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# БАЯНДАМАЛАРЫ

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## ANALYSIS OF PHOTOCONVERSION CHARACTERISTICS AND PARAMETERS OF A HOLOGRAPHIC CONCENTRATOR FOR AN ENHANCED EFFICIENCY SOLAR CELL

**Abstract.** The article describes the microprocessor method for measuring parameters and characteristics of conversion of solar radiation using a holographic concentrator at its production for an enhanced efficiency solar cell. The measurement is done using the Arduino Nano microprocessor controller, the HC-SR04 ultrasonic distance sensor, the TCS34725 color sensor, and the BH1750 light sensor. Information from the digital measuring system is transmitted via a serial USB port to a laptop where it is processed using the Excel spreadsheet.

The developed system for determining the quality parameters and characteristics of the holographic concentrator ensures the obtainment of rational parameters for converting light flux and the necessary level of dispersion and focusing of solar radiation, which contributes to reaching the maximum efficiency of the solar cell.

**Key words:** microprocessor method, measurement, photoconversion characteristics, holographic concentrator, solar cell, microcontroller, distance sensor, light sensor, color sensor.

**Introduction.** Microprocessor-based measurement and control systems are widely used in research by scientists from different countries [1-5].

The solar energy engineering is developing a sector related to the conversion of solar radiation into electrical energy using a holographic concentrator [6-8].

The principle of operation of the enhanced efficiency solar cell in line with the RK patent No. 31796 is described in detail in the article [9] and is shown in figure 1.

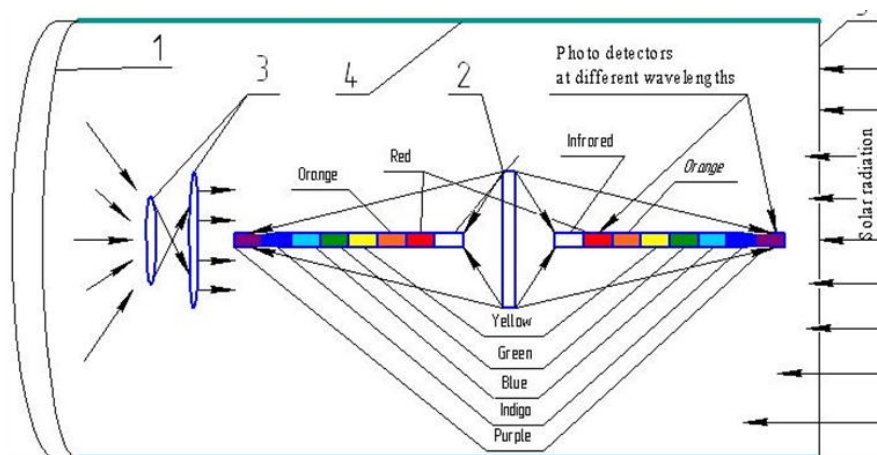


Figure 1 – Solar cell diagram

Figure 1 shows that the holographic concentrator is the most important element of the enhanced efficiency solar cell. It decomposes the light flux of solar energy on the optical axis into spectral components and focuses various wavelengths at a certain distance.

In the process of manufacturing a holographic concentrator with the required level of dispersion and focusing, it is necessary to determine qualitative characteristics of manufactured samples. To this end it is necessary to measure physical parameters of the light flux conversion.

For this, a digital measuring system was developed. It is shown in figure 2.

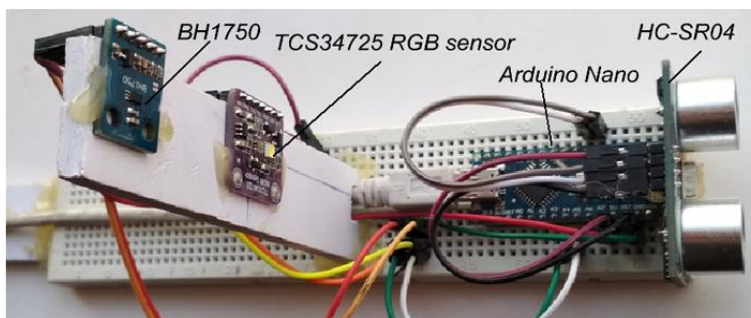


Figure 2 – The digital system for measuring quality characteristics of holographic concentrator samples

The digital measuring system contains an 8-bit Arduino Nano microprocessor controller and three digital sensors:

1. The HC-SR04 sensor for measuring the distance from the holographic concentrator;
2. The TCS34725 RGB sensor for measuring the color of a focused beam at the measurement point;
3. The BH1750 sensor for measuring the irradiance of the light flux transmitted through a holographic concentrator without spectral decomposition.

The HC-SR04 digital distance sensor employs acoustic ultrasonic radiation to determine the distance to the object. This contactless sensor ensures high accuracy and stability of measurements. The measurement range is from 2 cm to 400 cm. Solar radiation and electromagnetic noise practically do not affect sensor readings. The principle of operation of the digital sensor measuring the distance to the object is based on measuring the time delay of the reflected 40 kHz ultrasonic signal and is presented in figure 3.

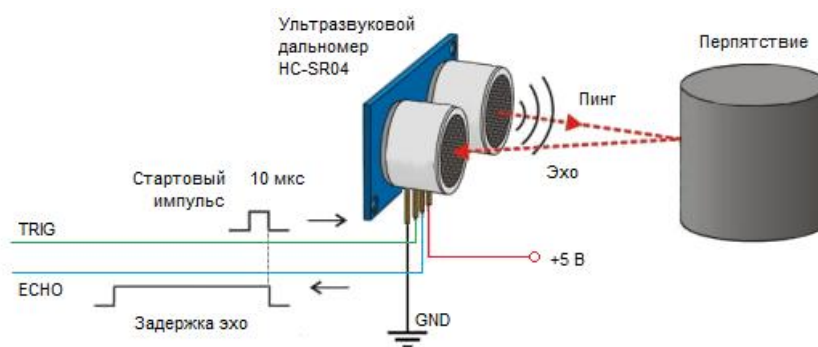


Figure 3 – Ultrasonic sensor for measuring the distance to the object: Стартовый импульс – Triggering pulse; Мкс - μs; Задержка эхо – echo delay; Ультразвуковой дальномер – HC-SR04 ultrasonic distance measurer; Пинг – Ping; Эхо – Echo; Препятствие - Obstacle

The HC-SR04 distance sensor is connected to the digital pins D2 and D3 that are responsible for TRG (trigger signal) and ECHO (echo signal) respectively.

The TCS34725 RGB color sensor measures the total light intensity, the light intensity of the red, green and blue spectral range.

The TCS34725 color sensor reads data from a set of photodiodes arranged in the form of an 8×8 matrix, which includes 16 photodiodes with blue filters, 16 photodiodes with green filters, 16 photodiodes with red filters and 16 photodiodes without filters. Four types of color photodiodes alternate to minimize the effect of uneven intensity of incident radiation [10].

The BH 1750 sensor measures the visible light intensity in the range from from 380 nm (violet) to 780 nm (red) [11].

The TCS34725 and BH1750 sensors are connected via a two-wire I2C interface, and supplied from +5 V. The I2C interface in Arduino boards is implemented on analog pins A4 and A5, which are responsible for SDA (data bus) and SCL (clock bus) respectively [12, 13].

**Research Method.** Figure 4 shows the electrical circuit diagram of a digital system for measuring the qualitative characteristics of holographic concentrator samples.

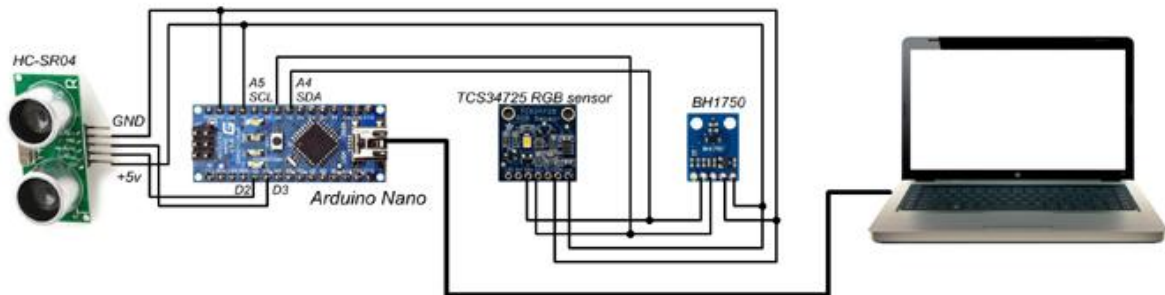


Figure 4 – The electrical circuit diagram of a digital system for measuring the qualitative characteristics of holographic concentrator samples

The program code recorded in the microprocessor controller using a laptop initializes digital sensors, reads the measured parameters and transfers data to the laptop for storage and analysis.

The obtained data are recorded on a laptop in an Excel spreadsheet, where the radiation intensity graphs in lux are analyzed and plotted depending on the distance to the holographic concentrator for: C - full-color spectrum, R - red spectrum, G - green spectrum and B - blue spectrum.

The digital system for measuring the qualitative characteristics of holographic concentrator samples is shown in figure 5.

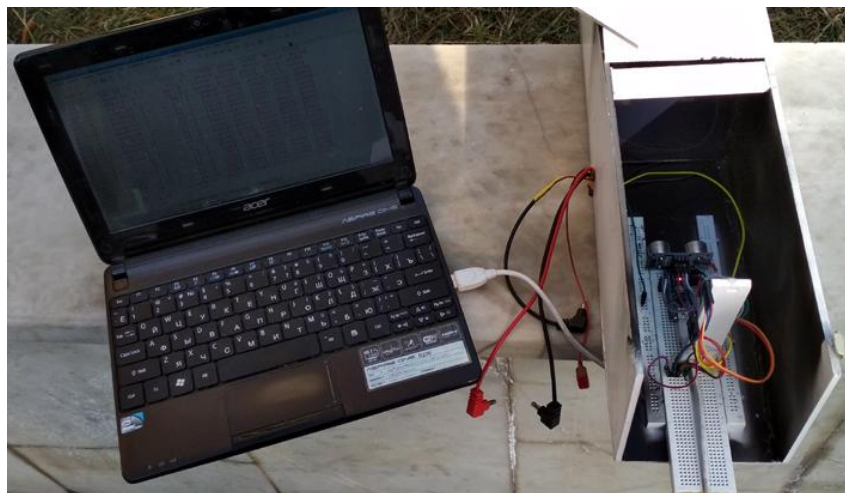


Figure 5 – The digital system for measuring the qualitative characteristics of holographic concentrator samples

**Research Results and Discussion.** Using a digital system for measuring quality characteristics, three samples of holographic concentrators were analyzed. The measurements were performed on February 24, 2020 from 15.00 to 16.00 p.m. in the city of Almaty, the Republic of Kazakhstan. The light beam focused by the holographic concentrator was manually pointed at the photosensor matrix. This explains the spike in intensity.

Table below shows the results of measuring the illumination of the light flux transmitted through holographic concentrators disregarding the spectral decomposition.

Results of measuring the illumination of the light flux transmitted through holographic concentrators disregarding the spectral decomposition, %

No	Light Sun, lux	Light in, lux	%
1	20,653	7,233	35
2	20,653	5,775	28
3	20,653	8,467	41

Here, ‘Light Sun’ is the input intensity of the light flux, and ‘Light in’ is the light intensity of the light flux transmitted through holographic concentrators disregarding the spectral decomposition.

Figures 6, 7 and 8 show diagrams of the qualitative characteristics of holographic concentrators No. 1, No. 2 and No. 3 respectively.

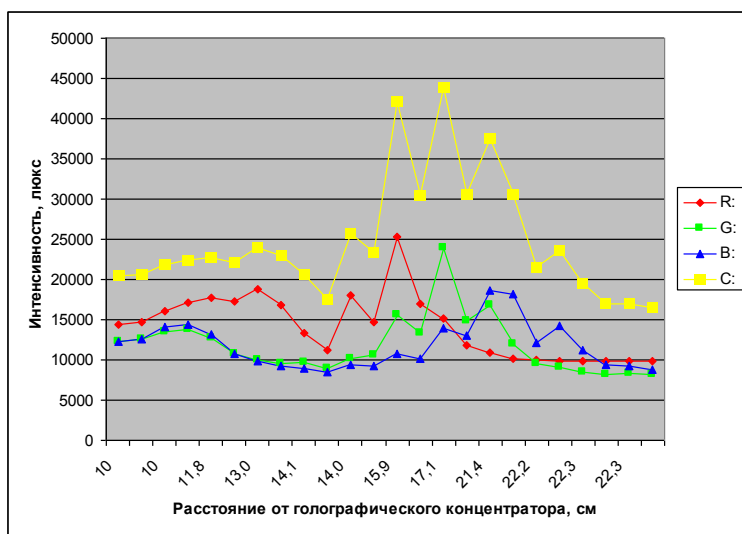


Figure 6 – Spectral decomposition of the light flux and its intensity (holographic concentrator No. 1):  
 Интенсивность, люкс – Intensity, lux; Расстояние от голографического концентратора, см – Distance from the holographic concentrator, cm

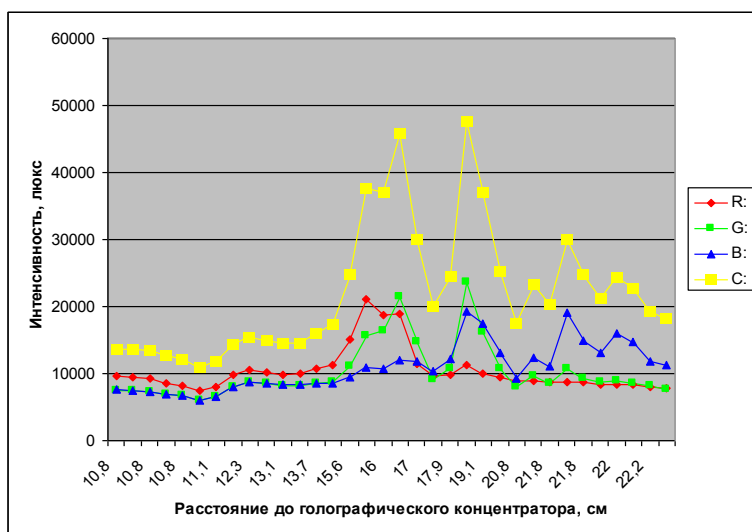


Figure 7 – Spectral decomposition of the light flux and its intensity (holographic concentrator No. 2)



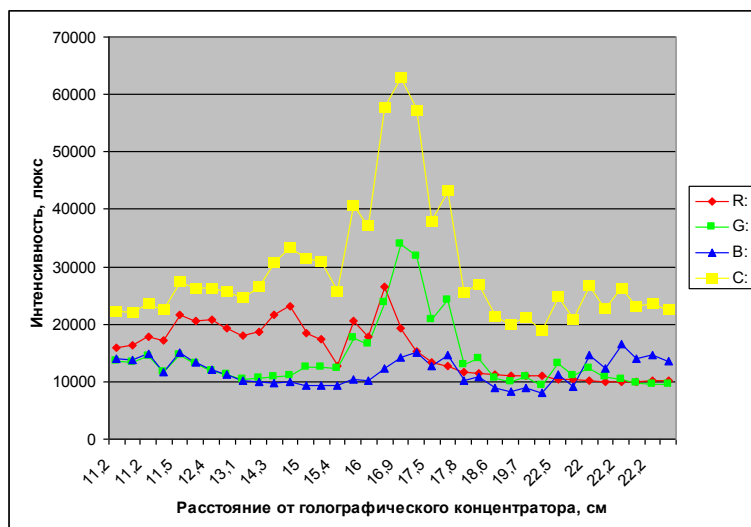


Figure 8 – Spectral decomposition of the light flux and its intensity (holographic concentrator No. 3)

The diagrams of the qualitative characteristics of holographic concentrators No. 1, No. 2 and No. 3 show that the manufacturing parameters affect the quality of dispersion and focusing. In particular, sample No. 1 decomposes the light flux more evenly. While concentrator No. 2 is characterized by the best light flux conversion coefficient and the worst dispersion. All parameters of the third concentrator are lower than in the first one.

**Conclusion.** The developed digital system for measuring the parameters and qualitative characteristics of the holographic concentrator ensures the determination of physical parameters of the light flux conversion and achievement of the required dispersion and focusing of solar radiation, which contributes to the maximum efficiency of the solar cell.

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#### ПАЙДАЛЫ ӘСЕР КОЭФФИЦИЕНТІ ЖОҒАРЫ КҮН БАТАРЕЯСЫ ҮШІН ГОЛОГРАФИЯЛЫҚ КОНЦЕНТРАТОРДЫҢ ФОТОТҮРЛЕНДІРГІШ СИПАТТАМАЛАРЫН ТАЛДАУ

**Аннотация.** Мақалада пайдалы әсер коэффициенті жоғары күн батареясы үшін оны дайындау кезінде голографиялық концентратордың күн радиациясының түрлендіру параметрлері мен сипаттамаларын өлшеудің микропроцессорлық тәсілі сипатталады. Өлшеу "Arduino Nano" микропроцессорлық контроллерінің, "HC-SR04" қашықтықтық ультрадыбыстық белгі бергіш, "TCS34725" түс белгі бергішінің және "BH1750" жарық белгі бергішінің көмегімен жүргізіледі. Ақпарат сандық өлшеу жүйесінен тізбекті USB порты арқылы ноутбукқа беріліп, "Excel" кестелік процессоры арқылы өңделеді.

Сандық өлшеуіш жүйенің көмегімен сапалық сипаттамаларды анықтау үшін голографиялық концентраторлардың үш үлгісі талданды. Өлшеу Қазақстан Республикасы Алматы қаласында 2020 жылғы 24 ақпанда сағат 15-00-ден 16-00-ге дейін жүргізілді. Фотобелгі бергіш матрицасының аумағына жарық сәулесінің голографиялық концентратормен тоғыстырылу қолмен жүргізілді. Бұл қарқындылықтың күрт өзгеруін түсіндіреді.

Кестеде спектр бойынша ыдырау ескерілмеген голографиялық концентраторлар арқылы өткен жарық ағынының жарықтандырылу өлшеу нәтижелері келтірілген.

Спектр бойынша ыдырау ескерілмеген голографиялық концентраторлар арқылы өткен жарық ағынының жарықтандырылуын өлшеу нәтижелері, %

No	Light Sun, люкс	Light in, люкс	%
1	20653	7233	35
2	20653	5775	28
3	20653	8467	41

Бұл жерде Light Sun-жарық ағынының кіріс қарқындылығы, ал Light in-спектр бойынша ыдырау ескерілмеген голографиялық концентраторлар арқылы өткен жарық ағынының жарықтану қарқындылығы.

Өлшеу нәтижелері бойынша үш түрлі голографиялық концентраторлар үшін сапалық сипаттамалардың графиктері жасалды.

Голографиялық концентраторлардың сапалық сипаттамаларынан алынған графиктері, дайындау параметрлеріне байланысты диспергирлеу және фокустау сапасының әртүрлі деңгейі орын алатынын көрсетеді, атап айтқанда, бірінші үлгі спектр бойынша жарық ағынын біркелкі таратады. Екінші концентраторда жарық ағынын түрлендірудің ең жақсы коэффициенті, бірақ нашар диспергирлеу. Үшінші нұсқада барлық көрсеткіштер бірінші нұсқадан төмен.

Голографиялық концентратордың сапалық параметрлері мен сипаттамаларын анықтаудың әзірленген жүйесі жарық ағынын түрлендірудің ұтымды параметрлерін және күн радиациясының диспергирлеу мен фокусталуының қажетті деңгейін алуға мүмкіндік береді, ол күн батареясының пайдалы әсерінің максималды коэффициентін алуға мүмкіндік береді.

**Түйін сөздер:** микропроцессорлық әдіс, өлшеу, фототүрлендіргіш сипаттамалар, голографиялық концентратор, күн батареясы, микроконтроллер, қашықтық белгі бергіші, жарық белгі бергіші, түс белгі бергіші.

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### **АНАЛИЗ ФОТОПРЕОБРАЗОВАТЕЛЬНЫХ ХАРАКТЕРИСТИК И ПАРАМЕТРОВ ГОЛОГРАФИЧЕСКОГО КОНЦЕНТРАТОРА ДЛЯ СОЛНЕЧНОЙ БАТАРЕИ С ПОВЫШЕННЫМ КОЭФФИЦИЕНТОМ ПОЛЕЗНОГО ДЕЙСТВИЯ**

**Аннотация.** В статье описывается микропроцессорный способ измерения фотопреобразовательных характеристик голографического концентратора при изготовлении его для солнечной батареи с повышенным коэффициентом полезного действия. Измерение проводится с помощью микропроцессорного контроллера «Arduino Nano», ультразвукового датчика расстояния «HC-SR04», датчика цветности «TCS34725» и датчика освещенности «BH1750». Информация с цифровой измерительной системы передается через последовательный USB порт в ноутбук, где обрабатывается с помощью табличного процессора «Excel».

При помощи смонтированной цифровой измерительной системы определения качественных характеристик были проанализированы три образца голографических концентраторов. Измерения проводились 24 февраля 2020 года с 15-00 до 16-00 часов в городе Алматы Республики Казахстан. Наведение сфокусированного голографическим концентратором светового луча на область матрицы фотодатчиков проводилось вручную. Это объясняет резкие скачки интенсивности.

В таблице приведены результаты измерения освещенности светового потока прошедшего через голографические концентраторы без учета разложения по спектру.

Результаты измерения освещенности светового потока прошедшего через голографические концентраторы без учета разложения по спектру, %

No	Light Sun, люкс	Light in, люкс	%
1	20653	7233	35
2	20653	5775	28
3	20653	8467	41

Здесь Light Sun – входная интенсивность светового потока, а Light in – интенсивность освещенности светового потока прошедшего через голографические концентраторы без учета разложения по спектру.

По результатам измерения составлены графики качественных характеристик соответственно для трех различных голографических концентраторов.

Полученные графики качественных характеристик голографических концентраторов показывают, что в зависимости от параметров изготовления имеет место различный уровень качества диспергирования и фокусировки, в частности, первый образец более равномерно разлагает световой поток по спектру. Так, у второго концентратора лучший коэффициент преобразования светового потока, но худшее диспергирование. В третьем варианте все показатели ниже, чем в первом варианте.

Разработанная система определения качественных параметров и характеристик голографического концентратора позволяет получить рациональные параметры преобразования светового потока и

необходимый уровень диспергирования и фокусировки солнечной радиации, который способствует получению максимального коэффициента полезного действия солнечной батареи.

**Ключевые слова:** микропроцессорный способ, измерение, фотопреобразовательные характеристики, голографический концентратор, солнечная батарея, микроконтроллер, датчик расстояния, датчик освещенности, датчик цветности.

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## HIGH-ASH COALS - POTENTIAL RESOURCES FOR FERROALLOY PRODUCTION

**Abstract.** The paper provides a brief overview of data on the structure of electricity generation in the Republic of Kazakhstan according to the proven world reserves of coal, the annual volume of coal production and its distribution by industry in the Republic of Kazakhstan. Based on the comparative analysis of qualitative and technological characteristics of the carbonaceous raw materials of various coal deposits of Kazakhstan, selected were the high-ash deposits most attractive in terms of being put into production of complex ferroalloys. Represented are the results of the proximate analysis and chemical composition of the representative samples of high-ash coals of Borly and Saryadyr deposits of Karaganda and Teniz-Korzhunkol coal basins, respectively. Based on the results of X-ray diffraction (XRD), established were the base minerals in the representative samples of high-ash coals. Presented are the physicochemical properties and processing characteristics, the aggregate thickness of commercial seams, the quantitative estimation of reserves of coal deposits, as well as the primary consumers. Presented also are the results of studies of the mineral and petrographic composition of the high-ash coals of Borly and Saryadyr deposits showing increased content of leaning microcomponents in pure carbon (21-24% fusinite, 22-35% semifusinite), which, in addition to the low content of fusible components (5-10% leptynite, 15-36% vitrinite) will substantially exclude the caking of these types of carbonaceous raw materials at high temperatures.

**Key words:** high-ash coal, qualitative characteristics, X-ray diffraction (XRD), petrographic composition, complex ferroalloy.

**Introduction.** Today, the energy industry is one of the important constituents of the global economic progress. This being said, the electric energy industry is of particular importance for the economy of Kazakhstan, since the key sectors of the country, such as metallurgy and oil and gas production require high energy consumption. Accordingly, the competitiveness of the heavy industry of Kazakhstan and the quality of life of people in many respects depend on the reliable and high-quality energy supply.

In the structure of energy production in Kazakhstan, the coal generation dominates, accounting for 70.4% of the total production of electricity in the country [1-3]. The gas power plants produce 19.4% of electricity, the hydroelectric plants produce 9.7%, while the wind and solar power plants produce 0.4% and 0.1% of electricity in the country, respectively [4,5].

In the fight against climate change, in many countries there is a tendency to switch to renewable energy sources and the government of Kazakhstan is not an exception here, setting ambitious goals for the transition to alternative energy sources [6,7].

However, the cost of coal as a fuel for power generation in many countries remain competitive, and its share of the global heat and power generation account for over 40% of the power supply (and 38% of generation) [8-10].

Total proven coal reserves in the world as at the beginning of 2018, amount to 1,035.0 billion tonnes. At the current level of annual coal production in the world, this amount of coal reserves is sufficient for about 150 years, but given the wide spread of renewable energy sources application in developed countries, the developing countries may be supplied with coal for a much longer period [11-14].

The Republic of Kazakhstan is one of the largest energy producers, which ensures it a significant international presence. Undoubtedly, one of the most crucial tasks for most raw stuff exporting countries, including Kazakhstan, is the wide diversification of the economy. In this regard, global companies are paying more attention not to the increase of reserves, but to the introduction of modern high-performance technologies in the field of processing, improvement of economic efficiency, and rational use of non-renewable energy sources.

In terms of coal extraction, Kazakhstan ranks second among the CIS countries. The coal reserves amount to 162 bln. tonnes. To date, 10 basins are found and more than 300 of coal and lignite deposits are explored.

The annual volume of coal production in the country amounts to over 100 million tonnes. Of these, about 51% is consumed by coal heat and power plants, 31% is exported outside of the country, 13% goes to heating needs of budgetary organizations and the population, and 5% is for industrial enterprises.

Most of the coal deposits are located in Karaganda, Pavlodar, Kostanay, and Akmola regions.

More than half the world's coal reserves are of high-ash.

The consumption of mineral and energy resources inevitably leads to the generation of enormous waste accumulated in dumps of overburden rock, slag, ash residues, etc. The man-made formations carry a very aggressive impact on the natural environment, therefore, the interest in its recycling is not only due to commercial objectives, but also to the increased environmental requirements.

The disposal of high-ash coal and overburden, unused in energy production, with the minimized loss of all elements and, moreover, the production of merchantable metallurgical products out of them is a prospective and timely technological challenge. In this regard, relevant is the development of new sustainable technology of complex processing of natural and man-made raw materials leading to obtaining effective complex alloys.

Currently, in the Karaganda and Tengiz-Korzunkol coal basins, different types and grades of coal are produced. Some of the deposits feature a high ash content; such coal with up to 35% ash content can be used in the electric power industry and national economy and; whereas the higher ash content coal practically does not find application and are stored in dumps.

However, a favorable technical composition (50-65% ash, 18-25% volatiles, up to 20-30% solid carbon) of high-ash coals will allow drawing them into the metallurgical treatment for the production of complex alloys. In this regard, the high-ash coals are the potential resource able to expand the raw materials base.

The carbothermic silicon and aluminum recovery processes are accompanied by formation of considerable amounts of suboxides. Therefore, to prevent the transition of silicon and aluminum suboxides to the gas phase, and to increase the yield of metal in the technology of smelting of complex alloys, it is necessary to pay attention to the physicochemical properties of the furnace burden and processes occurring in the upper layers of the furnace, i.e. on the furnace throat.

In this connection, to obtain an objective picture of the complex use of raw materials, it is necessary to study in detail their material composition and technological properties. To identify the suitability of application of high-ash coals, it is necessary to proceed from their physicochemical and technological characteristics. In this regard, the original raw materials were examined to determine their principal physical and chemical properties.

The study of the mineral composition of raw materials for solving technological problems involves the identification of all the minerals of the sample with a quantitative assessment of their ratio and the characteristic of intergrowth using a complex of methods [15,16].

**Experimental part.** Therefore, to conduct the mineralogical and petrographic studies, we used the representative samples of high-ash coals of Borly and Saryadyr deposits.

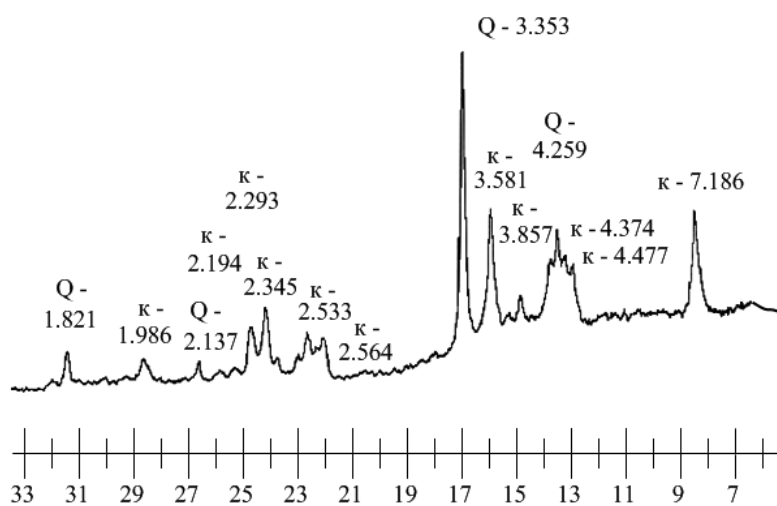
The preliminary preparation of each sample included operations of averaging, reduction, and selection of representative samples for mineralogical, complete chemical, and X-ray analysis.

The results of the proximate analysis and chemical composition of the representative samples of high-ash coals are shown in table 1.

Table 1 – Chemical composition and proximate analysis of high-ash coals

Field	Content, % wt								
	A <sup>c</sup>	V <sup>c</sup>	W	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	MgO	Fe <sub>total</sub>	P <sub>total</sub>
Borly	48,90- 53,43	17,01 - 18,50	0,44 - 1,50	50,75 - 62,10	34,50 -39,50	1,50	0,54	1,17 - 1,70	0,01 - 0,03
Saryadyr	44,20	20,70	1,80	61,30	28,70	1,40	1,0	4,60	0,02

In the representative sample of high-ash coal of Borly deposit, according to X-ray analysis conducted by X-ray diffractometer DRON-2,0 (Fe K<sub>α</sub> - radiation), the following minerals were found: kaolinite (Al<sub>2</sub>Si<sub>2</sub>O<sub>5</sub>(OH)<sub>4</sub>) and quartz (α - SiO<sub>2</sub>) (figure).



XRD pattern of high-ash coal of Borly deposit. k - kaolinite, Q - quartz

**Results and discussion.** The comparative analysis of the properties of carbonaceous raw materials of different coal deposits having respective chemical composition of ash for the smelting of complex alloys showed that the most attractive are the high-ash coals (carbonaceous rocks) of Borly and Saryadyr coal deposits of Karaganda and Teniz-Korzunkol coal basins, respectively. The high-ash coals of these deposits have a high ash fusion temperature, reduced tendency to cake, and relatively low electrical conductivity value [17].

Borly deposit is located in the Karaganda region, 110 km north of the city of Karaganda and 60 km north-east of the railway Karaganda-Nur-Sultan. The deposit represents a gently sloping brachysyncline structure (6.5x2.5 km), the flanks of which are layered by carbonate formations of Famennian Tournasian tiers, while the central portion is a thick stratum sandy-argillaceous rocks of Visean-Serpukhovian age, by analogy with the Karaganda basin, is divided into series (from bottom to top).

1. Ashlyarik (C<sub>1</sub>V<sub>1-2</sub>) 450 m thick;
2. Karaganda (C<sub>1</sub>V<sub>3-s</sub>) 200 m thick;
3. Nadkaraganda (Upper Karaganda) (C<sup>1</sup>s-C<sub>2</sub>) 100 m thick.

The commercial coal-bearing capacity is attributed to the lower part of the Karaganda series section, where three contiguous carbon formations are identified, comprising of 11 coal seams, including 5 commercial seams. The total thickness of the commercial seams is 37.4 m on average.

The coals of the deposit are bituminous; humic by material composition. The ash content of bulk of coal is 31-44%, of run-of-mine coal is 39-47% (45.4% on average). The ash is refractory and has high abrasive properties. The coals are low-sulfur (0.4-1.1%) and low-phosphor (0.01-0.02%). The coals of seams are attributed to «K» rank; the volatile content is 26-36%, the thickness of the plastic layer is 11-16 mm [18-20].

Due to difficult washability, they are not suitable for carbonization, and high ash coals can only be used as power fuel. The ash has a high content of alumina (26.8% on average).

All coal reserves can be mined using open-pit method at the overburden ratio of 1.7 cu.m./tonne. The coal seams are unhazardous in terms of coal and gas outburst (the methane concentration is 0.03 to 0.1 cu.m./tonne), whereas the coal dust is explosive. The coals are prone to spontaneous ignition. The increased content of  $Al_2O_3$  (38-39%) is in particular peculiar to coals and intermediate rocks of the Lower coal formation.

When quantifying the deposit reserves, the coal seams with a minimum thickness of 1.0 m and a maximum ash content of 55% were allocated to the booked reserves. The primary consumers of coal are the power plants of Karaganda and Akmola regions. As of January 1, 2015, the reserves amount to 342708.0 (thousand tonnes) by category A+B+C<sub>1</sub> [21].

The Saryadyr deposit is located in the south-eastern part of the Tengiz-Korzunkol basin (in Yereimentau district of Akmola region, 30 km from the town of Yereimentau) and is a relatively large depression [18-20].

According to the position in the section, lithological composition, fauna, coal-bearing character, they are classified into three series (from bottom to top):

1. Akkuduk (C<sub>1</sub> V<sub>1</sub> ak) 100 m thick;
2. Ashlyarik (C<sub>1</sub> V<sub>1-2</sub> ash) up to 220 m thick;
3. Karaganda (C<sub>1</sub> V<sub>3</sub> - s krg) 400 m thick.

The series are composed of gray-colored sandstone, siltstone, mudstone with sparse and thin interbedded marl and coal seams. The coal-bearing capacity is attributed to Ashlyarik and Karaganda series containing in total 7 coal seams, of which three are commercial. The aggregate thickness of all the commercial seams is 18.3 m.

The seams of Karaganda series Nadyozhniy and Sputnik-II have a very complex structure and relatively volatile. The Pyatimetroviy seam is stable and simply structured.

The coals of the deposit in terms of its quality are the best in the basin, especially the coals of Pyatimetroviy seam, which ash content for run-of-mine coal is 25%. On average, the ash content at the deposit ranges from 30 to 40%, sulfur content 0.6-0.8%, phosphorus 0.62-0.03%, volatile content on dry ash free basis is 38-45%.

The coals are humic, bituminous, hard-cleaning, ranked «G» (gas), unsuitable for carbonization and may be used as power fuel.

The environmental conditions are favorable for open-pit mining at the overburden ratio of 7.3 cu.m./tonne, and 4.9 cu.m./tonne at the site of primary development. The coal seams are classified as unhazardous in terms of sudden coal and gas outbursts. The coal dust is explosive.

As of January 1, 2015, the reserves amount to 164727.0 (thousand tonnes) by category A+B+C<sub>1</sub>, and 94799.0 (thousand tonnes) by category C<sub>2</sub>.

The principal consumers of coals are power plants and the population [21].

As is known, during the extraction, the coal seams are accompanied with rock layers (carbonaceous rocks) with high ash content of more than 40%, which does not always find use and are stored in dumps. The carbonaceous rocks have unstable chemical composition. The composition varies sharply from layer to layer and even within one layer, whereas for the production of complex alloys it is important that the carbonaceous materials have uniform chemical and mineralogical composition. The problem of their unstable composition can be solved by stacking and fractionation.

Accordingly, the representative samples of high-ash coals of Borly and Saryadyr deposits were subjected to mineralogical and petrographic studies.

High-ash coal of Borly deposit is classified as humic coal, bituminous (K<sub>en</sub>) (humolites are a group of coals formed due to transformation of higher plants residues in bog conditions). The color is gray to black. The lustre is matt to mirror.

The petrographic composition of high-ash varieties of coals and coal-bearing rocks is shown in table 2. The petrographic composition of coals of Borly and Saryadyr deposits shows the increased content of leaning microcomponents in pure carbon (21-24% fusinite, 22-35% semi-fusinite) which, in addition to the low content of fusible components (5-10% leptynite, 15-36% vitrinite) will substantially exclude the caking of these types of carbonaceous raw materials at high temperatures.

The material and petrographic composition shows the significant presence of mineral impurities, consisting primarily of fine mica-clay materials closely interrelated with the organic portion of coal.

Table 2 – Petrographic composition of coals of Borly and Saryadyr deposits

Sample name	Overall composition of coal, %						Composition of coals with minerals, %					Pure coal composition, %							Total leaning components in pure coal, %	Total caking components in pure coal, %	Total	Vitrinite reflectance					
	pure coal	clay minerals	iron sulfides	carbonates	silicon oxides	other	total	vitrinite	inertinite	lipitinite	minerals	total	vitrinite	semi-fusinite	macrinite	fusinite	sclerotinite	inertodetrinite					micrinite	lipitinite			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
Run-of-mine coal of Borly deposit	39	56	traces	-	5	-	100	6	31	2	61	100	15	35	6	24	-	13	2	5	100	20	80	0,95			
Run-of-mine coal of Saryadyr deposit	59	36	traces	shares	5	-	100	21	32	6	41	100	36	22	6	21	-	5	traces	10	100	46	54	0,74			



**Conclusions.** The results of study of the mineralogical and petrographic composition of high-ash coals of Borly and Saryadyr deposits show an increased content of leaning microcomponents in pure carbon (21-24% fusinite, 22-35% semi-fusinite) which, in addition to the low content of fusible components (5-10% leptynite, 15-36% vitrinite) will substantially exclude the caking of these types of carbonaceous raw materials at high temperatures. These high-ash coals have a high fusion point, a favorable petrographic composition, low tendency to caking and a relatively low value of electric conductivity. In general, high-ash coals of Borly and Saryadyr deposits by their physical and chemical properties and qualitative indicators are the complex metallurgical raw materials and meet the requirements for the smelting of complex aluminum-, silicon-, manganese-containing alloys.

In the future, they are a potential source of raw materials for the sustainable development of not just the fuel and energy sector, but also the expanded mass production of complex ferroalloys. The development of technology of producing complex ferroalloys using high-ash coals will define the role of coal deposits of Kazakhstan as a long-term (for centuries) resource base of ferroalloy production in Kazakhstan.

The industrial commissioning of complex ferroalloys production will ensure:

- the involvement of dump high-ash coals – of little use in the energy sector – in production, with simultaneous solution to the problem of their disposal and, as a consequence, improvement of the environmental conditions of communities of coal mining regions of Kazakhstan;
- the involvement of unsuitable manganese ores in metallurgical conversion to produce standard grades of manganese ferroalloys, such as ferromanganese and silicomanganese without additional and complex enrichment operations;
- the complete exclusion of the use of expensive carbonization in the process flow;
- ensure the competitiveness of output products and increase the export potential.

The involvement of high-ash coals in the production of complex ferroalloys is an adequate response to the global and domestic challenges of the time and in the foreseeable future will allow balanced and sustainable development of the ferroalloy industry in Kazakhstan.

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#### **ЖОҒАРЫ КҮЛДІ КӨМІРЛЕР – ФЕРРОҚОРЫТПА ӨНДІРІСІНІҢ ӘЛЕУЕТТІ ШИКІЗАТ БАЗАСЫ**

**Аннотация.** Жұмыста Қазақстандағы электр энергиясының өндіріс құрылымына қысқаша шолу жасалған. Көмір генерациясы басым рөлге ие, оның үлесіне елдегі электр энергиясын өндірудің жалпы көлемінің 70,4%-ы келеді. Әлемде және Қазақстанда дәлелденген көмір қоры, көмір өндірудің жылдық көлемі және оны Қазақстан Республикасындағы салалар бойынша бөлу туралы мәліметтер келтірілген. Елдегі негізгі көмір кен орындарының орналасқан жері туралы ақпарат келтірілген.

Көмір қабаттарын қазып алу кезінде әрдайым қолданылмайтын және үйінділерде сақталатын 40% -дан астам күл мөлшері бар тау жыныстары (көміртекті жыныстар) жүреді. Мұндай көміртекті тау жыныстарының теріс жағы – тұрақсыз химиялық құрам. Мұны жинау және бөлу арқылы шешуге болады.

Қазіргі уақытта Қарағанды және Теңіз-Қоржанды көмір бассейндерінде көмірдің әртүрлі түрлері мен сорттары өндіріліп жатыр. Кейбір кен орындарында күл мөлшері жоғары, мысалы, 35% дейін көмірді электр энергетикасы мен халық шаруашылығында қолдануға болады, ал күл мөлшері көп болған жағдайда олар іс жүзінде пайдаланылмайды және қоқыстарда сақталады.

Сондықтан энергетикалық салада пайдаланылмаған күлді көмір мен артық жүктемені кәдеге жарату барлық элементтердің шығындарын азайтып, сонымен қатар олардан нарықтық сұранысқа ие металлургия өнімдерін шығару перспективалы және уақтылы ғылыми-техникалық міндет болып табылады. Осыған байланысты тиімді кешенді қорытпаларды алу үшін табиғи және техногендік шикізатты кешенді түрде өндеудің жаңа ресурстарын үнемдейтін технологияларды әзірлеу өзекті болып табылады.

Қазақстандағы әр түрлі көмір кен орындарындағы көміртекті шикізаттың сапалық және технологиялық сипаттамаларын салыстырмалы талдау негізінде жоғары күлді көмірдің ең тартымды кен орындары күрделі ферроқорытпа өндірісіне тарту тұрғысынан таңдалды.

Техникалық талдау нәтижелері және сәйкесінше Қарағанды және Теніз-Коржанкөл көмір бассейндерінің Борлы және Сарыадыр кен орындарындағы жоғары күлді көмірлердің химиялық құрамы келтірілген.

Рентгендік фазалық талдаудың нәтижелері бойынша (РФТ) жоғары күлді көмірдің өкілдік үлгілеріндегі негізгі минералдар анықталды. Физика-химиялық қасиеттері мен технологиялық сипаттамалары, жұмыс қабаттарының жалпы сыйымдылығы, көмір кен орындарының қорларын сандық бағалау және негізгі тұтынушылар туралы мәліметтер келтірілген. Борлы және Сарыадыр кен орындарындағы жоғары күлді көмірлердің минералогиялық және петрографиялық құрамын зерттеу нәтижелері таза көмірдегі жұқа микрокомпоненттердің (21-24% фюзинит, 22-35% семифюзинит) жоғарылағанын көрсетті, ол ерігіш компоненттердің аз құрамымен (5-10% лейптинит, 15-36% витринит) іс жүзінде көмір шикізатының осы түрлерін жоғары температурада жентектеуді болдырмайды.

**Түйін сөздер:** жоғары күлді көмір, сапа көрсеткіштері, рентгенфазалық талдау (РФТ), петрографиялық құрам, кешенді феррокорытпа.

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### **ВЫСОКОЗОЛЬНЫЕ УГЛИ - ПОТЕНЦИАЛЬНАЯ СЫРЬЕВАЯ БАЗА ФЕРРОСПЛАВНОГО ПРОИЗВОДСТВА**

**Аннотация.** В работе приведен краткий обзор по структуре производства электроэнергии в Казахстане. Доминирующую роль занимает угольная генерация, на долю которой приходится 70,4% от общего объема производства электроэнергии в стране. Также приведены данные по доказанным запасам угля в мире и в Казахстане, ежегодному объему добычи угля и его распределения по отраслям в Республике Казахстан. Приведены сведения по расположению основных месторождений каменного угля в стране.

При добыче пластов угля сопутствуют породные слои (углистые породы) с повышенной зольностью более 40%, которые не всегда находят применение и складировются в отвалы. Отрицательной стороной таких углистых пород является нестабильный химический состав. Это можно решить путем штабелирования и фракционирования.

В настоящее время в Карагандинском и Тениз-Коржункольском угольных бассейнах добываются различные виды и сорта углей. Некоторые месторождения содержат высокую зольность, такие угли зольностью до 35% могут быть использованы в электроэнергетике и народном хозяйстве, а с более высоким содержанием золы практически не находят применения и складировются в отвалы.

Поэтому утилизация неиспользуемых в энергетике высокозольных углей и вскрышных пород с минимизацией потерь всех элементов и более того производство из них металлургической продукции обладающей рыночным спросом является перспективной и своевременной научно-технической задачей. В этой связи актуальным является разработка новых ресурсосберегающих технологии комплексной переработки природного и техногенного сырья с получением эффективных комплексных сплавов.

На основе сравнительного анализа качественных и технологических характеристик углистого сырья различных угольных месторождений Казахстана выбраны наиболее привлекательные с точки зрения вовлечения в производство комплексных ферросплавов месторождения высокозольных углей.

Представлены результаты технического анализа и химического состава представительных проб высокозольных углей месторождений Борлы и Сарыадыр Карагандинского и Тениз-Коржункольского угольных бассейнов, соответственно.

На основе результатов рентгенофазового анализа (РФА) установлены основные минералы в представительных пробах высокозольных углей. Приведены физико-химические свойства и технологические характеристики, суммарные мощности рабочих пластов, количественная оценка запасов угольных месторождений и сведения по основным потребителям. Также приведены результаты исследований минералогического состава высокозольных углей месторождений Борлы и Сарыадыр показавшие на повышенное содержание отошающих микрокомпонентов в чистом угле (21-24% фюзинита, 22-35% семифюзинита), что наряду с низким содержанием плавких компонентов (5-10% лейптинита, 15-36% витринита) практически будет исключать спекание данных видов углистого сырья при высоких температурах.

**Ключевые слова:** высокозольный уголь, качественные показатели, рентгенофазовый анализ (РФА), петрографический состав, комплексный ферросплав.

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## REGULARITIES OF DEVELOPMENT OF COLTS OF THE KAZAKH BACTRIAN BREED

**Abstract.** Based on the studies, it was found that for parental couples with a coefficient of wool clip up to 0.8 at the age of one year, the amount of wool clip was 2.4 kg, which is significantly lower by 12.5% compared to herdmates from parents with a coefficient of wool clip of 0.9-1.4, and 29.2% lower in comparison with young one-year-olds obtained from parental couples with the coefficient of wool clip of 1.5 and above.

It was established that the real wool cut was lower in two-year-old females obtained from parents with a coefficient of wool clip of up to 0.8 and 1.5 and higher. In two-year-old females obtained from parental couples with the coefficient of the wool clip of 0.9-1.4, the real wool cut was 9.1% higher than predicted. In the future, during the selection, it is recommended to give preference to individuals with a coefficient of shear of wool 0.9-1.4.

In colts of the Kazakh Bactrian of the South Kazakhstan type obtained from female camels corresponding to the technological parameters of dairy productivity, exceeded their mates of the wool-meat direction of productivity in live weight by 17.8% ( $P < 0.01$ ), of the milk and meat direction - in ( $P < 0.1$ )

After weaning, the intensity of growth and development is significantly reduced, which affected the increase in absolute live weight from 6 months to 9 months of age. After weaning, the colts from female camels of dairy productivity, the live weight increased by 11.9%, of the wool and meat productivity - by 34.0%, of the milk and meat direction of productivity - by 23.3%. That is, early weaning is not beneficial for colts from camels of the dairy direction of productivity. From one year to 15 months of age, young livestock from dairy camels have increased live weight by 17.1%, from wool and meat camels - by 19.1%, from milk and meat camels - by 16.6%.

From the age of 9 months to 15 months, the colts increased their live weight obtained from mothers with the coefficient of wool clip up to 0.8 by 58.7%, with the coefficient of 0.9-1.4 - by 55.3%, with the coefficient of 1.5 and above - by 91.1% The height between the humps increases by 15.7% -11.4% -11.7% respectively. That is, all female camels are of wool-meat productivity directions. The effectiveness of conducting assessment and selection by the coefficient of wool clip has been proved in the conditions of Baysyerke-Agro LLP.

**Key words:** Kazakh Bactrian, assessment, selection, technological parameters, colts, early ripeness.

**The relevance of the topic.** Camel breeding in the Republic of Kazakhstan is developing dynamically. There is an interest in agricultural enterprises of various forms of property to develop a productive direction of camel breeding.

A deterrent to the development of camel breeding in the Almaty region is the small number of females and producers. The rotation system of sampler-producers is violated, as a result of this the frequency of using moderate and even related mating of camels of reproductive age increases.

Many elaborations of local scholars regarding the use of approved methods for selection and breeding using commercial livestock are not effective.

One of the urgent problems in camel breeding is the long fructification period of the Kazakh Bactrian camels and low fertility up to 42%. Despite the available breeding achievements in Kazakh Bactrians, the effective methods for assessing dairy, meat and wool productivity have not yet been developed [1].

Reasonable methods of reproduction of the breeding stock of camels have not been worked out, taking into account the technological parameters of productivity.

In connection with the above, the choice of the research direction to improve breeding efficiencies and increase productivity through targeted selection and breeding of purebred camels of the Kazakh Bactrian in the conditions of the Baysyerke-Agro Educational Scientific and Production Center is correct.

Therefore, the development of effective criteria for evaluating camels by productivity based on a study of the regularities of growth and development of camels is relevant.

**The aim of the research.** To develop processing technologies for increasing the productive capacity of camels and improving the breeding efficiencies of the purebred animals.

**Scientific novelty.** For the first time, the influence of technological parameters of productivity of the Kazakh Bactrian camels on their productivity and early ripeness was established in the post-dairy period. For the first time, the regularities of postembryonic growth and development of young camels in the Almaty region were found.

**The practical value of the research.** Criteria for reliable assessment and selection of camels of the Kazakh Bactrian breed by the productivity direction have been developed. Using various options for the selection of parental pairs made it possible to obtain offspring with the given productive and technological parameters. Scientific provisions, conclusions, and recommendations have been widely used in the selection of camels of the Kazakh Bactrian breed of the South Kazakhstan type under the conditions of Baysyerke-Agro LLP.

**Research methods.** The object of the study was purebred Kazakh Bactrians of the South-Kazakhstan type.

Body measurements were studied according to the Instructions on the bonitation of camels 2014 [2]. The height between the humps was measured with an accuracy of 1.0 cm. The oblique body length and chest girth were measured with an accuracy of 1.0 cm, and the metacarpus girth was measured with up to 0.5 cm.

The live weight of camels was determined by individual weighing of animals on a stationary scale, as well as by calculation method at the request of Patent No. 15886 [3].

Morphofunctional features of the udder of camels were studied by the method of A. Baimukanov of 1972 [4]. The fat content in milk was determined using Milkotester device (2017). Total protein in milk was defined using AM-2 milk analyzer (2017).

The regularities of growth and development of the Kazakh Bactrian of the South Kazakhstan type born in 2019 was studied according to the common method [5]. We studied live weight and height at the withers in the postembryonic period.

The technological parameters for the selection of camels by dairy productivity were determined by the degree of full value of lactation and its impact on milk yield and fat content. Gradation of camels by the degree of full value of lactation was carried out in three ranks: up to 65 - 74; 75-84; 85 and more. The degree of full value of lactation in camels was determined according to the recommendation of professor A. Baimukanov by the formula [6].

$$CПЛ = Y\Phi \times 100 / YC_n$$

where CПЛ – degree of full value of lactation;  $Y\Phi$  – real milk yield for the entire lactation period;  $YC$  – average daily milk yield in the third month of lactation;  $n$  – the number of days of lactation.

The milking capacity coefficient was determined by the requirement of the Patent of the Republic of Kazakhstan No. 22213 through the ratio of the real milk yield for the active period of lactation to live weight [7].

$$KM = YM / \mathcal{K}M$$

where  $KM$  – the milking capacity coefficient;  $YM$  – the milk yield per lactation;  $\mathcal{K}M$  – live weight.

Gradation by milking capacity coefficient was carried out in three ranks: up to 1.4; 1.5-1.9; 2.0 and more.

The influence of the fertility index on the real milk yield in experimental camels of the Kazakh Bactrian of the South Kazakhstan type was carried out according to the common method. The fertility index was determined by the formula proposed by professor A. Baimukanov [8].

$$\Pi = 365 (n-1) \times 100/N,$$

where  $\Pi$  – the fertility index;  $n$  – number of coltings;  $N$  – the number of days between the first and last coltings.

The gradation by the fertility index was conducted in three ranks: up to 42; 42 - 47; 47 and more.

The influence of the gradation of the coefficient of wool clip (CWC) on the intensity of achieving the best finish and live weight was carried out in young males born in 2017 while the coefficient of wool clip is calculated by the formula [9].

$$KHIII = \frac{HIII}{ЖМ} \times 100$$

where  $KHIII$  – coefficient of wool clip;  $HIII$  – the amount of wool clip;  $ЖМ$  – live weight.

The gradation by the coefficient of wool clip was carried out in three ranks: up to 0.8; 0.9-1.4; 1.5 and above.

Biometric processing of digital materials was carried out according to the common method [10].

**Research results.** Based on the studies, it was found that for parental couples with a coefficient of wool clip up to 0.8 at the age of one year, the amount of wool clip was 2.4 kg, which is significantly lower by 12.5% compared to herdmates from parents with a coefficient of wool clip of 0.9-1.4, and 29.2% lower in comparison with young one-year-olds obtained from parental couples with a coefficient of wool clip of 1.5 and above (table 1).

Table 1 – Influence of the coefficient of wool clip on the indices of practical shearing of wool in young camels of the Kazakh Bactrian

Traits	Parental coefficient of wool clip		
	up to 0.8	0.9 -1.4	1.5 and more
The number of estimated daughters, animals	5	5	6
Live weight at birth, kg	29.3±1.7	37.7±1.1	35.5±1.6
Live weight at weaning, kg	245.8±9.8	269.2±14.5	239.1±19.1
Wool clip at one-year-old age, kg	2.4±0.3	2.7±0.3	3.1±0.2
Predicted wool clip at the age of two years, kg	2.9	3.3	4.2
Real wool clip at the age of two years, kg	2.8±0.2	3.6±0.4	3.7±0.4
The yield of pure fiber at the age of one year, %	95.2	95.5	95.5
The yield of pure fiber at the age of two years, %	96.5	96.6	96.5

It was established that the real wool clip was lower in two-year-old females obtained from parents with the coefficient of wool clip of up to 0.8 and 1.5 and more. In two-year-old females, the real wool clip obtained from parental couples with the coefficient of wool clip of 0.9-1.4 was 9.1% higher than the predicted.

With that in mind, we believe that the coefficient of wool clip is a reliable criterion for assessing camels of the Kazakh Bactrian breed in terms of shearing. In the future, during the selection, it is advisable to give preference to individuals with the coefficient of wool clip of 0.9-1.4.

Concerning the study of the yield of pure fiber, it was established that the produced wool is characterized by high technological qualities due to targeted selection with camels of the Kazakh Bactrian breed. At the same time, the pure fiber yield of 95.2-96.6% indicates the presence of inbreeding in the selection and breeding of parental couples. Therefore, to avoid mortality from the offspring in subsequent years, it is necessary to purchase sampler-producers from other regions of Kazakhstan.

In colts, as in calves, the early ripeness depends on the dairy productivity of their mothers. The regularities of milk formation as well as the formation of dairy productivity in cattle [11] are to some extent identical to camels.

In Kazakh Bactrian colts of the South Kazakhstan type obtained from camels of the dairy productivity exceeded their mates of the wool-meat direction of productivity in live weight by 17.8% ( $P < 0.01$ ), milk and meat in ( $P < 0.1$ ) (table 2).

Table 2 – Growth and development of colts in the post-dairy period, depending on the technological parameters of the breeding traits of their mothers (n=5)

Technological parameters of productivity	Age	Live weight, kg	Height between humps, cm
Dairy	At birth	40.3±1.9	109.7±2.1
	3 months	114.0±4.4	130.3±3.8
	6 months	169.9±6.3	145.1±3.3
	9 months	190.2±4.2	148.9±1.5
	12 months	232.7±5.7	155.4±1.1
	15 months	272.5±6.4	159.2±1.3
Wool - meat	At birth	34.2±1.5	104.0±2.4
	3 months	94.6±3.7	123.4±3.1
	6 months	144.5±5.1	137.2±3.5
	9 months	193.6±3.5	145.6±2.2
	12 months	240.1±4.7	151.1±2.7
	15 months	289.6±5.3	156.3±1.9
Milk-meat	At birth	36.8±1.9	107.1±1.8
	3 months	108.9±2.8	128.6±2.1
	6 months	156.2±6.1	141.9±2.5
	9 months	192.6±4.9	146.3±2.9
	12 months	242.4±5.2	152.8±2.7
	15 months	282.7±3.6	158.2±2.3

After weaning, the intensity of growth and development was significantly reduced, which affected the increase in absolute live weight from 6 months to 9 months of age. After weaning, the colts from female camels of dairy productivity, the live weight increased by 11.9%, of the wool and meat productivity - by 34.0%, of the milk and meat direction of productivity - by 23.3%. That is, early weaning is not beneficial for colts from camels of the dairy direction of productivity.

In young Kazakh Bactrians obtained from females of dairy productivity, the increase in live weight for the next 90 days (from 9 months to 12 months) was 42.5 kg, from the group of camels of wool-meat productivity direction - 46.5 kg and obtained from milk-meat female camels - 49.8 kg.

From one year to 15 months of age, young livestock from dairy camels have increased live weight by 17.1%, from wool and meat camels - by 19.1%, from milk and meat camels - by 16.6%.

From 2018 to 2020, the influence of the technological parameters of female camels on the growth and development of colts after weaning was studied. Weaning was performed at the age of 9 months (table 3).

When studying female camels of the main herd with technological parameters according to the degree of full value of lactation (DFL), it was found that with a degree of full value lactation of 75-84%, the height at the withers (8.8 cm) is intensively increased in colts from 9 months of age to one year old, in comparison with mates received from females with DFL of 65-74% (5.7 cm) and 85% and above (8.5 cm). Likewise, the live weight of colts from females is increasing intensively: with DFL of 75-84% (37.6 kg), with DFL of 65-74% (39.4 kg), and with DFL of 85% and above (41.1 kg) (table 3).

In the next three months, the colts have an increase in live weight: in those from female camels with DFL of 65-74% - 37.4 kg or 16.2%, with DFL of 75-84% - 16.2 kg or 6.8%, with DFL of 85% and above - 24.2 kg or 10.3%.

It has been found that in female camels with the milking capacity (MC) of up to 1.4; 5-1.9 and 2.0 and higher in the post-embryonic period, the live weight increases in camels from 9 months of age to one-year-old by 32.9% -19.9% -21.8%. From 12 months to 15 months of age by 14.1% -15.5% -12.45%. That is, in the first three months, the colts from female camels with MC of up to 1.4 grow intensively, in the next three months - the colts from camels with MC of 1.5-1.9.

Table 3 – The influence of the technological parameters of mothers on the growth and development of young stock in the post-dairy period

Traits	Age	Technological parameters		
		The degree of full value of lactation, %		
		65-74	75-84	85 and higher
Live weight, kg	9 months	192.1±3.7	202.3±7.4	193.6±5.8
	12 months	231.5±4.2	239.9±5.7	234.9±8.1
	15 months	268.9±9.4	256.1±6.1	259.1±7.5
Height between humps, cm	9 months	142.4±1.1	137.5±0.9	139.3±1.2
	12 months	148.1±0.9	146.3±1.2	147.8±1.4
	15 months	155.8±1.5	154.6±1.1	155.2±1.3
		Milking capacity		
		up to 1.4	1.5-1.9	2.0 and higher
Live weight, kg	9 months	177.9±8.2	196.9±4.2	190.3±6.4
	12 months	236.4±5.7	236.2±6.4	231.9±8.2
	15 months	269.9±8.2	272.9±4.2	260.8±6.4
Height between humps, cm	9 months	139.2±1.3	145.1±1.1	141.4±1.1
	12 months	145.7±1.1	151.5±1.4	150.3±1.2
	15 months	152.3±1.2	158.2±1.3	154.5±1.6
		Fertility index		
		up to 42	42-47	47 and higher
Live weight, kg	9 months	181.6±6.2	191.5±3.7	172.1±8.5
	12 months	237.1±8.7	246.5±5.4	235.6±6.8
	15 months	271.6±5.9	281.3±4.3	275.4±9.2
Height between humps, cm	9 months	140.9±1.7	141.4±1.5	141.1±1.6
	12 months	143.4±1.5	148.1±1.8	146.8±1.4
	15 months	164.3±1.9	156.4±1.6	151.7±1.3
		Coefficient of wool clip		
		up to 0.8	0.9 -1.4	1.5 and higher
Live weight, kg	9 months	168.9±7.1	187.6±4.9	190.1±8.3
	12 months	221.3±5.8	245.1±6.2	233.7±6.8
	15 months	268.1±6.3	291.5±5.8	281.2±7.1
Height between humps, cm	9 months	131.3±1.7	139.5±1.3	147.1±1.5
	12 months	141.1±1.4	146.1±1.8	152.8±1.1
	15 months	151.9±1.3	155.4±1.6	164.3±1.3

The colts in the post-dairy period obtained from females with the fertility index of up to 42% develop more intensively, compared with mates received from camels with the fertility index of 42-47%, 47 and higher. From the age of 9 months to 15 months, the height at the withers increases by 16.6% -10.6% - 7.5%. In terms of live weight, young camels from mothers with the fertility index of 47% and above 60.0% intensively grow, compared with the mates of 49.6% and 46.9%.

From the age of 9 months to 15 months, the colts increased their live weight obtained from mothers with the coefficient of wool clip up to 0.8 by 58.7%, with the coefficient of 0.9-1.4 - by 55.3%, with the coefficient of 1.5 and above - by 91.1 % The height between the humps increases by 15.7% -11.4% - 11.7% respectively. That is, all female camels are of wool-meat productivity directions. The effectiveness of conducting assessment and selection by the coefficient of wool clip has been proved in the conditions of Bayserke-Agro LLP.



**Conclusions.** To increase the early ripeness of the Kazakh Bactrian colts, it is needed to increase the selection of the breeding stock with the degree of full value of lactation of 75-84%, with the dairy productivity rank of 1.5-1.9, with the fertility index of 42-47% and the coefficient of wool clip of 0.9-1.4.

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### **ҚАЗАҚ ҚОС ӨРКЕШТІ ТҮЙЕЛЕРІНІҢ БОТАЛАРЫНЫҢ ДАМУ ЗАҢДЫЛЫҚТАРЫ**

**Аннотация.** Қазақ бактериан түйесінің қыркылған шудасын бағалау нәтижелері бойынша сұрыптау критерилерін жасау, зерттеудің өзекті бағыты болып табылады, себебі келер ұрпақтағы алынатын шуда шығымын болжауға мүмкіндік береді. Жүргізілген зерттеулер негізінде анықталғандай, шуда шығымының коэффициенті 0,8 болған ата – аналық жұптардың ұрпақтарында 1 жасындағы боталарында шуда шығымы 2,4 кг, жүн шығымы 0,9 – 1,4 коэффициенте ата – аналық жұптарда 29,2% төмен және жүн шығымы 1,5 және одан жоғары коэффициентте 1 жас боталардан төмен.

Шуда шығымы 0,8 және 1,5 және жоғары коэффициенті ата – аналық жұптардан алынған 2 жастағы інгендерде жүн шығымы күтілгеннен төмен болды. Жүн шығымы 0,9 – 1,4 коэффициентке ие ата – аналық жұптардан алынған інгендерден шуда шығымы болжалғаннан 9,1 % жоғары болды. Осыған сүйене отырып, қазақ бактериан түйелерінің шудаларының шығымы анықтаушы критерий болып табылады. Ары қарай, сұрыптауда жүн шығымы 0,9 – 1,4 коэффициентті түрлер алынды.

Қазақ бактериан түйелерінің бағытталған селекциясы барысында алынған шудалар жоғары технологиялық сапаларға ие. Алынған таза талшықтың шығым көрсеткіші 95,2-96,6%, бұл ата – аналық жұптарда таңдауда және сұрыптауда инбридингтің бар екендігін дәлелдейді. Сондықтан ұрпақтың төмедеуі болмауы үшін Қазақстанның басқа аймақтарынан буралар сатып алу керек.

Сәйкес технологиялық параметрлермен алынған қазақ бактериан боталарының оңтүстік қазақстан типінде сүттілігі жүнді – етті бағыттағы өнімділігі бойынша тірі салмағы құрдастарынан басым (17,8% ( $P < 0,01$ ), сүтті - етті ( $P < 0,1$ )).

Қарқынды өсу мен даму тоқтағаннан кейін 6 айлық 9 айлық аралықта тірі салмақта абсолютті ұлғаюы айтарлықтай төмендеді. Сүтті бағыттағы боталарды інгендерден бөлгеннен кейін тірі салмақ 11,9%, жүнді – етті 34,0%, сүтті – етті - 23,3%. Боталарды інгендерден ерте бөлу тиімсіз.

Сүтті бағыттағы қазақ қос өркешті інгендерінен алынған боталар кейінгі 90 күнде (9 айдан 12 айға дейін) тірі салмақтың өсімі 42,5 кг құрады, жүнді – етті бағыттағылардан – 46,5 кг және сүтті – етті бағыттағы інгендерден – 49,8 кг.

Сүтті бағыттағы інгендерден алынған төлдердің 1 жастан және 15 айлық жаста тірі салмағы 17,1%, жүнді – еттіде - 19,1%, сүтті – еттіде – 16,6% ұлғайды.

2018 ж. және 2020 жыл аралығында төлдерді інгендерден бөлгеннен кейін боталардың өсуі мен дамуына технологиялық параметрлердің әсері зерттелді. Анасынан бөлу 9 айда іске асырылды.

Негізгі үйірдегі інгендердің технологиялық параметрлерінің толық лактациялық дәрежесі бойынша зерттеу 9 айлық төлдерді толық лактация дұрыс болғанда 9 айдан 1 жасқа дейінгі аралықта шоқтық биіктігі өсу қарқындылығы (8,8 см), інгендердің лактация дәрежесі 65-74% бойынша аналогтарымен салыстырғанда (5,7 см) және 85% және (8,5 см) жоғары. ЛДТ інгендердің боталарында тірі салмақтың және өсу қарқындылығы 75-84% (37,6 кг), 65-74% (39,4 кг), 85% және жоғары (41,1 кг).

ЛДТ соңғы үш айда боталарда 65-74% - 37,4 кг немесе 16,2%, 75-84% - 16,2 кг немесе 6,8%, 85% және жоғары – 24,2 кг немесе 10,3%. 15 айлық жасқа жеткенде барлық боталарда шоқтық биіктігі 154,6-155,8 см бірдей болды. Алынған нәтижелер боталардың емізуден ажырағаннан кейін өсу мен даму қарқындылығына ЛДТ ұтымдылығының әсері анықталмады.

Сүттілік коэффициенті 1,4 дейінгі, 9 – 1,9 және 2,0 және жоғары інгендерде туылғаннан кейінгі кезеңде боталардың тірі салмағы 9 айдан 12 ай аралығында 32,9%-19,9%-21,8%., 12 – 15 ай аралығында 14,1%-15,5%-12,45%. Алғашқы үш айда СК 1,4 інгендердің боталары қарқынды өседі, кейінгі үш айда СК 1,5-1,9 інгендерден алынған боталар қарқынды өсті.

Шоқтық биіктігінің ұлғаюы бойынша бақылаудағы боталарда 9 айдан бір жасқа дейін 6,5 см-6,4 см-7,9 см, 12 айдан 15 айға дейін 6,6 см-6,7 см-4,2 см. 9 айдан 15 айға дейінгі аралықта шоқтық биіктігінің ұлғаюы 13,3 см-13,1 см-13,1 см. Алынған нәтижелер казак қос өркешті түйелерінде инбридинг қауіптілігін растайды.

Өнімділік индексі 42 % дейінгі інгендерден алынған боталар емізу мезгілінен кейін 42 – 47 % өнімділік индексі құрдастарымен салыстырғанда қарқынды дамиды. 9 айдан 15 ай аралығында шоқтық биіктігі 16,6%-10,6%-7,5% жоғарлайды. Тірі салмағы бойынша өнімділік индексі 47% және 60,0 % жоғары аналардан туылған боталар ие. Аналогтарымен салыстырғанда 49,6% және 46,9%.

Негізгі үйірде өнімділік индексі бойынша інгендерді сұрыптаудың тиімділігі анықталмады. Өндіруші буралар сатып алу керек.

9 айдан 15 ай аралығында шуда шығымы 0,8 коэффициентіне ие інгендерден алынған боталардың тірі салмағы 58,7%, 0,9-1,4 - 55,3%, 1,5 және жоғары 91,1%. Өркештер арасындағы биіктік 15,7%-11,4%-11,7% ұлғаяды. Қорыта келгенде, барлық інгендер жүнді – етті бағытта. «Байсерке-Агро» ЖШС жағдайында шуданың қыркым коэффициенті бойынша бағалау мен сұрыптау жасау тиімді.

**Түйін сөздер:** казак бактерианы, бағалау, сұрыптау, технологиялық параметрлер, боталар, жетілу.

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### **ЗАКОНОМЕРНОСТИ РАЗВИТИЯ ВЕРБЛЮЖАТ ПОРОДЫ КАЗАХСКИЙ БАКТРИАН**

**Аннотация.** Разработка критериев отбора по результатам оценки верблюдов породы казахский бактриан по коэффициенту настрига шерсти является актуальным направлением исследований, так как позволяет достоверно прогнозировать настриг шерсти у полученного потомства. На основании проведенных исследований установлено, что у родительских пар с коэффициентом настрига шерсти до 0,8 в верблюжата в годовалом возрасте имели настриг шерсти 2,4 кг, что достоверно ниже на 12,5% в сравнении со сверстницами, полученных от родителей с коэффициентом настрига шерсти 0,9-1,4, и на 29,2% ниже в сравнении с молодняком годовалого возраста, полученных от родительских пар с коэффициентом настрига шерсти 1,5 и выше.

Установлено, что фактический настриг шерсти оказался ниже у двухлетних самок, полученные от родителей с коэффициентом настрига шерсти до 0,8 и 1,5 и выше. У двухлетних самок, полученных от родительских пар с коэффициентом настрига шерсти 0,9-1,4, фактический настриг шерсти оказался на 9,1% выше прогнозируемого. Исходя из этого, считаем, что коэффициент настрига шерсти является достоверным критерием оценки верблюдов породы казахский бактриан по показателям настрига шерсти. В дальнейшем при отборе отдавать предпочтение особям с коэффициентом настрига шерсти 0,9-1,4.

Касательно изучения выхода чистого волокна установлено, что продуцируемая шерсть характеризуется высокими технологическими качествами, обусловленными целенаправленной селекцией с верблюдами породы казахский бактриан. В то же время, показатель выхода чистого волокна 95,2-96,6% свидетельствует о наличии инбридинга при отборе и подборе родительских пар. Поэтому во избежание падежа у приплода в последующие годы необходимо провести закуп бура-производителей из других регионов Казахстана.

У верблюжат казахского бактриана южно-казахстанского типа, полученных от верблюдоматок, соответствующие технологическим параметрам продуктивности – молочное превосходили сверстниц шерстно-мясного направления продуктивности по живой массе на 17,8% ( $P < 0,01$ ), молочно-мясного на ( $P < 0,1$ ).

После отъема интенсивность роста и развития значительно снижаются, что повлияло на увеличение абсолютной живой массы с 6 месячного возраста до 9 месячного. После отъема у верблюжат от верблюдоматок молочной продуктивности живая масса увеличилась на 11,9%, шерстно-мясной – 34,0%, молочно-мясного – 23,3%. То есть, ранний отъем не выгоден для верблюжат от верблюдоматок молочно направления продуктивности.

У молодняка казахского бактриана, полученных от верблюдоматок молочной продуктивности, за последующие 90 дней (с 9 мес. до 12 мес.) увеличение живой массы составило 42,5 кг, от группы верблюдоматок шерстно-мясного направления продуктивности – 46,5 кг и верблюдоматок молочно-мясного направления – 49,8 кг.

От годовалого возраста до 15 месячного возраста у молодняка от верблюдоматок молочной продуктивности живая масса увеличилась на 17,1%, шерстно-мясного – на 19,1%, молочно-мясного – 16,6%.

С 2018 г по 2020 г. изучали влияние технологических параметров верблюдоматок на интенсивность роста и развития верблюжат после отъема. Отъем производили в 9 мес. возрасте.

При изучении верблюдоматок основного стада с технологическими параметрами по степени полноценности лактации (СПЛ) установлено, что при степени полноценности лактации 75-84% у верблюжат с 9 месячного возраста до годовалого возраста интенсивно растет высота в холке (8,8 см), в сравнении со сверстницами, полученными от верблюдоматок со СПЛ 65-74% (5,7 см) и 85% и выше (8,5 см). Аналогично интенсивно увеличивается и живая масса у верблюжат от верблюдоматок со СПЛ 75-84% (37,6 кг), 65-74% (39,4 кг), 85% и выше (41,1 кг).

В последующие три месяца у верблюжат увеличение живой массы составило от верблюдоматок со СПЛ 65-74% - 37,4 кг или 16,2%, 75-84% - 16,2 кг или 6,8%, 85% и выше – 24,2 кг или 10,3%. При достижении 15 месячного возраста высота в холке у всех верблюжат оказалась одинаковой 154,6-155,8 см. Полученные данные не позволили установить эффективность влияния СПЛ на интенсивность роста и развития молодняка в постмолочный период.

Установлено, что у верблюдоматок с коэффициентом молочности (КМ) до 1,4; 5-1,9 и 2,0 и выше в постэмбриональный период живая масса увеличивается у верблюжат с 9 месячного возраста до годовалого на 32,9%-19,9%-21,8%, с 12 месячного до 15 месячного возраста на 14,1%-15,5%-12,45%. То есть, в первые три месяца интенсивно растут верблюжата от верблюдоматок с КМ до 1,4, в последующие три месяца – верблюжата от верблюдоматок с КМ 1,5-1,9.

По высоте в холке увеличение составило у подопытных верблюжат от 9 месячного возраста до годовалого возраста 6,5 см-6,4 см-7,9 см, от 12 месячного возраста – до 15 месячного возраста 6,6 см-6,7 см-4,2 см. С 9 месячного возраста до 15 месячного возраста увеличение высоты в холке составило 13,3 см-13,1 см-13,1 см. Полученные данные подтверждают наше опасение о инбридинге при разведении верблюдов казахского бактриана.

Верблюжата в постмолочный период, полученные от верблюдоматок, с индексом плодовитости до 42% развиваются более интенсивно, в сравнении со сверстницами, полученными от верблюдоматок с индексом плодовитости 42-47%, 47 и выше. С 9 месячного возраста до 15 месячного возраста увеличивается высота в холке на 16,6%-10,6%-7,5%. По живой массе интенсивно растут верблюжата от матерей с индексом плодовитости 47% и выше 60,0% , в сравнении со сверстницами 49,6% и 46,9%.

То есть, не выявлена эффективность отбора по индексу плодовитости верблюдоматок основного стада. Подтверждается наше положение о необходимости закупа производителей.

Увеличили живую массу верблюжата с 9 месячного возраста до 15 месячного возраста, полученные от матерей с коэффициентом настрига шерсти до 0,8 на 58,7%, 0,9-1,4 на 55,3%, 1,5 и выше 91,1%. Высота между горбами увеличивается на 15,7%-11,4%-11,7%. То есть, все верблюдоматки являются шерстно-мясного направления продуктивности. Доказана эффективность ведения оценки и отбора по коэффициенту настрига шерсти в условиях ТОО «Байсерке-Агро».

**Ключевые слова:** казахский бактриан, оценка, отбор, технологические параметры, верблюжата, скороспелость.

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## **DEVELOPMENT OF PROCESSING TECHNOLOGIES FOR INTENSIVE DEVELOPMENT OF HORSE BREEDING**

**Abstract.** The optimal parameters of the dairy productivity of female horses of the Kazakh Jabe horses and Kushum breed were determined depending on the technological parameters of the udder (cup-shaped, round, goat). So, mares with a cup-shaped udder reliably surpass peers with a round and goat udder. The mares of the Kazakh horse of Jabe type with a cup-shaped udder are superior in average daily milk yield to individuals with a round udder in 23.8%, with goat udder - 71.2%. A similar picture is observed in mares of the Kushum breed, the difference between the cup-shaped and round forms of the udder is 16.4%, the cup-shaped and goat - 57.1%.

In fat content, no significant difference was found. The fat content in milk in the third month of lactation was 1.37-1.38% in Jabe mares, 1.32-1.33% in the Kushum breed. The full value degree of lactation is pronounced in all mares with the cup-shaped udder, in comparison with round and goat forms. Jabe mares with a cup-shaped udder reliably exceed their peers with round udder in terms of the full value of lactation by 6.3% in absolute terms, mares with goat udder - by 16.1% in absolute terms. Mares of Kushum breed with the cup-shaped udder reliably exceed their peers with round udder by 5.7%, with goat udder by 21.2%.

Female horses of the Kazakh Jabe horses with the cup-shaped udder, nipple length of at least 2.5 cm, milk yield of at least 7.1 kg in the third month of lactation are preferred for targeted breeding and selection for dairy productivity.

Mares of Kushum breed with the cup-shaped udder, flat-shaped nipples directed vertically downward, nipple length not less than 3.0 cm and not more than 6.0 cm, milk yield not less than 9.5 kg in the third month of lactation are desirable for targeted breeding and selection for dairy productivity.

It was established that in the preweaning period, the average daily gain in stallions is 1511-690-482 g, in mares 1496-675-472 g. In the post-dairy period, the average daily gain is significantly reduced in stallions - 406-882 g, in mares - 377-842g.

It was found that in mares with the cup-shaped udder, due to higher milking capacity, foals grow better and have higher average daily gain.

**Key words:** mares, foals, parameters, milk yield, fat content in milk, exterior, live weight.

**Introduction.** In Kazakhstan, productive horse breeding has become widespread. Year-round keeping of horses on pastures allows to get cheap food, it is better to justify deserted, semi-desert and mountain pastures hardly suitable for other types of livestock. Therefore, productive herd horse breeding due to the simplicity of the technology and low costs is characterized by high economic efficiency [1].

In dairy horse breeding, the direction of selection by phenotype should ensure the acquisition of dairy herds with animals of a strong constitution, harmoniously built, capable of high fecundity and dairy productivity with low-cost technologies. The optimal model of a milked animal in the conditions of koumiss farms of Kazakhstan meets the complex of the following requirements: strong constitution; a regular exterior with a well-developed body in length, depth and width, a capacious belly and a pushed forward, well-developed udder with large nipples, convenient for milking; strong limbs with strong hooved horn [2].

Currently, in dairy horse breeding, the selection parameters by technological characteristics are not included in the instructions for bonitation of local breeds of horses [3]. Therefore, the technological parameters of productivity should be clarified experimentally for each breed of productive direction. For

Kazakh horses, the optimal levels of these traits are expressed in the following requirements: a cup-shaped udder, conical nipples.

Technological characteristics of the udder are evaluated in points during a comprehensive assessment of the animal: the shape of udder and nipples is visual, their sizes are taken by measurements, observation during milking.

In such a way, the system for improving the dairy productivity of horses includes the refinement and increase in the effectiveness of methods for evaluating animals according to the phenotype to more accurately characterize its genotype. The valuable genotypes revealed during the multistage selection process reproduce through the corresponding selection system under conditions that are most conducive to the development of the main breeding traits.

**The aim of the research.** To study the influence of technological parameters of productivity on the early ripeness of foals and the formation of dairy productivity in mares at Bayserke-Agro LLP.

**Methods of research.** To study the peculiarities of the mare's body build, the indices of format, chest girth, massiveness, and bone were calculated [1].

The shape of the udder in mares was determined visually, measuring the length and thickness of the nipples - with a measuring tape. The dairy productivity of mares was determined by the actual milk yield, by conducting weekly control milk yields.

Commodity milk yield of mares was determined monthly during lactation by the control milk yield method, twice a month on two adjacent days [2]. Dairy productivity was calculated taking into account milk sucked by foals at night, according to the formula of Professor I.A. Saigin [4].

The digital material was processed by the methods of variation statistics proposed by Lakin [5]. The research results were processed on a PC with an "MS Excel" program.

**Research results. The influence of technological parameters of the udder on milk yield.** The optimal parameters of the dairy productivity of mares of the Kazakh Jabe horses and Kushum breed were determined depending on the technological parameters of the udder (cup-shaped, round, goat) (table 1).

Table 1 – Average daily milk yield and fat content in milk during the third month of lactation in mares

Indicator	Udder form	Group	
		Jabe	Kushum
The average daily milk yield, kg	cup-shaped	12.5±0.4	9.9±0.4
	round	10.1±0.6	8.5±0.6
	goat	7.3±0.8	6.3±0.8
Fat content, %	cup-shaped	1.37±0.05	1.33±0.04
	round	1.38±0.04	1.32±0.05
	goat	1.37±0.05	1.33±0.05
The full value degree of lactation	cup-shaped	75.2±1.7	78.3±1.4
	round	68.9±1.3	72.6±1.9
	goat	59.1±0.9	57.1±0.8

So, mares with the cup-shaped udder reliably exceed peers with a round and goat udders. The female horses of the Kazakh Jabe with a cup-shaped udder are superior in average daily milk yield to peers with a rounded udder - by 23.8%, with goat udder - by 71.2%. A similar picture is observed in mares of the Kushum breed, the difference between the cup-shaped and rounded forms of the udder is 16.4%, the cup-shaped and goat's forms - 57.1%.

In fat content, no significant difference was found. The fat content in milk in the third month of lactation was 1.37-1.38% in Jabe mares, 1.32-1.33% in the Kushum breed. The full value degree of lactation is pronounced in all mares with the cup-shaped udder, in comparison with round and goat forms. Jabe mares with a cup-shaped udder reliably exceed their peers with round udder in terms of the full value of lactation by 6.3% in absolute terms, mares with goat udder - by 16.1% in absolute terms. Mares of Kushum breed with the cup-shaped udder reliably exceed their peers with round udder by 5.7%, with goat udder by 21.2%

Female horses of the Kazakh Jabe horses with the cup-shaped udder, nipple length of at least 2.5 cm, milk yield of at least 7.1 kg in the third month of lactation are preferred for targeted breeding and selection for dairy productivity.

Mares of Kushum breed with the cup-shaped udder, flat-shaped nipples directed vertically downward, nipple length not less than 3.0 cm and not more than 6.0 cm, milk yield not less than 9.5 kg in the third month of lactation are desirable for targeted breeding and selection for dairy productivity.

**The genetic basis of selection for the improvement of horses in Baysyerke-Agro.** The main features by which selective and breeding work with horses was carried out are the type, exterior, samples, live weight, adaptability to the herd keeping, milk yield of mares, which differ in varying degrees of phenotypic diversity (table 2).

Table 2 – Variability of breeding characteristics of horses in Baysyerke-Agro LLP

Breed	Sex	n	Measurements								Live weight	
			height at the withers		oblique body length		chest girth		metacarpus girth			
			$\delta$	Cv	$\delta$	Cv	$\delta$	Cv	$\delta$	Cv	$\delta$	Cv
Kushum	Stallion	11	0.83	0.57	1.16	0.77	1.16	0.62	0.27	1.37	6.86	1.42
	Mare	53	2.61	1.82	3.25	2.16	3.46	1.87	0.92	4.92	10.65	5.75
Kazakh Jabe type	Stallion	12	0.79	0.54	1.22	0.81	1.12	0.62	0.25	1.29	7.45	1.61
	Mare	73	1.79	1.26	3.59	2.42	4.35	2.43	0.77	4.18	11.32	4.64

The live weight is characterized by the highest variability, which is 1.42 and 1.61 for stallions, 5.75 and 4.64 for mares. Variation in metacarpus girth is 1.37 and 1.29 in stallions, 4.92 and 4.18 in mares. In terms of measurements of the height at the withers, the oblique body length and chest girth, more stable indicators of variability are inherent in stallions: 0.57-0.54, 0.77-0.81, 0.62-0.62 and in mares 1.82-1.26, 2.16-2.42, 1.87-2.43 respectively.

It can be seen from the above data that for Kushum and Kazakh horses, the selection by live weight, boniness, oblique body length, and chest girth gives positive results in breeding work to improve these traits.

When breeding horses of both breeds by live weight, the selection was made primarily by chest girth and metacarpus girth. A study of the correlation of the main economic traits in mares shows that the degree of development of the leading conjugate traits was not the same (table 3).

Table 3 - Correlation coefficients between measurements and live weight in mares

Correlation traits	Correlation coefficient $r=m_r$	validation criterion $tr$	Probability value $p$
Kushum breed			
Height at the withers – live weight	0.203±0.137	1.48	0.90
Косая длина туловища – live weight	0.331±0.132	2.51	0.95
Oblique body length – live weight	0.462±0.124	3.71	0.999
Metacarpus girth – live weight	0.485±0.122	3.93	0.999
Kazakh Jabe			
Height at the withers – live weight	0.216±0.141	1.55	0.90
Косая длина туловища – live weight	0.327±0.136	2.41	0.95
Oblique body length – live weight	0.458±0.128	3.56	0.999
Metacarpus girth – live weight	0.461±0.127	3.58	0.999

The correlation coefficient (r) between measurements and live weight in horses of the Kushum breed is slightly higher than in mares of the Kazakh Jabe. A higher correlation relationship in both breeds of horses is observed between live weight and metacarpus girth of 0.485-0.458, then between chest girth and live weight of 0.462-0.458. Finally, the relationship between height at the withers and live weight was 0.223-0.216.

Thus, in breeding work with horses, while improving meat and milk breeds, along with evaluating horses for height at the withers and oblique body length, it is necessary to conduct a careful selection by the chest girth and metacarpus girth. This is most fully consistent with the task of improving the Kushum breed and Kazakh Jabe horses.

**Patterns of growth and development of foals in the dairy and post-dairy period, depending on the technological parameters of the breeding characteristics of their mothers.** In 2019, 162 foals were obtained (40 animals per 100 broodmares). An important event in selective and breeding work is the development of a control scale for the development of young stock. To this end, we studied the growth and development of young animals of both breeds, for this we determined the dynamics of changes in measurements and live weight, calculated body indices, as well as the growth energy of foals depending on the udder shape of the mothers (tables 4, 5, 6).

Table 4 – Age-related dynamics of measurements and live weight of young horses

Age, months	n	Measurements, cm				Live weight	Average daily gain, g
		height at the withers	oblique body length	chest girth	metacarpus girth		
Stallions							
3 days	65	92.7±0.53	80.2±0.47	96.7±0.67	11.7±0.17	48.7±1.87	–
1	64	101.5±0.62	91.7±0.59	106.1±0.64	13.2±0.21	89.5±2.09	1511
3	62	113.2±0.67	105.3±0.64	115.8±0.60	14.5±0.18	130.9±2.17	690
6	60	118.7±0.67	113.4±0.74	124.6±0.74	15.7±0.16	174.3±2.31	482
9	55	122.1±0.59	119.6±0.67	143.2±0.71	16.6±0.11	210.9±2.36	406
12	50	129.6±0.61	130.1±0.65	151.7±0.69	17.2±0.13	290.3±2.87	882
Fillies							
3 days	76	91.4±0.48	79.6±0.53	95.8±0.57	11.4±0.11	47.2±1.62	–
1	76	100.2±0.51	90.4±0.45	104.8±0.52	12.6±0.12	87.6±2.01	1496
3	72	110.5±0.57	103.7±0.51	113.6±0.52	14.1±0.10	128.1±2.28	675
6	70	117.6±0.62	111.5±0.58	121.4±0.47	15.1±0.12	170.6±2.42	472
9	68	120.6±0.53	117.2±0.61	142.1±0.49	15.5±0.09	204.6±2.33	377
12	63	127.8±0.59	126.1±0.59	151.2±0.51	16.2±0.19	280.4±2.62	842

Table 5 – Age-related changes in the body indices of foals

Age, months	n	Body indices, %			
		Format	Girth	Bone	Massiveness
Stallions					
3 days	65	86.5	104.3	12.6	60.9
1	64	90.3	104.5	13.0	86.0
3	62	92.8	102.1	12.8	89.6
6	60	95.5	105.0	13.2	104.4
9	58	97.9	117.3	13.6	115.9
12	55	100.4	117.1	13.3	133.2
Fillies					
3 days	76	87.1	104.8	12.5	162.1
1	76	90.2	104.6	12.6	86.7
3	72	93.8	102.8	12.8	94.9
6	70	94.8	103.2	12.8	104.7
9	65	97.2	117.8	12.8	116.9
12	60	98.7	118.3	12.7	134.2



Table 6 – Growth and development of foals

Indicators	Breed			
	Kazakh Jabe		Kushum	
	Mare's udder shape			
	cup-shaped	round	cup-shaped	round
Number of animals	4	3	3	2
Live weight: at the age of 3 days, kg	41	39	48	47
at the age of 1 month, kg	82±3.1	79±4.5	93±5.9	90±5.9
at the age of 2 months, kg	112±5.4	107±7.7	129±9.2	123±6.0
at the age of 6 months, kg	165±5.6	149±7.9	171±9.4	155±6.2
at the age of 9 months, kg	217±5.8	181±8.0	233±9.6	197±6.4

It was established that in the dairy (preweaning) period, the average daily gain in stallions is 1511-690-482 g, in mares 1496-675-472 g. In the post-dairy period, the average daily gain is significantly reduced in stallions 406-882 g, in mares 377-842 g.

By the live weight of foals, it is not always possible to determine in which direction the development of the animal's organism is going. The answer to this question is given by the study of changes in exterior features in the development process. In the postnatal period, higher growth energy of foals is noted in the axial and weaker in the peripheral parts of the body. If from the age of 3 days to 6 months, measurements of the height at the withers increased in stallions by 26.0 cm and in fillies by 26.2 cm, of metacarpus girth by 4.0 cm and 3.7 cm, then measurements of the oblique body length increased by 33.2 cm and 31.9 cm, chest girth by 27.9 cm and 25.6 cm, respectively. Thus, the most intensive growth of all body parts in foals occurred in the first six months of life.

The advance in the format index with age occurs due to the higher growth rate of the oblique body length than the height at the withers. A high increase in the index of chest girth is due to the higher energy of growth of the body in depth and width, and the metacarpal bones in thickness than the growth of bones of the chest limb in length. A high index of massiveness in foals is associated with a faster increase in live weight over the growth of foals in height and length.

At the age of one month, the average daily gain of the foals of the Kazakh Jabe and Kushum mares with the cup-shaped udder was 1518g and 1667g, and with a round shape of the udder - 1481g and 1592g, respectively, the average daily gain of foals of 2-month-age was 1000 and 950 g, and the Kushum foals were 1190g and 1100 g.

It was found that in mares with the cup-shaped udder, due to higher milking capacity, foals develop better and have a higher average daily gain. The data obtained indicate the prospects for the development of dairy horse breeding, at the level of dairy cattle breeding in the conditions of Bayserke-Agro LLP [6]. In subsequent studies, it is necessary to pay attention to the study of the reproductive qualities of mares, according to the common methodology in dairy cattle breeding [7].

The studies were carried out in accordance with the program of the Ministry of Agriculture of the Republic of Kazakhstan for 2018 - 2020. IRN: BR06249249 Development of the integrated system for increasing productivity and improving breeding abilities of farm animals as an example of Bayserke-Agro LLP.

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#### **ЖЫЛҚЫ ШАРУАШЫЛЫҒЫН ДАМУДЫҢ ҚАРҚЫНДЫ ТЕХНОЛОГИЯЛЫҚ ТӘСІЛДЕРІН ӘЗІРЛЕУ**

**Аннотация.** Зерттеу мақсаты – «Байсерке-Агро» ЖШС шаруашылығындағы бие сүт өнімділігін қалыптастыру мен ерте жетілетін құлындардың технологиялық параметрлер өнімділігіне әсерін зерттеу.

Биенің дене құрылыс ерекшеліктерін зерттеу үшін тұрпаты, кеуде аясы, салмағы және сүйек көрсеткіші есептелді. Бие желінінің пішіні көзбен бақылау арқылы анықталды. Бие емізігінің ұзындығы мен жуандығы өлшеуіш лентамен айқындалды. Биенің сүт өнімі сауу барысына онкүндік бақылау жүргізу негізінде анықталды.

Биелердің тауарлық сүттілігі ай сайынғы лактация барысында айына екі рет, күнара сауу әдісін бақылау арқылы анықталды. Сүт өнімділігі профессор И.А. Сайгин (1963 жыл) формуласы бойынша түнгі уақытта құлын еметін мезгіл есептелді.

Нәтиже. Қазақтың жаба және көшім тұқымдас жылқысының сүтін өндірудің оңтайлы параметрлері желін технологиялық параметрлеріне байланысты анықталды. Тостаған тәрізді желіні бар қазақ жаба биесінің тәуліктегі орташа сүт мөлшері томпақ пішіндіден 23,8%, ешкі пішіндес 71,2% жоғары. Осындай көрініс көшім тұқымдас биеде де байқалады, тостаған тәрізді және томпақ пішінді желін 16,4%, тостаған тәрізді және ешкі желінді 57,1% айырмашылықты көрсетті.

Майлылық құрамында айтарлықтай айырмашылық табылмады. Лактацияның үшінші айында сүттің майлылығы жаба типтінде 1,37-1,38%, көшім тұқымдаста 1,32-1,33% қамтыды.

Лактацияның құндылық деңгейі өзге томпақ желінді мен ешкі желінді биенен салыстырғанда тостаған тәрізді пішінді желіні бар биеде айқын көрінді. Тостаған желінді жаба биелерінің лактация құндылығының абсолюттік көрсеткіші өзімен жас шамалас биеден 6,3%, ал ешкі желіндіден 16,1% асады. Көшім тұқымдас биелер өзімен жас шамалас томпақ желінді биеден 5,7%, ешкі желінді биеден 21,2% жоғары.

Тостаған желінді қазақ биесі емізігінің ұзындығы 2,5 см, лактацияның үшінші айында, кемінде, 7,1 кг сауылған, демек, мақсатты іріктеуге және сүт өнім селекциясына қолайлы деп есептеледі.

Тостаған желінді, жоғарыдан төмен бағытталған жалпақ пішінді көшім тұқымдас бие емізігінің ұзындығы 3,0 см – 6,0, лактацияның үшінші айында 9,5 кг сауылған сүт мақсатты іріктеу мен сүт өнімін селекциялау үшін қажет.

