DEVELOPMENT OF THE TELECOMMUNICATIONS SECTOR IN THE ECONOMY OF KAZAKHSTAN AS THE BASIS OF THE NATIONAL MODEL OF THE INFORMATION SOCIETY

S. Oralova
Turan University, Almaty, Kazakhstan
e-mail: derzktiv-maga@mail.ru

Annotation. The completion of the stabilization stage of the republic's economy and its transition to a trajectory of sustainable growth create objective prerequisites for the real use of medium-term and indicative long-term planning tools in the practice of state regulation and management. An important place in the general system of long-term planning is given to the formation on a medium-term basis of a strategy for the development of large industrial complexes, one of which is the telecommunications sector, whose increasing role at the present stage is determined by the trends of globalization and informatization of all aspects of public life on a global scale. Telecommunications are an integral part of the infrastructure, the development of which, in accordance with the provisions of the Development Strategy of Kazakhstan until 2030, is assigned to one of the seven long-term priorities and should contribute to: strengthening national security; political stability; economic growth.
However, the formation of planned and forecast parameters for the development of telecommunications is impossible without defining the conceptual foundations of the long-term functioning of the industry, assessing trends in the development of the telecommunications market based on internal and external factors, conducting periodization and highlighting stages of development, choosing priorities of state sectoral policy, rational evolution of the regulatory system, optimization of the legislative and regulatory framework in the industry.

Key words: information economy, e-government, socio-economic development of the Republic of Kazakhstan, digitalization, information security, information society, quality system.

The future of the digital economy and the emerging paradigm of its development should be focused on the reasonable consumption of resources, improving the ecology of the planet, increasing the life expectancy of mankind and, of course, on the development of the intellectual base in the field of science. Innovations in the field of technology and business processes have become a leading force in the competitive struggle, predetermining the high growth rates of economic development of states. The state program "Digital Kazakhstan 2020" is the foundation for the digital transformation of the country's economy.

With the introduction of new technologies and their penetration into all new professions, it requires all employees to constantly work on improving their skills. Taking into account the current situation, there is a need for long-term development of digital skills in such areas as: development of skills of professional personnel; increasing the attractiveness of new technologies and science among young people; development of digital skills among all segments of the population, including small and medium-sized businesses, civil servants, the elderly; providing lifelong learning opportunities. Industrial revolutions have enabled individual countries to achieve impressive success in economic growth and take places among the leaders in the global economy.

Main provisions of the article.
Production turns into the consumption of various transformed and reincarnated forms of information, and consumption, in turn, turns into the production of information;

The exchange and circulation of economic resources and the results of social production and reproduction began to have a mutually rotating and interchangeable character;

There is a predominant reproduction and accumulation of non-material factors and resources of an intellectual and innovative intensive type of economic growth;

In the distribution and consumption of aggregate information products, there have been fundamental differences between information products-things, information products-ideas and information products-copies of these ideas; the last two types of information products and their values are not destroyed as consumption increases, but self-grow.

Introduction. Technical progress and the continuous emergence of new developments require constant improvement and development from specialists in the field of informatization. With the current development of the economy, it is undoubtedly necessary to take into account how the level of the tax burden affects investment decisions in the economies of countries. The tax burden is one of the main criteria for investment attractiveness of Kazakhstan. Thus, this criterion is one of the indicators of the development of the tax system, regulation of the economy and tax policy of the state, which is measured as a percentage of GDP. This is an important indicator of determining the state of the country's tax system. It demonstrates how burdened the state's economy is with tax deductions. For example, in terms of the total tax burden to gross domestic product, back in 2017, Kazakhstan is on a par with developed Asian countries such as Hong Kong and Singapore [1].
But in European countries with a fairly highly developed economy, there is a very high level of this indicator. For example: in Norway and Germany, the tax burden on gross domestic product is already within 40%, and in Italy, France and Finland within 45%, well, the highest bar is in Denmark, where the indicator reaches up to 51%. It is worth noting that in developed countries, high indicators of gross domestic product per capita, such as in Denmark - 45709 US dollars, Norway - 68430 US dollars, France - 41781 US dollars, as well as high investment capital also make it possible for these countries to apply high tax rates.

In the conditions of transition to the innovative path of development, the most important role is played by the procedures for finding new technical and organizational solutions that regulate the innovative activity of economic entities. In the conditions of market relations, these procedures are focused on the search for new production opportunities in order to increase profits and increase the stability of an economic organization in a competitive struggle. New technologies, in particular in the field of communication systems, vehicles and information processing, have accelerated the process of forming the global capital market, the development of e-commerce, the creation of supply chains, blockchain technologies that cover the whole world [2].

