, as a rule, simplified, the accuracy and quality of the work performed are increased.

Company specialists generally give a high assessment of the level of competence of employees in assessing the impact of information technology on business results. The technologies, which have the most positive impact on business, have received the greatest approval today.

The importance of digital technologies will not decrease in the near future. Apparently, digital technologies will contribute to the development of new technological areas: social networks and supercomputer systems. It is also predicted that cloud technology, virtual, augmented and mixed reality systems, and additive technologies will have significant growth and impact on the development of digitalization in the country.

The essence of technological innovation is that it is not the technology that is being transformed but the company's business, the relationship between sellers, buyers, and management, and the interaction within the company. Nowadays, the company's management, information technology specialists, and ordinary performers and workers understand the need to digitalize all business processes. Kazakh companies fully understand that it is impossible to compete in world markets without introducing systemic changes.

The foundation of the digitalization processes of Kazakhstan's economy is transformational changes at the company level. Simultaneously, there must be changes at the macro level: in the system of public administration and legal regulation. In this direction at the state level, there is a need for active action and decisions, which interested businesses and citizens of Kazakhstan are waiting for. The government must form a unified digital environment, develop trust services, learn to identify and authenticate interacting entities, protect against unauthorized access and modification of documents, verify the powers of participants in business processes, etc. The government must also be responsible for

forming a digital trust infrastructure. It is necessary to adopt a single national concept that clearly defines the goals, objectives, and tools used.

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