Тірі салмақпен сипатталатын жоғары өзгергіштік 1,42 және 1,61 айғырды, 5,75 және 4,64 биені қамтиды. Жіліншік орамының өзгергіштігі 1,37 және 1,29 айғырда, 4,92 және 4,18 биеде байқалды. Дене өлшемі бойынша жотаның қиғаш биіктігі мен кеуденің қамту өлшемі – 0,57-0,54, 0,77-0,81, 0,62-0,62 айғырға, ал 1,82-1,26, 2,16-2,42, 1,87-2,43 биеге тән.

Көшім тұқымды биенің тірі салмағы қазақтың жаба биесіне қарағанда арасындағы корреляция коэффициенті (r) әлдеқайда жоғары. Екі тұқымдас бие арасындағы жоғары корреляциялық байланыс тірі салмақ пен жіліншік орамы 0,485-0,458 арасында, одан кейін кеуде орамы мен тірі салмақ 0,462-0,458 арасында байқалады. Ал жота биіктігі мен тірі салмағының арасындағы байланыс 0,223-0,216 құрайды.

Селекциялық-тұқымдық шаруашылықтағы маңызды жағдайдың бірі – жас төлдің дамуын бақылау шкаласын әзірлеу болып саналады.

Осы мақсатта екі тұқым төлінің өсу және дамуына үдерісіне зерттеу жүргізілді. Зерттеу барысында өлшеу мен тірі салмақ өзгерісінің динамикасы анықталды және дене тұрқының өсу көрсеткіші, сондай-ақ құлынның жетілу қуаты енесінің желінінің пішініне байланысты есептелді.

Тостаған тәрізді желінді биенің сүт шығымының көбеюіне байланысты құлын да жақсы жетіледі, тәуліктегі орташа өсу көрсеткіші жоғарылайды.

Сүт еметін кезеңде еркек құлынның тәуліктегі орташа өсімі 1511-690-482 г, ұрғашы құлынның 1496-675-472 г құрайды. Сүт ему кезеңінен кейін ұрғашы құлынның тәуліктегі орташа өсімі 406-882 г, 377-842 едәуір төмендейді.

Құлынның тірі салмағын анықтау арқылы жануар организмінің қай бағытта дамып жатқанын ұдайы айқындау мүмкін емес. Бұл мәселенің шешімін даму барсындағы экстерьерлі белгілердің өзгеруін зерттеу негізінде табуға болады. Постанальді даму кезеңінде құлынның өсу қарқыны жоғары, ал дененің шеткі бөліктерінде әлсіз жүреді. 3 күннен 6 айға дейінгі аралықта жота биіктігін өлшегенде еркек құлында 26,0 және ұрғашы құлында 26,2 см, оның жіліншік орамы – 4,0 және 3,7 см өссе, тұлғасының қиғаш ұзындығы – 33, 2 және 31,9 см, кеуде орамы – 27,9 және 25,6 см. қамтиды. Осылайша, дененің қарқынды өсу жағдайы құлынның алғашқы алты айында байқалды.

Дене тұрқының ұлғаю көрсеткіші құлын өскен сайын байқала береді және құлын тұлғасындағы қиғаш ұзындықтың өсу қарқыны жота биіктігінің жоғарылауына қатысты болып келеді. Кеуденің жоғары ұзындық көрсеткіші кеуде қуысы сүйектерінің ұзындығына қарағанда жіліншік сүйектерінің қалыңдығы мен тұлғасының биіктігі және ені бойынша өсу қарқынына байланысты. Құлын денесінің көлем көрсеткіші дене салмағының өсуі мен ұзындығы бойынша жылдам өсуіне қарай анықталады.

Қазақ пен көшім тұқымды тостаған желінді биенің бір айлық құлынының тәулігіне орташа өсімі 1518 және 1667 көрсетсе, ал томпақ желіндінікі – 1481 және 1592, 2. Екі айлық құлынның тәулігіне орташа өсімі – 1000 және 950 г, ал көшім құлынынан 1190 және 1100 г байқалды.

Тостаған желінді биелерде сүт мөлшері артық болғандықтан, құлындары да жақсы жетіледі, сондай-ақ олардың күнделікті орташа өсу деңгейінің жоғары болатындығы анықталды.

**Түйін сөздер:** бие, құлын, параметр, сүт мөлшері, сүт майлылығы, экстерьер, тірі салмақ.

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### РАЗРАБОТКА ТЕХНОЛОГИЧЕСКИХ ПРИЕМОВ ИНТЕНСИВНОГО РАЗВИТИЯ КОНЕВОДСТВА

**Аннотация.** Цель исследования – изучить влияние технологических параметров продуктивности на скороспелость жеребят и формирование молочной продуктивности у кобыл в ТОО «Байсерке-Агро».

С целью изучения особенностей телосложения кобыл вычислялись индексы формата, обхвата груди, массивности и костистости.

Определение формы вымени кобыл производилось визуально, измерение длины и толщины сосков – мерной лентой. Молочную продуктивность кобыл определяли по фактическим надоям путем проведения ежедекадных контрольных удоев.

Товарная молочность кобыл определялась ежемесячно в течение лактации методом контрольных удоев, два раза в месяц по двум смежным дням. Молочная продуктивность рассчитывалась с учетом молока, высосанного в ночное время жеребенком, по формуле профессора И.А. Сайгина (1963 года).

Результаты Определены оптимальные параметры молочной продуктивности кобыл казахских лошадей жабе и кушумской породы в зависимости от технологических параметров вымени. Кобылы казахской лошади типа жабе с чашевидной формой вымени превосходят по среднесуточному удою особей с округлой на 23,8%, козьей – на 71,2%. Аналогичная картина наблюдается у кобыл кушумской породы, разница составила между чашевидной и округлой формами вымени 16,4%, чашевидной и козьей – 57,1%.

По содержанию жира существенной разницы не установлено. Жирность молока на третьем месяце лактации составила у кобыл типа жабе 1,37-1,38%, кушумской породы – 1,32-1,33%. Степень полноценности лактации ярко выражен у всех кобыл, имеющих чашевидную форму вымени, в сравнении с дольковидной и козьей. Кобылы жабе с чашевидной формой вымени достоверно превосходят сверстниц с дольковидной по степени полноценности лактации на 6,3% в абсолютном выражении, с козьей – на 16,1% в абсолютном выражении. Кобылы кушумской породы с чашевидной формой вымени достоверно превосходят сверстниц с округлой на 5,7%, с козьей – на 21,2%.

Кобылы казахских лошадей жабе с чашевидной формой вымени, длиной сосков не менее 2,5 см, удоем на третьем месяце лактации не менее 7,1 кг являются предпочтительными для целенаправленного подбора и селекции на молочную продуктивность.

Кобылы кушумской породы с чашевидной формой вымени, сосками плоской формы, направленными вертикально вниз, длиной сосков не менее 3,0 см и не более 6,0 см, удоем молока на третьем месяце лактации не менее 9,5 кг являются желательными для целенаправленного подбора и селекции на молочную продуктивность.

Наиболее высокой изменчивостью характеризуется живая масса, которая равняется 1,42 и 1,61 у жеребцов, 5,75 и 4,64 у кобыл. Изменчивость обхвата пясти составляет у жеребцов 1,37 и 1,29, у кобыл 4,92 и 4,18. По промерам высоты в холке косой длины туловища и обхвату груди присущи более стабильные показатели изменчивости, у жеребцов 0,57-0,54, 0,77-0,81, 0,62-0,62 и кобыл соответственно 1,82-1,26, 2,16-2,42, 1,87-2,43.

Коэффициент корреляции ( $r$ ) между промерами и живой массой у лошадей кушумской породы несколько выше, чем у кобыл казахского типа жабе. Более высокая корреляционная связь в обеих породах лошадей наблюдается между живой массой и обхватом пясти 0,485-0,458, затем между обхватом груди и живой массой 0,462-0,458. Наконец, связь между высотой в холке и живой массой составила 0,223-0,216.

Важным мероприятием в селекционно-племенной работе является разработка контрольной шкалы развития молодняка. С этой целью нами проведено изучение роста и развития молодняка обеих пород, для этого были определены динамика изменения промеров и живой массы, вычислены индексы телосложения, а также энергия роста жеребят в зависимости от формы вымени матерей.

В связи с тем, что у кобыл с чашевидной формой вымени в силу более высокой молочности жеребят развиваются лучше и имеют более высокий среднесуточный прирост.

Установлено, что в молочный период средний суточный прирост составляет у жеребчиков 1511-690-482 г, кобылок 1496-675-472 г. Постмолочный период средний суточный прирост достоверно снижается у жеребчиков 406-882 г, кобылок 377-842 г.

По живой массе жеребят не всегда можно определить, в каком направлении идет развитие организма животного. Ответ на этот вопрос дает изучение изменений экстерьерных особенностей в процессе развития. В постнатальный период более высокая энергия роста жеребят отмечена в осевой и слабее в периферических частях тела. Если с 3 дневного до 6-ти месячного возраста промеры высоты в холке возросли у жеребчиков на 26,0 и у кобылок 26,2 см, обхват пясти на 4,0 и 3,7 см, то промеры косой длины туловища увеличились на

33,2 и 31,9 см, обхват груди на 27,9 и 25,6 см соответственно. Таким образом, наиболее интенсивный рост всех статей тела у жеребят произошли в первые шесть месяцев жизни.

Увеличение индекса формата с возрастом происходит за счёт более высокой интенсивности роста косой длины туловища, нежели высоты в холке. Высокий рост индекса обхвата груди за счёт более высокой энергии роста туловища в глубину и ширину, а пястных костей в толщину, чем рост костей грудной конечности в длину. Высокий индекс массивности у жеребят связан с опережающим повышением массы тела над ростом жеребят в высоту и длину.

В месячном возрасте среднесуточный прирост жеребят казахских и кушумских кобыл с чашевидной формой вымени составила 1518 и 1667 г., а с округлой формой вымени соответственно 1481 и 1592 г. Среднесуточный прирост жеребят 2-х месячного возраста составлял 1000 и 950 г, а кушумских – 1190 и 1100 г.

Установлено, что у кобыл с чашевидной формой вымени в силу более высокой молочности жеребят развиваются лучше и имеют более высокий среднесуточный прирост.

**Ключевые слова:** кобылы, жеребят, параметры, удой молока, жирность молока, экстерьер, живая масса.

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## COMPARATIVE CHARACTERISTICS OF SOME ISSUES ON PROCEEDING OF CASES WITH PARTICIPATION OF FOREIGN PERSONS IN INTERNATIONAL CIVIL PROCEDURE LAW OF KAZAKHSTAN AND RUSSIA

**Abstract.** Nowadays the cooperation of states in the integration process takes place within the framework of such international associations as the Commonwealth of Independent States (CIS), the Eurasian Economic Community (EAEC) and Common Economic Space (CES).

The cooperation of the states within EAEC is being developed most dynamically, which in the future can be transformed into the Eurasian Union (EU) as the most advanced form of economic integration. Due to this circumstance, the study of the legal systems of the states - members of the EAEC appears to be very interesting and relevant.

However, this international organization cannot be considered separately from the CIS, which can be assessed as a “laboratory of comparative law”. On the other hand, in fact, the Eurasian legal space exists. All participating countries are located geographically close to each other, and in the legal sphere they have a common legal heritage. They use a common working legal language (Russian) and they are united by the experience of interaction in the current institutional model (CIS).

The article is devoted to one of the most actual issues of the international civil process - proceedings on cases with participation of foreign persons. The authors focused on a comparative analysis of Kazakhstani and Russian legislation relating to the regulation of international civil procedural relations. The authors believe that the comparative characteristics of the institute of proceedings on the cases with participation of foreign persons in Kazakhstani and Russian law will be the next step in the scientific understanding of one of the most important branches of international private law in both states. It should be emphasized that as the subject of the research, the authors chose the proceedings on the cases with participation of foreign persons in international commercial disputes, i.e. the disputes related to entrepreneurial and other economic activities by legal entities and individual entrepreneurs.

**Key words:** Foreign persons, civil proceedings, proceedings on cases with participation of foreign persons, comparative characteristics, international process.

**Introduction.** Nowadays the cooperation of states in the integration process takes place within the framework of such international associations as the Commonwealth of Independent States (CIS) [1], the Eurasian Economic Community (EAEC) [2] and Common Economic Space (CES) [3].

The cooperation of the states within EAEC is being developed most dynamically, which in the future can be transformed into the Eurasian Union (EU) as the most advanced form of economic integration [4]. Due to this circumstance, the study of the legal systems of the states - members of the EAEC appears to be very interesting and relevant. However, this international organization cannot be considered separately from the CIS, which can be assessed as a “laboratory of comparative law” [5]. On the other hand, in fact, the Eurasian legal space exists. All participating countries are located geographically close to each other,

and in the legal sphere they have a common legal heritage. They use a common working legal language (Russian) and they are united by the experience of interaction in the current institutional model (CIS).

**Methodology.** The institute of proceedings on cases involving foreign persons, which is the subject of the study, is caused by its increasing role in modern conditions.

The comparative characteristics of the institute of proceedings on cases involving foreign persons in Russian and Kazakhstani law can serve as the next step in the scientific understanding of one of the most important branches of international private law of both states.

The methodological basis of the study is the use of systematic methods, and the study uses generalized methods such as the method of scientific abstraction, the method of differentiation, and the method of comparison.

**Results of a research.** The subject of the research is the proceeding on cases involving foreign persons arising from the consideration of international commercial disputes, i.e. disputes related to entrepreneurial and other economic activities by legal entities and individual entrepreneurs. Such disputes are settled in arbitration proceedings in Russia and civil proceedings in Kazakhstan.

Firstly, we will consider the international jurisdiction of the courts and the Kazakhstani economic and the Russian arbitration courts on the cases involving foreign persons.

The jurisdiction of the Kazakhstani economic courts on the cases involving foreign legal entities and entrepreneurs is defined in the civil procedural law, namely, in the Civil Procedure Code of the Republic of Kazakhstan dated October 31, 2015. By their legal status, the Kazakhstani economic courts are an integral part of the judicial system of Kazakhstan and are the specialized courts (Article 3 of the Constitutional Law “On the judicial system and the status of judges of the Republic of Kazakhstan” dated December 25, 2000 [6].

The jurisdiction of the Russian arbitration courts on cases involving foreign legal entities and individual entrepreneurs is defined in the Russian procedural legislation, namely in the Arbitration Procedure Code of the Russian Federation [7]. It should be noted that due to their legal status, Russian arbitration courts are the integral parts and links of the Russian judicial system and are included into the federal courts along with federal courts of the general jurisdiction.

Secondly, section IV of the Civil Procedure Code of the Republic of Kazakhstan [8] “The International Process” and section V of the Arbitration Procedure Code of the Russian Federation [7] “Proceedings on cases involving foreign persons” are devoted directly to the issues of establishing the jurisdiction of Russian arbitration courts and Kazakhstani economic courts regarding the international commercial disputes.

In accordance with Clauses 1-2 of Article 413 of the Civil Procedure Code of the Republic of Kazakhstan, foreigners and stateless persons, foreign and international organizations (hereinafter - foreigners) have the right to apply to the courts of the Republic of Kazakhstan to protect their violated or contested rights, freedom and interests protected by law. Foreigners use the procedural rights and perform procedural obligations on a par with citizens and legal entities of the Republic of Kazakhstan, unless otherwise provided by an international agreement which was ratified by the Republic of Kazakhstan. Legal proceedings in courts on the cases with the participation of foreigners are carried out in accordance with the Civil Procedure Code, other laws and international agreements ratified by the Republic of Kazakhstan and other laws.

In accordance with Clauses 1-3 of Article 254 of the Arbitration Procedure Code of the Russian Federation, foreigners use procedural rights and perform procedural obligations on a par with Russian organizations and citizens. Foreigners have the right to apply to the arbitration courts of the Russian Federation according to the rules of competence established by the Arbitration Procedure Code to protect their violated or disputed rights and legitimate interests in the field of entrepreneurial and other economic activities. Foreigners who participate in the case must submit the evidence to the arbitration court confirming their legal status and the right to carry out entrepreneurial and other economic activities. If such evidence is not provided, the arbitration court has the right to demand it on its own initiative.

Thirdly, the Republic of Kazakhstan may establish reciprocal restrictions (retorsions) regarding the foreigners of the states where special restrictions on the procedural rights of citizens and organizations of the Republic of Kazakhstan are allowed (Clause 4, Article 413 of the Civil Procedure Code of the Republic of Kazakhstan).

The Government of Russia may establish reciprocal restrictions (retorsions) regarding the foreigners of the states where the restrictions have been introduced regarding Russian organizations and citizens (Clause 4, Article 254 of the APC of the Russian Federation).

The positions of both Kazakhstani and Russian legislation on this issue are likely to coincide completely except for two positions.

Firstly, the Kazakhstani Civil Procedure Code does not contain such a clause, therefore, does not imply a more preferential procedural regime for foreigners compared with their own organizations and citizens.

The Russian legislation contains a clause which states that foreigners can be granted procedural benefits if it is provided by an international agreement of the Russian Federation (Clause 1, Article 254 of the APC of the Russian Federation).

Secondly, in the Civil Procedure Code of the Republic of Kazakhstan, the application of retorsions is reserved for the Republic of Kazakhstan represented by the Parliament or the President of the Republic of Kazakhstan. And the Arbitration Procedure Code of Russia mentions the Government of the Russian Federation as a body with the authority to introduce retorsions, which are carried out in the form of making decisions by the government.

Thirdly, the basic principles for establishing the general jurisdiction of Kazakhstani economic courts and Russian arbitration courts in international commercial disputes are stated in both codes as follows.

The Kazakhstani legislation considers cases involving foreigners if the respondent organization is located or the respondent citizen has a residence on the territory of the Republic of Kazakhstan:

1) the governing body, branch or representative office of a foreigner is located on the territory of the Republic of Kazakhstan;

2) the defendant has property on the territory of the Republic of Kazakhstan;

3) in the case of the recovery of alimony and the establishment of paternity, the plaintiff has a place of residence in the Republic of Kazakhstan;

4) in the case of compensation for damage caused by mutilation, other damage to health or the death of a breadwinner, the damage was caused on the territory of the Republic of Kazakhstan or the plaintiff has his place of residence in the Republic of Kazakhstan;

5) in the case of compensation for damage to property, an action or other circumstance that served as the basis for the presentation of a claim for compensation for damage took place on the territory of the Republic of Kazakhstan;

6) the claim arose from the contract under which full or partial execution should take place or took place on the territory of the Republic of Kazakhstan;

7) the claim arose from unjust enrichment that took place on the territory of the Republic of Kazakhstan;

8) in the case of divorce, the plaintiff has a place of residence in the Republic of Kazakhstan, or at least one of the spouses is a citizen of the Republic of Kazakhstan;

9) in the case of the protection of honor, dignity and business reputation, the plaintiff has a place of residence in the Republic of Kazakhstan (Article 416 of Civil Procedure Code of the Republic of Kazakhstan).

The arbitration courts of Russia consider cases of economic disputes and other cases related to entrepreneurial and other economic activities involving foreigners if: 1) the defendant is located or resides on the territory of the Russian Federation or there is property of the defendant on the territory of the Russian Federation; 2) the governing body, branch or representative office of a foreigner is located on the territory of the Russian Federation; 3) the dispute arose from a contract under which the execution should take place or took place on the territory of the Russian Federation; 4) the claim arose from the damage to property by an action or other circumstance that took place on the territory of the Russian Federation or upon the occurrence of harm on the territory of the Russian Federation; 5) the dispute arose from unjust enrichment that took place on the territory of the Russian Federation; 6) the plaintiff on the case for protecting business reputation is located in the Russian Federation; 7) the dispute arose from the relationships related to the circulation of valuable banknotes, their issue took place on the territory of the Russian Federation; 8) the applicant in the case of establishing a fact of legal significance indicates the presence of this fact on the territory of the Russian Federation; 9) the dispute arose from relationships

concerning the state registration of names and other objects and the provision of services in the international association of information and telecommunication networks of the Internet on the territory of the Russian Federation; 10) in other cases, if there is a close relationship of the disputed legal relations with the territory of the Russian Federation (Clause 1, Article 247 of the Arbitration Procedure Code of the Russian Federation) [9].

A case accepted by the arbitration court for consideration in compliance with the rules of international jurisdiction must be considered substantially, even if during the proceedings on the case due to a change in location or place of residence of the persons participating in the case, or in other circumstances, it will relate to competence of a foreign court (Clause 4 of Article 247 of the Arbitration Procedure Code of the Russian Federation) [10].

According to Article 417 of the Civil Procedure Code of Kazakhstan, the exclusive jurisdiction of Kazakhstani courts includes: 1) cases related to the right to real estate located in the Republic of Kazakhstan; 2) cases in claims against carriers arising from contracts of transportation, if carriers are located on the territory of the Republic of Kazakhstan; 3) divorce cases of citizens of the Republic of Kazakhstan with foreigners or stateless persons, if both spouses have a place of residence in the Republic of Kazakhstan; 4) some cases of special action proceedings provided for by chapters 27-30 of the Civil Procedure Code of the Republic of Kazakhstan (Clause 1, Article 417 of the Civil Procedure Code of the Republic of Kazakhstan). At the same time, the Civil Procedure Code includes cases of special proceedings arising from public relationships complicated by a foreign element, which are subject to the exclusive jurisdiction of Kazakhstani courts.

Kazakhstani economic courts consider cases of special proceedings if: 1) the applicant in the fact-finding case has a residence on the territory of the Republic of Kazakhstan or a fact that must be established, has taken or is taking place on the territory of the Republic of Kazakhstan; 2) a citizen who is recognized as legally competent or incompetent, forcibly admitted to a psychiatric hospital, is a citizen of the Republic of Kazakhstan or has a place of residence on the territory of the Republic of Kazakhstan; 3) a citizen who is recognized as missing or declared dead, is a citizen of the Republic of Kazakhstan or had the last known place of residence on the territory of the Republic of Kazakhstan, and the establishment of the rights and obligations of citizens and organizations having a residence depends on the resolution of this issue or location on the territory of the Republic of Kazakhstan; 4) thing in respect of which an application for declaring it ownerless has been submitted is located on the territory of the Republic of Kazakhstan; 5) valuable banknotes in respect of which an application for recognition as lost and for the restoration of relevant rights to it (call-up proceedings), issued by a citizen or organization residing or located on the territory of the Republic of Kazakhstan; 6) records of civil status acts, on the establishment of irregularities of which an application was submitted, were made by the bodies of the records of civil status acts of the Republic of Kazakhstan; 7) notarized actions appealed (refusal to perform them) were committed by a notary or other body of the Republic of Kazakhstan.

Thus, Article 248 of the Arbitration Procedure Code of the Russian Federation and Article 417 of Civil Procedure Code of the Republic of Kazakhstan consolidate the exclusive jurisdiction of Kazakhstan economic courts and Russian arbitration courts for the consideration of international commercial disputes of a certain category, which should be distinguished from the exclusive jurisdiction of an arbitration court or economic court for the consideration of a specific dispute arising from the conclusion of a proprietary agreement between the disputing parties.

Fourthly, the Rules on contractual jurisdiction are enshrined in both Kazakhstan and Russian legislation. They provide the possibility of the parties entering into disputed legal relationships of a proprietary agreement. The latter means an agreement between the disputing parties (the potential plaintiff and defendant) on the transfer of the dispute for resolution to a court of a state. Such agreement acts as a legal form for the implementation of the rules on contractual jurisdiction contained in domestic law.

According to Article 419 of Civil Procedure Code of the Republic of Kazakhstan “Contractual jurisdiction”, the competence of a foreign court may be provided by a written agreement of the parties, except for the cases specified in Article 33 of Civil Procedure Code of the Republic of Kazakhstan. If there is such an agreement, the court leaves the application without consideration at the request of the defendant, provided that such a request is applied for before the case is considered substantially. Article 33 “Exceptional jurisdiction” states that:



1. The claims for rights to land plots, buildings, premises, facilities, other objects firmly connected with land (real estate), for the release of property from arrest are provided at the location of these objects or seized property, except for the cases provided by Clause V of the present Article.

2. The claims of the testator's creditors presented before the inheritance is accepted by the heirs, are under the jurisdiction of the court at the location of the estate or its main part.

3. The claims against carriers arising from contracts for the transportation of goods, passengers or baggage are filed at the location of the permanent body of the transport organization.

4. The claims for compensation of losses caused by a violation by a foreign state of the jurisdictional immunity of the Republic of Kazakhstan and its property are filed at the location of the plaintiff, unless otherwise provided by an international agreement of the Republic of Kazakhstan.

5. The claims in which one of the parties is a citizen who carries out entrepreneurial activity without forming a legal entity in respect of which the decision to declare bankrupt has entered into legal force, or a legal entity regarding of which the decision to apply the rehabilitation procedure has entered into legal force and (or) being declared bankrupt, are considered by the same court judge who made the decision to apply rehabilitation procedure regarding him or to declare such a person bankrupt.

According to Article 249 of the Arbitration Procedure Code of the Russian Federation, provided that that the parties, at least one of which is a foreigner, have made an agreement where they have determined that the Russian arbitration court has the competence to consider a dispute that has arisen or could arise related to their entrepreneurial and other economic activities, the arbitration court of Russia will have exclusive competence to consider this dispute, provided that such an agreement does not alter the exclusive competence of a foreign court. An agreement regarding the determination of competence must be concluded in writing [11].

The wording of the heading of Article 249 of the Arbitration Procedure Code of the Russian Federation “Agreement on the determination of arbitration court competence in the Russian Federation” should be specified in order to improve it. We are talking about a proprietary agreement, while it should be about contractual jurisdiction, where a proprietary agreement serves only as a legal form expressing the latter. It would be more correct to indicate the heading of Article 249 of the Arbitration Procedure Code of the Russian Federation as “Contractual jurisdiction of cases involving foreigners”, because such a wording makes it possible to clearly distinguish, firstly, the types of jurisdiction - general (Article 247 of the APC of the Russian Federation and Article 416 of the Civil Procedure Code of the Republic of Kazakhstan), exclusive (Article 248 of the APC and Article 417 of the Civil Procedure Code of the Republic of Kazakhstan) and contractual (Article 249 of the Civil Procedure Code of the Russian Federation and Article 419 of the Civil Procedure Code of the Republic of Kazakhstan) and, secondly, the concept of a proprietary agreement as a way of determining jurisdiction in the form of implementing contractual jurisdiction from the concept of jurisdiction itself as a set of rules for establishing the competence of a state court. In addition to this issue, it is necessary to focus again on the fact that a proprietary agreement can only change the rules for determining general jurisdiction, but never exclusive under the threat of recognition as legally invalid, and in this context, contractual jurisdiction can be considered as amended by agreement of the parties to the dispute [12].

Therefore, in this regard, it is necessary to distinguish between general (416 of Civil Procedure Code of the Republic of Kazakhstan), exclusive (417 of Civil Procedure Code of the Republic of Kazakhstan), contractual (419 of Civil Procedure Code of the Republic of Kazakhstan) jurisdiction. However, the regulation of the general jurisdiction of Kazakhstan and Russia has some peculiarities. For example, in the Russian legislation there is no rule implying the consideration of cases on the recovery of alimony and on establishing paternity, the plaintiff has a place of residence in the Republic of Kazakhstan, which is provided in Kazakhstan legislation.

Fifthly, the inclusion of conflict of laws norms defining procedural law and the legal capacity of foreigners can be considered a significant distinguishing feature of Kazakhstani procedural legislation [13]. According to Clauses 1-5 of Article 414 of Civil Procedure Code of the Republic of Kazakhstan, the civil procedural capacity or standing of foreign citizens and stateless persons is determined by their personal law. The personal law of a citizen is the law of the state where he resides. If a citizen, along with the citizenship of a foreign state, also has the citizenship of the Republic of Kazakhstan, his personal law is the law of the Republic of Kazakhstan. The belonging of such person to the citizenship of a foreign state

is not recognized by the courts of the Republic of Kazakhstan. If a citizen has several foreign citizenships, his personal law is the law of the state with which he is closely connected. The personal law of a stateless person is the law of the state in which the person has a permanent place of residence, and in the absence of permanent residence - the law of the state of his usual residence. A person who is not legally competent under his personal law may be recognized as legally competent if he has the procedural capacity or standing in accordance with the law of the Republic of Kazakhstan.

According to Clauses 1-2 of Article 415 of Civil Procedure Code of the Republic of Kazakhstan, the procedural legal capacity of a foreign organization is determined by the law of a foreign state, in accordance with which it was created. A foreign organization that does not have the procedural legal capacity under this law may be recognized as capable on the territory of the Republic of Kazakhstan in accordance with the law of the Republic of Kazakhstan. The procedural legal capacity of an international organization is established on the basis of an international agreement in accordance with which it was created, its constituent documents or an agreement with a competent state body of the Republic of Kazakhstan.

Russian procedural legislation does not contain any conflict of laws rules to determine the law which is applied to procedural law - and the legal capacity of foreigners. One can state that in this case the general conflict of laws rules concerning the personal law of individuals and legal entities, contained in Section VI "Private International Law" of the third part of the Civil Code of the Russian Federation will be used.

Sixthly, foreign judgments will be recognized and enforced in Kazakhstan and Russia.

In the international civil process, the issue of recognition and enforcement of judgments is the most significant one, since it is at this procedural stage that the final settlement of disputed relationships takes place in the form of material satisfaction of the plaintiff's claims. However, the practical complexity of this issue consists in the fact that being an act of public authority of one state, adopted within its jurisdiction, judicial decision must be recognized and enforced on the territory of another state, to which the above mentioned public authority does not apply. Due to generally recognized principles of international law, namely: territorial integrity and sovereign equality of states, the recognition and enforcement of foreign judgments on the territory of a state are possible only on the basis of the relevant norms of national law or international agreement [14]. Both of these possible ways are applied in both Russian and Kazakhstani law.

If we consider the norms of the national legislation of Russia concerning the recognition and enforcement of foreign court decisions, then they are contained in Section 31 APC RF "Proceedings on cases regarding the recognition and enforcement of foreign court decisions and foreign arbitral awards". According to Clause 1 of Article 241 of the Arbitration Procedure Code of the Russian Federation, decisions of foreign courts concerning the disputes and other matters arising in entrepreneurial and other economic activities are recognized and enforced by arbitration courts in the Russian Federation if the recognition and enforcement of such decisions is provided for by the international agreement of Russia and the federal law.

The norms of the national legislation of Kazakhstan on this issue are contained in Clause 1 of Article 501 Civil Procedure Code of the Republic of Kazakhstan. According to it, the decisions of foreign courts are recognized and enforced in the Republic of Kazakhstan, if this is provided by the law or by the international agreement of the Republic of Kazakhstan on the basis of reciprocity.

The conditions and procedure for the recognition and enforcement of foreign court decisions in Kazakhstan are determined by law, unless otherwise provided by the international agreement of the Republic of Kazakhstan. A decision of a foreign court may be presented for enforcement within three years from the date the decision comes into force. The term missed for good reason may be restored by the court of the Republic of Kazakhstan (Clauses 2-3 of Article 501 of the Civil Procedure Code of the Republic of Kazakhstan). In Kazakhstan, the following judgments of foreign courts are recognized, which do not require execution in their nature:

- 1) regarding the personal status of exclusively citizens of the state where the court made a decision;
- 2) on the dissolution or invalidation of marriages between Kazakhstani and foreign citizens, if at the time of divorce at least one of the spouses lived outside the Republic of Kazakhstan;
- 3) on the dissolution or invalidation of marriages between Kazakhstani and foreign citizens, if at the time of divorce both spouses lived outside the Republic of Kazakhstan (Article 502 of the Civil Procedure Code of the Republic of Kazakhstan).

Kazakhstani economic court at the location of the debtor or his property is the competent court to make decisions regarding the enforcement of a foreign court decision. According to Article 5 of the Law of the Republic of Kazakhstan “On enforcement proceedings and bailiffs status” dated April 2, 2010 [15], the order of enforcement of international and foreign courts decisions in Kazakhstan is determined by the relevant international agreements ratified by the Republic of Kazakhstan and the above law. A writ of execution issued on the basis of a foreign court decision by a court of the Republic of Kazakhstan may be presented for enforcement within three years from the date the decision comes into force.

The procedure for enforcing a foreign court decision is set out in detail in Regulatory Decree of Supreme Court of the Republic of Kazakhstan “On court decision” dated July 11, 2003 [16]. The enforcement of a foreign court decision is made at the request of the interested party by a court ruling in accordance with the rules of jurisdiction, which are defined in the Civil Procedure Code of the Republic of Kazakhstan, at the place of the decision execution.

A court that considers an application for recognition and enforcement of a decision is limited to establishing the circumstances in which enforcement of the decision is possible.

The application for permission to enforce the decision must be submitted to the competent court of the Contracting party, where the decision is subject to execution. It can also be brought to court which ruled the case in the first instance. This court sends the petition to the competent court to enforce decision on the petition. The application is accompanied by: a) the decision or its certified copy, as well as an official document stating that the decision has entered into legal force and is enforceable, or that it must be executed before it comes into force, if this does not follow from the decision itself ; b) a document which states that the party against which the decision was made that did not take part in the process, was in good order and called to court on time, and was properly presented in case of its procedural incapacity; c) a document confirming the partial execution of the decision at the moment of its transfer; d) a document confirming the agreement of the parties on cases of contract jurisdiction.

The decision of the competent court of one Contracting party that has entered into legal force is executed on the territory of the other Contracting party in an indisputable manner (Article 3).

**Conclusion.** In conclusion, it should be emphasized that in both Kazakhstan and Russia, there are three modes of conducting proceedings on the cases involving foreigners: firstly, under the bilateral international agreements (as a rule, on legal assistance in civil, family and criminal cases); secondly, under the multilateral international agreements (the Kiev Agreement and the Minsk Convention); thirdly, under the national legislation (APC RF and CPC RK).

Based on the analysis of the institute of proceedings on cases involving foreigners, we came to the following conclusions:

Firstly, the norms of procedure for cases involving foreigners in Russia are regulated by the Arbitration Procedure Code and in Kazakhstan by the Civil Procedure Code. In Russia the proceedings on cases involving foreigners are considered by the arbitration courts, and in Kazakhstan - by the economic courts.

Secondly, in the Arbitration Procedure Code of Russia, Section V “Proceedings on cases involving foreigners” is devoted to the proceedings on cases involving foreigners, and in the Civil Procedure Code of Kazakhstan Section IV called “International Process” is devoted to this issue.

Thirdly, there are some discrepancies in establishing retorsion. Thus, the Russian legislation provides for procedural benefits, if they are specified by an international agreement of Russia, the Kazakhstani legislation does not contain the norms of a preferential procedural regime for foreigners. In addition, the Government of Russia introduces retorsions in Russian legislation, and in Kazakhstan, the Republic of Kazakhstan in the person of the Parliament or the President of the Republic of Kazakhstan, deals with this issue.

Fourthly, based on the study of Articles 416, 417, 419 of the Civil Procedure Code of the Republic of Kazakhstan, we propose to rename Article 416 of the Civil Procedure Code of the Republic of Kazakhstan as “General jurisdiction of economic courts”, 417 Article 417 of CPC RK - “Exclusive jurisdiction of economic courts” and Article 419 of the CPC RK - “Contractual jurisdiction of economic courts”.

Fifthly, it should be emphasized that in both Kazakhstan and Russia, there are three modes of conducting proceedings on cases involving foreigners: firstly, under the bilateral international agreements (as a rule, on legal assistance in civil, family and criminal cases); secondly, under the multilateral international agreements (the Kiev Agreement and the Minsk Convention); thirdly, under the national legislation (APC RF and CPC RK).

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### ҚАЗАҚСТАН МЕН РЕСЕЙДІҢ ХАЛЫҚАРАЛЫҚ АЗАМАТТЫҚ ІС ЖҮРГІЗУ ҚҰҚЫҒЫНДАҒЫ ШЕТЕЛ ТҮЛҒАЛАРЫНЫҢ ҚАТЫСУЫ АРҚЫЛЫ ІС ЖҮРГІЗУДІҢ КЕЙБІР МӘСЕЛЕЛЕРІНІҢ САЛЫСТЫРМАЛЫ СИПАТЫ

**Аннотация.** Қазіргі уақытта интеграциялық үдерістегі мемлекеттердің ынтымақтастығы мынандай халықаралық бірлестіктер шеңберінде өтуде: Тәуелсіз Мемлекеттер Достастығы (ТМД), Еуразиялық экономикалық қоғамдастық (ЕурАзЭҚ) және Бірыңғай экономикалық кеңістік (БЭК).

ЕурАзЭҚ шеңберінде мемлекеттердің ынтымақтастығы неғұрлым серпінді дамып келеді, ол келешекте экономикалық интеграцияның неғұрлым жетілдірілген нысаны ретінде Еуразиялық одаққа (ЕАС) айналуы мүмкін.

Осы жағдайға байланысты ЕурАзЭҚ-қа кіретін мемлекеттердің құқықтық жүйелерін зерделеу өте қызықты және өзекті болып саналады.

Сонымен қатар, аталған халықаралық ұйымды ТМД-дан бөліп қарауға болмайды, оны «салыстырмалы құқықтану зертханасы» деп бағалауға болады. Екінші жағынан, еуразиялық құқықтық кеңістік, шын мәнінде, бар. Барлық қатысушы елдер бір-біріне географиялық тұрғыда жақын орналасқан, ал заң саласында оларды ортақ құқықтық мұра біріктіреді. Олар жұмыста қолданылатын ортақ тілді – заң тілін (орыс) пайдаланады, оларды қолданыстағы институционалдық модельдегі (ТМД) өзара іс-әрекет тәжірибесі біріктіреді.

Авторлар шетелдік тұлғалардың қатысуы арқылы қазақ және ресей құқығындағы істер бойынша өндіріс институтының салыстырмалы сипаттамасы екі мемлекеттің халықаралық жеке құқығының маңызды салаларының бірі ғылыми ұғынуда кезекті қадам болып саналады деп есептейді. Зерттеу нысаны ретінде авторлар халықаралық коммерциялық дауларды, яғни заңды тұлғалар мен жеке кәсіпкерлердің кәсіпкерлік және өзге де экономикалық қызметті жүзеге асыруына байланысты дауды қарау барысында шетелдік тұлғалардың қатысуы негізінде іс жүргізуде өндірісті таңдағанын атап өткен жөн.

Бұл мақала халықаралық азаматтық үдерістің өзекті мәселелерінің бірі – шетелдік тұлғаларға қатысты істер бойынша сот ісін жүргізуге арналған. Авторлар халықаралық азаматтық іс жүргізу қатынастарын реттеуге қатысты қазақстандық және ресейлік заңнаманы салыстырмалы талдауға назар аударды. Авторлар шетелдік тұлғалардың қатысуы негізінде іс жүргізуге қатысты ресейлік және қазақстандық құқық саласындағы ұқсас ерекшеліктер мен айырмашылықтарды анықтау мақсатында ұлттық заңнама мен өңірлік сипаттағы халықаралық шарттарды қоса алғанда, құқықтық сала ауқымын егжей-тегжейлі зерттеді.

Зерттеу пәні ретінде авторлар халықаралық коммерциялық дауларды, яғни заңды тұлғалар мен жеке кәсіпкерлердің кәсіпкерлік және өзге де экономикалық қызметті жүзеге асыруға байланысты дауларды қарастыруда шетелдік тұлғаларға қатысты іс жүргізуді таңдағанын атап өткен жөн.

**Түйін сөздер:** шетелдік тұлғалар, азаматтық сот ісін жүргізу, шетелдік тұлғалардың қатысуы арқылы іс жүргізу, салыстырмалы сипаттама, халықаралық үдеріс.

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### СРАВНИТЕЛЬНАЯ ХАРАКТЕРИСТИКА НЕКОТОРЫХ ВОПРОСОВ ПРОИЗВОДСТВА ДЕЛ С УЧАСТИЕМ ИНОСТРАННЫХ ЛИЦ В МЕЖДУНАРОДНОМ ГРАЖДАНСКОМ ПРОЦЕССУАЛЬНОМ ПРАВЕ КАЗАХСТАНА И РОССИИ

**Аннотация.** В настоящее время сотрудничество государств в интеграционном процессе проходит в рамках таких международных объединений, как: Содружество Независимых Государств (СНГ), Евразийское экономическое сообщество (ЕврАзЭС) и Единое экономическое пространство (ЕЭП).

В силу этого обстоятельства изучение правовых систем государств, входящих в ЕврАзЭС, представляется весьма интересным и актуальным.

Вместе с тем, данную международную организацию нельзя рассматривать в отрыве от СНГ, которое можно оценить как «лабораторию сравнительного правоведения». С другой стороны, на самом деле евразийское правовое пространство существует. Все страны-участницы находятся в географической близости друг от друга, а в юридической сфере их объединяет общее правовое наследие. Они используют

общий рабочий юридический язык (русский), их объединяет опыт взаимодействия в действующей институциональной модели (СНГ).

Настоящая статья посвящена одному из наиболее актуальных проблем международного гражданского процесса – производству по делам с участием иностранных лиц. Авторы сконцентрировали свое внимание на сравнительном анализе казахстанского и российского законодательства, касающегося регулирования международных гражданско-процессуальных отношений. Авторы полагают, что сравнительная характеристика института производства по делам с участием иностранных лиц в казахстанском и российском праве будет очередным шагом в научном осмыслении одной из важнейших отраслей международного частного права обоих государств.

Следует подчеркнуть, что в качестве предмета исследования авторы выбрали производство по делам с участием иностранных лиц при рассмотрении международных коммерческих споров, т.е. споров, связанных с осуществлением предпринимательской и иной экономической деятельности юридическими лицами и индивидуальными предпринимателями.

**Ключевые слова:** иностранные лица, гражданское судопроизводство, производству по делам с участием иностранных лиц, сравнительная характеристика, международный процесс.

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## THE MEANING AND CONTENT OF THE MODERNIZING PROCESSES OF PEDAGOGY IN THE UNIVERSITIES

**Abstract.** Higher school pedagogy is based on the pedagogical science. This is the science of the pedagogical laws, the essence, principles, methods and forms of education, upbringing, development and professional training of the particular person, team with the interests of the successful activity. The emergence of higher school pedagogy is associated with the first associations of the people for joint life activity; in order to implement it, appropriate training was conducted. As an independent branch, pedagogy was formed only after the accumulation of the general and special pedagogical knowledge. Pedagogy reveals the most stable and significant relationships, dependencies between training, education, development and comprehensive training of the people and social groups. Studying the pedagogical aspects of the process of education (self-education), training, development, self-development and professional training of the people for the certain type of activity, higher school pedagogy substantiates the principles, methods and organizational forms of the educational work, recommendations, rules, management techniques, etc. Higher school pedagogy is a branch of the pedagogical science, which studies the pedagogical laws and means of organizing and implementing the higher educational process.

**Key words:** education, pedagogy, philosophy of education, Bologna process, doctorate, pedagogical process, pedagogical activity, self-education, training, self-education.

**The relevance of the topic.** In the Law of the Republic of Kazakhstan “About higher education”, its purpose is formulated as following: “Higher education provides the fundamental scientific, professional and practical training, obtaining educational and qualification levels for citizens in accordance with their vocation, interests and abilities, improving scientific and professional training, retraining and improving their qualifications”.

The education of students was understood as the diverse and regular changes in their individual psyche, resulting in the new qualitative state of the object. The process can occur along an ascending progressive or descending regressing line, in this case, the object degrades, loses the positive properties, without acquiring new ones [1].

From the point of view of the pedagogy, the students’ education is very purposeful, systematic and continuous process of improving mental, physical and professional activities with the help of appropriate educational material, influence and adequate organization of the educational process at the university. Science distinguishes between the general intellectual, moral, mental, physical and professional development of the person.

**Materials and methods of research.** General intellectual (mental) development has associated with the education and upbringing, aimed to developed understanding and mental actions, the ability to analyze, generalize and concretize the situation, pedagogical environment, the surrounding reality, and, if necessary, the ability to think outside the framework, making informed decisions. Moral development involves the acquisition, strengthening, set of the moral principles, norms, feelings, consciousness, ideals,

etc. Mental development is the development of the various systems of the individual psyche of the student [2]. Physical development means the high level of physical fitness, required for effective performance. It should be aimed during preparing of the young people for the productive work. Professional development of students is the process and result of acquiring knowledge, skills and abilities, necessary for the effective implementation of the professional activities, and their improvement. Training is mutually dependent, purposeful, organized and systematic process of transferring knowledge, skills, and the process of mastering them. Training is the main way to get the basic education. Learning is interlinked with the education. During education the certain qualities and properties were formed, while learning they receive knowledge, skills and abilities.

Education is interpreted, first of all, as the process of assimilation of the certain system of knowledge, skills and abilities, and secondly, as the result of their assimilation, which is expressed in the appropriate level of the theoretical and practical training and development of the intellectual powers of the person. On their basis, the worldview, moral qualities of the individual creative abilities and skills. Education literally means “to protect, to grow”. The term “education” is used in the broad social sense, as well as in the narrower pedagogical sense.

In a broad sense, education is a process of systematic and purposeful influence of the society on the spiritual and physical development of the individual through the creation of the conditions for productive, social and cultural activities of its members. The purpose, content and organization of the social education determine the prevailing social relations in the country.

In the pedagogical sense, education should be understood as a purposeful, organized system of the influences on people, their interests of forming certain worldview positions, moral ideals, norms and relationships, aesthetic perception, high aspirations, as well as the need for the systematic work [3].

In the narrow sense, the education is understood as the special pedagogical or practical activity of the certain aspect of the education (moral, legal, environmental, professional, civil, etc.). Self-education in the higher education means the purposeful conscious activity of the student for self-improvement and the formation of the necessary qualities and properties of the personality. Self-education is the purposeful independent work of the students with the acquisition, deepening and improvement of the knowledge, skills and abilities.

Pedagogical process in the higher education in Russia, Kazakhstan is an active process of interrelated and interdependent activities of the subjects and objects of training and education, organized and purposeful educational activities of its members, their professional, moral and psychological training, which act in the unity and relationship. Its main purpose is to prepare the people and groups (collectives) for the various types of the activities [4, p.25].

There are the complex and contradictory relationships between the training, development, professional, moral and psychological training, education and upbringing. At the semantic level for their description in the pedagogy, there is a large conceptual apparatus. The most relevant concepts include: knowledge, skills, techniques, tools, methods, forms, pedagogical patterns, and so on.

Like any other science, the pedagogy consists of the methodology, theory, methods, and recommendations for the pedagogical practice. Its content consists of the factual materials, obtained from the observations, experiments, and experience; scientific generalizations formulated in laws, principles, theories, and hypotheses, that are verified and confirmed by the practice [5, p.77].

Pedagogy rejects outdated and incorrect provisions, and adequately reflects the essence of pedagogical phenomena. Pedagogical practice implements the programmes of the development, approved by the government and educational training programmes of higher education, in three and more groups of specialties. It uses the outcome of pure and applied studies for generating, and in the transfer to the new knowledge.

**Research results.** The process of the preparing of people and teams to successfully solve the problems is very difficult. There are some aspects, studied by many humanitarian sciences: philosophy, sociology, ethics, esthetics, psychology, physiology, etc. Cybernetics, some physical and mathematical and technical sciences have joined the study of this process. Pedagogy interacts with these sciences (as well as with the number of other branches of pedagogy, uses their information, and sometimes methods in the analysis of phenomena, allows you to get deeper into the essence of the pedagogical process, develop objective criteria for the activities of those, who teach, and those trained, as well as justify accurate practical recommendations.

So, pedagogy is enriched by the development of other sciences. At the same time, other sciences, exploring the process of training people with their own methods, take into account the conclusions and recommendations of pedagogy, its capabilities. We should especially emphasize the connection of pedagogy with the educational work, the moral and psychological aspect. Today the role of the pedagogy in the theoretical development of the pedagogical problems of the competitive training of the people and various social groups has increased.

Main tasks of higher school pedagogy:

- substantiation of the methodological and theoretical foundations of the pedagogical process in higher education at the present stage of the development of science and humanity;
- study of the essence, features and laws of the pedagogical process and its components: training, education, moral and psychological training, development, self-education, in accordance with the requirements of the Bologna process [6];
- development of the methodological systems and individual methods of the socialization and professional training of the future specialists, their education and development;
- development and specification of the principles of training and education of the students (trainees), their professional, moral, psychological training, in accordance with the changes, that occur in the life of the society, the market economy, etc.;
- identification and justification of the conditions for successful implementation of the requirements of the principles of training and education for the activities in various fields;
- identification of the ways to improve and develop organizational forms of the educational work, improve the effectiveness of various methods of monitoring, evaluating the educational process, the levels of preparedness of the students and groups;
- forecasting the development of the pedagogical process, depending on the prospects of the science and the needs of the society;
- search for the ways, techniques, ways and means of activating the cognitive activity of students (listeners), reducing the time for effective and high-quality professional training;
- identification of patterns of pedagogical influence on students (listeners) in order to form their scientific worldview, national consciousness, dignity and pride, national feelings and patriotism, professional responsibility;
- formation of the students' motivation for the activity, competition, active social and social life;
- disclosure of the main laws, goals, content, methods of self-education and self-education of students (listeners), methods and techniques for stimulating them among various categories of the people;
- development of the modern pedagogical technologies for socialization and professional training of the specialists and various social groups;
- study of various groups and develop technologies of the pedagogical influence on them in order to unite them, optimize relations and ensure interaction, coherence, and so on;
- study and critical understanding of the pedagogical heritage of higher education in the past, identifying and using all that is valuable today;
- the introduction of the system of higher education new pedagogical technologies of education, training, vocational training, education, etc.

The most important characteristics of the pedagogical categories include learning (self-education), education (self-education), development, pedagogical process, pedagogical activity, activity model, specialist model, forecasting, pedagogical correction, goals, content, methods, values and organizational forms of training, education and development of students. Pedagogical objects designated by these categories are constantly interconnected, creating the complete structural unity complex system [7].

The pedagogical system of higher educational institution is the set of relatively independent elements, which are functionally connected with each other by the strategic goal, in order to prepare the students for the professional activity and social life. The individual elements of the pedagogical system of university administration, teaching department (center), personnel department, human resources, educational work, scientific department, faculties, departments, individual scholars, students, various services, sparsity, academic councils, etc.

The pedagogical system of higher educational institution should be considered, based on the law of balance, as the universal law of nature, which expresses the degree of correlation of opposing forces in



this system, and also provides for the direction and essence of the development of the system, within the framework of the existing system. Since the ratio of equilibrium in the system can be any, but ideally it is balanced, the opposing forces of this system are identically balanced.

Any system, including the pedagogical one, is characterized by the concept of reliability and stability. These concepts are actually based on the concept of the system balance. Any system is stable, if it has the necessary balance of resultant forces, viable mechanism for the constant updating, adaptation and bringing the system into the state of balance, the system is long-lasting and promising if the vector (direction and essence) of its development corresponds to the interests of the entire system as a whole (or most of its elements) [8].

The stability, viability and prospects of the pedagogical system of higher education are based on the fact that learning technologies should be presented as the systematic method of design, from goals through the methods, forms, means and educational, scientific base for achieving learning results, implementation, correction and further reproduction of the learning process of higher professional schools. The educational process is closely linked to the standardization of the education. Standard shows the mandatory requirements for certain aspects of the education, detected diagnostically. Since any pedagogical system consists of the elements, that define the didactic task and elements, describe didactic processes as the ways to solve these problems. The essence of the standardization in the education consists of two aspects. The first is the didactic task. It is defined through the disclosure of three elements of the pedagogical system: students, the purpose of training (education), and the structure of receiving training (education). For the students, their personal qualities must meet the certain requirements: starting level of the intellectual, moral, social, physical and aesthetic readiness, motivation of the training, material support, etc. Since there is the minimum level of the requirements for the special qualities of the student as the component of the pedagogical system, it can have the norm, defined in the form of the corresponding standard, for example, the starting requirements for entering the certain educational institution [9, p.135].

The second is the purpose of training (education). It is embedded in the educational and qualification characteristics and is implemented through various didactic processes. As you know, the main components of learning technology are its own didactic processes, organizational forms of learning, tools and scientific, pedagogical worker. The choice of the didactic process in higher education is determined by the number of considerations, which, according to the standardization, should be the same in the different educational institutions and in the implementation of the different scientific and pedagogical workers in all educational conditions. And this does not correspond to the specifics of the particular higher education institution and, moreover, creativity.

Therefore, it is advisable to give the freedom to the higher education institutions and recognized author's schools in order to creatively solve these issues by the developing standard-oriented model norms, i.e. recommended didactic processes. What about the problem of the standardization of the didactic processes also applies to organizational forms of training, in accordance with the actual conditions of training. We can talk about the recommended organizational forms of training, but not about the standard mandatory [10, p.121].

The main characteristics of the “education” are the category of the students, bachelors, masters, postdoctoral students. The modern concept of the training specialists provides for the functioning of an educational institution at any level as the element of the system of continuing education. Each link of this system “works” for the higher block of the cultural and educational pyramid and for the future of our society. Therefore, the educational activity at any stage, including in higher education institutions, should be of an advanced nature and for the theory and practice of continuing education, the category of “predictability” is the most important.

The “education” category has four aspects: value, system, process, result. The value characteristic of the education provides the consideration of three interrelated blocks: education as the value of the state; education as the public value; and education as the personal value. The value of the education of the society contains moral, intellectual, scientific, technical, spiritual and cultural potential, which directly depends on the state, the opportunities for the progressive development of the educational sphere. Despite the fact that all the elements are axiomatically weak, we need the appropriate implementation of the mechanisms, effective technologies that allow us to ensure the prestige of the education and awareness of its national significance. Without this, it is almost impossible to solve the significant problems of the

motivation and stimulation in the education. We are also talking about the priority of the education in the state educational institutions, supporting them with appropriate material and moral investments [10, p.12].

In practice, these prerequisites are also relevant for the characteristics of the public value of the education. The difference is that the state and the society are not identical concepts. As the result, the understanding and the desire of the state and society is to develop education creatively. The problem is related to the study of self-consciousness of the individual, especially the individually motivated attitude to their own education, its level and quality. On the one hand, there are such arguments: what can give an appropriate level of the education to the person and society? On the other hand, there are internal interests, the source of which is in the biosocial needs of any normal person, his natural desire for the knowledge. Internal motives and incentives largely depend on the psychological and pedagogical atmosphere, the actual educational environment, in which any people stay.

The education system is the set of the educational institutions: state, non-state, informal, alternative, that has the wide variety of the characteristics, primarily in the terms of the level and professional training. However, the diversity of the educational institutions serves as the basis for granting education the status of the whole system.

**Conclusion.** Therefore, higher education should be the person-oriented. However, we note, that the personal orientation of the education does not mean ignoring its social and state significance. In this regard, it is extremely important to establish the specific links and mutual influence between the socio-economic and socio-cultural spheres and the sphere of the education, these links by themselves should have very clear predictive character, that determines the future development of our society.

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### **ЖОҒАРЫ МЕКТЕП ПЕДАГОГИКАСЫНЫҢ МОДЕРНИЗАЦИЯЛЫҚ ҮРДІСТЕРІНІҢ МАЗМҰНЫ МЕН МАҒЫНАСЫ**

**Аннотация.** Жоғары мектеп педагогикасы педагогикалық ғылымға негізделген. Бұл-табысты қызмет мүддесінде нақты адамның, ұжымның педагогикалық заңдылықтары, мәні, принциптері, әдістері мен оқыту нысандары, тәрбиелеу, дамыту және кәсіби дайындығы туралы ғылым. Жоғары мектеп педагогикасының пайда болуы бірлескен өмір сүру үшін адамдардың бірінші бірлестіктерімен байланысты: оны жүзеге асыру үшін, тиісті дайындық жүргізумен байланысты. Дербес сала ретінде, педагогика жалпы және арнайы педагогикалық білім жинақталғаннан кейін ғана қалыптасты. Педагогика адамдар мен әлеуметтік топтарды оқыту, тәрбиелеу, дамыту және жан-жақты дайындау арасындағы неғұрлым тұрақты және Елеулі байланыстарды анықтайды. Білім беру (өзін-өзі білім беру), оқыту, тәрбиелеу, өзін-өзі тәрбиелеу, дамыту, өзін-өзі дамыту және адамдардың белгілі бір қызмет түріне кәсіби даярлығының педагогикалық аспектілерін зерттей отырып, жоғары мектеп педагогикасы оқу-тәрбие жұмысының принциптерін, әдістері мен ұйымдастыру формаларын, ұсынымдарды, ережелерді, басшылықтың тәсілдерін және т. б. негіздейді. Жоғары мектеп педагогикасы-педагогикалық заңдылықтарды және жоғары білім беру процесін ұйымдастыру және жүзеге асыру (өздігінен білім алу), оқыту, тәрбиелеу (өзін-өзі тәрбиелеу), дамыту (өзін-өзі дамыту) және студенттердің (тыңдаушылардың) белгілі бір қызмет түріне және қоғамдық өмірге кәсіби даярлығын зерттейтін педагогикалық ғылым саласы. Сондықтан жоғары мектеп педагогикасының пәні: педагогикалық жүйе ретінде ЖОО-ны; жоғары оқу орнындағы педагогикалық процестің жұмыс істеуі мен тиімділігін; ғылыми-педагогикалық қызметкерлердің педагогикалық қызметін, олардың кәсіби-педагогикалық даярлығын; студент тұлғасының қалыптасуы мен дамуының педагогикалық заңдылықтарын; жоғары білім беру және өз бетімен білім алу процесін; жоғары оқу орнында оқытуды; студенттерді тәрбиелеу мен өзін-өзі тәрбиелеуді; моральдық және психологиялық дайындықты; жоғары оқу орнындағы педагогикалық технологияларды, формаларды, әдістерді және; ЖОО-да оқу кезінде және оны аяқтағаннан кейін студенттердің үздіксіз өзіндік жұмысының педагогикалық аспектілері; ғылыми-педагогикалық қызметкердің тұлғасы; Болон Конвенциясының міндеттерін іске асыру барысында ЖОО-ның педагогикалық үдерісіндегі студенттер мен ғылыми-педагогикалық қызметкерлердің өзара әрекеттестігінің педагогикалық ерекшеліктері; кафедралардың, факультеттердің, ЖОО-ның ғылыми-педагогикалық қызметкерлерінің ұжымы (әлеуметтік тобы); студенттік ұжымдар (әлеуметтік топтар). Қоғамның әлеуметтік-экономикалық жағдайында болған түбегейлі өзгерістер жоғары мектеп үшін ғылыми-педагогикалық кадрларды ғылыми

негізделген даярлауды енгізуді талап етті. Мұндай дайындық оқу пәні жататын пәндік саланы терең меңгеруді ғана емес, сонымен қатар педагогикалық қызметтің ғылыми негіздерін де көздейді. Мұндай дайындықтың нақты жолдарының бірі магистратура мен докторантура болып табылады. Жоғары мектеп педагогикасы келесі функцияларды жүзеге асыруды қамтамасыз етуі тиіс: білім беру, ғылыми-танымдық, итермелеу, қайта құру, болжамдау, жобалау, мәдениеттану, бейімделу, тәрбие және кәсіби. Жоғары мектеп педагогикасы өзінің тезаурусына ие және мынадай негізгі ұғымдармен жұмыс істейді: даму, оқыту, тәрбиелеу, кәсіптік дайындық, өзін-өзі тәрбиелеу, өзін-өзі білім беру, педагогикалық жүйе, педагогикалық процесс, педагогикалық қызмет және т.б. Студенттің дамуы оның жеке психикасындағы әртүрлі жоспарлы және заңды өзгерістер ретінде түсінеді, соның салдарынан объектінің жаңа сапалық жағдайы пайда болады. Процесс өрлемелі (үдемелі) немесе төмен түсетін (регрессивті) сызық бойынша болуы мүмкін (бұл жағдайда объект тозады, жаңаларын алмастан оң қасиеттерін жоғалтады).

**Түйін сөздер:** білім беру, педагогика, білім философиясы, Болон процесі, докторантура, педагогикалық процесс, педагогикалық іс-әрекет, өзіне-өзі білім беру, оқыту, өзін-өзі тәрбиелеу.

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### **СМЫСЛ И СОДЕРЖАНИЕ МОДЕРНИЗАЦИОННЫХ ПРОЦЕССОВ ПЕДАГОГИКИ ВЫСШЕЙ ШКОЛЫ**

**Аннотация.** Педагогика высшей школы основывается на педагогической науке. Это наука о педагогических закономерностях, сущности, принципах, методах и формах обучения, воспитания, развития и профессиональной подготовки конкретного человека, коллектива в интересах успешной деятельности. Появление педагогики высшей школы связано с первыми объединениями людей для совместной жизнедеятельности: чтобы ее осуществлять, проводили соответствующую подготовку. Как самостоятельная отрасль педагогика сформировалась только после накопления общих и специальных педагогических знаний. Педагогика выявляет наиболее устойчивые и существенные связи, зависимости между обучением, воспитанием, развитием и всесторонней подготовкой людей и социальных групп. Изучая педагогические аспекты процесса образования (самообразования), обучения, воспитания, самовоспитания, развития, саморазвития и профессиональной подготовки людей к определенному виду деятельности, педагогика высшей школы обосновывает принципы, методы и организационные формы учебно-воспитательной работы, рекомендации, правила, приемы руководства и др. Педагогика высшей школы – это отрасль педагогической науки, изучающая педагогические закономерности и средства организации и осуществления высшего образовательного процесса (самообразования), обучения, воспитания (самовоспитания), развития (саморазвития) и профессиональной подготовки студентов (слушателей) к определенному виду деятельности и общественной жизни. Поэтому предмет педагогики высшей школы включает: вуз, как педагогическую систему; функционирование и эффективность педагогического процесса в высшем учебном заведении; педагогическую деятельность научно-педагогических работников, их профессионально-педагогическую подготовку; педагогические закономерности формирования и развития личности студента; процесс высшего образования и самообразования; обучение в высшем учебном заведении; воспитания и самовоспитания студентов; моральную и психологическую подготовку; формы, методы и педагогические технологии в высшем учебном заведении; педагогические аспекты непрерывной самостоятельной работы студентов во время обучения в вузе и после его окончания; личность научно-педагогического работника; педагогические особенности взаимодействия студентов и научно-педагогических работников в педагогическом процессе вуза в ходе реализации задач Болонской конвенции; коллектив (социальную группу) научно-педагогических работников кафедр, факультетов, вузов; студенческие коллективы (социальные группы). Коренные изменения, которые произошли в социально-экономических условиях общества, потребовали внедрения научно обоснованной подготовки научно-педагогических кадров для высшей школы. Такая подготовка предусматривает не только глубокое владение предметной областью, к которой относится учебная дисциплина, но и научные основы педагогической деятельности. Одним из реальных путей такой подготовки является магистратура и докторантура. Педагогика высшей школы должна обеспечить реализацию следующих функций: образовательной, научно-познавательной, побудительной, преобразовательной, прогнозирующей, проективной, культурологической, адаптивной, воспитательной и профессиональной. Педагогика высшей школы имеет свой тезаурус и оперирует такими основными понятиями, как: развитие, обучение, воспитание, профессиональная подготовка, самовоспитание, самообразование, педагогическая система, педагогический процесс, педагогическая деятельность и др. Развитие студента понимают как разноплановые и закономерные изменения в его индивидуальной психике, вследствие чего возникает новое

качественное состояние объекта. Процесс может происходить по восходящей (прогрессирующей) или нисходящей (регрессирующей) линии (в этом случае объект деградирует, теряет положительные свойства, не приобретая новых).

**Ключевые слова:** образование, педагогика, философия образования, болонский процесс, докторантура, педагогический процесс, педагогическая деятельность, самообразование, обучение, самовоспитание.

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**THE ROLE OF KANAFIA TELZHANOV'S CREATIVITY  
IN THE CONTEXT OF THE SPIRITUAL AND PATRIOTIC  
EDUCATION OF YOUNG ARTISTS OF KAZAKHSTAN**

**Abstract.** In the modern world, which is subject of the processes of globalization, standardization, national original cultural aspects, the social significance of art in the spiritual and moral education of the young generation of Kazakhstani artists is very relevant and quite important. The works of one of the first Kazakh painters Kanafia Telzhanov are the sources of the revival of spirituality, so necessary for the modern society. One of the aspects of Kanafia Telzhanov's originality of his artistic vision is the unique color palette, which is the living reflection on the color of folk art, created artistic images that fully reveal the spiritual traditions of the nation. Reflecting the history, mental coloristic features, specifics of imaginative and coloristic thinking of Kazakhs, it expresses the essence of the national identity. This will serve as the means of aesthetic and spiritual education of young artists. The process of forming the national identity of young artists is impossible without the influence of traditional artistic images that feed the artist with new means of expression. Kanafia Telzhanov's creativity is preserved in the consciousness of the modern society as an example for the younger generation to follow them very actively.

**Key words:** fine arts, national identity, creativity, school of painting, author's works, epic, romance, national culture, spiritual and moral education, revival of spirituality.

**The relevance of the topic.** Famous painter, Kanafiya Telzhanov, was born on May 1, 1927 in the village of Baituek (now Tavrichesky district, Omsk region, Russian Federation). From the age of 10, he studied in Leningrad, at the art school "Young Talents", at the Russian Academy of Arts, but was expelled due to the arrest of his father Temir-Bulat Telzhanov, editor of the number of Kazakh Newspapers, who was repressed and shot by the NKVD in 1939. Later Kanafiya Telzhanov became the student of the Institute of red professorship. Then he has graduated this institute and soon became the very talented and famous painter of Kazakhstan. He was died on September, 30, 2013.

The favourite works of Kanafiya Telzhanov were the following: "Jamal" (1955) [1, P.126], "Peaceful lights" (1961), "Sounds of dombra" (1958), "On the land of the grandfathers" (1958), "Kokpar" (1960), "Silence" (1964), "Arrival of the agitator on dzhailau" and "Young".

The history of fine art in Kazakhstan has started during the Soviet period, when Russians introduced paintings to the region as the new form of the cultural product that aimed to educate the masses and support the Soviet ideological worldview. Indeed, the first Kazakh painters, such as Abylkhan Kasteev (1904-1973) and Kanafiya Telzhanov (1927-2013), have studied in the institutes and art academies in Moscow [2]. Many works, that depicted the region, were also created in Moscow. Kazakh fine art has its origins in the socialist realism, the movement, created by merging ideology, propaganda, and aesthetics. Kanafiya Telzhanov argues that "Socialist realism was not supposed to depict life as it was, because life was interpreted as being constantly in flux and in development-specifically in "revolutionary" development, as it was officially formulated". Socialist realism was looking toward something that has not yet come into existence, toward the certain dream of the socialist future, toward the ideals of the socialist world. It rejected the idea of autonomy in art, instead of considering art, as one element in the wider socialist reality, an instrument that supported the construction of the desired future and the creation of the new socialist individual. It was the creative method that valued art for its social relevance.

The construction of the new man and the new world required the eradication of past heritage, and the destruction of previous cultural identity. Kanafiya Telzhanov writes that in Russia, the October Revolution constituted the radical break with the past, destroying individual and collective heritage. In Central Asia and Kazakhstan, the destruction of previous cultural identity was even more radical, since the relationship between Moscow and Alma-Ata was the relationship between the center and periphery, between the dominant and subordinate culture. Art historian Lisovsky V.G. describes the relationship between Russia and Central Asia using concepts from postcolonial theory; he argues that through Orientalist images, the Communist Party was able “to pursue several of its goals, namely state unification, imperial expansion and the acceleration of the national differences”. The Soviet state used art as the tool for achieving political goals and establishing its dominance through the complete demolition of preexisting cultural heritage. The government focused on art’s functional and instrumental value, and was interested in instrumentalizing art as propaganda [3].

The Soviet center had strong feelings about the scenes, landscapes and subjects that had to be depicted in paintings. The leading painters have famously remarked that art should be national in the form and socialist in the substance, the phrase that became the manifesto of the art production in the national republics, including Kazakhstan. Artists depicted scenes of the modernization and the construction of the new world: new combine factories against the backdrop of the mountain landscape symbolized the changes that Soviet rule had brought to the region. Painting was the means to educate, to construct the official and mainstream narratives of the Soviet power, which sought to represent itself as anticolonial. The official themes artists could work on the rapid modernization, liberation from the archaic traditions and economic development. The Communist Party did not allow any alternative perspectives on the radical social and cultural changes that were taking place. Though during the Soviet era, the nation painters were made sedentary on the massive scale under the Soviet rules, the process has caused famine and resulted in the deaths of nearly one-third of the Kazakh population. Another third of the population fled to the neighboring countries.

**Materials and methods of research.** Contemporary art is the art, preoccupied with the processes, changes and issues in the modern world; they have political, social, economic and cultural framework. Kanafiya Telzhanov wrote that the essence of the contemporary art is challenging to the status quo. The mechanism for launching such the challenge is built on the critical thinking and the ability to test boundaries, definitions and established worldviews.

Contemporary Kazakh art is the process rather than the definitive phenomenon, the constant work in the progress with the frameworks and norms, continuously being developed by the artists through their artistic practices. It breaks with the traditional realist painting, which is associated with support for the state ideology. Artists apply and use new media and materials through that process; they look for new messages and stories, new themes and objects outside the official narratives. Though they do not engage in the politics directly, they increase the number of critical voices and challenge the status quo. It is the essence of the art to the question, how the main things are organized in the world, established understanding of the world, common perceptions and propositions. In the restricted society, art is the arena of the alternative meanings and narratives becomes even more important.

One of the main narratives of the contemporary art in Kazakhstan is reimagining nomadism, or the revival of symbols, cultural codes, norms and artifacts of nomadic, pre-Soviet culture. Artists use the different media and different approaches to recreate the visual representation of the nomadic culture; trace its presence in the contemporary life, and locate forgotten artifacts in today’s art scene. Reimagining nomadism is closely connected with another narrative, constructing new post-Soviet identity. The number of established contemporary artists, who are well known outside Kazakhstan, work and develop the theme of nomadism, local culture and local landscape [4].

This use of art in urban space is an attempt to engage both the government and the public in the discussion about an important social problem that needs to be resolved. The artist notes the absence of public discussion and through his work highlights both the important social issue and the limitations of the existing public sphere; he wants to raise the social profile of an issue, which his art action does. The highly emotional form of the message makes it effective in communicating the problem and raising public attention and interest. At the same time, the nature of the social problem, the unconventional use of the public space, the prohibition of his art intervention, and the reaction of the city administration mean that the street art installation becomes the story that is widely covered by the local mass media. Street artwork

connects with the physical urban public space, public debates, taking place online and on the social networks.

We live in the diverse world, which is characterized by an interaction of the various cultures; each cultural, ethnic, religious and linguistic group tends to declare its values as sacred and inviolable. At the same time, we all live on one planet and represent the common humanity [5]. We challenge to determine some basic goals for education systems that may help us to live in the tolerant and peaceful world with respect to the cultural and personal identities of others. The formation of ethno-cultural identity of the people arises from the knowledge of its historical and cultural milestones, devotion to the established cultural values and the honoring of national heroes. Learning of the history of the nation and state creates the feeling of the intergenerational continuity and common historical roots. He or she realizes the belonging to the world history and shares the common destiny of the centuries-old neighboring people. It seems doubtful to create the template of the specific ethnic and/or cultural components of the national curriculum. However, an interdependent society, if seeking promotion of an international and intercultural understanding, would reasonably attempt to incorporate the principles of the cultural diversity value and the commitment of peace, tolerance and compassion its education system. Art education by definition contains a set of fundamental units, criteria and key ideas that should serve as a useful and effective tool for any instructor, school and other educational organization aimed on strengthening of humanistic and international aspects of training [6, P.53]. The core component of the curriculum should introduce the value-based art education, striving for consensus and respect of diversity, not only the training methods and means of knowledge. Kazakhstan has the unique feature of ethno-cultural diversity that appeared historically due to multi-ethnic and multi-confessional population's development. Such environment urges the state to facilitate the revival and development of the ethnic cultures and cross-cultural interaction for the benefit of the national unity.

The adoption of the concept of art ethno-cultural education means that the creation of the national education system would enhance the idea of cultural and linguistic pluralism, combining the advanced education, technical and information facilities with the traditional cultural values. In fact, the educated person feels the real belonging to the historical and cultural traditions of the country. The free movement of information, intellectual products and ideas were considered one of the great globalization advantages. The young generation of the painters are almost open for the new ideas, think globally and perceives the categories of the future. Kazakhstan creates the favorable environment for the individual capacity, building for the cultural exchange, freedom of expression, innovative projects and implementation of the creative ideas. All these prerequisites are the way for the creation of the modern system of art education in our country, in order to respond to the demands and wishes of the nation. Each painting school demonstrates the cultural specificity of the individuals, and represents the visual model of the wider community, in which it already exists. Painting Schools always depend on the spirit of the cooperation.

Kazakh National Art Academy named after T. Zhurgenov has conducted the special study tour for all young participants to the master class on the theatre art [7, P.136]. The role of culture is highly acknowledged in the course of the formation of statehood in the multiethnic and multi-confessional country. National Cultural Heritage Program, which has started in 2003, was not limited just to restoration of the historical and cultural heritage, but promoted the positive shifts in public attitudes and enhanced the interest to the national history and cultural treasures, strengthened the national self-consciousness and formation of the new cultural and historical landscape of the country. The cultural heritage of Kazakhstan is comprised of the variety of rich cultural values of the people and ethnic groups.

The diverse traditions of the Russian art school had developed by the beginning of the XX century, were very strong, and became the basis for the development of the national schools of painting in the newly formed republics of the Soviet state. The tendency to preserve and develop the traditions of the Russian school of painting can also be traced in the system of art education of the Soviet republics, which throughout the history of its existence followed Russia in its methodological foundations. The pedagogical activity of Russian artists played the crucial role in the formation and development of art education in Kazakhstan [8].

Artists, who have been trained in Russia and returned to Kazakhstan, as well as masters who have studied in their Republic with Russian teachers, have introduced new trends to the national art of painting. The figurative and pictorial system of many Kazakh artists has been enriched with new techniques. The basis of the creative concept of the painters was observation and epod, as the basis of their realistic method

of displaying reality. The Russian realistic school of art has introduced the tradition of plein-air painting to the art of Kazakhstan. Kazakh painting has been enriched with the historical, heroic-epic, portrait and life genres.

Studying in the creative workshops of Russian artists, Kazakh painters adopted the features of the artistic style, borrowed the creative method. The gradual development of the pictorial skills, allowed creating the variety of works of story-themed orientation. Kazakh artists mastered new techniques, which confirmed the intensive growth and artistic potential of the art of Kazakh painting in the period of 50-70-ies of the XX century. This development is the great merit of the Russian and Soviet art school, which since the beginning of the XX century was the basis for the several generations of artists and the best traditions were mastered by Kazakh artists, through the system of higher art education in Russia. The workshops of Russian artists of the Academy of arts and State Institute of Culture played the huge role in the education of creative youth in Kazakhstan. In general, the Russian art school had the deep influence on the development of painting in Kazakhstan in the middle of the XX century. The achievements of Kazakhstani painters allow us to speak about the high level of the Russian art school. The real example are the creativity and paintings of Kanafiya Telzhanov.

**Research results.** The education on the fine arts in Kazakhstan for last two decades has demonstrated the tendency of growth the number of the students, bachelors and doctoral student, newly opened the educational facilities at all levels: secondary school, vocational, technical and high school. The high school demands for the qualifications in the design, urged the educational institutions to create separate design faculties. The challenges of the fine arts in Kazakhstan should be taken into consideration also. Along with the visible growth of various educational institutions in fine arts, the decrease the quality of the education. Educational planning needs to take into consideration the specificity of the equipment and materials, auditorium space and functionality. The advanced training of the teachers needs to be improved. There is the need to re-activate the good practice of carrying out the lectures on the fine arts theory at the museums with the related expositions of the original art objects and natural heritage sites.

The creativity of the artists of the mid-XX century generation grew on the Kazakh land, drawing the origins of skill, the depth of the experience of communication, with the nature in the traditions of the Russian art school, established in the second half of the XIX century. These traditions adapted to the historical situation, to the ideas of the new era, forming the features of the Soviet art school, which took the humanistic ideals of Russian art [9, P.135]. The Russian art school, which adapted the national forms, content and mentality, contributed to the development of the painting in Kazakhstan. In the visual arts of Kazakhstan, new themes, subjects, genres, techniques, figurative and pictorial structure, creative manners that are not typical of the traditional art, have appeared. In the 50-60s, there was the process of active development of the realistic method in the Kazakh visual art. It was realism as the stable tradition of the Russian art school with its visual persuasiveness, orientation to the nature and developed genre structure that became the method, which helped at an early stage of the formation of the painting in Kazakhstan to quickly enter and adapt to the context of the European art system. At the same time, at all stages of the development of the painting, there was the link with the folk tradition [10, P.121]. Fine art has become the way of understanding the national culture of Kazakhstan, which has preserved its originality not in isolation, but in the context of global art.

**Conclusion.** In the conclusion we would like to note, that despite of the serious measures, undertaken by the authorities, the rich cultural tangible and intangible heritage, and centuries-old expertise of the ethnic traditions still under the threat of the numerous hard challenges of welfare, economic and ecological origin, which prioritize the purposes of the education and culture system, access to the cultural values and improving of the art erudition of young generation. The role of the art education in perception of the different forms of art creativity by the students and various population groups remains beyond the public policy: the approaches on curricula and programs of various education institutions are not unified yet; there is no continuity in teaching of the creative disciplines at different levels of art education; funds for art education don't cover the operational expenditure or even absent; the facilities of art education are weak. Education and culture systems act independently from each other, the negative results in art education isolation; there is the necessity to involve the painters in art education processes.



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### ҚАЗАҚСТАННЫҢ ЖАС СУРЕТШІЛЕРІНІҢ РУХАНИ ЖӘНЕ ПАТРИОТТЫҚ ТӘРБИЕСІ КОНТЕКСТІНДЕГІ ҚАНАФИЯ ТЕЛЖАНОВТЫҢ ШЫҒАРМАШЫЛЫҒЫНЫҢ РӨЛІ

**Аннотация.** Қазіргі әлемде жаһандану, стандарттау процестеріне ұшыраған және соның салдарынан ұлттық өзіндік мәдени аспектілердің жойылуы қазақстандық суретшілердің жас буынын рухани – адамгершілік тәрбиелеуде өнердің әлеуметтік маңыздылығы өзекті. Алғашқы қазақстандық суретшілердің шығармашылығы қазіргі заманғы қоғамға қажетті руханилықты сақтаушылар және қайта жаңғырту көздері болып табылады. Қанафия Тельжановтың көркем көрінісінің өзіндік қырларының бірі – ұлттың рухани дәстүрлерін толық көлемде ашатын халық шығармашылығының нақышына айналған тірі рефлексия болып табылатын бірегей түсті палитрасы. Қазақ халқының тарихын, менталдық колористік ерекшеліктерін, бейнелік және колористік ойлауының ерекшелігін көрсете отырып, ұлттық ерекшеліктің мәнін көрсетеді. Осылайша жас суретшілердің эстетикалық және рухани тәрбиесінің құралы ретінде қызмет етеді. Жас суретшілердің ұлттық өзіндік болмысын қалыптастыру процессі суретшінің дәстүрлі көркем бейнелерінің әсер етуінсіз мүмкін емес. Қанафия Тельжановтың шығармашылығы қазіргі қоғамның санасында жас ұрпаққа үлгі ретінде сақталып отыр. Көптеген қазақ суретшілері сияқты К. Тельжанов «таза» пейзаждарды жазбайды. Станок картинасындағы қазақ даласының бейнесі басым бола отырып, суретші ұлттық пейзаждық кескіндеменің өзіндік ерекшелігін көрсетеді, бұл ретте орыс көркем сурет мектебінің орнықты дәстүрлерін пайдалана отырып: бейнеленген оқиғалардың реализмі, бейнелердің эпикалығы, пейзаж күйлерінің алуан түрлілігі, жарықтандырудың түстік және түстік жай-күйін ескере отырып, объектілердің түстік қатынастарын беру; станок суреті кеңістігін құрудың үш жоспарлық жүйесі. К. Тельжановтың шығармаларының орыс көркем мектебінің дәстүрлерімен өзара байланысы, ең алдымен, көркем, кескіндеме құралдарына туған жер табиғатының көркем бейнесін жеткізе білуде көрсетілген. К. Тельжановтың шығармашылығы «таза табиғат» пейзажын таңдау болып табылады. Суретшінің шығармаларында орыс реалистік тоналды кескіндеме дәстүрімен байланысты лирикалық пейзаж арнасында тау кен Қазақстан бейнесін түсіндіруге бейілділік айқын байқалады. Суретші бояулы материал бойынша жұмыс істеді, түстің жұқа өңдей отырып, бейнелейтін ортаның жарықтық ауа тозуын сақтап, сол арқылы күйі мен көңіл-күйін жеткізуге ұмтылады. Бұл үрдістер негізінен пейзаждық этюдте өз өрнегін табады. Пейзаждарда суретші декоративті жалпылама мен реңктердің жұқа градациясын шебер ұштастырды. Пейзаждардағы түсті палитраны суретші эмоциялық жағдай мен дүниетанымды білдірудің құралы ретінде пайдаланды, романтизм және пейзаждық шығармаларының лирикалық нотасы. К. Тельжанов портретті жасаудағы тұлғаның тән сипаттарын терең ұғыну орыс көркем мектебінің портреттік кескіндеме дәстүрлерінің сабақтастығын көрсетті. Суретшінің шығармаларының ұлттық өзіндік ерекшелігі туған қазақ жерінің табиғаты, онда тұратын адамдардың бейнесінде көрініс тапты. Орыс пейзаждық кескіндемеінің тұрақты дәстүрлерін қолдану суретшінің пейзаждық суреттің әртүрлі түрлерін қолдануында К. Тельжановтың суреттерінде, сондай-ақ орыс лирикалық және эпикалық пейзаждың тоналды және декоративтік кескіндеме принциптерінде байқалады. Қазақстандық суретшілер «таза» пейзаждарды жазады, олар дала-көшпендінің қатысуымен даланың универсумын үнемі бейнелейді. К. Тельжановтың шығармаларының бірегейлігі, әлеуметтік реалистік канондар шеңбері суретшіге оның полотнаның мәнерлі және дәл көрінбейтін сюжеттері арқылы, ұрансыз және биік пафоссыз, өзінің барлық саясаттан тыс тұрған басты құндылығына, өз халқының, қазақ даласының рухани кеңістігіне өзінің жеке көзқарасын айқын көрсетуге кедергі келтірмегені. К. Тельжанов шығармашылық әдісінің негізгі принципі: бейбітшілікті бірге, тұтас, әралуандығы мен бірлігінде көре білу, өмірдің әсемдігін шынайы, поэтикалық жеткізе білу. Қ.Т. Тельжановтың шығармашылығы үшін универсализм тән, яғни әр түрлі, жанрларда, өнер техникаларында (пастель, акварель) жұмыс істеу. Орыс көркем мектебінің дәстүрлері суретшінің шығармаларында көрініс тауып қана қоймай, қазақ халық өнерінің элементтерімен байытылды. Ресей мен Қазақстанның халық және кәсіби мәдениетінің өзара іс-қимылы синтездеу мен модернизациялаудың осы процессінде маңызды мәңгі ие болды. Суретшінің шығармаларының негізгі тақырыбы- туған жердің және онда тұратын адамдардың бейнесі. Суретшінің шығармашылық ерекшелігі бейненің мәнері мен стилін таңдау тұрғысынан бір жоспарлы болған жоқ. Егер ерте шығармаларда дала кеңістігінің сәтсіз ырғағының шынайы бейнесімен, тыныш, көмескі реңктердің таңдауымен, жергілікті түстердің және күрт сызықтардың болмауымен көрінетін романтикалық көңіл-күй болса, біртіндеп шығармашылық ізденістер суретшінің кескіндеме өнерінің өзге мәнеріне алып келді. Форманың сипатын жіті сезініп, К.Т. Тельжанов пластикаға көп көңіл бөледі, басты мәнерлі құрал-түс болып табылады. 50-60-шы жылдары жасалған шығармалар үшін табиғатқа мінсіз бақылау жасау, шекті шындыққа ұқсастық принципін бекіту, қазақ даласының бейнесін

жасаудағы лиризм сезімі тән болды, бұл суретшінің орыс кескіндеме мектебінің дәстүрлерімен өзара байланысын көрсетеді.

**Түйін сөздер:** бейнелеу өнері, ұлттық өзіндік ерекшелігі, шығармашылық, кескіндеме мектебі, авторлық шығармалар, эпикалық, романтика, ұлттық мәдениет, рухани-адамгершілік тәрбие, руханилықты жаңғырту.

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## **РОЛЬ ТВОРЧЕСТВА КАНАФИИ ТЕЛЬЖАНОВА В КОНТЕКСТЕ ДУХОВНОГО И ПАТРИОТИЧЕСКОГО ВОСПИТАНИЯ МОЛОДЫХ ХУДОЖНИКОВ КАЗАХСТАНА**

**Аннотация.** В современном мире, подверженном процессам глобализации, стандартизации и, как следствие, стиранию национальных, самобытных, культурных аспектов актуальна социальная значимость искусства в духовно-нравственном воспитании молодого поколения казахстанских художников. Творчество одного из первых казахстанских живописцев является хранителем и источником возрождения духовности, столь необходимой современному обществу. Одним из аспектов своеобразия Канафии Тельжанова, его художественного видения является уникальная цветовая палитра, явившаяся живой рефлексией на колорит народного творчества, художественные образы в полной мере раскрывают духовные традиции нации. Отражая историю, ментальные колористические особенности, специфику образного и колористического мышления казахов, выражается суть национального своеобразия, что служит средством эстетического и духовного воспитания молодых художников. Процесс формирования национальной самобытности молодых художников невозможен без влияния традиционных художественных образов. Творчество Канафии Тельжанова сохранилось в сознании современного общества, как пример для подражания молодому поколению. Как и многие казахские живописцы, К.Т. Тельжанов не писал так называемых «чистых» пейзажей. Доминировал образ казахской степи в станковой картине; художник проявлял самобытность национальной пейзажной живописи, используя при этом устойчивые традиции русской художественной школы: реализм изображаемых событий, эпичность образов, многообразие состояний пейзажа, передача цветовых отношений объектов с учетом тонового и цветового состояния освещенности, трехплановую систему построения пространства станковой картины. Взаимосвязь произведений К.Т. Тельжанова с традициями русской художественной школы была проявлена, прежде всего, в тонком видении и умении художественно цельно, богатыми средствами живописи передать художественный образ природы родной земли. Особенностью творчества К. Тельжанова является выбор пейзажа «чистой природы». В произведениях художника четко прослеживается приверженность трактовке образа горного Казахстана в русле лирического пейзажа, связанного с традицией русской реалистической тоновой живописи. Художник работал по натурному материалу, стремясь путем тонкой тоновой разработки цвета сохранить световоздушность изображаемой среды и через нее передать состояние и свое настроение. Эти тенденции находят свое выражение, преимущественно, в пейзажном этюде. В пейзажах художник умело сочетал декоративную обобщенность и тонкую градацию колористических оттенков. Цветовая палитра в пейзажах использовалась художником как средство выражения эмоционального состояния и мировоззрения. Романтизм и лирическая нота пейзажных произведений К. Тельжанова, глубокое постижение характерных черт личности в создании портрета проявили преемственность традициям портретной живописи русской художественной школы. Национальная самобытность произведений художника выразилась в образах природы родной казахской земли, людей, живущих на ней. Применение устойчивых традиций русской пейзажной живописи прослеживается в картинах К. Тельжанова в использовании художником различных типов пейзажной картины, а также принципов тоновой и декоративной живописи русского лирического и эпического пейзажа. Казахские художники, как правило, не пишут «чистых» пейзажей, они описывают, в основном, степняка-кочевника. Уникальность произведений К. Тельжанова заключается в том, что рамки соцреалистических канонов не мешали художнику посредством незамысловатых сюжетов его полотен выразительно и точно, без лозунгов и возвышенного пафоса, предельно ясно проявить свое личностное отношение к главной ценности, находящейся вне всякой политики, духовному пространству своего народа, казахской степи. Ключевой принцип творческого метода К. Тельжанова: умение видеть мир слитно, цельно, в разнообразии и единстве сторон, проникновенно, поэтично передавать красоту жизни. Для творчества К. Тельжанова характерен универсализм, т.е. работа в различных видах, жанрах, техниках искусства (пастель, акварель, масло). Традиции русской художественной школы не только нашли отражение в произведениях художника, но и обогатились элементами казахского народного искусства. В этом процессе синтеза и модернизации существенное значение имело взаимодействие народной и профессиональной культур России и Казахстана.

Основная тема произведений художника – образ родной земли и людей, проживающих на ней. Своеобразие творчества художника, с точки зрения выбора стиля и манеры воплощения образа, не явилось одноплановым. Если в ранних произведениях присутствует романтический настрой, который выражается реалистическим изображением неспешного ритма степного пространства, выбором спокойных, приглушенных оттенков, отсутствием локальных цветов и резко очерченных линий, то постепенно творческие поиски привели художника к иной манере живописи. Остро чувствуя характерность формы, К. Тельжанов большое внимание уделяет пластике, главным выразительным средством становится цвет. Для произведений, созданных в 50-60-е годы, характерным стало безукоризненное следование натуре, утверждение принципа предельного правдоподобия, выраженное чувство лиризма в создании образа казахской степи, что проявляет взаимосвязь художника с традициями русской школы живописи.

**Ключевые слова:** изобразительное искусство, национальная самобытность, творчество, школа живописи, авторские произведения, эпичность, романтика, национальная культура, духовно-нравственное воспитание, возрождение духовности.

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## ANALYSIS OF THE GENESIS AND FORMATION OF THE PHILOSOPHY OF LANGUAGE

**Abstract.** The philosophy of language is the important research area of the philosophy, which identifies the fundamental role of the language and speech in the cognition and the structures of the consciousness and knowledge. The philosophy of the language is one of the central areas of the research in modern western philosophy, which focuses on the concept of the language as the key of understanding the knowledge. The predecessors of the philosophical and linguistic direction were Aristotle (the treatise “Categories”), I. Kant (the development of the categories of the mind), J.J. Rousseau (ideas about the origin of writing), J. Mill (contribution to the theory of the reference), V. Humboldt, and others. The transition from the philosophical classics to the period of the philosophy of the language is associated with the change in the object of research: instead of “ideas” came linguistic entities “sentences” and “terms”. The cognizing subject often shifts to the periphery of the cognitive process or eliminated altogether. At the same time, the so-called “linguistic turn” is characteristic of an extremely wide range of the modern lines of the philosophy development, including phenomenology and hermeneutics, structuralism and post structuralism. Modern philosophy considers it problematic in the principle to distract from the linguistic aspect of the philosophical problems.

**Key words:** philosophy of language, linguistics, phenomenology, hermeneutics, structuralism, poststructuralism, speech, cognition, consciousness, reference.

**The relevance of the topic.** The philosophy of language is the research area of the philosophy, which analyzes the relationships between the thinking and language, but also reveals the constitutive role of the language, words and speech in various forms of discourse, in cognition and in the structures of the consciousness and knowledge. The term “philosophy of language” was proposed by P.I. Zhitetsky (1900), A. Marti (1910), K. Fosler (1925), O. Funke (1928), M. M. Bakhtin and V.N. Voloshinov (1929).

The philosophy of language is the study of the most central questions that we raise about language, and an analysis of the most fundamental concepts we apply to language. Among the most important of these are truth, reference and meaning [1]. The task is to say what we mean by these concepts, and then to construct theories of truth, reference and meaning that help us understand not only the languages of logic, mathematics and science but also ordinary languages like English, French, and German.

Classical philosophy has researched the problems of the language from two sides: 1) explanations of the genesis of the language, where two alternative concepts were put forward: the emergence of the language by nature (concepts developed by the sophists and stoics to the enlightenment), and by convention (from the Greek atomists to T. Hobbes and J.J. Rousseau) and 2) the relationships of the language and thinking, with all the variety of the concepts.

Language is the mirror of the reason for the classical philosophy (D. Locke, G.G. Leibniz). Of course, the specific structure of the language also indirectly set the prospect of the categorical division, since categories were identified (by Aristotle, Kant, Trendelenburg, etc.) as the types of the connectives in

judgments, identified with the sentences, and the types of connectives of subject and predicate very different in various languages.

For example, the axioms of arithmetic can be derived from the system of logic plus the logical definitions of all arithmetical concepts. The question outlines the strategy for doing this in the Foundations of Arithmetic. Simply put, the idea is to show first that arithmetic is at bottom nothing but an elaboration of pure logic, and second that higher mathematics is at bottom nothing more than an elaboration of arithmetic. So the goal is to show, how all of mathematics can be established with the unchallengeable a priori certainty of pure logic [2].

Language forms in the world lay between the world of external phenomena and the inner world of man. And the language world is not just the pliable material for the expression of thought; it is an energetic activity, setting certain dispositions for the perception and thinking, forming attitudes and perspectives for the efforts of thought. Despite all the originality of Humboldt's linguistic concept, it still makes the significant influence on either philosophy or linguistics until the twentieth century. Philosophy still sought to purify the structures of knowledge and thought from their connectedness with the language, to turn its critical reflection from thinking, immersed in unjustified identifications, in metaphors, in polysemy inherent in the natural language, to pure thinking in the concepts, which have objective, transpersonal and unambiguous meaning [3]. In fact, the classical philosophy was most likely interested in the world of ideal meanings, and language was presented either as the pliable material for expressing this meaning, or as an inadequate form of expressing this ideal meaning, which is inherent in the natural language, which must be critically analyzed.

**Materials and methods of research.** Accessible and thorough, written with the unique combination of informality and careful formulation, the book addresses sense and reference, proper names, definite descriptions, indexical, the definition of truth and meaning, the nature of speaker meaning, as addressed by Frege, Kripke, Russell, Donnellan, Kaplan, Evans, Putnam, Tarski, Davidson, and Grice. The explanations aim to be as simple as possible without sacrificing accuracy; critical assessments are included with the exposition in order to stimulate further thought and discussion. Philosophy of Language will be an essential resource for undergraduates in the typical philosophy of language course or for graduate students with no background in the field. It can be used in conjunction with an anthology of classic texts, sparing the instructor much arduous exegesis. The situation has changed fundamentally in the late nineteenth and early twentieth centuries. Already F. Nietzsche has linked all misconceptions with the language, with hypostasis, and with the ontology of the fictitious words. He called German idealism "the metaphysics of the language" (Sprachmetaphysik). F. Mautner, having identified the thinking and speech, put forward the program of the criticism of the language as the source of anthropomorphism, fetishism and metaphor. In linguistics, the concepts arose not only returned to Humboldt's ideas, but also developed them. Thus, G. Steinthal has identified in the language the following: 1) the speech; 2) the ability to the language; 3) the material of the language. According to Buehler, the seeking to implement the ideas of Humboldt, put forward the number of axioms of new linguistics: 1) language as an Organon; 2) the sign nature of the language; 3) the analysis of the language as the speech action and speech act, as the language product and language structure; 4) language as the system of the words and sentences [4].