It is expected that the market for digitalization of the economy will grow by about 13% per year and will amount to 111 billion tenge by 2025. The digital world does not ask us if we are ready for change, the world is changing on a global level. The digital economy in developed countries develops in different ways, but they have important common features: the presence of favorable conditions for the development and implementation of innovations, as well as large amounts of investment in digital technologies and infrastructure. Kazakhstan has huge opportunities to make technological leaps in all spheres of the economy. The development of digital technologies in the country is determined by such factors as strengthening the role of information and communication services in the global market and providing support to domestic companies. For the successful functioning of the digital economy in the country, it is necessary: the development of infrastructure with Internet access, using telecommunications, as well as e-business and commerce.

**Methodology.** In the process of the study were used General methods of research: methods of analysis of financial statements: horizontal, vertical, ratio, comparison, and other.

**Results.** The penetration of the digital economy is everywhere observed around the world, in particular, new opportunities are opening up in all areas where new products are being developed, working methods are being modernized, production processes, logistics supply channels are being optimized, and ways of interacting with suppliers and buyers are improving. By reducing the cost of information processing, transmission and storage, as well as infrastructure development, society is on the first step towards a new digital revolution that will change the global economy as a whole. Digitalization will affect all industries, including oil and gas [3].

Tab.1 shows what tasks and goals the state and companies need to set in order to achieve high results in the implementation of digitalization in the country.

Geological and hydrodynamic modeling of deposits is aimed at the most complete extraction of hydrocarbon reserves and gives the maximum effect for obtaining high indicators of economic profitability. The use of digital technologies in the oil and gas sector will allow not only to simulate deposits, but also to increase the efficiency of repair work and drilling processes, reduce energy costs, as well as analyze product yields. In addition to the effect on the development of economic sectors, digital solutions bring with them new risks. Leader of the Nation of Kazakhstan N. Nazarbayev noted in his message to the people: "A new stage of technological and infrastructural development has been given impetus. In order to meet the..."
new time, we have to unite into a single nation – a nation standing on the threshold of a historic ascent in the conditions of the Fourth Industrial Revolution."

Table 1

**Challenges facing the state and companies for the introduction of the digital economy in Kazakhstan.**

<table>
<thead>
<tr>
<th>Tasks to achieve the goals for the introduction of the digital economy in the Republic of Kazakhstan</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The company</strong></td>
<td><strong>State</strong></td>
</tr>
<tr>
<td>Introduction of new technologies, improvement and digitalization of production processes</td>
<td>Introduction of new approaches to learning, improvement of educational processes. Increasing investment in R&amp;D</td>
</tr>
<tr>
<td>Search for new personnel, cooperation with educational research centers</td>
<td>Preparation of a base for mass retraining of personnel, due to the disappearance of many professions and the emergence of new professions and jobs</td>
</tr>
<tr>
<td>Investments in new technologies, selection of advanced directions</td>
<td>Improvement of innovation processes and their competent regulation by the state</td>
</tr>
<tr>
<td>Improving competitiveness, developing an innovative culture modeled after the world's highly developed digital companies</td>
<td>Digitalization of public services, increased literacy and widespread involvement of the population in the digital economy</td>
</tr>
</tbody>
</table>

Note: compiled by the author.

Our state needs to take the initiative to promote digital literacy and ensure data security protection. The widespread introduction of new technologies and the chosen path to the digital economy will allow the country to ensure increased efficiency and transparency in public administration, in the field of employment, as well as improve the quality of education and healthcare, will improve the investment climate. Specialists who will work in this industry must have the ability to think flexibly and the ability to implement new things. The process of digitalization requires new innovations, constant updates, new qualified skills and professional knowledge. Kazakhstan has chosen the right path in this direction.

The development of telecommunications is carried out under the influence of a number of external and internal factors. On the one hand, like any segment of the market economy, the telecommunications complex develops under the influence of natural market mechanisms, experiencing fluctuations in market conditions. On the other hand, due to the importance for the economy of the republic and the need to ensure the national interests of Kazakhstan, as well as due to the large monopolization of the telecommunications market, the industry is under strong regulatory influence of the state [4].