Neohumboldtianstvo (L. Weisgerber, G.G. Speth) has revealed the language understanding as the worldview, understood the natural language as an organ of the creating thought and comprehending the world, and turning to the internal form of the language, considered the formation of the forms of the spirit through the language and in the language. One of the features of linguistics of the XX century is the combination of the structuralism and semiotics. The founder of the structuralism- F. Saussure, made the distinction between the language as the structure of the possible and real norms; and the speech as the set of the acts. T.Morris investigates the foundational concepts, such as truth, reference, and meaning, which are central to the philosophy of the language and important to the philosophy as a whole. W.V.O. Quine has developed the precise techniques for understanding the languages of the logic and mathematics, and how these techniques have been refined and extended to the study of the natural human languages [5]. He has exploring new thinking about propositions, possibility, and the relationship between meaning, assertion, and other aspects of language use. The philosophy of language was finally formed in the XX century. It took the linguistic turn that was understood in the different ways and implemented in the different ways. The need to create a new research area is due to a number of reasons. First of all, the

differentiation of linguistics by itself. In the beginning of the XX century, the large body of the scientific disciplines was formed that explore the life of the language in its various modes, aspects and forms. For linguistics, an integrative image of the language was important, which would allow us to find ways of the categorical and methodological synthesis of various linguistic disciplines and theories that characterize the language in various ways.

The philosophy of language is the broad term that can describe the way different aspects of philosophy relate to language, the way language is considered in human thought or the way it is conceived [6]. Different perspectives within philosophy analyze language in different ways and take interest in different aspects of it. Many of the debates relate to the discussions within psychology, cognition and linguistics. Additionally, the fascination with the language extends far into other fields, where its fluctuations and manipulations have puzzled and captivated scholars for the centuries. The great religions of the world maintain their own views, doctrinal or traditional, on language as well. Many monotheistic religions consider the language to be an essential element of human society, designed to be a form of communication to facilitate growth and prosperity. This can be extrapolated from the biblical story of the Tower of Babel, where God creates new dialects in order to hinder the building of a great tower that would project human greatness. In Judaism and other faiths, the source language of holy texts or basic concepts of the religion often takes on a degree of sanctity as well, becoming a conduit of holiness and thus meaningful or purposeful in and of itself. In Judaism, Hebrew or even Aramaic has been attributed this sort of sanctity; in Islam, Arabic and perhaps Persian or Turkish.

The philosophy of the language was intended to provide integrative functions in the constantly differentiating linguistics. An integrative image of the language could hardly be constructed, since the diversity of the languages in linguistics went very far and its subject was constructed by completely different methodological means: from the use of the natural science methods to the methods of living and understanding put forward in the so-called “Sciences of the spirit”.

The second reason for the formation of the philosophy of language is the linguistic turn in philosophy itself, which led to the fact that language was understood as the reality that sets the categorical division of the world, that not only has its own specifics, but also forms the being of knowledge and consciousness.

The ancient Greek philosophers took more direct approach to the language. Plato wrote inconclusively on the topic of whether language was the natural outgrowth or the convention of the humanity. He claimed more often than not that there were natural aspects of vocabulary and phonemes. However, he could not prove that every sound inherently had meaning or lent something to the definition of any word that combined various phonemes. Aristotle took to analyze the semantics of the sentences in the similar fashion, with the idea that language and its understanding would be based on the mental abstraction of meaning based on the possibilities, provided by the lexicon. However, he thought each word was essential and had some degree of absolute meaning, inhibiting variation in meaning. Formerly, he would have been promoting nominalism. Aristotle draws the hierarchy, where the words stand for the thoughts and thoughts conceptualize things.

Ontology language was developed in various areas of philosophy: from the dialogical philosophy of F. Ebner, M. Buber, M.M. Bakhtin [2], where the language was understood as inter subjective reality, emerging in the dialogue between Me and You, to the concept of linguistic relativity. Sepira K. and B.L. Worf, stressing the dependence of all our knowledge from the linguistic resources to the fundamental ontology of M. Heidegger [7], where the language was understood as the house of the spirit and human existence, and the philosophy of language, as identifying the original meanings contained in language.

The field of the philosophy of language is thought by some to have been overcome by science, specifically linguistics, in a similar fashion to metaphysics or alchemy being absorbed by physics and chemistry, respectively. However, this view might be challenged based on the unique role of language in many biological and neurological sciences, where abstract theory remains necessary to theorize how language or faculties of language might affect us. Kierkegaard advocated for a more intense focus on language in Western philosophy, believing it had been ignored by modern philosophers and their recent predecessors. The 1916 publication by Charles Bally and Albert Sechehaye, *Course in General Linguistics*, develops a theory of structural linguistics that resembles the later theories of Noam Chomsky. They divide between an abstract, mental language and the tangible, expressed form of language we hear in words or other symbols. These ideas resemble the later biological theory of Chomsky that relate a deep and surface structure to language, where the expressed combinations of words, i.e., surface structure,

symbolizes a wordless thought, i.e., the deep structure of an expression. However, Chomsky criticizes the limiting notions of structural linguistics and proclaims that there is an infinite amount of sentences that can be created with source material for language. He proposes the description of a framework, in which all sentences can be formulated rather than trying to cocoon the host of language into a limiting generality.

Chomsky also proposes somewhat of the return to abstract philosophy in the way science examines language, this time accepting an abstract structure that is not so tangible until it is expressed, studying the so-called meta semantics of language before it is expressed. More broadly, Robert Stainton labels this “I- language”, the “internal language” of the people. Mixed in with this debate is the usage of the conventions or norms in defining how language works. One problem with this has been the inability to define to what extent something “conventional” should be regular enough to be labeled as such. However, many social theorists also postulate that the way people organize depends much on our communication and understanding of the expressions we pass to one another [8]. Symbolic interactionists would accept conventions in order to justify human organizations.

Relating back to the theories of Plato, it continues to be debated how much language is an innate element of human behavior. Most linguists and psychologists today view language as something learned through osmosis more than instruction. Additionally, theorists like Chomsky view the human brain as hard-wired to use language. He refers to a “universal grammar” evidenced by a finite set of rules for grammar structure in human languages that are inevitably conceived and guarded by human societies and restrain the shifts in the language.

Ontologism in the understanding of the language was also characteristic of the famous philosophies (A.F. Losev, S. Bulgakov, P.A. Florensky), which interpreted the name as reality, as effectiveness, the factor of both knowledge and reality by itself. The ontology of the language has become one of the variants of the hermeneutical approach to the language, which has found its embodiment in the ethno methodology of G. Garfinkel, Ethnography of the speech and ethno semantics (D. Hymes, etc.).

Philosophy of the language investigates the foundational concepts, such as truth, reference, and meaning, that are central to the philosophy of language and important to philosophy as a whole. Philosophers from Frege, Russell, Tarski, and Carnap to Kripke, Kaplan, and Montague have developed precise techniques for understanding the languages of logic and mathematics, and how these techniques have been refined and extended to the study of natural human languages. This line, connected with the distinction between object language and meta language and with the orientation to the analysis of the structures of the language of science, was continued in the generative grammar of N. Chomsky. L. Wittgenstein, in which “Logical-philosophical treatise” saw the task of philosophy to clarify the words later in “Philosophical studies” puts forward the concept of “language game”, which emphasizes that the meaning of the words due to the word usage, i.e. draws attention to the pragmatic nature of the language values and language use is interpreted as a linguistic activity [3].

**Research results.** Interest in the pragmatics of the language is characteristic of both instrumentalism and pragmatism (D. Dewey, C. I. Lewis) and the analysis of everyday language (D. Wisdom, D. Ryle, D.L. Austin, P.F. Strawson), where philosophy is understood as an analysis of the use of the language and as the identification of the semantic richness of the natural language. If in the 1950s and 60s structuralism and semiotic approach to the language as the system of signs prevailed, in the 1970s. in the linguistics and in the philosophy of the language there were significant shifts: the focus was not only on artificial languages and their semantics, but also on natural languages, syntactic aspects of the language were analyzed in unity with semantic ones, and semantics was understood as an explication of truths and logical consequences. This direction in the philosophy of the language found its development in the theory of speech acts, where the language expressions were understood not as the objects, but as the actions (D. Austin, Searle). Linguistics in the 1970s. have turned to the study of the units, larger than the sentence (text linguistics, discourse analysis), which significantly transformed both the subject and the methods.

The importance of any philosophical thought is always conditioned by the number of reasons for both internal and external properties. This also applies to the analysis of the problems of the development of Kazakh philosophy [9, p.133]. Since our country gained its independence, a lot has changed in terms of economic, political and social conditions of the system; this also caused the number of important changes in the cultural sphere, in particular, led to the revival of interest in the values of the traditional culture of the Kazakh people. This was followed by an increased interest in the history of the formation and

development of Kazakh philosophy. It should be considered that the definition of Kazakh philosophy is a modern category, although such concepts as “dana”, “danyshpan”, “danalyq” and “hakim”. It is claimed that the words “danalyq” and “hakim” are the closest to the meaning of the philosophy [10, p.130].

In the process of understanding the mentality of the Kazakh people, the use of such thing as the space of the historical time (historical and temporal space) has the great importance.

**Conclusion.** In the conclusion we would like to note, that the subject of the linguistics and the philosophy of the language significantly expanded by the end of the XX century, the subject of their study was not just language as an activity of thinking, but also speech, speech communication and all forms of the language, understood as the modes of the action, forming the continuum of the meanings that have polysemicity and homonymy, are not reduced to unambiguous and ideally objective meanings, and assume figures of the speech, metaphors and tropes as the methods of expression. Together with the logical analysis of the language, the concepts of hermeneutical interpretation of the language are developed in the philosophy of language (G.G. Gadamer and P. Riker), the transcendental pragmatics of K.O. Apel, the theory of communicative action of Y. Habermas, and the structural psychoanalysis of J. Lacan, who make the subject of their research speech utterances, language communications, pragmatics and semantics of language.

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#### ТІЛ ФИЛОСОФИЯСЫНЫҢ ГЕНЕЗИСІ МЕН ҚАЛЫПТАСУЫН ТАЛДАУ

**Аннотация.** Тіл философиясы – бұл таным мен білім құрылымындағы тіл мен тілдің негізгі рөлін анықтайтын философияның зерттеу саласы. Тіл философиясы – қазіргі батыс философиясындағы зерттеулердің орталық бағыттарының бірі, оның басты назарында тіл туралы түсінік ойлау мен білімді түсінудің кілті болып табылады. Философиялық-лингвистикалық бағыттың ізашылары Аристотель («Категориялар» трактаты), И. Кант (ақыл-ой санатының өңделуі), Ж.Ж. Руссо (жазудың шығу тегі туралы идеялар), Дж. Милль (референция теориясына үлес), В. Гумбольдт және басқалар. Философиялық классикадан тіл философиясының кезеңіне көшу зерттеу нысанының өзгеруіне байланысты: «идеялар» орнына лингвистикалық мәндер – ұсыныстар мен терминдер келеді. Танушы субъект көбінесе танымдық процестің шетіне жылжиды немесе мүлдем жойылады және дискурс автономды ретінде қарастырыла бастайды. Сонымен қатар, «лингвистикалық бұрылыс» деп аталатын философияның қазіргі заманғы даму желілерінің өте кең спектріне тән, оған феноменология және герменевтика, құрылымализм және постструктурализм жатады. Қазіргі философия негізінде философиялық проблемалардың тілдік аспектісінен алаңдамау проблемалы деп санайды. XX ғасырдың екінші жартысынан бастап философияның барлық негізгі бөлімдері кем дегенде ойдың философиялық-лингвистикалық қадамдарының стилистикалық әсерін сезінеді. Осылайша, тіл философиясы-философиялық зерттеулердің жеке алынған бағыты ғана емес (тек аналитикалық философиямен ғана тіл философиясын теңдестіретін тар анықтамалар мүмкін болса да), сонымен қатар теорияларды құру тәсілдері туралы сұрақтарға ерекше қызығушылықпен және белом беру құралдарын реттеу принциптерін зерделеумен байланысты философиялық ойлаудың ерекше стилі. Тіл философиясы Платон мен Аристотельдің жұмыстарынан бастау алады. Алғаш рет тіл философиясын қалыптастыруға қатаң логикалық-математикалық көзқарас идеясы XVII ғасырдың Лейбниц және Уилкинз сияқты танымал ғалым-философтарына ұсынылды, содан кейін Дж. Буль және Дж. Миль. Қазіргі тіл философиясының негізгі мәселелері мен ұғымдары Фрег, Дж. Сондай-ақ, «жалпы лингвистика курсында» Фердинанд де Соссюр.

Тіл философиясы – бұл тіл мен сөйлеуді зерттеумен, таным мен сана мен білім құрылымдарындағы олардың негізгі рөлін зерттеумен айналысатын философияның бөлімі. Қазіргі уақытта тіл философиясы басқа бағыттармен қатар батыс философиясын зерттеу орталығында тұр. Тіл философиясы философиялық тұжырымдама ретінде тілді ойлау мен білімді түсінудің кілті ретінде қарастырады. Тіл мәселесі тіл философиясын жеке философиялық бат ретінде ресімдегенге дейін қарастырылды.

«Тілдік ойындар» тұжырымдамасының адам іс-әрекеті процесінде қалыптасатын және жалпы адам өмірінің принциптерін білдіретін ережелер ретінде пайда болуы. Г. Райла, П. Стросон және т.б. сөйлеу актілерінің теориясын дамыту, олар тілдің логикасы мен құрылымы кейбір мәдени алғышарттарға негізделген. Бұл кезеңде маңызды орындардың бірі С. Крипке, Д. Каплан әзірлеген маңызды және



референция теориясы (онтологиялық, ғылыми, этикалық, діни тұжырымдарды талдау) алады. Тіл мәселесі және басқа да мағынасы тіл ойлау сияқты ішкі құбылыстарға қарсы тұратын сыртқы, әлеуметтік феномендерге байланысты.

**Түйін сөздер:** тіл философиясы, лингвистика, феноменология, герменевтика, структурализм, постструктурализм, сөйлеу, таным, сана, референция.

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### **АНАЛИЗ ГЕНЕЗИСА И СТАНОВЛЕНИЕ ФИЛОСОФИИ ЯЗЫКА**

**Аннотация.** Педагогика высшей школы основывается на педагогической науке. Это наука о педагогических закономерностях, сущности, принципах, методах и формах обучения, воспитания, развития и профессиональной подготовки конкретного человека, коллектива в интересах успешной деятельности. Появление педагогики высшей школы связано с первыми объединениями людей для совместной жизнедеятельности: чтобы ее осуществлять, проводили соответствующую подготовку. Как самостоятельная отрасль, педагогика сформировалась только после накопления общих и специальных педагогических знаний. Педагогика выявляет наиболее устойчивые и существенные связи, зависимости между обучением, воспитанием, развитием и всесторонней подготовкой людей и социальных групп. Изучая педагогические аспекты процесса образования (самообразования), обучения, воспитания, самовоспитания, развития, саморазвития и профессиональной подготовки людей к определенному виду деятельности, педагогика высшей школы обосновывает принципы, методы и организационные формы учебно-воспитательной работы, рекомендации, правила, приемы руководства и др. Педагогика высшей школы – это отрасль педагогической науки, изучающая педагогические закономерности и средства организации и осуществления высшего образовательного процесса (самообразования), обучения, воспитания (самовоспитания), развития (саморазвития) и профессиональной подготовки студентов (слушателей) к определенному виду деятельности и общественной жизни. Поэтому предмет педагогики высшей школы включает: вуз как педагогическую систему; функционирование и эффективность педагогического процесса в высшем учебном заведении; педагогическую деятельность научно-педагогических работников, их профессионально-педагогическую подготовку; педагогические закономерности формирования и развития личности студента; процесс высшего образования и самообразования; обучение в высшем учебном заведении; воспитания и самовоспитания студентов; моральную и психологическую подготовку; формы, методы и педагогические технологии в высшем учебном заведении; педагогические аспекты непрерывной самостоятельной работы студентов во время обучения в вузе и после его окончания; личность научно-педагогического работника; педагогические особенности взаимодействия студентов и научно-педагогических работников в педагогическом процессе вуза в ходе реализации задач Болонской конвенции; коллектив (социальную группу) научно-педагогических работников кафедр, факультетов, вузов; студенческие коллективы (социальные группы). Коренные изменения, которые произошли в социально-экономических условиях общества, потребовали внедрения научно обоснованной подготовки научно-педагогических кадров для высшей школы. Такая подготовка предусматривает не только глубокое владение предметной области, к которой относится учебная дисциплина, но и научные основы педагогической деятельности. Одним из реальных путей такой подготовки является магистратура и докторантура. Педагогика высшей школы должна обеспечить реализацию следующих функций: образовательной, научно-познавательной, побудительной, преобразовательной, прогнозирующей, проективной, культурологической, адаптивной, воспитательной и профессиональной. Педагогика высшей школы имеет свой тезаурус и оперирует такими основными понятиями, как: развитие, обучение, воспитание, профессиональная подготовка, самовоспитание, самообразование, педагогическая система, педагогический процесс, педагогическая деятельность и др. Развитие студента понимают как разноплановые и закономерные изменения в его индивидуальной психике, вследствие чего возникает новое качественное состояние объекта. Процесс может происходить по восходящей (прогрессирующей) или нисходящей (регрессирующей) линии (в этом случае объект деградирует, теряет положительные свойства, не приобретая новых).

**Ключевые слова:** образование, педагогика, философия образования, болонский процесс, докторантура, педагогический процесс, педагогическая деятельность, самообразование, обучение, самовоспитание.

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**ISLAM IN SPIRITUAL AND RELIGIOUS GLOBALIZATION:  
PERFORMANCE AND PLACE IN THE WORLD**

**Abstract.** The rise of religiosity and religious warfare today should alert us to an indisputable fact: when a state does not respond to people's basic needs, rights and beliefs, the citizens of these states seek help and security from other similar options. The two leading indicators of a sovereign state are religious and cultural similarities in times of crisis, which appear, first of all, in two powerful forces - Islamism and ethnicity. However, despite their profound authenticity and “eternal” proof, of course, neither religion nor any other similarity can replace a reliable system of government. In today's urbanized and globalized Muslim world, religious and cultural similarities cannot take their rightful place apart from the role of the state.

In a complex and rapidly changing worldview, world religions play a dual and contradictory role: on the one hand, they are a kind of catalyst for extremism, violence and political vulgarity, on the other hand, they characterize the defining concepts of morality and behavior, justice, harmony, equality and charity. gives. If the modern state performs its function effectively and fairly, religion will tend to retreat to certain spheres of society as late as possible. On the contrary, people experience the fear of internal violence, they see religion as the last resort, and they turn to the restoration of justice and hope for a brighter future.

**Key words:** Islam, spiritual, religious, globalization, performance, in the world.

**Introduction.** One of the common cultural values for mankind is religion. Religion is very important in the cultural space. Therefore, Islam is also an integral part of world culture.

Islam is one of the unique sources of spiritual origin for the culture of the Kazakh nation. The Muslim point of view has a special place in the culture of the Kazakh people. The values of the Muslim point of view are intertwined with the traditions of the Kazakh people and, in many cases, have a national character.

The XXI century is a time of intersection of cultures, dialogue of cultures, intersection of cultures, integration of cultures, struggle of cultures. It is true that there is a public opinion that the future of civilization depends on the understanding of these cultures. Thus, the formation of the cultural and philosophical image of modern life, the Muslim worldview is a requirement of the epoch, the demand of ethnic appearance in the process of globalization.

Islam has offered the Kazakh people a middle way to balance the world and the hereafter. According to the Islamic worldview, the world is the path that leads a person to eternal life in the hereafter. A Muslim does not worship the world, nor does he leave the world as a monk, nor is he indifferent to it. The Qur'an says, “Our Lord, grant us good in this world and in the Hereafter”. And guard against the torment of the Fire” [1].

This is how Islam has changed the way our nation views the world. Islam has made man responsible for everything around him. He commanded us to do good and to abstain from evil. At any time and in any place, He commanded us to fight against falsehood and to establish the truth. Because it is a requirement of faith. The hadiths of the Prophet Muhammad (peace and blessings of Allaah be upon him) say: “Be the best ummah (leader and role model), call to goodness, and stay away from evil ...”

Civilization has its origins in the beliefs of the ummah and in its focus on the universe, man and life. Each civilization has its own characteristics. One part of the world affects the other. Today it is not

difficult to communicate, to move from one continent to another. As a result of such interactions, one civilization influences another. A weak civilization is influenced by a strong civilization. Ibn Khaldun, a well-known Muslim sociologist, said: "A weak civilization depends on the traditions, religion, customs, slogans, etc. of a strong civilization. They want to imitate their situation".

At the height of civilization, they are strongly influenced by the relationship of Islam with other civilizations. In the first quarter of the nineteenth century, when the situation of Muslims weakened, the situation in the West rose and it became necessary for Muslims to go to the West. Muslims began to be sent to the West to study. Some of them were influenced by what they saw in European society. When they returned to the Muslim world, they were exposed to Western customs. Thus, the wave of Westernization has captured the human understanding of life and society. The colonized states obligated Muslims to their civilizations and languages. Thus, Muslims began to disappear.

In the last century, when the Soviet Union was under siege, the Muslim worldview was oppressed and prevented from developing. For this reason, the Muslim peoples of the former USSR faced a number of problems.

Islam is not only a reflection of a person's personal beliefs, but also an integral part of the ideological basis of society as a whole. For the Kazakh people, who have considered themselves Muslims for centuries, this religion has become their national "I", their national identity.

**Literature review.** To analyze in depth the work of Niklas Luman on religion, he gives a number of useful tips: "What is the state of religion in modern times, what are its transformational consequences in this area". In our opinion, the approach to the modern history of religion, its point of functional differentiation will be especially fruitful. In this context, the structure of the religious system is compared with the corresponding structures of other functional systems. Differentiation in a comparative context is, of course, much broader than the problem of scientific control.

Although global social reality does not question Lumann's terms, it is safe to say that in the current context, the world community is experiencing a functional differentiation of its major subsystems. At the same time, the notion of the rise of capitalism, the functioning of the global state system or simple technical invention, the scientific interest of many researchers in these phenomena is developing in this direction.

The popularity of religion in the context of globalization has changed significantly due to research in academic disciplines. In general, ideas that study the development of globalization in economic terms, such as the growth of global capitalist institutions that rule, completely ignore religion. Many studies in the field of international relations, political science, or the means of mass communication of religion pay little attention to religion. In this regard, the study of the role of Islam in Muslim countries by John Anderson is unique [2].

In general, many studies focus on the importance of religion, first of all, a number of anthropologists and sociologists. However, research here differs in how the term "globalization" is understood. The two intersecting lines are based on the main problem: the difference between the functional and substantive concepts of religion: each researcher considers religion as an aspect of culture or as a differentiated and independent social sphere.

The functional concept considers religion as another social issue related to a number of issues. For example, issues of social integration or the definition of the meaning of life. Here, religion becomes a necessary dimension of the process of building a world society. Because the problems of the meaning of life exist in any society. As an example, a number of authors have tried to analyze the emergence of a global culture that is an alternative to the new global sacred [3].

In this area, even the growing debate on the development of global "civil society" has joined [4]. At the same time, functional action allows national, territorial, ethnic or civilizational similarities in religious nature to raise global issues and, to a large extent, confirms the tendency to accept religion as an aspect of culture.

A clear example of this can be found in the work of John Meyer and his colleagues, who argued that the functional concept of religion could theoretically enter into a debate about globalization. His 1997 article presents their basic research, which comes to the level of global society through the classical sociology of Max Weber and Emile Durkheim, which can be applied to modern society. As they point out, this "global world structure" for scientists is characterized by the spread of modern Western values and their spread to innovative structures in other parts of the world. Western religion remained in a difficult

period between this modernization and the emergence of invention, but today the old religious elite has lost its power and remains a supporter of the “idea of salvation” of modern global values, including the search for tools for equality and progress. They have now been replaced by a new “religious” elite in the person of researchers, scientists and intellectuals. Along with managers, lawyers and politicians, they write a secular and unequivocally universal version of this story.

Meyer and his colleagues support the idea of the prosperity of this global structure, showing that the specific policies of many countries around the world are in line with its goals and values. In discussing this issue, they offer an alternative and homogenized view that leaves no room for any other institutional religion to adopt any specific or local change, which has no choice but to remain a helpless supporter of global trends.

The work of Roland Robertson on the possible role of institutional religion in the recognition of this issue to a much greater extent and more broadly is given. It also defines Meyer's so-called “globalization of social modernism”, which includes the category of “global religious function”.

Substantive ideas of religion, on the other hand, insist on the presence of similarities and institutional forms of activity that belong to supra-empirical reality. Therefore, the attitude of different religious groups to globalization is influenced by international Islamic organizations, the Roman Catholic Church, Buddhist groups, Pentecostal movements, etc. in the spotlight [5].

A number of “fundamentalisms”, such as the anti-globalization parallels of religious movements, express their own attitude to the ideas of a single world community, and even the declarations of these movements guarantee a constant search for a global spirit, especially in the Islamic world.

The unification of mankind is an ancient historical process. Suffice it to say that the two main branches of Christianity have united mankind, their ideas and canons have spread throughout the world and reached all peoples. At the heart of the idea of globalization seems to be the attempt to “Christianize” the world, which has spread to South America, Africa and Asia. This is because the idea of globalization and globalization was mainly a Western concept. And, of course, most of them are Christians.

As R.F. Matveev recalled, when the Pope was trying to create a global theocratic state, European kings were arguing over which of them was the most “Christian”. At the end of the twentieth century, there was a clear tendency to Islamize the world, at least at the level of ideology. In our opinion, this is a reaction of Muslims to the ideology of globalization, which is consciously and unconsciously created.

It should be noted that in practice, any religion has always demonstrated and will continue to demonstrate a global totalitarian (in all senses) aspiration. For example, Islam has made a fundamental contribution to the unification of mankind. Because for several centuries he has been in contact with different peoples of the world. Of course, in our opinion, a purely religious view of human cooperation is not in line with globalization. As mentioned above, the goal of globalization is based on the transboundary processes of goods, services, capital, and sometimes transnational labor. The flow of religious ideas and cultural values is gradually being transformed into a single global system in this process, only as a superstructure to change the image of the world.

In this sense, Islam is able to use all the advantages of globalization to expand its influence in the modern world. According to Muhammad Faik, globalization (alamiya), unlike globalism, does not negate the role of the state and does not seek its supremacy. Globalism, on the other hand, adapts the specific functions of the state and is interested in the fact that the process is fully realized through the state. On the contrary, globalization is likely to narrow its sovereignty in order to weaken it.

In our opinion, let's look at the issue from a different perspective, which religions have won from globalization, and which have lost? For example, Sergei Filatov, a senior researcher at the Institute of Oriental Studies of the Russian Academy of Sciences, thinks: “Buddhism easily adapts to all conditions of the modern world and quickly integrates into other national cultures. Therefore, we can say that he won. “He said that globalization weakens traditional religions, while non-traditional religions are clearly gaining ground; Globalization reduces the importance of religious traditions and increases the role of social services.

Speaking about America's influence on Europe today, Sergei Filatov describes it with contempt. According to him, the “Pentecostals” from the United States promote conservative Christian values, including anti-abortion movements. In terms of attitudes towards Muslim countries and their way of life, globalization will be secular. At this time, the global religious potential of the modern West, in his

opinion, should be sought in Protestantism. Among the various Protestant names, the sources of deep globalization can be traced to Calvinism. According to Filatov, “recently in the West, Orthodox principles are gaining ground”, and even more so, “in the West, the fifties are winning”. Other Protestant denominations have benefited from globalization.

The new historical conditions that emerged after the 1990s of the last century have led different peoples and societies to rethink and re-evaluate the values that have been imposed on them for decades. The society felt a spiritual need, due to which, along with the growth of national consciousness, the conversion of the population to religion became widespread. At the same time, as a result of globalization, information about Islam and Muslim nations began to spread among non-Muslims. There have also been cases of non-Muslims converting to Islam.

So what is the nature of Islam? Of course, in unity. If we look at the history of the Kazakh people, it is Islam that unites large and small tribes. Turkic tribes that did not join the Islamic community joined a different cultural group and became completely different societies. Examples are Bulgars, Hungarians, Chuvashs and Sakha-Yakuts.

Prominent scholar Rahmankul Berdibay explains why: “Especially the mass baptism of the branches in the late 18th and early 20th centuries, the Russian spelling of their names, and the introduction of Christian traditions into the country completely alienated them from the Turkish and Muslim world. Moreover, the fact that the Sakhas for centuries coexisted with the Mongols, Buryats, Evenks, Chukchis, and Yukaghirs has led to a dramatic change in the vocabulary” [6]. That is, religion is a key factor in determining the cultural environment of the population.

There has never been a secular culture in the history of mankind. All the cultures that emerged from the first church building were formed on the basis of this religious belief. Islam, in turn, had a great influence on the culture of the peoples who followed it [7].

In our opinion, this is due to the division of compensatory and regulatory services between the state and religion. For example, state structures that regulate morality and ethics are places of law and punishment, while in the dogmas and teachings of religion it is generally assimilated. If the state is weak in the performance of this function (corruption and corruption in the judiciary, weakness, lack of decision-making, etc.), it means that religion, as a mechanism for regulating the situation, is moving to increase its influence in society.

In general, politicized religious dogma today does not offer anything new, because the world religions played a social and political role in the early stages of their history, that is, because it is a dogma, it does not change its long-established rules.

However, it tells us a lot about the other two pillars of these three pillars: similarity and nationalism. Political experience in the context of Islam, Judaism, Christianity proves that religion plays a simple natural role. The main problem here is, first of all, the collapse of modern statehood. Religion and similarity in this view is the main image of the deep structural problems of the modern state.

Characteristic features of globalization are not only the deepening of interstate relations, rapid growth of trade and finance, transnational institutions, increasing ties between different cultures, but also environmental pollution, global climate change, population growth, interethnic conflicts, terrorism, the rise of international crime and drug trafficking. Therefore, without trying to stop or prevent globalization, it is necessary to draw the attention of the international community to global issues that can only be addressed by the entire world community.

If we try to determine the nature of the globalization of religion in the current situation and draw the most general conclusions, then we can note a number of conceptual manifestations of religion as a whole for the phenomenon of globalization:

- further development of the religious community, non-traditional religious institutions, the involvement of believers in other forms of spirituality, the transformation and revision of old religious traditions, syncretic or hybrid movements, the emergence and growth of completely new religions and sects;
- stimulating the process of religious pluralism, activating the equalization of religions directly related to each other and global integrity, reducing the level of religious isolation within certain territories and regions by expanding the activities of transnational religious organizations and diasporas;
- activation of religious fundamentalism in the Islamic, Jewish, Indian and Christian spheres, the emergence of new trends in Buddhism, the reaction of religious institutions to the emergence of a new

wave of religiosity as a way and form of protection from the negative effects of Westernization, modernization, secularization;

- diversity of religious orientations and ideological and ideological preferences between different religions, including the activity of non-traditional sects and foreign missionary organizations, the intensive use of global computer technology for missionary purposes;

- absolute vision of the problems of modern globalization of different religions and the need to rehabilitate interfaith dialogue and tolerance in relations between different religions.

Summarizing from the above, it should be noted that the globalization of religion takes place at different levels, depending on this process and the depth and nature of the spread of other religions. However, regardless of how globalization takes place in the field of religion, it shares a number of characteristics that characterize this process in other areas. We can talk about the change of permanent versions of religions that are deeply connected with the cultures and histories that belong to nations and ethnic groups. These changes affect the activities of individual religious groups, which increase the nature of free competition in the context of globalization. In addition, within the traditional structure of historical religions, there will be opportunities for major transformations. In our view, in any case, the globalization of religion should be considered as an inevitable historical process, regardless of its positive and negative consequences.

To this day, it is preferable to assume that the structure of culture consists mainly of material and spiritual spheres. N.A. Nazarbayev clarifies: "Kazakhstan's consciousness is only now, for the first time in the flow of history of the past, present and future, able to understand its national identity". An individual's appearance is determined by his spiritual strength. There is no doubt that the source of spiritual power lies in morality. Al-Farabi, a great teacher who has a special place in the history of world civilization, said: "Education is not the first thing a person needs. Education without education is the worst enemy of humanity. That is why the Kazakhs, who adapt to the individual life, respect the Motherland, the country, the land, the language, bring up a generation rich in spirituality and national values, lead our people to the future goals, turn to the philosophy of tradition, wisdom and culture. There is talk of the need for the idea. The next key issue is the implementation of mechanisms to accelerate its implementation.

Prominent scientists and intellectuals of Kazakhstan express their views on this issue. As Garifolla Esim put it, "An idea is the beginning, the main spiritual search" [p. 136,43]. However, it is still unanimous on what concepts the idea is based on and what value system it is based on. This is normal. This is because in the process of cultural development, the educational paradigm of the East begins to be spiritual and moral, while in the West, on the contrary, it is pushed aside. And in our case, there are two historical barriers of human culture - East and West. Ultimately, the integration of the interests of the individual, society and the state are the goal of any political action. High level of public awareness is a necessary condition for social concentration. Modern technical means allow a person to have unlimited access to any information [8].

Therefore: "Kazakhstan's new philosophy has already formed a new anthropological strategy of the third millennium. Its main core is the optimal synthesis of Eastern and Western worldviews, ie the restoration of lost spiritual traditions while preserving the resources and achievements of Western civilization, modern scientific and technological power, "Spiritual teachings of the East", "Human-World" relations. - Reconstruction of the unity of relations", - said A. Nysanbayev [9]. "But the idea needs the people's unequivocal faith. Living without confidence in the future is a bleak life. He must have a high and valuable spirit, which will be passed down from generation to generation. In the conditions of multi-ethnic, multi-religious independent Kazakhstan, the manifestation of the national idea should be Kazakhstan's civilization. Being civilized is a psychological and cultural motivation that everyone wants to have. Who doesn't want to be civilized. Isn't the basis of education civilization?" Said Garifolla Esim.

This is where the content and direction of education should be. Moral education, no matter how valuable it may be, is not without its consequences if it does not find its place in life. Therefore, as the main principle of moral education, we must take as a basis our traditions, values, which are mature in the heat of history, the principles that arise from the wise opinions of our leading thinkers.

Al-Farabi uses the example of two people to illustrate the close connection between philosophy and life. The first is a person who is closer to science than life experience, and the second is that he relies more on life experience while mastering science. To the question of which of these two men has the potential to

become a philosopher, the other says, "If a man is only engaged in theoretical science and does not pay attention to what he has learned from general life experience, his previous skills will not allow him to do good deeds".

According to Al-Farabi, it is the intellect, the human mind, that overcomes all difficulties in society and brings happiness. Therefore, a person becomes a civilized person only if he masters science and knowledge. One of the greatest thinkers of the Kazakh people - Hodja Ahmed Yasawi (1093-1157) in his work "Diwani Hikmet" (Book of Wisdom) sings of justice, truth, honesty and kindness.

Before talking about the attitude of Islamic ideologues to globalization, it would be appropriate to consider the concept of "Muslim world". According to a number of Arab authors, this term should be considered as the most controversial concept among other alternative space concepts. Western analysts believe that this notion has recently become widespread due to the support of Iran and Sudan.

The term "Muslim world" could be considered as a collection of all Muslims of the world. For example, while Islamists in the Middle East refer to the "Muslim world", they rarely involve all Muslims in the world. This is because Araki refers only to the Muslim people of the Middle East, including the Muslims of Pakistan and Afghanistan.

Spatial and geographical issues arise here. First, two countries with a large Muslim community outside the Middle East, Indonesia and Bangladesh, are excluded from this concept. Secondly, the majority of Muslims live in Central Asia, China, India and Africa. The number of Muslims in this country exceeds all the peoples of the Middle East.

At the same time, these Muslims are not only geographically distant from the region, but also have completely different needs and aspirations from their fellow believers in the Middle East. There are also significant differences in national and general cultural values. If the term "Middle East" is not officially correct, then to some extent it applies to the term "Muslim world", says American researcher Nikki Caddy.

According to Hassan Hanafi, a professor at Cairo University, the Middle East, as its name implies, did not come from outside, but from its own people and culture. Although the term "Arab people" (and the ummah al-arabia) is not enough for the respectful Arab nationalists, in geographical terms it is called the "Arab world" (al-alam al-arabi). This region is also called the "Islamic" or "Muslim world" (al-alam al-Islami), a term that fully satisfies Pan-Islamists [10].

The region is considered by some modernists to be an "African-Asian world," despite the fact that the ideals of development and independence include non-Muslims as well as Arabs. In these cases, which represent this region of the world, the adequacy of the geographical term has not only a religious component, but also a socio-political nature.

In other words, the Islamic view of the Muslim world is within the scope of global theory. However, such perceptions began to change after the death of Ayatollah Khomeini and the end of the Iran-Iraq war. Later, Iran shifted global revolutionary orientations to issues of internal development [11].

As for the aspects of globalization, the concept of the "Middle East" is questioned by many researchers from the region. For example, the Egyptian scholar Hassan Hanafi considers the term "Middle East" to be an old British concept that adopted the East on a British-Western basis. For example, they divide England into "near", "middle" and "far". Such a distinctive distinction between the peripheral region and the center, which encouraged strong relations, has always existed by classical Orientalism.

As for globalization, it is a similar phenomenon, which reflects the nature of the interaction of armed forces between East and West after the collapse of socialist regimes in Eastern Europe and the former Soviet Union. Therefore, globalization, according to Hassan Hanafi, does not provide any necessary concept, but only provides existential information. Political scientists sometimes confuse reality with certain concepts, replacing science with ideology. As a result, the term "Middle East" originated in English, was once needed by British public opinion, and the term "globalization" was originally intended to serve American and limited American interests.

As Amir Mahjub points out, the collapse of the Soviet Union and the socialist system paved the way for the emergence of a world order in a different way than it did during the Cold War between socialism and capitalism [13]. During this period, political boundaries could not be violated without the promotion of globalization in a system of conflicting ideological struggles. In addition, Amru Mahjub believes that the expected "socialist culture" (as-sakafa al-ishtirakiya) on ideological grounds. It did not allow them to have a negative impact on the various ideological systems of other countries. Needless to say, the impact



of globalization. On the other hand, the most important centers of national culture are nation-states. It counteracts the influence of the culture of globalization, which revives the origins of national and social culture and separates it from the economic, socio-political nature of society [14].

The issue of morality is the core of ethics. To be a human being is to be a noble citizen with noble and good moral qualities. After all, a person is honored by his morality, kindness, honesty, brotherhood and justice. Morality is the spiritual backbone of man. In this regard, in everyday life, someone is morally judged as a good person or a bad person, kind or cruel, narrow-minded. And moral purity is the pinnacle of morality. The main task of morality is to educate human behavior, to form in them a relationship of morality. About the behavior of our ancestor Abai:

I was full of thoughts,  
I took my ride.  
I looked at my character,  
I thought about checking, - he says.

It is necessary to form a character. Let's turn to Abai again: “He has the ability to keep science and intelligence. Don't let that behavior get in the way! When you are swayed by greed, light-heartedness, or someone else's words, or any kind of interest, the strength of character is broken. There is no point in studying after that. Where do you store them when there is no room for them? May he have the strength and courage to do what he wants to do and not be tempted to do what he wants to do! Let this strength be for one mind and one conscience”.

In his 39th speech, Abai urges not to lose two good qualities of our ancestors: The first character is a great respect for the leader. The second character is arrogance, and in the 37th word: “If I were a person with the power of the law, I would cut the tongue of a person who says that human nature can not be corrected”, - he said. “If you want to be a sane person, count yourself once a day, or once a week, or at least once a month”, says Abai.

By theoretically studying the place and role of national spiritual values in modern conditions, everyone armed with national moral ideas can share the sorrows and joys of others, help and support in times of need, assimilate the good habits and deeds of others, the most noble and noble qualities in life. We have seen that it should be an example of marriage. I think that today we need to pay attention to the creation of opportunities for people to develop comprehensively and harmoniously, to create a real treasure of spiritual culture.

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#### РУХАНИ-ДІНИ ЖАҒАНДАНУ ЖАҒДАЙЫНДАҒЫ ИСЛАМ ДІНІ: ТАРАЛУЫ МЕН ӘЛЕМДЕГІ ОРНЫ

**Аннотация.** Жаһандану құбылысы өткен ғасырдың 90-жылдарынан бастап адамзат дамуының маңызды құрамдас бөлігіне айналды. Осы бір көпөлшемді құбылыс өндірісті басқару мен ұйымдастыру, ұдайы өндіруші жүйелердің қызметін қарқындыратын және интеллектуалды жетістіктерді ынталандыратын көптеген факторлар саласында алуан түрлі жаңа үдерістерді бір арнаға тоғыстыратын үрдіс ретінде танылды.

Жаһандану – объективтік қайнар көздерге ие, осыған орай, ол табиғи тарихи үдеріс болғандықтан, қазіргі әлем дамуының қажетті заңдылығы десе де болады.

Жаһандану жағдайында экономикалық жағынан дамыған мемлекеттер тарапынан рухани құндылықтарды теологиялық жолмен ауыстыру, сонымен қатар Батыс құндылықтарын әмбебаптандыратын еуроцентризмнің де белең ала түсуі және экономикалық қатынастары нашар дамыған мұсылман елдерінде оларға жат қалыптар мен дәстүрлерді тарату сияқты әрекеттер мен талпыныстары да жоқ емес. Сондықтан, жаһандану экономикалық қана емес, сонымен қатар саяси, әлеуметтік, мәдени, діни және басқа да салаларда өзгерістерді тудырып, қайшылықтарға жол беріп, соның нәтижесінде қоғам арасында, жаһанданудан пайда көрген жекелеген топтар арасында келіспеушіліктер күшейе түсіп, оның әсері көп жағдайда кейбір халықтар мен мемлекеттерге кері ықпал етуде.

Атап айтсақ, жаһанданудың жағымсыз қырларының бірі – этноидентификацияға қауіп төндіру. Капиталдардың, қаржы ағындарының қозғалысы, адамдардың миграциясы, олардың әлеуметтік мобильділігі, бұқаралық мәдениет «қоғамдық өмірді қарқынды ретте интернационалдандыруға» әкелуі әбден мүмкін, мұның өзі ерікті-еріксіз түрде экономикалық, әлеуметтік және саяси интеграцияның арта түсуін талап етеді.

Негізінде жаһандану мәселесіне қатысты пікірталастар қазіргі таңда кең сипат алып, жаһандану жағдайында өмір сүру әрекеттерінің тиімді жолдарын қарастыру ерекше маңызға ие болды. Мәселені қай жағынан қарастырсақ та, мұсылман елдері жаһанданудан зиян көрмейтін тәрізді, алайда ол үшін жаһанданудың басқа гегемониялық субъектілерімен ұқсас стратегия мен саяси ұстанымдар қалыптастыру қажет. Осындай әдіс аясында Батыстың мұсылман әлемінің рухани ұлттық құндылықтары мен әлеуметтік бірліктерінің бұзылуынан мазасыздануы түсінікті жайт, өйткені ешбір ұлт осы үдеріс салдарынан болатын қауіп пен мүмкіндіктерден сақтандырылмаған.

Қазіргі таңдағы діншілдіктің және діни жауынгерліктің өсуі бізге талқылауға жатпайтын фактіні ескертуі тиіс: мемлекет адамның негізгі тұтынуы, құқығы мен сеніміне жауап бермеген сәтте, осы мемлекеттердің азаматтары ұқсас өзге де нұсқалардан көмек пен қауіпсіздік іздейді. Егеменді мемлекеттің екі жетекші көрсеткіші – дағдарыс жағдайындағы діни және мәдени ұқсастық, ол, ең алдымен, екі қуатты күште – исламшылдық пен этникалықта пайда болады. Алайда олардың терең түпнұсқалығына және «мәңгілік» дәлелдеуіне қарамастан, әрине, дін де, басқа ұқсастық та басқарудың сенімді жүйесін ауыстыра алмайды. Бүгінгі урбанизацияланған және жаһанданған мұсылман әлемінде дін мен мәдени ұқсастық мемлекет рөлінен бөліп берілген өзінің нақты орнын иеленуі мүмкін емес.

Күрделі әрі тез өзгеріп отырған дүниежүзілік көріністе әлемдік діндер екіжақты және қайшылықты рөл ойнайды: бір жағынан олар экстремизмнің, зорлық пен саяси тұрпайылықтың өзіндік катализаторы болады, екінші жағынан олар мораль мен мінез-құлық саласындағы анықтаушы түсініктердің, әділдіктің, келісушіліктің, теңдік пен қайырымдылықтың сипатын береді. Заманауи мемлекет өзінің функциясын тиімді және әділ орындаса, дін қоғамдағы жеке салаларға барынша кейін шегіну үрдісіне ие болады. Керісінше жағдайда, адамдар ішкі зорлық тудырған қорқынышты бастан кешіріп, олар дінге соңғы қорғаныс құралы ретінде қарап, әділдіктің қайта қалпына келуіне, жарқын болашақ үшін үміттенуге бет бұрады.

**Түйін сөздер:** ислам, рухани, діни, жаһандану, өнімділік, әлем.

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### ИСЛАМ В КОНТЕКСТЕ ДУХОВНОЙ И РЕЛИГИОЗНОЙ ГЛОБАЛИЗАЦИИ: РАСПРОСТРАНЕНИЕ И МЕСТО В МИРЕ

**Аннотация.** Феномен глобализации стал важной составляющей человеческого развития с 1990-х годов. Это многомерное явление признается как процесс, который объединяет множество новых процессов в области управления и организации производства, множество факторов, которые ускоряют функционирование производственных систем и стимулируют интеллектуальные достижения.

Глобализация имеет объективные источники и, являясь естественным историческим процессом, можно утверждать, что глобализация – это необходимый закон развития современного мира.

В условиях глобализации экономически развитые страны пытаются заменить духовные ценности теологией, а также рост евроцентризма, который универсализирует западные ценности, и распространение чужеродных взглядов и традиций в мусульманских странах с плохими экономическими отношениями. Поэтому глобализация привела к изменениям не только в экономической, но и в политической, социальной, культурной, религиозной и других сферах, что привело к противоречиям, к разногласиям в обществе среди отдельных групп, которые получили выгоду от глобализации, и ее последствия часто затрагивают отдельные народы и нации.

В частности, одним из негативных аспектов глобализации является угроза этноидентификации. Движение капитала, финансовые потоки, миграция людей, их социальная мобильность, массовая культура могут привести к «быстрой интернационализации общественной жизни», что неизбежно требует усиления экономической, социальной и политической интеграции.

В целом, дебаты о глобализации сейчас широко распространены, и особенно важно рассмотреть эффективные способы жизни в условиях глобализации. В любом случае мусульманские страны, похоже, не страдают от глобализации, но для этого необходимо сформулировать стратегию и политическую позицию, аналогичную другим гегемонистским субъектам глобализации. При таком подходе понятно, что Запад обеспокоен разрушением духовных национальных ценностей и социального единства мусульманского мира, поскольку ни одна нация не застрахована от опасностей и возможностей, связанных с этим процессом.

Рост религиозности и религиозных войн сегодня должен предупредить нас о неоспоримом факте: когда государство не реагирует на основные потребности, права и убеждения людей, граждане этих государств ищут помощи и безопасности в других подобных вариантах. Двумя основными показателями суверенного государства являются религиозные и культурные сходства во времена кризиса, которые проявляются,

прежде всего, в двух мощных силах – исламизме и этнической принадлежности. Однако, несмотря на их глубокую подлинность и «вечные» доказательства, конечно, ни религия, ни какое-либо другое сходство не могут заменить надежную систему управления. В современном урбанизированном и глобализированном мусульманском мире религиозные и культурные сходства не могут занимать свое законное место, кроме роли государства.

В сложном и быстро меняющемся мировоззрении мировые религии играют двойственную и противоречивую роль: с одной стороны, они являются своего рода катализатором экстремизма, насилия и политической вульгарности, с другой – они характеризуют определяющие понятия морали и поведения, справедливости, гармонии, равенства и милосердия. Если современное государство выполняет свою функцию эффективно и справедливо, религия будет иметь тенденцию отступать к определенным сферам общества как можно позже.

Напротив, люди испытывают страх перед внутренним насилием, они считают религию последней инстанцией и обращаются к восстановлению справедливости и надежде на светлое будущее.

**Ключевые слова:** ислам, духовность, религиозность, глобализация, продуктивность, мир.

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## EDUCATIONAL PUBLIC-PRIVATE PARTNERSHIP: FACTORS, TERMS AND PROSPECTS

**Abstract.** In terms of formation of a knowledge-based society, of an innovative economy development, the importance of education sector for the socio-economic development of the country significantly increases. The role in the modern society of the education sector is determined by the fact that competencies are formed in it, knowledge is created and disseminated - the key resources of modern society. The effectiveness of education sector functioning increasingly determines the success of socio-economic development.

The concept of public-private partnership (PPP) has proven effective in applying its principles in such a socially significant sphere of the economy as education. Therefore, one of the priority tasks of the development of national education is to create conditions for formation of an effective partnership mechanism between representatives of business structures and educational institutions while providing economic support to educational institutions, managing the content of the educational process, as well as in terms of research activities.

The relevance of this issue for the domestic economy is also due to the fact that in a crisis, the distinguishing features of which are financial and economic instability and insufficient budget funds attracted for the implementation of socially significant projects and programs, there is a need to form motivational incentives and create opportunities to attract extra-budgetary sources of financing, as well as other resources of the private sector.

The article is devoted to the study of the advantages and disadvantages of PPPs, the search for mechanisms of business structures interaction with educational institutions and the state, adequate to modern conditions, as well as the preparation of recommendations on the trends and prospects for the development of this cooperation in the education sector.

**Key words:** public-private partnership, education sector, entrepreneurship, projects, budget funds, private-sector finance.

**Introduction.** As socio-economic relations become more complicated, the state as a regulator of social relations, including legal, economic and others, is increasingly faced with problems the solution of which requires the involvement of substantial financial, managerial and human resources. In conditions of insufficient public resources to meet all public needs, in a number of industries that were previously exclusively in the field of state responsibility (transport, electric power, as well as social sectors, in particular, education, science, healthcare), the resources of entrepreneurial structures are being attracted. One of the forms of partnership between the state and business is public-private partnership (PPP).

As a rule, projects implemented in the framework of PPP are focused on solving problems related to the provision of services to the population, the development of state and municipal property, including in the field of higher professional education. A significant advantage of this approach is the long-term nature of partnerships, which is the guarantee of the industry development. Such a partnership allows you to implement projects even in those sectors of economy that are unprofitable, in particular, in the sectors of the social sphere (education, science) due to the possibility of attracting private sector resources.

Education, as a system for the formation of intellectual capital of a nation and as one of the main areas of innovation production, creates the basic conditions for the intensive growth of markets based on the rapid updating of technologies and products. Education is the first link in the innovation cycle "education - research - mass capture of innovations" [1]. At the same time, the educational sector acts as the dominant element of economic growth, which determines the stability of the external and internal competitive advantages of national economic systems. From the ability of the national economy to reproduce individual and social intellectual capital; implementing the level of economic thinking of the nation, the economic potential, well-being, the choice of its strategy and the trajectory of subsequent development within the framework of the global world order are largely determined. In this regard, the modern education system must survive institutional changes in connection with the development of an innovative model of the national economy, formed by the social orders of suppliers and consumers of educational services, the growing requirements of global competition in the markets of innovation, labor and education. Social design of the educational services sphere is associated with the globalization of the educational space based on the knowledge economy, which determines the vector of reforming socio-economic systems, the historical logic of the structural and functional modernization of institutional mechanisms, and the implementation of dynamic changes in the educational services market.

**Methods.** In domestic literature, there are various synonyms for the PPP term, which include: public-private partnership, public-socio partnership, cooperation of the government and private enterprise, public-private cooperation, socio-private cooperation. In this study, the term "public-private partnership" will be used to emphasize the leading role of the state in these relations. The term "государственно-частное партнерство" itself is translated as "public-private partnership", i.e. in this case, "public" is interpreted as a state in the broad sense of the word, and it is understood as a set of all public institutions at all three levels of government that exercise their power and have a direct impact on the development of social processes, including educational, cultural and other public institutions sectors [2].

Due to the fact that the concept of PPP originated abroad, first it is advisable to consider the definitions adopted in international practice. Thus, the World Bank defines PPP in the broad sense as "medium or long-term agreements between the public and private sectors, within the framework of which services are provided that are the responsibility of the public sector, but which are implemented by the private sector, while there is a clear separation of tasks between issues of infrastructure development and (or) the provision of public services"[3].

In the United States, for example, PPP is "an agreement between the state and the private sector, which is fixed in a contractual form and enables businesses to participate in state ownership in an agreed form and carry out functions that are traditionally in the area of public authorities' responsibility" [4]. At the same time, the role of the parties in projects implemented under the PPP framework may vary from the adoption of certain risks by the private sector and with the consent to the system of penalties to complex projects, including construction, modernization, operation and management of facilities.

An analysis of the scientific literature leads to the conclusion that there are two approaches in world practice to the definition of the PPP concept. On the one part, PPP is understood as a system of relations between the state and business, which is widely used as an instrument for regulating international, national, regional, municipal economic and social development, and on the other part, PPP is considered as specific projects implemented jointly by state bodies and private companies on the objects of state and municipal property.

**The results of the study.** The form of PPP in the education sector is determined by the allocation of the management object: institutional - the management object is an organization or structural unit; software and project - the initiative of the partners is aimed at the project, program. It seems that the basis of public-private partnerships are the features of the methods for implementing partnership initiatives (table). Cooperation between education and business, as international practice illustrates, is built on the basis of concessions. The state supports the cooperation of regional business and universities. Graduates are sent to work at regional small and medium-sized enterprises with the support of the head of the university. Thus, the activities of universities are very close to the specifics of the socio-economic development of the region. Information and marketing support at the national level helps to create a solid foundation for mutual cooperation between education and business, contributing to the development of regions.

Classification of forms of educational public-private partnership

		Forms of public-private partnership	
		Institutional	Program-project
Forms of educational PPP	Financial	Endowment-fund Arenda Lizing concession Tax loans Educational voucher Issue of stocks, data bills	Educational loan Government guarantee Grants Loans Scholarship program
	Organizational-administrative	Technoparks Technology Transfer Centers Recourse centers Association of graduates Accreditation of Higher Education Ranking	Joint programs Program accreditation and independent quality assessment Industrial R&D Internship Teachers` Internship at enterprises Development of standards and regulations
	Legal	Contracts on property management	Investment Contract

Endowment is a specific capital fund, and another form of PPP actively used abroad has come from the United States. In 1938, John Harvard bequeathed half his havings to the founding of a university in the town of Newport, Massachusetts. [5] Today, the Harvard Support Fund is one of the largest in the world, its volume exceeds 25 billion dollars. In America, universities have succeeded in creating and accumulating such funds, actively working both with parents of applicants, students, and with their graduates. Today, there are well-established cooperation schemes with a large number of donors, and the amounts available to their funds reach tens of billions of dollars. A culture of donations to universities formed over hundreds of years is also supported by a tax base. In charity work, Americans (both individuals and companies) receive significant tax benefits. In addition to the traditional endowment fund at Harvard, for example, a whole program of annual donations has been created that are not sent to the fund, but can be spent on the needs of the university immediately [6]. However, most often donors who make donations impose certain restrictions on the use of their money, whether it be targeted funding for research, support for a university museum, or the construction of a new dormitory building. One of the fundamental aspects of managing relations with graduates is maintaining constant communication, informing the donor about how much money they managed to collect during the reporting period, what they were spent on, and finding out the motives of the donor when donating one or another amount of money. Examples of the American endowment fund can also be considered the D.D. Rockefeller Foundation, the Yale University Foundation in the United States, and the D.W. Sterling Foundation for Special Teacher Positions [7].

In developed countries, there is a tendency toward the desire of educational institutions to cooperate with business entities, which allows them to assess the needs of the economy in specialists of high demand, update educational programs, create new teaching methods, and predict innovative directions.

The economic factors of partnership development In Kazakhstan, depend on the effectiveness of public reproduction, namely: the presence of an institutional structure, the development of science and education system, the level of small and medium-sized businesses development, the stability of financial and monetary institutions, the stability of the economy, the level of education and professional training of partnership participants.

All these conditions form the external environment in which business is operating. Non-economic conditions reflect the political and social systems. Attraction of resources, including financial, for the implementation of projects of such a partnership depends on the level of political risks. Social conditions are associated with the quality of functioning of social institutions and the level of development of community`s social sphere. Of particular importance in this context is human capital, which is characterized by the level of intellectual and spiritual development, qualifications, innovative abilities, and professional skill. Conditions can be classified as positive - increasing the economic effect of using PPPs, and negative - preventing the development of partnership between the state and the business community. Favorable conditions include a developed competitive environment, equal conditions for participation in partnerships, predictability and stability of the market conditions, activity of civil society, scientific and innovative potential [8].

Obstructive conditions are the follows:

- underdevelopment of competitive mechanisms;
- high economic and political risks;
- low qualification of labor resources;
- depreciation of capital resources and corruption.

The main factors hindering the development of PPPs in education are the factors hindering the involvement of private sector business entities in the field of educational services on the basis of mutually beneficial partnerships for both parties.

The high risk for the implementation of projects is also represented by the unsustainable annual budget financing of universities, which reduces the possibility of sustainable planning of project costs for business structures and reduces their interest in investing in long-term projects. Private sector risks arising from PPP projects can be divided into the following groups: administrative risks; business risks of PPP projects; risks associated with the negative opinion of public and international organizations [9].

In our opinion, the following circumstances are a deterrent to attract private capital for educational facilities financing:

- insufficiently clearly formulated educational standards and the national qualification system, which should take into account the qualification requirements and competencies for professions presented by employers and the labor market;
- low efficiency of business participation in the management of vocational educational institutions of primary, secondary and higher education, educational centers, which does not allow to determine the usefulness of specific educational institutions for employers;
- lack of effective financial mechanisms for the implementation of PPPs. The lack of financial interest in the private sector is associated, among other things, with an increase in the production cost, which transfers the expenses of commercial economic entities for training and retraining, advanced training of personnel, for registration and financing of educational institutions for training entrepreneurial personnel
- a public and objective system for assessing the activities of educational institutions with the active participation of business together with a professional expert community has not been formed.
- lack of highly qualified specialists in the field of creation and project management within PPP.

The reasons for the slowed partnership between the state and small and medium-sized businesses are determined by a combination of factors, including the lack of a set of measures, primarily aimed at increasing the motivation for cooperation in this area - determining the benefits for the participants of integration-state, educational institutions and entrepreneurship (figure).

But, despite the numerous problems in development of public-private partnerships, the feasibility of public-private partnerships in the system of training and retraining of personnel for small and medium-sized businesses, it seems, is due to several factors:

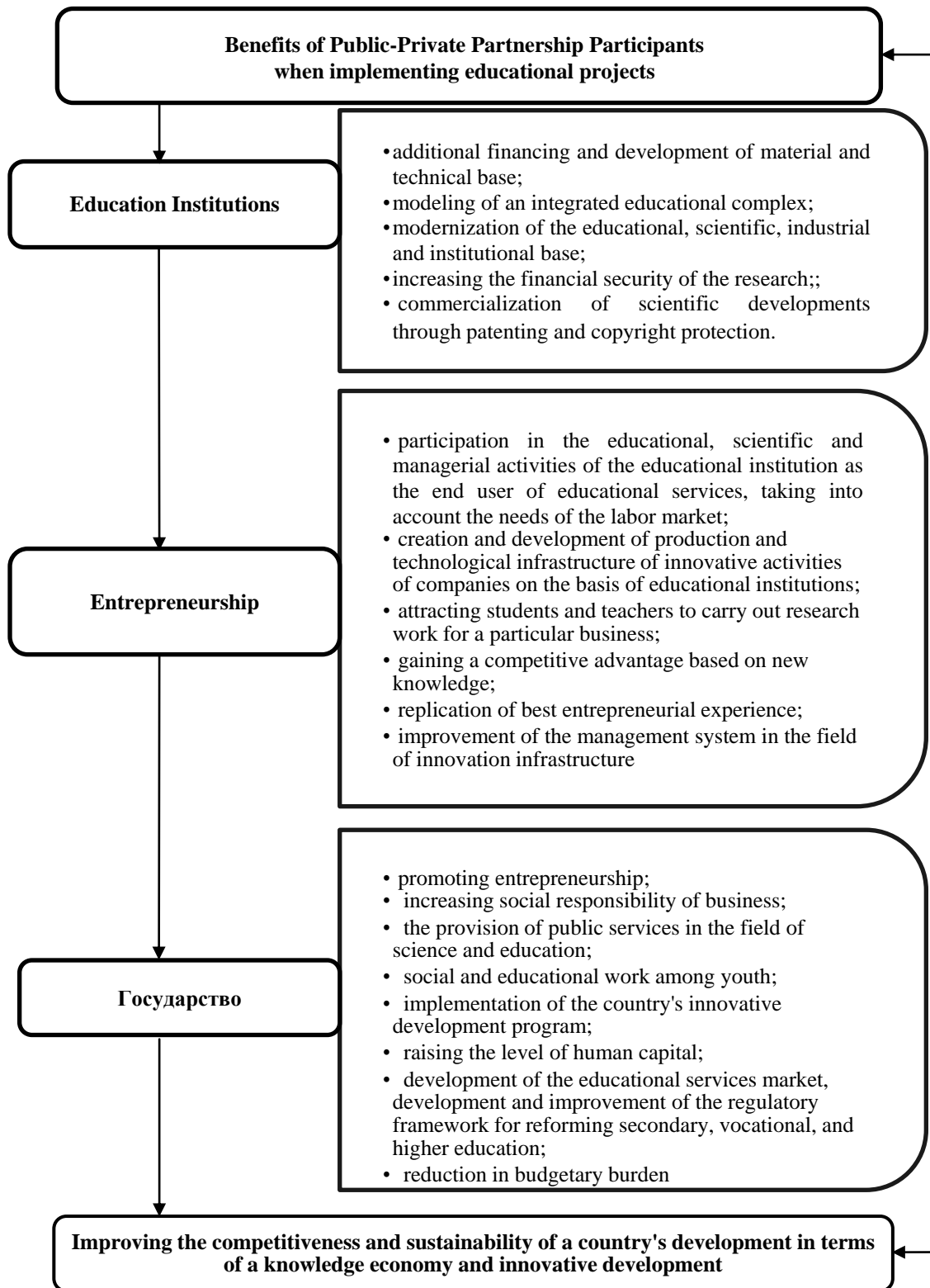
- the resulting gaps in the system of relations "education labor market";
- the dominance of private ownership in the economy, the effective use of which requires partnerships between government, business and society;
- insufficient presence of business in government, which has liquid resources, modern intellectual, organizational and economic potential;
- increasing the efficiency of the use of educational services by the state as a strategic resource through cooperation with business, in order to form a market social structure (middle class); cover costs and increase the profitability of the state budget.

In the analysis of supply and demand in the market of educational services, it should be noted as the most significant differentiated factors the follows:

- traditional - the cost of educational services, an increase or decrease in consumer income, a change in the prices of goods - substitutes and complementary goods, the image of the manufacturer;
- specific - the form of organization ownership, accreditation status, the degree of individualization of training, the degree of new teaching technologies usage [10].

According to our studies, measures to implement the partnership strategy between educational public and private sectors should be carried out in the following areas:

- development of a national socially-oriented model of PPP in education sector;
- formation of the legal basis of PPP in vocational education sector;



Benefits of Public-Private Partnership Participants when implementing educational projects. Note – compiled by authors



- practical use of partnership mechanisms;
- determination of the prospects for forms of partnerships taking into account the national policies, developed methodological base;
- systematization of measures to regulate, monitor and stimulate PPP in education sector through the creation of an institutional system in the field of educational services, an optimal model of information flows about PPP projects, a system for controlling and monitoring the implementation of PPPs.

Thus, when determining strategies for using PPP in training personnel for entrepreneurship, it must be taken into account that small and medium-sized enterprises are not always able to respond to changes in the information field quickly due to their isolation. The participation of the state, namely the use of PPP mechanisms, will allow to intensify the process of effective development of personnel training for entrepreneurship in terms of innovative economic development.

**Conclusion.** According to the results of the study, the main conditions for ensuring the implementation of a training system in a public-private partnership are the creation of:

- methodological, methodic and organizational basis of the system;
- modern material and technical base, providing for the widespread use of technical training aids;
- an information base that ensures the filling of the information space;
- системы опережающей подготовки преподавательских кадров, их ориентация на передовые методы обучения;
- экономического и мотивационного механизма, правового обеспечения системы.

Also, the effectiveness of the educational institutions functioning in the system of training for business directly depends on two basic conditions. The first is the correspondence of their activities to the economic interests of the region - the staffing needs of the regional and local labor markets (in structural, quantitative and qualitative terms). The second is the correspondence to the social interests of the region - the satisfaction of the needs and interests of its residents in education sector.

The economic motivation of public and private partners is different, which determines the legal structure of public-private partnerships. From the point of view of the state partner, this is the transfer of knowledge, provided with the necessary documentation, on the part of the private partner, it is the lower cost of the project associated with state financing throughout the entire period of the project. Such financing is possible only with a stably oriented and predictable macroeconomic policy, reliable legislative power protecting the partnership interests.

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### **БІЛІМ БЕРУ САЛАСЫНДАҒЫ МЕМЛЕКЕТТІК-ЖЕКЕ СЕРІКТЕСТІК: ФАКТОР, ШАРТ ЖӘНЕ ПЕРСПЕКТИВАЛАР**

**Аннотация.** Білім негізіндегі қоғамның қалыптасуы және инновациялық экономиканың дамуы жағдайында елдің әлеуметтік-экономикалық өркендеуі үшін білім беру саласының маңызы айтарлықтай арта түседі. Қазіргі қоғамдағы білім беру саласының рөлі ондағы құзыреттіліктің қалыптасуы, қазіргі қоғамның негізгі ресурстары – білімнің қалыптасуы және таратылуы негізінде анықталады. Білім беру саласының қызмет ету тиімділігі табысты әлеуметтік-экономикалық даму деңгейін айқындайды.

Мемлекеттік-жеке серіктестік (МЖС) тұжырымдамасы қағидаттарын қолдану білім беру сияқты экономиканың әлеуметтік маңызы бар саласында тиімді екендігін дәлелдеді. Сондықтан отандық білім беруді дамытудың басым міндеттерінің бірі оқу орындарына экономикалық қолдау көрсету, білім беру үдерісінің мазмұнын басқару кезінде, сондай-ақ ғылыми-зерттеу қызметін жүзеге асыруда бизнес-құрылымдар мен білім беру мекемелерінің өкілдері арасында серіктестіктің тиімді тетігін қалыптастыру үшін жағдай жасау болып саналады.

Аталмыш мәселенің отандық экономика үшін өзектілігі дағдарыс жағдайында ерекше білінетін әлеуметтік маңызы бар жобалар мен бағдарламаларды жүзеге асырудағы қаржы-экономикалық тұрақсыздық пен бюджет қаражатының жеткіліксіздігі кезінде мотивациялық ынталандыруды қалыптастыру және бюджеттен тыс қаржыландыру көздерін, сондай-ақ жеке сектордың өзге де ресурстарын тарту үшін мүмкіндік жасау қажеттілігі пайда болатын мән-жайларға да негізделеді.

Білім беру саласындағы мемлекеттік-жеке серіктестікті ортақ мақсаттарға қол жеткізу үшін өзара мүдделер негізінде мемлекеттің, білім беру мекемелері мен бизнес-құрылымдардың келісімі ретінде ұсынуға болады. Басқаша айтсақ, мұндай серіктестік заңнамалық актілер мен арнайы келісімдер негізінде білім беру жобаларын іске асыру мақсатында мемлекет пен бизнес арасындағы одақ деуге болады.

Яғни, білім берудегі мемлекеттік-жеке серіктестік – білім беру қызметтерін құру және сапасын жақсарту үшін халықаралық, ұлттық және аймақтық әлеуметтік-маңызды жобаларды іске асыру мақсатында қалыптастырылатын пайда мен сыйақыны бөлу, білім беру құрылымын пайдалану, аралас қаржыландыру туралы келісімдер негізінде құрылатын одақ.

Мақала мемлекеттік-жеке серіктестіктің (МЖӘ) артықшылығы мен кемшілігін зерттеуге, кәсіпкерлік құрылымдардың білім беру мекемелері мен мемлекетпен өзара қатынасының қазіргі заманғы жағдайына баламалы тетіктерін іздеуге, сондай-ақ білім беру саласындағы осы ынтымақтастықтың даму үрдістері мен мүмкіндіктеріне қатысты ұсынымдар дайындауға арналады.

**Түйін сөздер:** мемлекеттік-жеке серіктестік, білім беру саласы, кәсіпкерлік, жобалар, бюджет қаражаты, жеке құрылымдардың қаржысы.

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### ГОСУДАРСТВЕННО-ЧАСТНОЕ ПАРТНЕРСТВО В СФЕРЕ ОБРАЗОВАНИЯ: ФАКТОРЫ, УСЛОВИЯ И ПЕРСПЕКТИВЫ

**Аннотация.** В условиях становления общества, основанного на знаниях, развития инновационной экономики значительно возрастает значение сферы образования для социально-экономического развития страны. Роль в современном обществе отрасли образования определяется тем, что в ней формируются компетенции, создаются и распространяются знания - ключевые ресурсы современного общества. Эффективность функционирования сферы образования во всевозрастающей степени определяет успех социально-экономического развития.

Концепция государственно-частного партнерства (ГЧП) доказала свою эффективность в части применения ее принципов в такой социально значимой сфере экономики, как образование. Поэтому одной из приоритетных задач развития отечественного образования является создание условий для формирования эффективного механизма партнерства между представителями бизнес-структур и образовательных учреждений при оказании экономической поддержки учебным заведениям, управлении содержанием образовательного процесса, а также в части научно-исследовательской деятельности.

Актуальность данного вопроса для отечественной экономики обуславливается и тем обстоятельством, что в условиях кризиса, отличительными особенностями которого являются финансово-экономическая нестабильность и недостаточные объемы бюджетных средств, привлекаемых для реализации социально-значимых проектов и программ, появляется необходимость формирования мотивационных стимулов и создания возможности для привлечения внебюджетных источников финансирования, а также иных ресурсов частного сектора.

Государственно-частное партнерство в сфере образования можно представить как соглашение государства, образовательных учреждений и бизнес-структур на основе взаимных интересов для достижения общих целей. Иначе можно сказать, что это партнерство представляет собой альянс между государством и бизнесом в целях реализации образовательных проектов на основе законодательных актов и специальных соглашений.

Таким образом, государственно-частное партнёрство в образовании – это альянс, создаваемый на основе договоренностей о разделении выгод и вознаграждений, использовании образовательных структур, смешанного финансирования, формируемого с целью реализации международных, национальных и региональных социально-значимых проектов для создания и улучшения качества образовательных услуг.

Статья посвящается изучению достоинств и недостатков ГЧП, поиску адекватных современным условиям механизмов взаимодействия предпринимательских структур с образовательными учреждениями и государством, а также подготовке рекомендаций относительно тенденций и перспектив развития данного сотрудничества в сфере образования.

**Ключевые слова:** государственно-частное партнерство, сфера образования, предпринимательство, проекты, бюджетные средства, финансы частных структур.

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## THE ROLE OF HUMAN CAPITAL IN ECONOMIC INNOVATION SYSTEMS

**Abstract.** Growth dynamics of modern innovation and information economy, both global and local, is not determined by a simple increase in production in all sectors, and that part which is generated by a variety of innovative and qualitative changes in the production process of goods and services. Further intensification of the innovative process in recent decades due to the formation of a new type of economic development based on the continuous change of the production base, and the nature of the products with the continuous creation of fundamentally new technologies as well as new types of goods and services. In the context of globalization, tightening the competition in the world market actualizes the problem of innovation and quality competition. This innovation has become the main vector of economic development (Ivanov N., 2013). The purpose of our research is to define and reveal such notions as human capital, economic innovation, economic structure, economic development, productive capital, innovation, innovative process, economic growth, and labor force. The article directs to study and reveal the role, impact and significance of human capital for economic innovation and development, to find out and explain the notions of human capital theory and the origin of human capital. The main reason for this research is the growing awareness of the fact that human resources and their interconnection are crucial for the activities of any entity, be it a firm, nation, economy or global economy. In their search, scientists tried to obtain an objective understanding of these concepts and compare these soft forms of capital with the traditional idea of capital as a factor of production in the economy. Continuing education and activation of creative opportunities concerns not only individual employees, but the team as a whole. It is about the formation of the intellectual capital of the company, as part of its intangible assets. The intellectual capital of the company and the country as a whole becomes a prerequisite for the inclusion of companies and countries in the global economy with the greatest benefit for the country and the standard of living of its citizens. The intellectual capital of the company and the country as a whole becomes a prerequisite for the inclusion of companies and countries in the global economy with the greatest benefit for the country and the standard of living of its citizens. The human factor determines the country's competitiveness in the global economic system. Studies have led to the conclusion that the basis of modern competitive countries is the availability of innovative systems and human resources.

**Key words:** human capital, economic structure, economic development, productive capital, innovation, innovative process, economic growth, economic system, labor force.

**Introduction.** Human capital theory started back in the 17-th century. Our article will give a brief history of human capital and its characteristics, explain how to measure it, and provide a relevant example of human capital theory. Many people runs their own small business, and they have been struggling to keep up with competitors who are ahead of them technologically. These people are able to offer online orders and use technology to make their service faster. When one considers his/her own team, he/she recognizes that he/she has had the same team for ten years. Thus, they provide significant experience in the business. However, this person discovers that he/she needs to invest in more education and training for his/her employees. He/she may also need to hire new employees who are more familiar with newer technology to help his/her business.

In this article are shown the various ways that a person needs to invest in human capital to improve his/her business. He/she is not the only person thinking this way. Human resource managers in

organizations of all sizes need to focus on human capital because understanding and investing in it can lead to organization success.

The innovative nature of development has changed the character of the production processes. The bulk of innovation shifts the process of human activity outside the scope of mass production, or in the development of product ideas and services, or in the implementation of the product on the market mass production processes to become more transparent, streamlined and accessible for copying. Scientists and practitioners have recognized that the role of material factors is becoming increasingly mediated and dependent. It is organically included in the national economic structure of human creation of new organizational ideas, scientific and technical nature.

Human and social capital have elicited notable attention of research scholars in various disciplines such as sociology, economics, finance, political science, behavioral science, human resource management, and organizational theory in their request for answers to a broadening range of questions in their own fields. The primary reason for this attention is an increasing awareness of the fact that human resources and their interrelationships are crucial for the performance of any entity, be it a firm, nation, economy, or the global economy. In their search, scholars tried to gain an objective understanding of these concepts and compare these soft forms of capital to the traditional notion of capital as a factor of production in economics. In economics, capital is a purposive action, and an investment of resources with expected returns in the market place. Economic capital is a resource that is processed twice. In the first process, resources are produced or altered as an investment. In the second process, the produced or altered resources are deployed in the market place to earn profit. Drawing from this definition of economic capital, human capital would be, in simple terms, an investment in individual knowledge and skills with expected returns in the market place. Similarly, social capital would be an investment in social relations with expected returns in the market place.

The hypothesis is formulated that the better educated, younger, and middle-income groups are more mobile than the less educated, older, very lower and high-income groups, respectively. During periods of high unemployment in the economy nonwhite people are expected to be less mobile than the white ones.

Empirical evidence concerning migrants to and from 93 SMSA's of the United States supports the theoretical hypotheses.

The concept of the innovation system stresses that the flow of technology and information among people, enterprises, and institutions is the key to an innovative process. It contains the interaction between the actors needed in order to turn an idea into a process, product, or service on the market.

Innovation economics is a growing economic theory that emphasizes entrepreneurship and innovation. Innovation economics is based on two fundamental tenets: the central goal of economic policy should be to spur higher productivity through greater innovation; markets relying on input resources and price signals alone will not always be as effective in spurring higher productivity, and thereby economic growth. That is in contrast to the two other conventional economic doctrines, neoclassical economics and Keynesian economics.

In view of the fact that the human capital is rather abstract notion which is contingently explained, and its role and significance for economic innovation and development is not completely clear, we decided to research the subject more deeply and thoroughly. Human capital plays a key and importance role in various spheres of our life, for example, in education, job, business, medicine, and particularly, in economy. The topic of our article is important, relevant and actual for the current economy and economic innovation system, since the critical lack of human capital is observed for various reasons. Then, to define and understand the problem of human capital and the lack of it, we need to study and research the subject. So, our task is actual for efficient development of economy.

Human resources of a country are the size of population rate of growth of population urban rural distribution of people and quality of population. The quality of population as measured by health standards, educational levels and technology, is vitally important in impact on a nation's cultural and economic progress. A country which has developed the skills and knowledge of its people can exploit natural resources, build social economic and political organizations and carry forward national development. The less developed countries of the world are now making investment in human persons for increasing their skills abilities ideals health on the job training programmers. These productive investments have a strong bearing upon increasing human capabilities which is called human capital.

Joseph Schumpeter was one of the first and most important scholars who extensively has tackled the question of innovation in economics. In contrast to his contemporary John Maynard Keynes, Schumpeter contended that evolving institutions, entrepreneurs, and technological change were at the heart of economic growth, not independent forces that are largely unaffected by policy. He argued that “capitalism can only be understood as an evolutionary process of continuous innovation and creative destruction”.

For the first time the idea of a new role of a man in economic development was voiced by Th. Schulz (Schulz Th.W., 1971) based on research of E. Denison (Denison E., 1971). The last proven on a large array of statistics that only half the increase of the gross national product of the United States in the twentieth century was made at the expense of technological innovation and production equipment. Understanding the global scientific community, the new role of a man in the production process and theoretical generalization of this new socio-economic form of the realization of human abilities to work in the world of science has introduced the category of “human capital”. The use of the term capital to the human factor of production based on the fact that:

- Both of them are the main factors of social reproduction in the conditions of market economy capable of delivering income;

- Their interaction with each other is a part of the total productive capital, making a profit;

- Formation of both them is costly and takes place at the expense of current consumption. From this thesis with inexorable logic, it follows that such investments in physical capital, human capital investment can take place and should be considered as a subject of study;

- Investments in both types of capital allow for long-term effects;

- That is, another kind of capital can be accumulated and act as a reserve;

- Each one has a monetary value, and the result of their use can be measured in physical and monetary terms;

- Both types of capital are subject to wear and tear.

Skill and acquired human abilities increase their quality as a productive unit (as pointed out by K. Marx). Therefore, human skill and ability are essential qualities of the worker. It is hardly appropriate to talk about them separately from the individual (Schulz Th.W., 1971).

It should be noted that scientific thought in a previous age, anyway, recognizes the importance of the level of training of the labor force for the production process.

The origin of this concept can be traced to the works of classical economics, as the idea that the labor force is one of the factors of production, and the process of reproduction in the broadest aspect includes both the reproduction of the goods, and labor that is revealed in the writings of Adam Smith, K. Marx, Dzh. Styuart Mill, and many other theorists.

In the consideration of the economic categories of human capital and its process of reproduction, the views and theoretical positions of K. Marx, who described it in many works, are of particular importance. Taking the views of Karl Marx into account, we cannot help but notice that he reconsiders the category of “labor”, and not the category of “human capital”, reckoning, as you know, this difference to be fundamental.

Moreover, he holds a discussion with some representatives of the classical school, who identified labor and capital, which in their interpretation brings a percentage of wages. In the third volume of “Capital”, he cites two arguments in favor of his point of view:

- Workers must work hard to get their “interest”. They cannot turn the capital cost of their workforce in any transfer to another.

- The annual cost of labor is equal to its average annual wage. And that is the difficulty. He must reimburse the buyer for his labor is this value plus surplus value, i. e. its growth (Marx K., Engels F., 1999).

In fact, Karl Marx believed that the employee has the ownership of its workforce, which is being a commodity by the sale alienated from the worker, taking the form of variable capital, owned by the employer. “We should carry out the following distinction: the labor force is working in the hands of a commodity, but not capital; it is determined by income for him only insofar as he can continuously repeat its sale; as capital, it operates after the sale in the hands of the capitalist during the production process. This buying and selling of labor defines it as a capital element, whereby capital goods seem to be a creator” (Marx K., Engels F., 1999).

Human capital can be described as the training and health skills acquired through the job training and education. In Pakistan Michael Park defines it as "The skill and knowledge of human beings." It is also defined as the endowment of abilities to produce it that exists in each human being. It can be increased through formal education, on the job training and improved health and psychological well-being. To be more precise, if the people of a country are well educated, well nourished, skilled and healthy, they are said to have more human capital.

Human capital is the fundamental source of economic growth. It is a source of both increased productivity and technological advance. In fact, the major difference between the developed and developing countries is the rate of progress in human capital. The underdeveloped countries need human capital to staff new and expanding government services to introduce new system of land use and new methods of agriculture, to develop new means of communication, to carry forward industrialization and to build the education system. Prof. Galbraith is right saying: "Now we get a larger part of economic growth from investment in men and improvements brought about by improved men."

The main problems of human capital formation in less developed countries (LDC's) including Pakistan are briefly as under.

**1. Faster increase in population.** The population of almost all developing countries of the world including Pakistan is increasing faster than the rate of accumulation of human capital. As a result thereof, these countries are not making the satisfactory use sector. Expenditure on education is about 2.5% of GDP for the last over five years.

**2. Defective pattern of investment in education.** In the developing countries of the world, the governments are giving priority to primary education for increasing literacy rate. Secondary education which provides critical skills needed for developed economy, remains neglected. Another problem related to investment in education is that there is a mushroom growth of universities in the public and private sectors without trying to improve their standard of education. There are also mass failures at primary, secondary and higher levels of education resulting in wastage of the scarce resources of the countries.

**3. More stress on the provision of building and equipments.** Another major problem of investment in human capital in developing countries of the world is the politicians, and administrators lay more stress on the construction of buildings and provision of equipments than on the provision of qualified staff. It has been observed that foreign qualified teachers and doctors are appointed in rural areas where there is little usefulness of them.

**Materials and Methods.** At the same time, it should be noted that agreeing with the interpretation of "human capital", scientific thought is focused on education and investment in it being the main factor determining the value of human capital in the conditions of the market. Classic direction of E. Denison, Th. Schulz, G. Bekker, L. Turou, J. Mintzer, I. Higuchi focused on their research programs to establish the relationship between the educational level of the individual worker and benefiting from both themselves and the whole society.

D. Kendrick proposed a method for estimating the accumulation of human capital at the macro level, which is based on the method of "perpetual inventory", considering the cost of the family, and the following types of company:

- Maintenance of children until they reach working age and receive a particular specialty;
- Retraining;
- Training;
- Migration of labor;
- Health, and others.

This is the most general terms, considering capital as a technical factor from the point of view of its role in the production process, rather than capital, as a category of public relations.

If you still think in the mainstream of political economy, that is, in the context of social and economic relations, it is obvious that the actual labor, without being a capital with its sale becomes so in the disposal of the employer, when used in the manufacturing process. Being a commodity, the labor force has and uses value. The cost of labor is reduced to the value of life which benefits the worker and his family. Naturally, the interests of workers at such wage level would enable them to acquire the necessary amount of life benefits. So the worker is interested in the price of their ability to work – wages.

From the standpoint of the concept of “human capital”, people with education feel as though they were the owner of two factors: labor and human capital. Each of them makes marginal revenue, amounting to the sum of wages. A smaller part of it (which is unknown) is supplied to the employee for a normal labor, and a large one – to bring humancapital. In other words, the wage of the modern worker is considered as a combination of the market price of a simple labor and rental income from investment in human capital. But the mechanism of the rental income also does not clarify the relationship between the worker and the division of income from the simple labor and rental income on human capital (Schetinin V., 2001; Kendrick J., 1976).

Along with that, he considered investments in housing, consumer durable stocks of goods in families, as well as research and development costs (Kendrick J., 1976).

Education and health are considered to be long-acting factors, as the product of the educational process is qualitatively new work force with a high skill level, ability to work of great complexity and at a greater time interval.

With this interpretation, we come to the concept of human development, which is the main indicator of the level of socio-economic development of society in the modern world, and is recognized by all international organizations: UNDP, ILO and others.

Unconditional novel methodological approach of the founders of the human capital theory is the formation of a new look at economic development in the 20-th century. Traditionally, the research study of the factors that shape the labor force (such as education, health, demographic trends) is not carried out within the framework of the investment approach.

The theory of human capital allocated the problem of “human capital investment” and introduced indicators, covering the entire employee lifecycle (such as lifetime income, health status, etc.) (Mincer J., 1944; Becker G., 1993; Thurow L., 1970).

**Results and Discussion.** From this perspective, the category of “human capital” is eclectic in nature, and based on the mechanical connection of the concepts “labor” and “capital.” This view considers the capital and wealth as a basic concept, which is outside of anyspecific social relations. In the current economic encyclopedia, published under the editorship of L.I. Abalkin, the capital is called “what is able to generate revenue.” In his writings R.M. Nureev leads capital value in the broadest sense. It is any resource that is created with the aim of producing a large number of economic benefits (Abalkin L.I., 1999) (table 1).

Table 1 – Economic categories, describing the role of man in the production process

Category	Content	Characteristic	Characteristic
Work force	The set of physical and mental abilities of the worker, which has a human body and is used by humans for the production of certain consumer goods of his/her ability to work	Category of Marxism from the perspective of public relations	K. Marx
Human capital	Knowledge, skill, motivation and energy vested in human beings that can be used as a factor in the production of goods and services for a certain time	Category capital as a factor of production	G. Becker, T. Shulz, D. Mintser, L. Thurow, E. Denison et al.
Human potential	Accumulated employee scientific and educational potential, coupled with his health and quality of life	Category of social reproduction	G. Myrdal et al.
* Compiled by the author.			

The national economic level justifies the macro effect of investments in human capital. According to G. Myrdal economists have long “tended to ignore the instrumental value of such investments, for the reason that the effect obtained by improving the quality of the population is too scattered, manifested for a long time afterwards and hard to change” (Myrdal G., 1972).

However, in the late 20-th century, a group of World Bank experts substantiated the concept of expansion of the national wealth, allocating it three main components: human capital; natural capital; reproducible capital (basic production and non-productive assets, working capital, household goods) (Kunte A., Hamilton K., Dixon J., Clements M., 1998).



This concept is methodologically based on the theory of human capital by T. Shulz, as the country's accumulated cost of reproduction of labor power, regardless of their source of coverage (family budgets, the current production costs, government spending on social needs). The results of these investments are: accumulation of a person's ability to work, his creative activity in society, the maintenance of life itself, and public health (Schulz Th.W., 1971).

He also justified the need for broad interpretation of a number of categories of reproduction, especially accumulation. (In the current system, most of the SNA cost of reproduction of the human factor is reflected in the composition of indicators of current consumption, such as the actual final consumption, government transfers, and corporations in the form of money, in-kind transfers of state, etc.) T. Shulz suggested that the outcome from production company on the accumulation of human capital has been around  $\frac{1}{4}$  according to scientists in the early 20-th century, and  $\frac{3}{4}$  of its total value.

Official data on the structure of the national wealth in the world today are as follows (table 2).

Table 2 – Structure of the national wealth per capital of the population estimate of 2010 thousand dollars and %

Regions	National wealth, thousand, USD	Structure, %		
		Human capital	Playable capital	Natural capital
North America	326	76.4	19.0	4.9
Pacific OECD	302	67.9	29.8	2.6
Western Europe	237	74.7	23.2	2.5
Near East	150	43.3	18.0	38.7
South America	105	66.7	24.8	8.6
East Asia	47	76.6	14.9	8.5
South Asia	22	63.6	18.2	18.2
* Calculated and compiled according to the World Bank's source ( <i>Problems of Economics</i> , 1999).				

According to these calculations, the share of human capital in the structure of the national wealth in the regions differs greatly. In terms of economic development, a larger amount, than the other two types of capital in the most developed regions and the countries (North America, Western Europe, East Asia), with the highest proportion of 75-76%.

Such an analysis of the national wealth, based on the theoretical researches and discoveries by T. Shulz, E. Denison and others, reflected the process that goes into the economic systems since the mid 20-th century – the emergence of a new role of human capital in the modern economy. The increasing role of human capital was a response to changes in processes, which were updated more than once in 35-40 years, as previously, an average of 10.8 years. In the early 21-st century, the average period of technology upgrades and equipment was reduced to 4-5 years, and in the most developed branches up to 2-3 years. That naturally affected the requirements for the employee. In the 19-th and early 20-th century, the vast number of professionals needed to learn a range of knowledge and skills, and to perform their duties in accordance with the procedure defined once and for all. In the second half of the 20-th century, the requirements have changed. Today, a creative approach from the worker is required to his/her professional knowledge, responsibilities, and ability to learn new methods of professional activity.

According to K. Hening, researcher of the “new economy” in this economic system, which is closely associated with the information revolution, there is a sharp change in the relationship between the physical and human capital. “The decisive factor was the human capital rather his ability to turn information into knowledge. Physical capital has not disappeared, but has lost its dominant position” (Henning K., 2001).

An innovative type of development has led to the features of formation and functioning of the human resource in the modern economy:

Continuous feedback education with production activities throughout the working life - continuous retraining;

Significant creative element in the labor process, i.e., not just the accumulation of new knowledge and skills in the workplace, but also the ability to apply them creatively, to develop new methods and techniques in their daily work;

Demand continuing education and activation of creative possibilities. It applies not only to individual workers, but also the team as a whole. We are talking about the formation of the intellectual capital of the company, as part of its intangible assets. (Such assets include two structural parts: a set of knowledge and skills of employees, along with their creativity and culture of the firm and the firm's capital structure: its information base, organizational system, belonging to it, patents and trademarks.)

The basic management principle of the innovation process, both at the firm level and at the state level. It becomes the principle of synergy, which is implemented in knowledge management (knowledge management): management technology, patent, market-based flow of information that makes specific demands on the employees and the managers.

The intellectual capital of the company and the country as a whole is becoming a prerequisite for inclusion of companies and countries into the world economy with the greatest benefit for the country and the standard of living of its citizens. Among the four main determinants, M. Porter included the human factor in the “national diamond” of competitiveness. This factor is a mandatory captain in his part, and determines the country's competitiveness in the global economic system. That is the full and productive participation of the country in the new economy, which is growing on a global scale. It is impossible without modern quality of human capital. Effective implementation of human capital in the economy globalization is unthinkable without including innovation networks, which are a feature of the global division of labor. For a modern economy, phenomenon is divided into four main types of work:

- Production of high-value products related to high technology;
- The issue of mass production, which is competitive on the world market from the low labor costs;
- Production of raw materials;
- Unclaimed work in modern conditions.

Rapid production of high-tech goods (HTG) and employment growth in these sectors suggest increasing the intellectual capital in the global economy.

Productive potential of new technologies depend on the quality of training systems on the level of qualification which they provide. In fact, the mastery of high-quality skills and competences with creative improvement becomes a necessary response to the changes in production technology, rapidly changing requirements for quality and productivity. Features of the organization and innovation process in modern economic systems in the conditions of globalization of research contracts, financial flows, production and marketing networks create unique centers of gravity for innovation, pulling itself to the human and material capital. As summarized by the UN experts, increasing competition forces firms to specialize in core areas of competence and to rely more than before on the cooperation with external partners (suppliers, customers and even competitors). Networking opportunities encouraged TNCs to conduct operations within clusters of firms. Clusters is a concentration of firms of one or more industries in which synergy is used, resulting from the interaction of competitors, suppliers and customers within the network.

At the same importance on the country's education system, knowledge base, networks, institutions and culture increases dramatically. M. Porter writes about this phenomenon as follows: “Globalization leads to a paradox. It is tempting to assume that the home country no longer plays a role in ensuring the success of its international businesses. At first glance, the firm became more important than the country. But in reality, the competitiveness of advanced industries is increasingly determined by the particular knowledge, skill and level of innovation that is increasingly embodied in skilled labor and organizational arrangements. The processes of preparation of the qualified labor force, as well as some of the important factors affecting the pace of innovation, are determined by the local origin. Paradoxically, the more open global competition increases the importance of the local base” (Porter M., 2002).

Self-developing of an innovative system in the modern economy is based on the expansion and strengthening of relations, not only within the cluster groups, but also between other entities of the economy, between them and society, between society and the state.

In this regard, significant obligations arise from the state in connection with the provision of the economy and competitive clusters of human resources of suitable quality. The formation of high-tech industries and modern service level dictates a high level of education, professional skill, knowledge and culture with the ability to deal with modern appliances. The high level of education and the formation of the ability to develop their potential is a prerequisite for adaptation of the worker to a permanent process of improvement in the production processes. In order to carry out such a complex activity, a person needs not only creative education and quality health care but also the possibility of labor mobility, the

availability of the information fields and the ability to work and other terms with them. Therefore, education, health, vocational training and the search for economically significant information with the mobility of labor, education and childcare, serve as western economists to the main areas of “human capital investment”.

To carry out a qualitative shift in the standard of living, the population must be based on the development of human resources and modern infrastructure, as well as the quality of social services (Doskaliyeva B.B., 2009).

State investment in human capital flow passes through the social sphere, which is important in this regard, firstly increased, and, secondly, has acquired new content. Earlier, the social sphere rather as a necessity of state paternalism for socially vulnerable members of society, because all the other layers can take advantage of private education and health, etc. At the present stage the need to provide a high level of social infrastructure for all, to make it available to every member of society, to provide high-quality human resources for the nation as a whole, not just its individual groups.

**Conclusion.** Summarizing all the foregoing, we provide the following conclusions. The core of modern competitive countries is the availability of innovative systems and human resources. These systems can develop and be maintained. Despite the conceptual incompleteness of human capital theory, the causal link between the level of education, health and mobility of human resources and the level of competitiveness of the national economy is scientifically proved and recognized by the international community. Accordingly, the fact remains immutable.

In our article we have defined and revealed the notions of human capital, economic innovation, economic structure, economic development, productive capital, innovation, innovative process, economic growth, and labor force. The role, impact and significance of human capital for economic innovation and development were studied and revealed in the article. We have found out and explained the notions of human capital theory and the origin of human capital.

The research can prospectively contribute to the improvement of the economic innovation system, economic state and development in various countries due to study of human capital and its drain. Since the essence and peculiarities of human capital are explained and researched, it would be possible to solve the problem of human capital more efficiently due to more investments in it. Thus, we can preserve the human capital. As the problem of human capital and its lack is global, our article can help to improve the economic innovation system, economic state and development all over the world.

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### ЭКОНОМИКАНЫҢ ИННОВАЦИЯЛЫҚ ЖҮЙЕСІНДЕГІ АДАМ КАПИТАЛЫНЫҢ РӨЛІ

**Аннотация.** Жаһандық және жергілікті қазіргі заманғы инновациялық және ақпараттық экономиканың өсу динамикасы барлық саладағы өндірістің ақырын жетілу жағдайымен емес, тауарлар мен қызметтерді өндіру үдерісінде түрлі инновациялық және сапалы өзгерістер арқылы анықталады. Соңғы онжылдықтардағы инновациялық үдерістің одан әрі күшеюі өндірістік базаның тұрақты өзгерісіне негізделген экономикалық дамудың жаңа түрінің қалыптасуы, сонымен қатар түбегейлі жаңа технологияларды, тауарлар мен қызметтердің жаңа түрлерін үздіксіз қалыптастыратын өнім сипатына байланысты. Жаһандану жағдайында әлем нарығында бәсекелестіктің күшеюі инновациялар мен сапа бәсекелестігі мәселесінің өзектілігін арттырады. Бұл жаңалық экономикалық дамудың басты бағытына айналды (Иванов Н., 2013). Зерттеуіміздің мақсаты – адам капиталы, экономикалық инновация, экономикалық құрылым, экономикалық даму, өндірістік капитал, инновация, инновациялық үдеріс, экономикалық өсу және жұмыс күші сияқты ұғымдарды анықтау және айқындау. Мақала адам капитал теориясы және адами капиталдың пайда болуы туралы түсініктерді анықтау, айқындау мақсатында экономикалық инновация мен дамудағы адам капиталының рөлін, әсері мен маңызын зерттеуге және ашуға бағытталған.

Зерттеудің негізгі себебі адами ресурстар мен олардың өзара байланысы кез келген субъектінің – фирма, ұлт, экономика немесе ғаламдық экономика үшін маңызды орын алатыны туралы жете ұғыну жағдайының дамуы болып саналады. Ғалымдар зерттеулерінде аталған ұғымдарды объективті түсіндіруге және капиталдың жеңіл формаларын экономикадағы өндіріс факторы ретінде капитал туралы дәстүрлі түсінікпен салыстыруға тырысты. Үздіксіз білім беру және шығармашылық мүмкіндіктерді жандандыру тек жеке қызметкерлерге ғана емес, жалпы ұжымға да қатысты. Мұнда компанияның материалдық емес активтерінің бөлігі ретінде интеллектуалдық капитал қалыптастыру жайын сөз еттік. Компанияның және тұтас елдің интеллектуалдық капиталы елдің, ондағы азаматтардың өмір сүру деңгейіне үлкен пайда келтіретін компаниялар мен елдерді әлемдік экономикаға қосу үшін қажетті алғышартқа айналады. Адами фактор елдің әлемдік экономикалық жүйеде бәсекеге қабілеттілігін анықтайды. Жүргізілген зерттеулер қазіргі заманғы бәсекеге қабілетті елге инновациялық жүйелер мен адам ресурстары тән деген тұжырымға әкелді.

**Түйін сөздер:** адам капиталы, экономикалық құрылым, экономикалық даму, өндірістік капитал, инновация, инновациялық процесс, экономикалық өсу, экономикалық жүйе, жұмыс күші

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### РОЛЬ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА В ИННОВАЦИОННОЙ СИСТЕМЕ ЭКОНОМИКИ

**Аннотация.** Динамика роста современной инновационной и информационной экономики, как глобальной, так и локальной, определяется не простым увеличением производства во всех секторах, а той частью, которая порождается различными инновационными и качественными изменениями в процессе производства товаров и услуг. Дальнейшая интенсификация инновационного процесса в последние десятилетия обусловлена формированием нового типа экономического развития, основанного на постоянном изменении производственной базы, а также характера продукции с непрерывным созданием принципиально новых технологий, а также новых типов товаров и услуг. В условиях глобализации ужесточение конкуренции на мировом рынке актуализирует проблему конкуренции инноваций и качества. Это нововведение стало основным вектором экономического развития (Иванов Н., 2013). Целью нашего исследования является определение и выявление таких понятий, как человеческий капитал, экономические инновации, экономическая структура, экономическое развитие, производительный капитал, инновации, инновационный процесс, экономический рост и рабочая сила. Статья направлена на изучение и раскрытие роли, воздействия и значения человеческого капитала для экономических инноваций и развития, чтобы выяснить и объяснить понятия теории человеческого капитала и происхождения человеческого капитала.

Основной причиной этого исследования является растущее осознание того факта, что человеческие ресурсы и их взаимосвязь имеют решающее значение для деятельности любого субъекта, будь то фирма, нация, экономика или глобальная экономика. В своих поисках ученые пытались получить объективное понимание этих концепций и сравнить эти мягкие формы капитала с традиционным представлением о капитале как факторе производства в экономике. Непрерывное образование и активизация творческих возможностей касается не только отдельных работников, но и команды в целом. Речь идет о формировании интеллектуального капитала компании, как части ее нематериальных активов. Интеллектуальный капитал компании и страны в целом становится предпосылкой для включения компаний и стран в мировую экономику с наибольшей выгодой для страны и уровня жизни ее граждан. Человеческий фактор определяет конкурентоспособность страны в мировой экономической системе. Проведенные исследования позволили сделать вывод о том, что основой современных конкурентоспособных стран является наличие инновационных систем и человеческих ресурсов.

**Ключевые слова:** человеческий капитал, структура экономики, экономическое развитие, производительный капитал, инновации, инновационный процесс, экономический рост, экономическая система, рабочая сила.

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## **THE FEATURES OF IMPLEMENTATION THE EVALUATION METHODS OF DIGITAL INFRASTRUCTURE REALIZATION IN THE REGIONS OF KAZAKHSTAN**

**Abstract.** The article considers the features of information technologies and digital transformation in modern conditions based on digital information, in all technological changes, and the main factors of ensuring the competitiveness of individual enterprises and at a high level of associations. Currently, the method of forming the digital infrastructure of the regions of Kazakhstan, determining the main opportunities for increasing the level of innovative development of new economic zones and prospects for developing the potential of science and innovation in the region has been fully studied. The most promising methodological issues of forming and evaluating the service infrastructure and information infrastructure in connection with the development of the economy and the change of the technical regime were also outlined. In General, infrastructure is a part of the material and technical base. its allocation in the structure of the national economy will allow us to determine the elements that provide the General conditions in terms of effective functioning for the development of economic and social processes and the creation of objective material opportunities for social work. In addition, we can talk about a direct relationship between the prospect of transferring the economic regime and the level of infrastructure development – in accordance with the level of its preparation, the possibility of introducing innovations in the production process is open. The analysis of the vector of development of information technologies, changes in the technological structure due to the introduction of innovations, assessment of the role of information infrastructure in terms of prospects for economic transformation, research of the effectiveness of the digital infrastructure of the region. The basics of combining system properties and quality of classical and system analysis are considered. As a result, the experience of obtaining a typology of digitalization of regions based on the study of the stages of information infrastructure formation is revealed.

**Key words:** Digital economy, region, infrastructure, innovation, factors, resources, information.

**Introduction.** Last ten years the whole world was moving fast to new economical model which is formed by digital technology. Information technologies and digital transformation in modern conditions on the basis of digital information are the main factor and condition for ensuring competitiveness not only at the level of individual enterprises, but also at the level of associations at the level of nations and countries, and restoring economical and production processes, increasing productivity and improving the quality of goods and services as well as reducing costs. Expanding the role of information technology in the work of the private and public sectors is the basis for the transition to the digital state. According to the world's leading experts, by 2020 about 25% of the global economy will be digital, and the introduction of digitalization technologies into the economy, which will allow the government, business and society to mutually beneficial actions, will become a more wide scale and dynamic process.

**Methods.** Digital technologies play an important role in the economic development of modern countries. It lasted for at least five years and every year it gets stronger. The concept of “digitization” is replaced by the word “transformation”, which nowadays becomes the motto “digitization - or you will forever be left behind the world” from the peloton, striving for the economy of the 30 most successful countries in the world. “Digital Kazakhstan” is a new state program, according to which the state takes

control of all digital processes in the country and acts as a customer for most of them. The national digitalization program is not only a Kazakhstan invention, but such strategies have been adopted in more than 15 countries of the world.

**Results.** Most developed and developing countries are beginning to feel “digitalized”, as they understand that future changes are inevitable. Today, the United States and China, the so-called informal leaders of digital games, have announced their first orientation. Subsequently, relevant programs were adopted in England, the European Union, Australia, Belarus, Kazakhstan and other countries. [1].

And the forecast of the state program “Digital Kazakhstan” by 2021 can be seen below:



The state program "Digital Kazakhstan"

- Forecast for 2021: 81% - Share of Internet users; 81,5% - Digital literacy rates;
- 80% - The share of public services received in electronic form of the total volume of public services;
- 6,3% - Productivity growth in the mining and quarrying sector;
- 5,9% - Productivity growth in Information and Communications Technology

The number of employed people in the industry of Information and Communications Technology is 110 thousand people. According to this forecast, it is safe to say that some of the goals were performed. Currently, the formation of a digital infrastructure in Kazakhstan is the basis for the disclosure of the main paradigms of the “regional” output: quasi-government zone; region as a quasicorporation; - the region as a market; production system as region; region as a society. When describing a region as a quasi-government, it is considered relatively small as a separate state. As for the region as a quasi-corporation, it is primarily the use of a number of approaches to commercial companies. The concept of quasicorporation involves the idea of the proper use of domestic resources for global competition and regional development. In this case, the result of successful competition is a change in the financial situation in the region. In accordance with these rationales, be opportunities are emerging for the development of regions of the Republic of Kazakhstan.



The event, which is held in the Kyzylorda region of the Republic of Kazakhstan, will open the way for new opportunities in all regions of the country. In the concept of the region, special attention is paid to creating favorable conditions for economic activity in a certain territory within the market. The territorial boundaries of territorial markets in some cases coincide with the administrative boundaries of the regions - subjects of Kazakhstan, and in some cases combine several zones [2].

Aims of the study. Analysis of approaches to the assessment of digital infrastructure in Kazakhstan and the introduction of methods of analysis and formulation. The main results of the study. As part of a sustainable production system in the region, it shows that, along with the end-to-end production cycle in the region, it is viewed as an open subsystem of the country's socio-economic complex, with particular emphasis on the stages of its production. With regard to the public concept of the district, pays special attention to the public healthcare, education and culture. In addition, the region is considered a science and innovation space. According to the scientist of M.A. Gusakov, science and innovation space "there is space for interdisciplinary and scientific-innovative fields of activity in the field of science and innovations, which are separated by economic factors for the implementation of scientific and innovative processes in the institutional environment" [3]. Therefore, one of the main opportunities for increasing the level of innovation development of new economically regions is the dissemination of scientific results, their adaptation, transmission and involvement of regions in long-term innovation activity, as well as expansion of the innovation development space.

According to Gusakov, the effectiveness of space expansion is manifested in the formation of regions on the path of innovative development, the most active changes in the institutional environment, socio-economic development, as well as in the formation of disproportions in the level of regional development. As a way to determine the prospects for the development of scientific and innovative potential in the region. A. Gusakov proposes to define the boundaries for the innovative development of the region, as well as to establish contacts between groups in the field of the scientific and innovative process, which represent different and higher levels of innovative development [4]. The main reason for the emergence of scientific and innovation space is the incompleteness of regional innovation systems and the lack of interconnection between them. In this regard, firstly, it is necessary to integrate the scientific and innovative activities of the regions, and secondly, it is necessary to shape such areas of transformation as the integration of regional activities to increase the degree of innovative development through the development of the structure of the national innovation system in the country and regions at all stages scientific innovation process. It should be noted that "infrastructure industries", such as transport, transport, health care, science, will open the way. However, the concept of infrastructure and other aspects, such as the infrastructure of a country, a region, a settlement, and industries, is legal. This term can be understood as all technical and technical means that provide favorable conditions for the normal operation of an object. Therefore, it is logical to call this type of infrastructure the scale of the object of action and the production system: international, national, regional, local, sectoral.

Infrastructure proposed by J. Toshchenko - part of the material and technical basis, the division of which the structure of the national economy makes it possible to identify elements that provide general conditions for the effective functioning of economic and social processes, development and creation of objective material possibilities for the public [5]. "Infrastructure is a collection of buildings, systems and services necessary for the functioning of the branches of material production and the sustenance of society. Infrastructures: industrial (roads, channels, ports, warehouses, systems, communications, etc.) and social networks (hospitals, theaters, stadiums, etc.)" [6]. All such routes should be analyzed separately. It can be concluded that the infrastructure does not produce products in a material form, but only creates the necessary conditions for the production of products. I believe that the thesis is an important feature of most elements of the infrastructure. Thus, the infrastructure is the basis of the production processes of the economic system. It is reasonable to assume that due to the development of the economy and changes in the technical order, the infrastructure that serves it will also change. In addition, it can be said that there is a direct relationship between the degree of economic transformation and the level of infrastructure development - innovations can be introduced into the production process in accordance with its level of readiness. Knowledge and creativity in an innovative economy is a key factor in production. It can be said that such an economic structure is very necessary for the system of regional institutions responsible for the production of information, as well as for its translation and use. In this regard, from the point of view of the institutional approach, we can consider the information infrastructure as an integral part of the



innovation economy of the region, as well as the information infrastructure. We believe that information support for the formation of elements of the innovative economy is a key factor determining the potential of the economy in the region. In the context of globalization, the leading world economies will be able to reorient the leading economies to the innovation model, as well as to promising, methodological issues of forming and evaluation the information infrastructure in the regional economy in the context of the development prospects and competitiveness of the region. When studying the genesis of the information infrastructure, we saw the need to improve the storage, processing and transfer of education associated with the development of science, technology and transport. These changes are commonly referred to as "information revolutions." Academician A. I. Rakitov on his own experience, concludes about six revolutions, which are based on the principle of storing and transmitting information and qualitative change in the coding process [7]. In fact, the appearance of words, letter and the invention of the publisher of the book made it possible to correct and disseminate information. Then, along with the formation of industrial production, communication tools such as the telegraph, telephone and radio were invented, made it possible to spread information more widely. The subsequent information revolution occurred due to the advent of electronic computers, which have the capacity and processing speed of information that is inaccessible to people. Due to creation of global information and communication networks allow mass media access to information from any point of the planet. In our opinion, today's level of development of information technology is not limited to "global" definition, as communication can be exchanged with objects which are far away from the earth. According to the materials of Mars One, in 2025 for the first time in the world history expedition to the planet Mars, participants will be able to access the Internet [8]. By the way, the analysis of the vector of information technology development gives us grounds for the formation of the seventh information revolution. In our opinion, its value is not quantitative, that is, fast processing and rapid dissemination of information, computer performance (even though indicators are constantly increasing) and the quality is the intellectualization of the information space and as a result, the development of full technological features. The typology of zone digitalization can be obtained from studying the stages of the information infrastructure, because we believe that the transition to a new level of development depends on the objective and ever-growing needs for storing and disseminating information, that is, tools that are more advanced to the elements of infrastructure. The development of productive forces based on scientific and technological revolutions has become a historical prerequisite for the emergence of an information infrastructure. It began to develop as a system with the development of the market. It not only participated in the economic activity and the movement of goods, but also provided information on the flow of goods. This was due to the process of exchanging goods and services, and since the system of relations between market actors was becoming more and more complex, it had to deal with a large number of intermediaries. Traditionally, along with the infrastructure, which is connected with transport, warehousing logistics, communications, etc., the individual sectors that provide information flow, known as information infrastructure, have become distinctive structures [9].

The technological structure defines "all stages of managing resources and a macroeconomic cycle of reproduction that incorporates incompetent nonproductive consumption". Integrated technological components of the complex components are based on the basic technological structure. The sum of technological innovations that form the basis of the technological structure is called the main factor, as well as areas that actively use the key factor and play a leading role in the development of a new technological structure.

The concept of wave characteristic of the spread of innovations is very interesting to T. Hagerstand. According to T. Hagerstand the spread of innovation can be of three types: expansion of diffusion (uniform distribution of innovation), diffusion of movement (distribution in a certain direction) and mixed form. According to the scientist, each generation of innovation consists of four stages: formation, diffusion, accumulation and saturation [10].

Due to the introduction of innovations, changes in the technological structure will result in qualitative changes in the international division of labor, and the consequences will have a direct impact on competitiveness. Given this thesis, it is difficult to overestimate the role of information infrastructure in the context of economic transformation. The economy has five technological structures. The first (1770-1830) was based on the development of the textile industry, which was characterized by the mechanization of labor and the production of wastewater; the second major factor in the technological structure is the

steam engine, the third is the development of heavy engineering, and the fourth is the internal combustion engine. The fifth technological structure (since 1980) is based on information and communication technologies, computer science, new types of energy, and achievements in robotics. In developed countries, this structure has entered a phase of excellence, which made it possible to proceed to the sixth stage, which began in 2010. Its core is nanotechnology and global information. Special attention should be paid to the level of development of the information infrastructure required by the Sixth Technological Structure. Moreover, if the level of recent developments is not very high, then it cannot be transferred. The Internet-based products of the fifth generation, quantum computers, non-flying vehicles and airlines, programmable matter and other conceptual stages of development at the various stages have one integrative quality - in general they all have based on a certain degree of general information and communication capabilities. The growth in demand for information infrastructure is due to the fact that the use of information is combined with all economic trends. It should be noted that this type of infrastructure ensures the functioning of consumers and commodity producers, as well as their intermediaries that is infrastructure sectors. The latest information technologies have become a unifying factor for various information infrastructure infrastructures. The integration is carried out in the process of evolution and exchange of free information between these institutions, in the result information infrastructure has acquired a new qualitative character, which has become an important and rapidly developing component of the economy. In this regard, we can define the concept of digital infrastructure. It should also be noted that depending on the method or the role of the infrastructure in certain historical periods, several different conclusions can be drawn. However, science is not sustainable, and in the economic literature it is relatively rare. In the one of the earliest research scientists gave explanation of “information infrastructure” and defined as “the ability to make education and information accessible and to disseminate this knowledge and information, ability to use knowledge in the workplace” [11]. Compared to many definitions, which include a simple translation of components or functions of a particular type of infrastructure, this approach includes describing the information infrastructure as its potential for developing information accessibility, transforming it among economic operators and using this information in the production process. It is especially important to note that the infrastructure between the subjects is a guide, a broker. The main reason for the dependence of elements of digital infrastructure on the level of economic development as a whole is as follows: “Digital infrastructure provides a complete set of tools (material, technical, software, etc.) through its elements and components” [12].

We define digital infrastructure as an institutional basis for an effective information flow in the process of meeting the information needs of the community, often identifying the potential for generating new knowledge and, as a result, justifying the level of innovation in the economy.

The effectiveness of the region’s digital infrastructure is largely dependent on how well its elements are coordinated with the rest of the infrastructure. Technological advances of the latest information revolution, as well as the spread of network information technologies, have increased the efficiency and effectiveness of the information infrastructure, which is the cause of structural changes in the innovation infrastructure and ultimately reduces transaction costs. It can be said that the items will be determined by the informational costs to the field. [13]. It can also be concluded that the effectiveness of a regional economy depends on the level of digital infrastructure, based on the fact that “a decrease in average transaction costs is associated with increased productivity and sustainable economic growth” [14]. For this reason, it is worth noting that digital infrastructure has become the main focus of investment. Therefore, this principle is based on the need to more actively stimulate its development for the effective functioning of the economy. This is a task not only for the public sector, but also for the private sector. Based on the above definitions and using systematic analysis, we offer the basic parameters of the digital infrastructure in the region. Digital infrastructure is a collection of elements that interact with each other as a system, not specific to each element, but with a certain integral quality. Classical and systematic analysis is based on the combination of the system of each system and its system properties. In accordance with the system analysis algorithm, you can determine the following system parameters: A - elements and their layers; a - relations between elements, their functional interaction; B - system functions and its integral quality; Y - additional system constraints: space, time, etc. b.

Thus, the classification can be summarized as follows:  $S = f(A, a, B, Y)$

With the help of this method, you can place system parameters on the digital infrastructure.

## Structure a system of digital infrastructure

System parameters	Characteristics
A	Information resources. Subjects of digital infrastructure: information producers and consumers, custodians, mediators, information / formations / owners (mass media, statistical bodies, databases, archives, laws, computer and telephone networks)
a	Functional relations and relations between subjects of the information infrastructure in the process of information flow
B	The use of innovative structures and economic entities through the storage, collect, processing and dissemination of information
Y	Optimization of economic processes by improving efficiency and competitiveness

Analyzing these approaches from the table, we can note the following attributes of the region's digital infrastructure:

- The basis of digital infrastructure is information as a factor of production;
- The specificity of the digital infrastructure is determined by information about the properties of the product;
- the principle of its development will increase the flow of information flows;
- its impact on the economy can be characterized by an increase in the speed and efficiency of resource allocation;
- One of the main criteria of efficiency is the influence of participants in economic relations on the level of transaction costs.

As we have already mentioned, information factors in the modern theory of factors of production are taken into account in the system of productive forces of society. In context, this issue is crucial because of the specificity of the production factor, the relationship between interrelated institutions and the effective work of the respective functions. It should be noted that the information factor is integration. All production factors are capital, and the movement of capital of a certain type creates a structure and appropriate infrastructure. Another important aspect is the mechanism of economic relations between the subjects of the digital infrastructure of the region, which are determined by its own characteristics, so sometimes they do not fall under the generally accepted rules of economic relations. Persons engaged in the creation, transmission and use of the information are subject to digital infrastructure, as well as subjects of public administration, organizations, public organizations and citizens. A wide range of digital infrastructure in the region is designed to ensure interaction and communication between all participants in economic relations, especially those mentioned above. In this regard, it is advisable to introduce a classification of all subjects of the digital infrastructure [15].

The formation and differentiation of regions is a long-term process, which indicates the essential need for constant monitoring and taking into account the socio-economic reality at the regional level as a basis for predicting the future development of the structure that the region is part of [16].

**Conclusion.** The above problems undoubtedly determine the need to prepare a set of measures for the formation of a digital infrastructure. In our study, we concluded that digitalization has a great impact on economic development, we presented a model for assessing the state of information and communication technologies, as well as the importance of introducing information technologies in all spheres of life in terms of the formation of an innovative economy and competitiveness in the global market. After analyzing the general way of studying these theses, we are faced with serious problems. This shows that we can expand the development of the concept of the seventh information revolution by the example of the concept of the information revolution, and then transfer it to a qualitatively new level. In this case, we presented the idea of technological features of the intellectualization of the information space. Traditionally, this term is defined as “a city in which information and communication technologies are used in all key elements of public life and infrastructure to create the most interactive and open urban information environment.” In general, if investments are made in human capital and information infrastructure, in this case it is recommended to call the city “smart”, which will allow more efficient use of resources. Let's briefly look at the concept of a smart city in order to identify key elements that are part of it, which will allow us to develop a set of measures for building information infrastructure as a factor for each of them.

In our opinion, the prospects for the development of digital infrastructure and, accordingly, the prospects for the development of all high technologies in the field of information technologies are determined by the state policy vector in this matter. Only within the framework of the sixth technological direction, the development of a regional economy is possible only if the information and communication technology sector is the engine of growth for the entire economy and is recognized as one of the key factors of regional competitiveness. This justifies the need for a new IT industry development strategy and was implemented as part of this study. Based on all the above conclusions, no state has a clear understanding of what a digital economy is and what its results will be. Nevertheless, the digital economy explains the new form of communications and payments for consumers, and most countries deal with digitalization, and not with the digital economy. This activity is not a form of a realistic, purposeful process of creating a digital economy, regardless of experience.

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### **ҚАЗАҚСТАНДАҒЫ АЙМАҚТАРДЫҢ САНДЫҚ ИНФРАҚҰРЫЛЫМЫН ҚАЛЫПТАСТЫРУДА БАҒАЛАУ ТӘСІЛДЕРІН ЕНГІЗУ ЕРЕКШЕЛІКТЕРІ**

**Аннотация.** Мақалада сандық ақпаратқа негізделген қазіргі жағдайдағы ақпараттық технологиялар мен сандық трансформацияның барлық технологиялық өзгерістердегі ерекшелігі мен жекелеген кәсіпорындардың жоғары бірлестіктер деңгейінде де бәсекеге қабілеттілікті қамтамасыз етудің негізгі факторы қарастырылған. Қазіргі кезде Қазақстандағы аймақтардың сандық инфрақұрылымын қалыптастыру, жаңа экономикалық тұрғыдағы аймақтардың инновациялық даму дәрежесін арттырудың басты мүмкіндіктерін және аймақтағы ғылым мен инновацияның әлеуетін игеру перспективасын анықтау тәсілі толықтай зерттелген. Сонымен қатар, экономиканың дамуына әрі техникалық тәртіптің ауысуына байланысты оған қызмет көрсететін инфрақұрылым мен ақпараттық инфрақұрылымды қалыптастыру мен бағалаудың неғұрлым перспективалы әдіснамалық мәселелері көрсетілген. Жалпы, инфрақұрылым дегеніміз – материалдық-техникалық базаның бір бөлігі, халық шаруашылығы құрылымында оны бөліп қарау экономикалық және әлеуметтік үдерісті дамыту үшін тиімді қызмет ету және қоғам еңбегі үшін объективті материалдық мүмкіндіктер жасау тұрғысынан жалпы жағдайды қамтамасыз ететін элементтерді анықтауға мүмкіндік береді. Бұдан басқа, экономикалық тәртіпті ауыстыру перспективасы мен инфрақұрылымды дамыту деңгейі арасындағы тікелей тәуелділік туралы айтқан жөн, атап айтқанда, оның дайындық деңгейіне сәйкес өндірістік үдерісіне инновация енгізілу мүмкіндігі айқындалған. Ақпараттық технологияларды дамытудың векторын, инновацияларды енгізудің арқасында технологиялық құрылымның өзгеруін талдау, экономиканы трансформациялау перспективалары тұрғысынан ақпараттық инфрақұрылымның рөлін бағалау, аймақтың сандық инфрақұрылымының жұмыс істеу тиімділігін зерттеу жүргізілген. Классикалық және жүйелік талдау сапасымен, жүйелік қасиеттерін біріктіру негізі қарастырылды.

Қазіргі кезде Қазақстандағы аймақтардың цифрлық инфрақұрылымын қалыптастыру «аймақ» тұжырымының негізгі парадигмаларын ашып көрсетуге негіз болады: квазимемлекет ретіндегі аймақ; квазикорпорация ретіндегі аймақ; нарық ретіндегі аймақ; өндірістік жүйе ретіндегі аймақ; қоғам ретіндегі аймақ. Квазимемлекет ретіндегі аймақты сипаттаған кезде оны салыстырмалы түрде мемлекеттің оқшауланған шағын жүйесі түрінде қарастыру көзделді. Квазикорпорация ретіндегі аймақтың үлгісіне келсек, ол, ең алдымен, коммерциялық компанияларға тән бірқатар тәсілдерді қолданудан тұрады. Квазикорпорация тұжырымдамасы жаһандық бәсекелестік пен аймақтарды дамыту үшін ішкі ресурстарды дұрыс пайдалану идеясын қамтиды. Мұндай жағдайда табысты бәсекелестік күрестің нәтижесі аймақтағы қаржылық жағдайының өзгеруі болып саналады.

Шаруашылық қызметке қатысушылар ақша мен тауарлардың қозғалысын жүзеге асырудан бөлек, өнім туралы ақпаратпен қамтамасыз етіп отырды. Бұл жағдай тауар мен қызметтер алмасу үрдісіне байланысты жүзеге асты және нарық субъектілері арасындағы қатынастар жүйесі қиындаған сайын көптеген ақпараттарды дәнекер өңдеді. Сонымен қатар, дәстүрлі түрде көлік, қойма логистикасы, байланыс және т.б. инфрақұрылым салаларымен қатар, оқшауланған құрылым ретінде ақпараттық инфрақұрылым деп аталатын ақпараттық ағын үдерісін қамтамасыз ететін жеке салалар ерекшелене бастады.

Аймақтың сандық инфрақұрылымның қызмет ету тиімділігі көбінесе оның элементтерінің әрекеттері басқа инфрақұрылымдық үлгілермен үйлесімділігіне байланысты. Соңғы ақпараттық төңкерістердің технологиялық жетістіктері, сондай-ақ желілік ақпараттық технологиялардың таралуы ақпараттық инфрақұрылымның тиімділігі мен өнімділігін едәуір арттырды. Бұл құбылыс инновациялық инфрақұрылымдағы құрылымдық өзгерістердің себебі ретінде танылады.

Жоғарыда келтірілген анықтамаларды негізге ала отырып, әрі жүйелік талдауды пайдалану барысында біз аймақтың сандық инфрақұрылымының негізгі параметрлерін ұсынамыз. Сандық инфрақұрылым жүйе ретінде әрбір элементке жеке тән емес, белгілі бір интегралды сапасы бар, өзара іс-қимыл жасайтын элементтердің жиынтығы.

Қорытындысында аймақтарды цифрландырудың типологиясы ақпараттық инфрақұрылымды қалыптастыру кезеңдерін зерттеу негізіндегі тәжірибелері айқындалған.

**Түйін сөздер:** сандық экономика, аймақ, инфрақұрылым, инновация, фактор, ресурс, ақпарат.

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### **ОСОБЕННОСТИ ВНЕДРЕНИЯ МЕТОДОВ ОЦЕНКИ ФОРМИРОВАНИЯ ЦИФРОВОЙ ИНФРАСТРУКТУРЫ РЕГИОНОВ В КАЗАХСТАНЕ**

**Аннотация.** В статье рассмотрены особенности информационных технологий и цифровой трансформации в современных условиях, основанных на цифровой информации, во всех технологических изменениях и основные факторы обеспечения конкурентоспособности отдельных предприятий и на высоком уровне объединений. В настоящее время полностью изучен способ формирования цифровой инфраструктуры регионов Казахстана, определения основных возможностей повышения уровня инновационного развития новых экономических зон и перспектив освоения потенциала науки и инноваций в регионе. Также были изложены наиболее перспективные методологические вопросы формирования и оценки обслуживающей инфраструктуры и информационной инфраструктуры в связи с развитием экономики и сменой технического режима. В целом, инфраструктура – часть материально-технической базы, ее выделение в структуре народного хозяйства – позволит определить элементы, обеспечивающие общие условия с точки зрения эффективного функционирования для развития экономических и социальных процессов и создания объективных материальных возможностей для общественного труда. Кроме того, можно говорить о прямой зависимости между перспективой переноса экономического режима и уровнем развития инфраструктуры – в соответствии с уровнем его подготовки открыта возможность внедрения инноваций в производственный процесс. Проведены анализ вектора развития информационных технологий, изменения технологической структуры благодаря внедрению инноваций, оценка роли информационной инфраструктуры с точки зрения перспектив трансформации экономики, исследование эффективности функционирования цифровой инфраструктуры региона. Рассмотрены основы объединения системных свойств, качества классического и системного анализа.

В настоящее время формирование цифровой инфраструктуры регионов в Казахстане является основой для раскрытия основных парадигм концепции «регион»: как квазигосударственный регион; как квазикорпорация; как рынок; как промышленная система; как регион как общество. При описании территории как квазигосударственного предусматривается его рассмотрение относительно обособленной подсистемы государства. Что касается модели региона как квазикорпорации, то она состоит, прежде всего, в применении ряда подходов, присущих коммерческим компаниям. Что касается модели региона как квазикорпорации, то она состоит, прежде всего, в применении ряда подходов, присущих коммерческим компаниям. Концепция квазикорпорации охватывает идею правильного использования внутренних ресурсов для глобальной конкуренции и развития регионов. В этом случае результатом успешной конкурентной борьбы является изменение финансового положения в регионе.

Участники хозяйственной деятельности не только осуществляли движение денег и товаров, но и обеспечивали движение информации о продукции. Это было связано с процессом обмена товарами и услугами, и чем сложнее система отношений между субъектами рынка, тем больше информации пришлось обрабатывать посредникам. Кроме того, традиционно в области инфраструктуры, к которым относятся транспорт, складская логистика, связь и другие, в качестве обособленной структуры стали выделяться отдельные отрасли, обеспечивающие поток информационных потоков, так называемых информационной инфраструктурой.

Эффективность функционирования цифровой инфраструктуры региона во многом зависит от того, насколько согласованы действия ее элементов с остальными образцами инфраструктуры. Технологические достижения последних информационных революций, а также распространение сетевых информационных технологий значительно повысили эффективность и производительность информационной инфраструктуры, что является причиной структурных изменений в инновационной инфраструктуре. Основываясь на приведенных выше определениях, и используя системный анализ, мы предлагаем основные параметры цифровой инфраструктуры региона. Цифровая инфраструктура как система представляет собой совокупность взаимодействующих элементов, имеющих определенное интегральное качество, не свойственное каждому элементу индивидуально.

В итоге выявлен опыт получения типологии цифровизации регионов на основе изучения этапов формирования информационной инфраструктуры.

**Ключевые слова:** цифровая экономика, регион, инфраструктура, инновации, факторы, ресурсы, информация.

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**ECOLOGICAL AND ECONOMIC ANALYSIS  
OF ADAPTIVE LANDSCAPE SYSTEMS UNDER CONDITIONS  
OF SUSTAINABLE DEVELOPMENT**

**Abstract.** The article considers the adaptive-landscape system, which consists of the natural, cultural and historical characteristics of a particular area. The article describes the main characteristics of the territory, landscape elements; the importance and negative or positive expression of each characteristic is determined; The assessment of the spatial conditions of the landscape is given. These indicators formed the basis of the environmental and economic analysis of the territory. A new systematic approach to the landscape, measures to revitalize spring areas, and measures to combat erosion: organizational, agricultural, technical measures are proposed.

**Key words:** landscape, landscape features, adaptive-landscape system, ecological and economic analysis of territories, systematic approach.

**Introduction.** The landscape character is made up of natural, cultural and historical characteristics of a particular place or area. The landscape character is influenced by human activity. The state, experts, legal and natural persons participate in the creation of the character.

According to Löw and Míchal, it is important to remember that the landscape is the environment in which one lives and one is the one who has been in control of the landscape for a long time. The image and quality of the landscape is therefore a direct reflection of the quality of human society (LÖW, 2003).

**Methods.** In the research process general methods of scientific knowledge were used namely empirical research methods (observation comparison measurement experiment) and theoretical research methods (abstraction analysis and synthesis idealization induction and deduction mental modeling ascent from abstract to concrete).

The empirical level of knowledge includes: observation of phenomena the accumulation and selection of facts and the establishment of relationships between them.

The theoretical level was associated with the predominance of mental activity with the comprehension of empirical materials its processing. At the theoretical level we have revealed the internal structure and regularity of the development of the territorial system and phenomena their interaction and conditionality.

**Results.** The landscape character is determined by the following indicators:

- defining the main characteristics of the territory
- differentiation of the territory into characteristic territorial units
- creating an inventory of essential landscape features: landscape components and features;
- determining the importance and negative or positive expression of each characteristic;
- evaluation of spatial conditions of landscape characterization characteristics;

- design of landscape protection (Bukáček 1999).

Landscape is the most effective tool for landscape protection and restoration in the landscape planning system (Váchal 2011).

Man has transformed the natural landscape into a cultural landscape with different ecosystems that affect man to varying degrees. There is an imbalance in nature and its correction is very demanding.

Negative impact of agricultural activity with incorrect sowing excessive chemicalization land consolidation by plowing of boundaries drawers etc. brings with it a loss of stabilizing landscape features and landscape drainage that reduced the amount and quality of animal facilities disrupted runoff conditions in the landscape polluted water and degraded land. The growth of industrial production is causing global warming depletion and depletion of the ozone layer acid rain water and soil contamination caused inter alia by the huge increase in waste and hazardous substances contained therein. The negative impact of urbanization brings changes due to the increasing demands on the infrastructure production spatial settlement like.

In terms of human activity impact on the aquatic environment and in relation to the level of responses of biotic systems Helešic Adámek and Rulík identified these basic activities of human society with an impact on the aquatic environment and their impacts which are listed in table.

Landscape measures landscape features. Landscaping measures are a never-ending process. The aim in the landscape is to break up large soil formations which are undesirable into smaller mosaic formations. The landscape elements are natural or man-made as bio-belts planting solitaires grassy herbaceous plants afforestation of agricultural land water bodies - pools pools shrubs alley boundaries etc.

Some activities of human society and their impact on water recipients

Climate change	Rise of UV radiation
Human population growth	Emissions from transport
Urban sprawl and waste	Acid rain
Water consumption in agglomerations	Use of biocides
Chlorination of water	Liquid waste production
Water tanks and power plants	Drying of recipients
Minimum flow rates	Milling of acidic rocks
Introduction of new species	Export of water between river basins
High flow - flooding	Floating wood
Motor shipping	Recreational fishing
Water sports	Commercial fishing
Source: (Adamek 2014).	

These landscape elements are an integral part of the landscape divide it and form its character. Man-made landscape features require landscaping change of management and subsequent care usually repeatedly to ensure their permanent existence. The landscape features then provide a number of *erosion control* functions to protect soil from erosion by humiliating soil erosion agents *increasing water retention* in the landscape through measures such as dry polders throughputs *maintaining or enhancing ecological stability* by maintaining or enhancing biodiversity; *flood control*; *landscaping* (landscape design and landscape protection); *nature protection* - protected landscapes national parks important landscape features (Ministry).

On Nature and Landscape Protection describes the Protected Landscape Area (PLA) as a vast area with harmonious landscape characteristically developed relief significant share of natural ecosystems of forest and permanent grasslands with abundant representation of tree species eventually with preserved monuments of historical settlement. The aim in these areas is to improve the natural state preserve and create the best ecological functions and the economic exploitation of these areas which is carried out according to the graded protection zones which are four I - IV with zone I representing the highest degree of protection. Recreational use is only permitted provided that the natural value of these areas is not impaired (Ministry 2017).



The protected landscape area its tasks and specific protective conditions are declared by the Government of the Republic by decree. The proclamation of the Protected Landscape Area means observing many conditions. The most important of these are the ban on the disposal of waste outside sites designated with the consent of the nature conservation authority throughout the PLA permit or carry out deliberate distribution of geographically non-native plant and animal species build new highways settlements and canals. In the area of zone I of the Protected Landscape Area it is also forbidden to fertilize land use slurry of silage juice and other liquid waste. On the territory of I. and II. The second zone of the PLA is also forbidden to manage land outside the built-up areas of the municipality with such tools and actions leading to a substantial change in biodiversity structure and function of ecosystems or which may irreversibly damage the soil surface. Furthermore the use of biocides change of water regime etc. (Ministry 2017) are forbidden.

The Law on Nature and Landscape Protection defines National Nature Reserve (NNR) as the minority areas of exceptional natural value for natural relief with a typical geological structure is linked ecosystems important and unique in a national or international scale. A nature reserve (PR) is similar in definition to the NRP but only with a significance not exceeding a regional scale (Czech Republic 1992).

Targeted landscape management affects ecosystems. Effective landscape management implies knowledge of the region good management expertise interconnection and close cooperation of all areas and authorities concerned control and transfer of information as well as considerable financial resources.

According to Maršálek it is necessary to understand the actual reservoir and the basin above the reservoir as one planning unit because the modern project of reservoir renewal must never neglect the processes in the basin above the reservoir. It is necessary to see the reservoir and the river basin above it in all hydrological hydro chemical and hydrobiological contexts for a sustainable ecological condition of reservoirs and river basins. Modern tank renewal projects are being carried out with the aim of establishing processes and measures aimed at restoring the ecosystem to the desired state and rebalancing the aquatic ecosystem thus initiating unified and sustainable management of the reservoirs and their catchment areas. From the point of view of processes it is necessary that the balance of both processes (eg oxygen regime) and structure (eg limitation of the predominance of a certain group - macrophyte growth rapid growth of cyanobacteria etc.). The fulfillment of the stated objective of implementation of such projects for the renewal of reservoirs is conditioned by the available data which will allow an insight into the functioning of the entire reservoir system and the river basin above it. Experience shows that the source of failure or failure to achieve the expected result is often the poor quality limnological data on which the project was based. It is crucial that the system of implemented measures is based on real factors that determine water quality not only data from the growing season. Specific processes and measures can be prepared on the basis of high-quality input data (eg in case of projects limiting the development of cyanobacteria then scenarios of movement and fate of nutrients in a specific river basin and a specific reservoir). Projects of restoration of ecosystem watercourses are implemented with a number of different objectives (restoration of biodiversity reduction of nutrient input from catchment areas reduction of cyanobacteria development etc.) (Adámek 2014).

Other experts also agree with this view. Syrovatka says that the management of water reservoirs must also take into account the management of the entire catchment area (Syrovatka). According to Duras an important and essential part of the management of water reservoirs is the integrated reservoir management or basin reservoir with the collection of sufficient information and evidence to evaluate and the choice of the next optimal procedure. It is necessary to take a few steps as expand and improve monitoring of water reservoirs and their watersheds so that the data allow insight into the functioning of the whole system dramatically increase the level of assessment of water quality in reservoirs inclusion of mass balances in assessing the basin reservoirs to pursue the course pohuby nutrient eventually erosion of the material to be able to build different models of the effects of the measures proposed in favor of water quality identify opportunities for good ecological potential of reservoirs by supporting the development of stable Littoral with aquatic plants develop flood control in watersheds with the intention to meet the objectives of the areas basin. All of the above results are reflected in river basin district plans (Duras 2006).

According to Maršálek effective reduction of nutrient water pollution in the monitored basin means to carry out exploration of resources mainly phosphorus suspended solids suspended solids sediments and other organic substances both in standard conditions and in extreme dry or torrential flows. rain or long-

term rainfall. The survey will show where and under what circumstances the prevailing source of phosphorus is farming in the landscape (area sources) where and under what conditions they are the main source (point sources - municipalities and municipal waste water) further determine the importance of recreation fishing etc. on the basis of the assessment the majority of percentages of pollution sources are determined which are the basis for the selection of priorities in the reduction of phosphorus concentrations in river basins and reservoirs (Adámek 2014).

According to Maršálek municipal and industrial waters and run-offs intensive agricultural production and aquaculture are the main sources of nutrients in surface waters in the Czech Republic. Improving the quality of water in a reservoir with sustainability presupposes solving the problem of transporting nutrients to river basins. The recovery plan is the determination of the number of point nutrient sources under which concentrated wastewater discharges from settlements industrial plants etc. and diffuse nutrient sources such as landfills agricultural areas etc. and the detection of nutrient water retention of water bodies can be imagined. Legislation to reduce phosphate detergents and intensify nitrogen and phosphorus removal in wastewater treatment plants is also an important area for reducing nutrient input from point sources. The building of artificial wetlands can also have a significant function to capture nutrients. Natural elements such as arable land grazing wetlands vegetation buffer strips surfaces allowing the infiltration of low-polluted water into the soil instead of its drainage into sewers and watercourses are used for the remediation of diffuse pollution. Dozens of measures to reduce water and nutrient runoff from the landscape and the principles of good economic practice are the basis for changes in management. The basic motto is: if we retain water in the landscape we will also retain nutrients in the landscape which in turn do not increase tank trophies and thus prevent eutrophication processes (Adámek 2014).

According to Maršálek water ecosystems are an open system in terms of energy and matter. The size of the reservoir and the basin affects the number of stocks and the community system. Tanks are part of a river basin each river basin and tank being an original unit with interconnected subsystems. The recovery technique must not be solved locally or once. Measures aimed at improving a single parameter without linking to ecosystem contexts may exacerbate other indicators that may undermine the equilibrium of the aquatic ecosystem. One of the fundamental theories of phytoplankton ecology is Reynolds' theory which speaks of naturally assembling or collecting phytoplankton under specific conditions that is under certain hydrochemical hydrological and hydrobiological conditions. The species composition of phytoplankton has its laws from which we understand that only nutrients are not the only condition for mass development of cyanobacteria. A number of existing techniques for limiting cyanobacterial development must be applied based on knowledge of the limnological and ecotoxicological context but also the socio-economic context land use in the basin above the reservoir long-term activities to reduce land transport sedimentation rate etc. where the trophic burden on river basins and reservoirs will be programmatically reduced where the amount of infectious inoculum of the predominant species of water blooms will decrease and where factors contributing to the enormous growth of cyanobacteria will be monitored for a long time. Removing only one factor will not limit the enormous proliferation of cyanobacteria (Adámek 2014).

According to Marshal the production of water flower is influenced by a number of indicators such as phosphorus temperature temperature stratification solar radiation CO<sub>2</sub> pH and nitrogen. Knowledge of these factors is followed by methods of limiting the expansion of water flowers. The basic measures include control and reduction of the input of nutrients into the reservoir especially phosphorus and control of the source areas both internal (release from sediments) and external (source in the basin above the reservoir). It is clear from practice from abroad that the cheapest and most effective method is the long-term and systematic reduction and prevention of feeding nutrients into the tank. Such a measure could be the use of phosphate-free detergents (Adámek 2014).

Current problems of water reservoir management. Nowadays many reservoirs face considerable problems such as water quality and quantity eutrophication or erosion. As mentioned in the introduction the Plumlov Reservoir where adjacent gardens began to slide down due to erosion has a big problem today (Havlík 2013). Eutrophication plagues eg. Water reservoir Švihov River Želivka. The Great Depression took place in 2015 at the Orlik Dam where the drought level decreased to a critical minimum (Novotná 2015). This tremendous problem does not only concern the dams but also the rivers themselves.

Man has influenced the landscape and thus the runoff conditions from past times as a result of deforestation grazing of grass ecosystems cultivated arable land artificial canals water drainage from rivers to artificial irrigation to drive mills.

According to Syrovátka significant drainage of spring areas and springs of individual streams where the stream has been handicapped from the outset due to lack of water brings with it the problem with the quantity of water in the catchments (Syrovátka).

The individual components of the outflow are influenced by the volume of water flowing from the catchment depending on the influence of atmospheric precipitation and other climatic factors and their intensity - solar radiation air temperature and humidity evaporation. However the influencing factors influence soil geological conditions vegetation cover land treatment on large acreages in agriculture and forestry. Geological bedrock and its permeability affect runoff during rainless periods. The density of the watercourses the geometric features of the river basin (shape length of the valley) and the catchment conditions determine the rate of runoff and its accumulation in a particular flow profile. Soil conditions in relation to the infiltration are influenced by soil properties (soil type mother rocks geological bedrock) soil structure status its penetration asphyxiation (Cerhánová).

In the past ameliorations were carried out where they were drained mainly in spring areas ie in higher altitudes where the springs are mostly found but also in places where there was a larger amount of standing water as in floodplains etc. (Šír 2006). Experience has shown that these inappropriate amelioration interventions have a negative impact in terms of water scarcity.

There is a paradox where water is scarce but at the same time the spring areas are drained. This is a major problem that is compounded in cases of erosion threat (Syrovatka).

The revitalization of watercourses introduces and implements processes aimed at restoring the original natural functions of aquatic ecosystems. The conditions for improving the water regime in the landscape are realized through the system of ecological stability of the landscape land consolidation water management functions of the forest motivation of landowners and forests and legislative pressure. Revitalization is carried out by watercourse administrators; this obligation is legal. Revitalization must be meaningful and planned aiming at restoring the natural character and natural functions of watercourses and floodplains (Just 2005).

According to Helešice the objective in terms of water is to maintain and improve the retention capacity of the landscape. The intention of the river system revitalization program is to modify or eliminate amelioration interventions to remove artificial drainage of pipes channels etc. to adapt them to the form of ecosystems close to nature. Watercourses not only drain water but also have an additional function as a natural migration pathway for organisms; furthermore it is desirable that they have a natural self-cleaning ability which requires increasing water oxygenation restoring introducing and maintaining shore consolidation through vegetation. Impaired aquatic ecosystems can be influenced by appropriate adjustment of the flow ratio by adjusting the longitudinal and transverse profile of the stream (including bottom and shore bases) removing sources of pollution and eutrophication of streams. Adjustments must be assessed comprehensively (Adámek 2014).

Helešic notes that according to Government Resolution No. 373/92 a program for revitalization of river systems was established with the following content:

- Support of landscape retention capacity - slowing down of surface and subsurface water runoff from the landscape by retaining water in water reservoirs and wetlands and increasing soil coverage
- Remediation of improperly performed amelioration interventions - in the framework of revitalization programs previously unsuitably dried wetlands or deforested steep slopes should be adapted again to the form of naturally close systems
- Restoration of natural function of watercourses - to restore their function as natural migration routes of organisms in watercourses restoration of bank vegetation as a reinforcing link removal of unsuitable modifications of rivers and small streams in the form of pipes concrete troughs etc. (Adámek 2014).

Helešic notes that from a professional point of view it is possible to correct altered flow conditions adjust the transverse and longitudinal profile of the flow and at the same time modify the substrates of the bottom and banks remove sources of pollution and eutrophication of the flow (Adámek 2014).

Soil is a dynamic natural formation formed of mineral and organic material and living organisms in which plants grow. Soil originates and develops with the participation of organisms and biological processes for a very long time by weathering rocks and minerals by physical and chemical processes (Šimek 2003).

Erosion is one of the most important factors influencing the landscape leading to its change. It is a process of soil erosion especially in our climatic conditions mainly by water and wind in the world for example by the activities of glaciers. Exposure to soil erosion is due to the intensive use of land for agriculture the preference for growing certain crops and large-scale deforestation which has gradually eroded the natural soil cover. Erosion has developed through the destructive effect of water and wind on the soil surface.

Soil erosion is a process of separating transporting and storing material by erosive mostly abiotic agents. Erosion is like a long-term agent that models the planet's surface in all geological times (Kvítek 2006). Soil erosion is one of the greatest environmental and economic problems.

Soil erosion has the following negative impacts (Medunová 2013):

- causes the depletion of agricultural land by the most fertile part - topsoil
- deteriorates the physico-chemical properties of the soil
- reduces the thickness of the soil profile
- reduces nutrient and humus content
- harms crops and cultures
- Increases graveliness
- makes it difficult to move machinery on land
- causes loss of seeds and seedlings fertilizers and plant protection products

The process of soil erosion is a natural process it cannot be completely stopped. In a non-standard condition however accelerated erosion occurs which disrupts the soil surface to such an extent that the soil particles cannot be replaced by the soil-forming process. Accelerated erosion is influenced by human activity and farming.

Water erosion is a complex process that causes the erosion of the soil surface (top soil the most fertile soil - topsoil) the transfer and storage of loose soil particles under the influence of water during heavy rainfall or rapid snow melting the top layer of soil. Water erosion worsens the physicochemical properties of soils reduces soil profile thickness increases gravel reduces nutrient and humus content reduces soil permeability damages crops makes machinery more difficult on land and causes loss of seeds seedlings fertilizers and plant protection products and therefore it also reduces hectare yields (Novotný).

The causes of water erosion are specific in the Czech Republic. Due to the intensification of agriculture huge soil blocks were created in the past hydrographic and landscape elements were disturbed (plowing of boundaries grassy valleys dirt roads liquidation of scattered greenery etc.). At the same time however as a result of the discontinuation of agricultural land trading in the 1960s land ownership per person was the least. A large number of agricultural holdings managed on leased land which reduces the interest in investing in soil conservation measures. In the past watercourses troughs weirs weirs and irrigation canals were modified. The streams were straightened deepened and fortified which shortened the streams by almost a third of their length. This caused an acceleration of the outflow of water from the landscape and consequently a decrease in groundwater reserves and degradation of floodplains. Stream straightening causes undue stability of the bed and riverbanks which led to the need to strengthen them. Strengthening brings with it the removal of vegetation on the shore and smaller water bodies around the streams. Industrialization and development of settlements brought with it the use of energy and transport flows (Novotný).

The impact of erosion is the fouling and pollution of watercourses and reservoirs causing excessive intake of nutrients from fertilizers and other chemicals into the aquatic environment where they often cause an increase in algae production (eutrophication) the formation of a water bloom and the multiplication of one or other animals. This situation can also significantly complicate the process of treatment of surface water to drinking water there are higher costs of water treatment and sediment extraction (Novotný).

Reducing erosion will increase the protection of water resources and help maintain or improve the favorable structure and composition of agricultural soils. If the agricultural landscape fails to hold water then the risk of drought and floods increases.

The main consequences of water erosion are:

- a threat to the sustainability of soil fertility;

- influencing the quantitative parameters of water sources (watercourse channel capacity and available reservoir volume);
- influencing the qualitative characteristics of water resources;
- endangerment of urban areas of municipalities roads and other infrastructure in the landscape by surface runoff and water erosion processes (Novotný).

Water erosion is influenced by the slope of the land in relation to its length along the slope vegetation on it soil properties and its disposition to erosion established erosion control measures frequency of occurrence of torrential rainfall after a drought lack of organic matter in the soil. From the point of view of soil protection the positive influence of organic matter on the stability of the soil structure is important because by means of organic substances the individual soil particles are cemented into clusters which create pores between them. Soil porosity affects the infiltration of water into the soil reduces surface runoff and better resists the load when traveling through heavy mechanization on land. If organic matter is not delivered to the soil in the long term its properties deteriorate. Restoring soil quality in terms of sufficient organic matter content is much more demanding in terms of time organization and economy than early prevention of the reduction of organic matter in the soil (Novotný).

Wind erosion is influenced by meteorological and soil conditions (grain size structure) soil moisture soil surface roughness vegetation cover of soil method and period of cultivation of soil and length of land; wind speed and direction duration and frequency; amount and form of atmospheric precipitation and evaporation; soil cover and condition of the soil and weather during the implementation of agrotechnical operations. Wind erosion causes soil disruption due to wind causing soil particle movement sometimes over long distances (Novotný). Plowing erosion is the process of causing soil to move in the direction of a slope. Plowing erosion with its average annual values approaches water erosion. Snow erosion can cause in particular sliding of soil layers when the upper waterlogged soils pass through the lower layer which is still frozen during slow melting. During the erosion of the harvest the soil is lost from the land together with the harvested crop. Then the extent of soil loss is influenced by the method of harvesting soil moisture and its properties (CENIA).

The measures aim to mitigate the negative impact of erosion. The application of anti-erosion measures consists of protecting the soil from the effects of falling drops of erosion-hazardous rain promoting water infiltration into the soil reducing water transport energy and concentrated surface runoff slowing down catching and safely draining surface runoff. The concentrated surface drain is safely drained to the watercourse or to a place where it does not cause damage and catches the washed soil.

Erosion control measures are divided into:

- organizational;
- agrotechnical;
- technical.

Measures that are financially and easier to implement are measures of an organizational and agrotechnical nature and measures of a technical nature are more expensive.

Organizational measures deal with the optimum shape and size of the land land block or its part the appropriate location of the crops including the protective grassing and the belt cultivation of crops. The principle is to locate the land block or soil part with the long side in the contour line which encourages cultivation along the contour line the appropriate size and shape of the land and the delimitation of parcels suitable for changing land types (Váchal 2011). In reality this type of measure is most often introduced in connection with the implementation of complex land consolidation.

Agrotechnical measures concern soil-protective cultivation. *Includes contour sowing / planting protective tillage (stubble mulch / shallow sowing / planting protective crop sowing sowing with under-crop drowning punching; hoeing chiseling undermining; sowing maize in a narrow row; belt tillage* (Novotny). Other measures include protecting grassing protective afforestation (optimally mixed forest). crop insufficiently protecting soil from erosion only to land flat or slightly sloped with a permeable structure belt rotation plowing along contour lines and the like. (Vachal 2011).

In case of necessity to build technical measures field roads with erosion control function ditches hatchways protective dikes and reservoirs terrain settlements grassy valleys with stabilized path of concentrated runoff terraces erosion limits redevelopment of erosion potholes and gorges (Novotný).

Implementation of technical measures comes after the introduction of organizational and agrotechnical measures as a complement. The main purpose of technical anti-erosion measures is to interrupt the length of the land along the slope and drain the surface runoff (ditches catching washed soil and surface runoff delaying it and safe harmless drainage (dams sedimentation retention and dry tanks) (field settlements terraces historical limits). Technical measures are investment measures subject to the Building Act (Novotný).

On the ground *heavily threatened by erosion* they are not suitable for growing crops erosion dangerous as corn potatoes beets pea beans soya sunflower and sorghum; Other cereal crops and oilseed rape should be planted using soil protection technologies or in the case of other cereals the condition of soil protection technologies need not be complied with only if they are cultivated with clovers or leguminous mixtures. On *slightly erosion-endangered soils* erosion-hazardous crops such as maize potatoes beets broad beans soybeans sunflowers and sorghum should only be set up using soil protection technologies (Novotný).

Specific soil-protection technologies on moderately erosion-threatened areas for planting broad-crop crops include break-straps infiltration belts headland sowing sowing / planting de-stoning sugar beet bedding growing of leguminous mixtures. General or specific soil-protection technologies when establishing stands of erosion-hazardous crops on a slightly erosion-threatened area need not be complied with provided that they are cultivated with a crop of non-erosion-sensitive crops sown at the latest together with the main crop (Novotný).

The issue of anti-erosion measures is dealt with in part by the standards of Good Agricultural and Environmental Condition of Soils (DZES or G AEC). Good agricultural and environmental condition (GAEC) standards are standards that ensure farming in accordance with environmental protection.

In particular the conditions of the DZES 5 standard stipulate in the framework of soil erosion protection the methods of growing selected main crops on strongly and slightly erosion-threatened areas registered in the public land register LPIS (Land Parcel Identification System).

For the new period of the Common Agricultural Policy 2015-2020 the basic direction of the standards of good agricultural and environmental condition of the soil is adjusted in accordance with Annex II of Regulation (EU) No 1306/2013 of the European Parliament and of the Council About protects land deal with three of them namely standard GAEC 4 (minimum soil cover) GAEC 5 (minimum land management in relation to specific local conditions to limit erosion) and GAEC 6 (preservation of soil organic matter levels appropriate procedures also burning of stubble on arable land).

The above standards include conditions that promote soil erosion protection through the introduction of soil protection measures to reduce soil shear slow down surface runoff increase water retention in the landscape and maintain or improve soil quality by incorporating fertilizers (Ministry).

The issue of combating water erosion is partly addressed by GAEC 1 a measure for the protection of sloping soils above 7 ° and GAEC 2 which discusses the principles of growing certain crops on heavily and moderately erosion-threatened soils. The measures under GAEC 1 and 2 therefore concern the plots which meet the specified criterion (GAEC 1) or are marked as severely or slightly vulnerable to erosion (GAEC 2).

Set criteria however solve the soil erosion control poorly and because they are set up slightly compared to the total area of farmland at risk. In addition GAEC standards are an economic tool to support the agricultural sector and do not replace the obligation for agricultural entrepreneurs to manage so as not to erode soil. Moreover they concern only those farmers who draw subsidies (Ministry).

Thus we carried out an ecological and economic analysis of the adaptive-landscape system which consists of natural natural and historical characteristics. The main characteristics of the territory landscape elements are disclosed; The expression of a negative or positive expression of each characteristic; The assessment of the spatial conditions of the landscape is given.

**Discussion.** The authors of the study suggest a new systematic approach to the object. The basis for supporting the functions that define the so-called containment-evaporation unit (RETU; see Eliash et al. 1999 and 2000). A new systems approach means understanding that the individual elements are RETUs. The goal is to restore water resources and restore water resources through transplantation of greenery which in turn stabilizes components in the water regime and prioritizes water recovery thermal conditions in the landscape (Syróvátka 2004).

The authors also point out the absurdity of the current way of defense against the ecological instability of the landscape which consists in the construction of new dams and other regulations of watercourses. The authors prove the ineffectiveness of this approach in comparison with the area-wide restoration of the retention-evapotranspiration function of the landscape also in connection with the assertion from the classical work of Kutilek (1978): when comparing the volume of water reserves in agricultural and forest land and the total volume of all water reservoirs that soil is a huge reservoir that should be given appropriate attention. Unfortunately the illogicality in this respect has not yet been understood by many experts. In an analysis of the impacts of climate warming a team of experts (Hladný et al 1995) came to an analogous conclusion: *“Soil is one of the fundamental input transformers of water resources both quantitatively and qualitatively. It is therefore important to manage water in the soil space and to use its retention capacity which requires in particular the following measures: reduction of surface runoff reduction of disproportionately large drainage by systematic drainage application of anti-erosion measures”* (Syrovátka 2004).

Within the project “Selected socio-scientific aspects of environmental management” the research team created the basis for the coordination of research activities in selected areas of the environment with a focus on the legal social psychological economic ethical and ecological fields. This created the conditions for an interdisciplinary approach to identifying and analyzing relationships that exist in a particular environment and affect quality of life. From a managerial point of view this conception is essential for problem-solving and decision-making both in the area of public administration and in the business environment and it is also a precondition for developing the company's knowledge (Hejda 2004).

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#### ТҰРАҚТЫ ДАМУ ШАРТТАРЫ БОЙЫНША АДАПТЕРЛІК ЖЕРЛЕРДІК ЖҮЙЕЛЕРДІҢ ЭКОЛОГИЯЛЫҚ-ЭКОНОМИКАЛЫҚ ТАЛДАУ

**Аннотация.** Мақалада белгілі бір аумақтың табиғи мәдени және тарихи ерекшеліктерінен тұратын бейімдеу-ландшафт жүйесі қарастырылады. Мақалада аумақтың негізгі сипаттамасы ландшафт элементтері; әрбір сипаттаманың маңыздылығы мен теріс немесе оң көрінісі анықталады; ландшафттың кеңістіктік жағдайына баға берілген. Бұл көрсеткіштер аумақтың экологиялық-экономикалық талдауының негізін құрады. Ландшафтқа жаңа жүйелік көзқарас көктемгі аудандарды жандандыру шаралары және эрозияға қарсы шаралар: ұйымдастырушылық ауылшаруашылық техникалық шаралар ұсынылады.

Жаңа жүйелік тәсіл жасыл желектерді отырғызу арқылы су ресурстарын қалпына келтіруге бағытталған бұл өз кезегінде су режиміндегі құрамдас бөліктерді тұрақтандырады және суды қалпына келтіруге басымдық береді сонымен қатар жаңа дамбалар мен басқа да құрылыстардан тұратын ландшафттың экологиялық тұрақсыздығынан қорғаудың қолданыстағы әдісінің қисындылығын көрсетеді. су ағындарының ережелері. Авторлар ландшафттың ұстап қалу-буландыру трансплантациялау функциясын кең көлемде қалпына келтірумен салыстырғанда бұл тәсілдің тиімсіздігін дәлелдейді: ауылшаруашылық және орман алқаптарындағы су қорының көлемін және барлық су қоймаларының жалпы көлемін салыстырған кезде топырақ - бұл үлкен резервуар оған тиісті назар аудару керек. Топырақ - сандық және сапалық жағынан су ресурстарын негізгі түрлендіргіштердің бірі. Сондықтан топырақ кеңістігіндегі суды басқару және оны сақтау қабілетін пайдалану өте маңызды ол келесі шараларды қажет етеді: жер үсті ағындарын азайту жүйелі дренаж арқылы пропорционалды емес үлкен дренажды азайту және эрозияны бақылау шараларын қолдану.

Зерттеу процесінде жұмыс тобы құқықтық әлеуметтік психологиялық экономикалық этикалық және экологиялық салаларға баса назар аудара отырып қоршаған ортаның нақты салаларында зерттеулерді үйлестіруге негіз жасады. Бұл белгілі бір ортада өмір сүретін және өмір сүру сапасына әсер ететін қатынастарды анықтауға және талдауға пәнаралық көзқарас үшін жағдай туғызды. Басқарушылық тұрғыдан алғанда бұл тұжырым мемлекеттік басқару саласында да бизнес ортада да мәселелерді шешу және шешім

кабылдау үшін маңызды сонымен қатар зерттеу саласындағы білімді дамытудың міндетті шарты болып табылады.

**Түйін сөздер:** ландшафт ландшафт ерекшеліктері адаптивті-ландшафт жүйесі аумақтарға экологиялық-экономикалық талдау жүйелік тәсіл.

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### **ЭКОЛОГО-ЭКОНОМИЧЕСКИЙ АНАЛИЗ АДАПТИВНО-ЛАНДШАФТНЫХ СИСТЕМ В УСЛОВИЯ УСТОЙЧИВОГО РАЗВИТИЯ**

**Аннотация.** В статье рассматривается адаптивно-ландшафтная система которая состоит из природных культурных и исторических характеристик конкретной местности. Раскрыты основные характеристики территории элементы ландшафта; определена важность и негативное или позитивное выражение каждой характеристики; дана оценка пространственных условий ландшафта. Данные показатели легли в основу эколого-экономического анализ территории. Предложен новый системный подход к ландшафту мероприятия по оживлению весенних площадей и меры по борьбе с эрозией: организационные агротехнические технические.

Новый системный подход направлен на восстановление водных ресурсов путем пересадки зелени, что в свою очередь стабилизирует компоненты в водном режиме и отдает приоритет восстановлению воды а также указывают на абсурдность существующего способа защиты от экологической нестабильности ландшафта которая заключается в строительстве новых плотин и других нормативных положений водотоков. Авторы доказывают неэффективность этого подхода по сравнению с масштабным восстановлением удерживающей-эвапотранспирационной функции ландшафта: при сравнении объема запасов воды в сельскохозяйственные и лесные угодья и общий объем всех водохранилищ что почва является огромным водохранилищем, которому следует уделить соответствующее внимание. Почва является одним из основных входных преобразователей водных ресурсов как в количественном так и в качественном отношении. Поэтому важно управлять водой в почвенном пространстве и использовать ее удерживающую способность что требует в частности следующих мер: уменьшение поверхностного стока уменьшение непропорционально большого дренажа путем систематического дренажа применение мер против эрозии.

В процессе исследования рабочая группа создала основу для координации исследовательской деятельности в отдельных областях окружающей среды с акцентом на правовой социальной психологической экономической этической и экологической областях. Это создало условия для междисциплинарного подхода к выявлению и анализу отношений, которые существуют в конкретной среде и влияют на качество жизни. С управленческой точки зрения эта концепция важна для решения проблем и принятия решений как в области государственного управления так и в бизнес-среде а также является предварительным условием для развития знаний в области исследования.

**Ключевые слова:** ландшафт особенность ландшафта адаптивно-ландшафтная система эколого-экономический анализ территорий системный подход.

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## **WAYS TO IMPROVE THE ENTERPRISE'S CAPITAL ACCOUNT**

**Abstract.** Equity capital of any business entity is one of the types of economic capital category. It is essential for the proper functioning of the institution due to changes in the sources of formation and environment. Capital contributed by the founders at the opening of the company, is considered to be the initial funds used to organize the initial activity of the enterprise, or additional funds in a period of growth and expansion. In addition, equity capital protects institutions from financial instability and excessive risks, protects them from bankruptcy, covers losses of current expenses, increases customer confidence, and meets the needs of the clientele in commercial and consumer goods.

To ensure the life of the enterprise in modern conditions, management personnel must, first of all, clearly assess the financial condition of their enterprise and potential competitors. Financial position is the most important characteristic of an enterprise's economic activity. It assesses the competitiveness, potential of business cooperation, and the extent to which the economic interests of the company and its partners in financial and industrial relations are secured. However, the ability to determine the real financial situation is not sufficient for the successful operation of the enterprise and the achievement of its goals.

The company organizes accounting depending on its actual state, volume and type of activity: independently determines the forms of organization of accounting work; forms accounting policies; determines the scope of financial and industrial accounting; develops the procedure for monitoring economic operations, as well as makes other necessary decisions for the organization of accounting. In addition, you can see that the company has recently been developing dynamically and is a profitable enterprise. Other important indicators show high performance and development directions. In General, this company is one of the most promising and large taxpayers. Therefore, the analysis of the main indicators that characterize the effectiveness of the enterprise in the conditions of market relations is carried out. The ability to calculate them correctly, identify the impact of various causes on changes in their level, analysis allows you to more widely disclose reserves for improving production efficiency, develop proposals to eliminate the identified shortcomings, improve the financial situation and develop.

It is necessary to take into account the achievements of the development of economic activities of the organization. The process of formation of the volume and structure of the capital of the organization should be organized not only at the beginning of its economic activity, but also in order to continue and increase future activities. And its achievements are determined by the capital structure and business plan.

**Key words:** capital, equity, debt capital, financial condition, income, expenses, loss, product, production, material, analysis.

All the information necessary for the management of the enterprise is prepared by accountants, and the associated professional activity is called "accounting". This includes work related to the preparation of reports, analysis of the financial condition of the entity, planning work, control over the activities of the entity.

Finances are certain monetary resources of an enterprise. It is aimed at ensuring the development of the enterprise and the continuous production process. The financial position of an enterprise is an economic category that characterizes the financial position of a market entity and its ability to finance its activities as of a given date. In the process of procurement, production, sales and financial activities there is a continuous process of variable capital, the structure of instruments and sources of their formation, the need for financial resources and, consequently, the financial condition of the enterprise changes [1].

The main activity of the enterprise is sales. The financial statements of STK LLP include: balance sheet; income statement; cash flow statement; capital flow accounting; explanation sheet. Financial

statements allow you to determine the total value of assets of the enterprise, the value of dispersed assets, the value of working capital, working capital, the amount of own funds of the enterprise, borrowed funds.

Through financial statements you can find out the condition of the enterprise, the composition and structure of its activities, profitability, financial stability, level of liquidity. The establishment of market relations has led to significant changes in the methods of analyzing the performance of business entities. This is especially true of the analysis of the financial condition of the enterprise, during which the analysis identifies reserves for its improvement. The analysis of the balance sheet begins with the identification of changes in its total, individual items for the reporting period. The information in the balance sheet allows you to assess the composition and structure of the assets of the enterprise, the state of own and debt sources, the efficiency of use of resources, as well as the solvency of the enterprise for the reporting period. Thus, the company uses different resources in its activities. This can result in profit or loss. Therefore, when giving an economic description of the enterprise, it is impossible not to focus on its assets and sources of their formation. The funds of the enterprise may be used in its internal circulation or outside it [2].

The main source of funding is equity. It includes authorized capital, additional capital, reserve capital, retained earnings. However, given the limited amount of equity, the next source of funding is borrowed capital. Capital and liabilities are the main elements of financial statements that are the sources of an entity's assets. The company must know exactly what resources it carries out its activities and in what areas of activity it invests its capital [3].

Providing business with the necessary financial resources is a key part of any organization. Capital is the sum of all the assets owned by an organization. The equity of the organization is used to form the share of assets. The organization is guided by it in concluding certain contracts, in other words, it is a section of the balance sheet that establishes the balance of the founders (participants) to the legal entity created by them.

The information needed to determine the value of equity fully describes and discloses the components of the property of the organization - that is, the business activity on which it is based. The main form of financial statements, which discloses the composition of the organization's equity, is the balance sheet of the enterprise. Capital is the sum of all assets owned by an organization. Capital is used to create a share of assets.

Any business must be successful and bring income to its owners. When expanding or increasing production capacity, management may decide to use additional borrowed capital. Financial stability of the enterprise is an indicator that characterizes the independence of the company from external resources. It is used in the analysis of the adequacy of business self-financing, which shows how effectively it can be implemented without resorting to external funds. It is important to know the share of equity in the balance sheet currency. This is because this indicator is interpreted differently in different literatures. For example, the ratio of ownership, the ratio of independence or autonomy, but their meaning is the same: on the basis of this indicator is characterized by the independence of the enterprise from external sources of debt [4-5].

Its growth from year to year reflects the growth of financial independence of the enterprise, and the reduction of the risk of financial difficulties in the coming periods. Western economists believe that this figure should be kept as high as possible. He concludes that if the company has a large amount of own debt, it is possible to ensure the continuity of its work. The independence ratio is an indicator that characterizes the independence of the enterprise from external debt sources, which has a normal value in the enterprise. The coefficient of dependence shows an optimal value in its inverse.

Debt to equity ratio is an indicator of how much tenge is invested in 1 tenge of equity invested in the assets of the enterprise. In the reporting year, this indicator did not exceed the threshold value. Maneuverability ratio describes the level of maneuverability of working capital of working capital, reflecting the ratio of working capital to the amount of capital.

The return on investment characterizes the share of long-term liabilities with capital in the balance sheet currency. This company has a positive value in this indicator. The investment ratio reflects the share of equity invested in the use of fixed assets. In the reporting year, it shows that fixed assets cost 1.16 tenge per 1 tenge.

The ratio of long-term liabilities reflects the number of long-term liabilities involved in the assets of the enterprise, along with equity. In the reporting year, this figure increased according to the company.

This indicates that the company can incur long-term liabilities. The financing ratio reflects the ratio of capital to capital raised, which part of the assets is due to capital, and part to capital. In the reporting year, this indicator has a normal value. The mobility ratio of the enterprise's assets reflects the share of short-term assets in the balance sheet currency of the enterprise. The indicator given in the reporting year has a positive value. Overall calculated indicators indicate financial stability [6-7].

The part of the participants that is not invested in the authorized capital should be recognized as a receivable. On debit 1280 "Other receivables", on credit 5110. The participant must pay the receivables within the period accepted by the general meeting of participants. However, according to the law, this period should not exceed one year. The participant is obliged to compensate the company for the failure to make a contribution in a timely manner. If the debtor participant does not contribute within the prescribed period, the enterprise must invest in the authorized capital at the expense of net assets, or reduce the amount of authorized capital in the uninvested part. In this case, the debit account 5030 "Deposits and shares", the credit account 5110 "Unpaid capital".

The analytical report for each participant in the authorized capital is reflected in the report in the month of changes. In 2019, based on the financial statements, the authorized capital decreased by 8232 thousand tenge. This was due to the reduction of the share of the third participant in the authorized capital. The second participant increased its share in the authorized capital. Table 1 shows the reduction in the share of the authorized capital participant in the reporting year. According to table 1, the first and fourth participants remained unchanged in the reporting year at 40% and 15%, respectively. The third participant reduced its share in the authorized capital from 33% to 20%, as a result of which the value of the share was reduced by 9730 thousand tenge. The second participant, on the contrary, increased its share in the authorized capital from 12% to 25%, and the value of its share increased by 6026 thousand tenge.

Table 1 – Change in the share of participants in the authorized capital of STK LLP for 2019, thousand tenge

Indicators	Share in the authorized capital,%	Share value	Share in the authorized capital,%	Share value	Share change,%	Change in value
1 participant	40	24874	40	21581,2	–	-3292,8
2 participant	12	7462,2	25	13488,25	13	6026,05
3 participant	33	20521,05	20	10790,6	-13	-9730,45
4 participant	15	9327,75	15	8092,95	–	-1234,8
Total	100	62185	100	53953	–	8232

Decrease in the total authorized capital of the first and fourth participants after receiving the part belonging to it by the third participant, although the share of participation of the first and fourth participants decreased by 3292.8 thousand tenge and 1234.8 thousand tenge, respectively. Table 2 shows how this information is reflected in the chart of accounts.

Table 2 – Log of actions to change the authorized capital of STK LLP in 2019, million tenge

№	Content of document	Amount	Debit	Credit
1	The decrease in the share of the third participant led to an increase in the share of the second participant	6026, 05	1030	5032
2	Decrease in the authorized capital from the decision of the third party to return the share	8232	5033	3390
3	The share of the third participant was returned in cash	8232	3390	1030

After a decision is made to purchase a share by a third party, its role is transferred from the participant to the lender. Accounts 5033 "third party's Deposit" and 3390 "other lender's loans" are taken into account for debiting debt to a third party. If the participant is granted a share in monetary terms on the credit debit 3390 "other payables" is reflected 1030 "cash on current account in banks".

In accordance with the legislation on partnerships, all participants are not entitled to receive income in the form of dividends without filling in shares of the authorized capital. The calculation of dividends payable to participants is accounted for under the credit of account 3030 "short-term accounts payable on

dividends and income of participants". The decision to pay dividends is made on the basis of the General meeting of participants. In the case that the participant will contribute to the Charter capital unamortised assets as a contribution, can receive property income. The positive difference between the value of the contribution to the authorized capital and the purchase price of this object is calculated. For this amount, you must pay tax according to the requirements of tax legislation at a rate of 10%.

In conclusion, the report on the movement for the analyzed years according to the company's statutory calculations was considered. In the reporting period, changes in the company's authorized capital occurred and are reflected in the accounting in compliance with the requirements of the legislation on partnerships. Undistributed income (uncovered loss) usage accounting is shown in table 3.

Table 3 – Calculation of the use of retained earnings (uncovered loss) in STK LLP, thousand tenge

№	Content of action	Amount	Debit	Credit
1	Retained earnings (uncovered losses) for the reporting period were carried to replenish reserve capital	6424	5510	5410
2	It was decided to pay dividends to retained earnings (uncovered losses) for the reporting period	15000	5510	3030
3	Retained earnings (uncovered losses) for the reporting period are included in retained earnings for prior periods	119464	5510	5520

The amount of retained earnings for the reporting period amounted to 140889 thousand tenge. 6424 thousand tenge of unallocated income was transferred to the reserve capital. As a result of the general meeting of participants, it was decided to pay a dividend of 15,000 thousand tenge among the participants. Analytical accounts were opened for the purpose of accounting for the amount of dividends accrued to each participant on the synthetic account 3030 for the distribution of dividends accrued to the participants of STK LLP.

Retained earnings (uncovered losses) for the reporting period are credited to retained earnings or uncovered losses of previous periods on the debit of account 5510 "Retained earnings (uncovered losses)" and on the credit of the passive account 5520 "Retained earnings (uncovered losses)". Retained earnings (uncovered losses) for the reporting period are reflected in the debit of the account 5510 "Retained earnings (uncovered losses) for the reporting period" and the credit 5410 "Reserve capital created in accordance with the constituent documents". Retained earnings (uncovered losses) are reflected in the item "Retained earnings (uncovered losses)" in the "Capital" section of the statement of financial position of the enterprise.

The financial results of the enterprise should be characterized by the following elements. Income is the total economic income that an enterprise finds and invests in its own account, which leads to an increase in capital. An increase in economic income and an increase in capital without the contribution of business owners due to an increase or decrease in assets or a decrease in liabilities during the reporting period. Income is the total flow of economic income received by an enterprise in the ordinary course of business. That is, gross income before expenses minus expenses. Income with this sign differs from other types of income. Income leads to an increase in capital.

Income includes only the total flow of economic income received or to be received in the personal account of the enterprise. Amounts spent on the income of a third party, such as value added tax, do not increase the capital of the enterprise and are not included in economic income. Agency relations are the same, the amount of gross economic income is accumulated in the principal's income, does not increase the equity of the enterprise. Income is a commission, not the amount received by the principal.

The amount of income received in the course of activities is usually determined by established or approved tariffs and prices. If prices are not set or individual services, works are performed, the price is determined by the contract or by calculation with a fixed level. Agreed prices are set by a person specially approved by the management of the enterprise to find a fair value as a result of agreements with the user. Fair value is the amount at which an asset can be exchanged or a liability settled by an independent party.

Expenses for the period are not included in the cost of goods sold, services rendered and are debited to the accounts 7110 Sales of products and services, 7210 Administrative expenses, 7310 Interest expenses. Operating income (loss) is recognized as the difference between gross income and expenses for the period, and income from non-operating activities is recognized as the financial result of non-operating

activities. The total turnover ratio of the average amount of advanced capital for the period gives a comprehensive idea of the business activity of the enterprise. Sales revenue is calculated as the ratio of the balance sheet currency (total capital) to the average, which reflects the turnover of all capital of the enterprise and characterizes the efficiency of use of all resources of the enterprise, regardless of their sources of mobilization. This figure varies depending on the industry and reflects the specifics of the production process [8-14].

Methods of integrated assessment of financial stability. Due to the diversity of financial stability indicators, differences in their level and economic content, there are difficulties in assessing the probability of financial stability and bankruptcy of the enterprise. In this regard, the scientist economists recommend an integrated assessment of financial stability based on scoring analysis. The essence of this method is to classify enterprises by level of financial risk on the basis of a scoring system based on several key financial and economic indicators. Methods of predicting the probability of bankruptcy. Based on the financial analysis, it is possible to assess the probability of bankruptcy of the enterprise, and it has different methods. Well-known economists Altman, Lis, Tishow's multi-stage discriminatory models are widely used in foreign countries to assess the probability of bankruptcy. Among them, Altman's two- and five-factor models (creditworthiness index) are widely known.

Altman's Z-score model:

$$Z = - 0,3877 + CLR * (-1,0736) + BC * 0,0579 \quad (1)$$

where CLR. - current liquidity ratio; BC - borrowed capital; -0,3877, - 1,0736, 0,0579 - liabilities.

If  $Z > 0$ , the probability of bankruptcy is higher than 50 percent, and if  $Z < 0$ , the probability of bankruptcy is lower than 50 percent.

By calculation, two stages of bankruptcy is less than 50 percent, bankruptcy at the end of one period; increased probability of bankruptcy.

The advantages of the Altman Z - Score are its simplicity, sufficiency of information, and ease of calculation, but in this example, the profitability of the enterprise is not taken into account. Therefore, E. Altman offers a 5-factor model of bankruptcy design:

$$Z = (1.2 \times A) + (1.4 \times B) + (3.3 \times C) + (0.6 \times D) + (0.999 \times E) \quad (2)$$

where A - Working capital / total assets; B - Retained earnings / total assets; C - Earnings before interest and tax payment / total assets; D - The equity's market value / total assets; E - Total sales / total assets.

Putting the calculated data in the formula:

- 2018 y.:  $1.2 \times (0,070) + 1,4 \times 0,107 + 3,3 \times 0,134 + 0,6 \times 1,37 + 1,0 \times 1,01 = 2,508$ ;

- 2019 y.:  $1.2 \times (0,063) + 1,4 \times 0,081 + 3,3 \times 0,111 + 0,6 \times 0,59 + 1,0 \times 1,411 = 2,320$ .

The accuracy of forecasting the probability of bankruptcy for 1 year on the 4-factor model is 90-95%, 80-85% for two years, which is a big advantage of this model. The indicators calculated on the basis of the company's data for 2018-2019. The probability of bankruptcy is high. If we calculate the probability of bankruptcy on a two-factor Z-model:

$Z = - 0,3877 + 3,435 * (-1,0736) + 0,423 * 0,0579 = -4,0517$ ;

$Z = - 0,3877 + 3,594 * (-1,0736) + 0,386 * 0,0579 = -3,837$ .

In conclusion, since the probability of bankruptcy in the reporting period is  $Z < 0$ , the analysis shows that the probability of bankruptcy in the analyzed years is less than 50%, does not affect the financial stability of the enterprise. The advantages of the two-factor model Z are its simplicity, adequacy of information, ease of calculation, but this model does not take into account the profitability of the enterprise.

In addition, the purpose of a capital audit is to confirm the accuracy of the capital information presented in the financial statements. The audit identified items of property, plant and equipment that were not used in the statement of financial position of the enterprise as an example and were not fully depreciated. That is, as a elimination of this shortcoming, it is proposed to write off unused fixed assets by creating a special commission on storage. This is because the information in the financial statements is falsified. It is estimated that the probability of bankruptcy in the reporting period is less than 50%, as the probability of bankruptcy is  $Z < 0$ , but the period does not affect the financial stability of the enterprise, even if the probability of bankruptcy increases [15-18].

The company also organizes accounting depending on its specific situation, volume and type of activity, in particular: independently determines the forms of organization of accounting work; forms accounting policies; establishes the scope of activities on financial accounting and production accounting; develops the order of control over business operations, makes other necessary decisions for the organization of accounting. Therefore, the analysis of key indicators characterizing the efficiency of the enterprise in market conditions. Being able to calculate them correctly, identify and analyze the impact of various causes and changes in their level, allows you to more widely open the reserves to increase production efficiency, make recommendations to address identified shortcomings, improve and develop the financial situation.

In general, ensuring that the capital raised corresponds to the amount of assets formed in the organization. The total need for capital is determined by the need for current and non-current assets. The formation of an optimal capital structure reflects the ratio of equity and debt capital used in the activities of the organization, with its effective functioning. Ensuring the minimization of costs for the formation of capital from various sources, which is carried out in the process of managing the cost of capital. Adherence to the principle of efficient use of capital in its economic activities, in turn, is achieved by maximizing the rate of return on capital at the level of financial risk.

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### **КӘСІПОРЫННЫҢ КАПИТАЛ ЕСЕБІН ЖЕТІЛДІРУ ЖОЛДАРЫ**

**Аннотация.** Кез келген шаруашылық жүргізуші субъектінің меншікті капиталы капиталдың экономикалық санатының бір түрі болып саналады. Ол мекеменің қалыптасу көзінің және ортаның өзгеруіне байланысты дұрыс қызмет ету үшін елеулі мәнге ие. Кәсіпорынды ашу кезінде құрылтайшылар енгізген капитал кәсіпорынның бастапқы қызметін ұйымдастыру үшін пайдаланылатын алғашқы қаражат немесе қызмет өсуі және кеңеюі кезеңінде қосымша қаражат болып саналады. Сонымен қатар, меншікті капитал мекемелерді қаржылық тұрақсыздықтан және шектен тыс тәуекелден сақтап, банкроттан қорғануға септеседі, ағымдағы шығындардың орнын толтырады, тұтынушы сенімін арттырады, клиентураның коммерциялық және тұтыну тауарларына деген қажеттіліктерін қанағаттандырады.

Кәсіпорынның қазіргі жағдайдағы өмірін қамтамасыз ету үшін басқарушы қызметкер, ең алдымен, өз компаниясы мен әлеуетті бәсекелестерінің қаржылық жағдайын шынайы бағалауы тиіс. Қаржылық жағдай – кәсіпорынның экономикалық қызметінің маңызды сипаттамасы. Ол бәсекеге қабілеттілік пен іскерлік ынтымақтастық әлеуетін, қаржылық және өндірістік қатынастарда кәсіпорын мен серіктестерінің экономикалық мүддесіне берілген кепілдіктің берілу жағдайын бағалайды. Алайда нақты қаржылық жағдайды анықтау мүмкіндігі кәсіпорынның табысты қызмет етуі мен мақсатына жетуі үшін жеткіліксіз саналады.

Кәсіпорын өзінің нақты жағдайына, көлеміне және қызмет түріне қарап бухгалтерлік есепті ұйымдастыруды жүзеге асырады: бухгалтерлік жұмысты ұйымдастыру нысандарын дербес белгілейді; есеп саясатын қалыптастырады; қаржылық және өндірістік есептер бойынша қызмет ету аясын белгілейді; шаруашылық операциясын бақылау тәртібін әзірлейді, сондай-ақ бухгалтерлік есепті ұйымдастыру үшін басқа да қажетті шешімдерді қабылдайды. Сонымен қатар, кәсіпорынның соңғы уақытта қарқынды дамығанын және рентабельді кәсіпорын екенін байқаймыз. Басқа маңызды көрсеткіштер қызметтің жоғары нәтижесі мен даму бағыттарын көрсетеді. Жалпы алғанда, бұл кәсіпорынның болашағы зор және ірі салық төлеушілердің бірі болып саналады. Сондықтан, нарықтық қатынас жағдайында кәсіпорын қызметінің тиімділігін сипаттайтын негізгі көрсеткіштерге талдау жасалынды. Оларды дұрыс есептеу, олардың деңгейінің өзгеруіне түрлі себептердің әсерін анықтау, талдау өндірістің тиімділігін арттыру үшін резервтерді неғұрлым кеңірек ашуға, анықталған кемшіліктерді түзетуге, қаржылық жағдайды жақсарту мен дамыту үшін ұсыныс жасауға мүмкіндік береді.

Ұйымның экономикалық қызметін дамытудағы жетістіктерін ескеру қажет. Ұйым капиталының құрылымы мен көлемінің қалыптасу үдерісін оның шаруашылық қызметінің басында ғана емес, болашақта қызметті жалғастыру және кеңейту мақсатындағы дамуды ұйымдастыру қажет. Оның жетістіктері капитал құрылымы мен бизнес-жоспарда анықталады.

**Түйін сөздер:** капитал, меншік капитал, қарыз капиталы, қаржылық жағдай, табыс, шығын, залал, өнім, өндіріс, материал, талдау

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## ПУТИ СОВЕРШЕНСТВОВАНИЯ УЧЕТА КАПИТАЛА ПРЕДПРИЯТИЯ

**Аннотация.** Собственный капитал любого хозяйствующего субъекта является одним из видов экономической категории капитала. Он имеет существенное значение для правильного функционирования в связи с изменением источников формирования учреждения среды. Капитал, внесенный учредителями при открытии предприятия, считается первыми средствами, используемыми для организации первоначальной деятельности предприятия, или дополнительными средствами в период роста и расширения деятельности. Кроме того, собственный капитал сохраняет учреждения от финансовой нестабильности и чрезмерных рисков, обеспечивает его защиту от банкротства, покрывает убытки текущих расходов, повышает доверие клиента, удовлетворяет потребности клиентуры в коммерческих и потребительских товарах.

Для обеспечения жизнедеятельности предприятия в современных условиях управленческому персоналу необходимо, прежде всего, реально оценить финансовое состояние своего предприятия и потенциальных конкурентов. Финансовое положение важнейшая характеристика экономической деятельности предприятия. Он оценивает конкурентоспособность, потенциал делового сотрудничества, насколько экономические интересы самого предприятия и его партнеров гарантированы в финансовых и производственных отношениях. Однако возможность определения реального финансового положения недостаточна для успешного функционирования предприятия и достижения поставленных перед ним целей.

Предприятие осуществляет организацию бухгалтерского учета в зависимости от своего фактического состояния, объема и вида деятельности: самостоятельно определяет формы организации бухгалтерской работы; формирует учетную политику; определяет сферу деятельности по финансовому и производственному учету; разрабатывает порядок контроля хозяйственных операций, а также принимает другие необходимые решения для организации бухгалтерского учета. Кроме того, можно увидеть, что предприятие в последнее время динамично развивается и является рентабельным. Другие важные показатели показывают высокую эффективность деятельности и направления развития. В целом это предприятие является одним из перспективных и крупных налогоплательщиков. Поэтому был проведен анализ основных показателей, характеризующих эффективность деятельности предприятия в условиях рыночных отношений. Умение правильно их рассчитать, выявлять влияние различных причин на изменение их уровня, анализ позволяет более шире раскрыть резервы повышения эффективности производства, выработать предложения по устранению выявленных недостатков, улучшать финансовое положение и развиваться.

Необходимо учитывать достижения развития хозяйственной деятельности организации. Необходимо организовать процесс формирования структуры и объема капитала организации не только в начале ее хозяйственной деятельности, но также учет развития с целью продолжения и расширения деятельности в будущем. А его достижения определяются в структуре капитала и бизнес-плане.

**Ключевые слова:** капитал, собственный капитал, заемный капитал, финансовое положение, прибыль, убыток, расход, продукция, производство, материал, анализ.

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## **STATE REGULATION OF RELATIONS IN THE FIELD OF CIRCULATION OF MEDICINES INTENDED FOR THE TREATMENT OF RARE DISEASES IN THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** The article deals with the problems of state regulation of relations in the sphere of orphan medicines circulation in the Republic of Kazakhstan. Definitions of the terms «orphan drugs» and «rare (orphan) diseases» are given. The analysis of foreign experience of state stimulation of orphan drug manufacturers is carried out. The reasons for the lack of incentive mechanisms for orphan drug manufacturers in the Republic of Kazakhstan are considered. The legislative base in the field of orphan drugs and rare diseases list is analyzed. The procedures of expertise and registration of orphan drugs are considered. Proposals are made to improve the regulation of relations in the sphere of orphan medicines circulation. For example, the establishment of a rare diseases laboratory in Kazakhstan and the creation of continuity between the child and adult orphan drug distribution system. As a result of the study, a number of conclusions have been made that can contribute to the implementation of the policy in the field of state regulation of relations in the sphere of orphan drugs.

**Key words:** Medicines, rare diseases, orphan drugs, government regulation, state examination and registration.

**Intruduction.** Medicines are currently one of the most important arsenals of therapeutic and preventive care. Every year, drugs are becoming increasingly important in the structure of medical services, allowing, in particular, to prevent or treat diseases, maintain a high quality of life in chronic diseases, alleviate the suffering of dying patients, and generally reduce the percentage of disability, increase life expectancy, and improve quality life of the population. Therefore, in society there is a great need for medicines, which continues to increase every year. Based on this, the importance of state regulation of relations in the field of circulation of medicines is growing, as the state is one of the main participants in the pharmaceutical industry.

So, for example, the global cost of prescription drugs in 2019 amounted to 871 billion US dollars. In the next few years, sales will only grow, and by 2024, the figure could reach 1.2 trillion US dollars. One of the fastest growing segments of the global drug market is the orphan drug market. According to experts, the market volume of orphan drugs by 2024 will be \$ 262 billion [1]. This is not surprising, the orphan drug market is currently attracting even more interest from large pharmaceutical companies that seek to add orphan products to their portfolio and capture new sources of revenue.

Consider the definitions of the terms "orphan drugs" and "rare (orphan) diseases."

Orphan medicines (orphan medicinal product) - medicines intended solely for the diagnosis or pathogenetic treatment (treatment aimed at the mechanism of the development of the disease) of rare (orphan) diseases [3]. Orphan drugs have long been considered commercially unattractive. The main reason for the unattractiveness was a small number of sick people, some kind of rare disease, unquantitatively almost unchanged. Also, pharmaceutical companies require significant investments to conduct clinical research, development and production of orphan drugs. In order to mitigate risks and provide an

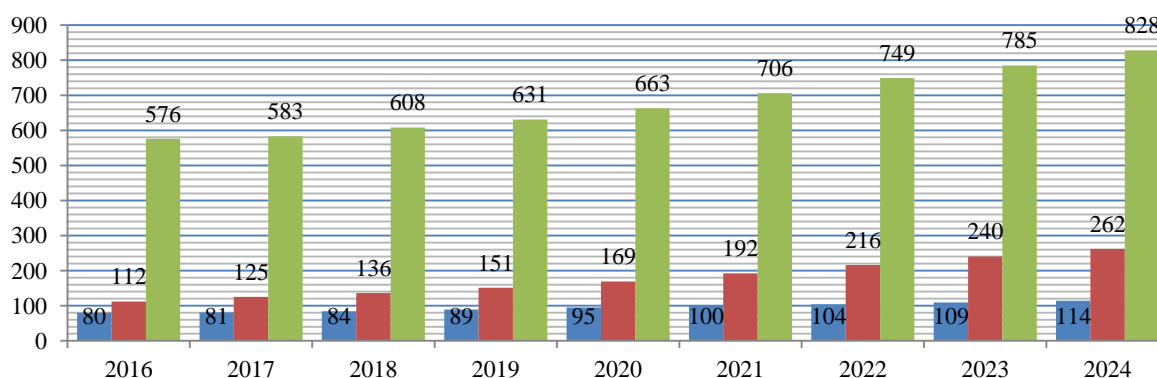


Figure 1 – Worldwide sales of prescription drugs in 2016-2019 and forecast up to 2024 (in billions of US dollars) [2]

opportunity to earn money, many states compensate for the large costs of pharmaceutical companies through allocated preferences, as well as create a favorable legislative framework that helps the orphan drug market to function effectively [4].