**Macroeconomic environment**

Being a branch of the infrastructure complex, the telecommunications sector plays a service role, providing services to the needs of legal entities and the population. In this regard, the macroeconomic situation in the republic, the general state of the sectors of the economy, the financial and budgetary sphere, the standard of living and the solvency of the population have a very significant impact on the situation of enterprises in the industry, determining the level of sales of telecommunications services.

With the existing population and the scale of the republic's economy, the capacity of the telecommunications market is very limited, and the determining factor for increasing sales
volumes and improving their financial situation on this basis is not the technical capabilities of operators, but the amount of per capita income.

Another factor limiting the possibilities of increasing sales of telecommunications services is the fact that in the service sector the moments of creation and sale coincide, which makes it impossible to sell services for the future and store them.

The existence of such a dependence of the state of the telecommunications market on the general socio-economic situation in the republic allows us to conclude that the processes of reforming the industry should be closely linked to the level of development of the national economy and the dynamics of per capita income. The practice of market liberalization in a number of foreign countries also speaks in favor of this conclusion.

At the same time, it should be noted that telecommunications is an industry whose services are in steady demand, almost independent of seasonality, location of consumers, which creates prerequisites for the stable functioning of this industry.

*Features of state regulation*

Being an important element of the national infrastructure and economy, the telecommunications industry is influenced by a complex of external conditions and its development should be determined from the point of view of state interests:

* requirements for the state of the national network, the volume and quality of provision of telecommunications services to citizens of the country, the fulfillment of national security tasks;

* vision of the place and role of telecommunications in ensuring the economic growth of the country, the formation of the socio-cultural standard of living of the population;

* as a result, the adoption and implementation of a set of appropriate measures.

*Organizational and legal support of industry regulation*

The current regulatory framework in the field of communications consists of the Law of the Republic of Kazakhstan "On Communications", the Decree of the Government of the Republic of Kazakhstan dated November 25, 1996 No. 1443 "On approval of the Regulations on the procedure for licensing business activities in the field of postal communications and telecommunications, the use of radio frequency spectrum in the Republic of Kazakhstan", Regulations on the procedure for connecting telecommunications networks to public telecommunications networks and the procedure for regulating the passage of telephone traffic through public telecommunications networks of the Republic of Kazakhstan, The Rules of organizational and technical interaction of operators of the interconnected telecommunications network of the Republic of Kazakhstan, the Rules of mutual settlements between telecommunications operators Forming a public telecommunications network for the network resource provided and the passage of telephone traffic, the Rules for the Provision of long-distance and international telephone services, the provision of services by local telecommunications networks, telegraph and wire broadcasting services, approved by regulatory legal acts of the authorized body in the field of communications. This is clearly not enough, given that many regulatory documents are already outdated. The development of standards, technical norms and other documents is practically not carried out.

The licensing procedure and conditions need serious revision. The current state of licensing legislation (perpetuity of licenses, cancellation of the annual license fee, special conditions for small businesses), as well as a complex procedure for revoking licenses dictate the need for a radical revision of licensing rules in the field of telecommunications with a shift of emphasis on strengthening the responsibility of telecom operators for fulfilling their obligations to develop telecommunications networks and provide services of the appropriate level, monitoring the fulfillment of license conditions by the authorized body. The measures of in-
fluence established by the legislation of the Republic of Kazakhstan on the operator who violated the terms of the license (suspension of its validity, administrative fines) are, taking into account the specifics of the industry, rather a simple formality than punishment. It is necessary to tighten economic sanctions.

Certification and standardization in the industry

Activities in the field of standardization and certification are regulated by the relevant legislation of the Republic of Kazakhstan, with the assistance of the authorized body in the field of communications, communication certification bodies accredited by the state authorized body in the field of standardization, metrology and certification have been established.

Certification is the tool by which barriers are established in the use of communication equipment that does not meet the established technical standards and requirements for the quality of communication services. It is necessary to strengthen control and toughen measures on the illegal import of non-certified means of communication. At the moment, there is practically no work in the field of standardization, on the development of relevant regulatory documents, for compliance with which certification should be carried out, a program for certification of communication services has not been developed. It is necessary to intensify work on the recognition of international certificates for communication equipment.

The issue of creating an industry technical committee for standardization, a non-governmental working body, which can be entrusted with the functions of forming a fund of normative documents on standardization and other normative acts (including their development, submission for approval and registration to the authorized body in the field of standardization, metrology and certification in accordance with the procedure established by law and replication), is relevant.