**Main part.** Rare diseases, orphan diseases, orphan diseases (English rare disease, orphan disease) - diseases affecting a small part of the population [5]. Most of the rare diseases are usually of a genetic nature, often occur in childhood, approximately 1/3 of sick patients do not live to the age of five. There is no specific general prevalence of a rare disease in a population at which it would be considered rare. A disease can be rare in one state and at the same time can be spread in the territory of another state [6]. The World Health Organization defines the boundaries of a rare disease if it affects from 6.5 to 10 people per 10,000 people.

When it comes to rare diseases, first of all, we should talk about rarely used medical technologies that dramatically affect the patient. Rarely used technologies have a high level of evidence of effectiveness and vital necessity. Without the use of rare technologies, the patient's inevitable disease progression occurs, complications worsen and develop, which leads to death for the patient. For their designation in the world use the term, "rarely used medical (orphan) technology."

Medicines are developed and circulated on the free market, however, being one of the most important factors for the success of medical interventions, they require the mandatory participation of the state in regulating circulation. The life cycle of a drug consists of several links, each of which is to some extent regulated by the state. The regulatory impact consists both in the creation of certain legislative and organizational-legal documents, and in the direct implementation of services (examination, registration, licensing) and the monitoring of the activities of pharmaceutical and medical organizations (control, supervision).

In the Republic of Kazakhstan, on the part of the state, much attention was paid to solving problems and regulating the drug supply of frequently occurring socially significant diseases. For example, infections, cardiovascular diseases, diabetes, etc. In the past 10 years, the state has begun to actively regulate relations in the field of rare diseases and orphan drugs. Until 2009, state regulation of medicines intended for the treatment of rare diseases was formal. The growing social significance of the problems of patients with rare diseases has made it possible to change the situation for the better.

Unlike Kazakhstan, many foreign countries much earlier began to develop government policies in the field of orphan drugs. So in 1983, the first country to adopt the Orphan Drug Act was the United States of America [7]. Americans were the first to define the boundary of the spread of a rare disease; in the USA, a rare disease is defined as a disease that affects less than 200,000 people, or about 1 in 1,500 people [8]. According to the enacted law, pharmaceutical companies producing orphan drugs provide a number of incentives. For example, pharmaceutical companies can sell orphan drugs without competition for 7 years. Until 2017, federal tax credits accounted for 50% of the cost of conducting clinical trials, now they are 25%. The state provides federal grants for clinical trials of new therapies for the treatment or diagnosis of rare diseases [9].

Manufacturers of orphan drugs do not experience regulatory restrictions when setting prices; prices are determined by market conditions. In 1997, the US Congress exempted pharmaceutical companies that

produce orphan drugs from FDA (Food and Drug Administration) fees [10]. Pharmaceutical companies are entitled to an expedited process for reviewing applications for the sale of orphan drugs. The FDA provides pharmaceutical companies with grants for the development of orphan drugs, and also reduces the cost of the drug registration process. The goal of the grant program is to fund clinical trials that will accelerate the emergence of promising drugs.

At the federal level, criteria for the interchangeability of drugs are established, which focus on the identical pharmacokinetic and pharmacodynamic properties of individual species, taking into account their dose, strength of action, method of use, safety, effectiveness and permitted use. Each state has the right to reduce the number of criteria for interchangeability and thereby increase the range of drugs considered interchangeable. A register of interchangeable drugs is maintained. The country has created a network of regional centers of excellence for research on rare diseases [11]. Financing of the drug supply for patients with rare diseases occurs at the expense of the state or insurance companies.

In Japan, the first Orphan drug law was passed in 1993.

To meet the criteria for an orphan drug, a drug must meet the following requirements:

- the drug should be used to treat a rare disease or condition that affects less than 50,000 people;
- the drug must treat diseases or conditions for which there are no other methods of treatment in Japan, or the proposed clinical drug is superior to drugs available on the Japanese market;
- the applicant must have a clear plan for product development and scientific justification in support of the need for the use of the drug in Japan [12].

Based on US experience, Japan has created its incentive system for pharmaceutical companies. Thus, the Ministry of Health, Labor and Welfare of Japan holds special free consultations for manufacturers of orphan drugs. Pharmaceutical companies may receive financial assistance from the government of Japan to collect additional data, such as clinical trials, additional studies, etc. The applicant can also receive financial assistance up to 50% of the cost of clinical trials, tax benefits in the amount of 6% of research costs and 10% of the company's income. An application for registration of orphan drugs is considered according to the accelerated method, for a period of not more than 10 months. Pharmaceutical companies are granted exclusive marketing rights for 10 years. The cost of the purchase of orphan drugs for patients with rare diseases is borne by the state.

In Australia, the orphan drug policy began in 1997 with the adoption of the relevant law. A program to provide patients with rare diseases was created, guaranteeing a wide selection of orphan drugs. Orphan drugs are controlled by the Australian Therapeutic Goods Administration (TGA). The criterion for the prevalence of a rare disease is not more than 2000 people or commercial non-viability of the drug.

The main feature of the Australian program is that it is based on the close cooperation of the TGA with the US FDA. The Australian program takes into account American drug evaluation experience, and also takes into account orphan drugs that do not meet the FDA criteria.

A feature of the Orphan Drug Policy in Australia is:

1. Good legislative framework;
2. Refusal of registration fees;
3. Five-year marketing exclusivity for orphan drugs.

Regarding the financing of orphan drugs, the TGA covers all costs associated with the drug registration procedure. In Australia, the research and development of orphan drugs is not supported by government grants or tax incentives. Due to the high cost of orphan drugs, benefits are provided to citizens to make some drugs more affordable [13].

In the countries of the European Union (hereinafter referred to as the EU), orphan legislation is based on Decree of the Parliament and the Council of the EU of December 16, 1999 No. 141/2000 on orphan medicines adopted pursuant to the decision of the Parliament and the Council of April 29 of 1999 No. 1295/1999 / EU on a joint program on rare diseases as part of public health action [14]. The borderline for the spread of a rare disease in the EU is different, usually 5 cases per 10 thousand people, in Sweden and Denmark 1 case per 10 thousand people. The European Medicines Agency (EMA) has set up a specialized body, the Orphan Medicines Product Committee (COMP), in London, which is responsible for regulating relations in the field of orphan medicines. EMA reviews the dossier for orphan drugs within 90 days, and the European Commission must decide not later than 30 days to use them [15].

The EU gives preferences to companies developing orphan drugs, in particular, it compensates for the costs of the marketing approval process. By approving the orphan drug, EMA gives the manufacturer the

exclusive right to sell the orphan drug for 10 years and 12 years if the orphan drug is intended for pediatrics. The term may be reduced to 6 years if the sale of the orphan drug brings profit to the manufacturer. When considering applications for granting the status of orphan drug, the services of the relevant state bodies can be provided free of charge or with certain benefits. The EU also provides free assistance in the preparation of the protocol, a 50% reduction in fees at the pre-registration stage, a reduction in all fees by 50% during the first year after the approval of the orphan drug.

Features of regulation of orphan drugs in foreign countries

Indicators	Countries			
	USA	Japan	Australia	The EU
Legislative act	Adopted in 1980	Adopted in 1993	Adopted in 1998	Adopted in 2000
The boundary of the spread of a rare disease	7.5 people per 10 thousand	4 people per 10 thousand	1 person per 10 thousand	5 people per 10 thousand
Exclusive right	7 years	10 years	5 years	10 years
Financial incentives for manufacturers	Clinical Studies 50%	yes	no	Varies by country
Express Registration	yes	yes	yes	yes
Scientific Advice	yes	yes	yes	yes
Reduction of registration fees	yes	yes	yes	Full or partial

As already mentioned, in the Republic of Kazakhstan in recent years the state has been actively working to improve the provision of medicines for patients with rare diseases and improve their quality of life. One of the main problems of providing medicines for patients with rare diseases until 2009 was that the legislative framework governing situations with rare diseases and orphan drugs, as well as expensive technologies for their treatment, was absent. Such concepts as “rarely used medicine” were not legislatively fixed, that is, medical technology, “rare disease”, there was no criterion for classifying diseases as rare diseases.

The first step to rectify the situation was the adoption on September 18, 2009 of the Code of the Republic of Kazakhstan "On the health of the people and the health care system, in it such concepts as" rare diseases "and" orphan drugs "were fixed at the legislative level.

Rare diseases - rare serious diseases that threaten a person's life or lead to disability, the frequency of which does not exceed an officially determined level.

Orphan (rare) drug - a drug intended for the diagnosis, etiopathogenetic or pathogenetic treatment of rare diseases, the frequency of which does not exceed an officially determined level in the Republic of Kazakhstan.

In the Republic of Kazakhstan, in order to fall under the category of orphan drug, a drug should rarely be used or used in less than 1 person per 10 thousand people. Also, medicines must have a high level of evidence of effectiveness and vital necessity. In the Republic of Kazakhstan, orphan drugs are not produced, the need for orphan drugs is met through imports. Having considered the experience of the USA, Japan, Australia and the EU, two main reasons can be identified for which the production of orphan drugs in the Republic of Kazakhstan is unprofitable for both domestic and foreign pharmaceutical companies:

1. A small number of patients with rare diseases. In Kazakhstan, out of 18.6 million people, less than 1% of the population has rare diseases. Pharmaceutical companies invest the same amount of money in the development, testing and registration of commonly used and rarely used drugs. For the production of large and small batches of drugs, the costs are also approximately the same, but the price of one conventional tablet of orphan drug varies markedly. For example, take a certain amount of X that is spent on developing a medicine, whether it is orphaned or not, X is divided by one hundred people with a rare disease and we get one price of the drug, if X is divided by a million people, a more reasonable price will be obtained. The manufacturer needs to cover the costs of production, and make a profit. For this reason, the costs of orphan drugs can be huge.

2. In the Republic of Kazakhstan, there are no mechanisms to stimulate and encourage manufacturers of orphan drugs. There is no exclusive right to orphan drugs, the state does not apply financial incentives

to pharmaceutical companies with the ability to produce orphan drugs. Scientific consultations are not held, registration fees are not reduced. In developed countries, the production and sale of orphan drugs stimulates the state. Typically, the state takes upon itself the financing of special programs, compensating manufacturers for the production of expensive orphan drugs, so that pharmaceutical companies are interested in investing money not only in production and sale, but also in the development of new drugs. The state also gives tax preferences and increases the term of exclusivity of the orphan drug.

Given the above, government measures are needed to create conditions for pharmaceutical companies that could organize the production of orphan and other medicines in the Republic of Kazakhstan. In 2025, the full functioning of the single market for medicines of the countries of the Eurasian Economic Union (hereinafter - the EAEU) will be implemented. With the market expanding to 183.4 million people, the number of patients with rare diseases will increase, and the number of orphan drugs consumed will increase accordingly. Therefore, in a competitive environment, Kazakhstan needs to be the first of the EAEU countries to create favorable conditions for manufacturers of orphan pharmaceutical companies. Government incentives will create the opportunity to produce original drugs or “generics” for rare diseases at a lower price.

I would like to note that before creating incentive mechanisms for pharmaceutical companies, it is necessary to improve state regulation of relations in the sphere of circulation of orphan drugs. Today, Kazakhstan faces difficulties in compiling lists of orphan drugs and rare diseases. For example, if in the world there are about 7 thousand rare diseases, then in the list of rare diseases there are only 57 nosologies. Accordingly, if a citizen of the Republic of Kazakhstan becomes ill with a disease that has not previously been registered in Kazakhstan, then he will have bureaucratic difficulties in the treatment and access to free orphan drugs. In the list of orphan drugs, not all orphan drugs are also present.

In the Republic of Kazakhstan, the list of orphan drugs was first approved on June 10, 2009 by order of the Minister of Health of the Republic of Kazakhstan “On the Procedure for the Formation of the List of Orphan Medicines”. The list was formed in order to ensure accessibility, create a unified order and approve the principles for the formation of orphan drugs. The procedure for the registration of medicines in the list was determined and the stages of consideration by the formulary commission of proposals for the inclusion of orphan drugs in the list were determined. This list has lost its force and has been revised and amended several times. For example, on December 7, 2009, the order of the Minister of Health of the Republic of Kazakhstan No. 831 “On approval of the List of orphan (rarely used) drugs in the Republic of Kazakhstan” was issued, which stated that orphan drugs from the list can be purchased and used in medical practice if not in the state register medicines of the Republic of Kazakhstan. It was also spelled out that the decision on the use of orphan drugs is made by the head of the healthcare organization on the recommendation of the formulary commission of the healthcare organization (or the department head). In order to import an orphan drug that has not been registered in the state register of medicines at a time, you must obtain permission from the state authority in the field of drug circulation.

The procedure for registration and examination of orphan drugs is spelled out in orders No. 735 “Rules of state registration, re-registration and amendments to the registration dossier of a medicinal product, medical devices and medical equipment” and No. 736 “On approval of the Rules for the examination of pharmaceuticals, medical devices and medical technicians ”of November 18, 2009. Orphan drugs that are not registered (if justified) in the country of the manufacturer or country of the holder of the production license and registration certificate for the drug are not subject to state registration in Kazakhstan. Also, orphan drugs do not pass state expertise on effectiveness, safety and quality.

If there is insufficient information on the results of preclinical (nonclinical) and clinical trials, by agreement with the applicant, the state body carries out state registration of orphan drugs in the following cases:

- if on the day of filing the application for registration, the level of scientific knowledge does not allow to collect more detailed information;
- if obtaining complete information is contrary to generally accepted principles of medical ethics.

When examining orphan drugs, a positive safety opinion is issued against the obligation of the applicant on the following conditions:

- fulfillment within a certain time frame of a certain research program, the results of which will be the basis for reassessing the benefit-risk ratio;

- the use of the drug under the strict supervision of a physician;
- immediate notification of the state body of any side effects that occurred with the use of the orphan drug, and the measures taken.

In cases where the orphan drug is not registered in Kazakhstan, but is included in the treatment diagnosis protocols, then the state body has the right to allow one-time import of the drug for a particular patient.

Thus, the market for orphan drugs is one of the fastest growing young markets in the pharmaceutical sector. The state occupies an important place in resolving problematic issues that arise both for manufacturers of orphan drugs and for citizens with rare diseases. Since 2009, the Republic of Kazakhstan has been pursuing an active state policy and legal regulation of relations in the sphere of circulation of orphan medicines. The globalization of the drug market is forcing most countries, including Kazakhstan, to implement national drug policies and legislation in accordance with international standards. Therefore, it is necessary to take into account the experience of developed countries in carrying out state policy of regulating and stimulating the market of orphan drugs.

**Conclusion.** As a result of the study, we can draw a number of conclusions about state regulation of relations in the field of circulation of medicines intended for the treatment of rare diseases in the Republic of Kazakhstan.

Orphan drugs, having a number of specific features (a small number of patients, large investments, difficulty in conducting clinical trials), are an integral part of the pharmaceutical market, requiring special support from the state. The great social significance of orphan drugs requires the government to quickly solve problems by creating conditions conducive to increasing the social and economic efficiency of the functioning of the orphan drugs market.

As foreign experience shows, medicine is not only new innovative technologies, it is primarily innovative technologies in medical management, which allows minimizing government costs and increasing the return on the use of new technologies. The state is able to include regulatory mechanisms, reducing the cost of treating patients with rare diseases and increase the efficiency of investing in this area. The problem of development of orphan technologies concerns not only the life and health of a particular person, it is also associated with the development of the market for innovative technologies in healthcare and related fields with the speed of innovation. Therefore, developing orphan technologies, the state invests in the health care of the future. Without the formation of a state policy in the field of orphan technologies, it is impossible to overcome the lag and develop innovations in healthcare.

State regulation of relations in the sphere of circulation of orphan drugs should primarily be aimed at solving the problems of patients with rare diseases. It is necessary to establish an effective system for the diagnosis of rare diseases in order to quickly provide them with orphan drugs. It is necessary to create your own laboratory for rare diseases so as not to waste time on diagnosis abroad. Incorrect diagnoses and untimely provision with orphan drugs leads to sad consequences for people suffering from rare diseases. Proceeding from this, the state should build an effective system for providing the population with orphan drugs, without bureaucracy and formalism.

It should be noted that the solution of the above issues will ensure the implementation of a policy in the field of protecting the health of citizens, the use of effective methods for the prevention of rare diseases, the detection of diseases at an early stage, diagnosis, treatment, as well as the healing of patients, mortality reduction, fairness and equal access to health care for all to citizens.

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#### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА СИРЕК КЕЗДЕСЕТІН АУРУЛАРДЫ ЕМДЕУГЕ АРНАЛҒАН ДӘРІЛІК ЗАТТАР АЙНАЛЫМЫ САЛАСЫНДАҒЫ ҚАТЫНАСТАРДЫ МЕМЛЕКЕТТІК РЕТТЕУ**

**Аннотация.** Мақалада Қазақстан Республикасында орфандық дәрілік заттар айналымы саласындағы қатынастарды мемлекеттік реттеу мәселелері қарастырылған. «Орфандық дәрілік препараттар» және «сирек (орфандық) аурулар» терминдеріне анықтама берілді. Орфандық дәрілік заттарды өндірушілерді мемлекеттік

ынталандырудың шетелдік тәжірибесіне талдау жүргізілді. Қазақстан Республикасында орфандық дәрілік заттарды өндірушілерді ынталандыру тетіктерінің болмауының себептері қарастырылды. Орфандық дәрілік заттар мен сирек кездесетін аурулар тізбесі саласындағы заңнамалық база талданды. Орфандық дәрілік препараттарды сараптау және тіркеу процедуралары сарапталды. Орфандық дәрілік заттар айналымы саласындағы қатынастарды реттеуді жетілдіру бойынша ұсыныс берілді. Аталған ұсыныс Қазақстанда сирек кездесетін аурулар бойынша зертхана құру және балалар мен ересек орфандық дәрілік заттарды тарату жүйесі арасында сабақтастық құру мәселесі ретінде көрсетілді. Жүргізілген зерттеу нәтижесінде орфандық дәрілік препараттар саласындағы қатынастарды мемлекеттік реттеу саласындағы саясатты іске асыруға ықпал ететін бірқатар қорытындылар жасалды.

Қазақстан Республикасында қазіргі кездегі өзекті мәселелердің бірі сирек кездесетін ауруларды емдеуге арналған дәрі-дәрмектерді тіркеу және сараптау тәртібін жетілдіру болып саналады. Тіркеу есірткінің өмірлік цикліндегі есірткі қолдануды қалыптастыру мен қолдану кезеңі арасындағы маңызды кезең, мемлекеттің ажырамас функциясы болып саналады және клиникалық тәжірибеде сатуға және қолдануға рұқсат беру туралы барлық зерттеулердің нәтижелерін жан-жақты бағалауға және шешім қабылдауға арналған. Дәрілік заттарды тіркеу мемлекет тарапынан фармацевтикалық нарықты реттеудің негізгі буыны саналады: біріншіден, сатуға мақұлданған дәрілік заттардың номенклатурасын атап өткен жөн, екіншіден, олардың тиімділігі мен қауіпсіздігі, үшіншіден, сапаның фармацевтикалық аспектілері, сондай-ақ сату шарттары және т.б. Көп елде тіркеу нарыққа кіру ретінде анықталады.

Орфандық дәрі-дәрмекпен қамтамасыз етуді мемлекеттік реттеу тетіктерінің тиімдірек жұмыс істеуі үшін басқа елдердің жүйелеріне сәйкес келетін жетілген заңнамалық база қажет, оған клиникалық зерттеулер мен орфандық өндірушілерді ынталандыру кіреді. Мемлекет салық жеңілдігін беруі қажет, патенттік және маркетингтік құқықтарды қорғауы керек, клиникалық зерттеу бағдарламаларын қаржыландыруға көмек көрсетуі тиіс, ең бастысы, орфандық дәрілерді өндірушілерге әкімшілік және бюрократиялық кедергілер алып тасталуы тиіс. Мемлекет өндірушілерге қолайлы жағдай жасап, ЕАЭО елдерінің дәрі-дәрмектің бірыңғай нарығына шығу мүмкіндігімен фармацевтикалық компанияларды Қазақстан нарығына тарта алады.

Мемлекеттік тіркеу емделушіге тиімді және қауіпсіз дәрі-дәрмектердің қолжетімді екендігінің кепілі болып саналады. Сондықтан, мемлекеттік тіркеу мемлекеттік стандарттарға, клиникалық сынақтарға сәйкес клиникалық сынақтарды өткізу, болашақ сериялық өндірістің қасиеттерін реттейтін нормативтік құжаттарды жасау жағдайын, сондай-ақ клиникалық қолдануға арналған нұсқаулықтардың болуын бақылауды қамтамасыз етеді. Біріншіден, дәрілік заттың тиімділігі мен қауіпсіздігін қамтамасыз ету үшін тіркеу, аз дегенде, клиникалық зерттеулерде белгіленген деңгейде болуы қажет. Сонымен қатар, тіркеу жан-жақты және профилактикалық сипатқа ие болуы тиіс, оның мақсаты – сатуға рұқсат беру мәселесін шешуде әр препарат үшін пайдасы мен тәуекелінің арақатынасын бағалау. Осылайша, препарат сапасының фармацевтикалық аспектілеріне қатысты пайымдағанда, алдымен жеке үлгілердің сапасын тексеруден бөлек, оның өндірістік үдерісінің сенімділігін анықтау үшін тіркеу қажет.

**Түйін сөздер:** дәрі-дәрмек, сирек кездесетін ауру, орфандық препарат, мемлекеттік реттеу, мемлекеттік сараптама және тіркеу.

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## **ГОСУДАРСТВЕННОЕ РЕГУЛИРОВАНИЕ ОТНОШЕНИЙ В СФЕРЕ ОБРАЩЕНИЯ ЛЕКАРСТВЕННЫХ СРЕДСТВ, ПРЕДНАЗНАЧЕННЫХ ДЛЯ ЛЕЧЕНИЯ РЕДКИХ ЗАБОЛЕВАНИЙ В РЕСПУБЛИКЕ КАЗАХСТАН**

**Аннотация.** В статье рассмотрены проблемы государственного регулирования отношений в сфере обращения орфанных лекарственных средств в Республике Казахстан. Даны определения терминам «орфанные лекарственные препараты» и «редкие (орфанные) заболевания». Приведен анализ зарубежного опыта государственного стимулирования производителей орфанных лекарственных средств. Рассмотрены причины отсутствия механизмов стимулирования производителей орфанных лекарственных средств в Республике Казахстан. Проанализирована законодательная база в области перечня орфанных лекарственных средств и редких заболеваний. Рассмотрены процедуры экспертизы и регистрации орфанных лекарственных препаратов. Даны предложения по совершенствованию регулирования отношений в сфере обращения орфанных лекарственных средств. Например, создание в Казахстане лаборатории по редким заболеваниям и создание преемственности между детской и взрослой системой распределения орфанных лекарственных средств. В результате провиденного исследования сделан ряд выводов, которые могут способствовать



реализации политики в области государственного регулирования отношений в сфере орфанных лекарственных препаратов.

В Республике Казахстан одной из актуальных проблем, существующих в настоящее время, является совершенствование процедуры регистрации и экспертизы лекарственных средств, предназначенных для лечения редких заболеваний. Регистрация – это важный этап в жизненном цикле лекарственных средств, который лежит между этапами создания и этапами применения лекарств, она является неотъемлемой функцией государства и предназначена для комплексной оценки всех результатов проведенных исследований и принятия решения о возможности допуска к продаже и применения в клинической практике. Регистрация лекарственных средств является главным звеном регулирования государством фармацевтического рынка по многим его параметрам: во-первых, следует отметить номенклатуру допущенных к продаже лекарственных препаратов, во-вторых, их эффективность и безопасность, в-третьих фармацевтические аспекты качества, а также условия реализации и многое другое. В большинстве стран процедура регистрации определяется как допуск на рынок.

Для более эффективного функционирования механизмов государственного регулирования лекарственного обеспечения орфанными препаратами необходима хорошая законодательная база, соответствующая системам других стран, которая включала бы проведение клинических испытаний и стимулирование орфанных производителей. Государство должно предоставлять налоговые привилегии, защищать патентные и маркетинговые права, оказывать содействие в финансировании программ клинических исследований и, что самое важное, не ставить административных и бюрократических барьеров для производителей орфанных препаратов. Создав благоприятные условия для производителей, государство сможет привлекать фармацевтические компании на рынок Казахстана с возможностью выхода на единый рынок лекарственных средств стран ЕАЭС.

Государственная регистрация выступает гарантией того, что пациентам будут доступны эффективные и безопасные лекарственные препараты. Поэтому государственная регистрация предусматривает контроль за условиями проведения соответствующих государственным стандартам доклинических исследований, клинических испытаний, создание нормативных документов регламентирующих свойства будущей серийной продукции и также наличие инструкции по клиническому применению. Прежде всего, регистрация обязана обеспечить эффективность и безопасность лекарственного средства как минимум в пределах, установленных клиническими испытаниями. Помимо этого, регистрация должна нести в себе комплексный и профилактический характер, целью которой должна быть оценка соотношения пользы и риска по каждому препарату для решения вопроса о его допуске к продаже. Таким образом, касаясь фармацевтических аспектов качества препаратов, регистрация, прежде всего, нужна для определения надежности процессов их производства, но никак не на проверку качества отдельных образцов.

**Ключевые слова:** лекарственные средства, редкие заболевания, орфанные препараты, государственное регулирование, государственная экспертиза и регистрация.

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**HUMAN CAPITAL MANAGEMENT**

**Abstract.** The methods of managing human capital in choosing the best employees, improving the efficiency of employees makes them an indispensable resource for the organization. Human capital management creates a free flow of information between superiors and subordinates, provides the importance of interpersonal communication skills and the development of employees' personalities.

In addition to staff motivation in the form of training and retraining for the effective use of their human capital in the context of innovative transformations, other motivational approaches must be applied. First of all, we are talking about pay. A highly qualified specialist should receive the appropriate salary, which reduces the likelihood of the enterprise losing its valuable human capital. A person, being a physical being, is at the same time a social (social) being, therefore, one cannot reduce a person to economic categories. Man is the bearer of certain natural individual abilities and talents with which nature has endowed him and developed society. A person spends certain physical, material and financial resources on the development of qualities and abilities. Natural abilities and acquired social qualities in their economic role are akin to natural resources and physical capital.

**Key words:** management, human capital, potential, innovative management, resources.

**Introduction.** The concept of “capital” is expressed through a system of relations that arises and is formed in the process of a certain activity regarding the use of certain resources for profit. The totality of human abilities is not capital, because in themselves they mean nothing. The inclusion in the system of socio-economic relations of a certain set of abilities, knowledge and skills of a person makes it possible to define them as capital. Capital is the realization of the knowledge and skills of the individual in productive labor, when the goal of production is profit. Following the definition given by K. Marx of the category “capital”, it should be noted that he distinguished the main and circulating, constant and variable types of capital and defined them through the category “cost”, which is advanced for the acquisition of certain resources, has particular circulation. Variable capital is that part of capital that turns into labor force and changes its value in the production process.

By this logic, human capital can be defined as the value advanced and materialized in the form of a stock of knowledge, skills, information, abilities and health, profitable in the workplace. Therefore, in many modern economic studies, human capital is defined as the human ability accumulated as a result of investments.

**Main part.** Like natural resources, man in his original state does not bring any economic effect; After the implementation of certain costs (training, education, advanced training), human resources are formed that can generate income, like physical capital.

However, the categories “human resources” and “human capital” are not identical to each other. Human resources can become capital if they generate revenue and create wealth. This means that a person will occupy a certain place in social production through self-organized activity or the sale of his labor to the employer, using his own physical strengths, skills, knowledge, abilities, talent. Therefore, for the conversion of human resources into operating capital, certain conditions are necessary that would ensure the realization of human potential (resources) in the results of activities, expressed in commodity form and brought economic effect.

Physical capital is a category by which is meant buildings, machinery, equipment used to produce goods and services. Physical capital, combined with labor, turns into a factor of production, which is used to create goods and services, including new capital. It turns out that the most important feature of capital is that it is a product of production.

Human capital as a product of production is the knowledge, skills that a person acquires in the process of training and labor activity, and like any other type of capital, has the ability to accumulate.



Difference between Personnel Management and HRM Assignment

Human resource department is necessary for an organization as it has the responsibility to manage people working in the same. It has different roles and responsibilities like recruitment, selection, performance evaluation, stress handling, trainings etc. Human resource or employees are responsible for the growth of an organization as their efforts can help an organization for the achievement of objectives. Human resource management means the effective utilization of people so that they can achieve individual as well as organizational goals. Human resource management and personnel management are different from each other. Personnel management is a discipline that is related to the hiring and development of human resources. It acts as a mediator between the management and human resource. It deals with payroll management, employment laws, job analysis etc.

Human capital has a rather complex internal structure, and each of its elements at various levels is evaluated by a corresponding set of indicators. In accordance with the level of aggregation and analysis, certain groups of indicators are distinguished [1,6]:

- nanoscale - to characterize the human capital of individual individuals;
- micro level - to characterize the human capital of individual enterprises;
- mesoscale - to characterize the human capital of the regions;
- macro level - to characterize the total human capital in the national economy.
- mega-level - to characterize the total human capital in the global economy.

A simplified version of the grouping is also possible: micro-level (individual, enterprise) and macro-level (region, national economy).

Let us consider in more detail the possible list of indicators for each of the levels.

At the nanoscale for an individual employee, the following can be used: qualification (competence), work experience (experience), time of employment during the year, duration of training at the workplace - physical indicators; personal expenses for the acquisition of a profession and qualification, an increase in earnings as a result of training in production and retraining, etc.

At the micro level or at the enterprise level, you can use: the number of personnel and their vocational qualifications, the amount of time worked per year, product quality, fund of training time at the workplace - physical indicators; costs of training, retraining and advanced training of personnel, profit growth as a

result of retraining of personnel, labor productivity of workers, losses from marriage and complaints, etc. cost indicators.

At the macro level: the vocational qualification structure of the aggregate labor force, the number of employed and unemployed (including by occupation and level of qualification), life expectancy, etc. - physical indicators; social labor productivity, the volume and proportion of the costs of training and retraining workers in GDP; loss of GDP from non-participation of the unemployed in economic activity, etc. - cost indicators.

#### Benefits of Human Capital Management.

One of the biggest advantages of human capital management is the virtualization of this area. With the growth of information technology, companies have found more advanced methods of managing their workforce. An innovative solution to human capital management is the introduction of human capital management services into the cloud software structure. The theoretical basis of cloud-based human capital management is that the organization's employees are people with different needs and goals, and therefore should not be considered as a typical business asset, such as equipment or tools. The main problems of increasing labor productivity on the part of the employee are the lack of knowledge, insufficient training, and failures in the process of managing the human capital of the employee.

Cloud-based human capital management solutions provide key benefits for companies by providing the tools and technologies necessary to increase the effectiveness of labor relations management and the formation of motivated and loyal employees. The application of best practices (cloud services) in the practice of human capital management will lead to the improvement of the organization. The best practices for managing human capital include providing job security, selective hiring of staff, advanced training, comprehensive training, information exchange, self-governing teams, higher remuneration based on the organization's activities, and ultimately benefits for the organization.

The material methods of motivation can also include various bonus payments and cash rewards. Intangible methods of motivation include various non-monetary bonuses, recognition in the team, taking into account the opinions and ideas of highly qualified specialists, etc. It is important to value the qualities of a person and not allow him to "stagnate" in one position, the rotation of personnel should be fair and deserved. This is a strong motivational moment in the work. Conservatism in the organizational structure, lack of movement and "fresh thoughts" in the leadership community lead to a decrease in innovation activity and unmotivated staff to apply their knowledge and skills for the benefit of the enterprise, as a strong opinion is formed that it will not lead to anything good, the innovator will not benefit no.

In conditions of innovative transformations, especially technological re-equipment of production, an important point is the timely assessment of the so-called "innovative readiness" of personnel from the standpoint of the theory of human capital.

#### Differences between Learning and Self-Learning Region

Specifications	Region	
	Student	Self learning
Structural interaction	Horizontal and vertical connections	Mostly horizontal connections
Awareness, awareness and acceptance of the goals and objectives of the region	The goals and objectives of the region are not cascaded into the subjects of the region	The goals and objectives of the region are broadcast and announced through the media, are available to all entities
Teaching methods	Traditional teaching methods	Distance learning, the creation of a knowledge base accessible to a wide range, the formation of an implicit knowledge base accessible to the region's population
Learning Content	Learning the external experience of related regions / countries	Training through the improvement of the "personal" experience of the region, training in innovations achieved in the region, the dissemination of implicit knowledge. Critical study and use of the experience of other regions and foreign experience
Student category	Vocational training of the working-age population	Creation of conditions and educational opportunities for the population from one year to 99 years old

The concept of innovative readiness is found in works devoted to the innovative development of enterprises, but within the framework of our work we specify this concept precisely from the standpoint of the theory of human capital, since we substantiated its role in innovative transformations, and it represents those useful knowledge, skills and qualities of personnel that are necessary for the successful development and implementation of innovations.

Thus, the system of personnel and its human capital management in the conditions of innovative transformations at the enterprise should be supplemented by a mandatory procedure for monitoring and increasing the innovative readiness of human capital. Its timely assessment will improve the efficiency of development and implementation of innovations at the enterprise, reduce the payback period.

The innovative readiness in the classical sense shows the personnel's willingness to accept innovation and the ability to work with it [3]. From the standpoint of the theory of human capital, by innovative preparedness we will mean precisely the presence of the necessary basic, technical and specialized knowledge necessary for the implementation and effective application of innovative technology.

**Conclusion.** An innovative technology at the organization level is a self-learning organization. In our work, we rely on the definition supplemented by V.P. Dudyashova, N.A. Kipen, E.V. Smirnova. SOO, according to scientists, is an artificially created organizational system in which an active increment of implicit knowledge is carried out, firstly, through the use of interpersonal communications directly in the process of making managerial decisions; secondly, through the organization of lifelong learning based on the institution of mentoring and other interactive forms using the transfer of experience through human capital. "

An innovative technology at the level of human capital management is a sequence of personnel processes that allow implementing a development strategy.

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#### **АДАМИ КАПИТАЛДЫ БАСҚАРУ**

**Аннотация.** Адами капиталды басқару әдістері үздік қызметкерлерді таңдау мен қызметкер тиімділігін арттырудың ұйым үшін таптырмас ресурс екендігін көрсетеді. Адами капиталды басқару басшылар мен қоластындағы қызметкер арасында ақпараттың еркін ағынын қалыптастырады, тұлғааралық қарым-қатынас дағдылары мен қызметкерлердің тұлғалық қасиеттерін дамытудың маңыздылығын айқындайды.

Инновациялық қайта құру жағдайында адами капиталды тиімді пайдалану үшін оқыту және қайта даярлау түріндегі қызметкерлерді ынталандырудан басқа да уәждемелік тәсілдер қолданылуы қажет. Біріншіден, еңбекақы туралы айтқанда, жоғары білікті маман тиісті жалақы алуы тиіс, бұл кәсіпорынның өзінің адами капиталын жоғалту мүмкіндігін азайтады.

Адам – физикалық әрі әлеуметтік (әлеуметтік) болмыс. Сондықтан адамды экономикалық категорияларға төмендетуге болмайды. Адам – табиғат пен қоғамдағы белгілі бір табиғи қабілет пен қабілет иесі. Адам белгілі бір физикалық, материалдық және қаржылық ресурстарды сапа мен қабілеттің дамуына жұмсайды. Табиғи қабілет пен олардың экономикалық рөліндегі әлеуметтік қасиеттер табиғи ресурстар мен физикалық капиталға ұқсас.

Табиғи ресурстар секілді адам бастапқыда ешқандай экономикалық нәтиже бермейді. Белгілі бір шығындарды (оқыту, білім беру, біліктілікті арттыру) жүзеге асырғаннан кейін физикалық капитал сияқты табыс әкелетін адами ресурстар қалыптасады.

Алайда, «адами ресурстар» және «адами капитал» категориялары бір-біріне ұқсас емес. Адами ресурстар, егер олар табыс тауып, байлық жинаса, капитал бола алады. Бұл дегеніміз, адам өзінің жеке күш-жігерін, дағдыларын, білімін, қабілеттерін, дарындылығын пайдалана отырып, өздігінен ұйымдастырылған іс-әрекет немесе өз еңбегін жұмыс берушіге сату арқылы қоғамдық өндірісте белгілі бір орын алады. Демек, адами ресурстарды айналым капиталына айналдыру үшін тауарлық нысанда көрсетілген және экономикалық нәтиже беретін қызмет нәтижелерінде адам әлеуетін (ресурстарын) іске асыруды қамтамасыз ететін белгілі бір жағдайлар қажет.

Физикалық капитал дегеніміз – тауар мен қызметтерді өндіруге қолданылатын ғимарат, машина, жабдық категориясы. Физикалық капитал жұмыс күшімен бірге өндіріс пен тауарларды, қызметтерді, соның ішінде, жаңа капиталды құру үшін қолданылатын өндіріс факторына айналады. Капиталдың ең маңызды ерекшелігі өндіріс өнімі екендігі анықталды.

Ұйымдастыру деңгейіндегі инновациялық технология – өздігінен білім алатын ұйым. Ғалымдардың пікірінше, бұл жасанды түрде құрылған ұйымдастырушылық жүйе, мұнда анық емес білімнің белсенді өсуі, біріншіден, басқару шешімін қабылдау үдерісінде тікелей тұлғааралық қарым-қатынасты пайдалану арқылы жүзеге асырылады; екіншіден, тәлімгерлік институт және басқа да интерактивті нысандар негізінде адами капитал арқылы тәжірибе алмасуды қолдана отырып, өмір бойы оқытуды ұйымдастыру негізінде орындалады.

**Түйін сөздер:** менеджмент, адам капиталы, әлеует, инновациялық менеджмент, ресурс.

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### УПРАВЛЕНИЕ ЧЕЛОВЕЧЕСКИМ КАПИТАЛОМ

**Аннотация.** Методы управления человеческим капиталом в выборе лучших сотрудников, повышении эффективности работы сотрудников делает их незаменимым ресурсом для организации. Управление человеческим капиталом создает свободный поток информации между начальниками и подчиненными, обеспечивает важность навыков межличностного общения и развития личности сотрудников.

Кроме мотивации персонала в виде обучения и переподготовки для эффективного использования его человеческого капитала в условиях инновационных преобразований, необходимо применять и другие мотивационные подходы. В первую очередь, речь идет об оплате труда. Высококвалифицированный специалист должен получать соответствующую заработную плату, что снижает вероятность потери предприятия его ценного человеческого капитала.

Человек, будучи физическим существом, одновременно является социальным существом, поэтому нельзя сводить человека к экономическим категориям. Человек является носителем определенных природных индивидуальных способностей и талантов, которыми природа наделила его и развивало общество. Человек тратит определенные физические, материальные и финансовые ресурсы на развитие качеств и способностей. Природные способности и приобретенные социальные качества по своей экономической роли сродни природным ресурсам и физическому капиталу.

Как и природные ресурсы, человек в своем первоначальном состоянии не приносит никакого экономического эффекта. После осуществления определенных затрат (обучение, образование, повышение квалификации) формируются человеческие ресурсы, которые могут генерировать доход, например, физический капитал.

Однако категории «человеческие ресурсы» и «человеческий капитал» не идентичны друг другу. Человеческие ресурсы могут стать капиталом, если они приносят доход и создают богатство. Это означает, что человек будет занимать определенное место в общественном производстве посредством самоорганизованной деятельности или продажи своего труда работодателю, используя свои собственные физические силы, навыки, знания, способности, талант. Поэтому для преобразования человеческих ресурсов в оборотный капитал необходимы определенные условия, которые обеспечили бы реализацию человеческого потенциала (ресурсов) в результатах деятельности, выраженной в товарной форме и приносящей экономический эффект.

Физический капитал – это категория, под которой подразумеваются здания, машины, оборудование, используемые для производства товаров и услуг. Физический капитал в сочетании с трудом превращается в фактор производства, который используется для создания товаров и услуг, в том числе нового капитала. Оказывается, самая важная особенность капитала заключается в том, что он является продуктом производства.

Инновационная технология на уровне организации – самообучающаяся организация. По мнению ученых, это искусственно созданная организационная система, в которой активный прирост неявных знаний осуществляется, во-первых, посредством использования межличностных коммуникаций непосредственно в процессе принятия управленческих решений; во-вторых, через организацию обучения на протяжении всей

жизни на основе института наставничества и других интерактивных форм с использованием передачи опыта через человеческий капитал.

**Ключевые слова:** управление, человеческий капитал, потенциал, инновационное управление, ресурсы.

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**TRANSFORMATION OF LOAN ACTIVITIES  
OF A COMMERCIAL BANK TO DIGITALIZATION**

**Abstract.** Currently, digital transformation is seen as an integral element of maintaining the competitiveness of banks: on average, a third of banking operations are already carried out using digital technology. The widespread adoption of digital technology is associated with the needs of society, which at the present stage of innovation development is aware of all the advantages achieved through the use of technology in the banking sector.

In conclusion, we note that the digital transformation process should be based on a digital strategy developed taking into account the characteristics and needs of a particular bank. The implementation of a rational digital transformation strategy will allow individual banks, and subsequently the entire banking sector, to increase business efficiency and enter a new stage in the development of financial and credit organizations and the economy as a whole. Currently, the financial system is in the process of development in accordance with the modern requirements of the digital economy.

**Key words:** Digital transformation, financial and credit organizations, banking sector, digital technologies, digital strategy, digital economy.

**Introduction.** Due to digital transformation, business models and concepts for the development of the banking sector are being improved: from the advent of Internet banking to the transformation of traditional money transactions. Innovative development is the main opportunity for sustainable and long-term growth in the effectiveness of banks. In the coming decades, the digital development of the financial sector will accelerate, and the sound management of digital transformation in the banking sector will become an inherent advantage in a competitive environment. The process of digital transformation refers to the use of digital technologies in order to improve existing business models, as well as increase business efficiency. This process involves the introduction of innovative technologies on an ongoing basis, which will lead to a complete digital transformation of the entire economy. The use of digital technologies improves the ways of interaction between banks, government and potential customers.

**Main part.** Digital transformation implies the widespread introduction of modern methods of providing banking services. The number of bank branches is reduced, many services are being transferred to online services, especially when issuing loans or investing funds [9]. Such a transformation of the banking sector has its drawbacks: the older generation may not keep pace with the acceleration of the digital development process and for it a complete abandonment of traditional methods of doing business is not good, although it is beneficial for banks to completely go online and there are already banks operating exclusively on mobile digital platforms. An example is AtomBank in the UK, which does not have physical offices for working with clients, all of whose work (from opening a current account to issuing loans) is carried out using a mobile application.

The application of the achievements of digital technologies expands the client base due to the almost universal and round-the-clock availability of banking services. The process of digital transformation of the banking sector includes the following elements: analysis of customer experience, digitalization of the products and services provided, as well as the transformation of the organization's internal processes.

Digital transformation is ensured through a thorough study of customer experience and analysis of both existing needs and the identification of new ones. It is consumers of banking services that are the driving force behind the innovative development of banks, as they, through the expression of their needs, form requirements for modern banking products and services. Clients evaluate their experience of interacting with banks depending on how easy and comfortable it was for them to receive a particular service, therefore, the banking sector should constantly study customer experience, identify shortcomings in their work, as new customers are likely to require use of even more modern technologies.

Earlier, banking performance was assessed through an increase in sales targets for products and services, but in the era of the digital economy, banks have to reckon with modern digital challenges: now banks are becoming more and more customer-oriented with their urgent needs. Billions of potential customers can be served through the use of a mobile phone with Internet access, which forces banks to constantly improve their digital technologies in order to maintain a competitive advantage. Barclays Bank was one of the first banks to introduce an on-line banking system: now customers visit bank branches on average twice a month, while they use mobile banking services up to 18 times a month

Transformation of internal processes of banks is also an important condition for the digital development of the banking sector. Along with the introduction of digital, customer-centric technologies, it is necessary to improve approaches to management, leadership and control.

The main obstacle to a full-fledged digital transformation of banks may be the lack of necessary skills and abilities in the digital economy. Use of

temporary data analysis technologies through customer relationship management systems (CRM) is one of the elements of digital transformation of banks, although statistics show that only one out of four banks plans to introduce similar data analysis systems into their activities

The digital transformation of banks requires an integrated approach based on the development and application of a digital strategy. Digital transformation covers all aspects of conducting financial and credit activities, including bank management mechanisms, therefore, the digital transformation of the banking sector should be coordinated with other development strategies in order to develop solutions that help achieve maximum business efficiency. The digital strategy should be aimed at solving four main problems: the introduction of digital technologies, the transformation of the process of creating the cost of services, the financial aspect of digitalization, as well as changing the organizational structure. For the successful implementation of the digital strategy, coordination of the above development areas is required, which largely depends on the operating model of the bank.

New digital products of the bank are increasingly creating their own digital teams that combine the competencies of business, IT and marketing. Most large banks seek to focus digital expertise internally, with historically large IT departments and focusing on proprietary solutions.

The larger banks become, the more difficult it is for them to innovate. Accordingly, acceleration paths are needed, including through partnerships with startup teams. For these purposes, banks buy fintech projects and support the development of fintech by investing in it in order to improve their services and increase customer satisfaction. At the same time, fintech companies serve as a factor for banks to respond to changes - by translating business models into digital and mobile forms or changing their business culture to provide a better consumer experience. In this context, banks are transforming from a classical financial institution to digital organizations.

The digital bank offers most of its products and services digitally using digital channels. The infrastructure of such a bank is optimized for digital communications and is ready (along with the corporate culture) for a rapid change of technology.

The number of digital banks in the world is growing - and organizations that do not even have their own offices and ATMs show the greatest dynamics. They are better able to take into account customer habits, offering special conditions unusual for the banking market, as well as additional non-financial services.

New additional opportunities for expanding the business - for example, through the sale of partner products (through the digital marketplace, as well as the implementation of the white label concept) are still of little interest to TOP30 Russian banks. First of all, the restraining factor here is the non-obviousness of monetization, the absence of obvious successful cases, including in world practice.

## The world's leading digital banks in terms of customer base

№	Банк	Материнская компания	Страна	Количество клиентов (млн)
1	ING Diba	ING Group	Германия	8,5
2	Capital One 360	Capital One Financial	США	7,8
3	USAA Bank	USAA	США	7
4	FNBO Direct	First National of Nebraska	США	6
5	Rakuten Bank	Rakuten	Япония	5
6	Tinkoff Bank	–	Россия	5
7	TIAA Direct	TIAA-CREF Trust Company	США	3,9
8	Discover Bank	Discover Financial Services	США	3,5
9	Alior Bank	–	Польша	3
10	DKB AG	–	Германия	3
Источник: Frost & Sullivan				

Most banks note that they do not find a suitable turnkey solution on the market, and therefore they are considering foreign platforms as well. Large banks are interested in maximizing the competitive edge of digitalization. This determines a shift in priorities towards in-house development.

#### Six Ways to Get Into the Digital Race:

The development of the Internet of things, artificial intelligence, social networks and mobile solutions offers enormous opportunities for financial service providers. To use them, financial service providers are forced to transform their business by introducing digital technology.

According to Avaya representatives, the financial services industry is gradually shifting to an open, integrated and promising technological ecosystem, which, with proper organization of processes, promises financial institutions numerous advantages in terms of customer experience, promises competitive business results, and also opens up wide possibilities for differentiating services. On August 2, 2017, Avaya published a list of six different options that, according to company representatives, will help financial service providers stay competitive in a smart digital world.

With the ability to create or embed custom communication tools, financial service providers can, in particular, embed real-time video support in online and mobile terminals in order to create even more personalized interactive services. Integration of video will allow, for example, to simplify the procedure for reporting damage as a result of an accident to an insurance company. Or optimize the process of user interaction with an ATM with minimal costs. Not surprisingly, about 80% of financial service providers see video banking as a tool that will improve their customer experience and reduce costs.

These solutions are able to maintain a conversation with customers on almost any topic, starting with information about their accounts and ending with a history of expenses. Moreover, these solutions allow you to give personalized recommendations and suggestions, based on historical data and on real-time information. According to industry experts, as technology is optimized, the chatbot ecosystem will only expand. This will provide financial service providers with little effort to automate tasks such as intrusion detection, transferring funds, comparing insurance programs, payment, etc. According to experts, European financial institutions can achieve cost savings of up to 90% by automating workflows using solutions like chat bots.

Considering that two-thirds of clients of financial institutions in the United States find attractive features offered by consultant robots, it is not surprising that the market for digital counseling systems will reach \$ 500 billion by 2020. With the help of artificial intelligence technologies, banks can create intelligent mechanisms. who will be able to offer advice on almost all issues, starting with investment opportunities and ending with personalized approaches to accumulating savings. This is achieved through

the use of an open integrated architecture, which allows us to achieve a single unified presentation of all customer banking information.

The future of banking authentication technology can be described in one word - biometrics. Although not yet ubiquitous, many market leaders are already actively introducing the use of physical characteristics (fingerprints, voice, face, method of pressing keys) for automatic recognition. Biometrics is one of the most important steps in the direction of digital transformation for PFCs facing today's realities in the field of mobile services security. More than 90% of customers believe that their banks do not sufficiently protect mobile applications, and 41% are confident that they will be hacked. Therefore, about 80% of customers would use voice biometrics if this would provide increased security. In general, analysts expect the biometrics market to reach \$ 17 billion by the end of 2017, with an impressive CAGR of 18.5% over the past 7 years.

**Conclusion.** Ultimately, financial institution clients seek targeted and personalized experience. They want intuitive service providers to feel and understand their desires and address potential problems before they arise. Due to the ability to comprehensively track and collect data and share it across the entire organization, financial service providers can use training algorithms that will provide the necessary intellectual capabilities at the last stage of resource selection and naturally optimize any interactions. At the same time, a comprehensive analysis of all aspects of consumer contact with the company and its services will allow the financial services provider to be proactive and eliminate any potential problems.

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### **КОММЕРЦИЯЛЫҚ БАНКТИҢ КРЕДИТТІК ҚЫЗМЕТІН САНДЫҚ ТРАНСФОРМАЦИЯЛАУ**

**Аннотация.** Қазіргі уақытта сандық түрлендіру банктердің бәсекеге қабілеттілігін қолдаудың ажырамас бөлігі ретінде қарастырылады: орта есеппен банк операцияларының үштен бірі сандық технологияны қолдану арқылы жүзеге асырылады. Сандық технологияның кеңінен енгізілуі қоғам қажеттілігіне байланысты әрі қоғам өкілдері инновациялық дамудың қазіргі кезеңінде банк секторында технологияны қолданудың барлық артықшылықтарын меңгерген.

Цифрлық трансформациялау үдерісі белгілі бір банктің сипаттамасы мен қажеттілігін ескере жасалған сандық стратегияға негізделуі қажет. Трансформацияның ұтымды сандық стратегиясын іске асыру жекелеген банктерге, содан кейін бүкіл банк секторына тиімділігін арттыруға және қаржы-несиелік ұйымдар мен тұтастай экономиканы дамытудың жаңа кезеңіне шығуға мүмкіндік береді.

Байланыстың арнайы құралдарын құру немесе ендіру мүмкіндігімен қаржылық қызмет провайдерлері жекелеген интерактивті қызметтерді құру үшін нақты уақыт режимінде онлайн және мобильді терминалдарға бейнеқолдану көрсете алады. Мысалы, бейнені интеграциялау сақтандыру компаниясына жазатайым оқиға салдарынан келген шығын туралы есеп беру рәсімін жеңілдетуге мүмкіндік береді. Немесе аз шығынды пайдаланушының банкоматпен өзара әрекет ету үдерісін оңтайландырады. Қаржылық қызмет көрсетушілердің шамамен 80% бейне-банкингті клиенттердің тәжірибесін жақсартатын және шығындарды төмендететін құрал ретінде қарастырады.

Бұл шешімдер клиенттермен кез-келген тақырып бойынша, олардың шоттары туралы ақпараттан бастап, шығын тарихына дейін сөйлесуге мүмкіндік береді. Сонымен қатар, бұл шешім тарихи деректерге және нақты уақыттағы ақпараттарға негізделген жеке ұсыным мен ұсыныс беруге мүмкіндік береді. Сала мамандарының айтуынша, технология оңтайландырылғандықтан, чатот экожүйесі кеңейеді. Бұл қаржылық қызмет провайдерлеріне қолсұғушылықты анықтау, қаражатты аудару, сақтандыру бағдарламаларын салыстыру, төлемдер және т.б. тапсырмаларды автоматтандыру үшін аз күш жұмсайды. Сарапшылардың пікірінше, еуропалық қаржы институттары чат-бот сынды шешімдердің арқасында жұмыс ағындарын автоматтандыру арқылы шығындарды 90% дейін үнемдеуге қол жеткізе алады.

Америка Құрама Штаттарындағы қаржы институттары тұтынушыларының үштен екісі кеңесші-роботтар ұсынатын тартымды мүмкіндікке қол жеткізгенін ескерсек, сандық кеңес беру жүйелерінің нарығы 2020 жылға қарай 500 миллиард долларға жетсе таңданыс тудырмайды. Жасанды интеллект технологиясының көмегімен банктер зияткерлік тетіктерді орындай алады. Сондай-ақ, инвестициялық мүмкіндіктерден бастап жинақтаудың жеке тәсілдеріне дейінгі барлық мәселелер бойынша кеңестер

ұсынады. Бұған тұтынушылардың банктік ақпараттарды алуға септігін тигізетін ашық біріктірілген архитектураны қолдану арқылы қол жеткізіледі.

**Түйін сөздер:** сандық түрлендіру, қаржы-несиелік ұйым, банк секторы, сандық технология, сандық стратегия, сандық экономика.

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### **ТРАНСФОРМАЦИЯ КРЕДИТНОЙ ДЕЯТЕЛЬНОСТИ КОММЕРЧЕСКОГО БАНКА В ЦИФРОВИЗАЦИЮ**

**Аннотация.** В настоящее время цифровая трансформация рассматривается как неотъемлемый элемент поддержания конкурентоспособности банков: в среднем треть банковских операций уже производится с помощью цифровых технологий. Повсеместное внедрение цифровых технологий связано с потребностями общества, которое на современном этапе развития инноваций осознает все преимущества, достигаемые за счет использования технологий в банковском секторе.

В заключение отметим, что процесс цифровой трансформации должен быть основан на цифровой стратегии, разработанной с учетом особенностей и потребностей конкретного банка. Реализация рациональной стратегии цифрового преобразования позволит отдельным банкам, а впоследствии и всему банковскому сектору повысить эффективность деятельности и выйти на новый этап развития финансово-кредитных организаций и экономики в целом. Имея возможность создавать или встраивать собственные средства связи, поставщики финансовых услуг могут, в частности, встраивать поддержку видео в реальном времени в онлайн и мобильные терминалы для создания еще более персонализированных интерактивных услуг. Интеграция видео позволит, например, упростить процедуру сообщения о повреждениях в результате несчастного случая страховой компании или оптимизировать процесс взаимодействия пользователя с банкоматом с минимальными затратами. Не удивительно, что около 80% поставщиков финансовых услуг рассматривают видеобанкинг как инструмент, который улучшит их качество обслуживания клиентов и сократит расходы.

Эти решения способны поддерживать диалог с клиентами практически на любую тему, начиная с информации об их аккаунтах и заканчивая историей расходов. Более того, эти решения позволяют вам давать персональные рекомендации и предложения, основанные на исторических данных и информации в режиме реального времени. По мнению отраслевых экспертов, по мере оптимизации технологий, экосистема чат-ботов будет только расширяться. Это позволит поставщикам финансовых услуг без особых усилий автоматизировать такие задачи, как обнаружение вторжений, перевод средств, сравнение страховых программ, платежей и т.д. По мнению экспертов, европейские финансовые институты могут достичь экономии до 90% за счет автоматизации рабочих процессов с помощью таких решений, как чат-боты.

Учитывая, что две трети клиентов финансовых учреждений в Соединенных Штатах находят привлекательные возможности, предлагаемые роботами-консультантами, не удивительно, что рынок систем цифрового консультирования достигнет 500 миллиардов долларов к 2020 году. С помощью технологий искусственного интеллекта банки могут создавать интеллектуальные механизмы, которые смогут дать совет практически по всем вопросам, начиная с инвестиционных возможностей и заканчивая индивидуальными подходами к накоплению сбережений. Это достигается за счет использования открытой интегрированной архитектуры, которая позволит нам обеспечить единое представление всей клиентской банковской информации.

**Ключевые слова:** цифровая трансформация, финансово-кредитные организации, банковский сектор, цифровые технологии, цифровая стратегия, цифровая экономика.

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**THE CURRENT STATE OF MONETARY CIRCULATION  
AND MEASURES TO ENSURE ITS SUSTAINABILITY**

**Abstract.** The stability of the monetary system is a backbone factor that reflects the essence of the social process and determines the stability of the development of a market economy and its component - the regional economy. Money is a reproductive category; cash issued by the Bank of Russia as a monopolist in the total mass of reproduction entities serves both the production sphere and the distribution, exchange and consumption spheres. Fuelled by advances in technology and communications, the financial infrastructure has developed into a perpetually operating global system in which "megabyte money" (i.e. money in the form of symbols on computer screens) can move anywhere in the world with speed and ease. Currently, the stability of the monetary system is significantly affected by risks arising from the shortage of the long-term resource base and the transformation of short-term liabilities of banks into long-term investments.

**Key words:** money circulation, economic growth, monetization of the economy, financial depth of the economy, transmission mechanism channels, monetary policy, inflation, financial sector.

**Introduction.** The monetary system is a complex socio-economic phenomenon, reflecting a set of stable relations established by national legislation between the subjects of the money market regarding the organization and implementation of money circulation, the functioning of the money market and the fulfillment by money of their functions. The basic functions of the monetary system are predetermined by the need to implement the functions of money as a means of payment and means of circulation and consist in ensuring: reliable organization and stability of money circulation in the country; balance of supply and demand of money; reliable and efficient functioning of economic turnover, payment and settlement systems; stable and balanced functioning of the commodity and money markets; stability of the national monetary unit, as well as in promoting the dynamic development of the country's economy.

**Main part.** The main contradiction in the mechanism of functioning of modern monetary systems is the antinomy of the economic nature of money and its maternity nature, due to which the circulation of decreed (fiat) money is provided by the administrative authority of the state. In our opinion, this contradiction is fundamental and is reflected in the aggregate of other contradictions, the resolution of which is carried out through the implementation by the state of a certain system of measures to regulate monetary circulation and the implementation of the monetary policy by the central bank. The forms of manifestation of the main contradiction in the functioning of monetary systems that are inherent in almost all countries, in our opinion, are the following imbalances and imbalances that exist in monetary circulation.

As is commonly believed in economic literature, since in practice the demand for money is difficult to determine, in fact we are dealing with the money supply market. In fact, the supply of modern money is monopolized by the banking system, and we are dealing with a monopolized market and imperfect competition. But this fact is not a drawback, but rather a definite advantage of modern monetary systems, since the concept of the active role of money in the development of the economy and, accordingly, the

monetary policy of the central bank are built on the discrepancy between the supply and demand of money. Due to the fact that the demand for money is limited not only by the resources and assets of business entities, but also by the interest rate of the central bank, the regulation of these processes, as is commonly believed in economic theory, is carried out mainly on the basis of establishing an equilibrium interest rate.

Balancing the demand and supply of money through the implementation of the monetary policy of the national bank is carried out on the basis of the so-called “dynamic effect of monetary expansion”, the essence of which is in the adaptation of business entities to issue additional money supply. And although the mechanisms for implementing the “dynamic effect of monetary expansion” are quite complicated in practice, they are based on the concept of the active role of money in the economy and a certain monetary policy regime is being formed, which is implemented through the transmission mechanism of the monetary policy of the central bank.

It is generally accepted that the central bank does not deal with issues of determining the demand for money, but regulates only their supply. However, this is not at all true. Modern central banks pay very much attention to the issues of targeting the money supply, and the key element of this process is determining the volume and structure of the monetary base. And although the main goal of forming the monetary base is nevertheless the determination of the volumes and structure of the channels for future credit emissions of the central bank, this process also takes into account the main components of the demand for money.

The monetary base is a complex monetary indicator, which is called money of “increased efficiency”. The volume, structure and dynamics of the monetary base is influenced by a number of factors, among which the main ones are the growth rate of gross domestic product, the level and dynamics of commodity prices, the degree of development of the financial sector, and the nature of the monetary policy implemented by the national bank. Changes in the monetary base have a significant impact on changes in other monetary indicators, which allow us to predict the nature and effectiveness of the monetary policy pursued by the central bank.

Changes in the methods and tools of monetary policy lead to a change in the volume and structure of monetary aggregates, interest rates, foreign exchange rates, lending conditions, asset prices, as well as the expectations of market entities and, therefore, affect the functioning of the money market. Then changes in the money market through changes in accumulations, investments, and consumption, export and import volumes have a direct or indirect effect on the real sector, which ultimately affects the dynamics of volumes and structure of production, employment and prices. Thus, the general reaction of the housekeeper to the monetary policy of the central bank is the result of the combined effect of all channels of the transmission mechanism. In fact, on the basis of the transmission mechanism channels, certain types of money prices are controlled and the money supply in circulation is regulated.

In accordance with modern approaches, monetary, credit, interest and currency (exchange rate) channels are allocated in the mechanism of monetary transmission, which are directly influenced or controlled by the national bank, as well as a channel for changing asset prices and an expectation channel that are almost weakly controlled by the national bank. From the point of view of assessing the impact of money circulation on economic growth, the most important are the monetary, credit, interest and currency channels. However, in different periods of the country's economic development, the role and level of use of these channels can vary significantly. In the pre-crisis period, the main role in the transmission mechanism was played by the currency and credit channels, as well as the asset price channel. To date, the most significant impact on the real sector of the economy is exerted by monetary and credit channels.

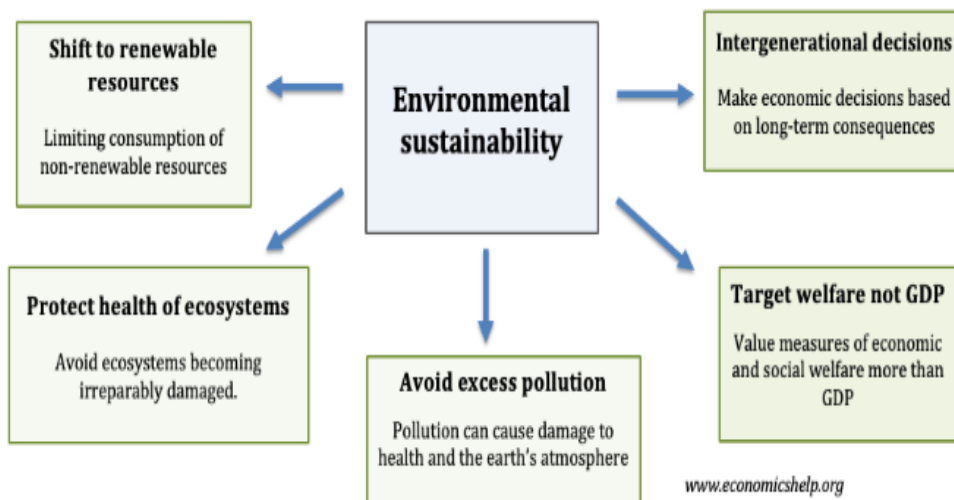
The study showed that money circulation affects the stimulation of economic growth mainly indirectly, based on the regulation of money supply and demand, interest rates and the exchange rate. Moreover, the main method of this influence is to increase the financial depth of the economy, and the main tool is the management of transmission mechanism channels.

Thus, the financial depth of the economy should be considered as a comprehensive assessment of the saturation of the economy with money, characterizing the level of development of the monetary market, the financial sector and the involvement of a wide range of institutions, financial intermediaries and business entities in the monetary system. In accordance with the concept of “financial depth of the economy” it is considered that the higher the saturation of the economy with financial and monetary



resources and the more diversified the structure of the financial and credit system, the more stable the rate of economic growth. The concept of financial depth was first formulated by R. Goldsmith, who established a direct relationship between the level of economic and financial development, and also determined that in certain periods the growth rate of the financial sector can significantly exceed the growth rate of the real sector.

Later, this pattern was called the theory of “faster growth” of the financial sector. In accordance with this theory, which fully complies with the requirements of modern monetarism, the financial sector is the basis of economic development, and therefore the increase in the size of financial markets and the increase in the financial depth of the economy contribute to economic growth. To date, this approach prevails in the scientific literature, and its supporters are M. Binswanger, B. Braash, A. Galetovik, J. Gurley, R. McKinon, J. Olivier, X. Titmeyer, J. Tobin, E. Shaw and many other famous economists.



Issues of environmental sustainability

Environmental sustainability is concerned with issues such as:

- Long-term health of ecosystems. Protecting the long-term productivity and health of resources to meet future economic and social needs, e.g. protecting food supplies, farmland and fishing stocks.
- Intergenerational decision making. When making economic decisions, we should focus on implications for future generations, and not just the present moment. For example, burning coal gives a short-term benefit of cheaper energy, but the extra pollution imposes costs on future generations.
- Renewable resources: Diversifying into energy sources that do not rely on non-renewable resources. For example, solar and wind power.
- Prevent the consequences of man-made global warming. Policies to ensure the environment of the planet does not deteriorate to a point where future generations face water shortages, extreme weather events, excess temperature.
- All factors that could make living in parts of the world very difficult if not possible.
- Protection of species diversity and ecological structure. Sometimes medicines require elements within specific plant species. If some species go extinct, it limits future technological innovation.
- Treating environmental resources as if they have intrinsic rights and value. In other words, we shouldn't just rely on a monetary value, i.e. we should protect rainforests because they deserve to be protected rather than using a cost-benefit analysis of whether we gain financially from protecting rainforests.
- Targeting social welfare/happiness and environmental sustainability above crude measures of progress such as GDP.

The importance in the economy of achieving a balance of supply and demand of money. Being an instrument of economic policy, money directly affects economic growth, contributes to the activation of business activity, increase in jobs and, as a result, increase in the number of employees. At the same time, the existing imbalances in the distribution of money supply, the mismatch between demand and supply of

money can block the mechanisms of economic growth and impede the sustainable development of national and regional economies.

The crises that arose during the formation and development of the monetary system of the Republic of Kazakhstan, the problems of banking liquidity, the stability of the national currency, and the use of funds received due to high energy prices put forward the creation of an effective system for managing the monetary system, ensuring the sustainability of regional monetary subsystems, and studying theoretical aspects of demand modeling money.

The main reason for the decrease in the purchasing power of money is the inflationary development of the modern economy and the dominance of the financial sector in its structure. In this regard, the point of view according to which even moderate inflation impedes the normal development of the economy is now widespread. Therefore, the stabilization of money circulation, i.e., the achievement of relative price stability, should be considered as a condition for long-term sustainable economic growth.

In addition, the lack of tools and mechanisms for influencing the stability of the national monetary unit and the stability of monetary circulation requires the expansion of monetary policy instruments. This is due to the presence of another contradiction - inconsistencies in the short-term nature of the action of monetary policy instruments and the long-term nature of the goals and objectives of monetary circulation. In this regard, recently the issue of the need to coordinate monetary and fiscal policies has become quite acute.

This is partly due to the fact that in the process of managing inflation, some of the factors are of a monetary nature and their management is in the competence of the central bank, and a significant part of the factors are in the competence of the government. Moreover, the stability of money circulation should be understood as: the stability of the purchasing power of money over a relatively long period of time; balance of money supply structure; reliability of operation and trust of the population and business entities to the central bank and the banking system; the existence of an effective system for regulating monetary circulation; compliance with the proportions in the formation of cash incomes of the population, savings and savings in the economy in proportion to the rate of growth of production and productivity of social labor; full satisfaction of the solvent demand of the population for goods and services with banknotes of the national currency. The main task of regulating money circulation should be to ensure its stability, and regulation should be based on the practical implementation of the functions of money circulation - its internal properties, which are manifested in the process of implementing monetary policy, regulating cash circulation and ensuring the reliable functioning of payment systems. Moreover, money circulation should be considered in the unity of its cash and non-cash forms through the prism of: regulation of the money market, including factors of supply and demand of money; regulation of the money supply and the structure of monetary aggregates; implementation of the monetary policy by the central bank; regulation of the activities of institutions and subjects of the money market; regulation of the performance of money its functions. The process of regulation of cash circulation should include certain procedures of the central and commercial banks, forecasting, planning and organizing the release of cash into circulation, production, protection, processing of banknotes and coins, etc. Regulation of cashless circulation is carried out on the basis of the use of tools available to the central bank and methods for implementing monetary policy and performing a number of oversight and control functions. The macroeconomic relationship of instruments and mechanisms for regulating cash and non-cash money circulation should be based on the formation of a monetary base indicator by central banks.

In addition, in this process, it is necessary to take into account the role of the transmission mechanism of monetary policy as the basis for regulating monetary circulation, the main channels of which are the currency, credit, interest, asset value channel and expectations channel. A feature of the current stage of the practical implementation of monetary theories is that changes in the supply of money, through the implementation of the transmission mechanism, transmit stimulating impulses from the process of implementing the basic principles of monetary policy to specific areas of investment promotion, accumulation and expanded reproduction.

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## АҚША АЙНАЛЫМЫНЫҢ ҚАЗІРГІ ЖАҒДАЙЫ ЖӘНЕ ОНЫҢ ТҰРАҚТЫЛЫҒЫН ҚАМТАМАСЫЗ ЕТУ ШАРАЛАРЫ

**Аннотация.** Ақша жүйесінің тұрақтылығы әлеуметтік үдерістің мәнін көрсететін және нарықтық экономика мен оның құрамдас бөлігі – аймақтық экономика дамуының тұрақтылығын анықтайтын тірек факторы. Ақша дегеніміз ұдайы өндірістік категория; Қазақстан Республикасының Ұлттық Банкі шығаратын қолма-қол ақша өндіру субъектілерінің жалпы көлеміндегі монополист ретінде өндіріс саласына да, бөлу, айырбастау және тұтыну салаларына да қызмет етеді.

Ақша базасының элементтерін талдау барысында елдің халықаралық (алтын-валюта) резервтерін анықтау тетіктері ірі маңызға ие. Мұндай резервтерге орталық банктің бақылауында болатын және кез келген уақытта төлем балансының тапшылығын, ұлттық валютаға әсер ететін валюта нарығындағы араласу немесе басқа мақсаттарды қаржыландыруға пайдаланылатын сыртқы активтер жатады. Технология мен коммуникация саласындағы жетістіктерге сүйене отырып, қаржылық инфрақұрылым тұрақты мегабайттық жүйеге айналды, онда «мегабайт ақша» (яғни, компьютерлік экрандардағы таңбалар түріндегі ақша) әлемнің кез келген нүктесінде тез әрі жеңіл қозғалады. Қазіргі уақытта ақша-несие жүйесінің тұрақтылығына ұзақ мерзімді ресурстық базаның жетіспеушілігі және банктердің қысқа мерзімді міндеттемелерінің ұзақ мерзімді инвестицияға айналуы нәтижесінде туындайтын тәуекелдер айтарлықтай әсер етеді.

Сонымен қатар, ақша айналымының тұрақтылығы келесідей түсінікті қамтиды: салыстырмалы түрде ұзақ уақыт кезеңінде ақшаның сатып алу қабілетінің тұрақтылығы; ақша массасы құрылымының теңгерімі; халықтың сенімділігі және шаруашылық жүргізуші субъектілердің орталық банкке және банк жүйесіне сенімі; ақша айналымын реттеудің тиімді жүйесінің болуы; халықтың ақшалай кірісін қалыптастыру, экономикадағы жинақ пен жинақ ақша өндірісінің өсу қарқыны мен әлеуметтік еңбек өнімділігінің пропорциясына сәйкестігі; ұлттық валютаның ақша белгілері арқылы жасалатын тауарлар мен қызметтерге халықтың төлем қабілеттілігін толық қанағаттандыру.

Егер қылмыстық әрекеттен түскен қаражат белгілі бір мекеме арқылы жеңіл өңделетін болса, мекеме қызметкері немесе директоры пара алғандықтан немесе мекеме мұндай қаражаттың қылмыстық сипатына көз жұма қарағандықтан мекеме қылмыскерлермен белсенді серіктестік болып есептелуі мүмкін және қылмыстық желінің бөлігіне айналады. Мұндай күрделіліктің дәлелі басқа қаржы делдалдарының және реттеуші органдардың, сондай-ақ қарапайым тұтынушылардың қарым-қатынасына зиянды әсер етеді.

Бақыланбайтын ақшаны жасырудың ықтимал теріс макроэкономикалық салдарына ақшаға деген сұраныстың беймағлұм өзгерісін, банктің тұрақтылығына пруденциалдық тәуекелдерді, заңды қаржылық операцияларға ластану әсерін және болжанбаған трансшекаралық активтер трансферті салдарынан халықаралық капитал ағынына валюта бағамдарының жоғарылауын жатқызамыз. Сонымен қатар, ол сыбайлас жемқорлық пен қылмысқа қарсы әрекет ете отырып, ақшаны табысты пайдалану бүкіл қоғамның тұтастығына және демократия мен заңның үстемдігіне кедергі келтіреді.

Осылайша, монетаризм дағдарысы негізінде сипатталатын ақша теориясы мен практикасының қазіргі даму кезеңінің ерекшелігінен туындайтын ақша жүйелерінің негізгі қарама-қайшылығын талдау ақша айналымын және ұлттық ақша жүйесін дамытуды жетілдірудің негізгі мәселесі мен бағыттарын анықтауға мүмкіндік береді.

**Түйін сөздер:** ақша айналымы, экономикалық өсу, экономиканы ақшамен алмастыру, экономиканың қаржылық тереңдігі, трансмиссия тетігінің арналары, ақша-кредит саясаты, инфляция, қаржы секторы

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## СОВРЕМЕННОЕ СОСТОЯНИЕ ДЕНЕЖНОГО ОБРАЩЕНИЯ И МЕРЫ ПО ОБЕСПЕЧЕНИЮ ЕГО УСТОЙЧИВОСТИ

**Аннотация.** Устойчивость денежной системы является системообразующим фактором, отражающим сущность общественного процесса и определяющим стабильность развития рыночной экономики и ее составной части – региональной экономики. Деньги являются воспроизводственной категорией; наличные деньги, выпущенные НацБанком РК как монополистом в общей массе субъектов воспроизводства, обслуживают как сферу производства, так и сферы распределения, обмена и потребления.

В процессе анализа элементов денежной базы большое значение имеет механизм определения международных (золотовалютных) резервов страны. К таким резервам относят внешние активы, которые находятся под контролем центрального банка и в любой момент могут быть использованы для финансирования дефицита платежного баланса, интервенций на валютных рынках, оказывающих влияние на курс национальной валюты, или для других целей. Опираясь на достижения в области технологий и коммуникаций, финансовая инфраструктура превратилась в постоянно действующую глобальную систему, в которой «мегабайтные деньги» (то есть деньги в виде символов на экранах компьютеров) могут быстро и легко перемещаться в любую точку мира. В настоящее время на устойчивость денежной системы значительное влияние оказывают риски, возникающие в связи с дефицитом долгосрочной ресурсной базы и трансформацией краткосрочных обязательств банков в долгосрочные вложения.

При этом под устойчивостью денежного обращения следует понимать: устойчивость покупательной способности денег в течение относительно продолжительного периода времени; сбалансированность структуры денежной массы; надежность функционирования и доверие населения и субъектов хозяйствования к центральному банку и банковской системе; наличие эффективной системы регулирования денежного обращения; соблюдение пропорций в формировании денежных доходов населения, накоплений и сбережений в экономике пропорционально темпам роста производства и производительности общественного труда; полное удовлетворение платежеспособного спроса населения на товары и услуги денежными знаками национальной валюты.

Если средства от преступной деятельности могут быть легко обработаны через конкретное учреждение – либо потому, что его сотрудники или директора были подкуплены, либо потому, что учреждение закрывает глаза на криминальный характер таких средств, – учреждение может быть вовлечено в активное соучастие с преступниками и стать частью самой преступной сети. Доказательства такого соучастия будут иметь пагубное влияние на отношение других финансовых посредников и регулирующих органов, а также обычных клиентов.

Что касается потенциальных негативных макроэкономических последствий неконтролируемого отмывания денег, можно привести необъяснимые изменения в спросе на деньги, пруденциальные риски для устойчивости банков, влияние загрязнения на законные финансовые операции и повышенную волатильность международных потоков капитала и обменных курсов из-за непредвиденной трансграничной передачи активов. Кроме того, поскольку это поощряет коррупцию и преступность, успешный отмывание денег наносит ущерб целостности всего общества и подрывает демократию и верховенство закона.

Таким образом, анализ основных противоречий денежных систем, вытекающих из особенностей современного этапа развития монетарной теории и практики, характеризующегося кризисом монетаризма, позволяет определить основные проблемы и направления совершенствования регулирования денежного обращения и развития национальных денежных систем.

**Ключевые слова:** денежное обращение, экономический рост, монетизация экономики, финансовая глубина экономики, каналы трансмиссионного механизма, денежно-кредитная политика, инфляция, финансовый сектор.

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**SOCIAL AND ECONOMIC ROLE OF INDUSTRIAL POLICY  
IN THE MODERN ECONOMY OF KAZAKHSTAN**

**Abstract.** Industry is an important development factor, but even more important is the achievement of competitiveness and the development of the potential of modern business services, which determine the face of a developed country in the world. Along with the high development of the extractive industry, other industries do not play a significant role in the economy. The structure of the economy of Kazakhstan confirms the thesis that countries with an average level of economic development are characterized by a large proportion of industry. If economic growth means quantitative changes — an increase in the production and consumption of the same goods and services, then economic development means positive qualitative changes, that is, innovations in production, in products, in services, in management, and in the economy as a whole. The effectiveness of development processes is largely determined by the effectiveness of state regulation of the economy.

**Key words:** industrial policy, macroeconomic stabilization, national economy, knowledge-based economy, technological modernization, labor market.

**Introduction.** The concept of "industrial policy" is derived from the tasks that confront it. The disadvantage of this definition is that industrial policy, among other things, is an instrument of intersectoral flow of capital, and is not limited to a subsidized function. The long-term strategy "Kazakhstan-2050" and plans for its development aimed at modernizing the socio-economic system should be built taking into account the existing potential of the country's regions. Therefore, we introduce the concept of "socio-economic potential of modernization", which includes not only the totality of resources, but also the qualitative characteristics of the regional systems themselves. At the same time, socio-economic modernization is a complex of interrelated areas covering industrial policy, development of scientific, technical and innovative potential, improvement of social infrastructure.

When modernizing the economic development of the regions, the following issues are the most acute: what is of primary importance - accelerating the pace of economic growth or curbing inflation; what modernization to start with - institutional (improving institutions) or technological (stimulating economic growth); what kind of demand is oriented - internal or external.

**Main part.** It is also fundamentally important to choose a path from two modernization alternatives: either from above or from below. If the first path is chosen, the role of the state is reduced to strict regulation, to redistribution of the gross domestic product in its favor, to the concentration of resources necessary for massive investments in reconstruction of the economy, to the choice of industry priorities and the strengthening of administration. The second way assumes the dominant role of the lower levels of the economy - enterprises and their corporate associations, market forces, private initiative. The state is given the task of creating the conditions for proactive management.

A characteristic feature of the options under consideration is the insufficient consideration of the spatial factor formed by a wide set of territorial features of the country, while long-term strategies should be based on the existing potential of the regions. Modernization of national economies can be carried out both by using own resources of the state and private business (creative type), and by attracting external

investment, new knowledge, developments and technologies (adaptive type). It seems to us that Kazakhstani regions are characterized by a mixed type of modernization, with the organic use of advanced foreign achievements and the capabilities of their own scientific and innovative potential. The choice of a specific type of modernization for a particular territory should be based on a detailed analysis of the state of the socio-economic potential of the region and cover such aspects as the production base, the level of technological development, the level of professional competence of various categories of labor resources, the available scientific and technical potential, and financial opportunities of the territories etc.

In this regard, it seems appropriate to use the concept of “socio-economic potential of modernization”, which includes the totality of structural elements of socio-economic potential that can be used to solve modernization problems.

In our opinion, the following principles should underlie the concept of managing the socio-economic potential of modernization:

- potential is a dynamic characteristic and is detected only in the process of its use;
- the use of the potential of the socio-economic system should be accompanied by its constant growth;
- processes of utilization and capacity building are continuous and complement each other.

The defining feature of the modernization potential of the regions is the priority character of not only the achieved level of the most important volume parameters, but also the dynamics of the economic and social development of the corresponding territory, which fundamentally distinguishes the potential ability of a region to modernize from the general level of its economic development, characterized by exclusively static (level ) indicators, such as, for example, gross regional product.

Based on the socio-economic analysis, we revealed a rather low readiness of most regions of Kazakhstan to carry out modernization transformations. The main reasons for this situation are:

- insufficiently high level of GRP per capita in most regions of Kazakhstan; significant depreciation of fixed assets in Kazakhstan as a whole, as well as a significant differentiation of the regions of Kazakhstan in terms of capital-labor ratio;
- low level of investment in fixed assets;
- insufficient financial support for science and research, a low degree of innovative activity, which is the reason for the low science-intensive production;
- uneven distribution of labor resources, creating labor-surplus and labor-deficient regions;
- low level of life expectancy, population aging; high level of socio-economic differentiation of the population.

When carrying out socio-economic modernization of the country, it is advisable to eliminate the shortcomings of the existing state regional policy and improve the methodological tools for managing the socio-economic development of the regions.

The basis of ensuring integrated financial and credit regulation of an open economy should be based on the following areas:

- identification of leading sectors of the economy, the so-called growth drivers;
- ensuring the growth of efficiency of budget expenditures;
- improving the efficiency of the tax system;
- regulation of the money supply;
- further development of the securities market and the international financial center Astana;
- increasing the investment attractiveness of the economy;
- expansion of lending to the economy;
- Strengthening second-tier banks;
- ensuring financial security.

For the stable functioning of the national economy, it is necessary to strengthen the normal socio-economic conditions, and this means the need:

- further growth of investments in infrastructure development;
- Improving the tariff policy, more favorable for the population and small and medium-sized businesses;
- the introduction of a progressive income tax and tax on luxury;

- use of tax incentives (lower rates, tax holidays);
- Solving the problems of regulating VAT and customs duties for importers and exporters;
- credit stimulation.

The tasks of the industrial policy of the region are limited by the creation of a common regulatory and legal field, financial and credit, investment, innovative issues, and, in part, the problems of employment and industrial ecology.

In the Russian economy, it is acceptable to consider industrial policy as the main corporate or company policy of the enterprise. In the framework of industrial policy, under the influence of the external environment, emphasis can shift in one direction or another.

A distinctive feature of industrial policy at each of the three levels is its systemic nature. This character is manifested in the fact that any system, possessing the property of synergy, includes a certain set of elements called subsystems, and at the same time it itself is an integral part of another larger system. At the macro level, industrial policy is part of structural policy, which is in relation to it and determines the conditions for its implementation.

Structural policy is “a set of actions by the state in relation to the formation and change of the sectoral and regional structure of national production, the impact on the proportions, the relationship between the production of various types of industry products.

Economic policy is understood to be the state’s general line of economic actions, giving the desired direction to economic processes, embodied in the aggregate of measures taken by the state, through which the intended goals and objectives are achieved, and socio-economic problems are solved.

Competitive provides a level playing field for competition within the framework of industrial production policy. “Creates a situation of competition in the markets by establishing and enforcing rules prohibiting certain behaviors in the market”, creates incentives for investment and innovation.

Investment. Provides and stimulates investment in the development of industrial production policies and industrial infrastructure. Regulates the selection of the most effective investment projects, including in terms of social and budgetary effects. Defines the priority criteria for investment projects taking into account the objectives of industrial policy.

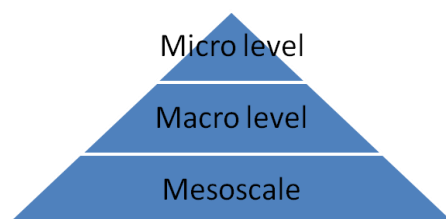
Innovative. Promotes the interaction of entrepreneurial and policy research and innovation structures. the formation of innovative motivations of economic activity, the establishment of state guidelines and incentives for an innovative development model.

Structural. Stimulates intersectoral. interbank and politics interregional “overflow” of capital for financial support for modifying the sectoral and territorial structure of industry in accordance with the long-term goals of industrial policy.

Quality Policy Provides control over compliance with the quality of industrial production. Includes certification, licensing of certain types of activities within the industry, metrology

Employment policy. It assumes social responsibility of the state for the consequences of the restructuring of industrial enterprises, the creation of safe working conditions in the workplace and guarantees of social protection of workers in industry.

Industrial policy is part of a structural policy, as a sub-system of state economic policy (state participation in the regulation of the production process is not limited only to the industry, but extends to all sectors of the economy, including agriculture, construction, transport, and other services).



Levels of industrial policy

Industrial policy is heterogeneous and includes constituent elements or subsystems in the form of innovative, investment, human resources, environmental and other policies that characterize industrial development.



1. Economic aspects. Consideration of economic factors in the future. Focus on economic benefits. Getting economic benefits.

2. Social aspects. Solving social problems. Accounting for social issues. Social aspects are not a priority.

3. Economic security. Ensuring economic national security. Ensuring the economic security of a particular region. Ensuring the economic security of a particular enterprise.

4. Investment attractiveness. Improving the investment attractiveness of individual industries and industries. Increasing the investment attractiveness of the region, while industry affiliation is not critical. Creating a favorable image of the enterprise.

5. Leadership in business. Leveling the starting conditions for business. Providing leadership in relation to other regions. Creation of concrete competitive advantages.

6. Employment and staff. Ensuring employment of the country's population. Providing employment to the population of the region. Further training and professional development of employees.

7. Crisis management. Development of depressed regions Anti-crisis measures in relation to potentially insolvent enterprises and inefficient production. Diversification of production activities and improvement of industrial policy methods.

8. Efficiency and competitiveness. Improving the efficiency and competitiveness of industry. Improving the efficiency and competitiveness of the regional industrial sector. Improving the efficiency of the enterprise.

9. Attitude to environmental and economic factors. Parity of environmental and economic factors. Priorities are not expressed explicitly. The priority of economic factors over environmental ones.

10. Information policy. Open Information Policy Open Information Policy. Closed Information Policy

11. Objects of discrimination in the implementation of industrial policy. Discrimination of some industries in relation to others. Discrimination of some enterprises, types of activities in relation to others. Discrimination of some elements of the enterprise's production system in relation to other system elements of various significance and target orientation.

The diversification of the economy and the development of non-resource sectors were facilitated by the implementation of the State Program of Forced Industrial and Innovative Development of the Country's Economy for 2010–2014, the new State Program for Industrial and Innovative Development, designed for 2015–2019. Sustainable economic growth should be ensured by accelerating diversification through industrialization and infrastructure development, and above all, increasing the competitiveness of human capital. In the course of diversification, a transition is made from an extensive, raw-material development path to industrial-innovative development.

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#### **ҚАЗАҚСТАННЫҢ ҚАЗІРГІ ЭКОНОМИКАСЫНДАҒЫ ӨНДІРІСТІК САЯСАТТЫҢ ӘЛЕУМЕТТІК-ЭКОНОМИКАЛЫҚ РӨЛІ**

**Аннотация.** Өнеркәсіп – дамудың маңызды факторы. Бәсекеге қабілеттілік пен әлемдегі дамыған елдің беделін анықтайтын заманауи бизнес-қызметтердің әлеуетін дамыту одан да маңызды саналады. Өндіруші саланың қарқынды дамуымен қатар, экономиканың басқа салалары маңызды рөл атқармайды. Қазақстан экономикасының құрылымы экономикалық дамудың орташа деңгейіндегі елдердің ішінде өнеркәсіп бойынша ірі үлесі бар деген тезис расқа шығады. Экономикалық өсу сандық өзгерісті – тауар және қызметті өндіру мен тұтынудың арту жағдайын білдірсе, онда экономикалық даму – өндіріс, өнім, қызмет көрсету, басқару және тұтас алғанда, экономикадағы оңтайлы сапалық өзгерісті айқындайды. Даму үдерісінің тиімділігі, көбінесе, экономиканы мемлекеттік реттеудің тиімділігі негізінде анықталады.

Өңірлік әлеуметтік-экономикалық жүйелерді жаңғырту міндетін іске асыруда мемлекеттік-жекеменшік әріптестік институтының (МЖӨ) әлеуеті зор. Тиімді экономикалық саясатты қалыптастыру, инвестициялық

және инновациялық белсенділікті арттыру, елдің бәсекеге қабілеттілігін арттыру, сондай-ақ индустриялық және әлеуметтік инфрақұрылымды дамыту мемлекет пен бизнестің өзара қатынасының тиімді институттарын дамыту болып саналады, бұл жағдай ЖІӨ-нің өсу қарқыны мен мемлекеттік сектордың тиімділігін арттырады, экономикалық даму қажеттілігін қанағаттандыру тұрғысынан мемлекеттік сектордың тиімділігін ұлғайтып, инфрақұрылымдық жобаларды іске асырудың барлық деңгейіндегі шығындарды азайтады. Сонымен қатар, ынтымақтастық әлеуметтік-экономикалық инфрақұрылым мен өндіріс факторларының, капиталдың, еңбек ресурстарының, технологияның сапасын жақсартып, қолжетімділік жағдайын тиімді етеді. Сондай-ақ фирмааралық кооперативті байланыстарды дамытуды қамтамасыз етумен қатар, экспортты және шетелдік инвестицияларды тартуды жеңілдетеді.

Алайда, Қазақстанда МЖӘ тетіктерін құру және қолдану үдерісі алғашқы бастапқыда қалды. Бизнес ортаны дамыту үшін қолайлы жағдай жасау арқылы бизнес пен үкімет серіктестігін кеңейтуге болады. Бизнесті тиімді инвестициялауға ынталандыратын шаралармен қатар, мемлекеттік-жекеменшік кеңес беру институттарын дамыту, серіктестік жоспарын құру, қазақстандық, салалық және өңірлік бизнес-қауымдастықтардың қызметін кеңейту бойынша тәжірибелік қадамдар аса маңызды саналады. Осыған сүйене отырып, мемлекет пен бизнес арасындағы серіктестік аумақтық (аймақтық) және салалық деңгейде дамуы қажет.

Өңірлерді әлеуметтік-экономикалық жаңғыртуды жүзеге асыруда жана индустрияландыру шешуші маңызға ие және оны жүзеге асырудың оңтайлы ұйымдастырушылық-экономикалық нысаны индустриалды саясат болып саналады.

Индустриялық саясатты жүзеге асырудағы шетелдік тәжірибені зерттеу түрлі уақытта мемлекеттік ынталандыру құралдары индустриялық дамудың қозғаушы күші болғандығын көрсетеді. Елдің бәсекеге қабілеттілігін арттыру бағытындағы мемлекеттік міндеттерді іске асырудың нақты тетік тобын таңдау оның әлеуметтік-экономикалық жағдайына байланысты болып келеді.

Өңірлерді әлеуметтік-экономикалық жаңғыртудың маңызды шарты – Қазақстандағы аймақ экономикасының нақты жағдайын, инновациялық идеяларды қалыптастыру үдерісін және оларды алға жылжыту тәжірибесін үйлестіруді ескере отырып, инновациялық жүйені басқарудың аймақтық моделін енгізу.

**Түйін сөздер:** индустриялық саясат, макроэкономикалық тұрақтандыру, ұлттық экономика, білімге негізделген экономика, технологиялық жаңғырту, еңбек нарығы.

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## **СОЦИАЛЬНО-ЭКОНОМИЧЕСКАЯ РОЛЬ ПРОМЫШЛЕННОЙ ПОЛИТИКИ В СОВРЕМЕННОЙ ЭКОНОМИКЕ КАЗАХСТАНА**

**Аннотация.** Промышленность – важный фактор развития, но еще более важным является завоевание конкурентоспособности и развитие потенциала современных бизнес-услуг, которое определяют лицо развитой страны мира. Наряду с высоким развитием добывающей отрасли, остальные отрасли не играют существенной роли в экономике. Структура экономики Казахстана подтверждает тезис о том, что страны со средним уровнем экономического развития характеризуются большим удельным весом промышленности. Если экономический рост означает количественные изменения – увеличение производства и потребления одних и тех же товаров и услуг, то экономическое развитие – это положительные качественные изменения, то есть инновации в производстве, в продукции, в услугах, в управлении и в экономике в целом. Эффективность процессов развития во многом определяется эффективностью государственного регулирования экономики.

Для реализации задач модернизации региональных социально-экономических систем значительным потенциалом обладает институт государственно-частного партнерства (ГЧП). Одним из условий формирования эффективной экономической политики, повышения инвестиционной и инновационной активности, роста конкурентоспособности страны, а также развития производственной и социальной инфраструктуры выступает развитие эффективных институтов взаимодействия государства и бизнеса, что позволит увеличить темпы роста ВВП, повысить эффективность бюджетного сектора с точки зрения соответствия потребностям развития экономики, снизить издержки всех уровней при реализации инфраструктурных проектов. Наряду с этим сотрудничество обеспечивает повышение качества и рост доступности социально-экономической инфраструктуры и факторов производства, капитала, рабочей силы, технологий, а также развитие межфирменных кооперационных связей, содействует экспорту и привлечению иностранных инвестиций.

Однако процесс создания и использования механизмов ГЧП в Казахстане находится только в начальной стадии. Расширить партнерство бизнеса и власти возможно путем создания комфортных условий для развития предпринимательской среды. Наряду с реализуемыми мерами, стимулирующими бизнес к эффективному инвестированию, очень важны и практические шаги по развитию институтов государственно-частных консультаций, формированию планов партнерства, расширению активности общеказахстанских, отраслевых и региональных объединений предпринимателей. Исходя из этого, партнерские отношения между государством и бизнесом следует развивать на территориальном (региональном) и отраслевом уровнях.

Определяющее значение в осуществлении социально-экономической модернизации регионов имеет неоиндустриализация, наиболее оптимальной организационно-экономической формой реализации которой является целенаправленная промышленная политика.

Исследование зарубежного опыта реализации промышленной политики показывает, что локомотивом индустриального развития в разное время становились различные инструменты государственного стимулирования. Выбор конкретной группы механизмов осуществления государственных задач в направлении повышения конкурентоспособности страны зависит от ее стартового социально-экономического положения.

Важнейшим условием социально-экономической модернизации регионов является реализация модели управления региональной инновационной системой, учитывающей особенности современного состояния экономики казахстанских регионов, слабую координацию в них процесса генерации инновационных идей и опыта их продвижения.

**Ключевые слова:** промышленная политика, макроэкономическая стабилизация, национальная экономика, наукоемкая экономика, технологическая модернизация, рынок труда.

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**ANALYSIS OF FINANCING OF EXPENDITURES  
ON SOCIAL SECURITY AND SOCIAL PROTECTION  
OF CITIZENS OF THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** The actualization of social protection of the population consists in the fact that the concept of “social protection” is associated with the concept of “social care” of the state, when individual assistance to a person, groups of people organized by professionally trained people and expressed by the concept of “social work” will have the support of confidence as its ultimate goal man in his strength, his capabilities. That is why in recent years, most specialists of social protection of the population refuse from such a broad, but non-specific concept as "state regulation of the social sphere", and use the term "social support of the population by the state" more and more.

The social policy of any state is the most important part of its domestic policy. In the context of Kazakhstan's transition to sustainable development, the problem of improving the social security system of the population becomes especially acute and relevant. The right to social security of citizens is exercised in practice using a specific organized financial mechanism, which includes a set of interrelated organizational, economic, legislative and other measures.

**Key words:** social security, social protection, sphere, finances, mechanism, population, budgets.

**Introduction.** The functions of social security in the Republic of Kazakhstan are performed by various government bodies, ministries, departments, services and institutions, social protection and non-governmental institutions that form the organizational structure of social security. The economic basis of social security is the state budget and state social insurance, which differ from each other in terms of funding sources. Social insurance payments are made from insurance funds formed from social insurance contributions. They are charged both from employing enterprises and from workers. State funding is provided through appropriations from the Republican and local budgets.

There are four directions for the development of the system of financial support for social protection of the population: social insurance based on the formation of trust funds through contributions from participants; social security, involving the payment of universal benefits or financing of services from national revenues; social assistance in the form of benefits or material services provided with the condition of a personal need test at the expense of national revenues; state support of corporate and personal insurance of social risks. Financial relations within the framework of these areas are regulated by law and are implemented in the course of activities of special organizations, which together form public institutions for financial support of social protection of the population.

**Main part.** At the beginning of the new millennium, most countries of the world are in the process of implementing deep reforms or, at least, are seriously considering the possibility of their implementation, including in the field of social protection of the population. Common factors for states that have a decisive influence on the content of necessary reforms are population aging, globalization of markets leading to a radical reassessment of social costs and wages, the growth of the informal sector, which is outside the state social protection system, and the cost of social services due to growth standard of living and technological progress. At the present stage, due to a number of objective economic factors, as well as reasons caused by prevailing informal norms, the predominant institution of financial support for social protection in Kazakhstan is social security. The insufficient size of the tariff base, the underdevelopment

of insurance principles in the activities of state extra-budgetary funds, and the actual economic lack of independence did not allow them to take the social insurance institution to leading positions in the provision of social security, as is the case in countries with developed market economies. As a result, the level of social guarantees and the size of payments remain low in our country.

The need to reform the system of financial support for social protection of the population in the Republic of Kazakhstan is universally recognized. At the government level, the concepts of pension reform and modernization of the compulsory health insurance system are being adopted, however, until now, a scientifically sound, based on unified methodological principles, integrated concept of financial support for social protection of the population has not been adopted. The lack of a systematic approach reduces the effectiveness of managerial decisions, which are often made under the influence of economic and political processes that are far from the goals of social protection. Research aimed at developing the theoretical and methodological foundations of the conceptual construction and economic analysis of financial support for social protection of the population as an integrated system and studying its features in the Republic of Kazakhstan are relevant. Social protection is a system designed to provide a certain level of access to vital goods and a certain level of well-being of citizens who, due to circumstances (old age, state of health, loss of breadwinner or job and other legal grounds) cannot be economically active and provide themselves with income by participation in well-paid work.

The International Labor Organization, of which Kazakhstan is a member, defines a social protection system as a set of measures, including:

- stimulation of stable, paid labor activity;
- prevention and compensation of a part of income in the event of a major social risk through social insurance mechanisms;
- the provision of social assistance mechanisms designed for vulnerable groups that are not participants in the social insurance system

Favorable changes in the economy in recent years and measures taken to ensure sustainable growth allow us to move on to creating an integrated system of social protection in the event of social risks. In this regard, it became necessary to develop a new concept of social protection of the population, taking into account the priorities and opportunities of Kazakhstan in the present and future.

The main directions of development of the social protection system are based on the analysis of international experience and current status. It is proposed to build such a system that meets market conditions and contributes to the formation of incentives for stable paid labor with a higher level of population coverage with minimal administration costs.

The new system is mixed and includes elements of both a joint and a personalized system, both compulsory and voluntary insurance, and is designed to ensure social protection of the population from the main risks that a person may face throughout his life.

The fulfillment by the state of all social obligations assumed by the population (the payment of wages to employees of state organizations, social security and social assistance to citizens in the form of pensions, allowances and scholarships for students in universities and colleges) is a natural priority in financing the social sphere.

Pension benefits of citizens of Kazakhstan.

Kazakhstan was the first among the CIS countries to begin the transformation of the old joint citizen pension system with a systematic transition to a funded pension system, which was of historical importance for the whole country.

Today, Kazakhstan's pension provision is a three-level system combining simultaneously the mechanisms of the joint and funded systems, this is the joint pension system inherited by Kazakhstan from the USSR after the collapse of the latter and based on "generational solidarity", in which the state budget becomes mandatory source of pension payments funded pension system with a fixed 10% amount of pension deductions from monthly income for citizens of Kazakhstan, foreigners and individuals stateless, permanently resident in Kazakhstan and 5% compulsory professional pension contributions in favor of workers employed in work with harmful (particularly harmful) working conditions, and a funded system based on voluntary pension contributions.

To ensure a decent level, pension payments are indexed annually.

For the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan for 2019, 13 632 405, 9 thousand tenge were allocated, execution for the reporting period amounted to 13 630 986.5 thousand tenge, including in the context of programs:

According to the program 001 "Services on the formation of state policy on attracting investments, the development of economic, trade policy, the policy in the field of consumer protection, the regulation of activities of natural monopolies and in the field of statistical activity, the protection of competition, the coordination of activities in the field of regional development and entrepreneurship" For the reporting period, according to the payment plan, funds are provided in the amount of 8 966 172 thousand tenge, paid obligations amounted to 8 965,028.1 thousand tenge, or 100%.

The balance of unused funds amounted to 1,143.9 thousand tenge, including: 237.1 thousand tenge - savings in payroll; 1,1 thousand tenge - the balance of funds for travel expenses; 898.6 thousand tenge - in connection with the completion of the state examination in the Department of Statistics of the Kostanay region; 7.1 thousand tenge - the balance of funds for purchased goods, works and services.

Program 081 "Ensuring the presentation of statistical information" for the reporting period, according to the payment plan, funds are provided in the amount of 4 557 803.0 thousand tenge, paid obligations amounted to 4 557 577.8 thousand tenge, or 100%.

The balance of unused funds amounted to 225.2 thousand tenge, including: 76.6 thousand tenge - savings on the layout of statistical information in the Department of Statistics of the Aktobe region; 10.6 thousand tenge - the balance of funds in connection with a decrease in the sample of respondents; 5.7 thousand tenge - savings in the payroll of non-staff employees; 0.5 thousand tenge - the balance of funds for travel expenses; 121.6 thousand tenge - cost savings as a result of public procurement; 10.2 thousand tenge - the balance of funds for purchased goods, works and services.

Program 101 "Carrying out events at the expense of funds for entertainment expenses" for the reporting period, according to the payment plan, funds are provided in the amount of 1 424.6 thousand tenge, paid obligations amounted to 1 424.5 thousand tenge, or 100%.

Program 138 "Providing advanced training for civil servants" for the reporting period, according to the payment plan, funds are provided in the amount of 40 626.3 thousand tenge, paid obligations amounted to 40 612.8 thousand tenge, or 100%. The balance of unused funds amounted to 13.5 thousand tenge.

Program 159 "Ensuring the conduct of research on the socio-economic situation of the Republic of Kazakhstan in the framework of cooperation between the Republic of Kazakhstan and the Organization for Economic Cooperation and Development" for the reporting period, funds in the amount of 61,620.0 thousand tenge are provided for according to the payment plan, paid obligations amounted to 61,583, 5 thousand tenge, or 99.9%. The balance of unused funds in the amount of 36.5 thousand tenge was formed due to exchange rate differences.

Program 164 "Kazakhstan's participation in the initiatives and tools of the Organization for Economic Cooperation and Development within the framework of Kazakhstan's cooperation with the Organization for Economic Cooperation and Development" for the reporting period, according to the payment plan, funds are provided in the amount of 4,760.0 thousand tenge, paid obligations amounted to 4 759.8 thousand tenge, or 100%.

In Kazakhstan, families with children receive maternity and childcare benefits until they reach one year of age. The amount of the allowance depends on the number of children in the family. Poor families with children and families raising children with disabilities are also provided with benefits.

#### Social assistance in a new format

In Kazakhstan, the system of providing social assistance to poor citizens will be revised with the introduction in 2018 of a new format of targeted social assistance for people with incomes below 50% of the subsistence level and with an emphasis on the participation in active measures to promote the employment of able-bodied family members.

To ensure the social protection of the rural population it is necessary:

- creation of economic conditions for the growth of wages and other cash incomes of rural workers;
- phased repayment of all types of social payments, pensions and wages that they have not seen for years;
- introduction of registration cards for low-income citizens in all settlements;
- providing targeted social support to rural residents.

**Conclusion.** To improve the quality of education for the period up to 2005, the state program “Auyly metebi” was developed in Kazakhstan, the purpose of which was to determine the main directions of development of a rural school in the country for the coming years. This program is very important as there are no schools in many rural areas. Within the framework of the Program, the Ministry of Education and Science of the Republic of Kazakhstan set a goal to provide all rural schools with qualified subject teachers. The state program “Education” has been approved and is operating in the country, aimed at creating conditions for the development of education, providing everyone with wide access to quality education.

Thus, the sustainable development of human potential, stabilization of the standard of living must be achieved by creating conditions for realizing labor potential, ensuring accessibility and improving the quality of education, medical services, increasing the level of incomes of the population, implementing targeted poverty reduction based on measures of social adaptation, economic rehabilitation and social support for the most vulnerable segments of the population.

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#### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫ АЗАМАТТАРЫН ӘЛЕУМЕТТІК ҚАМТАМАСЫЗ ЕТУ ЖӘНЕ ӘЛЕУМЕТТІК ҚОРҒАУ ШЫҒЫНДАРЫН ҚАРЖЫЛАНДЫРУДЫ ТАЛДАУ**

**Андатпа.** Әлеуметтік қорғаудың өзектілігі «әлеуметтік қорғау» түсінігі кәсіби бағдарланған тұлғалар ұйымдастырған және «әлеуметтік жұмыс» түсінігімен айқындалатын тұлғаға, тұлғалар тобына жеке көмек көрсету, олардың түпкі мақсаты адамның өз күшіне, қабілетіне деген сеніміне қолдау болғанда мемлекеттік «әлеуметтік қамқорлық» түсінігімен байланыстырылады. Сондықтан соңғы жылдары халықты әлеуметтік қорғау мамандарының көпшілігі «Әлеуметтік саланы мемлекеттік реттеу» секілді ауқымды, бірақ нақты емес тұжырымдамадан бас тартып, «Мемлекет тарапынан халықты әлеуметтік қолдау» терминін көбірек қолданады.

Кез келген мемлекеттің әлеуметтік саясаты оның ішкі саясатының маңызды бөлігі ретінде саналады. Қазақстанның тұрақты дамуға көшу жағдайында халықтың әлеуметтік қамтамасыз ету жүйесін жетілдіру мәселесі өзекті әрі маңызды. Азаматтардың әлеуметтік қамтамасыз ету құқығы өзара байланысты ұйымдастырушылық, экономикалық, заңнамалық және басқа да шараларды қамтитын нақты ұйымдастырылған қаржылық механизмді қолдану арқылы жүзеге асырылады.

Агроөнеркәсіптік кешеннің негізгі мәселелері: өндіріс пен экономикалық байланыстың тұрақсыздығы, инфляция, несиелік ресурс құнының өсуі, мемлекеттік қаржыландырудың қысқаруы, тұтынушылардың ауылшаруашылық өнімдерін сатып алу көрсеткішінің төмендеуі, кәсіпорындар арасындағы төлемдердің ұлғаюы нәтижесінде пайда болған өндірістің құлдырауы, егіс алқаптарының азаюы, мал басының саны, өнеркәсіптік және ауылшаруашылық өнімдеріне бағаның сәйкессіздігі; ауыл шаруашылығы алқаптарының қанағаттанарлықсыз жағдайы.

Қажетті реформалардың мазмұнына аса әсер ететін мемлекеттерге тән жалпы факторлар – халықтың қартаюуы, әлеуметтік шығындар мен жалақыны түбегейлі қайта бағалауға әкелетін нарықтың жаһандануы, мемлекеттік әлеуметтік қорғау жүйесінен тыс бейресми сектордың өсуі, өмір сүру деңгейі мен технологиялық прогрестің өсуіне байланысты әлеуметтік қызметтердің қымбаттауы. Қазіргі кезеңде бірқатар объективті экономикалық факторларға, сондай-ақ бейресми нормалардың басым болу себебіне байланысты Қазақстан Республикасында әлеуметтік қорғауды қаржылай қолдаудың басым институты әлеуметтік қамсыздандыру болып саналады. Тарифтік базаның жеткіліксіз мөлшері, мемлекеттік бюджеттен тыс қорлар қызметіндегі сақтандыру қағидаттарының жетімсіз дамуы және экономикалық тәуелсіздіктің нақты болмауы, нарық экономикасы дамыған елдердегідей, олардың әлеуметтік сақтандыруды қамтамасыз етудегі жетекші орындарға шығуына мүмкіндік бермеді. Нәтижесінде, елімізде әлеуметтік кепілдік деңгейі мен төлем мөлшері төмен күйінде қалады.

**Түйін сөздер:** әлеуметтік қамтамасыз ету, әлеуметтік қорғау, сала, қаржы, тетік, халық, бюджет.

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## **АНАЛИЗ ФИНАНСИРОВАНИЯ РАСХОДОВ НА СОЦИАЛЬНОЕ ОБЕСПЕЧЕНИЕ И СОЦИАЛЬНУЮ ЗАЩИТУ ГРАЖДАН РЕСПУБЛИКИ КАЗАХСТАН**

**Аннотация.** Актуализация социальной защиты населения состоит в том, что понятие «социальная защита» ассоциируется с понятием «социальная забота» государства, когда индивидуальная помощь человеку, группам людей, организованная профессионально подготовленными людьми и выражаемая понятием «социальная работа», своей конечной целью будет иметь поддержку уверенности человека в своих силах, своих возможностях. Именно поэтому в последнее время большинство специалистов социальной защиты населения отказываются от такого широкого, но неконкретного понятия как «государственное регулирование социальной сферы», а все больше пользуются термином «социальная поддержка населения со стороны государства».

Социальная политика любого государства является наиболее важной частью его внутренней политики. В условиях перехода Казахстана к устойчивому развитию проблема совершенствования системы социального обеспечения населения становится особенно острой и актуальной. Право на социальное обеспечение граждан осуществляется на практике с помощью определенного организованного финансового механизма, который включает в себя комплекс взаимосвязанных организационных, экономических, законодательных и других мер.

Основными проблемами АПК являются: спад производства, сокращение посевных площадей, поголовья скота, что произошло в результате неустойчивости производственно – хозяйственных связей, инфляции, удорожание кредитных ресурсов, сокращение государственного финансирования, сокращение государственного финансирования, снижения покупательской способности потребителей сельскохозяйственной продукции, роста неплатежей между предприятиями и диспаритет цен на промышленную и сельскохозяйственную продукцию; неудовлетворительное состояние сельскохозяйственных земель.

Общими для государств факторами, которые оказывают решающее влияние на содержание необходимых реформ, являются старение населения, глобализация рынков, приводящая к кардинальной переоценке социальных затрат и заработной платы, рост неформального сектора, который находится вне системы государственной социальной защиты, удорожание социальных услуг в связи с ростом уровня жизни и техническим прогрессом. На современном этапе в силу ряда объективных экономических факторов, а также причин, обусловленных сложившимися неформальными нормами, преобладающим институтом финансового обеспечения социальной защиты в РК является социальное обеспечение. Недостаточный размер тарифооблагаемой базы, неразвитость страховых принципов в деятельности государственных внебюджетных фондов, фактическая экономическая несамостоятельность не позволили им вывести институт социального страхования на ведущие позиции в финансовом обеспечении социальной защиты, как это имеет место в странах с развитой рыночной экономикой. В результате уровень социальных гарантий и размер выплат остаются в нашей стране низкими.

**Ключевые слова:** социальное обеспечение, социальная защита, сфера, финансы, механизм, население, бюджет.

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## TRANSFORMATION OF STATE CONTROL TODAY

**Abstract.** In most of the advanced countries of the world, the transition of the public administration system to "digital rails" is quite slow, and the development is far behind the officially defined and announced schedules.

In this regard, the assessment of the effectiveness of digital management becomes particularly relevant.

The effect of digitalization of public administration is often equated with an increase in its quality and a reduction in cost.

The effect of digitalization of public administration is mainly associated with improving its quality and reducing costs. However, while research is being conducted on the quality of digitalization, a proper assessment methodology has not yet been developed on the issue of cost.

Analysis of efficiency of public administration requires the determination, on the one hand, a clear relationship between the activities of civil servants and effectiveness of their work and, on the other hand, it is equally clear justification of expenditure on public administration and the amount of economic impact from the introduction of new services and technologies.

State control is internal and external control, control and supervision of structural and territorial units, subordinate state bodies and organizations, aimed at ensuring compliance with decisions made by state bodies, as well as requirements, verification and conformity control.

Unresolved issues lead to inefficient use of resources, incomplete implementation of the country's socio-economic development opportunities, and insufficient public confidence in state institutions

The article provides a brief description of the systemic problems of public administration and control in Kazakhstan, highlights the main reasons for ineffective audit of state bodies. The problems of improving the system of state control in Kazakhstan and improving the efficiency of Executive authorities that can be solved using digital technologies, what restrictions are there, and how they can be overcome are considered.

**Key words:** digitalization; public administration; performance assessment; digital government, state control, internal and external control.

**Introduction.** The development of e-government is studied by building a framework, criteria and models for its development stages.

In particular, A. M. al-Khouri (al-Khouri, 2011) conducted an active study of e-government initiatives and found that, despite the large number of initiatives taken around the world, only a few of them achieved the results they were originally intended to achieve. P. Chu and Yu. San were among the first to study the international e-government development ratings (Chu, Sun 2013).

We should support their conclusion that the optimal goal of e-government is to achieve or create more public values that will bring greater benefits to many stakeholders, as well as ensure social justice. Over the past 15 years, several framework ratings have been introduced to assess e-government capabilities.

E. Siskos, D. Askounis, and J. Psarras (see: Siskos, Askounis & Psarras, 2014), depending on the subject of studying the levels of digitalization, divide research into three groups: governmental (conducted by national or international organizations such as the UN, EU), academic (conducted by researchers and universities) and independent (conducted by private companies or organizations). It should be noted that

the UN is the leader among international organizations in terms of the number of studies conducted. Thus, since 2001, 10 studies have been conducted to assess the development of e-government in the world. Starting with the problem of implementing e-government (UN, 2001, 2003), the UN came to the thesis about the need to develop e-government to support changes towards a sustainable and viable society (UN, 2018).

In addition to the above, the following indicators are calculated annually: the e-participation index; the e-government and digital economy readiness rating of the economic intelligence group; the Waseda e-government rating, the world economic forum (WEF) network readiness index, and the international telecommunication Union (ITU) ICT development index. The world Bank (WB) has developed indicators of public administration, and the OECD calculates the percentage of citizens who use the Internet to send completed forms to government websites, reflecting the degree of digitalization in the provision of public services (OECD, 2015). Some of these indicators are used as benchmarks to guide discussion, as well as to evaluate government investment in e-government development.

**Methods.** Methodological research is a General method of scientific knowledge-analysis and synthesis, Content-Media analysis of sociography, a system-comparative method that allows you to determine the Genesis, sequence and functioning of the stages of development of the meat market, the attractiveness and effectiveness of digitalization of state control.

Research and experimental and methodological work in the field of development and effective development of the transformation of state control through the introduction of digitalization.

**Results and discussion.** The development of Kazakhstan's society and the obligations that arise before the state apparatus of the new format require the functioning of a strong system of public administration.

In addressing these issues, the role of state financial control as an integral part of public administration is increasing. However, the current system of state financial control in the country is «one-sided» and is aimed only at identifying cases of inefficient use of budget funds and financial violations. Meanwhile, it is necessary to introduce such an institution that will assess the existing management system and determine directions for its further effective development.

In international practice, this role is performed by the state audit.

The experience of the formation and development of audit has shown that the existing tools and methods do not take into account the specifics of the budget process and can not be fully applied to the state audit of budget recipients. It is necessary to develop a methodology for checking recipients of budget funds, taking into account the existing international experience, adapted to the realities of Kazakhstan.

In particular, the conceptual apparatus of the state audit needs to be improved. there are many terminological discrepancies in publications.

The definition of the sector of the economy to which budget recipients belong needs to be considered theoretically. The legislative framework does not contain exhaustive definitions of such concepts as: «public sector», «budget funds», «state audit», «misuse of budget funds», «financial violations», etc.

In General, the state audit for Kazakhstan is seen as a holistic and independent assessment of the effectiveness of the audit objects, covering not only financial issues, but also all areas of their activities, with the presentation of effective recommendations based on identified shortcomings and proposals for risk management.

The problem of the effectiveness of public administration, at present, is probably one of the most relevant for modern social Sciences.

The transformation processes of the national system of state financial control are dictated by the trends of time. The principles and mechanisms formed within these processes will allow it to become dynamic, adequate to national interests in the field of economy [1].

The overall future for the public sector is to move from political accountability to managerial accountability in achieving public welfare.

The current legal framework has a number of significant drawbacks: the state audit is not defined by law; it is not standardized; there are no General rules for control; regulations contain a lot of reference rules. Sometimes, in order to determine the norm that regulates a specific issue, you have to look through dozens or even hundreds of legal acts in a circle; some subordinate legal acts contradict the legal framework; excessive dynamism of the legal framework. You don't have time to comprehend one legal act, but another one comes out, canceling the first one, and so on.

Control over the distribution and use of budget funds should ensure that budget recipients achieve the goals set when providing them with allocations. For this purpose, the "Concept of introduction of state audit in the Republic of Kazakhstan" dated June 18, 2013 No. 609 has been developed, which is based on the fact that state audit is carried out continuously in the process of budget funds movement, is conducted by highly qualified specialists, affects the safety and efficiency of the use of state resources, contributes to the timely detection and prevention of financial violations. Also, on November 12, 2015, the Head of state signed a number of laws «on state audit and financial control» and «on amendments and additions to certain legislative acts on state audit and financial control», which were developed to implement the Concept of introducing state audit in the Republic of Kazakhstan, taking into account international standards.

To implement the Law, the Accounts Committee has already developed and adopted 24 regulatory legal acts, 35 documents are already in development and will be considered by 2021.

As a result of the above, it is established that the process of state audit can be divided into four stages: preparatory; organizational; working; implementation.

The indicators selected for assessing the state of various aspects of activity should not only reflect progress in a specific area, but also ensure the implementation of the overall mission and integrated budget policy strategy [2].

The lack of information on the application of the indicator system does not allow us to understand how this system can and should be used in evaluating the performance of budget recipients, budgeting, and other contexts. For this purpose, it is necessary to monitor and evaluate the achievement of indicators during the performance audit.

Thus, the system of indicators that serves as a measure of the effectiveness of budget recipients' activities should be linked to the state budget policy and social development priorities, with the results of the performance audit, which is an integral part of the state audit. This relationship is reflected in the performance assessment model.

The Institute of state audit exists in almost all countries of the world and has been developing especially actively in recent years. The mission of the state audit is to ensure, on behalf of the state and society, independent objective public control over the activities of government bodies in managing public resources entrusted to them [3].

International experience shows that controlling bodies operate very effectively at various levels of government in the state, mainly in the budgetary and financial sphere. The current system of state financial control, which has developed in a particular country, has its own characteristics related to the historical aspects of the development of the state.

Moreover, in the world practice, state financial control bodies have long been an integral part of a democratic society and a mandatory element of public financial management. Therefore, the study of the world experience in the implementation and functioning of state financial control is of great interest for our country. State control in the field of financial management is one of the most effective tools for ensuring the effectiveness of public financial resources management [5].

Today, in developed countries, the majority of state financial control bodies widely use performance audit as one of the most important methods of conducting state budget control. Its most important goal is to determine a socially significant result from the use of available public resources, for example, in the form of improving the health and quality of life of the population, improving the quality of education or reducing crime. The share of performance audit in the total number of audits of the Supreme financial control bodies in a number of developed countries exceeds 50 % [6].

The main features that most control and accounting bodies abroad possess are: independence of financial control bodies from the legislative and Executive authorities; special attention is paid to the targeted use, efficiency and economy of programs for spending financial resources; the effectiveness of the activities of control bodies is determined by comparing the funds spent on its implementation and the resulting «income» (funds returned to the budget and/or not spent in violation of budget legislation, possible lost profits from the disposal of state or municipal property).

From the point of view of socio-political practice, it is important to use the socially useful positive potential of civil society, located in the network, coordinated with the activities of the reforming public

administration system [7]. «E-democracy» is possible under the condition of clear and transparent rules for all its users, without notes and exceptions [8].

Active citizen services can become a tool for implementing citizens' constitutional rights. Under the condition of a de facto legalized referendum on the Internet, when when collecting a certain number of votes, it becomes mandatory for the authorities to fulfill the electronic will of citizens.

Otherwise, it is only a cross-section of the mood in society, even worse – a «democratic» toy. With this design, a person cannot get real freedom in the «figure». This will only be the illusion of a slave of the new world order who has sacrificed himself for the triumph of the global digital society of tomorrow [20]. Became a big HYIP 1 in the network.

That is, people's thoughts do not accumulate knowledge, but turn into «noise». The task is «to restore a value-rational world, to connect value-rational and goal-oriented spheres of social life». In the meantime, it is «the rationality of technology that has pervaded the management of social processes and the management of mass consciousness» [10].

The semantic content of the network future has yet to be determined. Create an Image of the future together, using and forming a network integrated world order [11], assessing whether a «connected» world really means a better one [12]. It is important not just to take for granted that in modern society people are becoming more dependent on information. It is necessary to reduce to the maximum extent the «epidemic» of information anomie in the network-the process when a message that has a certain meaning, at the moment of transmitting information, distorts, replaces or loses this meaning, a multiplicity of understanding options is created, which leads to the imitation of real meaning, the illusion of reality [13].

And if they also deliberately create a fake environment, how can a person understand the flow of information, draw conclusions that are adequate to reality, and make decisions to take action. Anomie as the collapse of traditional foundations, deviation in the system of social norms leads to the destruction of the unity of culture.

To understand the necessary network knowledge and not fall into the information traps placed there, you need to have a high level of critical thinking. It grows out of a fundamental education. One that teaches non-technical skills through an educational service: «if education is about how to turn on a coffee maker, it's different». Modern online education, where more and more knowledge flows, should contain the meanings and strategies of spiritual development of a person, taking into account the restoration of the integrity of the individual. Moreover, when switching to the «digital» language of communication, it is important not to lose the native speakers of the ancestral language component.

Here, the role of the state and various civil institutions is important, which should ensure compliance with the norms of speech in Internet communications and know the psychology of the network.

**Summary and Conclusion.** World experience of formation of chambers of shows that you can use one of 3 models: parliamentary (the gist of it is that Parliament has a crucial role in determining the composition of the chamber and mainly its Chairman); parliamentary (the gist of it is that the appointment of the President of the chamber President of the Republic by the decision of the Council of Ministers, or appointed by the government, and the remaining members are appointed by the President); combined (the gist of it is that allow synthesis of the first two models, i.e. participation of both the Parliament and the President in determining the composition of the accounting chamber).

In General, it should be noted that Kazakh laws also aims to implement an integrated system of public audit and financial control in the Republic of Kazakhstan, as well as the execution of orders given by the Head of state within the Five institutional reforms, and will help prevent problems through assessment and analysis of activities of state audit and financial control.

High-quality implementation of all the envisaged innovations will contribute to improving the efficiency of national resource management, the most important part of which is the sphere of public Finance, state property, natural resources, and intellectual capital of the country.

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## БҮГІН МЕМЛЕКЕТТІК БАҚЫЛАУДЫҢ ТРАНСФОРМАЦИЯСЫ

**Аннотация.** Әлемнің көптеген алдыңғы қатарлы елдерінде мемлекеттік басқару жүйесін "цифрлық рельстерге" көшіру жеткілікті баяу жүріп жатыр, даму ресми айқындалған және жарияланған кестелерден алыста қалып отыр.

Осыған байланысты цифрлық басқарудың тиімділігін бағалау ерекше өзектілікке ие болады.

Мемлекеттік басқаруды цифрландыру әсері көбінесе оның сапасын арттырумен және шығындарды төмендетумен теңестіріледі.

Мемлекеттік басқаруды цифрландыру тиімділігі негізінен оның сапасын арттырумен және шығындарды төмендетумен байланысты. Бірақ егер цифрландыру сапасына қатысты зерттеу жүргізілсе, онда бағалаудың тиісті әдістемесінің шығындылығы мәселесі бойынша әзірше әзірленбеген.

Мемлекеттік басқарудың тиімділігін талдау бір жағынан, мемлекеттік қызметшілердің қызметі мен олардың еңбегінің нәтижелілігі арасындағы нақты өзара байланысты және екінші жағынан, мемлекеттік басқаруға арналған шығыстар көлемінің және жаңа сервистер мен технологияларды енгізуден экономикалық қайтарым көлемінің дәлме-дәл негіздемесін айқындауды талап етеді.

Мемлекеттік бақылау - бұл ішкі және сыртқы бақылау, құрылымдық және аумақтық бөлімшелерінің, ведомстволық бағынысты мемлекеттік органдарының және ұйымдарының мемлекеттік органдар қабылдаған шешімдерді, сондай-ақ талаптарын орындауын қамтамасыз етуге бағытталған бақылауы және қадағалау, талаптарға сәйкестігін тексеру және байқау жөніндегі бақылауы.

Бұл мәселелердің шешілмеуі ресурстарды тиімсіз пайдалануға, елдің әлеуметтік-экономикалық даму мүмкіндіктерін толық іске асырмауға, қоғамның мемлекет институттарына сенім дәрежесінің жеткіліксіздігі

Ұсынылған мақалада Қазақстанда мемлекеттік басқару мен бақылаудың жүйелік проблемаларына қысқаша сипаттама беріліп, мемлекеттік органдардың тиімсіз аудитінің негізгі себептері айқындалды. Қазақстанда мемлекеттік бақылау жүйесін жетілдіру және сандық технологияларды пайдалана отырып шешілуі мүмкін атқарушы билік органдары қызметінің тиімділігін арттыру мәселелері, қандай шектеулер бар, олар қалай ескерілуі мүмкін.

**Түйін сөздер:** цифрландыру; мемлекеттік басқару; тиімділікті бағалау; цифрлық үкімет; сервис; технология, мемлекеттік бақылау, ішкі және сыртқы бақылау.

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## ТРАНСФОРМАЦИЯ ГОСУДАРСТВЕННОГО КОНТРОЛЯ СЕГОДНЯ

**Аннотация.** В большинстве передовых стран мира перевод системы государственного управления на «цифровые рельсы» происходит достаточно медленно, развитие далеко отстает от официально определенных и объявленных графиков.

В связи с этим особую актуальность приобретает оценка эффективности цифрового управления.

Эффект от цифровизации государственного управления зачастую отождествляется с повышением его качества и снижением затратности.

Эффект от цифровизации государственного управления в основном ассоциируется с повышением его качества и снижением затратности. Но если относительно качества цифровизации исследования ведутся, то по вопросу затратности надлежащей методики оценки пока не выработано.

Анализ эффективности государственного управления требует определения, с одной стороны, четкой взаимосвязи между деятельностью государственных служащих и результативностью их труда и, с другой стороны – столь же четкого обоснования объема расходов на государственное управление и объема экономической отдачи от внедрения новых сервисов и технологий.

Государственный контроль – это внутренний и внешний контроль, контроль и надзор за структурными и территориальными подразделениями, подведомственными государственными органами и организациями,

направленный на обеспечение соблюдения решений, принятых государственными органами, а также требований, проверки и контроля соответствия.

Нерешенность этих вопросов ведет к неэффективному использованию ресурсов, неполной реализации возможностей социально-экономического развития страны, недостаточной степени доверия общества к институтам государства

В представленной статье дана краткая характеристика системным проблемам госуправления и контроля в Казахстане, выделены основные причины неэффективного аудита госорганов. Рассмотрены проблемы совершенствования системы государственного контроля в Казахстане и повышения эффективности деятельности органов исполнительной власти, которые могут быть решены с использованием цифровых технологий, а также определено, какие ограничения имеются, каким образом они могут быть преодолены.

**Ключевые слова:** цифровизация, государственное управление, оценка эффективности, цифровое правительство, государственный контроль, внутренний и внешний контроль.

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## A CONCEPTUAL APPROACH TO MANAGING MATERIAL RESOURCES IN PRODUCTION ENTERPRISES

**Abstract.** The applied methods and methods of managing the provision and use of material resources at production enterprises in Kazakhstan are the adaptation of traditional methods for centrally planned economy to the conditions of emerging market relations. The practice of economic activity of industrial enterprises shows their desire to preserve the existing relations with suppliers of material resources in the past. This one-sided orientation leads to the complete dependence of the enterprise on a single partner. The inert policy of enterprises-consumers of material resources encourages suppliers to raise prices above the current level on the world market. In industrial enterprises, the dismantling of centralized material management was not supplemented by the formation of an appropriate mechanism for managing the material intensity of products. As a result, the efficiency of using material resources decreases.

The lack of an adequate mechanism for managing processes related to the provision and production use of material resources makes it necessary to study the problem of managing the material resources of production enterprises in the conditions of the formation of market relations.

At the same time, the analysis of works that reveal certain aspects of material resource management, rationalization of their use in production enterprises shows that there is no complete concept of management of the enterprise provision and production use of material resources as a single system, the efficiency of which largely depends on the level of costs and the need for working capital.

Production enterprises in Kazakhstan need an appropriate methodological basis to form their own model of material resource management, taking into account the specifics of internal potential and the variability of the external environment.

In accordance with the intended purpose in the study solved the following tasks: revealed the economic laws of material resources use and the features of their exploitation as an object of management in manufacturing enterprises: based on the selected patterns of use of material resources and synthesis of existing concepts for the management of material resources define the content of management of material resources for the production of the company; reviewed and summarized from the perspective of admissibility for p of industrial enterprises of Kazakhstan; developed by Western experts, methods for managing purchases, deliveries, and inventory of material resources in manufacturing firms; based on system and situational approaches, methodological foundations for managing material resources of an industrial enterprise have been developed.

**Key words:** management, material resources, production, efficiency, formation, cost level.

**Introduction.** Globalization of the modern economy, activation of integration processes, rapid changes in the sectoral structure of the economy and the development of high-tech knowledge-intensive industries, fundamental changes in production technology in most industries require changes and transformations in the management of the reproduction cycle as a whole and its individual stages - implementation, production, material and technical support of production, regulatory, organizational and design preparation of production.

In most industrial production sectors that convert material resources into finished products, the cost increment is more determined by their correct choice and effective use. Due to the fact that in a market economy, economic relations with suppliers of material resources, coordination of order and delivery



schedule, pricing and forms of payment associated with a high degree of uncertainty and risk, it is assumed, first, the strategic management of this process and, secondly, the application of methods of management of logistics, adequate to new economic conditions.

So far, the share of material resources in total production costs exceeds 60%, i.e. it has a decisive impact on the cost and financial results of organizations, determines the competitiveness of a particular type of goods (works, services) and the organization as a whole [1].

**Methods.** Methodological research is a General method of scientific knowledge-analysis and synthesis, Content-Media analysis of sociography, system-comparative method that allows you to determine the Genesis, sequence and functioning of the stages of development of the meat market, the attractiveness and effectiveness of the meat market.

Research and experimental-methodical work in the field of development and effective management of material resources at production enterprises.

**Results and discussion.** The art of inventory management is: optimizing the overall size and structure of inventory of inventory items; minimizing maintenance costs; ensuring effective control over their movement. [2]

Thus, the economist T. P. Karpova [3] believes that the purpose of inventory management is to keep the annual total cost of inventory provision at a minimum level. for this purpose, it is necessary to minimize the following indicators: the number of orders per year; the duration of insurance cycles; the duration of supply cycles and intra-plant movements; the size of ordered batches; the number of materials in stock and the number of storerooms and warehouses; the total order cycle.

The inventory management system includes the correct accounting organization that allows you to control the balances, receipts, and expenditures of inventory in the warehouses of the enterprise. To improve the accounting of material resources, it is necessary to constantly improve the documents and accounting registers used, as well as to increase the level of automation of accounting and computing work. If the company has implemented a stock management program or other similar information system, you can get monthly (or more often) all the necessary information about the actual state of stocks.

Material cost analysis is important for effective financial management. Inventory can make up a significant share not only in the current assets, but also in the assets of the enterprise as a whole. This may indicate that enterprises are experiencing difficulties with the sale of their products, which in turn may be due to poor product quality, violation of production technology and the choice of inefficient sales methods, insufficient study of market demand and market conditions. According to analyst Savitskaya G. V. for effective inventory management, it is necessary to conduct an analysis of the use of material resources, which includes the following types of analysis: analysis of the company's availability of material reserves; analysis of the effectiveness of the use of material resources [4].

A sound regulatory framework on reserves generated throughout the specified item used in the enterprise material resources, taking into account the current conditions and specifics of supply and marketing is the tool that allows us to solve large complex problems in management of material flows to identify the scarce and unnecessary material items, to determine the required delivery time, the required amount of working capital for the acquisition of tangible resources. Professor V. Paliy in his work defines the optimal procedure for determining the standard costs of materials, which includes two stages: determining the physical standards, that is, the type and quantity of materials required for a given product; determining the standard prices for materials, that is, current or expected prices for the period of the standards [5].

To keep the annual total cost of inventory provision at a minimum level, you must correctly determine the optimal order size, that is, determine the ordered quantity at which the cost of the entire inventory volume and its storage will be minimal. It is also important in inventory management to determine the moment when you need to make an order to receive materials. this requires regulating the delivery time and determining the amount of insurance stock.

Volodina V. E. in her works considers increasing the economic efficiency of material inventory management of an industrial enterprise on the basis of a logistics concept [6].

She argues that the solution to the problem of effective inventory management in the modern economic environment requires a transition from traditional management methods to logistics, which allows you to include inventory management methods in the main strategies of market behavior. Logistics

is used to optimize inventory in space and time. It coordinates the movement of inventory and ensures that the necessary materials are provided in a timely manner, in the right place, in the required quantity and quality. As a result, the cost of warehousing and the duration of capital in stocks are reduced, which helps to accelerate its turnover and improve the efficiency of the enterprise.

Each enterprise should have its own inventory management system designed to meet its specific requirements [7]. It will be effective only with the participation and support of all divisions of the enterprise. An effective way to get support is to provide information to Department managers.

Material and technical support of production as a component of logistics and the supporting subsystem of the production management system largely determines the quality of the processing process of the system's input to its output-the finished product. If the input quality of the system is low, it is not possible to get a high quality of its output.

Process logistics of production to timely delivery to warehouses or directly to the jobs required under the business plan of material and technical resources.

The material and technical resources include: raw materials, materials, components, purchased technological equipment and technological equipment (tools, cutting and measuring tools), new vehicles, loading and unloading equipment, computer equipment and other equipment, as well as purchased fuel, energy, and water. In other words, everything that comes to the enterprise in material form and in the form of energy belongs to the elements of material and technical support of production.

For the smooth functioning of production, well-established material and technical support is necessary, which is carried out at enterprises through the logistics bodies.

The purpose of logistics of production:

- timely provision of enterprise divisions with the necessary types of resources of the required quantity and quality [8];
- improving the use of resources increasing labor productivity, capital return, reducing the duration of production cycles of manufacturing products, ensuring the rhythm of processes, reducing the turnover of working capital, full use of secondary resources, improving investment efficiency;
- analysis of the organizational and technical level of production and quality of products from the supplier's competitors and preparation of proposals for improving the competitiveness of the supplied material resources or changing the supplier of a specific type of resource. In order to improve the quality of «input», enterprises should be afraid of changing non-competitive resource suppliers [9].

To achieve these goals, employees of supply agencies must study and take into account the supply and demand for all material resources consumed by the enterprise, the level and changes in prices for them and for the services of intermediary organizations, choose the most economical form of commodity movement, optimize inventory, reduce transport, procurement and storage costs.

Material resource management is one of the most important aspects of the activities of large industrial enterprises and includes a wide class of tasks-from selecting raw material suppliers and determining internal and external logistics schemes to making decisions on the construction of additional workshops and increasing (or reducing) production capacity [10]. The efficiency of using the material resources available to the organization largely determines the level of production costs and the quality of final products, which, in turn, has a direct impact on the competitiveness of the enterprise and its survival.

Material resource management involves organizing the supply of raw materials, materials, substances and components in accordance with established standards and regulations.

It is also the development, documentation and implementation of rational measures that contribute to reducing the amount of waste generated in the technological cycle and their high-quality utilization.

The effectiveness of material resource management is thus determined by the contribution of this process, as well as its subordinate processes, to the overall efficiency of the enterprise as a production system.

We will formulate the following conceptual provisions for the management of material resources of a production enterprise in modern conditions [11]:

- 1) The main tasks of material resources management are to control their rational use, as well as to improve the efficiency of the production system by changing the configuration (structure) of the production system and redistributing resources between its elements;
- 2) There should be flexibility in switching between different performance indicators of the production system (economic, environmental, hybrid and other indicators);

3) Effective management of material resources of a large industrial enterprise is impossible without forming a complete picture of the relationships between the elements of the production system and the environment;

4) Methods of managing material resources should be sufficiently universal in relation to the scale of the object of management (a separate division, an enterprise as a whole, or a group of enterprises).

The increase in economic activity during this period, the increase in market saturation with goods and services led to the fact that the duration of the presence of goods on the market was determined by their quality, price and speed of delivery to consumers ("diffusion" of innovations). Innovative features include the following:

- creating a new product;
- use of new raw materials (cheaper or better quality);
- application of new technologies;
- formation of new (more rational) organizational structures;
- development of new markets (sales of products, capital, cheaper or more skilled labor). It was

during this period that transnational corporations began to actively develop in the world, seeking to combine all of the above innovative advantages and in logistics, the theory of systems and compromises was developed.

Systems theory assumes simultaneous implementation of system and complex approaches to management.

The system approach involves considering an enterprise as a system consisting of many interrelated elements (including logistics), on the one hand, and as an element of a larger system (in particular logistics) that unites several enterprises. An integrated approach involves considering the problems of production, logistics, personnel, Finance, and so on from a unified perspective, both at the intra-company and inter-company levels.

The theory of systems allowed us to consider the problem of commodity movement from a scientific point of view as a complex one, and to represent various enterprises involved in commodity movement as a single system. This has led to an understanding of the need to take into account and coordinate the characteristics, interests, internal and external relationships of all participants in the logistics chain. Coordination based on the principles of consistency and complexity of actions of participants in the logistics chain, taking into account their capabilities, interests and characteristics, allowed us to bring logistics activities to a new level of development.

The theory of compromises as a component of the theory of systems allows you to find solutions that minimize the total costs of logistics activities and maximize the gross profit of participants in the logistics process. The influence of systems theory and the theory of trade-offs is particularly pronounced in the activities of transnational corporations (TNCs).

The development of TNCs has led to the promotion of unification of the conditions of international economic activity in the form of standardization of norms, rules and technical means of implementing logistics activities both at the regional (EU, NAFTA, MERCOSUR, APEC) and at the world (WTO) level.

Before the development of TNCs, the share of which now accounts for about a quarter of world GDP, the physical transfer of material resources between States is largely complicated by differences in national legislations, which led to an increase in workflow in the border clearance of goods, growth period, time of delivery, and complexity of the order of financial calculations, etc. When manufacturers ceased to fit within the borders of one state, maneuvering between the price and quality of raw materials, labor, markets, etc., formed of TNCs.

During this period, the role of logistics has increased many times. At the same time, measures were taken to unify the rules of international economic activity, which led to the simplification of border and customs control. In the context of integration and globalization of the world economy, international transshipment, storage, distribution, information and other logistics centers have been formed. New transport technologies (including intermodal) have been developed.

**Summary and Conclusion.** The decline in economic activity in the 2020s, caused by the global economic crisis of energy nature, according to forecast estimates, will put its imprint on the development of production and economic activities in General, and logistics in particular. The assumption about the development of combinatorial management tools (including logistics) in this period is based on the analysis of the following trends in socio-economic development.

First, in the conditions of the expected change of technological structures, the cluster of radical innovations is still at the stage of development and accumulation of new knowledge. To overcome, or rather localize, the decline, we are actively looking for options for local improvements of innovations coming off the market (product modernization), including the search for combinatorial options for their use.

Second, reducing the life cycle of products in the conditions of scientific and technological progress makes enterprises more often switch to new types of products, and this requires the universalization of both production and logistics schemes, including solutions of a combinatorial nature.

Third, the high degree of market saturation in a post-industrial society requires the formation of logistics systems to focus not only on the relatively frequent change of product types, but also on the frequent change of its producers. This trend requires that the construction of logistics systems also rely on the principles of combinatorics.

Fourth, in the context of the development of the information economy, the process of replacing physical volumes of final (finished) products, products in progress, and initial material resources with reliable information tends to slow down. Information flows are unable to completely replace the material. In this regard, logistics systems should be based on the principles of rationalization of combinations of managed flows, including: material flows, information flows, financial flows and service flows.

Thus, in the coming years, the development of logistics will be associated with the stage of combinatorial innovative solutions. It is on these logistics solutions that humanity will move to the sixth technological order.

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### **ӨНДІРІСТІК КӘСІПОРЫНДАРДА МАТЕРИАЛДЫҚ РЕСУРСТАРДЫ БАСҚАРУДЫҢ ТҰЖЫРЫМДАМАЛЫҚ ТӘСІЛІ**

**Аннотация.** Қазақстанның өндірістік кәсіпорындарында материалдық ресурстарды қамтамасыз ету мен пайдалануды басқарудың қолданылатын тәсілдері мен тәсілдері орталықтандырылған-жоспарланып отырған экономика үшін қалыптасқан нарықтық қатынастар жағдайларына дәстүрлі әдістердің бейімделуі болып табылады. Өнеркәсіптік кәсіпорындардың шаруашылық қызметінің практикасы олардың бұрын қалыптасқан материалдық ресурстарды жеткізушілермен байланысты сақтауға ұмтылысын көрсетеді. Мұндай бір жақты бағдар кәсіпорынның жалғыз серіктестен толық тәуелділігіне әкеледі. Материалдық ресурстарды тұтынушы кәсіпорындардың инертті саясаты өнім берушілерді әлемдік нарықта қалыптасқан деңгейден жоғары бағаны көтеруді көтермелейді. Өнеркәсіптік кәсіпорындарда материалды үнемдеуді орталықтандырылған басқаруды демонстрациялау өнімнің материал сыйымдылығын басқарудың тиісті тетігін қалыптастырумен толықтырылмаған. Соның салдарынан материалдық ресурстарды пайдалану тиімділігі төмендейді.

Материалдық ресурстарды қамтамасыз етуге және өндірістік пайдалануға байланысты процестерді басқару тетігінің нарықтық жағдайларға барабар болмауы нарықтық қатынастардың қалыптасу жағдайында өндірістік кәсіпорындардың материалдық ресурстарын басқару проблемасын зерттеу қажеттілігін негіздейді.

Сонымен бірге материалдық ресурстарды басқарудың, оларды өндірістік кәсіпорындарда пайдалануды ұтымды етудің қандай да бір аспектілерін ашатын жұмыстарды талдау осы уақытқа дейін кәсіпорында материалдық ресурстарды бірыңғай жүйе ретінде қамтамасыз ету мен өндірістік пайдалануды басқарудың біртұтас тұжырымдамасы жоқ екендігін көрсетеді, оның жұмыс істеуі айтарлықтай шамада шығын деңгейі мен айналым қаражатына қажеттілік тәуелді болады.

Қазақстанның өндірістік кәсіпорындары ішкі әлеуеттің ерекшелігін және сыртқы ортаның өзгеруін ескеретін материалдық ресурстарды басқарудың өзіндік моделін қалыптастыру үшін тиісті әдіснамалық негізде мұқтаж.

Қойылған мақсатқа сәйкес зерттеуде келесі міндеттер шешілді: материалдық ресурстарды пайдаланудың экономикалық заңдылықтары анықталды және оларды өндірістік кәсіпорындарда басқару объектісі ретінде пайдалану процесінің ерекшеліктері ашылды: материалдық ресурстарды пайдаланудың бөлінген заңдылықтары және материалдық ресурстарды басқару бойынша қолда бар ұғымдарды жинақтау негізінде

өндірістік кәсіпорындар үшін материалдық ресурстар менеджментінің мазмұны анықталды; Қазақстанның өндірістік кәсіпорындары үшін қолайлылық тұрғысынан қаралып, қорытылды.; Батыс мамандары әзірлеген өндірістік фирмаларда сатып алуды, жеткізуді, материалдық ресурстар қорын басқару әдістері; жүйелік және ахуалдық тәсілдер негізінде өнеркәсіптік кәсіпорынның материалдық ресурстарын басқарудың әдіснамалық негіздері әзірленді.

**Түйін сөздер:** басқару, материалдық ресурстар, өндіріс, тиімділік, қалыптастыру, шығындар деңгейі.

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### КОНЦЕПТУАЛЬНЫЙ ПОДХОД К УПРАВЛЕНИЮ МАТЕРИАЛЬНЫМИ РЕСУРСАМИ НА ПРОИЗВОДСТВЕННЫХ ПРЕДПРИЯТИЯХ

**Аннотация.** Применяемые приемы и способы управления обеспечением и использованием материальных ресурсов на производственных предприятиях Казахстана являются приспособлением традиционных для централизованно-планируемой экономики методов к условиям нарождающихся рыночных отношений. Практика хозяйственной деятельности промышленных предприятий показывает их стремление к сохранению сложившихся в прошлом связей с поставщиками материальных ресурсов. Такая односторонняя ориентация ведет к полной зависимости предприятия от единственного партнера. Инертная политика предприятий-потребителей материальных ресурсов поощряет поставщиков поднимать цены выше уровня сложившегося на мировом рынке. На промышленных предприятиях демонтаж централизованного управления материалосбережением не был дополнен формированием соответствующего механизма управления материалоемкостью продукции. Как следствие, снижается эффективность использования материальных ресурсов.

Отсутствие адекватного рыночным условиям механизма управления процессами, связанными с обеспечением и производственным использованием материальных ресурсов, обуславливает необходимость исследования проблемы управления материальными ресурсами производственных предприятий в условиях становления рыночных отношений.

Вместе с тем анализ работ, раскрывающих те или иные аспекты управления материальными ресурсами, рационализации их использования на производственных предприятиях показывает, что до настоящего времени отсутствует целостная концепция управления на предприятии обеспечением и производственным использованием материальных ресурсов как единой системой, от эффективности, функционирования которой в значительной мере зависит уровень издержек и потребность в оборотных средствах.

Производственные предприятия Казахстана нуждаются в соответствующей методологической основе для формирования собственной модели управления материальными ресурсами, учитывающей специфику внутреннего потенциала и изменчивость внешнего окружения.

В соответствии с поставленной целью в исследовании решены следующие задачи: выявлены экономические закономерности использования материальных ресурсов и раскрыты особенности процесса их использования как объекта управления на производственных предприятиях: на основе выделенных закономерностей использования материальных ресурсов и обобщения имеющихся понятий по управлению материальными ресурсами определено содержание менеджмента материальных ресурсов для производственных предприятия; рассмотрены и обобщены с позиции приемлемости для производственных предприятий Казахстана; выработанные западными специалистами методы управления закупками, поставкой, запасами материальных ресурсов в производственных фирмах; на основе системного и ситуационного подходов разработаны методологические основы управления материальными ресурсами промышленного предприятия.

**Ключевые слова:** управление, материальные ресурсы, производство, эффективность, формирование, уровень издержек.

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**ADAPTATION OF MODELS OF FOREIGN COUNTRIES  
IN THE MANAGEMENT OF MUNICIPAL DEVELOPMENT  
AND ITS RESOURCE PROVISION**

**Abstract.** Sustainable development of territories, functioning of modern efficient economy, attraction of territorial potential for solving the most important range of strategic socially-oriented tasks of the state and local self-government are based on the vital activities of institutional entities at various levels, including socio-ecological and economic complexes of municipalities.

At present, there is a multi-level, multi-subject system of municipal resource management that is not able to provide solutions to the problems of sustainable development of the municipality and the necessary effectiveness of local government. In fact, there is a contradiction between the requirements of the market and the specifics of municipal management, which can be resolved on the basis of the formation and functioning of a system of resource support for sustainable development of the municipality. The resolution of this contradiction should be considered in the context of the institution of local self-government, its dual nature, expressed in a combination of state and social principles within this institution. This combination is determined by the need for citizens to participate in managing the Affairs of the country and the local community, and requires their own resources. Effective use of local resources is the main task, which will reduce the damage caused to the environment, improve the quality and standard of living of the population, the competitiveness and security of both municipalities, regions, and other economic agents.

As a result of mastering the experience of the municipal governance structure in the West, this management system plays an important role in the free democracy of developed economies.

The article analyzes the Western European theory and practice of complex solutions to issues of socio-economic development of municipalities, including in the field of health and social security. An important task of municipalities is to maximize the potential of self-financing for the implementation of the developed strategy for the development of these entities, and to actively attract free funds of the population.

**Key words:** sustainable development, socio-economic development, planning, municipal formation, sustainable development strategy.

**Introduction.** Research and analysis of the current stage of development of local self-government in Kazakhstan, identification of problems of socio-economic development of municipalities, as well as the search for rational and effective methods of solving these problems should be carried out taking into account the constructive use of world experience.

The processes of formation and development of local self-government taking place in Kazakhstan in the last decade do not reduce the interest of domestic scientists and practitioners in foreign experience in regulating socio-economic territorial development. This indicates the relevance of the issue of the possibility of using world experience in the specific conditions of modern Kazakhstan.

Let's consider a number of topical Kazakhstan problems of local self-government resource provision in the aspect of international experience. Taking into account the fact that Kazakhstan has joined the European Charter of local self-government, first of all, we will analyze the experience of European countries.

**Methods.** The paper uses methods of modeling and comparative analysis. The methods of the «tree» of goals and expert assessments were used to solve individual tasks. The information and empirical base of the research is the normative legal acts of the regional and municipal levels; official data of the Republican and regional bodies; methodological, scientific, educational and reference literature, materials of the Internet, as well as the research conducted by the authors.

Methodological research is a General method of scientific knowledge-analysis and synthesis, Content-Media analysis of sociography, system-comparative method that allows to determine the Genesis, sequence and functioning of the stages of development of the meat market, the attractiveness and effectiveness of adapting foreign experience in the management of the development of municipal institutions.

Research and experimental-methodical work in the field of development and effective adaptation of foreign experience in the management of the development of municipal institutions.

**Results and discussion.** One of the most acute problems facing local self-government in Kazakhstan, as already noted, is the problem of a clear division of responsibilities between the Federal, regional and local levels of government, which is aggravated by budget imbalances. The European Charter of local self-government [1], which Kazakhstan has joined, sets out the conceptual principles of modern European practice of organizing budget and tax relations of municipalities. These are the principles of subsidiarity, sufficiency, complementarity, transparency and solidarity.

On the basis of the principle of «subsidiarity», the basis for the vertical distribution of powers between all levels of government is formed. On the one hand, it is necessary to allow elected bodies at all levels to independently exercise their powers in accordance with the needs of the local population and the interests of the state as a whole, and on the other hand, to ensure that the required financial and other resources are spent in the most effective way.

The principle of «sufficiency» reflects the need to ensure consistency between the amount of financial resources available to local self-government bodies and the content and scope of powers that they are given as a result of the distribution of functions by levels of government.

Based on the principle of «complementarity», the delegation of additional functions should be accompanied by an adequate reallocation of resources.

The principle of «transparency» means cooperation between all levels of government in the state, both in the distribution of powers and in the provision of financial resources for their implementation. The allocation of resources should be based on objective, not political, criteria.

According to the principle of «solidarity», well-off regions and municipalities should provide support to those territories that are experiencing a temporary shortage of financial resources. This horizontal solidarity must be voluntary, it should take place under clearly defined conditions and not lead to dependent attitudes of individual regions or municipalities.

These are the main principles for the development and implementation of a policy for the distribution of powers and resources between levels of government in the European Union. However, as the analysis of foreign experience shows, the universality of these principles does not mean that there are identical approaches to solving these issues. Thus, there are two fundamentally different models for the formation of subjects of local self-government [2].

The first model assumes the exercise by local authorities of authority to manage services related to territorial infrastructure and the provision of services to the population: ensuring public order at the local level (police, civil defense, burial sites, etc.), communications, hygiene (sanitation, removal and processing of household garbage, etc.), assistance to the population (social assistance, but not social insurance), management of municipal property, sports and cultural institutions, if necessary, public transport. However, urban planning is rarely the exclusive domain of local authorities. This approach is practiced in most countries of Western Europe, where municipalities traditionally enjoy a fairly broad freedom. However, the main functions remain in the hands of the state or directly controlled structures.

In the second model, local authorities (communes) provide not only the basic authority to manage the territory, but also most of the powers corresponding to the functions of the state. In this case, local authorities may be responsible for social insurance, social institutions, the health system, and education. This model is typical of the Scandinavian countries (Sweden, Denmark, Finland, Norway), and it is also less pronounced in countries such as the Netherlands or the United Kingdom. Of the Central and Eastern European countries, this model exists in Hungary and, in part, in Poland.



This model assumes a different type of relationship with the state. A larger budget should also correspond to a broader range of responsibilities. Although the powers are considered their own, they are actually mandatory and strictly regulated, especially in terms of ensuring the main state functions. At the same time, the legality of a decision by local authorities is constantly checked. Continuous monitoring is based on strict regulations, which are determined by special laws.

Within this model, local governments should be provided with a sufficiently broad financial base and eliminate the economic inequality of different administrative divisions.

Depending on the implemented model of power distribution in European countries, there are two principal approaches to financial support of local authorities.

In the first approach, transfers, both in the form of budget grants and in the form of participation of local budgets in revenues from regulatory taxes, are the main means of financing. Local taxation plays a secondary role. The amount of budget funds provided to each territorial community is calculated based on the needs indicator.

It is typical for international practice that expenditure requirements, or normative expenditures, are set or prescribed in the budget execution process. The norms used in budget execution may be imputed in different ways, but the main purpose of using such norms is to ensure that certain types of services are provided by local authorities, at least at a level that is considered acceptable from the point of view of the Central authorities.

An approach can be applied that determines the approximate requirements for expenditures by calculating the cost of providing a «standard level» of services in a typical territorial entity. It is known as the «unit cost» approach.

In many countries, transfers transferred by the center to lower-level budgets are often aimed at equalizing the ability of local authorities to provide budget services to the population.

At the same time, it is necessary to assess the expenditure needs of each territory in comparison with others - expenditure standards.

In world practice, there are several ways to determine expenditure standards. One of them is based on determining the necessary standards of services through expert evaluation, the other is based on calculating the unit cost of the minimum, or standard, volume of specific budget services in a representative region. In this case, it is usually assumed that the standard depends on various territorial features, or factors, such as the number of certain population groups or the number of infrastructure facilities, after which each factor is assigned a specific weight that reflects its relative importance. A large number of countries apply this approach, although the wording used differs significantly.

Currently, expenditure standards in Australia are determined from expenditures of lower-level authorities, divided into eleven items. The cost items and factors used in determining the standards for these items are presented below.

Social security: population size, level of power, gender and age composition, population density, prices for factors of production, demographic composition of the population.

Culture and recreation: level of government, migration, population density, prices for factors of production, land rights, status of the capital of the state, demographic composition of the population, number of temporary residents, degree of urbanization, natural environment.

Improvement and development of the territory: the level of government, the cost of factors of production, land rights, the status of the state capital, the demographic composition of the population, level of development and land use, the degree of urbanization.

Utilities: level of government, population density, relative expenditure indicators, prices for factors of production, land rights.

Providing services to the industrial sector: level of government, population density, relative expenditure indicators, prices for factors of production, land rights, natural environment.

Education: the size of the relevant population, level of authority, gender and age composition of the population, migration, population density, economic conditions, cost of stages of education, prices of factors of production, environment, scale of service provision, demographic composition of the population, number of temporary residents, degree of urbanization, vandalism and level of security.

Health care: level of power, migration, population density, treatment of inpatient patients, prices for factors of production, treatment of outpatient patients, gender and age composition and population.

Law enforcement and public safety'. population size, level of government, gender and age composition of the population, number of offenders, migration, population density, prices of factors of production, land rights, status of the capital of the state, environment, scale of services, demographic composition of the population, number of temporary residents, degree of urbanization, vandalism and security.

Transport, level of government, population density, price of factors of production, land rights, length of roads, intensity of road use, demographic composition of the population.

Economic activity and other functions', level of power, population density, relative expenditure indicators, price of factors of production, environment, demographic composition.

Commercial enterprises, population, level of power, relative expenditure indicators, factor prices, land rights, environment, scale of service delivery, demographic composition, degree of urbanization, vandalism, and security.

These factors are called «restraints» and are expressed as a ratio between the value they have in a particular territorial entity and the average value for all territorial entities. The calculation of the standard for each item of expenditure begins with the calculation of the per capita amount equal to the value of expenditures for each item for previous years on average for all territories. These standard per capita standards are then adjusted for the above-mentioned "constraints" with appropriate weights, which are determined by regression or expert methods.

Thanks to the system used, Australia has managed to achieve a significant equalization of conditions for its constituent territorial entities. At the same time, this system is extremely complex and requires large amounts of data to function.

In the UK, local taxation is reduced to a land tax on residential buildings, which provides about 11% of all income of British local governments [3]. On the other hand, the state levies a tax on technical buildings throughout the country at a uniform rate, and all proceeds from it are redistributed among local governments in proportion to the number of their residents. Revenues from this tax amount to about 14% in local budgets. Local authorities also receive non-tax revenues in the form of receipts from public fees (11 %). The balance is covered by transfers, which are usually divided into General grants and subsidies, and the share of subsidies has increased in recent years. Subsidies can be calculated in different ways, but they are all allocated to Finance specific and specified categories of expenditure. As for the grant, it is a simple balance, which is calculated as the difference between the amount of funding for the services that local authorities should provide to the population, on the one hand, and the estimated amount of their own resources and subsidies allocated to Finance certain functions, on the other. All local communities are thus guaranteed the same level of service delivery with the same taxation [4].

In the UK, the methodology for assessing expenditure needs allows the Central level of government to compensate lower levels of government for differences in expenditure needs within the amounts necessary for them to provide approximately the same level of budget services [5]. For this purpose, a regression analysis method is used to determine the factors that affect the need for budget services, and regression coefficients are used as weights.

This method is currently applied as a baseline to the seven expenditure items listed below, together with the factors that affect the level of expenditure for these items.

Education: number of students; number of students requiring special attention; number of students from low-income families; cost of education workers' labor; rent; population density.

Road maintenance: length of the road network; labor costs; traffic density; population; frequency of precipitation in the form of snow.

Social security: number of residents over the age of 65, 75 and 85; number of children from single-parent and low-income families, as well as living in rented premises and in families without housing; number of children from families belonging to national minorities of color; number of residents between the ages of 18 and 64; number of citizens suffering from mental disorders; number of citizens with physical disabilities; number of citizens living in overcrowded housing; number of citizens living in rented housing; the number of families living in areas under joint ownership; the number of colored national minorities.

The main method for selecting factors and determining their specific weights is regression analysis. However, for some items of expenditure, factors and specific weights are determined based on an expert assessment after consultation with regional (local) authorities. The method described applies only to current expenditures and does not include capital expenditures.

As for Australia, these factors are used to calculate the ratio between the value they have in a particular territorial entity and the average value for all territorial entities. Thus, the relative indicators of the need for each sub-Federal level in budget expenditures are determined, which are then used for the alignment procedure.

The system used in the UK is probably the most comprehensive of all modern systems. It allows you to: take into account almost all (currently existing) budget services and at the same time include in the analysis a wide range of features of territorial entities, including cost differences; achieve almost complete alignment due to the fact that the same unit costs are provided in all territorial entities with the same conditions.

This alignment is achieved due to the extreme complexity of the system, its functioning requires large amounts of information. In addition, this system is not fully understood by employees of local government structures due to the extreme complexity and lack of transparency.

The second approach to financing local governments is focused on their own tax sources of income for local budgets.

In some countries (for example, in Denmark and Sweden), local budget funding is mainly provided by local income tax, the rate of which is determined by local governments for each individual municipality. In Denmark, local tax revenues account for 52.2 % of all local budget funds, and in Sweden this figure reaches even 56 %, in Finland-36 %, in Norway-43 %, in Switzerland-45 % [6]. The advantage of this approach lies in the direct responsibility of local authorities that manage finances to residents-tax payers, as well as in ensuring high financial autonomy of local communities. However, such amounts of local taxes have a serious impact on the total amount of taxpayer deductions and, accordingly, on the level of their income. In addition, due to the uneven distribution of tax potential with high local taxation, an effective system of inter-budgetary regulation is necessary, otherwise this will lead to significant differences in the level and quality of services provided to the population. Therefore, along with direct tax regulation, the state reserves the opportunity to adjust the priorities set by some local authorities. Implementation of this possibility is provided with the help of state grants.

For example, in Sweden, non-targeted subsidies are used to equalize the revenue potential, Supplement the income of municipalities where the population has been declining for a long time, and to equalize the differences between territories in the cost of providing services. In the latter case, expenditure standards are determined.

In Switzerland, expenditure requirements are also a factor taken into account when allocating grants. The expenditure needs of a Canton are calculated as the product of two factors: the country's average per capita cantonal income and the population of the Canton. Then additional adjustments are made for the increased costs of providing services in mountainous and densely populated areas. The method contributes to a moderate equalization of budget security [7].

The considered approaches to financing are characterized by a General trend in determining the amount of financial resources of each of the municipalities, based on real needs. At the same time, the Central government can influence the amount of financial resources by General measures; but it does not have levers of influence on the finances of an individual municipality. This fact is an important achievement and the main guarantee of the independence of local self-government bodies.

Returning to the problem of self-sufficiency of local budgets in Kazakhstan, the authors believe that the analysis of the structure of local budget and tax systems is of interest. As you know, these systems are different in European countries, but we can talk about their fundamental unity, which is determined by three main points. First, these are expenses that are borne by local authorities in accordance with their assigned functions and tasks; second, these are revenues that Finance the activities of local self-government and, third, transfers that come from higher-level budgets in order to equalize the financial capabilities of local territorial entities.

For example, a secondary analysis of data from periodicals and special literature showed that the expenditures of municipal authorities in European countries are in relation to GDP from 0.1 % (San Marino) to 27.5 % (Sweden), with an average value of about 9 %. Among Central and Eastern European countries, Romania has the lowest ratio of municipal expenditures to GDP (3.5%), while Hungary has the highest ratio (17%) [8]. At the same time, for most countries, the ratio of the size of local budgets to the total of all budgets in the state is from 10 to 30 % (on average, this figure is 22 %).

Research and analysis of sources of income of local budgets in European countries allowed us to draw the following conclusions.

As for the composition of revenue sources, municipal budget revenues can be divided into different categories (own financial resources, transfers, borrowed funds). The main value is the category of own financial resources. These are the funds that local governments receive as a result of making independent decisions and that they can dispose of at their own discretion. This concept combines several types of sources of funds. For example, this includes fees (receipts) from paid services provided to the population by municipal services (water supply, etc.), as well as payments related to the issuance of various types of permits (for building, for the right to occupy public areas, etc.) or with the arrangement (construction of access roads to the enterprise, etc.). In addition, own funds are supplemented by income from municipal property (rent, proceeds from the sale of assets, etc.).

However, the most significant part of the local government's own resources are taxes. At the same time, own taxes make up on average just over 1/4 of local financial resources.

As for the composition and structure of their own local taxes, the oldest and most common among them are local taxes related to land ownership. According to the analysis, the share of this type of tax on average is about 40 % of local budget revenues (compared to 3 % in the Republic of Kazakhstan). Initially, the object of taxation was land property, and then in many countries taxation began to apply to built-up real estate.

In different countries, land tax accounts for a different share of income from their own local taxes (almost 100 % in the UK and Ireland, 17 % - in Belgium, in Spain or Italy-14 %, in France-10 %, in Denmark-4 %).

However, funds from land tax collection are not sufficient to cover the needs of local government. Therefore, a number of countries have introduced a local tax on business activity, while others have introduced a tax on income. Both of these taxes are not exclusive (municipal), but joint, i.e. they are levied by local authorities using the same tax base in proportion to the authorities of other levels. Today, these two types of taxes are the main local government's own taxes in Europe.

Local business taxes are quite numerous and varied. They may apply to production, consumption, trade, or transfer of ownership.

A local income tax was first introduced in Sweden in 1928. Such a tax can form a very significant part of local taxes. For example, in Iceland in 1997 it accounted for about 55% of the municipalities' own financial resources, in Denmark in 1995 the local income tax was 91 %, and in Finland it was 90 % [9].

Along with these main types of local taxes, there are so-called pocket receipts, which are usually given to local authorities. Examples of this category of fees are tax on dogs, tax on entertainment events, on advertising and «signs», markets, gambling and betting, tax on temporary stay (in tourist areas), tax on additional housing.

Taxes related to environmental protection occupy a special place. These are charges for the removal of household waste, for sewage or sanitation, for waste, for cleaning and electrifying public places, etc. among the most productive and also rapidly developing in recent years, local taxes can be called the tax on cars and the tax on the transfer of ownership of real estate.

However, according to experts, there is a recent trend in European countries to increase the role of transfers. In the world practice, there are three main forms of taxation - shared (regulatory) taxes, grants and subsidies. All these types of financial resources from the point of view of local governments can have a variety of functions - filling budgets, financial assistance, and proportional equalization of budget security.

In addition to tax funds and transfers, municipalities can fill their budgets in three other ways. First, these are payments that they receive for providing services to the population. On average, this source provides about 12 % of local budget revenues, and it is the second (after taxes) revenue item. Secondly, local budget revenues are generated from various revenues that may be temporary, for example, from the sale of assets or from income from their investment. Third, it is possible to fill local budgets through loan mechanisms (if this is legally allowed).

In accordance with the concept of self-development of municipalities, the proportions of financial support for self-development of municipalities presented above provide for the availability of about 15% of borrowed funds in the acceptable structure of municipal income.

It should be noted that borrowing from private capital markets by issuing regional and local bonds is an important financial mechanism for territorial development in all market economies.

Analysis of foreign practice of using regional and local loans [10] showed that the most developed is the municipal securities market in the United States, as well as significant experience has been accumulated in a number of European Union countries (Germany, great Britain, France, the Netherlands, Denmark, Belgium, etc.).

So, in the US, 5-7 thousand municipalities annually issue their bonds. As a result, about 120 thousand bond issues are sold and resold on the stock market every year. At the same time, tens of thousands of municipalities have outstanding debt on these securities. In 1986, for example, their total debt was \$ 723 billion and in 1995-it exceeded \$ 1.3 trillion. [3].

In Western Europe, there is also an increase in the use of municipal loans for additional financing of local budget expenditures. Borrowed funds are becoming an increasingly visible revenue budget item. The right to issue municipal securities is usually granted to large administrative-territorial entities (Federal subjects, provinces, cities, counties, etc.). Municipal loans are distributed by local authorities not only on their territory, but also in other regions (cities, districts, etc.), as well as abroad. The yield of municipal securities is determined taking into account the level of interest rate on the loan capital market, the term of the loan, and the financial condition of local authorities.

State control of financial and credit activities of local administrations exists in all countries, but the degree of its rigor varies. The most important tool of the system of state regulation of municipal loans is the licensing procedure for issuing securities. Special prior permission from the Central authorities is required almost everywhere (for example, in the UK, Denmark, the Netherlands, and other countries).

In addition to financing current expenditures of local budgets, all these tools can be used to Finance strategic development programs of municipalities.

There are a number of structures around the world that Finance investment projects and develop territories. A special place is occupied by structures operating at the national and regional levels (for example, the Council on economic development of U.S. cities), which are a kind of associations of cities in implementing social and economic development [8].

At the municipal level in the United States, similar structures exist in the city administrations of many large cities.

As noted above, a feature of the US financial market is a large share of the securities market in financing the needs of local authorities, and issuers can be not only state and municipal authorities, but also utilities. In many ways, this situation is related to the preferential tax treatment of income from municipal securities.

The investment needs of large cities are also met through budget financing (the city budget) combined with the issuance of securities. Moreover, the structure of city budgets clearly distinguishes the current part of the budget and the development budget. At the same time, both sources and directions of spending are differentiated for the two parts of the budget. The task of cities is to maintain a high level of borrowing. At the same time, the «pyramid» effect does not occur due to the return of funds to the city budget due to direct or indirect return on investment.

In new York, the largest city in the United States by budget, the Deputy mayor for economic development, planning, and public administration is responsible for investment and urban development issues. It is responsible for the city planning Department and the economic development Corporation (EDC). CER is the main body for stimulating business development in the city - complex projects to increase business activity, financing investment projects, infrastructure development. Each of these projects implements a number of targeted programs that provide consulting assistance, tax incentives, and preferential loans to participants.

The city development system in Los Angeles is slightly different. In the structure of the city administration, there is a Department of urban development, which includes departments of industrial and commercial development; development of services and interaction with the regions; development of the labor market; human resources; support for urban programs; financial management.

Los Angeles also has a city development Bank. The Department of industrial and commercial development has developed and implemented a city loan program and a business assistance program. Within the city's credit program, support facilities can be provided with direct financing, tax incentives,

technical assistance to economic growth and the creation of new jobs in depressed areas of the city. The Department of industrial and commercial development works closely with other city services and national non-governmental organizations involved in urban development (the Los Angeles business group, the California commercial and trade Agency, the U.S. Department of urban and township development, and several others).

In Japan, there is also a practice of regular issuance of securities by municipalities to Finance investments. In large cities, there are departments of urban development, business promotion and small entrepreneurship in the administrative structures. A wide range of proposed development programs are funded in a combined way, both through the issuance of municipal securities and from other sources.

Among European countries, the undisputed leader in this area is Germany, where the municipal bond market has developed significantly. There is a well-developed market for municipal borrowing in France, which is characterized by a low share of bonds in the volume of municipal debt, as a result of which municipalities resort to other methods of borrowing.

In the UK, for example, no new issues of municipal securities have been registered over the past decade. The reason for this is that municipal authorities are able to cover their external financing needs by borrowing at relatively low interest rates and for relatively long periods directly from the Central government through a special loan Board.

To Finance the needs of municipalities, Bank lending, various types of subsidies from Central governments and other financial instruments are also used.

**Summary and Conclusion.** Thus, summarizing the results of the analysis of foreign experience, we can conclude that in European countries and the United States, municipal authorities have sufficient capabilities and have a set of tools for effective management of socio-economic development of municipalities. Borrowing positive foreign experience, taking into account and preserving Kazakhstan's characteristics, in our opinion, will allow municipalities to overcome many crisis development trends and create conditions for effective implementation of advanced technologies in the field of strategic management of territorial development.

Thus, the analysis of foreign experience in the organization and functioning of infrastructure support for municipalities allows us to conclude that the model of European socially - oriented infrastructure support for municipalities with its main institutions has been quite successful in ensuring interaction with municipalities in the process of implementing their social programs.

Consequently, the municipal authorities of Kazakhstan in the conditions of liberalization of the state social policy, relying on private social enterprises, which are actually a kind of local business structures, are able to implement a new approach to solving problems of municipal development – orientation during the development of the municipal strategy on the priority use of local resources and activities that are close to the needs and traditions of the communities of municipalities.

This approach is one of the types of resource approach to the development of the infrastructure support system for municipalities.

The use of mechanisms for cooperation between municipal authorities and major infrastructure social organizations allows not only to develop a municipal model for the formation and use of funds for the development of the social sphere in market conditions, but also contributes to its successful implementation on the basis of active production activities in the field of infrastructure development.

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#### **ШЕТ ЕЛДЕРДІҢ МОДЕЛДЕРІН МУНИЦИПАЛДЫҚ МЕКЕМЕЛЕРДІҢ ДАМУЫН БАСҚАРУДА ЖӘНЕ ОНЫ РЕСУРСТЫҚ ҚАМТАМАСЫЗ ЕТУДЕ БЕЙІМДЕУ**

**Аннотация.** Аумақтарды тұрақты дамыту, қазіргі заманғы тиімді экономиканың жұмыс істеуі, мемлекеттің және жергілікті өзін-өзі басқарудың стратегиялық әлеуметтік-бағдарланған міндеттерінің маңызды шеңберін шешу үшін аумақтық әлеуетті тарту әртүрлі деңгейдегі институционалдық субъектілердің, оның

ішінде муниципалдық құрылымдардың әлеуметтік-экологиялық-экономикалық кешендерінің тіршілік етуіне негізделеді.

Қазіргі уақытта муниципалдық ресурстарды басқарудың көп деңгейлі, көп объектілі жүйесі қалыптасты, ол муниципалдық білімді тұрақты дамыту міндеттерін шешуді және жергілікті өзін-өзі басқарудың қажетті тиімділігін қамтамасыз ете алмайды. Шын мәнінде, нарық талаптары мен муниципалдық басқару ерекшеліктері арасында қарама-қайшылық туындайды, оны шешу муниципалдық білімнің тұрақты дамуын ресурстық қамтамасыз ету жүйесінің қалыптасуы мен жұмыс істеуі негізінде мүмкін. Бұл қайшылықты шешуді жергілікті өзін-өзі басқару институты, осы институт шеңберінде мемлекеттік және қоғамдық бастауларды ұштастыра отырып, оның қосарлы табиғаты контекстінде қарастыру керек. Бұл үйлесім азаматтардың ел мен жергілікті қоғамдастықтың істерін басқаруға қатысу қажеттілігімен айқындалған, меншікті ресурстық қамтамасыз етуді талап етеді. Жергілікті ресурстарды тиімді пайдалану басты міндет болып табылады, оны шешу қоршаған ортаға келтірілген залалды азайтуға, халықтың өмір сүру сапасы мен деңгейін, муниципалдық білімнің де, өңірлердің де, басқа да экономикалық агенттердің бәсекеге қабілеттілігі мен қауіпсіздігін арттыруға мүмкіндік береді.

Батыстағы муниципалды құрылымды басқарудың құрылымы тәжірибесін меңгеру нәтижесін айтсақ, экономикасы дамыған елдердің еркін демократиясында осы басқару жүйесі үлкен рөл атқаруда.

Мақалада батысеуропалық теория және муниципалдық құрылымдардың әлеуметтік-экономикалық даму мәселелерін кешенді шешу тәжірибесі талданады, соның ішінде денсаулық сақтау және әлеуметтік қамтамасыз ету саласында. Муниципалдық құрылымдардың маңызды міндеті осы білім беруді дамытудың әзірленген стратегиясын іске асыру үшін өзін-өзі қаржыландыру әлеуетін барынша пайдалану, халықтың бос қаражатын белсенді тарту болып табылады.

**Түйін сөздер:** тұрақты даму, әлеуметтік-экономикалық даму, жоспарлау, муниципалдық білім беру, тұрақты даму стратегиясы.

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### **АДАПТАЦИЯ МОДЕЛЕЙ ЗАРУБЕЖНЫХ СТРАН В УПРАВЛЕНИИ РАЗВИТИЕМ МУНИЦИПАЛЬНЫХ ОБРАЗОВАНИЙ И ЕГО РЕСУРСНОГО ОБЕСПЕЧЕНИЯ**

**Аннотация.** Устойчивое развитие территорий, функционирование современной эффективной экономики, привлечение территориального потенциала для решения важнейшего круга стратегических социально-ориентированных задач государства и местного самоуправления базируются на жизнедеятельности институциональных субъектов различных уровней, в том числе социально-эколого-экономических комплексов муниципальных образований.

В настоящее время сложилась многоуровневая, многосубъектная система управления муниципальными ресурсами, которая не в состоянии обеспечить решение задач устойчивого развития муниципального образования и необходимую эффективность местного самоуправления. По сути, возникает противоречие между требованиями рынка и особенностями муниципального управления, разрешение которого возможно на основе формирования и функционирования системы ресурсного обеспечения устойчивого развития муниципального образования. Разрешение этого противоречия следует рассматривать в контексте института местного самоуправления, его двойственной природы, выражающейся в сочетании государственных и общественных начал в рамках данного института. Данное сочетание определено необходимостью участия граждан в управлении делами страны и местного сообщества, требует собственного ресурсного обеспечения. Эффективность использования местных ресурсов является главной задачей, решение которой позволит снизить ущерб, наносимый окружающей среде, повысить качество и уровень жизни населения, конкурентоспособность и безопасность как муниципального образования, так и регионов, других экономических агентов.

В результате овладения опытом структуры муниципального управления на Западе эта система управления играет важную роль в свободной демократии развитых экономики. В статье анализируется западноевропейская теория и практика комплексного решения вопросов социально-экономического развития муниципальных образований, в том числе в области здравоохранения и социального обеспечения. Важной задачей муниципальных образований является максимальное использование потенциала самофинансирования для реализации разработанной стратегии развития данных образований, активное привлечение свободных средств населения.

**Ключевые слова:** устойчивое развитие, социально-экономическое развитие, планирование, муниципальное образование, стратегия устойчивого развития.

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**TRANSFORMATION OF ECONOMIC DEVELOPMENT  
OF KAZAKHSTAN IN THE CONDITIONS OF MODERN REALITIES**

**Abstract.** The article examines the features of the fourth industrial revolution and the place that characterizes the transformational concept of modern society in a series of other sociological theories. The published revolution is the result of the latest advances in information and communication, biotechnology, robotics, and artificial intelligence.

Modern requirements of digitalization at the present time: compatibility (compatibility), virtualization, decentralization, and real-time operation. Cyber-physical systems, cloud computing and big data technologies, business on the Internet, virtual and horizontal integration, virtualization and «digitization» of all processes of value chain formation.

Kazakhstan seeks to become not only an industrially developed country, but also a postmodern country, but today it is a postmodern state, primarily of modern man.

Many developed countries and business giants are active participants in the fourth industrial revolution: government programs, business communities, and non-profit organizations were created to remove barriers to creating industry 4.0.

The fourth industrial revolution is a predictable event, mass introduction of cyber-physical systems in production, satisfaction of human needs, including LIFE, Work and leisure. Changes cover various aspects of life: the labor market, environment, political systems, technological regime, human personality, and others. Due to the fact that improving the quality of life comes at the expense of economic efficiency and attractiveness, industry 4.0 performs it at the risk of increasing instability and possible collapse of the world system, so its attack is considered difficult for humanity to react.

**Key words:** transformation, fourth industrial revolution, industry, Internet, development, productivity, information and communication technologies, industry, postmodernism.

**Introduction.** 43 years have passed since the first edition of D. bell's famous work «the Coming post-industrial society» [1] (1973). During this time, many attempts have been made to describe modern society and its future fate in connection with the transformation of information and knowledge into a key resource, as well as the growth of the service sector in the economy.

An example of qualitative systematization of the most recognized theories is given by F. Webster's book «Theory of information society» (1995). All the variety of descriptions of modern society, this author divided into two types: the first proclaim the transition to a fundamentally new, «information» («post-industrial») era, the second postulate the continuity of the social structure. It has been XXI years since the book was published, and the concepts of «knowledge society» and «cognitive capitalism» have been added and updated in the sociological discourse, but the most cited book remains m's. Castels «Information society: economy society and culture» (F. Webster attributed his theory to the first category, although he himself tends to the second direction).

The situation is very typical for modern sociology as a whole: there are a number of the most well-known and discussed concepts, but no generally accepted paradigm has yet been formed. New books are written mainly under the influence of popular authors, they develop or, on the contrary, criticize certain aspects of their theories that claim to be fundamental, but this has not yet led to the emergence of a fundamentally new, quite influential concept.

Changing global market conditions, the transition of the world's leading countries to a low-carbon economy, and the advent of the digital era have become new challenges for Kazakhstan in the XXI century.

**Methods.** The theoretical and methodological basis of the research is the work of domestic and foreign researchers on the theory and assessment of management quality, strategic management, features of logistics management and organization in the conditions of digital transformation of the economy as a whole.

The research is based on a system-logistics approach to the formation of digitalization of economic processes in the country. It was based on dialectical, statistical, inductive and deductive methods used by world science in the knowledge of socio-economic phenomena.

To solve these problems, methods of comparative analysis, grouping of data, indexes, analysis and synthesis, modeling methods, methods of short-term and long-term forecasting, planning, and expert-analytical methods were used as special research methods and tools.

**Results and discussion.** For the modern development of the global and national economy is characterized by the strengthening of globalization processes, formation of the foundations of an innovative economy and post-industrial society, contributing to significant changes in the content of labor workers, improve their skills, human capital formation a new quality, adequate to modern conditions of introduction of new technological structures. Kazakhstan is gradually becoming a part of the global economic system, and the development of its economy is naturally based on the strengthening of innovation processes.

In this light, it is particularly important to meet the challenges of accelerated industrial and innovative development, increase labor productivity and ensure the physical and social well-being of Kazakhstan's citizens.

Therefore, in the complex of nodal problems that need theoretical understanding and justification, the issues of increasing labor productivity and improving the regulation of labor relations in the country's economy are of particular importance and relevance.

The solution of these problems involves a comprehensive approach and a deep study of the realities in the system of labor relations that require the current stage of development of the Kazakh economy.

In the most generalized form, labor can be defined as an objectively inherent sphere of activity for the transformation of natural, material and intellectual resources into products intended for both personal and public consumption. At the same time, work is the basis of human life and development, and its self-realization.

It is known that Karl Marx first spoke about the economic content of future labor. He foresaw that such labor would inevitably appear as universal labor, which is an activity to satisfy the material and spiritual needs of society, not broken up into the production of value and use value, not mediated by the market method of distributing the goods produced, activity as the realization of all human essential forces – the mind, will, moral and aesthetic qualities. It is stimulated not by a particular interest of a person or group of people, but by universal, universal motives; it is an activity based on all the achievements of previous generations' life-making [1, p.50].

New phenomena in the sphere of labor and social organization are widely discussed in modern Western literature. In recent years, the Russian «post-industrial wave», represented by V. Inozemtsev, V. Orlov and others, has joined the discussion. Many of them note that Marx's assumptions about the historical maturation of universal labor clearly come true in modern developed capitalist society. Not only manual labor, but also mechanized labor is becoming a thing of the past, and in General, material productive labor is significantly reduced in its volume.

The spheres of services, management, information, science, mass communications, etc. are expanding. the Structural organization of society, like a pyramid, is replaced by a «network», consisting of small semi-permanent structures supplemented by numerous temporary modules [2, p.459].

There is a transition from materialistic values to post-materialistic ones.

Analyzing today's post-industrial elements in society, we can see the growth of collectivist tendencies, which are the result of new types of labor that arise in the conditions of «post-industrial», information-automated production. One clear example of real collectivism in modern society is the relationship between employees in enterprises with a collective form of ownership. This refers to the so-called national enterprises owned by employees. This is the birth of socialism within the bourgeois economy. There is no hiring, the effect of production – market income-is distributed among employees according to the distribution methods approved in the team [3].

Over the past half-century, the formation of a post-industrial society in the field of labor has undergone radical changes. They were the result of long transformations in all areas of social and economic life.

Until the early 70s of the last century, the basis of both Western and then existing Soviet society was a developed industry and the dominance of two sectors of the economy (mining and manufacturing) over the third sector – the sphere of services. Mass industrial production generated mass professions and "employee-employer" relationships, which were regulated by developed labor law. The subject of labor law was mainly relations in the field of collective labor. At the same time, the legislation was mainly intended to protect employees with minimal consideration for the interests of employers.

However, by the 1970s, the world of work in developed countries began to change. Many labor institutions, such as women's labor protection, have been challenged or changed, and many small and medium-sized employers have begun to ignore labor law or selectively comply with it. These changes were associated not only with post-industrialization, but also with globalization and its accompanying processes. During this period, there was a radical change in the world division of labor with the movement of the main branches of industrial production from the developed countries of the West to the so-called developing countries with the involvement of cheap labor resources in the turnover.

Transnational corporations and transnational banks, together with the entire updated global financial system and such bodies of influence as the international monetary Fund (IMF), the world Bank (WB), and the world trade organization (WTO), have become one of the instruments of this shift in production capacity, capital, and the division of labor. On this basis, industrial modernization of the economy of developing countries, including India, China, and Indonesia, was carried out.

The socio-economic reforms carried out in these countries in recent decades have led to the formation of a new workforce capable of working in the enterprises of transnational corporations (TNCs) established in these countries. On the one hand, in all sectors of the economy on the technocratic wave mentioned above, there was a radical renewal of the technical and technological base on the basis of computerization, Informatization, development of telecommunications, automation, robotics, and the introduction of flexible production systems.

On the other hand, this renewal required new qualities, abilities, and education from employees. There were significant changes in the organization of labor and production: overcoming Taylorism and Fordism with the elimination of conveyors and organizations of flexible production.

A new labor policy has been implemented, based on such terms as «quality of work life», «social engineering», «human resource management», as well as new approaches to the organization of remuneration and incentives for labor. Thus, in the conditions of the post-industrial economy, many new realities in the field of labor have appeared. This is, first of all, a new network worker working in a new economic, cultural, civilizational and ethnic environment.

These employees are concentrated in inter-network nodes-agglomerations, have new creative, informational, and cultural qualities, and bring increased added value to employers. New network workers formed a new layer of network labor resources, which occupied its niche in the highly mobile network labor market, providing new forms of organization, productivity, and remuneration [4,5]. With the transition to a global level of development, national and regional economies are put in conditions of severe competition in almost all parameters and, above all, in terms of labor flows and qualified personnel. The main functions of forming, distributing, placing and using labor resources are changing. In developed countries, there has been a restructuring of the labor force with a shift to high-tech industries.

In 2011, a significant event for Western industry took place, which could potentially, if not give rise to a new strong sociological theory, then at least give a new impetus to the study of social transformations

caused by the development of technology. This is the Hanover fair, the world's largest industrial exhibition, for which the term «industry 4.0» was coined in 2011 [3]. Today, it is used to refer to the fourth industrial revolution.

The first revolution lasted about 100 years and is associated with the mastery of steam energy, the transition from manual to machine labor, the appearance of factories and the division of labor [4] (i.e., with the mechanization of production). The second industrial revolution was driven by electrification and the introduction of conveyor production in the early 20th century [5] (mass production). The third revolution was caused by the development of computer technologies in the second half of the twentieth century [5] (production automation).

One of the most recognized theories is the book by F. Webster «Theory of information society» [6] (1995). All the variety of descriptions of modern society, this author divided into two types: the first proclaim the transition to a fundamentally new, «information» («post-industrial») era, the second postulate the continuity of the social structure. It has been 21 years since the book was published, and the concepts of «knowledge society» and «cognitive capitalism» have been added and updated in the sociological discourse, but the most cited book remains m's. Castels «Information society: economy society and culture» (F. Webster attributed his theory to the first category, although he himself tends to the second direction).

The situation is very typical for modern sociology as a whole: there are a number of the most well-known and discussed concepts, but no generally accepted paradigm has yet been formed. New books are written mainly under the influence of popular authors; they develop or, on the contrary, criticize certain aspects of their theories that claim to be fundamental, but this has not yet led to the emergence of a fundamentally new, rather influential concept. In 2011, a significant event for Western industry took place, which could potentially, if not generate a strong new sociological theory, at least give a new impetus to the study of social transformations caused by the development of technology. This is the Hanover fair, the world's largest industrial exhibition, for which the term «industry 4.0» was coined in 2011 [7].

Today, it is used to refer to the fourth industrial revolution. The first revolution lasted about 100 years and is associated with the mastery of steam energy, the transition from manual to machine labor, the appearance of factories and the division of labor [8] (i.e., with the mechanization of production). The second industrial revolution was driven by electrification and the introduction of conveyor production in the early 20th century6 (mass production). The third revolution was caused by the development of computer technologies in the second half of the twentieth century [9] (production automation).

We are witnessing a change in the world's industrial image. The factor of cheap labor is no longer relevant – digitalization of production and technological modernization based on Industry 4.0. determine the further development and competitiveness of enterprises. Today, most countries have already started implementing their national digital transformation strategies (Germany adopted them in 2011, the US-2012, Japan, China, and other EU countries-2014-2015). According to the calculations of international experts, the introduction of Industry 4.0 technologies increases production efficiency by up to 10% -20%, and the use of digital technologies reduces the cost of production. In order for our companies to remain competitive in foreign markets, it is necessary to follow this trend.

Approximately 300 experts from 150 companies representing various economic circles, associations, trade unions and government agencies are developing concepts and specific recommendations in six working groups (standards and regulations; scenarios for the development and application of technologies; security of connected systems; legal framework conditions; work, training and professional development; digital business models for Industry 4.0). It was announced that the annual investment of the German industry in the development of digital systems until 2020 is estimated at 40 billion euros.

The German government expects that with the positive development of industry in the framework of «Industry 4.0», additional growth of the national economy in the amount of 267 billion euros and the creation of approximately 390 thousand new jobs by 2025 are possible.

By the way, in 2017, the share of enterprises with a high level of digitalization in Germany was about 25%, by 2025 it should increase to 83%. It is expected that the positive effect of the introduction of the fourth industrial revolution, businesses will particularly affect improvement of product quality, increase productivity, and minimize the timing of bringing products to market, improve production flexibility, etc. However, digitalisation in Germany covers not only the production and services sector, but also public administration, education, culture and science.

The transformation of the economy and society is taking place within the framework of the digital agenda of the German Federal government in such thematic areas as digital infrastructure, economy and labor, the innovative state, understanding digital changes in society, education, science, culture and media, etc. In addition to the digital agenda of the government in 2016, the digital strategy for 2020-2025 was presented. It identified key areas and tools for the successful implementation of Germany's digital transformation.

In Kazakhstan, in 2018, together with international experts, the readiness of enterprises to implement the elements of «Industry 4.0» in the manufacturing industry and mining sector was assessed, their technological level was determined. About 600 enterprises were surveyed.