The structure of the market and the relationship between its subjects

Currently, formally, all sectors of the telecommunications market are zones of free competition of operators. Some restrictions on the number of market participants are related only to the natural limitation of Kazakhstan's natural resource - the radio frequency spectrum. This leads to a limitation of the number of licenses issued for activities related to the use of radio frequencies.

A high degree of competitiveness exists now in the markets of data transmission services, Internet, mobile telephony, personal call facilities, telecommunications services for corporate business clients. The market of international communication services provided through dedicated networks is sufficiently developed.

Competition is practically not developed in the market of local telephone services, since today the service sector using local networks is defined by law as a natural monopoly, and government-regulated tariffs for them do not provide sufficient profitability, and in rural areas they do not even cover the cost of production of services [5].

In addition to the national telecom operator, local telephone services are provided mainly by owners of networks that previously belonged to various government agencies that use networks primarily to meet production needs. More than 30% of licenses for the provision of local telephone services were obtained by such owners. The market share of local telephone services occupied by other telecom operators is no more than 15%.

Currently, there are about 300 telecom operators operating in the communications market, the total number of licenses issued is more than 600.

Conclusions. The rapid development of the communication services market based on the formation and introduction of modern information and telecommunication technologies, the development of globalization and informatization processes in all aspects of life require a careful and informed choice of tools for state regulation of the telecommunications market of
the republic, designed to ensure the effective development of this segment of the economy of Kazakhstan in line with global trends.

The improvement of the system will give a new impetus to the development of the telecommunications market both on the basis of creating conditions and stimulating market processes, and the use of selective regulatory mechanisms that ensure the implementation of tasks of a national nature.

At the same time, all the problems of the telecommunications sector are considered not only from the point of view of the effective development of this industry, but also from the standpoint of the formation of a unified information space of the republic based on the full use of the potential of the modernizing telecommunications network of Kazakhstan.

In the most general case, the implementation of the proposed directions in the telecommunications industry involves the creation of its own independent and efficient network that meets all modern requirements of global telecommunications and informatization networks.

**List of references:**


**List of references (transliteration):**


АКПАРАТТЫҚ ҚОҒАМНЫҢ УЛТТЫҚ МОДЕЛИНІҢ НЕГІЗІ РЕТИНДЕ
ҚАЗАҚСТАН ЭКОНОМИКАСЫНДА ТЕЛЕКОММУНИКАЦИЯ
СЕКТОРЫН ДАМЫТУ

С. Оралова
Тұран университеті, Алматы, Қазақстан
e-mail: derzkiy-maga@mail.ru

Түйін. Макалада қазіргі уақытта Қазақстан Республикасының экономикалық дамуы оңтүстік оңдірілмепін өңдіріп, тауарлар мен қызметтердің бөлікке кабиет-тілінің қамтамасыз ететін әкімді және экономикалық жүйеге әддікті құрылымдық ілгерілеуген салалар бойынша оның серіңізді даму корсеткіштерімен сипатталып, құрылым әкімді жүйелі экономикалық жүйелі әддікті елдің құрылымындағы жаңа пәніндестірілген.

Түйін сәздер: әкімді экономика, электрондық ұйым, Қазақстан Республикасының әддік-экономикалық дамуы, цифровдіру, әкімді құқықтық, әкімді экономика құқық, әддік жүйесі.

РАЗВИТИЕ СЕКТОРА ТЕЛЕКОММУНИКАЦИИ В ЭКОНОМИКЕ
КАЗАХСТАНА КАК ОСНОВЫ НАЦИОНАЛЬНОЙ МОДЕЛИ
ИНФОРМАЦИОННОГО ОБЩЕСТВА

С. Оралова
Университет Тұран, Алматы, Қазақстан
e-mail: derzkiy-maga@mail.ru

Резюме. В статье описано то, что экономическое развитие Республики Казахстан в настоящее время характеризуется очень динамичными показателями развития на этапах, с последовательным структурным продвижением в глобальную экономическую систему, которая обеспечивает конкурентоспособность отечественной производимой продукции, товаров и услуг. В работе дано теоретическое обоснование производства всей республики, которое ориентировано на строительство нового постиндустриального общества, характеризующегося галопирующим развитием и ростом весомой доли сферы информационно-коммуникационных товаров и услуг.

Ключевые слова: информационная экономика, электронное правительство, социально-экономическое развитие Республики Казахстан, цифровизация, информационная безопасность, информационное общество, система качества.