The main barriers and challenges to digitalization of industry are identified (insufficient understanding of the economic benefits of digitalization in the business environment; lack of qualified personnel; insufficient development of domestic technologies; limited financial resources; insufficient infrastructure development). In order to eliminate barriers, taking into account international experience, appropriate systemic measures have been developed (development of own technologies for the elements of Industry 4.0; improvement of regulatory regulation; development of digital infrastructure; financial and other incentive measures). These measures are included in the state program «Digital Kazakhstan».

However, the most pressing issue today is the issue of popularizing and demonstrating the benefits of implementing Industry 4.0 technologies. To do this, this year launched a project to create a digital model of factories on the basis of existing enterprises of the manufacturing industry. Currently, work has begun on technological diagnostics of selected enterprises, and the development of road maps for the introduction of digital technologies on them.

In addition, 14 projects have been identified for the implementation of digitalization elements of system-forming companies until 2025, in the amount of 146 billion tenge. Using the example of implemented projects, we can already see how much they help to increase efficiency and increase their competitiveness.

For example, the ERG «smart quarry» project at the Kacharsky quarry allows to increase the productivity of mining and transport equipment by 10%, which leads to a reduction in capital and operating costs. The economic effect of the project will amount to 9.9 billion tenge by 2021.

This year, under the «Digital Kazakhstan» program, it is planned to ensure the growth of domestic exports to foreign markets both in the raw materials industries and in the agro-industrial complex. This should lead to an increase in the capitalization of the largest manufacturing companies. It is expected that the digitalization of economic sectors will increase the level of labor productivity to the level of the top 30 countries in the world, increase competitiveness and bring the capitalization of domestic companies to a new level.

The introduction of Industry 4.0 technologies is expected in fields and mines, e-Commerce and Commerce, the transport system, agro-industrial and electric power complexes.

The experience of Germany will be used in the mining, metallurgical and manufacturing industries. According to the roadmap, this year it is planned to create an Institute of industrial automation and digitalization, launch 7 «model digital factories», bring the «Digital mine» system to full capacity in the pilot project «Kazatomprom-SaUran», introduce smart Deposit technologies at the enterprises of «Embamunaigas», and start implementing the «Smart mine» project.

Already in 2019, the program plans to introduce the «Digital mine» at three enterprises. By 2020, Kazzinc intends to implement the «Big data» project. This will allow you to optimize many operations, manage risks more effectively, and implement innovations. And if in 2020, the introduction of digital technologies in large and medium-sized enterprises will amount to 5%, then in 2022-11%.

In Kazakhstan, certain elements necessary for the organization of «Industry 4.0» are already being introduced. The main reason for investing in them is the ability to improve control, reduce losses and, consequently, cost. To introduce the technologies associated with the «Industry 4.0», the company intends to McKinsey. To find out how the introduction of «Industry 4.0» affects companies, she conducted her own research. It turned out that about half of the respondents in the US and Germany (50% and 56%) reported good/significant progress over the past year from the introduction of Industry 4.0 tools, while in Japan, a small percentage of respondents noted this level of progress (16%). Technology suppliers reported more progress (47% reported at least good/significant progress) than manufacturing companies (of which only 37% reported at least good/significant progress).

**Summary and Conclusion.** The problem of Kazakhstan is not only a question of the availability or lack of technology, employees, legal framework or goodwill of companies. Improvements in the framework of «Industry 4.0» can work in Kazakhstan, but only if customers are honest – many of those who are engaged in the implementation of «Industry 4.0» say that this problem may arise in one form or another.

The essence of the Fourth industrial revolution is that the physical world connects with the virtual, resulting in the birth of new cyber-physical complexes integrated into a single digital ecosystem.

«Industry 4.0» means increasing automation and intellectualization of all industrial production processes: from digital product design, digital copy creation, predictive real-time maintenance, automated component supply chain to an individualized approach to working with customers.

The technologies of Industry 4.0 include: analysis of large databases, predictive maintenance, collaborative robots, «smart» devices that interact with people, perform dirty, dangerous or excessively routine work, the industrial Internet of things-the concept of building infocommunication infrastructures, which involves connecting equipment, sensors, and sensors to the Internet, as well as integrating these elements among themselves, additive technologies (3D printing), simulation, augmented and virtual reality, Autonomous vehicles [10].

Digitalization increases the flexibility of production, reduces the time to bring new products to market, which allows you to implement new business models. All this significantly increases the efficiency and competitiveness of industrial enterprises:

- labor productivity increases by an average of 10-20% due to process optimization, the ability to quickly analyze data in real time, reduce accidents and downtime, and improve the interaction of employees and equipment;

- labor safety is ensured by minimizing human labor in particularly dangerous areas and in places with a high level of injuries [11]. For example, to check dangerous areas in the mine and data that excludes injuries to personnel. This also allows operators to move from the underground environment to safer and more comfortable working environments in control rooms;

- new product launch times are reduced by 20% thanks to digital engineering and rapid prototyping technologies.

In addition, businesses can strengthen their market positions and develop new markets by better identifying customer needs and market forecasts, as well as producing for specific needs.

Kazakhstan, despite its severe dependence on raw materials and devastating deindustrialization, is getting new chances in the upcoming retaking of the cards of the world industrial game. Opportunities to move up the value chain in the new global system of international division of labor are determined, on the one hand, by the immaturity of the latest technological links of the sixth technological order, and, on the other, by new chances to integrate into the released elements of the rebuilt technological chains.

However, the lack of a clear strategic line in the implementation of Kazakhstan's industrial policy does not help to neutralize the main strategic risks and threats to national security in the industrial sector, which in the long term are:

- preservation of the export-raw material model of national economy development;
- slow transition of the country's industrial and technological base to the development of new production technologies;
- reduced competitiveness of the economy and high dependence of its most important areas on foreign economic conditions;
- loss of control over national resources;
- deterioration of the raw material base of industry and energy;
- uneven development of regions and progressive labor self-sufficiency, coupled with irregular migration.

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### ТРАНСФОРМАЦИЯ ЖАҒДАЙЫНДАҒЫ ҚАЗАҚСТАННЫҢ ЭКОНОМИКАЛЫҚ ДАМУЫНЫҢ ҚАЗІРГІ ШЫНДЫҒЫ

**Аннотация.** Мақалада төртінші индустриалдық революцияның ерекшеліктері және қазіргі заманғы қоғамның басқа социологиялық теориялар сериясындағы трансформациялық ұғымын сипаттайтын орын қарастырылады. Жарияланған революция ақпарат пен байланыс, биотехнология, робототехника және жасанды интеллекттің соңғы жетістіктерінің нәтижесі болып табылады.

Қазіргі кездегі цифривизациялау замануи талабы: үйлесімділік (үйлесімділік), виртуализация, орталықсыздандыру және нақты уақыт режимінде жұмыс істеу. Кибер-физикалық жүйелер, бұлтты есептеу және үлкен деректер технологиялары, Интернеттегі бизнес, виртуалды және көлденең интеграция, виртуалдандыру және құндылық тізбегін қалыптастырудың барлық үдерісін «цифрлау» сияқты бизнесте кеңінен танымал бола түсуде.

Қазақстан индустриалды дамыған мемлекеттің ғана емес, сонымен бірге постмодернистік елге айналуға ұмтылады, бірақ қазіргі таңда бұл постмодернистік мемлекет, ең алдымен қазіргі заманғы адам.

Көптеген дамыған елдер мен іскерлік алыптар төртінші индустриалды революцияның белсенді қатысушылары болып табылады: мемлекеттік бағдарламалар, бизнес қауымдастықтары және коммерциялық емес ұйымдар 4.0 саласын құрудағы кедергілерді жою мақсатында құрылған.

Төртінші индустриалды революция - бұл болжанатын оқиға, өндірістегі кибер-физикалық жүйелерді жаппай енгізу, адамның қажеттіліктерін қанағаттандыру, соның ішінде өмір, жұмыс және бос уақыт. Өзгерістер өмірдің түрлі аспектілерін қамтиды: еңбек нарығы, тіршілік ортасы, саяси жүйелер, технологиялық тәртіп, адамның жеке басы және басқалары. Өмір сүру сапасын жоғарылатудың экономикалық тиімділігі мен тартымдылығы есебінен өмір сүруіне байланысты, Индустрия 4.0 оны тұрақсыздықты жоғарылату және әлемдік жүйенің ықтимал құлдырауы тәуекелдерімен орындайды, сондықтан оның шабуылы адамзаттың жауап беруі қиын деп есептеледі.

**Түйін сөздер:** трансформация, төртінші өнеркәсіптік революция, өнекәсіп, интернет, даму, өнімділік, ақпараттық және коммуникациялық технологиялар, индустрия, постмодернистік.

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### ТРАНСФОРМАЦИЯ ЭКОНОМИЧЕСКОГО РАЗВИТИЯ КАЗАХСТАНА В УСЛОВИЯХ СОВРЕМЕННЫХ РЕАЛИЙ

**Аннотация.** В статье рассматриваются особенности четвертой индустриальной революции и место, характеризующее трансформационное понятие современного общества в серии других социологических теорий. Объявленная революция является результатом последних достижений информации и связи, биотехнологии, робототехники и искусственного интеллекта.

Современные требования цифровизации в настоящее время: совместимость (совместимость), виртуализация, децентрализация и работа в режиме реального времени. Кибер-физические системы, облачное вычисление и большие технологии данных, бизнес в Интернете, виртуальная и горизонтальная интеграция, виртуализация и «оцифровка» всех процессов формирования цепочек ценностей.

Казахстан стремится стать не только промышленно развитой страной, но и страной постмодерна, но сегодня это государство постмодерна, прежде всего, современного человека. Многие развитые страны и деловые гиганты являются активными участниками четвертой индустриальной революции: государственные

программы, бизнес-сообщества и некоммерческие организации созданы с целью устранения барьеров в создании отрасли 4.0.

Четвертая индустриальная революция – это предсказуемое событие, массовое внедрение кибер-физических систем в производстве, удовлетворение потребностей человека, в том числе жизнь, работа и досуг. Изменения охватывают различные аспекты жизни: рынок труда, среда обитания, политические системы, технологический режим, личность человека и другие. В связи с тем, что повышение качества жизни происходит за счет экономической эффективности и привлекательности, Индустрия 4.0 выполняет ее с риском повышения нестабильности и возможного падения мировой системы, поэтому его атака считается сложной, чтобы человечество реагировало.

**Ключевые слова:** трансформация, четвертая промышленная революция, промышленность, интернет, развитие, производительность, информационные и коммуникационные технологии, индустрия, постмодернизм.

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**THE DEVELOPMENT OF THE MEAT MARKET  
IS AN INTEGRAL BUILDING A LOGISTICS SYSTEM  
AT THE BUSINESS ORGANIZATION LEVEL**

**Abstract.** The stability and financial well-being of an enterprise is ensured by its business activity and behavior in a particular market segment. In a competitive environment, it is necessary to constantly monitor the appearance of new, cheaper and sufficiently effective developments, adapt to changes in the market situation in a timely manner, and accordingly review the existing principles of the company's functioning. Well-established concepts, ways of organizing and conducting business that were acceptable and acceptable to the company's management yesterday can negatively affect the dynamics of the company's development today. To not only achieve, but also maintain the position of a leader, the company needs to increase the level of technology and efficiency of business processes. Success in attracting potential customers depends on the efficiency and clarity of the customer's requirements. Failure to comply with at least one of the requirements may result in the loss of consumers and the corresponding market share.

In a competitive environment, customers have the opportunity to compare and choose the best level of service and, accordingly, make higher demands on its quality. The quality of logistics services is the satisfaction of customers' requests, expressed in the proper execution of orders, the absence of errors, effective provision of services, as well as a constant desire to improve the level of service.

The article considers the specifics of building a logistics strategy at an industrial enterprise, analyzes and describes the algorithm for building a first-level logistics system. It is determined that the General strategy of an industrial enterprise as a whole plays an important role in the construction of a logistics strategy. The organizational structure of the logistics service of an industrial enterprise is considered and studied, the purpose of which is to provide system management of commodity flows of the enterprise.

Special attention is paid to the subsystems of macro and micrologistic systems, infrastructure aspects of their development taking into account the factors of the global economy.

The focus of logistics systems on the macroeconomic effect is determined by their perspective role in the development of the economy of the Republic of Kazakhstan, which affects the innovative aspects of the development of industry and business processes.

In the future, logistics systems can be widely developed and spread not only in terms of material flows, but also in terms of the information component, the dynamics of the movement of HR resources, which will optimally integrate the economy of Kazakhstan into global and cross-border production and economic systems. As a result, new economic theories can be developed for building and designing logistics for foreign economic unions, interaction between customs authorities, and improving the principles and methodology of competition in international markets for goods and services. The theoretical research carried out is of an applied nature and can be widely distributed.

**Key words:** strategy, logistics, logistics strategy, industrial enterprise, logistics goals, costs.

**Introduction.** Reorganization and restructuring of the company in order to increase business efficiency based on a logistics approach provides additional opportunities for further reducing costs and production costs, improving the quality of customer service. One of the conditions for spreading the concept of logistics in Russia as the basis for building a business is the readiness of the Russian entrepreneur to radically change the attitude to consumers and partners.

According to analysts, managers of many Russian companies are well aware of logistics management methods, but they are used only in certain cases and often on an intuitive level, so the task of developing a scientific and methodological basis for the effective application of the logistics concept in business is very relevant for Russian scientists.

Logistics is a business concept based on the involvement of individual interrelated elements in the overall process in order to prevent waste of company resources. The company's logistics system works effectively for the consumer when its main elements, such as purchasing, production, storage, transportation and distribution, act as a single well-established mechanism. According to the European logistics Association, the use of logistics developments can reduce the production time of goods by 25%, reduce the cost of production by up to 30%, and reduce the volume of inventory from 30 to 70%.

**Methods.** The theoretical and methodological basis of research is the works of domestic and foreign researchers devoted to the theory and assessment of management quality, strategic management, features of logistics management and organization of material supply of organizations in a market economy.

The research is based on a systematic and logistic approach to the formation of logistics management of material resources of industrial production. It was based on dialectical, statistical, inductive and deductive methods used by world science in the knowledge of socio-economic phenomena.

To solve these tasks, methods of comparative analysis, data grouping, indexes, analysis and synthesis, modeling methods, methods of short-term and long-term forecasting, logistics planning, and expert-analytical method were used as special research methods and tools.

**Results and discussion.** The main concepts of logistics services: Customer Satisfaction and Consumer Service. Their essence is to build a relationship with the consumer, in which it is possible to solve almost all of its problems based on the study of its needs («the customer is always right»). The main goal is to help the customer make their business more efficient and profitable.

Reorganization and restructuring of the company in order to increase business efficiency based on a logistics approach provides additional opportunities for further reducing costs and production costs, improving the quality of customer service. One of the conditions for spreading the concept of logistics in Russia as the basis for building a business is the readiness of the Russian entrepreneur to radically change the attitude to consumers and partners [1].

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Logistics activities are integrated in nature, covering all stages from the moment when the need for a product arises to the moment when it is met [2]:

- market research, forecasting the level of demand, searching for consumers and concluding contracts for the supply of finished goods, including payment and settlement operations;
- purchase of raw materials, basic and auxiliary materials, as well as other resources necessary for the production of finished products in accordance with the order;
- direct production of products [3];
- implementation of the order, including storage of the finished product in the warehouse and its shipment.

Logistics functions can be described as follows: the consumer must get the necessary quality and quantity of goods at the right time, in the right place, from a reliable supplier with a good level of service, at a certain level of cost.

To systematize logistics processes, as well as to implement logistics management in the daily activities of the company, it is necessary to create an independent division - the logistics service. It must report directly to the company's management.

In the company's organizational structure, almost all management functions are interconnected with the logistics system [4]. Therefore, the logistics service must work closely with various functional divisions of the company, ensuring the optimization of their activities and the system stability of the company. Creating such a service allows you to link the tasks of logistics management of internal business processes of the company and the business processes of partners and consumers into a single system.

In the structure of the logistics service, all the functions necessary for effective order fulfillment are combined into a powerful centrally-managed mechanism that allows you to solve tasks of almost any complexity responsibly, smoothly and professionally.

Understanding the benefits of effective interaction between functional departments and logistics services, having an effective communication system between departments and supporting the company's management can make a significant contribution to the implementation of the company's strategic goal. The introduction of modern logistics management in business practice can increase the organizational and economic stability of the company in the market. The use of the logistics concept is one of the main reserves that allow reducing the level of total resource expenditures of the enterprise.

The study of types of logistics systems at the micro and macro levels is a fairly promising research area that allows us to study certain specific features of each element of the logistics system.

The division of logistics systems implies their division into two main categories, which are characterized by the scale of distribution: macro - and micrologistic systems.

At the same time, the macrologistic system should be understood, in our opinion, as a community of logistics systems that ensure the rational organization of economic flows in order to fully meet the needs of customers in quality products, timely execution of orders, and logistics service.

The most complete, in our opinion, the classification of logistics systems offers V. I. Sergeev [5], highlighting the macrologistical system of the degree of globalization (state, interstate, transcontinental), the allocation on administrative-territorial basis (regional, district, city, regional, regional, interregional, Republican, inter-Republican) and the objective-function (of a group of enterprises, departmental, sectoral, intersectoral, interagency, commercial, military, institutional, transportation).

According to the presented classification, a macrologistic system represents a specific infrastructure of a city, region, or country.

Logistics integration of production, distributors, dealers and other spheres of economic activity, where economic flows circulate, can be traced in the classification of macrologistic systems by authors A. P. Dolgov and S. A. Uvarov [6]. Moreover, an important criterion in the classification proposed by A. P. Dolgov and S. A. Uvarov is the use of a logistics channel and chain in the system. The logistics chain of the system connects a set of individuals and legal entities that implement bringing the material flow from one link of the macrological system to another or to the retail buyer.

In the most General case, we are talking about the integration of the manufacturer, intermediaries, carriers and the consumer. Thus, depending on the type of logistics chains, macrologistic systems are divided into systems with direct connections, flexible and echeloned.

A similar classification of macrologistic systems is proposed by A. M. gadzhinsky [7], highlighting also only one feature of classification.

It is obvious that the allocation of macro-logical systems by one criterion does not reflect the fullness of the macro-environment, which affects both the enterprise and the micro-logical system of the enterprise, since first, the scale of activity is not taken into account, and secondly, the scope of the logistics system.

The classification features formulated by V. N. Stakhanov differ in the greatest variety [8]. The author offers a more detailed understanding of the functional sphere of the logistics system in the organization and optimization of product distribution processes.

The need to form a logistics system of a retail trade enterprise is determined by two circumstances: first, the management of increasing the efficiency of economic flow; second, the market conditions of management are determined as an independent object of managing the efficiency of capital formation and use.

In this regard, we can name several classification features that distinguish macrologistic systems: by type of economic flow (systems of material, financial and information flows); by stages of the reproduction process (systems of purchasing, production and distribution logistics); by phases of capital circulation (systems of business and commercial logistics); by geography of coverage (local, regional, national and international); by degree of automation (simple and automated); by method of organization (direct, echeloned and flexible); by purpose (specialized and integral); by form of representation (physical and abstract) [9].

In this study, we do not consider it necessary to clarify the classification of the macrologistic system, since we consider it sufficiently justified, and we study the issues of the logistics system at the micro level. The question of the model of the relationship between the micro - and macro-level is natural.

The issues of forming the logistics system of a retail enterprise, which, in our opinion, is a micrologistic system, require clarification of the definition of «micrologistic system».

A micrologistic system is a set of structural elements of an enterprise that are interconnected with each other and with the external environment and perform total management of logistics business processes in order to ensure the effective functioning of the enterprise.

At its core, a retail enterprise is a complex set of structural elements (subsystems) linked by the implementation of a complex of logistics operations and logistics functions. In this regard, it would be fair to consider the types of micrologistic systems available in the literature, as well as to expand and clarify the composition of logistics subsystems of a retail enterprise.

The micrologistic system is formed in accordance with the company's mission and development strategy and optimizes both the company's global business processes and the local processes of individual parts of the logistics system.

Some authors [10] distinguish three types of micrologistic systems, namely: internal (intra-production), external and integrated logistics systems.

It is particularly important to highlight an integrated system whose boundaries are blurred, since it coordinates internal and external operations for planning, production, sales and supply, transportation and warehousing. In this regard, internal and external systems are often considered as subsystems of an integrated micrologistic system.

Integrated systems make it possible to implement the concept of logistics integration to the greatest extent, for which there are certain prerequisites identified by O. B. Katsuba, namely:

- first, there is a system-wide goal shared by all participants in the logistics chain - the implementation of the social mission;
- secondly, there is a certain degree of organization of economic flow;
- third, the presence of stable economic relationships of participants in the logistics chain;
- fourth, there is a desire among all participants in the logistics chain to find and establish a compromise.

The General scheme of the micrologistic system of a retail enterprise, proposed by A.V. Petrova, identifies as subsystems: purchasing, transportation, warehousing, production, and implementation.

In the scheme of micrologistic system of a retail enterprise proposed by A.V. Petrov, it is important that at present many food retail enterprises, in addition to the main subsystems, have their own production units. Thus, in the logistics system of a retail enterprise, on the one hand, the material flow includes goods purchased from suppliers for resale, on the other - raw materials and materials necessary for the production of their own products and their further sale [11].

Material flows in retail trade enterprises have production divisions that are much more complex, including goods purchased from suppliers for resale, raw materials and materials necessary for the production of their own products and their further sale.

In view of this, the introduction of an additional link (production) in the logistics system of a retail trade enterprise, on the one hand, complicates the management of material flow, on the other - increases the competitiveness of the trade enterprise.

In our opinion, the considered types of micrologistic system proposed by A.V. Petrova do not contradict the separation of the system into external, internal and integration, and make a significant contribution to understanding the essence of the logistics system of a retail enterprise. Clarification of the classification of the micrologistic system is necessary in relation to the retail enterprise, highlighting the classification of the authors N. F. Zhemaldinova and V. I. Sergeev as the basis, adding its composition to the subsystems of A.V. Petrova, corrected in accordance with the purpose of this study.

**Summary and Conclusion.** Determining the place of logistics management in the organization of management of a retail enterprise and determining the boundaries of coordination with other parts of the logistics system is relevant for the effective formation of modern micrologistic systems of a retail trading enterprise. Logistics management allows you to get a synergistic effect of the main management functions to achieve the goals of the formed micrologistic system.

In addition, logistics management directly affects the minimization of total logistics costs. The following factors are taken into account: the integral impact on the price of finished products, physical distribution in the sense of replacing some logistics costs with others (warehousing for transportation), and combining several types of logistics costs in one link of the micrologistic system to reduce them.

The main purpose of logistics management in the structure of micrologistical system retailers is to ensure high competitiveness of the enterprise market by integrating parts of micrologistical system and optimizing inter-organizational relationships with elements of macrologistical system.

Effective management of economic flows in the logistics system is a complex task that requires a high level of management. The Central place in the management structure of the micrologistic system of the operational and functional level is the centralized management of information flows, which ensures high synchronization of material and information flows, reducing the time of information flow, monitoring and analysis of information flow in real time.

When analyzing the approaches and principles of building a logistics system, an integration and management approach was used to Refine the micrologistic system of a retail enterprise, which is a fairly promising research area that allows taking into account certain specific features of each element of the retail enterprise's logistics system.

A characteristic feature of each element of the micrologistic system of a retail enterprise is that the tasks solved by the system elements do not have clear boundaries, i.e. they coordinate and integrate between the specified elements of the logistics system.

In the proposed classification, the tasks of each element of the system are formulated based on the principles of forming the logistics system of a retail enterprise. Operational vertical and horizontal integration is achieved due to the structural, informational, material, and technical compatibility of elements of the refined micrologistic system of a retail enterprise.

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### **БИЗНЕСТІ ҰЙЫМДАСТЫРУ ДЕҢГЕЙІНДЕ ЛОГИСТИКАЛЫҚ ЖҮЙЕНІ ҚҰРУ**

**Аннотация.** Кәсіпорынның тұрақтылығы мен қаржылық әл-ауқаты оның іскерлік белсенділігімен және нарықтың қандай да бір сегментінде мінез-құлқымен қамтамасыз етіледі. Бәсекелестік күрес жағдайында жаңа, арзан және жеткілікті тиімді әзірлемелердің пайда болуын үнемі бақылап отыру, нарықтағы жағдайдың өзгеруіне уақтылы бейімделіп, тиісінше фирманың жұмыс істеуінің қолданыстағы принциптерін қайта қарау қажет. Кеше кәсіпорын басшылығына қолайлы және қолайлы, бизнесті ұйымдастыру және жүргізу жолдары, қалыптасқан ұғымдар бүгінгі күні кәсіпорынның даму серпініне кері әсерін тигізуі мүмкін. Кәсіпорын көшбасшысының позициясына қол жеткізіп қана қоймай, ұстап тұру үшін бизнес-процестердің технологиялылығы мен тиімділігінің деңгейін арттыру қажет. Әлеуетті клиенттерді тартудағы табыс Тапсырыс берушінің талаптарын орындаудың жеделдігі мен анықтығына байланысты. Талаптардың ең болмағанда біреуінің сақталмауы тұтынушылардың және нарықтың тиісті үлесінің жоғалуына әкеп соғуы мүмкін.

Бәсекелестік жағдайында клиенттер сервистің үздік деңгейін салыстыру және таңдау мүмкіндігіне ие және тиісінше оның сапасына жоғары талаптар қояды. Логистикалық қызмет көрсету сапасы-бұл тапсырыстарды тиісінше орындауда, қателердің жоқтығында, қызметтерді тиімді көрсетуде, сондай-ақ сервис деңгейін арттыруға үнемі ұмтылыста көрсетілген тұтынушылардың сұраныстарын қанағаттандыру.

Мақалада өнеркәсіптік кәсіпорындағы логистикалық стратегияны құру ерекшелігі қарастырылған, бірінші деңгейлі логистикалық жүйені құру алгоритмі талданды және сипатталған. Логистикалық стратегияны құруда жалпы өнеркәсіптік кәсіпорынның бас стратегиясы маңызды рөл атқаратыны анықталды. Мақсаты кәсіпорынның тауар ағындарын жүйелі басқаруды қамтамасыз ету болып табылатын өнеркәсіптік кәсіпорынның логистикалық қызметінің ұйымдық құрылымы қарастырылды және зерделенді.

Жаһандық экономика факторларын ескере отырып, макро-микрологиялық жүйелердің кіші жүйелеріне, оларды дамытудың инфрақұрылымдық аспектілеріне ерекше назар аударылды.

Логистикалық жүйелердің макроэкономикалық әсерге бағытталуы олардың өнеркәсіп пен бизнес-үдерістерді дамытудың инновациялық аспектілерін қозғайтын Қазақстан Республикасының экономикасын дамытудағы перспективалық рөлін айқындайды.

Перспективада логистикалық жүйелер материалдық ағындар тұрғысынан ғана емес, ақпараттық құрамдауыш, HR-ресурстар қозғалысының серпіні тұрғысынан да кеңінен дами алады және таратыла алады, бұл Қазақстан экономикасын жаһандық және шекара маңындағы өндірістік-шаруашылық жүйелерге оңтайлы ықпалдастыруға мүмкіндік береді. Соның салдарынан сыртқы экономикалық одақтардың логистикасын құру мен жобалаудың, кеден органдарының өзара іс-қимылының, тауарлар мен қызметтердің халықаралық нарықтарында бәсекелестіктің қағидаттары мен әдіснамасын жетілдірудің жаңа экономикалық теориялары жобалануы мүмкін. Жүргізілген теориялық зерттеулер қолданбалы сипатқа ие және кең таралған.

**Түйін сөздер:** стратегия, логистика, логистикалық стратегия, өнеркәсіптік кәсіпорын, логистикалық мақсаттар, шығындар.

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## ПОСТРОЕНИЕ ЛОГИСТИЧЕСКОЙ СИСТЕМЫ НА УРОВНЕ ОРГАНИЗАЦИИ БИЗНЕСА

**Аннотация.** Стабильность и финансовое благополучие предприятия обеспечивается его деловой активностью и поведением в том или ином сегменте рынка. В условиях конкурентной борьбы следует постоянно отслеживать появление новых, более дешевых и достаточно эффективных разработок, своевременно адаптироваться к изменению ситуации на рынке и соответственно пересматривать существующие принципы функционирования фирмы. Устоявшиеся понятия, пути организации и ведения бизнеса, приемлемые и устраивающие руководство предприятия вчера, могут негативно повлиять на динамику развития предприятия сегодня. Чтобы не только достигнуть, но и удержать позицию лидера предприятию необходимо повышать уровень технологичности и эффективности бизнес-процессов. Успех в привлечении потенциальных клиентов зависит от оперативности и четкости выполнения требований заказчика. Несоблюдение хотя бы одного из требований может привести к потере потребителей и соответствующей доли рынка.

В условиях конкуренции клиенты имеют возможность сравнить и выбрать лучший уровень сервиса и, соответственно, предъявляют повышенные требования к его качеству. Качество логистического обслуживания – это удовлетворение запросов потребителей, выраженное в надлежащем выполнении заказов, отсутствии ошибок, эффективном предоставлении услуг, а также постоянном стремлении к повышению уровня сервиса.

В статье рассмотрена специфика построения логистической стратегии на предприятии, проанализирован и описан алгоритм построения логистической системы первого уровня. Определено, что немаловажную роль при построении логистической стратегии играет генеральная стратегия промышленного предприятия в целом. Рассмотрена и изучена организационная структура логистической службы промышленного предприятия, целью которого является обеспечение системного управления товарными потоками предприятия.

Особое внимание акцентировано на подсистемы макро- и микрологистических систем, инфраструктурные аспекты их развития с учетом факторов глобальной экономики.

Направленность логистических систем на макроэкономический эффект определяет их перспективная роль в развитии экономики Республики Казахстан, затрагивающая инновационные аспекты развития и бизнес-процессов.

В перспективе логистические системы могут получить широкое развитие и распространение не только с точки зрения материальных потоков, но и с позиции информационной составляющей, динамики движения HR-ресурсов, что позволит оптимально интегрировать экономику Казахстана в глобальные и приграничные производственно-хозяйственные системы. Как следствие, могут быть спроектированы новые экономические теории построения и проектирования логистики внешнеэкономических союзов, взаимодействия таможенных органов, совершенствования принципов и методологии конкуренции на международных рынках товаров и услуг. Проведенные теоретические исследования носят прикладной характер и могут получить широкое распространение.

**Ключевые слова:** стратегия, логистика, логистическая стратегия, промышленное предприятие, логистические цели, издержки.

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## DIGITAL TRANSFORMATION OF AGRICULTURE IN THE REPUBLIC OF KAZAKHSTAN

**Abstract.** Currently, in many countries, digitalization is a strategic development priority. According to the forecasts of the world's leading experts, by 2020 25% of the world economy will be digital, and the introduction of digitalization technologies for the economy, allowing the state, business and society to interact effectively, is becoming an increasingly large-scale and dynamic process.

Agriculture in the world is turning from a traditional into a high-tech industry, which is able to create new markets for innovative developments that did not exist before. The time has come when intelligent digital solutions should help the country's agriculture to cope with the problems of increasing productivity and sustainable development.

The agricultural sector is the most vulnerable sector of the economy, largely dependent on the vagaries of nature. And the impact of climate change on food security in the world will only increase. Intensity, seasonality and rainfall will become increasingly unpredictable, which will significantly reduce the ability of the agrarian business to adapt to such changes.

Digitization of the agro-industrial complex will reduce these risks, adapt to climate change, increase crop yields and animal productivity, and plan field work in a timely manner.

The agricultural sector of Kazakhstan is of great importance and should continue to develop rapidly. However, due to the natural conditions in the country, that is, due to the harsh continental climate, this is not easy, but because of the large territory, this industry has great potential. Kazakhstan could make an important contribution to the global food supply in the future.

Reducing the cost of growing products, improving their quality and competitiveness based on the efficient use of resources and scientifically based approaches is the main task of digitization of agriculture. Providing the necessary information to rural producers will reduce transaction costs for the purchase and sale, simplify the supply chain of products from the field to the consumer, reduce the deficit in skilled labor.

**Key words:** digitalization, agriculture, industry, development, effectiveness, digitalization technology, foreign experience, product, cost.

**Introduction.** Industrially developed countries continue to successfully modernize their economies. They are rapidly implementing innovative technologies based on automation, computerization, and digital platforms. The day is probably not far off when artificial intelligence will control production.

Global spending on scientific and technological development today amounts to about \$ 2 trillion with an average annual increase of 4%.

The world has already entered the era of digital globalization, defined by data flows that contain information, ideas and innovations. According to experts, by 2022, 25% of the world economy will switch to the introduction of digitalization technologies that allow the state, business and society to function effectively.

Digital technologies in Kazakhstan are also considered as the main way to diversify the national economy, its reorientation from a raw material to an industrial-service model.



Areas that have already become traditional for agriculture, such as plant breeding or cloning in animal husbandry, which were associated with mass production and consumption to the detriment of the environment, are now losing their former significance. They are being replaced by "smart" agricultural technologies supported by digital platforms, 3D printing capabilities, robotics, biosensors and Big Data.

The prospects for modernizing the industry are huge. Agriculture is changing from a traditional to a high-tech industry that can create new markets for innovative developments that did not exist before. It is time that smart digital solutions should help the country's agriculture to cope with the challenges of increasing productivity and sustainable development.

**Methods.** The theoretical and methodological basis of the research is the work of domestic and foreign researchers on the theory and assessment of digital transformation of agriculture.

The research is based on a system-logistics approach to the formation of digital transformation of agriculture. It was based on dialectical, statistical, inductive and deductive methods used by world science in the knowledge of the agro-industrial complex.

To solve these problems, methods of comparative analysis, grouping of data, indexes, analysis and synthesis, modeling methods, methods of short-term and long-term forecasting, stages of digitalization of agriculture, expert-analytical method were used as special methods and research tools.

**Results and discussion.** The agricultural sector is the most vulnerable sector of the economy, largely dependent on the whims of nature. Moreover, the impact of climate change on food security in the world will only increase. The intensity, seasonality and amount of precipitation will become increasingly unpredictable, which will significantly reduce the ability of agricultural businesses to adapt to such changes.

To this we can add the possibility of huge damage that can be caused to the country's economy by drought or flooding caused by climate change. Only over the past 5 years, 30 billion tenge was spent from the national budget to eliminate the consequences of emergency situations.

Digitalization of the agro-industrial complex will reduce these risks, adapt to climate change, increase crop yields and animal productivity, and plan field work in a timely manner.

Reducing the cost of growing products, improving their quality and competitiveness based on efficient use of resources and science – based approaches-this is the main task of digitalization of agriculture. Providing the necessary information to rural producers will reduce transaction costs for buying and selling, simplify the supply chain of products from the field to the consumer, and reduce the shortage of skilled labor.

Rural entrepreneurs need to produce more food with fewer resources. Therefore, we need a significant breakthrough in agricultural production technologies. To work the old-fashioned way, "by eye" - means to lose the world competition.

A farmer, in order to remain competitive, must be able to predict the supply of their products depending on demand and consumer preferences. In order to make a correct or, as they say now, "smart" management decision, they need to possess digital technologies. This includes the use of satellite images, differentiated field processing algorithms, high-tech sensors, mobile applications and GPS systems.

This means that we need to change the system of professional training of specialists, starting with rural schools, colleges and universities.

Education should be continuous in accordance with modern requirements and tasks. To do this, our University higher school of agribusiness and top farmers ' school offers courses, conducted ongoing seminars, opening up access to the development of digital technologies.

Currently, digitalization is a strategic development priority in many countries. According to forecasts of the world's leading experts, by 2020 25% of the world economy will be digital, and the introduction of technologies for digitalization of the economy, allowing the state, business and society to interact effectively, is becoming an increasingly large-scale and dynamic process [1].

More than 15 countries are implementing national digitalization programs: Denmark, Norway, the United Kingdom, Canada, Germany, Saudi Arabia, India, Russia, China, South Korea, Malaysia, Singapore, Australia, New Zealand and Kazakhstan.

China's Internet plus program integrates digital industries with traditional ones. Singapore is creating a «Smart economy», Canada is creating an ICT hub in Toronto, the driver of which is ICT. South Korea's "Creative economy" program focuses on human capital development, entrepreneurship and dissemination of ICT achievements, while Denmark focuses on digitalization of the public sector.

As we can see, different countries set different priorities in the field of digital transformation. In our case, in the «Digital Kazakhstan» program, we expect progressive development of the digital ecosystem to achieve sustainable economic growth.

The most striking example of a digital privatisation approach is Singapore. So, in 2014, the state initiated the development of the Smart Nation concept and invited business and the expert community to cooperate to Refine and implement it.

The share of information technology in the gross domestic product of South Korea is 9%, in China and India-4.7% [2].

The progress in the development of the digital economy of different countries and the level of integration of the global network into the lives of billions of people reflects the rating of Digital Evolution Index 2017. After analyzing the current state and growth rates of the digital economy in each state, the authors of the study divided the countries into four groups:

Singapore, the United Kingdom, New Zealand, the United Arab Emirates, Estonia, Hong Kong, Japan and Israel demonstrate high rates of digital development, maintain it and continue to lead in the spread of innovation.

South Korea, Australia, as well as countries in Western Europe and Scandinavia have shown steady growth for a long time, but now they have noticeably reduced the pace of development. Without innovation, these States risk falling behind the leaders of digitalization.

Despite the relatively low overall level of digitalization, these countries are at the peak of digital development and demonstrate stable growth rates, which attracts investors. China, Kenya, Russia, India, Malaysia, the Philippines, Indonesia, Brazil, Colombia, Chile, and Mexico have the potential to take a leading position.

Countries such as South Africa, Peru, Egypt, Greece, and Pakistan face serious challenges associated with a low level of digital development and slow growth.

Kazakhstan does not start from scratch. In the 90s, the state program for accelerated industrial and innovative development was launched, the Bolashak international education program was initiated, and the formation of an «electronic government» was launched in 2005.

The Foundation for the digital transformation of the economy of Kazakhstan was the state program «Information Kazakhstan-2020», approved in 2013. It contributed to the development of the transition to an information society, improving public administration, creating institutions of «open and mobile government», and increasing the availability of information infrastructure not only for corporate structures, but also for citizens of the country. According to the results of three years of implementation of the state Program, 40% of its implementation has already been achieved.

The Head of state also noted that the development of the digital industry will provide an impetus to all other industries. In this regard, the President set a task to develop new industries that are created using digital technologies [3].

Digitalization will primarily cover those sectors that have great potential for economic growth: agriculture, energy, mining and oil and gas sectors, transport and logistics.

The projects «Smart Deposit» and «Digital mine» are already working. Local e-Commerce development is being invested.

According to forecasts, the combined effect of digitalization projects will provide up to 30% of the country's GDP growth from 2025.

A good example of the possibility of a breakthrough may be the digitalization of agriculture. The Food and agriculture organization of the United Nations and the Organization for economic cooperation and development estimate that the world's population will reach 9.7 billion by 2050. To ensure food security of the planet's inhabitants, it is necessary to increase agricultural production by 60-70% compared to the 2000s.

Here, such a competitive advantage of Kazakhstan, and the entire EEU, as huge reserves of fertile land comes to the fore. But it is possible to solve this global problem by introducing radical technological innovations. A tool for stable agricultural production will be the transition to a digital structure of the agricultural market.

According to Gartner forecasts, the overall economic impact of the introduction of the Internet of things in all sectors of the economy on a global scale will be \$1.9 trillion by 2022. Agriculture accounts for 4%, i.e. approximately \$ 76 billion [4].

According to Goldman Sachs, the total increase in crop productivity due to the introduction of precision farming solutions can grow by 70% and bring in \$800 billion of additional production by 2050. The market for precision farming solutions for manufacturers and developers will bring in \$240 billion in 2050. These are solutions for precise planting, precise irrigation, precise fertilization, spraying, field monitoring, data analysis, small agricultural machinery, including Autonomous [5].

The average penetration rate of precision farming technologies in the United States is estimated by the USDA at 30-50%, while the level of technology use in large farms is twice as high as in small ones. The penetration of precision farming technologies in active agricultural areas of the United States is 60-80%.

The most common: computer with high-speed Internet access, soil sample analysis (98%); yield maps, yield monitors, GPS navigation systems (~80%); differentiated application technologies (VR) and prescriptionmaps (prescriptionmaps) are used by more than 60% of respondents; satellite images and vegetative index analysis of plants are used by no more than 30% of farmers, although new developments in the use of unmanned aerial vehicles (drones) may increase interest in using images for scouting, data analysis and management decision-making.

In terms of data collection and processing technologies, the use of data and software for yield mapping is the most common practice (80%), followed by the development of plans or prescriptions for the use of VR technology for the application of nutrients and fertilizers, as well as for seeding and planting (50-60%).

The USA demonstrates stable growth of the agricultural machinery market, the country is the leader in the import of tractor equipment. The industrial nature of US agriculture and the combination of automation with rapid implementation of the latest high-tech achievements ensure the country's leadership in agricultural efficiency and AIoT market volume.

The development of precision farming systems Agro IoT in the United States is promoted by large farms with minimal state participation.

The most developed region in terms of agricultural equipment with modern technology is Germany: the number of tractors per unit area is the largest in the world. Germany is the world leader in tractor exports among the countries considered in the study. This is because at the level of national consciousness, the country aims at global industrial leadership (among the world industrial leaders a lot of German brands: Bosch, Siemence, BMW, Daimler, Volkswagen), is the «author» of the term «industry 4.0» (this is one of the subprogrammes of the state Hi Tech strategy of Germany) and initiated the processes related to the digitalization of the industry.

At the same time, despite the fact that in Europe 70-80% of agricultural machinery is sold with built-in smart and navigation systems in Europe, the number of «connected» equipment is at the level of 25% - 30%. The main barriers to the European market are a smaller share of large farms compared to the United States (the presence of a large number of «family», centuries-old successor businesses), for which the purchase of equipment with connected electronics is expensive, as well as the fact that most farms already have tractor equipment in use, which prevents its replacement with more innovative [6].

In the US and Germany, high Internet penetration in rural areas is 70-80%.

Every year, about 2.1 million new tractors are sold worldwide. About 50% of all tractors are sold in China and India.

China is developing at the fastest pace in terms of agricultural mechanization. The agricultural machinery market has been growing by an average of 13.3% over the past 5 years. China is almost completely self-sufficient in equipment, the volume of imported equipment in monetary terms is 8 times less than exported, despite the fact that in 2004 China had the same volume of exports and imports of tractors.

As a catch-up country with the least mechanized agriculture, India shows the greatest demand for these products and is rapidly increasing the level of agricultural mechanization. In the period 2006-2018, sales of new tractors increased by more than 3 times. In addition, according to J'son & Partners Consulting, India is one of the leading countries in the production of agricultural machinery. The main role in the engineering industry is played by 14 large companies, most of which work closely with well-known Western partners. India takes an active position on localization of the world's largest manufacturing enterprises. This is consistent with the national program Net Zero Export (Zero import) –

the state program of import substitution, according to which by 2021 the country should learn to produce everything independently and ensure zero imports. Therefore, the country is able to quickly master the production of modern high-tech equipment.

High penetration of precision farming technologies in Canada – 60-80% or more for some basic types. According to a survey of farmers, the overall attitude to precision farming in Canada is generally positive:

- 84% of the surveyed farmers use some form of «precision farming» technology;
- 93% agreed that «precision farming» is beneficial to use;
- 75% plan to increase the use of precision farming technologies.

Canada became the # 1 country in terms of output per employee (ratio: agricultural output/number of employees in the industry) and overtook the traditional permanent leader - the United States in 2015. Leadership is due to the high penetration of automated systems and hitech agropractic, a large number of employees in the agricultural sector, and strong government support for the industry (for example, farmers have free access to a variety of interactive maps made on the basis of satellite imagery).

The analysis of the activities of Kazakh farmers and government agencies on the issues of digitalization and automation of the agro-industrial complex in 2019 showed the following results:

Pavlodar region. Digitalization programs are already being used in crop and livestock production. For example, for producers, a program is connected that integrates information about the volume of milk received into an electronic system of information and analytical base. According to data, 568.3 thousand hectares of 1.3 million hectares of land in the region have been digitized, which is 42.6% [7].

North Kazakhstan region. In 2019, nanotechnology began to be used in 50 farms in Northern Kazakhstan.

Also, the basis of digitalization is an electronic map of fields. To date, 52% of the fields have been digitized. In the future, it is planned to use satellite monitoring of fields and equipment [8].

The center of information technologies of the regional Akim's office was opened in East Kazakhstan region within the framework of the «Digital Kazakhstan» program. The Center's goal is to develop the process of digitalization in the region. Electronic maps will be created in the cities of Ust-Kamenogorsk and Semey that reflect information about available land plots in localities [9].

Kostanai region. As part of the digitalization of the agro-industrial complex, the main focus will be on the introduction of elements of precision agriculture, which is expected to have the greatest economic effect. In kamystinsky LLP «PKF Kairat», using modern high-performance equipment that allows the use of digital technologies, when sowing 15 thousand hectares of grain, they saved more than 30 million tenge, or 15% of production costs. In «Troyana» LLP of the Fedorovsky district last year, during spring field work using satellite navigation, 4 units were sown with 6.4 thousand seeds. 10 million tenge was saved by preventing replanting, saving fuel, seeds and protection equipment. In The zhanakhay farm of the same district, due to the wide use of «smart» technologies, the annual savings amount to more than 9 million tenge. Given the scale of sowing and harvesting operations in the region as a whole, the economic effect may exceed tens of billions of tenge [10].

In Kostanay region, it is planned to complete the work on «digitization» of fields. These cards are planned to be linked to receiving all subsidies, preferential lending, and insurance.

A number of tasks on digitalization of agricultural production are being implemented in Akmola region. In the region, the process of transferring applications and payment of subsidies in electronic form through a web portal has begun Minagro.kz.

Now agricultural producers do not need to submit applications themselves, everything is translated into digital format. The region is working on the formation of an electronic map of fields aimed at the development of precision agriculture.

Three basic enterprises for the introduction of precision farming technologies were identified-AF «Rodina tselinogradsky district» LLP, «Belagash» LLP of «Zhaksynsky district and zhuravlevka-1» LLP of Bulandinsky district) and three enterprises in animal husbandry that produce products using smart-farm technology (AF «Rodina tselinogradsky district» LLP, «Yessil agro» LLP of «Burabaysky district» and «Enbek Akkol» district LLP.

In the near future, within the framework of the signed Memorandum between the Akimat of the Akmola region and JSC «Kazakh agrotechnical University named after S. Seifullin» on cooperation in the field of scientific and innovative development of the agro-industrial complex, it is planned to conduct

advanced training courses and retraining of farm specialists in teaching digital literacy and precision farming technology. In addition, a number of projects will be implemented to introduce digital technologies in crop production, online monitoring and accounting systems for field work using digital technologies and GPS equipment.

The introduction of digital technologies will make it possible to quickly make optimal decisions on field operations, save fuel and lubricants, increase the efficiency of fertilizers and herbicides, which will generally contribute to the sustainable growth of agricultural production in the region [11].

West Kazakhstan region. In April 2019, the house of farmers of Uralsk held a meeting on the preparation for the spring field work under the chairmanship of the first Deputy Governor of the region.

As a result of the meeting, it was instructed to take comprehensive measures to provide agricultural formations with the missing volume of seeds, bring them to sowing conditions, to etch seeds, to complete repairs of tractors, sowing and tillage equipment in time, to intensify work on the selection of allocated diesel fuel, as well as to assist agricultural producers in introducing elements of precision farming and digital technologies in the agro-industrial complex, to complete digitization of fields in electronic format. (newspaper «Priuralie»)

The Turkestan region. The use of digital technologies in the agro-industrial complex is developing dynamically in the region. In particular, modern technologies are being introduced in the region in agriculture and animal husbandry.

As a result of the use of advanced technologies, the productivity of intensive gardens planted on 2.8 thousand hectares has increased by 1.5-2 times compared to traditional gardens. It is worth noting that 70 percent of greenhouses in the region are automated. Along with this, the area of land on which the drip irrigation method is used has increased by 16%, amounting to 59.1 thousand hectares. In addition, the livestock industry maintains an automated accounting of livestock. This measure will allow you to control all animal movements and veterinary measures.

At the same time, new technologies are actively used in the production and processing of livestock products in the region. For example, the dairy farm «Borte-Milka» fully automated the entire production process, from milking to feeding and storage of milk. As a result of automation of production, the annual productivity of one cow will be up to 7 thousand liters of milk, when the traditional method of productivity is 3 thousand liters [12,13].

Roland Berger believes that the market for smart agriculture solutions in the world will reach €4.5 billion by 2022, and according to Gartner's forecasts, the overall economic effect of the introduction of IoT tools by 2022 will be \$1.9 trillion, with 4% of them coming from agriculture, which in absolute terms will be more than \$75 billion. Tractica concluded that the market for agricultural robots by 2024 will reach \$74.1 billion, and production will grow 19 times and reach 594 thousand units of equipment.

According to J'son & Partners Consulting, the efficiency of business processes in agriculture can be increased by 50-70% if you use robotic systems that allow you to control the consumption of fuel, water, electricity, and harvest. When optimizing the main working processes with the help of robotic systems, you can increase productivity by 1.5-2 times, and reduce the cost of planting crops by up to 80%. In General, the global digital farming market is estimated at 3 billion euros, and by 2022 it can grow to 4.5 billion euros.

**Summary and Conclusion.** Currently, the development of agriculture in our country is a priority.

Improving the economic efficiency of agriculture to a competitive level from the positions of the world market is impossible without improving and developing the main creative force of the agricultural economy, which reflects the essence and inner core of rural residents. The development of agriculture is objectively determined by the need to form new effective infrastructure links of the digital economy and provide the population with food of appropriate quality in the required quantity. Modern information technologies help to increase the efficiency of agricultural production.

But, unfortunately, the innovations of the agro-industrial complex in Kazakhstan are not sufficiently developed. And in order to achieve effective development, it is necessary to create various programs for improving the skills of personnel that will move agricultural production forward, attracting new specialists to enterprises.

The key trend in the development of agriculture is the formation of an effective human and social capital with the right level of information provision and transparency of information flows, a highly organized institutional environment, with minimal transaction costs, is to build a system of directions and measures of agricultural development with the appropriate orientation of the digital economy.

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## ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДАҒЫ АУЫЛ ШАРУАШЫЛЫҒЫНЫҢ САНДЫҚ ТРАНСФОРМАЦИЯСЫ

**Аннотация.** Қазіргі уақытта көптеген елдерде цифрландыру стратегиялық даму басымдық болып табылады. Әлемнің жетекші сарапшыларының болжамдарына сәйкес, 2020 жылға қарай әлемдік экономиканың 25 пайызы цифрланады, ал мемлекет, бизнес пен қоғамның тиімді өзара әрекеттесуіне мүмкіндік беретін экономикаға цифрландыру технологияларын енгізу барған сайын кең ауқымды және серпінді процесс болады.

Дүние жүзіндегі ауыл шаруашылық дәстүрліден жоғары технологиялық индустрияға айналып келеді, ол бұрын болмаған инновациялық әзірлемелер үшін жаңа нарықтарды құруға қабілетті. Зияткерлік сандық шешімдер еліміздің ауыл шаруашылығына өнімділікті арттыру және орнықты даму проблемаларын шешуге көмектесетін уақыт келді.

Агроөнеркәсіптік кешен - бұл экономиканың ең осал секторы, көбінесе табиғаттың қиырлығына тәуелді. Климаттың өзгеруі әлемдегі азық-түлік қауіпсіздігіне әсер етеді. Қарқындылық, маусымдық және жауын-шашынның болуы күтпеген жағдайға айналады, бұл аграрлық бизнестің осындай өзгерістерге бейімделу қабілетін айтарлықтай төмендетеді.

Агроөнеркәсіптік кешенді сандықтау осы тәуекелдерді азайтады, климаттың өзгеруіне бейімделеді, егістік өнімділігі мен жануарлардың өнімділігін арттырады, сондай-ақ кен орнындағы жұмыстарды дер кезінде жоспарлайды.

Қазақстанның аграрлық шаруашылығы үлкен маңызға ие және келешекте де қарқынды дамуы керек. Дегенмен, республикадағы табиғи жағдайлар, яғни күрт континентальды климаттың айқын болуына байланысты бұл оңай емес, алайда аумақтың үлкен болуына байланысты бұл саланың әлеуеті зор. Қазақстан болашақта әлемді азық-түлікпен қамтамасыз етуде маңызды үлес қоса алады.

Ауыл шаруашылығын цифрландырудың негізгі міндеті - өсіп келе жатқан өнімдердің құнын төмендету, ресурстарды тиімді пайдалану және ғылыми негізделген тәсілдер негізінде сапасы мен бәсекеге қабілеттілігін арттыру. Ауылдық тауар өндірушілерге қажетті ақпарат беру сатып алу-сату үшін транзакциялық шығындарды қысқартуға, кен орнынан тұтынушыға дейін жеткізілімдер тізбегін жеңілдетуге, білікті жұмыс күшінің тапшылығын азайтуға мүмкіндік береді.

**Түйін сөздер:** цифрлау, ауыл шаруашылығы, өндіріс, даму, тиімділік, цифрлау технологиясы, шетелдік тәжірибе, өнім, құн.

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## ЦИФРОВАЯ ТРАНСФОРМАЦИЯ СЕЛЬСКОГО ХОЗЯЙСТВА В РЕСПУБЛИКЕ КАЗАХСТАН

**Аннотация.** В настоящее время во многих странах цифровизация является стратегическим приоритетом развития. По прогнозам ведущих мировых экспертов, к 2020 году 25% мировой экономики будет цифровой, а внедрение технологий цифровизации экономики, позволяющих государству, бизнесу и обществу эффективно взаимодействовать, становится все более масштабным и динамичным процессом.

Сельское хозяйство в мире превращается из традиционной в высокотехнологичную отрасль, которая способна создавать новые рынки для инновационных разработок, не существовавших ранее. Настало время, когда интеллектуальные цифровые решения должны помочь сельскому хозяйству страны справиться с проблемами повышения производительности труда и устойчивого развития.

Сельскохозяйственный сектор является наиболее уязвимым сектором экономики, в значительной степени зависящим от капризов природы. А влияние изменения климата на продовольственную безопасность в мире будет только усиливаться. Интенсивность, сезонность и количество осадков будут становиться все более непредсказуемыми, что значительно снизит способность аграрного бизнеса адаптироваться к таким изменениям.

Оцифровка агропромышленного комплекса позволит снизить эти риски, адаптироваться к изменению климата, повысить урожайность сельскохозяйственных культур и продуктивность животных, своевременно планировать полевые работы.

Сельскохозяйственный сектор Казахстана имеет большое значение и должен продолжать быстро развиваться. Однако из-за природных условий в стране, а именно – из-за резкого континентального климата, это нелегко, но из-за большой территории эта отрасль имеет большой потенциал. Казахстан может внести важный вклад в мировое снабжение продовольствием в будущем.

Снижение себестоимости выращиваемой продукции, повышение ее качества и конкурентоспособности на основе эффективного использования ресурсов и научно обоснованных подходов является основной задачей цифровизации сельского хозяйства. Предоставление необходимой информации сельским товаропроизводителям позволит снизить транзакционные издержки по купле-продаже, упростить цепочку поставок продукции с поля к потребителю, снизить дефицит квалифицированной рабочей силы.

**Ключевые слова:** цифровизация, сельское хозяйство, промышленность, развитие, эффективность, технологии цифровизации, зарубежный опыт, продукт, стоимость.

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## **PROBLEMS AND PROSPECTS OF INNOVATION DEVELOPMENT IN THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** The article considers the importance of innovative development of the Republic of Kazakhstan as one of the priority directions of economic growth in modern conditions. The main directions of the state policy in the sphere of scientific, technical and innovative activity are considered. Based on the research, important directions of innovation development in Kazakhstan have been identified.

The purpose of the research is to study the problems of innovation development in the Republic of Kazakhstan and the innovative activity of Kazakhstani enterprises, the most important tools for implementing the strategy of innovative development and provide recommendations for their elimination.

Methodology-the research process used such general scientific methods and techniques as scientific abstraction, analysis and synthesis, comparisons, generalizations, and descriptive analysis.

Conclusions-successful implementation of state programs for innovative development of the country's economy should contribute to qualitative changes in the structure of the economy of Kazakhstan, which will lead it to sustainable growth based on the effective use of human, produced and natural capital, Kazakhstan's entry to a new level of social development and social structure. At the same time, the uncontrolled flow of foreign technologies can lead to the suppression of the development of the national research and production complex, which creates a real danger of technological dependence of the domestic industry on foreign developments.

**Key words:** creative management, knowledge management, innovation, project approach, creativity, creative capital.

**Introduction.** Kazakhstan's entry into the top 30 most competitive countries in the world is one of the main goals of the state, which can be achieved only on the basis of deep diversification of the country's economy, by stimulating innovation, introducing and developing competitive industries integrated into regional and global markets. That is why in recent times the most important factors in the development of Kazakhstan's economy began to include innovation, which is based on the introduction of new ideas, scientific knowledge, technologies and products in various fields of production and spheres of governance. President of The Republic of Kazakhstan Nazarbayev N.A. in his Address to the people of Kazakhstan, emphasized that "by 2015, the national innovation system should fully function, and by 2020, it should already produce results in the form of developments, patents and ready-made technologies being implemented in the country" [1].

According to the President of Kazakhstan, five positive trends in innovative development of the economy of Kazakhstan are particularly important:

1. Energy efficiency, which is provided only by new technologies.
2. Growth in the non-resource sector. Mechanical engineering should become the core of the country's innovative development process, which includes the automobile industry with new technologies and car building.
3. Agro-industrial complex. Today, the state is making considerable efforts to develop vegetable and livestock production.
4. Projects implemented in small and medium-sized businesses.
5. Labor productivity, which should grow steadily, which will automatically entail an increase in income and qualitative changes in the social development of society [2].



Initially, the issues of innovative development of Kazakhstan were reflected in the Strategic plan of 2010, the Program for the formation and development of the national innovation system of Kazakhstan for 2005-2015. The main provisions of the Law of the Republic of Kazakhstan "on innovation" and "program of innovative development of the Republic of Kazakhstan" are aimed at expanding the scope of innovation activity in Kazakhstan [3].

In the official legal documents of Kazakhstan, the concept of "innovation" has been used in the last 10-15 years, it has been fixed in the Law of the Republic of Kazakhstan "on innovation" and is defined as the result of innovative activities that have been implemented in the form of new or improved products (work, services), new or improved technological process, as well as organizational, technical, financial, economic and other decisions in various areas of public relations, they have a progressive impact on various areas of production and management of society [4].

I. Schumpeter interprets innovation as a new scientific and organizational combination of production factors, motivated by the entrepreneurial spirit [5].

Today, Kazakhstan is undergoing radical transformations of its multi-layered economy in order to increase the country's competitiveness, where the main importance is given to technological transformations – overcoming technological degradation, mastering the technology of the modern fifth and promising sixth technological orders.

In Russia and in other countries currently, the tasks of transition to innovative type of economic development [6], and in Kazakhstan – to industrially-innovative due to the not yet fully developed industrial sectors of the economy and focus on a strategy to support high-tech production, innovation and business sectors.

Kazakhstan faces the task of dynamic modernization of the entire system of socio-economic and socio-political relations. At the same time, the main focus is on the markets of Russia, China, Central Asia, the Caspian and black sea regions. This implies state support for the expansion of Kazakhstan's capital, goods and services to foreign markets [7].

To date, the fundamental document defining the economic development of Kazakhstan is the Strategy of industrial and innovative development of the Republic of Kazakhstan for 2003-2015.

Since 2015, the implementation of the state program of industrial and innovative development of the Republic of Kazakhstan for 2015-2019 has begun. The program was developed in accordance with the long-term priorities of Strategy "Kazakhstan-2050" and the concept of Kazakhstan's joining top 30 developed countries of the world, is a logical continuation of the state program on forced industrial-innovative development for 2010-2014 and considers the experience of its implementation.

The main goal of the program is to encourage diversification and increase the competitiveness of the manufacturing industry. Namely, 6 priority sectors of the manufacturing industry were selected: metallurgy, chemistry, petrochemistry, mechanical engineering, construction of materials, food industry. They, in turn, are divided into 14 sectors: ferrous metallurgy; non-ferrous metallurgy; oil refining; petrochemistry; food production; Agrochemistry; production of chemicals for industry; production of motor vehicles, their parts, accessories and engines; production of electric machines and electrical equipment, agricultural and railway equipment, machinery and equipment for the mining industry; production of machinery and equipment for the oil refining and oil production industry; production of construction materials.

The program also defines a cluster policy that will be aimed at transferring the country's economy to a new technological platform, forming industries with a high level of productivity, added value and the degree of conversion of products and services.

**Methodology.** During the implementation of the program, the state will focus on the development and balanced support of one national cluster of basic resource sectors related to oil and gas production and processing, oil and gas chemistry, oil and gas chemical engineering and services for the oil and gas industry; three territorial clusters in market-oriented manufacturing sectors, which will be determined by the results of the competition; two innovation clusters in the sectors of the "new economy" - in Astana (cluster "Nazarbayev University"), Almaty (cluster "Park of innovative technologies").

The program helped in 2019 to achieve the following economic indicators to the level in 2012: growth of volumes of output of manufacturing industry by 43% in real terms; the growth in gross value added in manufacturing industry not less than 1,4 times in real terms; the growth of labor productivity in

the manufacturing industry 1.4 times in real terms; the growth in the value volume of non-commodity (processed) export not less than 1.1 times; reducing the energy intensity of the manufacturing industry no less than 15%; growth of employment in the manufacturing industry by 29.2 thousand people.

**Results of a research.** Kazakhstan has every chance to pass its own path to innovation most successfully and become one of the world's innovation leaders. In order to ensure a high rate of annual growth of indicators of innovative development in market conditions, a targeted state policy is needed not only in innovation and scientific and technical, but also in the socio-economic sphere [8]. In Kazakhstan, the most important tools for implementing the strategy of innovative development are the national Fund of the Republic of Kazakhstan, JSC «development Bank of Kazakhstan», JSC

«Investment Fund of Kazakhstan», JSC «national innovation Fund». All these institutions are designed to implement a policy of investment in the creation of new and development of existing industries with high added value and support scientific and technical research and development based on a comprehensive analysis of promising industries, identifying their most important elements [9].

One of the main directions of state policy in the field of scientific, technical and innovative activities is the formation of an innovation infrastructure, including the creation of specialized subjects of innovation activities of a state, intersectoral, sectoral and regional nature. The development of a network of technoparks on the territory of the Republic is one of the priority directions for the development of the economy of Kazakhstan. In accordance with the decree of the President of the Republic of Kazakhstan dated March 19, 2010 «On the state program for accelerated industrial and innovative development for 2011-2014», eight regional technoparks were established in the Republic of Kazakhstan:

1. Technopark Algorithm LLP;
2. LLP Technopark Sary-ARKA;
3. JSC Technopark of KazNTU named after K. I. Satpayev;
4. Almaty regional Technopark LLP;
5. LLP Technopark "Alatau";
6. Regional Technopark of Astana" LLP;
7. Regional Technopark in South Kazakhstan region LLP;
8. East Kazakhstan regional Technopark Altai LLP.

According to the Law of the Republic of Kazakhstan «on state support of industrial and innovative activities», technological business incubation is defined as the main activity of technoparks [10]. In 2010-2013, within the framework of the government's technology business incubation program, technoparks submitted 631 innovative project proposals (96 innovative projects were selected for further promotion). Today, the total share of innovative companies present on the territory of technoparks is 62% of the total number of companies.

To encourage the development of venture institutions, the country is developing an adequate legislative framework for stimulating and regulating venture activities. The country's economic recovery will depend on the Government's ability to implement reforms in the science and education system and their interaction with the industrial sector. The lack of qualified employees, such as scientists and engineers, and the poor quality of research institutions may threaten further growth. The state of infrastructure remains at a low level, which imposes physical restrictions on the growth of certain sectors of the economy and innovative industries in particular. In order to further promote the Republic's entry into the top 30 competitive countries in the world through the development of new technologies and services in 2013. The presidential decree adopted the Concept of innovative development of the Republic of Kazakhstan until 2020. As for the level of development of business processes, including such indicators of innovative development as the degree of marketing development, the nature of companies' competitiveness in international markets and the length of the production chain of exporting enterprises, Kazakhstan is significantly behind most countries.

According to the statistics Committee of the Republic of Kazakhstan, in 2019, 1774 economic entities are innovatively active out of 22070 enterprises.

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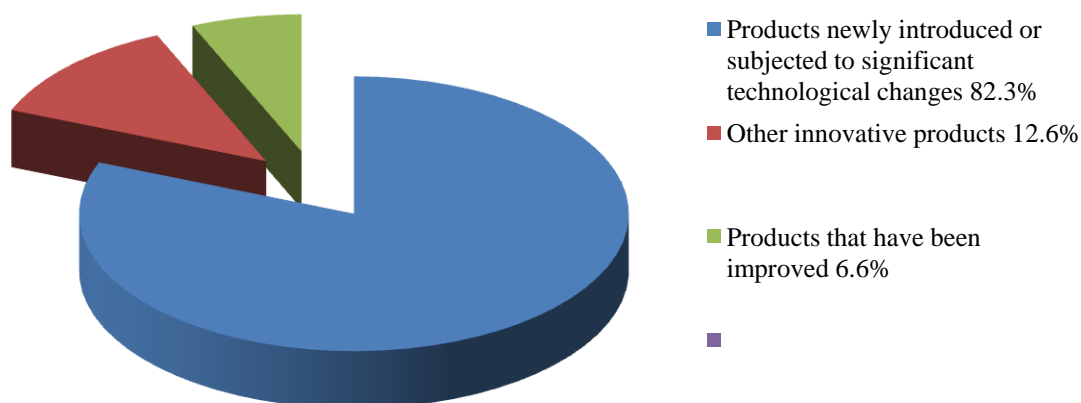
Table 1 – Main indicators of innovation activity of the Republic of Kazakhstan [11]

№	Region	Number of enterprises total	From them	
			With innovation, units	Activity level, as a percentage
1	The Republic of Kazakhstan	22070	1774	8
2	Akmola region	1173	83	7,1
3	Aktobe region	1044	68	6,5
4	Almaty region	1318	126	9,5
5	Atyrau region	798	41	5,1
6	West Kazakhstan region	646	34	5,3
7	Zhambyl region	734	75	10,2
8	Karagandy region	1957	148	7,6
9	Kostanay region	1393	164	11,8
10	Kyzylod region	709	85	12,0
11	Mangystau region	838	20	2,4
12	South Kazakhstan region	2009	129	6,4
13	Pavlodar region	1118	95	8,5
14	North Kazakhstan	1047	114	10,9
15	East kazakhstan	1767	99	5,6
16	Nur-sultan	1617	179	11,1
17	Almaty	3902	314	8

At the same time, the share of innovation activity achieved high results – 8%.

The volume of innovative products has increased significantly, amounting to 578 billion tenge (in 2016, 379 billion tenge). The volume of innovative services provided increased by 50.1%. Among the innovative products of industrial enterprises in 2017, the largest share is taken by products newly introduced or subjected to significant technological changes – 82.3%, products that have been improved - 6.2 %, and other innovative products-12.6% (figure).

### Structure of innovative products for 2017



Structure of innovative products for 2017 [11]

The processes of implementing science and technology achievements are responsible for improving the efficiency of innovative activities of business structures. Research shows that Kazakhstan's science is losing out to the leading countries in all parameters: funding, inventive activity, availability of qualified personnel, the number of publications in international scientific journals. Kazakhstan's science is focused on rapid development and not always getting high-quality results. There is an increase in the volume of internal research and development expenditures, which in 2018 it amounted to 66.3 billion tenge [8].

Table 2 – Internal research and development expenditures for 2014-2018 [11]

№	Region	2014	2015	2016	2017	2018
1	The Republic of Kazakhstan	33 466,8	43351,6	51253,1	6167,7	66347,6
2	Akmola region	574,5	471,1	631	742,5	826,7
3	Aktobe region	627,1	628,1	645,1	559,2	735,3
4	Almaty region	705,1	1007,8	879,1	1117,4	804,2
5	Atyrau region	2199,3	3010,9	3531	1880	1885,7
6	West Kazakhstan region	5099,2	4175,9	3959,9	3773,3	3040,6
7	Zhambyl region	1221,9	198,2	1485,5	1077	1322,3
8	Karagandy region	212,9	353,7	548,2	916	672,2
9	Kostanay region	939,4	1528,4	2947	3407,7	4048,9
10	Kyzyloda region	214,7	250,6	329,9	445,3	574
11	Mangystau region	80,7	79,5	213	213,3	266
12	South Kazakhstan region	3064,8	5150,9	5095,5	5059,4	6160,8
13	Pavlodar region	198,8	385,6	434,1	335,3	322,9
14	North Kazakhstan	112,1	101,9	221,4	209,6	236,3
15	East kazakhstan	450,7	440,5	930,6	1168,5	1233,8
16	Nur-sultan	4445,6	9280,9	10376,3	9741,2	10187,7
17	Almaty	13319,8	16287,6	19061,5	30991	34030,3

In 2018 the Republic of Kazakhstan took 69th place, improving its position by 5 points compared to 2016. According to the regional classification among the countries of Central and South Asia, Kazakhstan occupies the 2nd place, being between India (76th place) and Bhutan (86th place). Having improved its position in the main indicators in 2018, Kazakhstan demonstrates positive dynamics in certain components of the index. According to experts of JSC "Institute of economic research", despite the stable position of Kazakhstan in the Global innovation index and the improvement of individual components of the index, the development of the national system of support and implementation of innovations is at the stage of formation, which explains the lag behind the leading countries of the world [12]. The effectiveness of innovation activity depends on the General economic situation in the country and the state scientific and technical strategy, on full-fledged resource provision, market conditions, availability of professional personnel and effective management [9].

In the world, there is no specific model of innovative economic development, strictly following which the country will necessarily achieve social and economic well-being [13]. Kazakhstan must continue the reform process if it wants to reach a higher level of growth and development. Despite Kazakhstan's existing opportunities and innovative achievements in the form of sufficient venture capital, the ability of companies to innovate and increase the volume of public procurement of advanced technical products, due to the lack of effective developed tools in the field of law, technology and scientific personnel, the overall state of socio-economic development is difficult to characterize as innovative [14].

**Conclusion.** Thus, the successful implementation of the strategy of innovative development should contribute to the implementation of qualitative changes in the structure of the economy of Kazakhstan, which will lead to its sustainable growth, based on the effective use of human, produced and natural capital, Kazakhstan's entry to a new level of social development and social structure.

Based on the current challenges of globalization and financial instability, increased competition in world markets, the increasing role of science and innovation, and human development, the macroeconomic policy of the Republic of Kazakhstan should be built. For the good of the people of Kazakhstan, it is necessary to focus not on the ideals of individual and mass consumption, but on the preservation of family traditions and national characteristics of social relations. This is the main key to building a civil legal society in the Republic of Kazakhstan [15].

Today, Kazakhstan needs to look for new directions of economic development. To increase the country's competitiveness on the world market, it is necessary to actively develop high-tech industries and build an effective national innovation system based on them.

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#### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДАҒЫ ИННОВАЦИЯЛЫҚ ДАМУ МӘСЕЛЕЛЕРІ МЕН ПЕРСПЕКТИВАСЫ**

**Аннотация.** Мақалада Қазақстан Республикасының инновациялық дамуы қазіргі жағдайдағы экономикалық өсудің басым бағытының бірі ретінде қарастырылады. Ғылыми-техникалық және инновациялық қызмет саласындағы мемлекеттік саясаттың негізгі бағыттары назарға алынды. Зерттеу жүргізу барысында Қазақстанның инновациялық дамуының маңызды бағыттары айқындалды.

Зерттеу мақсаты – Қазақстан Республикасындағы инновациялық даму және қазақстандық кәсіпорындардың инновациялық қызмет мәселелерін, инновациялық даму стратегиясын іске асырудың аса маңызды құралдарын зерделеу және оларды жоюға қатысты ұсыныстар әзірлеу.

Методология. Зерттеу үдерісінде ғылыми абстракция, талдау және синтез, салыстыру, қорыту, сипаттау талдауы секілді жалпы ғылыми әдістер мен тәсілдер қолданылды.

Қорытынды. Ел экономикасын инновациялық дамытудың мемлекеттік бағдарламаларын табысты іске асыру Қазақстан экономикасы құрылымындағы сапалы өзгерістерге ықпал етуі тиіс, бұл адам, өндірістік және табиғи капиталды тиімді пайдалану негізінде оның тұрақты өсуіне, Қазақстанның қоғамдық даму мен әлеуметтік құрылымның жаңа деңгейіне шығуына әкеп соғады. Қазіргі уақытта Қазақстан экономикалық дамудың жаңа бағыттарын іздестіруі қажет. Елдің әлемдік нарықта бәсекеге қабілеттілігін арттыру үшін

жоғары технологиялық салаларды белсенді дамыту және олардың негізінде тиімді ұлттық инновациялық жүйені құру қажет. XX ғасырдың аяғында ғылыми-техникалық саланың – ғылым, білім, өнеркәсіптің жоғары технологиялық салаларының, әлемдік техника нарықтарының даму деңгейі бай және кедей елдер арасындағы межені айқындайды, қарқынды экономикалық өсуге негіз қалыптастырады әрі билік орталықтарын қалыптастырудың маңызды факторы болып саналады. Ғылыми-техникалық саладағы басымдықтарды таңдау оның жеке даму перспективасының шеңберінен шығатын мәнге ие. Сонымен бірге, жаһандану үдерістері мен экономиканың дамып келе жатқан өзара тәуелділігі инновациялық үдерістерді басқару міндетін жекелеген мемлекеттің инновациялық әлеуетті дамытуға өзінің стратегиялық тәсілдерін дұрыс айқындау қабілетіне күрделі және тәуелді етеді. Әлемнің дамыған елдерінде инновациялық саясатты қалыптастыруға жүйелік тәсілді қолдану, әсіресе, әлемдік экономика дамуындағы қазіргі заманғы тенденция аясында маңызды болып саналады, атап айтқанда, жоғары сапалы адам капиталы үшін бәсекелестік жаһандық инновациялық дамудың маңызды сипаттамасына айналады, ал жоғары білікті кадрларда қалыптасып келе жатқан жинақылық білім мен технологиялардың таралуына септігін тигізеді; инновациялық қызметтің одан әрі жетілуіне ақпараттық технологиялардың рөлі маңызды болып келеді, білімді тарату үдерісі жеке экономикадан тыс қалды; жаһандану компанияларға барынша жоғары технологиялық деңгейде бәсекелесуге мәжбүр етеді және сонымен қатар, бір уақытта инновацияларды мамандандыру және оқшаулау үдерістерін ынталандырады. Әлемнің дамыған елдерінде инновациялық саясатты қалыптастыруға жүйелі тәсілді қолдану, әсіресе әлемдік экономиканың дамуындағы қазіргі заманғы тенденциялар аясында маңызды болып табылады: - жоғары сапалы адам капиталы үшін бәсекелестік жаһандық инновациялық дамудың маңызды сипаттамасына айналуға, ал жоғары білікті кадрлардың өсіп келе жатқан ұтқырлығы сонымен бірге білімді таратуды және технология; - білімді тарату процесінде ақпараттық технологиялардың рөлі инновациялық белсенділіктің одан әрі өсуі үшін өзекті бола түсуде, білімді тарату процестері жеке экономикадан тыс қалып отыр; - Жаһандану компанияларды жоғары технологиялық деңгейлерде бәсекелес болуға мәжбүр етеді және сонымен бірге инновацияларды мамандандыру және оқшаулау процестерін ынталандырады. Инновациялық саясатқа жүйелі көзқарас тұжырымдамасын іске асырған елдер қысқа тарихи кезеңде мемлекеттің, бизнестің, ғылым мен білім берудің өзара іс-қимыл тетіктерін қамтитын тиімді ұлттық инновациялық жүйелерді құра алды, сондай-ақ ЖІӨ-нің жалпы ғылымға қажеттілігін арттыра алды.

Қазақстанда ғылыми-техникалық сала қоғамның әлеуметтік-экономикалық дамуының базалық элементі болмаған. Ғылыми-техникалық дамудың стратегиялық бағыттарын іске асыру үшін отандық ғылым мен техниканы дамытудың басым бағыттарын түзету, олардың дамуына кедергі келтіретін себептер мен факторларды айқындау, сондай-ақ оларды шешудің нақты тетіктерін анықтау қажет. Экономикалық тұрғыда дамыған елдермен салыстырғанда Қазақстанда инновациялық қызметті дамытудағы жағдай қағидалық айырмашылыққа ие. Атап айтқанда, республикадағы инновациялық қызмет негізінен тікелей шетелдік инвестицияларды тарту негізінде жүзеге асырылады. Тікелей инвестициялармен қатар, елде жаңа технологиялар мен жаңа басқару пайда болады. Көптеген кәсіпорынның шетелдік технология мен лицензияны сатып алу ірі ынталандыру болып, өйткені оларға әлемдік нарыққа шығуға мүмкіндік береді. Сонымен қатар, шетелдік технологиялардың бақыланбайтын ағыны ұлттық ғылыми-өндірістік кешеннің дамуын бәсеңдетуі мүмкін. Бұл жағдай отандық өнеркәсіптің шетелдік әзірлемелерге технологиялық тәуелділігіне қауіп тудырады.

**Түйін сөздер:** шығармашылық басқару, білім басқару, инновация, жобалық тәсіл, креатив, шығармашылық капитал.

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## ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ РАЗВИТИЯ ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ В РЕСПУБЛИКЕ КАЗАХСТАН

**Аннотация.** В статье рассматривается значение инновационного развития Республики Казахстан как одного из приоритетных направлений экономического роста в современных условиях. Рассмотрены основные направления государственной политики в сфере научно-технической и инновационной деятельности. На основе проведенного исследования были определены важные направления инновационного развития Казахстана.

Целью исследования является изучение проблем инновационного развития в Республике Казахстан и инновационной деятельности казахстанских предприятий, наиболее важных инструментов реализации

Стратегии инновационного развития и выработка рекомендаций по их устранению.

Методология. В процессе исследования используются такие общенаучные методы и приемы, как научная абстракция, анализ и синтез, сравнения, обобщения, описательный анализ

Выводы. Успешная реализация государственных программ инновационного развития экономики страны должна способствовать качественным изменениям в структуре экономики Казахстана, что приведет ее к устойчивому росту на основе эффективного использования человеческого, производственного и природного капитала, выходу Казахстана на новый уровень общественного развития и социальной структуры. В настоящее время Казахстану необходимо искать новые направления экономического развития. Для повышения конкурентоспособности страны на мировом рынке необходимо активно развивать высокотехнологичные отрасли и строить на их основе эффективную национальную инновационную систему. К концу XX века стало очевидным, что уровень развития научно-технической сферы — науки, образования, высокотехнологичных отраслей промышленности, мировых рынков техники определяет границы между богатыми и бедными странами, создает основу для быстрого экономического роста, является важнейшим фактором формирования центров силы. Выбор приоритетов в научно-технической сфере приобрел такое значение, которое выходит за рамки перспектив ее собственного развития. В то же время процессы глобализации и растущая взаимозависимость экономик делают задачу управления инновационными процессами все более сложной и зависимой от способности отдельного государства правильно определять собственные стратегические подходы к развитию инновационного потенциала. Применение системного подхода к формированию инновационной политики в развитых странах мира приобрело первостепенное значение, особенно на фоне таких современных тенденций развития мировой экономики, как: - конкуренция за качественный человеческий капитал становится важнейшей характеристикой глобального инновационного развития, а растущая мобильность высококвалифицированных кадров также обеспечивает распространение знаний и технологий; - роль информационных технологий в процессе распространения знаний становится все более актуальной для дальнейшего роста инновационной активности, процессы распространения знаний вышли за пределы отдельных экономик; - глобализация вынуждает компании конкурировать на все более высоких технологических уровнях и одновременно стимулирует процессы специализации и локализации инноваций. Страны, реализовавшие концепцию системного подхода к инновационной политике, сумели за короткий исторический период создать эффективные национальные инновационные системы, включающие механизмы взаимодействия государства, бизнеса, науки и образования, а также повысить общую наукоемкость ВВП.

В Казахстане научно-техническая сфера еще не стала базовым элементом социально-экономического развития общества. Для реализации стратегических направлений научно-технического развития необходимо скорректировать приоритетные направления развития отечественной науки и техники, выявить причины и факторы, препятствующие их развитию, а также определить реальные механизмы их разрешения. По сравнению с экономически развитыми странами, условия для развития инновационной деятельности в Казахстане имеют принципиальные отличия. В частности, инновационная деятельность в республике осуществляется в основном на основе привлечения прямых иностранных инвестиций. Наряду с прямыми инвестициями в страну приходят новые технологии и новое управление. Для большинства предприятий приобретение зарубежных технологий и лицензий является большим стимулом, так как позволяет им выйти на мировой рынок. В то же время неконтролируемый поток иностранных технологий может привести к подавлению развития Национального научно-производственного комплекса, что создает реальную опасность технологической зависимости отечественной промышленности от зарубежных разработок.

**Ключевые слова:** креативный менеджмент, управление знаниями, инновации, проектный подход, творчество, креативный капитал.

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**ECONOMIC MECHANISMS OF ORGANIZATION  
AND IMPLEMENTATION OF ACCOUNTING POLICY  
AT THE ENTERPRISE**

**Abstract.** Accounting policy – is a system that fully reflects what methods were used, how the final report is performed over several reporting years, as well as how additional information about changes in the field of work was obtained, and other circumstances. The introduction of the international accounting standard will significantly improve the quality and efficiency of accounting, control, enterprises give a certain independence in using the most reasonable accounting systems, indicating its features, specifics, techniques and technologies in the organization of production, labor and management. Nowadays, accountants are engaged not only in maintaining accounts, but also in planning and making decisions, monitoring, evaluating economic activities, and auditing. Accountants also provide users of accounting information with the necessary information, regardless of whether they are internal or external users.

Thus, the accounting policy is a set of internal rules specific to the accounting system, which are used in the practice of the sphere of economic activity of organizations, selected and consistent. The content of the accounting policy reflects the ways of optimal and effective use of accounting methods to describe the financial results and requirements of economic activities of organizations. The accounting policy consists of a set of accounting principles, methods and rules applied by organizations for the preparation of the final financial report, as well as provisions adopted for the practical disclosure of the content of economic activities of organizations. The accounting policy is one of the main internal regulatory documents of the organization. It controls the process of accounting in the organization in accordance with the requirements of the rules governing external Accounting at the legislative, methodological and methodological level, performing such functions.

Each organization is forced to review the requirements and conditions of an ever-changing market, as well as to restrict competition from increasing competition and re-approach the issues of financial management and accounting policy of the organization. Because at present, these issues are no less important for companies than their production capabilities. Therefore, organizations need an accounting policy that provides information and high reliability of reporting indicators, reflects the balance of interests of a group of users of reporting information, helps to minimize the burden of tax payments and achieve other opportunities. In connection with the transition to international financial reporting standards, one of the most pressing issues has become General accounting, and the ability to compare reporting indicators with them. Theoretical and practical approaches to these principles should be thoroughly studied and recognized as a source of interest in the implementation of Kazakhstan accounting.

**Key words:** accounting policy, balance sheet, assets, liabilities, accounting, capital, equity, debt capital, financial condition, income, expenses, losses, products, production, audit.

The accounting policy of the enterprise on the principles of accounting - a set of methods and techniques of accounting of the organization, ie the services of primary control, value measurement, current grouping and summarizing the data of economic (statutory and other) activities. Methods of accounting include methods of aggregation and evaluation of business data, calculation of the value of

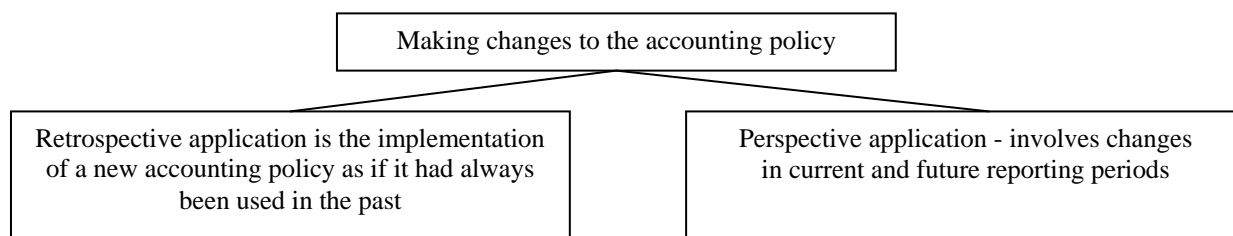
assets, organization of document management, inventory, methods of using accounting records, accounting system, data processing and other relevant methods and techniques.

The Address of the President of the Republic of Kazakhstan Nursultan Nazarbayev paved the way for the development of the country to a new level. It is known that if our economy grows and our incomes increase, the country's power will increase and our social situation will improve. Also, in the message of the President of the Republic of Kazakhstan dated December 31, 2017 "The Third Revival of Kazakhstan: Global Competitiveness" it is necessary to expand the scope of microcredit and actively use the mechanisms of guarantees and services for entrepreneurs. These measures should be taken in conjunction with the organization of business and financial literacy training [1].

The accounting policies, changes in them and the reasons for them should first be disclosed in the entity's statement of financial position. If these changes have a material effect on the financial statements, an appropriate estimate of such changes should be provided. If the change affects the reporting period, the previous period, the financial statements and the subsequent reporting period, the Entity shall disclose in the statement the following information: the reasons for these changes; the amount of the change for the reporting period and for each specified period; the amount of the change in determining net income or loss for the reporting year; the amount of changes for the periods included in the comparative data before the reporting year; the amount of changes made in each reporting year and the amount of changes related to the previous reporting year added to the financial statements (if it is not possible to name additional information, this fact must be disclosed); calculated comparative data or the reason for their inaccuracy.

The reporting year covers the period from January 1 to December 31. The first reporting year for an entity lasts from the date of its state registration until 31 December. Changes in accounting policies should be taken into account in the initial application of an entity's standard [2].

Retrospective application is the use of a new accounting policy that is constantly being applied. Retrospective review of financial reporting indicators-reflection of financial statements in case of errors in the previous reporting year, in figure changes in accounting policy are given. Correction of errors becomes impossible if: it is impossible to determine its impact; it is necessary to enter into the requirements of management; it is difficult to review financial statements that require evidence.



Changes in accounting policies

An error may occur with respect to the recognition, measurement, proposal, or disclosure of elements of the financial statements. Financial statements do not comply with IFRS if there are serious errors or even minor errors that were made intentionally in order to achieve a certain financial position, financial performance or cash flows of the organization. Potential errors of the current year identified during this period may be changed before the financial statements are approved for release. However, some significant errors are not observed until the following dates, and these past term errors indicated in the financial statements for this subsequent period are eliminated in the comparative information [3].

When preparing accounting policies, the organization must disclose the accounting methods adopted and the decisions made by interested users of accounting financial statements that have a significant impact on the price. Important accounting methods are considered to be those in which it is impossible to reliably assess the financial condition, cash or financial results of an organization without accounting for interested users. The most important accounting methods should be disclosed in the comments included in the accounting for the reporting year. When developing an accounting policy, the organization has the right to determine the policy in the field of methods for writing off raw materials, materials and household equipment for production, methods for evaluating work in progress, the possibility of applying accelerated depreciation, types of formation of repair and insurance funds, etc.

The main tasks of the accounting policies of the organization (if possible) are a set of clear guidelines, conditions and methods to normalize, order, regulation the main areas of accounting within the organization, the creation of a single schema document, the evaluation of the assets of the organization, reporting, accurately reflect the financial situation of the organization. These tasks are performed using various accounting methods. These include: ways to evaluate grouping and creative activity data, destruction of asset values, organization of document flow, equipment, use of accounting accounts, accounting indicator systems, and ways to process information.

Inventory should be measured at fair value. Fair value is the amount that at least fulfills the obligation in a transaction between independent parties that can be replaced or declared. Inventory should be measured at the lowest of the two specified values: cost or net realisable value. The possible net realisable value is equal to the reduction from the estimated realisable price of the cost of adjustment and evaluation of sales. Trade discounts, refunds of overpayments and other adjustments are deducted in the calculation of the cost of acquisition. The cost of finished products, along with the cost of raw materials, must include the costs associated with the manufacturing process. For example: employee salaries and fixed overhead costs [4].

In order to calculate the impairment, inventory must be assessed in each reporting period. This is done by comparing the book value and the sale value after deducting the costs of completion and sale. If the cost of inventory does not cover the cost of damage, depletion, or reduction in the sale price for it, the enterprise estimates the inventory at the net value that can be realized. Raw materials and supplies held in inventory should not be written off at a cost below cost if they are sold as finished products with added value, either at cost or at a higher price. Every year in preparing financial statements or when the inventory should be carried out testing of the waste. Account 1360 inventory write-off reserve 1300 is a counter-account of a group of Fund accounts.

Write-off of inventory at net cost can be performed using the following methods: for inventory units - the method by item; for major groups of inventory - the method of the main commodity group; based on the total volume of inventory - the total level of inventory. For example, the cost of a product unit is 25,000 tenge. Retail price - 30 000 tenge. The balance of goods at the end of the year is equal to 100 units, and sales expenses are equal to 5% of the retail price. Net value that can be realized in this case:  $30\ 000 - (30\ 000 \times 5\%) = 28\ 500$  tenge. In the financial statements, inventory should be recorded at cost, since cost is lower than net realisable value. And if the cost of a unit of goods is 25,000 tenge. Retail prices fell by 20,000 tenge. The balance of goods at the end of the year is equal to 100 units, and sales expenses are equal to 5% of the retail price. Net value that can be realized in it:  $20\ 000 - (20\ 000 \times 5\%) = 19\ 000$  tenge. In the financial statements, inventory should be reflected in the net cost of sales, since the cost of production is high.

Cost of loss of value:

-  $(20\ 000 - 19\ 000) = 1\ 000 \times 100 = 100\ 000$  tenge.

You can see an indication of inventory depreciation in the report from table 1.

Table 1 – Accounting for losses of inventory value, tenge

Debit	Credit	Amount
7420 "Asset impairment expenses"	1360 "Reserve for write-off of inventory"	100000
1360 " Reserve for write-off of inventory"	1300 " Funds"	100000

Second, to improve asset accounting, consider the valuation of fixed assets. After initial recognition of a fixed asset as an asset, it should be measured either using the actual cost method or the revalued cost model, and subsequently apply this policy to the entire group of fixed assets. The selected method should be specified in the accounting policy. Accounting for actual costs. After recognition as an asset, an item of property, plant and equipment is calculated at cost after deducting depreciation from cost and loss of accumulated costs and cost.

When using the revalued cost model, items are revalued to bring the original cost of property, plant and equipment in line with the current price at a certain date, after which it is reflected in accounting and reporting. This will provide accurate and comprehensive information about the availability and structure of fixed assets, their actual replacement cost and degree of depreciation. The fair value of land plots and

buildings is determined on the basis of market price information, which is issued by professional fair value appraisers using information [5-7].

It is necessary to re-evaluate fixed assets, the fair value of which is in large fluctuations in the book value, which is repeated over 3-5 years. And for items of property, plant and equipment, the fair value of which does not vary significantly from the carrying amount, such often do not require repeated estimates. After revaluation of an item of property, plant and equipment, accumulated depreciation at the date of revaluation is calculated using one of the following methods: proportional method; removal of accumulated depreciation. If an individual item of property, plant and equipment is revalued, all assets belonging to the group of property, plant and equipment are revalued.

Only an employee of the company can be sent on a business trip. Employee in the organization of the enterprise, employment contract, individual. If the employee refuses in writing to continue working due to changes in working conditions, the employment contract with the employee shall be terminated on the grounds provided for in sub-paragraph 2) of paragraph 1 of article 59 of this Code. The employee is dismissed after drawing up a business trip order. According to paragraph 2 of article 163 of the Tax code, representative expenses are subject to payment of individual income tax and mandatory pension contributions to profit, social tax and social deductions, and are charged to expenses through the payroll Fund. To confirm the economic basis of representation costs, you must issue the appropriate documents. All these documents do not have standard forms, so they can be made freely, in compliance with the requirements of the legislation on accounting, registration of documents.

First of all, you should prepare an estimate of representation expenses for the reporting year. In addition, the company must enter internal organizational and administrative documents. They should cover the following issues: the right to participate in the negotiations and a list of officials of the entity receiving amounts subject to accounting, representation; the procedure of providing amounts representative of the cost to be taken into account; the order of elimination of amounts on entertainment costs; documenting the cost of representation; order of the control write-off and cancellation of amounts on entertainment costs.

In the second place, the company conducts a specific representative event. In this regard, the following documents are prepared: an order appointed by the head of the enterprise by the person responsible for holding an official event; a plan for conducting business meetings; an estimate of representative expenses. Based on these documents, funds are transferred as the amount to be reported. All the above cases should be reflected in the organization's accounting policy

In the third stage, the person responsible for the representation event, you must submit to the accounting documents, confirming the cost of the event: report on the meeting (list of issues discussed, agreements reached, etc.); the advance report with the documents confirming the actual costs; the act of writing off the incident expenses, signed by a specially appointed Commission and approved by the head of the enterprise [8-9].

We disclose the value of the amount of employee income for 2019, which is shown in table 2.

Table 2 – Total income of employees in 2019, tenge

Indicators name	Amount
Salary	85 650 000
The cost of health insurance	570 000
Premium	880 000
Other indirect income of employees	405 000
Total	87 505 000

The financial results of the enterprise should be characterized by the following elements. Income is the total, economic benefits that an enterprise finds and invests in its own account, leading to an increase in capital. An increase in economic benefits and an increase in capital without the contribution of business owners due to an increase or decrease in assets or a decrease in liabilities during the reporting period. Income is the total flow of economic benefits that an entity receives in the ordinary course of business, ie gross profit before income minus expenses. With this sign, income differs from other types of profits.

Income leads to an increase in capital. Revenue includes only the total inflow of economic benefits received or to be received by the entity's personal account. Amounts spent in favor of a third party, such as value added tax, do not increase the capital of the enterprise and do not relate to economic benefits. Agency relations are the same, the amount of gross economic profit is accumulated in favor of the principal, does not increase the equity of the enterprise. The profit is not the amount received in favor of the principal, but commissions.

The amount of profit received in the course of activities is usually determined by fixed or approved tariffs and prices. If prices are not set or individual services, works are performed, the price is determined by the contract or by calculation with a fixed level. Agreed prices are set by a person specially approved by the management of the enterprise to find a fair value as a result of agreements with the user. Fair value is the amount at which an asset can be exchanged or a liability settled by an independent party.

In accordance with IFRS 18 Income and Expenses, income arises only when the following conditions are met: the entity transfers significant risks and rewards of ownership to the purchaser; non-participation of the organization in the management of the goods, which are usually associated with the right of ownership and are not controlled; when the amount of income is measured reliably; when it is probable that the economic benefits associated with the transaction will flow to the entity; when the costs incurred or expected to be incurred in connection with the transaction can be measured reliably.

Income accounting should be done in section 6000 Revenue of the chart of accounts. 6010 Operating income account 6011 includes income from the sale of finished goods. The basis for determining the sale of goods, works and services in the accounting register is the invoice. The invoice must be based on the shipping documents confirming the work or services performed and in accordance with the terms of the agreement. Documents confirming the shipment of goods, completed consignment notes and the power of attorney of the buyer attached to the release of inventory.

A document confirming the provision of services, signed by all parties, an act of acceptance of work performed, services (including estimates and forms that may be required), or other agreement on the performance of work under the agreement and satisfaction with its results. The invoice is filled in accordance with the requirements of the Tax Code of the Republic of Kazakhstan. Revenue from the provision of services should be recognized only after the future economic benefits associated with the arrangement have been credited to the entity and the outcome of the arrangement has been reliably assessed.

An entity may conduct a trust assessment after the parties to the agreement have agreed: the right of each party to comment on the services to be provided and received by the parties; the proposed counter-presentation; be able to carry out a reliable assessment after the agreed approval of the procedure and conditions of mutual settlements.

The final stage of short-term contracts is the delivery of work and services to the customer. The entity recognizes profit at the end of production. Under the agreement, the production period is more than 30 days, and the profit is taken into account during the production process. The stage of completion of the contract is determined in different ways. The entity uses a method that helps to assess reliability, depending on the nature of the contract: reporting on the work performed; percentage of services provided as of the reporting date to the total volume of services; Percentage of the cost of the contract as of the date of the transaction to the total cost of the transaction.

Costs incurred at the reporting date include only those costs incurred to date. The total costs estimated under the contract include only those costs that reflect the services rendered or to be rendered. Advance payments and advances received from the customer are not reflected as profit from services. In the event that the outcome of a service contract cannot be measured reliably, the benefit is recognized in the amount of the recoverable amount. A transaction is not a sale and no gain is recognized if the entity retains significant ownership risks. An entity may incur a significant risk of acquisition in a number of circumstances.

Examples of cases in which an entity retains significant risks and rewards associated with ownership: an entity retains liability for unsatisfied activities that are not covered by standard warranty obligations; when the income from the actual sale is related to the income received by the buyer as a result of the sale of goods; when the installation of the shipped goods is mandatory, and the installation occupies a significant part of the unfulfilled contract with the organization; the buyer has the right to terminate the

sale transaction for the reasons specified in the contract of sale and in the absence of confidence in the profitability of the organization.

If the entity retains insignificant ownership risks, the transaction is a sale and is recognized as a gain. Gains and losses relating to one transaction or another are recognized in the same period. Costs, including warranty obligations and other costs incurred after shipment of goods, can be measured reliably if other requirements for recognition of income are met. However, revenue cannot be recognized in the event that costs are not reliably measured, in which case any counterparty received after the sale of the good is recognized as an obligation. If the terms of the contract provide for appropriate delivery, installation and condition checks, the benefit is recognized only after the completion of the above work. In the case of consignment of goods, ie the buyer (buyer) undertakes to sell the goods to a third party on behalf of the supplier (seller), the profit is recognized in the period of sale to third parties.

Expenses are the decrease in capital due to a decrease in economic benefits during the reporting period, an outflow or decrease in assets or an increase in liabilities. Costs include cost of sales, wages, depreciation, etc. They usually take the form of a decrease in assets, cash and cash equivalents, inventories and property, plant and equipment. Expenses are reported in income and expenses when they are due to a decrease in future economic benefits, a decrease in assets or an increase in liabilities.

Expenses are recognized in the income statement on the basis of the direct relationship between the costs incurred and the actual profit or loss. This process involves the simultaneous or combined accounting of profits and losses, which may be the result of a single transaction or event. In the case where economic benefits are expected to be earned over several reporting periods and the relationship with profit is monitored only as a whole or indirectly, costs are incurred in a systematic and gradual manner in the income statement. This method is often used to recognize costs associated with property, plant and equipment, intangible assets and future expenses. The distribution method is necessary to recognize the cost of an economic benefit over a number of accounting periods over which items are used or are declining [10-13].

Expenses are recognized immediately in profit or loss if they do not materialize in future periods or if future economic benefits do not meet or cease to be recognized as an asset in the balance sheet. Expenses are recognized in profit or loss when the liability is recognized without recognizing the asset. An example of such a situation is a guarantee obligation.

The profit and loss of the enterprise are reflected in the income statement, which is part of the financial statements. The income statement includes the following indicators: costs of sales of products, services; cost of goods sold and services; gross profit is the financial result from the sale of goods and services. Recognized as the difference between the profit from the sale of the product and the cost of goods sold; period costs - general and administrative expenses, costs of selling products and payment of interest.

Expenses for the period are not included in the cost of goods sold, the cost of services rendered and are debited to the accounts 7110 Expenses for sales of products and services, 7210 Administrative expenses, 7310 Interest expenses. Operating income (loss) is recognized as the difference between gross income and expenses for the period, and income from non-operating activities is recognized as the financial result of non-operating activities. The total amount of profit for the reporting period is shown in Table 3 to determine the financial results of business activities.

Table 3 – Correspondence of total profit accounts for the reporting period

Debit	Credit
Accounts in section 6, other 6020	5610 Total profit (loss)

The total amount of expenses for the reporting period for determining the financial result of economic activity is shown in table 4.

Table 4 – Correspondence of total cost accounts for the reporting period

Debit	Credit
5610 Total profit (loss)	Accounts in Section 7, other 7030

In general, at the beginning of the year, the balance of the reporting year on the account 5510 Retained earnings is transferred to the account 5520 Retained earnings (uncovered losses) of previous years. Revenue figures are affected by the accounting methods used. For example, one entity calculates the depreciation of property, plant and equipment using the accelerated method, while others use the straight-line method [14-15].

In the course of financial analysis of the enterprise we have taken as an example (December 2018 and December 2019), the most relevant issues were considered:

- based on the above, the dynamics of changes in the balance sheet assets of the enterprise at an effective level;

- most of the liabilities for the analyzed period are inefficient;

- at an effective level during the analysis of the dynamics of income and expenses;

- most of the profitability indicators increased during the analyzed period, ie they are an effective trend;

- improved financial stability of the enterprise;

- at the end of the analysis period, the indicator of recovery of solvency of the enterprise is calculated, even if the current liquidity ratio is below its normal level (2.0). Solvency recovery indicator shows that in the event of loss of solvency, the company can recover in the next 6 months in the event of changes in the dynamics of current liquidity ratios. At the end of the period, this figure was 0.78, which means that the company can not restore its solvency, as this figure is below 1;

- At the beginning of the analysis period, the company did not have enough funds to finance reserves and costs, and at the end of the period there were sufficient normal sources of funding for the formation of funds and financing costs. The company used its own funds and long-term loans.

In general, an entity's accounting policies are developed by the entity's chief accountant and approved by the entity's head. The main requirement related to the accounting policy of the organization is that it does not contradict the regulations adopted by the Republic of Kazakhstan. An entity is able to correct significant errors by recalculating the relative amounts of the earlier periods and by recalculating the residual income of assets, liabilities and equity in the most recent period when the most previous period occurred.

In formulating the accounting policy, the industry specifics of the entity, financial reporting standards and recognition requirements and interpretations were taken into account. In general, the accounting policy is the choice of accounting form of the organization, the assessment of the objects of accounting permitted by the instructions, as well as the forms of accounting and organization of accounting techniques in accordance with the requirements of established standards and the specifics of the enterprise. In addition, the implementation of measures to improve the current level of accounting will provide more opportunities for the effective organization and optimal management of the accounting system of the enterprise.

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#### **КӘСІПОРЫНДА ЕСЕП САЯСАТЫН ЖҮРГІЗУ МЕН ҰЙЫМДАСТЫРУДЫҢ ЭКОНОМИКАЛЫҚ ТЕТІКТЕРІ**

**Аннотация.** Есеп саясаты – қолдану әдістерін, беру жылдарындағы бірнеше есеп қорытынды есептің орындалу үдерісін, сонымен қатар, жұмыс барысы мен басқа да жағдайдағы өзгерістер туралы қосымша ақпарат алатын жүйе. Есептің халықаралық стандартын енгізу есеп пен бақылау сапасын, тиімділігін жақсартуға мүмкіндік береді. Кәсіпорындар есептің неғұрлым негізделген жүйесін, ерекшеліктерін, спецификасын, өндірісті, еңбекті және басқаруды ұйымдастырудың техникасы мен технологиясын көрсету арқылы пайдалануына белгілі бір дербестік береді.

Бүгінгі таңда бухгалтерлер тек шот жүргізумен ғана емес, сондай-ақ, жоспарлау және шешім қабылдау, бақылау, бағалау, шаруашылық қызметке баға беріп, аудиторлық тексеру жұмыстарымен де айналысады. Сондай-ақ бухгалтерлер есеп ақпаратын пайдаланушыларды, олардың ішкі немесе сыртқы пайдаланушы еместігіне қарамастан, қажетті ақпараттармен қамтамасыз етеді.

Сонымен, есеп саясаты – ұйымдардың шаруашылық қызмет саласы тәжірибесінде қолданылатын, таңдалып алынған және жүйелі бухгалтерлік есеп жүйесіне тән ішкі ережелердің жиынтығы. Есеп саясатының мазмұны ұйымдардың шаруашылық жүргізу қызметінің талабы мен қаржылық нәтижесін сипаттауға арналған есеп әдістерін оңтайлы және тиімді қолданудың жолдарын көрсетеді. Есеп саясаты қаржылық қорытынды есеп жасауда ұйымдардың қолданатын есеп қағидалары, әдістер мен ережелер, сондай-ақ ұйымдардың шаруашылық қызметі мазмұнын тәжірибеде ашып көрсету үшін қабылданған ережелердің жиынтығынан тұрады. Есеп саясаты – ұйымның негізгі ішкі нормативтік құжаттарының бірі. Ұйымдағы бухгалтерлік есеп үдерісін сыртқы, заңнамалық, әдіснамалық және әдістемелік деңгейде реттелетін бухгалтерлік қызметтерді орындайтын нормалардың талаптарына сәйкес бақылайды.

Әрбір ұйым үнемі өзгеріп отыратын нарықтың талаптары мен шарттарын, сонымен қоса, бәсекелестіктің дамуы барысында қысым түсіп, ұйымды қаржылық басқару тарапынан және есеп саясатының мәселелеріне жаңадан қарауға мәжбүр етеді. Себебі қазіргі уақытта бұл мәселелер компаниялар үшін өзінің өндірістік мүмкіндігінен төмен емес маңызға ие болды. Сондықтан ұйымдарға есеп беру көрсеткіштерінің ақпараттылығы мен жоғары шынайылығын қамтамасыз ететін, есеп беру ақпаратын пайдаланушылар тобының қызығушылық теңгерімін көрсететін, салықтық төлемдердің жүктемесін неғұрлым төмен азайтуға және басқа да мүмкіндіктерге қол жеткізуге көмектесетін есеп саясаты қажет.

Халықаралық қаржылық есеп стандартына ауысуына байланысты есеп жүргізу қағидаларының ортақ болуы, ал одан есеп беру көрсеткіштерін салыстыра алу мүмкіндігі өзекті мәселелердің біріне айналды. Осы қағидаларды теориялық және тәжірибелік тұрғыдан жан-жақты зерттеп, қазақстандық бухгалтерлік есепті жүзеге асыруда қызығушылықтың негізі ретінде танылуы тиіс.

**Түйін сөздер:** есеп саясаты, баланс, актив, пассив, бухгалтерлік есеп, капитал, меншікті капитал, қарыз капиталы, қаржылық жағдай, табыс, шығын, залал, өнім, өндіріс, аудит.

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## ЭКОНОМИЧЕСКИЕ МЕХАНИЗМЫ ПРОВЕДЕНИЯ И ОРГАНИЗАЦИИ УЧЕТНОЙ ПОЛИТИКИ НА ПРЕДПРИЯТИИ

**Аннотация.** Учетная политика – система, полностью отражающая методы применения, исполнения итогового отчета в течение нескольких отчетных лет, а также получение дополнительной информации об изменениях в ходе рабочей деятельности и другие обстоятельства. Внедрение международного стандарта учета позволит значительно повысить качество и эффективность контроля, даст предприятиям определенную самостоятельность в использовании наиболее обоснованных систем учета с указанием их особенностей, специфики, техники и технологии в организации производства, труда и управления.

На сегодняшний день бухгалтеры занимаются не только ведением счетов, но также и планированием, принятием решений, контролем, оценкой хозяйственной деятельности, работой по аудиторской проверке. Также бухгалтеры должны обеспечивать пользователей учетной информации необходимыми данными, независимо от того, являются ли они внутренними или внешними пользователями.

Таким образом, учетная политика представляет собой совокупность внутренних правил, характерных для системы бухгалтерского учета, отобранных и последовательных, которые используются в практической сфере хозяйственной деятельности организаций. Содержание учетной политики отражает пути оптимального и эффективного использования методов учета для характеристики финансовых результатов и требований проведения хозяйственной деятельности организаций. Учетная политика состоит из совокупности принципов учета, методов и правил, применяемых организациями для составления итогового финансового отчета, а также положений, принятых для раскрытия практического содержания хозяйственной деятельности организаций. Учетная политика является одним из основных внутренних нормативных документов организации. Она контролирует процесс ведения учета в организации в соответствии с требованиями норм, выполняющих функции бухгалтерского учета, регулирующие на внешнем, законодательном, методологическом и методическом уровне.



Каждая организация вынуждена заново пересматривать требования и условия постоянно меняющегося рынка, а также под возрастающим давлением конкуренции со стороны финансового управления организацией и вопросы учетной политики, потому что в настоящее время эти вопросы имеют не менее важное значение для компаний, чем их производственные возможности. Поэтому организациям необходима учетная политика, обеспечивающая информированность и высокую достоверность отчетных показателей, отражающая баланс интересов группы пользователей отчетной информации, помогающая минимизировать нагрузку налоговых платежей и достичь других возможностей.

В связи с переходом на международные стандарты финансовой отчетности одним из наиболее актуальных вопросов стало единство принципов ведения учета и возможность сравнения с ними показателей отчетности. После исследования этих принципов как с теоретической, так и практической точки зрения, они должны стать источником интересов в функционировании казахстанского бухгалтерского учета.

**Ключевые слова:** учетная политика, баланс, актив, пассив, бухгалтерский учет, капитал, собственный капитал, заемный капитал, финансовое положение, прибыль, расход, убыток, продукт, производство, аудит.

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## DIGITALIZATION AS A BASE OF ACCELERATED TECHNOLOGICAL MODERNIZATION OF KAZAKHSTAN ECONOMY

**Abstract.** The topicality of the paper is stipulated by active penetration of digital technologies to all spheres of contemporary society life. The corporative and governmental structures of the world including the Republic of Kazakhstan have aware the necessity of digital transformation of economy to enhance the competitiveness in the global digital space. The methodic of the research is based on application of common scientific principles of system approach; methods of logical, factor, comparative, strategic, managerial analysis; quantitative and qualitative investigation of the main tendencies and fields of forming and development of informational-communication and digital infrastructures.

The paper is aimed at analysis of the state and problems of digital development of Kazakhstan and elaboration of recommendations on digitalization development. To achieve the set goal the contemporary tendencies of digitalization development of economics and society were revealed, the analysis of precursors and conditions of digital economics development were analyzed as well as related sectors favoring the digitalization of economics. The experience of the developed and developing countries that achieved successful results in the process of economics digitalization was studied regarding revealing the possibilities to apply its experience for Kazakhstan. The adequate research conclusions were made, and the recommendations on digital development of the country were suggested.

**Key words:** digitalization, technological modernization, information technologies, Internet, electronic commerce.

**Introduction.** The topicality of the paper is stipulated by active penetration of digital technologies to all spheres of contemporary society life. The corporative and governmental structures of the world including the Republic of Kazakhstan have aware the necessity of digital transformation of economy to enhance the competitiveness in the global digital space. The first president of the Republic of Kazakhstan, Nursultan Nazarbayev, in one of its annual Addresses to the people of Kazakhstan told on several priorities related to development of economics, and one of them is technological modernization: “We have to cultivate new industries created using digital technologies” [1]. The solution of the complex task set by the first President implies the necessity to conduct analytical and scientific-methodical elaboration of such changes implementation.

**Methods.** The methodic of the research is based on application of common scientific principles of system approach; methods of logical, factor, comparative, strategic, managerial analysis; quantitative and qualitative investigation of the main tendencies and fields of forming and development of informational-communication and digital infrastructures.

**Results and discussion.** The Program “Digital Kazakhstan” sets the priorities of digital sectors development in Kazakhstan for today. Under the priority direction of technological modernization the following cross-cutting tasks were determined:

1. Cultivation of new industries that are created using digital technologies, among them 3-D printing, online trade, mobile banking, digital services including the health care and education systems, and other.

2. Along with establishing of new sectors it is necessary to accelerate the development of traditional industries on which the economics of RK is based. These are: industry, agro-industrial complex, transport

and logistics, construction and other. It is necessary to increase the labor efficiency, continue the industrialization with emphasis on export, keep the stability of mining and smelting, and oil and gas complex, make the agro-industrial complex the economics driver, develop new logistics infrastructure throughout the continent, accelerate the development of the construction sector to support the growing urbanization.

3. Simultaneously with the two first the labor market should be also modernized. Automation of labor in the traditional sectors will result in freeing of labor resources; it means that new work places will be required in other sectors especially new ones that should become additional sources of employment [2].

To increase the volume of digitalization, first of all, it is necessary that a potential consumer could use the digital technologies. The methodology of the Statistics Committee under the Ministry of the National Economics of RK (SC MNE RK), to estimate the digital literacy, considers a share of people able to use smartphones, personal computers, tablets, standard software, Internet services, and domestic digital devices. By data of the SC MNE RK the digital literacy of the population in 2017 was 60.8%, but in 2018 this indicator increased and reached 68.1% [3]. It is impossible to judge on the dynamics confidently basing on data of two years only, but the available indicators are positive. At the same time, the share of the Internet users also increases (figure 1).

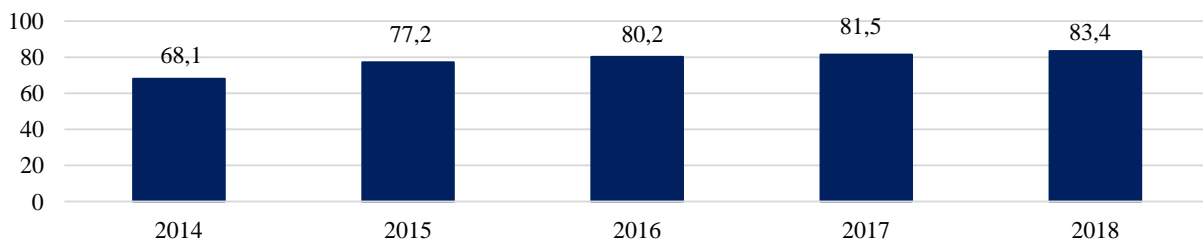


Figure 1 – The share of the Internet users in RK (%). Note – compiled by reference [4].

It is possible to state about the increase of digital technologies popularity among the population, and on the growth of its application skills. All this creates favorable conditions for further digitalization of economics as it will be possible to state that new goods and services related to digital technologies, most probably, will be applied and demanded. In addition, the growth of population digital literacy popularizes the information technologies, and consequently the demand for specialties related to them.

However, it is too early to state about the availability of the developed digital sectors as the most of goods related to the ICT is imported from other countries. And the export of such goods from RK is only 4% of the import in 2018 (figure 2), and the dynamics of export volume since 2014 is negative although it shows increase after the fall in 2015.

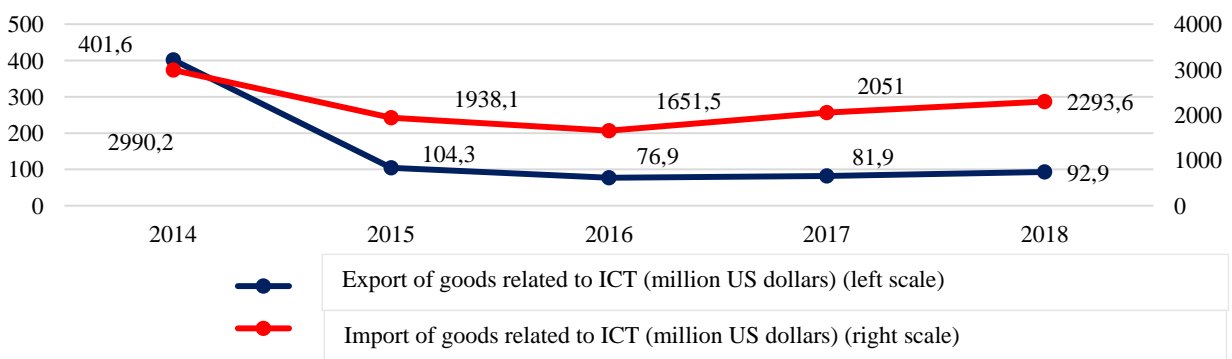


Figure 2 – Export and import of RK goods related to ICT (million US dollars). Note – compiled by reference [5].

Regarding the internal electronic trading the dynamics is positive (figure 3). This indicators is measured once in three years, and the recent result showed that the share of the electronic trading in retail sales increased by 40%, and wholesale trading – by 25%. At the same time, the share itself is still small – not more than 1.5% for retail, and 0.5% for wholesale, i.e. the most of trade is occurred avoiding the network options.

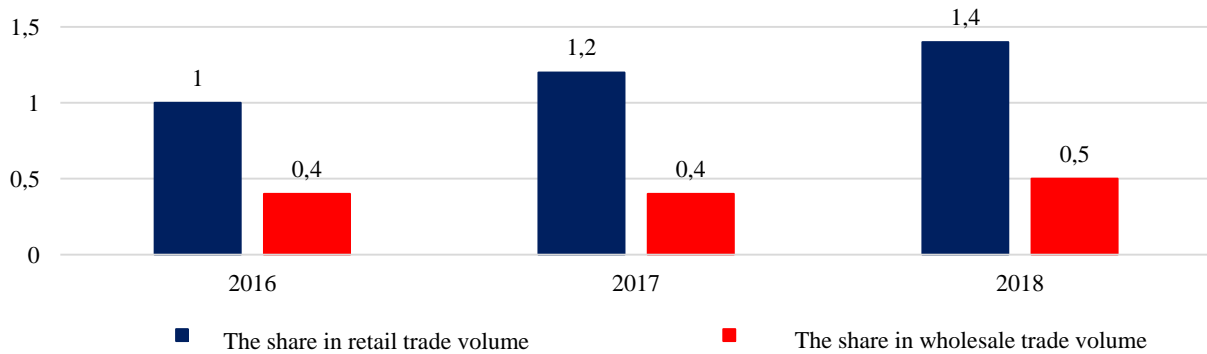


Figure 3 – The share of electronic trade in the whole trade volume (%). Note – compiled by reference [6].

One of the important fields is digitalization of interaction between the government and citizens and enterprises. The three years period, when the number of organizations using Internet for communication with the governmental bodies is observed, showed the significant increase – more than 42% (figure 4).

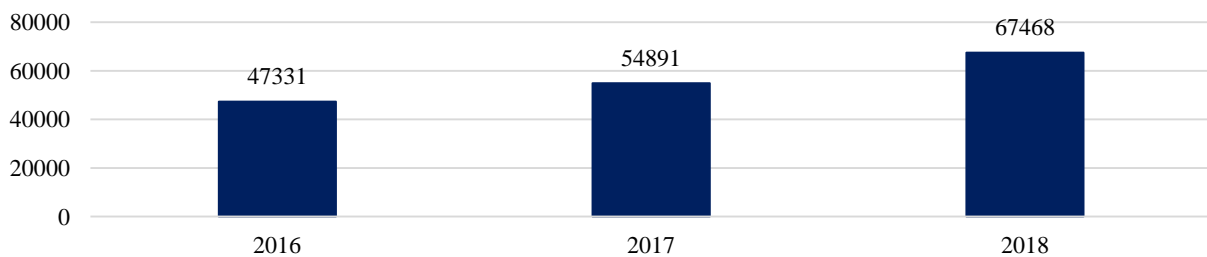


Figure 4 – Number of organizations using the Internet for communication with the governmental bodies (units). Note – compiled by reference [7].

Another indicator is automation of business processes as one of the main factors to increase the efficiency of the organization operation. For this indicator the dynamics is unstable; the whole period 2014 – 2018 showed the growth of organizations having automated internal business-processes, but the highest value was observed in 2015 and then decreased (figure 5).

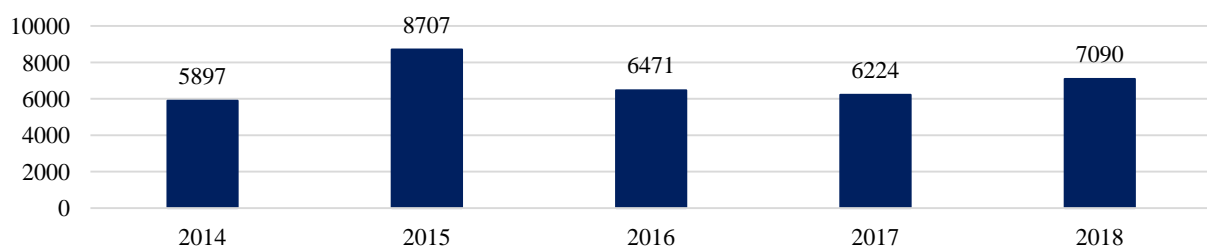


Figure 5 – Number of organizations having automated internal business-processes (units). Note – compiled by reference [8].

This value is just one of the indicators stating that today many organizations in RK are not ready technologically and organizationally for full-scale transfer to digital economics and concept “Industry 4.0” [9]. To solve this problem the useful can be the study of the international experience on introducing digital technologies into different sectors of economics. The analysis of foreign practices shows that the digital globalization determined by flows of information, ideas, and innovations has already started in the world. The global expenditures for R&D constitute about 2 trillion dollars taking into account 4% of annual growth [10]. According to McKinsey estimations the application of new technologies increases the labor efficiency by 45-55%, reduces the equipment maintenance expenses by 10-40% and machines downtime by 30-5-%, increases the indicators of products quality by 10-20% and decreases the storage costs by

20-50%. In addition, owing to new technologies introduction the period of new goods presentation in the market shortens by 20-50%, and accuracy of sales forecasting reaches 85% and higher [11]. Such indicators of economic activity improvement cannot be ignored by any State, it means that the share of digital technologies in the global economics will grow continuously, and the technologies will be introduced into the governmental, public, and business-processes.

In Kazakhstan, one of the most prospective sectors for digitalization is agro-industrial complex. The agro-industrial complex is a reserve of Kazakhstan economics digitalization which potential by date has been used less than other strategically important sectors of RK. Despite that a half of RK population lives in rural area, the share of agro-industrial complex in the GDP is less than 5%. It should be also noted that 2/3 among rural man or 1.3 million people of RK are self-employed [12], i.e. there is a significant amount of population almost not included into the digitalization processes despite that the agro-industrial sector is declared as one of the priority sectors for digitalization.

In the meantime, the developed countries pay a lot of attention to digital modernization of the agro-industrial complex. This is confirmed by generalization of the global experience on digitalization development in the agro-industrial complex [13]:

- introduction of the information technologies into the manufacture part of the agro-industrial complex allows reducing the unbudgeted expenses by 20%;
- utilization of mobile and online applications for acquisition, storage and processing of data on land sites of farms (coordinates, square, type of crops, capacity, climate etc.) allows farmers receiving exact recommendations on their activity;
- supplement of the previous point with installation of sensors on agricultural machinery, drones, production and distribution facilities allows making more effective decisions [14];
- it was found that the agricultural machinery manufactured by John Deere is already able to transmit information on the crop state. The fields survey conducted by the agro-technical machinery manufactured by this Company allows reducing the examination expenses up to 90% [9];
- in Australia there is a system on identifying and monitoring of live-stock animals and its products that allows for fast and efficient response on various diseases, if appear, and reducing the risk of infection distribution;
- it is worth to note that the investments to the agricultural sector in the developed world countries have already reached its historical peak and constitute 4.6 billion dollars. Among the most active countries that attract the investments into the agrarian startups are USA, China, India, Canada, and Israel.

The national Program “Digital Kazakhstan” states that “in the rating by the economics digitalization compiled by the Boston Consulting Group Kazakhstan is ranked 50 among 85 countries”. This means that in the Republic it is time when intellectual digital solutions should help the agricultural industry to cope with problems of labor efficiency increase and sustainable development [15]. In the Republic of Kazakhstan the agro-industrial complex is still a vulnerable sector of economics that depends much on climate changes. The digitalization of the agro-industrial complex will allow reducing the risks of climate changes adaptation, increasing the crop capacity, productivity of the live-stock, and in-time planning of the field works. To enhance the efficiency of the agro-industrial complex under the market economics it is necessary to take innovation measures on supporting the rural businessmen [16]. The individual specialists (particularly, the academician of NAS RK T.I. Yespolov) recommend implementing a pilot project “Digital agro-industrial complex” that will allow activating the efforts in digitalization of the country’s agriculture industry.

While analyzing the global experience it is necessary to consider that every country has its own trajectory of digitalization, and it is quite difficult to repeat a success of a definite country under the conditions of another. For the same reason it is difficult to highlight an absolute leader to align with. Nevertheless, it is possible to highlight the common moments – for example, a lot of countries resort to the national programs on digitalization and development of information technologies. For example, these are the programs of digital development of Israel [17], Thailand [18], Denmark [19], and Russia [20]. The programs of digital development are also elaborated by 17 African countries [21].

These programs of digital development on the national level include such issues as development and introduction of own technologies, analysis of “large data” for social and economic processes forecasting, new types of management [22]. At the same time the programs strive to determine definite fields of

development to focus on concrete tasks, for example, creation of favorable organizational, infrastructural, legal and other conditions for digital economics development [23].

Under the digital economics conditions the data become a form of capital. Forming, accumulation and utilization of such capital require close cooperation of government and business, government and civil society, business and civil society [24].

For instance, the Russian Federation pays much attention to forming of digital infrastructure. The following large-scale projects are implemented: a project on elimination of digital inequality, creation of a unified information system of governmental procurement, unified system of governmental services, a system of medical organizations of Moscow (EMIAS), running of Moscow portals “Our city” and “Active citizen” [25]. Basing on this it can be concluded that the main goal of Russia at this stage is creation of a base for further introduction of digital technologies and transformation of traditional sectors through creation of well-developed infrastructure for data storage, transmission, and analysis.

Germany is one of the leading countries in the field of industrial innovations. For Germany as a federated State the centralization including financial flows is unusual. As a consequence, federation members have more freedom in distributing the finances including the field of digital development. The State undertakes a function of regulator setting the rules, developing the aspects moving beyond one federal member.

The Far East countries also develop actively the digitalization opportunities. The South Korea, and Japan used the similar way – digitalization by means of large digital companies that also are a source of innovations and export capacity buildup (Samsung, LG, Toyota, Sony, Toshiba, SoftBank).

China which share of digital economics is comparable with that of the USA also showed the history of successful introduction of digital technologies. Especially, it concerns the introduction of digital solutions related to export – Alibaba, Taobao platforms that are used by customers all over the world. In addition, China develops actively the digital retail trade, mainly owing to distribution of financial online-platforms and introduction of convenient, fast and safe payment methods [26].

The digital economics in the listed countries has been developed by different ways, however there are some common features – availability of favorable conditions for innovations introduction and large volumes of investments into the digital technologies and infrastructure. At the same time, the developing markets, under the digital age, acquire special advantages owing to creation of ready digital services from scratch (medical services, parking, online retail), not adapting the inherited infrastructure.

Another good example of digitalization is Australia. New South Wales State introduced a portal providing more than 800 governmental services. The portal also has on-line chat room for immediate consultations extending the opportunities on assisting the citizens and reducing the expenses on operators support services as the online operation is more effective than consultations by telephone or face-to-face [27].

In Australia, there is also a legislated regulation that all information other than State, commercial or private secret should be publicly available. This facilitates significantly the acquisition and analysis of large amount of data used by the governmental authorities for decision-making. The analog of such approach is the initiative of establishing Palantir Technologies Company in the USA under the assistance of the Central Intelligence Agency. This company develops the software able to reveal the activity of crime networks by analyzing large massifs of data [28].

It is also worth to mention the issue on the introducing of digital currency. From time to time, different countries declared the projects on introducing digital versions of its currencies. Among such countries are India [29], Japan [30], and Tunisia [31]. Digital currency introduction provides the opportunity of extended control for monetary flows on the State side, and this is obvious advantage for those countries where the share of shadow (informal) economy is high. In addition, the introduction of digital currency supported by the State will increase the reliability of electron transactions and its popularity in the population.

**Conclusion.** Summarizing the stated above it is possible to formulate the following conclusions and recommendations on digitalization development in Kazakhstan.

The digitalization is a natural process of economy development owing to technologies. It means that it is impossible to refuse of it, only possible is to choose a way of development. Choosing one or several trends is a key moment of digitalization, and Kazakhstan has already made it by adoption of “Digital Kazakhstan” program.

It is necessary to determine the base for the digitalization development depending on the most developed sectors or aspects of social and economic life. In some countries, it is a strong government machine allowing for making effective decisions and delegating them to the places. Some countries rely on business (Japan, South Korea, USA), other – on export potential (China). For Kazakhstan, the obvious base for digitalization development is industry including the traditional one. On this point the best experience is the experience of Russia that focused on the development of digital infrastructure for gradual conversion of industry functioning within the “Industry 4.0” concept. It would be also effective to delegate a part of decisions-making power regarding the financing of digitalization to the level of region/city of republican status as this will accelerate the process and increase its efficiency due to proximity of actual performers and decision makers.

The current indicators of digital development show low volume of digital trade while the trade takes about a third part of the GDP volume in service sphere. The development of digital trade could also be encouraged by infrastructure development: ability to purchase devices for receiving/making of digital payments, availability of fast, extended, safe channels for such payments.

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### **ЦИФРЛАНДЫРУ ҚАЗАҚСТАН ЭКОНОМИКАСЫН ЖЕДЕЛ ТЕХНОЛОГИЯЛЫҚ ЖАҢҒЫРТУДЫҢ НЕГІЗІ РЕТІНДЕ**

**Аннотация.** Қазіргі уақытта цифрландыру тек салаларды жаңғыртуды ғана емес, сондай ақ тұрғындардың цифрлық сауаттылығын жоғарылатуды, жеке кәсіпорын және жеке тұлға деңгейіндегі анағұрлым қолайлы цифрлық шешімдерге өтуді үгіттеуді, Интернет желісін кеңінен таратуды қосатын кешенді мәселені білдіреді.

Мақала тақырыбының өзектілігі заманауи қоғамның барлық салаларына цифрлық технологиялардың белсенді енуімен сипатталады. Өлемнің корпоративтік және мемлекеттік құрылымдары, оның ішінде Қазақстан Республикасы дүниежүзілік цифрлық кеңістіктегі бәсекеге қабілеттілігін жоғарылату мақсатында экономиканы цифрлық трансформациялау қажеттілігі мойындалған. Мәселен, ҚР Тұңғыш Президенті Нұрсұлтан Назарбаев өзінің жыл сайынғы жолдауларының бірінде экономиканы дамытумен байланысты бірнеше басымдықтар туралы айтқан болатын, олардың бірі технологиялық жаңғырту болып табылады: «Цифрлық технологияларды қолдану арқылы құрылатын жаңа индустрияларды ынталандыруымыз қажет. Тұңғыш Президентпен қойылған мәселені шешу осы сипаттағы өзгерістерді іске асыру бойынша талдамалық және ғылыми-әдістемелік зерттеулер жүргізу қажет.

Зерттеу әдістемесі жүйелік тәсілдің жалпы ғылыми қағидаларын; логикалық, факторлық, салыстырмалық, стратегиялық, басқарушылық талдау әдістерін; ақпараттық-байланыстық инфрақұрылымды қалыптастыру және дамытудың негізгі үрдістері мен бағыттарын сандық және сапалық зерттеу әдістерін қолдануға негізделген.

Мақаланың мақсаты Қазақстанның цифрлық даму жағдайы мен мәселелерін талдау және цифрландыруды дамыту бойынша ұсыныстар әзірлеу болып табылады. Қойылған мақсатқа жету үшін экономика мен қоғамдағы цифрландырудың заманауи үрдістері анықталған, цифрлық экономика дамуының алғышарттары мен шарттарына, сонымен қатар экономиканы цифрландыруға ықпал ететін аралық салаларға талдау жасалған.

Жүргізілген зерттеу экономиканы ары қарай цифрландыру үшін нақты қолайлы шарттардың бар екендігін анықтауға мүмкіндік берді, оның ішінде ақпараттық-байланыс технологияларын қарқынды дамыту және тарату, тұрғындардың цифрлық сауаттылығын жоғарылату, сонымен бірге цифрлық қызметтер мен өнімдерге сұраныстың артуын атауға болады.

Цифрлық экономиканың дамуы үшін алғышарттардың болуына қарамастан, авторлар дамыған цифрлық салалардың әлі де қалыптасқандығы тура қорытынды жасаған, оны ақпараттық-байланыс технологияларымен байланысты тауарлардың едәуір бөлігінің шет мемлекеттерден импортталатындығымен түсіндіреді. Одан басқа, жалпы сауда құрылымындағы цифрлық сауда көлемінің төменгі үлес салмағы анықталған, бұл цифрлық дамудың ағымдық көрсеткіштерінің төмендігін куәландырады. Осы орайда цифрлық экономиканың инфрақұрылымын дамыту ұсынылады, бұл ақпараттық-байланыс технологияларының инфрақұрылымын дамытумен қоса, цифрлық төлемдерді қабылдау және іске асыру, төлемдерді іске асырудың жылдам, қауіпсіз арналарын қамтамасыз ету үшін қажетті құрылғыларға қол жеткізу мүмкіндіктерін кеңейтуді көздейді.

Қазақстанның цифрлық дамуының көрсеткіштері мен индикаторлары қатарын талдау нәтижелері елдегі көптеген ұйымдардың цифрлық экономикаға және «Индустрия 4.0» тұжырымдамасына толықтай өтуі үшін технологиялық және ұйымдық тұрғыда дайын емес екендігін көрсетті. Бұл мәселені шешу үшін авторлар экономиканың түрлі салаларына цифрлық технологияларды енгізу бойынша халықаралық тәжірибеге жүгіну қажеттілігін көрсетеді.

Мақала аясында экономиканы цифрландыру барысында жетістікке жеткен дамыған және дамушы мемлекеттердің тәжірибесі сараланып, оны Қазақстанның шарттарында қолдану мүмкіндіктері зерттелген. Зерттеудің осыған сәйкес ұйғарымдары қалыптастырылып, елдің цифрлық дамуы бойынша ұсыныстар әзірленген. Әзірленген ұсыныстар цифрлық дамудың басым бағыттарын анықтау, экономиканы цифрландыру бойынша міндеттерді іске асыру бойынша өкілеттіліктерді мемлекеттік басқару деңгейлері арасында бөлу сияқты сұрақтарды қамтиды.

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### ЦИФРОВИЗАЦИЯ КАК ОСНОВА УСКОРЕННОЙ ТЕХНОЛОГИЧЕСКОЙ МОДЕРНИЗАЦИИ ЭКОНОМИКИ КАЗАХСТАНА

**Аннотация.** Цифровизация в современных условиях представляет комплексную задачу, которая включает не только модернизацию отраслей, но и повышение цифровой грамотности населения, пропаганду перехода к более удобным цифровым решениям на уровне предприятия и отдельного гражданина, охвата широкополосной сетью Интернет как можно большего количества домохозяйств и предприятий.

Актуальность темы статьи обусловлена активным проникновением цифровых технологий во все сферы жизнедеятельности современного общества. Корпоративными и государственными структурами мира, в том числе Республикой Казахстан, осознана необходимость цифровой трансформации экономики в целях повышения конкурентоспособности в мировом цифровом пространстве. Так, Первый Президент РК Нурсултан Назарбаев в одном из своих ежегодных посланий народу Казахстана говорил о нескольких приоритетах, связанных с развитием экономики, одним из которых является технологическая модернизация: «Мы должны культивировать новые индустрии, которые создаются с применением цифровых технологий». Решение поставленной первым президентом задачи предполагает необходимость проведения аналитической и научно-методической проработки осуществления такого рода изменений.

Методика исследования основана на применении общенаучных принципов системного подхода; методов логического, факторного, сравнительного, стратегического, управленческого анализа; количественного и качественного исследования основных тенденций и направлений формирования и развития информационно-коммуникационных и цифровой инфраструктур.

Целью статьи является анализ состояния и проблем цифрового развития Казахстана и разработка рекомендаций по развитию цифровизации. Для достижения поставленной цели выявлены современные тенденции развития цифровизации экономики и общества, проведен анализ предпосылок и условий развития цифровой экономики, а также смежных отраслей, способствующих цифровизации экономики.

Проведенное исследование позволило установить наличие определенных благоприятных условий для дальнейшей цифровизации экономики, в числе которых активное развитие и распространение информационно-коммуникативных технологий, рост цифровой грамотности населения, а вместе с ним и увеличение спроса на цифровые услуги и продукты. Несмотря на существующие предпосылки развития цифровой экономики, авторы отрицают наличие развитых цифровых отраслей, объясняя это явление тем, что всё еще большая часть товаров, связанных с ИКТ, импортируется из других стран. Кроме того, выявлен низкий удельный вес объемов цифровой торговли в структуре общей торговли, что свидетельствует о низких текущих показателях цифрового развития. В этой связи предлагается принятие усилий по развитию инфраструктуры цифровой экономики, что помимо развития инфраструктуры информационно-коммуникативных технологий, предполагает расширение возможностей приобретения устройств для принятия/осуществления цифровых платежей, создания быстрых, обширных, безопасных каналов для осуществления таких платежей.

Результаты анализа ряда показателей и индикаторов цифрового развития Казахстана показали, что на сегодняшний день многие организации в стране не готовы технологически и организационно для полноценного перехода к цифровой экономике и концепции «Индустрия 4.0» Для решения этой проблемы авторы подчеркивают необходимость обращения к международному опыту внедрения цифровых технологий в различные отрасли экономики.



В рамках статьи изучен опыт развитых и развивающихся стран, добившихся успешных результатов в процессе цифровизации экономики на предмет выявления возможностей применения их опыта в условиях Казахстана. Сформированы соответствующие выводы исследования и предложены рекомендации по цифровому развитию страны. Разработанные предложения охватывают такие вопросы, как определение приоритетных направлений цифрового развития, делегирование задач по осуществлению цифровизации экономики между уровнями государственного управления.

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## **CURRENT STATUS AND PROSPECTS FOR THE DEVELOPMENT OF VENTURE FINANCING**

**Abstract.** In modern conditions, entrepreneurs directly initiating new projects, large industrial companies, and the state clearly realize that a refusal to invest in the development of innovations would mean in practice much greater financial losses. Therefore, they are following the path of creating economic mechanisms that, on the one hand, would facilitate the introduction of the latest achievements of scientific and technological progress into production, and on the other, would allow to minimize the financial risk of individual investors.

One of such mechanisms is venture (risk) financing of innovations. The venture mechanism has played an important role in the implementation of many of the largest innovations in various fields of activity.

At the present stage of development in the context of globalization, the economic situation of countries is increasingly dependent on the level of innovation. If several centuries ago the power of state power was determined by gold reserves, land fertility and mineral resources, in the 21st century the level of development of science and technology in the economic sector began to play an increasingly important role.

As one of the reasons for limiting the volume of innovation, it is customary to attribute a lack of investment. The experience of economically developed countries shows that the development of innovative financing mechanisms from various sources (government, corporations) can solve the problem of insufficient investment.

Venture financing is one of the possible mechanisms to support innovative companies. The example of Silicon Valley in California, USA, serves as a vivid example of how the formation of innovative companies in the region was largely ensured by the parallel development of venture capitalism - venture capital funds and frequent investors.

The development of venture financing in Kazakhstan is considered one of the priority vectors of state innovation development, which contributes to the intensification of innovative activity and increase the competitiveness of the country's economy. The development of venture financing and venture entrepreneurship can solve a whole range of tasks that are strategically important for the implementation of positive qualitative changes in the economy. Firstly, this means an additional influx of investments, including from abroad. Secondly, there is an opportunity to revive and significantly intensify the national innovative potential, gradually turning it into the main “locomotive” of the development of the domestic economy, expanding its tax and export base. Thirdly, there will be a rapprochement between the Kazakhstani and international business environment on the basis of the most modern forms and directions of economic activity, interaction with direct developers of innovative products. With venture capital, domestic entrepreneurs receive not only Western money, but also advanced managerial experience and extensive business contacts necessary for the international commercialization of their own technological developments, while maintaining control over the company in their hands.

**Key words:** Venture financing, state, corporations, venture mechanism, innovative companies.

**Introduction.** Few people know, but venture financing in our country began to develop more than 10 years ago. The venture financing system traditionally includes investments of so-called “business angels” (individuals or investment companies investing in risky, but potentially highly profitable projects) in innovative startup projects, in addition, crowdfunding or crowdfunding are becoming more widespread in Kazakhstan, as well as venture capital funds investments in existing projects.

Recently, however, more and more analysts and experts have been asking the question: how effective is this area of investment activity?

We begin our analysis with the investment environment. Kazakhstan pays special attention to creating a favorable business climate for investors and improving the conditions for doing business. In the DoingBusiness 2018 World Bank rating, our country took 28th position, having improved its performance by 8 points compared to 2017. Today, Kazakhstan is a regional leader in the amount of foreign capital invested in the economy. So, over the past decade, the volume of direct investments attracted exceeded their net outflow, while investment funds were mainly attracted through debt instruments.

In his Address to the people of Kazakhstan, “New Development Opportunities under the Fourth Industrial Revolution,” the first president N.A. Nazarbayev said that “the most important issue is the development of our own ecosystem of developers of digital and other innovative solutions. “The main factors for the success of the innovation ecosystem are the stimulation of demand for new technologies from the real sector and the functioning of the private venture financing market. To do this, relevant legislation is needed.” As a result, the Concept of the draft Law “On Amendments and Additions to Some Legislative Acts on Venture Financing Issues” was developed.

In general, the era of venture financing in Kazakhstan began in 2003-2004 with the creation of the National Innovation Fund (today it is the National Agency for Technological Development - NATD), whose main goal is to promote innovation through grant financing and direct investment. Priority areas for granting NATD grants: info-communication technologies, biotechnologies, energy efficiency, robotics.

Also among the venture capital funds is the Samruk-Kazyna National Welfare Fund. One of the new \$ 100 million funds, SingulariTeam, is investing in artificial intelligence and robotics. Another venture fund - Centras (established by the Centras financial group and the National Innovation Fund of Kazakhstan) - specializes in fintech. The fund is one of the leaders in the Kazakhstan venture market, with an average of 15 projects in its portfolio.

Today, the total volume of venture capital in Kazakhstan is 260 million US dollars, investments of the National Innovation Fund in foreign funds - about 40 million dollars. The state program for the formation of the national innovation system of the Republic of Kazakhstan provides for investment in information technology and Internet business at the expense of venture capital funds.

So, in the republic, the Alatau IT City Information Technology Park was opened as a platform for the development of IT business, 3 regional technology parks were created, venture funds were established with the participation of domestic and foreign investors, the first innovative managers appeared.

However, over 5 years, all Kazakhstan venture funds have organized ... only 12-15 transactions, while for each fund to be effectively utilized, each of them had to complete 10 transactions. At the same time, the average investment amount per project is equal to \$ 2.5 million, while in the first quarter of 2018, European companies received international investment capital of 4.9 billion euros.

According to The Financial Times Limited, in 2018, by agreement of the European Commission and the European Investment Fund, it was decided to invest 410 million euros to finance a new program known as Venture EU. Investments in Sweden, the UK, and Norway account for more than 0.5% of GDP, the average European indicator is 0.3%.

Thus, analyzing the current state of venture financing in Kazakhstan, we have to admit that it is at the initial stage of formation. One of the factors restraining the development of venture financing is the shallow stock market capacity, in contrast to Western countries, where the growth dynamics of venture funds is also associated with the development of the stock market. Often, venture capital investments in a particular project at more mature stages of the project are realized through an IPO (initial public offering). The simplicity of the withdrawal procedure is an important advantage that determines the interest of venture funds / investors [1].

In terms of accessibility of venture capital, Kazakhstan ranks 102nd in the ranking of the global competitiveness index. Despite the fact that the domestic history of venture capital business has more than ten years, the risk financing infrastructure that has developed over the years, consisting of one state-owned company, 20 private venture capital funds and a dozen business angels, practically does not stimulate the development of innovation in the economy of the Republic of Kazakhstan [2].

Baiterek National Management Holding JSC held a session in the framework of the 12th Astana Economic Forum (AEF-2019) to discuss the role of the state in the development of venture capital. Based on successful international experience, Kazakhstan is taking an important step towards the development of

its innovative ecosystem and international competitiveness by launching its first venture capital fund - QazTechVentures JSC [3].

In February 2019, QazTechVentures JSC was established to promote the development of technology entrepreneurship through tools for venture financing, business incubation and technology consulting. QazTechVentures is a part of Baiterek National Management Holding JSC [4].

The subsidiary company Baiterek National Management Holding JSC, QazTechVentures JSC, is attracting venture investments to Kazakhstan by signing a preliminary agreement on creating a joint fund with the American venture investment fund. The fund will have a capitalization of US \$ 150 million, the main investments will be made in the most successful startups that have previously received money from regional or global 500 Startups funds.

The fund plans to invest 35% of capital in companies from the USA and 65% in companies selected from around the world. It is assumed that the priority sectors for investment will be projects of IT, e-commerce, fintech, mining and metallurgical complex, agricultural sector, logistics and others.

The creation of a joint fund and cooperation with 500 Startups can be an important catalyst for the development of venture capital in Kazakhstan, as it will integrate into the global ecosystem and will help scale up domestic startups in the world market and attract foreign investment in the country.

500 Startups is one of the leading US venture capital management companies established in 2010 in Silicon Valley. Over the nine years of operation, the company has created 19 funds, of which 4 are global, investing in startup projects around the world, and 15 are thematic, focused on individual regions of the world. So, the thematic funds “500 Startups” invest in Singapore, Thailand, Vietnam, South Korea, Japan, Israel, the Middle East, Turkey, Brazil, Mexico, Canada and other countries.

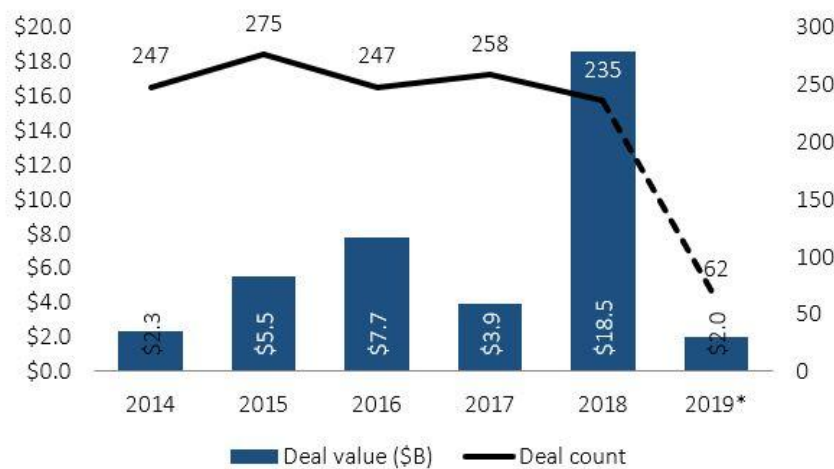
According to its strategy, Baiterek holding plays an active role in attracting foreign funding to support investment projects in Kazakhstan. The holding may assist in providing certain benefits for American companies wishing to work in the Kazakhstan market. In particular, a great interest is in attracting long-term investments in infrastructure and industrial projects [5].

**Methods.** Methods used are general scientific and special, such as: system analysis method; content analysis method; comparative analysis method; method of analysis and synthesis; method of systematic approach.

**Results.** Venture investments in the payment solutions market jumped 5 times.

In 2018, the volume of venture financing in the global payment solutions market reached \$ 18.5 billion, an increase of almost 5 times compared to 2017. Such data was released on May 28, 2019 by the analytical company PitchBook.

Although companies, one way or another connected with financial technologies, began to attract much more funds, the number of venture transactions decreased from 258 in 2017 to 235 a year later.



Source: Pitchbook

Figure 1 – The volume of transactions on venture financing payment startups, data from PitchBook

The surge in investor activity in the field of online payments is associated with the Chinese company AntFinancialServicesGroup, which in 2018 raised a record \$ 14 billion.

From the beginning of 2019 to the end of May, 62 transactions were registered (in the amount of \$ 2 billion) for venture financing of startups, whose business relates to payments and transfers via the Internet. In January, Stripe, a company developing a payroll and anti-fraud service, raised a total of \$ 345 million and received a valuation of \$ 22.5 billion.

GoCardless company, creating a global network of interbank payments, received \$ 75 million in investments, including from Alphabet and Salesforce, while startup Klarna, which offers online store users to pay for goods after testing the goods, closed the \$ 100 million round of financing in 2019.

According to CNBC TV channel, in the payment industry there are more and more services and developers who want to capitalize on the fact that more and more people prefer to make purchases online and using contactless technologies. McKinsey analysts estimated the size of this market at \$ 1.9 trillion in 2018 [6].

CB Insights: 2,740 transactions for \$ 53 billion. At the end of 2018, corporate venture capital structures financed 2,740 transactions, and their total investments approached \$ 53 billion. Global activity of corporate venture is growing rapidly, and Asian companies are claiming more and more confidence, promising oust traditional North American leaders. At the same time, not only Asian corporate foundations are ready to take the main positions, but also start-ups from this region who manage to raise ever higher investment rounds. So, in 2018, the largest funding volume, \$ 1.9 billion, including from SoftbankGroup and CapitalG, was received by the Chinese platform for truck rental ManbangGroup. These conclusions came from a profile study by analysts at the American company CB Insights [7].

The Chinese market has also become the champion of the Asian region for attracted investments from corporate venture. Namely: in 2018, the Asian region accounted for 38% of all transactions involving corporate venture capital.

According to the CB Insights report, financing for Chinese startups increased by 51% to \$ 10.8 billion, and the number of transactions increased by 54% to 351. For comparison, financing for startups in Japan, although it increased by 56%, however, it amounted to 2018 g. only \$ 1.4 billion. The largest deal for the market was the \$ 63 million investment received by Folio's capital management platform. Corporate venture capital investments in Indian startups also remained small compared with China - the number of transactions increased by 20%, from 59 to 71, and the volume of investments amounted to \$ 1.8 billion. The largest deal for the market was the investment of Japanese SoftBank structures (\$ 1 billion) in Indian hotel chain OyoRooms.

Still, US funds still maintain leadership in the corporate venture investment market - the total volume of transactions in 2018 increased by 28%, from \$ 20.7 billion to \$ 26.5 billion, and the number of transactions increased from 945 to 1046 (an increase of 11%).

Fintech attracted a record investment of \$ 39.57 billion. At the end of January 2019, the results of the CB Insights study were published, according to which, according to the results of 2018, financial and technological companies from around the world raised a record venture capital of \$ 39.57 billion, which is 120 % more than a year ago [8-10].

Every 4 days, a startup worth more than \$ 1 billion appears in China. At the end of January 2019, the Hong Kong research company HurunReport published a report saying that almost every four days a so-called "unicorn" appears in China - a startup with a market capitalization of \$ 1 or more billion.

The volume of venture investments in Europe was a record, but the number of transactions decreased by a quarter. At the end of January 2019, as part of the annual European PitchBook report, data were published according to which 2018 was the record year for the size of venture investments in Europe, although the total number of transactions decreased by more than a quarter. In 2018, a total of \$ 23.3 billion was invested in 3384 transactions, which is 4.2% more than a year earlier. But the total number of transactions fell by 25.9% [11-13].

The highest level of venture financing since 2000. At the beginning of January 2019, PwC and CB Insights analysts published a report according to which the highest level of venture financing was observed in 2018 from 2000 - the last year of the dotcom bubble.

During 2018, \$ 207 billion was invested in 14,247 transactions worldwide, which is 21% more than in 2017. Total US funding for the year increased by 30% to \$ 99.5 billion for 5536 deals. During the year, about 382 funding funds (including 184 in the United States) amounted to more than \$ 100 million, while in 2017 their number amounted to only 266.

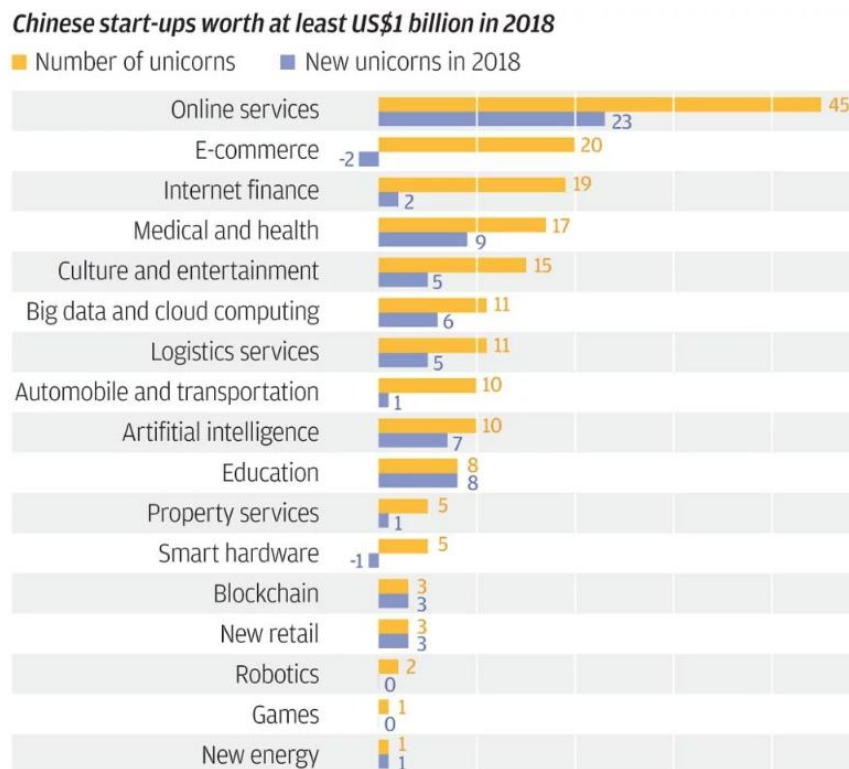


Figure 2 – Areas where companies with the most value of \$ 1 billion or more appeared in China, Hurun Report data for 2018

In the USA, in 2018, 53 new companies reached the level of attracted venture capital of \$ 1 billion or more, while in 2017 there were 29. In the fourth quarter alone, 21 such companies were registered - the highest figure in history.

Venture capital investment in 2018 was a record for 18 years.

The investments were received mainly by companies in the field of artificial intelligence, digital healthcare and financial technologies, while financing related to artificial intelligence grew by 72% to \$ 9.3 billion. At the same time, venture financing in the San Francisco region jumped by 55%, to \$ 28 billion, and financing in New York reached \$ 13 billion.

Despite record numbers, in the fourth quarter the number of transactions decreased worldwide, with the exception of Asia, where activity continued to grow. In 2018, compared with 2017, investments in venture capital in Asia increased by 42%, and the amount of invested funds increased by 11%. Asia broke records in all areas: the share of financing funds of \$ 100 million and more grew by 35% (to 162), and the share of new companies with investments of more than \$ 1 billion increased by 60% (40 companies were opened) [14-16].

For the first time, China has become a leader in startup investment. In the second quarter of 2018, China for the first time surpassed North America in the amount of venture capital, which was facilitated by a record \$ 14 billion fundraising campaign by AntFinancialServicesGroup, a company specializing in the development of financial technologies.

According to the Crunchbase portal, which tracks and analyzes data on collected funds, in April, May and June 2018, China received 47% of the world's venture capital, while the United States and Canada were able to raise 35% of the funds. Some economists even believe that Crunchbase in its report underestimated the volume of investments in China, since it only tracked relatively large investments.

This surge in investor interest in China may be due to record investments in AntFinancialServices. The fundraising was attended by new investors, including Singaporean venture capital funds GIC and TemasekHoldings, US private firms WarburgPincus and SilverLake, as well as private Chinese shareholders who supported the issuance of securities [17-21].

Venture capital investments over the past 40 years have become very popular in all developed countries of the world. But the United States became the cradle of this type of business - a country where

25% of all venture capital on the planet is concentrated. The high-tech market in the USA is the most boiling and most developed in the world. It is not surprising that venture capital investments as a phenomenon originated in this country, and to this day they have the greatest success. Today in the United States there are more than 1,600 venture funds, and the ecosystem of the venture capital market includes thousands of enterprises with tens of thousands of employees.

Features of venture investment in the United States.

The lion's share of venture capital investors in the United States is concentrated in San Francisco, where the famous Silicon, or rather Silicon Valley, is located. High-tech startups here appear like mushrooms after the rain, so local investors have long since worked out for themselves universal rules for venture capital investments. The first stage of venture investments is the pre-seed stage (Pre-Seed), which involves companies that have at least some evidence of potential interest in its product from future customers. At this stage, the average check is about \$ 250 thousand, and the funds raised during the pre-sowing stage are used to create the so-called. MVP (minimum viable product version). The main investors at this stage are the founders of the company themselves or business angels.

The next seed stage (Seed) involves companies that already have an MVP and at least an initial customer base. In this round, the average investment check can range from \$ 500 thousand to \$ 3 million, and the main participants can be not only business angels, but also seed funds or venture accelerators. The company uses the funds received in order to provide scalability of the product and increase sales. Often, the amount of investment is enough for a year and a half, after which the fate of the startup becomes more or less clear, since you can already see whether it is starting to become popular with the target audience or not.

The most important stage of venture capital investment in the USA is usually the late sowing stage (Post-Seed) or the growth stage. It involves companies that have already been able to demonstrate their effectiveness, but which lack the funds to further develop the project and increase profits. At the growth stage, companies can attract venture capital investments in several rounds (A, B or C) and at each of them the average check amount increases significantly. Amounts on round A are usually \$ 5-10 million, on round B \$ 10-20 million, and on round C, the average check can reach \$ 100 million, and in some cases even more. The amounts collected in each of the rounds are used to expand the customer base, expand to other regions or new markets, and further increase profits. If such projects are successful, after 3-5 years they begin to bring billions in profits to their investors, as happened with companies such as Twitter, Instagram, Facebook and many others.

Analyzing the current state of venture financing in Kazakhstan, we have to admit that it is at the initial stage of formation. One of the factors restraining the development of venture financing is the shallow stock market capacity, in contrast to Western countries, where the growth dynamics of venture funds is also associated with the development of the stock market.

Problems and disadvantages of the current state of venture financing in Kazakhstan:

1) The lack of measures and mechanisms of state incentives, such as: tax preferences and subsidies, the absence of state guarantee programs and co-financing for venture projects directly or through state development institutions, investment agencies or insurance organizations.

2) Imperfection of the legislative framework that does not allow building various ways and forms of investment, project management, lack of reliable protection tools to reduce the entrepreneurial risks of investors.

**Discussions.** Thus, the possibilities of beginning businessmen and start-ups in raising funds at the first stage are quite limited. This also applies to government programs aimed at developing the startup industry.

Another difficulty is the lack of a critical mass of quality projects.

According to the data of the international startup platform StartupBlink, in Kazakhstan there are only 27 projects. At the same time, Kazakhstan occupies 71st place among 197 countries in the global ranking of ecosystems. The most popular projects are Iris, Singularity Lab and Hexlet. The most active industries are education, mobile services and real estate. This suggests that we need to open up, tell that we have projects, startups that have managed to raise funds, and not only local investors.



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### ВЕНЧУРЛІК ҚАРЖЫЛАНДЫРУДЫҢ ҚАЗІРГІ КЕЗДЕГІ ЖАҒДАЙЫН ТАЛДАУ ЖӘНЕ ДАМУЫНДАҒЫ ПЕРСПЕКТИВАЛАРЫ

**Аннотация.** Қазіргі жағдайда жаңа жобаларды тікелей бастаған кәсіпкерлер де, ірі өнеркәсіптік компаниялар да, мемлекет инновацияларды дамытуға инвестиция салудан бас тарту іс жүзінде айтарлықтай қаржылық шығындар әкелетінін түсінеді. Сондықтан, олар бір жағынан ғылыми-техникалық прогрестің жаңа жетістіктерін өндіріске енгізуге ықпал ететін, екінші жағынан жеке инвесторлардың қаржылық тәуекелін азайтуға мүмкіндік беретін экономикалық тетіктерді құру жолымен жүрде.

Осындай тетіктердің бірі инновацияларды венчурлық (тәуекелді) қаржыландыру болып табылады. Венчурлік механизм әр түрлі қызмет салаларында көптеген ірі инновацияларды жүзеге асыруда маңызды рөл атқарды.

Жаһандану жағдайындағы дамудың қазіргі кезеңінде елдердің экономикалық жағдайы инновация деңгейіне байланысты. Егер бірнеше ғасыр бұрын мемлекеттік биліктің күші алтын қорымен, жер құнарлығымен және минералды ресурстармен анықталса, ХХІ ғасырда экономика саласындағы ғылым мен техниканың даму деңгейі маңызды рөлге ие бола бастады.

Инновациялар көлемін шектеу себептерінің бірі ретінде инвестицияның жетіспеушілігін атауға болады. Экономикалық дамыған елдердің тәжірибесі әр түрлі көздерден (үкімет, корпорациялар) қаржыландырудың инновациялық тетіктерін дамыту жеткіліксіз инвестиция мәселесін шеше алатындығын көрсетеді.

Венчурлық қаржыландыру инновациялық компанияларды қолдаудың мүмкін механизмдерінің бірі болып табылады. Калифорниядағы (АҚШ) Силикон алқабының мысалы аймақтағы инновациялық компаниялардың құрылуы венчурлік капитализмнің – венчурлық қорлардың және жиі инвесторлардың қатарлас дамуымен қамтамасыз етілгендігінің жарқын мысалы болып табылады.

Қазақстанда венчурлік қаржыландыруды дамыту мемлекеттік инновациялық дамудың басым бағыттарының бірі болып саналады, бұл инновацияны ынталандыруға және ел экономикасының бәсекеге қабілеттілігін арттыруға көмектеседі. Венчурлік қаржыландыру мен венчурлік кәсіпкерлікті дамыту экономикада жағымды сапалық өзгерістер жасау үшін стратегиялық маңызды міндеттердің барлығын шеше алады. Біріншіден, бұл инвестициялардың қосымша ағынын, оның ішінде шетелден келетіндігін білдіреді. Екіншіден, ұлттық инновациялық әлеуетті жандандырып, едәуір жандандыруға, оны біртіндеп отандық экономиканың негізгі «локомотивіне» айналдырып, оның салықтық және экспорттық базасын кеңейтуге мүмкіндік бар. Үшіншіден, экономикалық қызметтің неғұрлым заманауи нысандары мен бағыттары, инновациялық өнімдерді тікелей жасаушылармен өзара іс-қимыл негізінде қазақстандық және халықаралық іскерлік орта арасында жақындасу болады. Венчурлық капиталымен отандық кәсіпкерлер тек батыстық ақшаны ғана емес, сонымен қатар өздерінің технологиялық әзірлемелерін халықаралық коммерцияландыруға қажет жетекші тәжірибе мен кең іскерлік байланыстарды алады, сонымен бірге олардың бақылауында болады.

**Түйін сөздер:** венчурлық қаржыландыру, мемлекет, корпорациялар, венчурлық капитал механизмі, инновациялық компаниялар.

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### АНАЛИЗ СОВРЕМЕННОГО СОСТОЯНИЯ И ПЕРСПЕКТИВЫ РАЗВИТИЯ ВЕНЧУРНОГО ФИНАНСИРОВАНИЯ

**Аннотация.** В современных условиях и предприниматели, непосредственно выступающие инициаторами новых проектов, и крупные промышленные компании, и государство отчетливо осознают, что отказ от инвестиций в освоение нововведений означал бы на практике куда большие финансовые потери. Поэтому

они идут по пути создания экономических механизмов, которые, с одной стороны, содействовали бы внедрению в производство новейших достижений научно технологических прогрессов, а с другой — позволяли бы сводить к минимуму финансовый риск отдельных инвесторов.

Одним из таких механизмов является венчурное (рисковое) финансирование нововведений. Венчурный механизм сыграл важную роль в реализации многих крупнейших нововведений в различных областях деятельности.

На современном этапе развития в условиях глобализации экономическое положение стран все в большей степени зависит от уровня инновационной деятельности. Если несколько веков назад могущество государственной власти определяли запасы золота, плодородие земель и минеральные ресурсы, то в XXI веке уровень развития науки и техники в экономическом секторе стал играть все более важную роль.

В качестве одной из причин ограничения объема инноваций принято относить отсутствие инвестиций. Опыт экономически развитых стран показывает, что разработка инновационных механизмов финансирования из разных источников (государство, корпорации) может решить проблему недостаточных инвестиций.

Венчурное финансирование – это один из возможных механизмов поддержки инновационных компаний. Пример Кремниевой долины в Калифорнии, США, служит ярким примером того, как становление инновационных компаний региона во многом было обеспечено параллельным развитием венчурного капитализма – венчурных фондов и частых инвесторов.

Развитие венчурного финансирования в Казахстане считается одним из приоритетных векторов государственного инновационного развития, которое способствует активизации инновационной деятельности и увеличению конкурентоспособности экономики страны. Развитие венчурного финансирования и венчурного предпринимательства способно решить целый комплекс задач, стратегически важных для осуществления позитивных качественных изменений в экономике. Во-первых, это означает дополнительный приток инвестиций, в том числе из-за рубежа. Во-вторых, появляется возможность реанимировать и существенно активизировать национальный инновационный потенциал, постепенно превращая его в основной «локомотив» развития отечественной экономики, расширения ее налоговой и экспортной базы. В-третьих, произойдет сближение казахстанской и международной предпринимательской среды на основе самых современных форм и направлений экономической активности, взаимодействия с непосредственными разработчиками инновационных продуктов. С венчурным капиталом отечественные предприниматели получают не только западные деньги, но и передовой управленческий опыт, и обширные деловые контакты, необходимые для международной коммерциализации собственных технологических разработок, при сохранении контроля над компанией в своих руках.

**Ключевые слова:** венчурное финансирование, государство, корпорации, венчурный механизм, инновационные компании.

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## MAIN PROBLEMS OF OPTIMIZING THE COMPANY'S CAPITAL STRUCTURE AND GLOBAL MODELS

**Abstract.** Financial management is the process of productive use of financial resources, counting the budgetary relations of the enterprise, the inflow of cash flows, the provision of the required level of capital. Investment decisions are made in the placement of effective financial investments. Financial decisions are intended for decisions on the placement of funds, determining the composition and structure of capital, financing of long-term and short-term resources, the ideal and efficient use of equity and debt capital. In a period of uncertainty and competition in the market, the optimization of the capital of the enterprise, its structure leads to the strengthening of the financial position, and negative financial decisions in the management of the capital structure lead to a slowdown of the enterprise. As a result of compelling capital management of the enterprise includes a combination of all financial, investment and operating cash flows, which has a positive impact on financial development. The role of financial management in the management of capital structure in an important financial mechanism is special. Improving the efficiency of capital structure management is also important in increasing the profitability of capital owners. In the conditions of market development, the study of optimization of financial management of capital in the enterprise and the disclosure of the impact of capital, financial management decisions on the financial activities of domestic enterprises play an important role and remain relevant.

Entrepreneurship financing is aimed at ensuring the efficiency of financial management cash flow and working capital as a form of capital management. Capital structure management is a special system that determines the overall financial situation, cash flows, cash resources, the effective organization of financial relations. One of the areas of management in financial management is capital - the source of funding for the company, ie the liabilities on the balance sheet that bring income. The results of financial analysis are used as an information base for the analysis of the structure, assessment of the use of capital of the enterprise. The role of financial management decisions in managing the capital structure is growing in the development of competition in a market economy. In the current situation, enterprises need to determine the capital, resource potential, solvency in the management of financial decisions. This involves the optimization of financial relations, the capital of the enterprise and its structure, increasing the efficiency of management. If the indicators of the financial situation show profitability, financial success, the capital structure determines the efficient allocation of resources. The study of financial management in the field of capital management, the system of defining and improving the structure of capital is of interest to both financial partners and investors and creditors. The study of optimization of the capital structure of the enterprise is relevant today.

**Key words:** enterprise, capital, deposit, finance, working capital, fixed assets, income, loss, investment, equity, debt capital.

To determine the optimal investment budget, it is necessary to determine the profitability of the investment opportunities of the enterprise. Depending on the return that exceeds the cost of capital raised to Finance the enterprise, it is necessary to accept all independent projects and reject all other projects, since they could be financed from sources that exceed the internal return on investment, while the net present value will have a negative value. The optimal capital price is determined by the intersection point of the investment opportunity charts and the marginal cost of capital. If they use it as a benchmark for

evaluating investments in projects with an average level of risk, the appropriate decisions about whether to adopt a project will be correct, and the financial and investment policy will be optimal. When using any other norm, the firm's capital investment budget will not be optimal [1].

If the company has fewer investment opportunities, the intersection point of the IOS and MSS charts can move to the left and down, and a large number of investment opportunities, on the contrary, move this point to the right and up. Thus, the discount rate applied when forming the budget is affected by all projects as a whole. The strength of the operating mechanism determines the degree of flexibility of the enterprise, depending on the share of fixed costs in the total amount and causing the occurrence of business risk. Increasing fixed expenses by increasing interest on loans in the capital structure will lead to an increase in the result of the financial mechanism.

In turn, the operating mechanism shows the special revenue growth compared to growth in the volume of products sold, increased earnings per share and thereby increase the strength of the financial mechanism. Thus, financial and operational mechanisms will be closely interlinked, reinforcing each other. The level of the combined result of the actions of two mechanisms characterizes the level of joint risk of the enterprise and shows how much percent the income per 1 share changes when the volume of sold substances (income from sold products) changes by 1%.

The combination of a powerful operating mechanism with a strong financial mechanism can be devastating for an enterprise, as business and financial risks multiply, multiplying the adverse effects. The interrelationship of operating and financial mechanisms further exacerbates the negative impact of declining income on net income.

The problem of reducing the overall risk of the enterprise leads to the choice of one of three options:

- 1) the combination of the weak effect of the operating mechanism with a high level of performance of the financial mechanism;
- 2) the combination of a low level of performance of the financial mechanism with a strong operating mechanism;
- 3) a combination of balanced levels of financial and operational mechanisms.

In general, the criterion for choosing any option is the maximum possible exchange rate of the company's shares in the conditions of minimum risk. This can be achieved through a deal between risk and return.

The choice of a particular financing option is influenced by many objective (market conditions of goods and capital, the internal organization of business processes in the enterprise) and subjective factors (relationships with investors and personal preferences of typical managers) [2-3].

Different methods are used in foreign practice to lay the foundation for the optimization of the capital structure of the enterprise. Figure 1 below shows a diagram of foreign models.

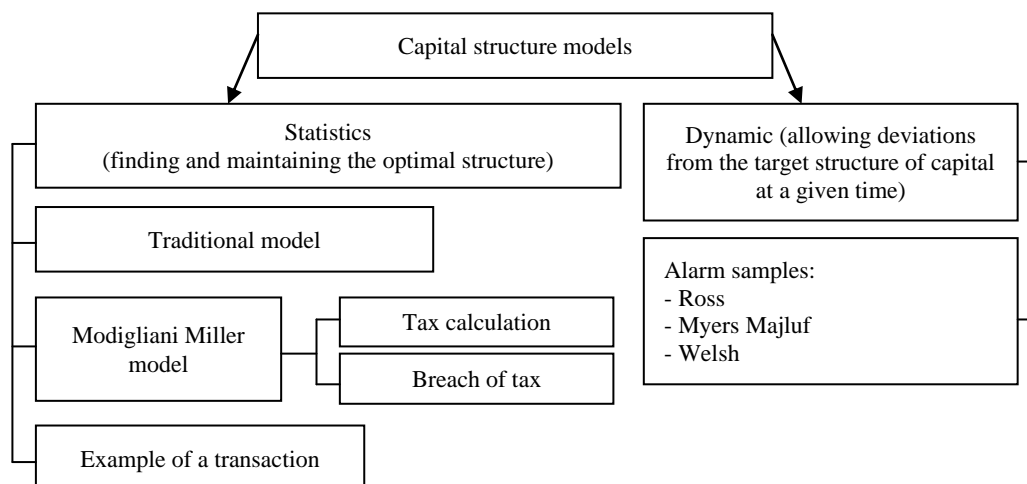


Figure 1 – Foreign models of capital structure

The combined level of operational and financial mechanisms for joint-stock companies allows making planned calculations of future earnings per share depending on the planned volume (income) of products sold, which means that the company can directly access the dividend policy.

Evaluating the sources of capital is one of the important criteria for selecting and building its structure. However, decisions regarding the choice of funding sources, despite the significant role of the latter, cannot be based solely on their evaluation criteria. In decisions on the capital structure, there are transactions related to the actual conditions under which an enterprise operates.

In the world practice, the most popular models of capital structure are based on the optimal structure, maximizing the current assessment and offering a choice of sources of financing. If the optimal structure has been determined, then achieving this proportion in the elements of capital should be the main goal of management, and in this proportion it is necessary to increase capital [4-5].

Capital maximization is not a one-time task, but a continuous process, we show the cycle of capital creation as follows (figure 2).

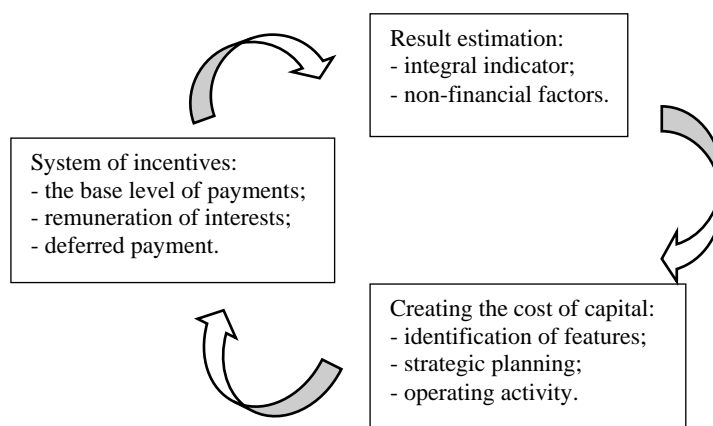


Figure 2 – The factors of formation of cost of capital

Optimization of the capital structure is a scientifically based system that provides experience of approaches to the goals and principles that characterize the process of building an optimal financial structure for cost management. In modern economic literature, the following criteria are used: increasing the market value of a company, reducing the average mass cost of capital, reducing the amount of risk, increasing the return on capital, and purposeful formation of the composition and structure of capital require important functions.

The creation of quantitative indicators determined by the main factors of the cost of capital will allow us to effectively link current and prospective goals in the development of the company, create a consolidated management system based on the structural structure of these factors, solve issues by creating a system of direct material payments with the rate of the cost of capital (identification, forecasting, control of the main factors in the "sphere of responsibility" of employees). In accordance with this approach, the effectiveness of all financial decisions and decisions on the capital structure is revealed by the company's contribution to the increase in the market price.

A common disadvantage of accounting methods for management decisions is that it draws attention to the previous performance of the company, hence the weak interdependence of the company's value. It is not considered as a target criterion, even if there are no disadvantages in reducing the average weight cost. The purpose of improving the capital structure is to increase the market value, warns of the need to create a modern model of capital structure formation as a cost approach to company management [6-7].

It is important that the process of building an effective capital structure is considered in tactical and strategic aspects. The analysis is performed by increasing the market value intended for strategic purposes. The goal at the current stage reflects the process of growth appearing as income, and provides a combination of long-term and short-term goals for building a capital structure. The special value of the cost of capital - it can be used to determine the contradiction between accounting financial transactions, taking into account the balance of the "return-risk-liquidity" system, you can perform the restrictions and forecasts necessary to implement the efficiency of the capital ratio in financing.

Consider the constraints by creating the following inequalities:

$$\Delta E \leq \Delta CA \leq \Delta EP \quad (1)$$

where  $\Delta EP$  – the growth of economic income;  $\Delta CA$  – increase in current assets;  $\Delta E$  – increase in debt capital.

Fulfilling this inequality involves increasing revenue relative to the cost of resources used, reducing the risk of financial stability loss, and achieving an acceptable amount of liquidity. The implementation of the cost method in improving the company's capital structure involves a system of construction factors based on the criterion, justification for the choice of the value of evaluating performance through market value. The economic value-added model (EVA) has the greatest potential as an analytical tool in managing the cost of capital.

American economists B. Stewart and D. Stern pointed out in their works the features of the value added indicator-EVA. This criterion is a universal indicator for financial analysis in the assessment and management of the company's value. EVA is a company management tool, the main purpose of which is to form and increase the company's market value. EVA does not necessarily lead to an increase in the value of the company. The decrease in cost with an increase in the value of EVA can occur in the following cases: if the analysis stage increases the EVA, then achieving the priority goal of obtaining a superprofit in the long term; when capital expenditure increases, EVA also increases due to increased risk. EVA – is considered as a criterion that determines the company's managers as an impact on profitability.

As a strategic indicator, the EVA value is proposed, reflecting the present value of the estimated amount of economic value added (EVA), which provides a combination of short – and long-term goals in building the capital structure within the company's value management system, such as MVA-application of market value added, operational indicator.

The influence of the main financial factors on the increase in EVA is as follows: cost formation, capital efficiency, Production, investment and financial activities. Earnings before interest for loans and operating taxes are divided into EBIT and taxes. Investment activity is divided into the return on advanced capital and invested capital. We determine our financial performance by searching for the weighted average cost of capital. EVA increases under the influence of the following factors: increased revenue from core operating activities – (EBIT-Tax); increase in return on invested capital( ROIC); decrease in capital expenditures (WACC).

The creation of an effective capital structure should be aimed at achieving a level of average mass value of invested capital that provides a return to the extent necessary for investors, providing a return that is less than the return on capital at efficiency. The amount of the profitability spread allows you to Express an opinion about the size of the formation of EVA: in its desired value, the EVA is formed, and in the negative value there are losses. The value of using the cost model to improve the company's structure is shown in the following table 1.

Table 1 – Goals of using the EVA model

Users	Goals of using
Shareholders/ owners	Assessment of economic value added, the main factors of its construction, increasing the attractiveness of the company for investors
Top managers	Assessment of economic value added and making management decisions, standards, and plans for the growth of indicators
Strategic investor	Evaluation of the effective use of equity capital, use in the conditions of consolidation and creation of the company

The main factors that ensure an increase in economic value added are identified. You can see them in the following figure 3. In this figure 3, the factors that affect the cost of capital are divided into three levels. To calculate the return on investment, the General level factors provide income from core activities with an indicator of invested capital. Customer base at the level of Business units, industry performance and operating income. Among the operational factors, there are important factors for making specific decisions by middle and Junior managers [8-11].

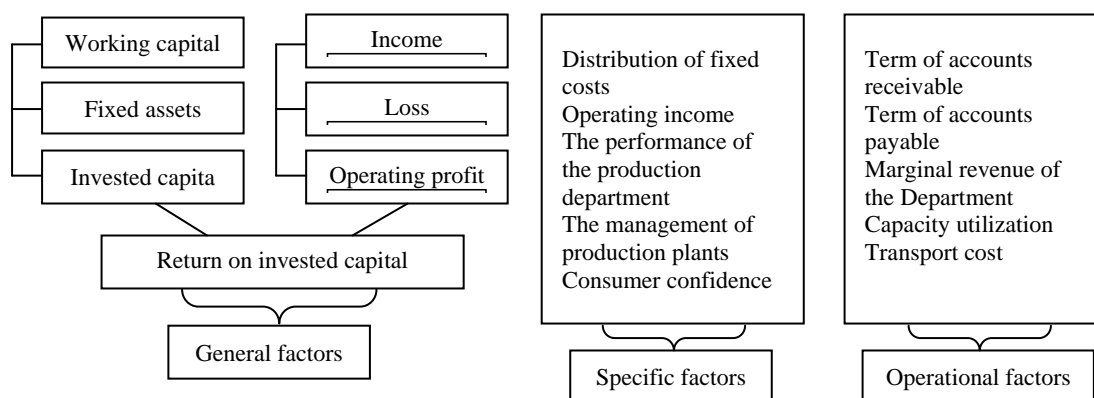


Figure 3 – A set of factors that affect the cost at various levels of enterprise activity

As shown in figure 3, the values of the proposed factors affect the cost of capital, so changes in indicators affect the cost of capital. The financial drivers of cost formation are presented in the following table 2.

Table 2 – Economic value added of LLP "NAR" - EVA and weighted average cost of WACC, thousand tenge

Indicators	2017	2018	2019
EBIT-net income from taxation	-575	-4625	-1587
K-capital of the company	797153	826593	753122
NOPAT-net income after tax	-1784	-6374	-16681
WACC-weighted average cost of capital, %	1,01%	0,80%	1,24%
EVA-economic value added	-9835,25	-12986,74	-26019,71

The negative value of the value added indicator of EVA – economic LLP "NAR" in 2017-2019 is an adverse phenomenon. The amount of EVA increases the smaller the WACC value. The lower the WACC value, the more efficient it is. And the larger the size of the EVA indicator, the higher the income owners receive.

Using these indicators, we determine whether the values of LLP "NAR" correspond to the limits that characterize the "profitability-risk-liquidity" balance.

EP-growth of economic income:

– change in pre-tax income in 2018 compared to 2017 (-4625 thousand tenge) - (-575 thousand tenge) = 4050 thousand tenge;

– change in pre-tax income, increase in 2019 compared to 2018 (-1587 thousand tenge) - (-4625 thousand tenge) = 3038 thousand tenge.

ΔCA - growth of current assets:

– increase in 2018 compared to 2017 544946 thousand tenge - 516557 thousand tenge = 28389 thousand tenge;

– The increase in 2019 compared to 2019 is 425207 thousand tenge - 544946 thousand tenge = 119739 thousand tenge.

ΔE - growth of debt capital:

– increase in 2018 compared to 2017 1028520 thousand tenge - 978950 thousand tenge = 49570 thousand tenge;

– The increase in 2019 compared to 2018 is 907329 thousand tenge - 1028520 thousand tenge = - 121191 thousand tenge.

In these calculations, we see that in 2017, the borrowed capital was 49570 thousand tenge more than in 2018. The borrowed capital in 2019 compared to 2018 decreased by 121191 thousand tenge. The sum of these changes is shown in the following table 3.



Table 3 – Change of LLP "NAR" to EVA,  $\Delta CA$ ,  $\Delta E$ , thousand tenge

Indicators	2017	2018	2019
Economic income growth ( $\Delta EP$ )	-1120	4050	3038
$\Delta EVA$ economic value added growth	-1235,25	-3151,49	-13032,97
Growth of current assets $\Delta CA$	-13024	28389	119739
Growth of debt capital ( $\Delta E$ )	816670	49570	- 121191

Determine compliance with the constraints  $\Delta EVA > \Delta CA > \Delta E$ , which characterize the balance of "return-risk-liquidity":

In 2017:  $\Delta EVA = -1235.25$  thousand tenge;  $\Delta CA = -13024$  thousand tenge;  $\Delta E = 816670$  thousand tenge. Then check that  $\Delta EVA > \Delta CA > \Delta E$  conforms to the restrictions:

$(-1235.25 \text{ thousand tenge}) > (-13024 \text{ thousand tenge}) < 816670 \text{ thousand tenge}$  The contract was not fulfilled.

In 2018:  $\Delta EVA = -3151.49$  thousand tenge;  $\Delta CA = 28389$  thousand tenge;  $\Delta E = 49570$  thousand tenge. Checking the implementation of the inequality:  $(-3151.49 \text{ thousand tenge}) < 28389 \text{ thousand tenge} < 49570 \text{ thousand tenge}$ ; the condition is fulfilled.

In 2019:  $\Delta EVA = -13032.97$  thousand tenge;  $\Delta CA = 119739$  thousand tenge;  $\Delta E = -121191$  thousand tenge. Checking the implementation of the inequality:  $(-13032.97 \text{ thousand tenge}) < 119739 \text{ thousand tenge} > -121191 \text{ thousand tenge}$ ; the condition is not fulfilled.

The results of the verification of compliance with this condition can also be shown in table 4. The correspondence of the  $\Delta EVA > \Delta CA > \Delta E$  limits can be seen in the table below.

Table 4 – Compliance of the balance "Return-risk-liquidity" for 2017-2019 with the limits  $\Delta EVA > \Delta CA > \Delta E$ , in thousands of tenge

Indicators	2017	2018	2019
Economic value added ( $\Delta EVA$ )	-1235,25	-3151,49	-13032,97
Current asset growth ( $\Delta CA$ )	-13024	28389	119739
Debt capital growth ( $\Delta E$ )	816670	49570	- 121191
$\Delta EVA > \Delta CA > \Delta E$ conformity to the constraint	$(-1235,25 \text{ thousand tenge}) > (-13024 \text{ thousand tenge}) < 816670 \text{ thousand tenge}$	$(-3151,49 \text{ thousand tenge}) < 28389 \text{ thousand tenge} < 49570 \text{ thousand tenge}$	$(-13032,97 \text{ thousand tenge}) < 119739 \text{ thousand tenge} > -121191 \text{ thousand tenge}$ ;

As can be seen from table 4, the limit on the balance of "return-risk-liquidity" of NAR LLP  $\Delta EVA > \Delta CA > \Delta E$  was fulfilled in 2018, and in 2017 and 2019 the inequality condition was not fulfilled. The indicators of economic value added ( $\Delta EVA$ ), current asset growth ( $\Delta CA$ ), debt capital growth ( $\Delta E$ ) are very closely linked. Because as the debt capital increases, the level of risk increases and the level of liquidity of the enterprise decreases.

Non-fulfillment of NAR LLP's "return-risk-liquidity" balance indicates that the reason for non-compliance with  $\Delta EVA > \Delta CA > \Delta E$  restrictions is due to the high share of debt in liabilities and increased risk. It is important to keep in mind that there are risks in optimizing the capital structure. An entity incurs risks in the course of its operations, both as a result of its operating activities and as a result of its financial activities. Therefore, when losing liquidity, a new issue in the company should not forget about financial stability, including the emergence of financial dependence. And this reduction of financial dependence, liquidity is likely to lead to bankruptcy in the future. Therefore, from the point of view of practical financial management, the task of the financial manager should not only manage capital, but also to find the right ratio of equity and debt capital, reduce the weighted average cost of capital - WACC, as well as avoid financial dependence and strengthen financial stability. Effective use of capital structure will lead to rapid development and successful results in the future [12-14].

In general, summarizing the analysis and research related to the optimization of the capital structure of NAR LLP, which we took as an example, it was determined that the optimization of the capital structure is important for each entity. There are several ways to optimize the capital structure: increase the market value, reduce the weighted average cost of capital, reduce the level of financial risks, increase

profitability. Many decisions will have to be made in the creation of these measures. The process of forming an optimal capital structure of the company should be considered in strategic and current aspects [15].

Determining the optimization of the capital structure is carried out by quantitative and qualitative indicators. The optimal capital structure determines the capital formation of the enterprise of the elements of capital and investments in assets. Quantitative indicators are determined by the protection of the interests of shareholders. Indicates the risk of qualitative indicators, financial risks.

Of course, the problems with the capital structure of a non-financial company have not diminished. The company, which received a reference point in the form of a combination of priority sources of funding, will have to solve new problems. The next step in the analysis is to determine the best way to adjust the actual structure to the optimal structure in accordance with the goals of the movement, taking into account the analysis of available market instruments. Empirical study of the factors influencing the financial decisions of Russian joint stock companies will improve the understanding of current problems and solutions, as well as provide a fundamental basis for planning the capital structure of domestic companies, along with theoretical recommendations [16].

In addition, the company's transition to a cost management system requires the identification of cost drivers (factors). Valuable drivers in a cost management system are used both to set target indicators and to evaluate performance. Capital value determinants must create value and be communicated to all levels of the organization. Cost formation factors should be identified as target indicators and measured on financial and operational indicators. The level of efficiency achieved in determining the value of capital should increase both in the long run.

In conclusion, the lack of universal methods and recommendations that allow to make optimal decisions on the structure of capital, forces managers to follow the rules and practices developed in this case, depending on the factors accepted and individual views on their essence. The results of the study show that, in addition to the cost of the source of funding, the most important factors that managers consider when creating a capital structure are management flexibility, risk, expected returns and their variability, business control and time spent on operations.

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### **КӘСІПОРЫННЫҢ КАПИТАЛ ҚҰРЫЛЫМЫН ОҢТАЙЛАНДЫРУДЫҢ НЕГІЗГІ МӘСЕЛЕЛЕРІ ЖӘНЕ ӘЛЕМДІК ҮЛГІЛЕР**

**Аннотация.** Қаржыны басқару қызметі кәсіпорынның қаржылық қатынасы, ақша ағынының түсуі және қажетті деңгейде капиталмен қамтамасыз етуді қамтитын, қаржылық ресурстарды тиімді қолданудың үдерісі болып саналады. Инвестициялық шешімдер тиімді қаржылық салымдарды орналастыруда қабылданады. Қаржылық шешімдер ақша қаражатын орналастыру, капитал құрамы мен құрылымын анықтау, ұзақ және қысқа мерзімді активтерді қаржыландыру, меншікті және қарыз капиталын оңтайлы әрі тиімді қолдану шешімдеріне арналған. Нарықтағы белгісіздік пен бәсекелестік кезеңінде кәсіпорын капиталын және құрылымын оңтайландыру қаржылық жағдайдың нығаюына әкеледі, ал капитал құрылымын басқарудағы теріс қаржылық шешімдер кәсіпорын жағдайының төмендеуіне әкеледі. Капиталды тиімді басқару нәтижесінде кәсіпорындар қаржылық, инвестициялық және операциялық ақша ағындарының жиынтығын қамтамасыз етеді, бұл қаржылық дамуға оң ықпал етеді. Капитал құрылымын басқаруда қаржылық басқару қаржы тетігінің маңызды бөлігі ретінде ерекше орын алады. Капитал иелерінің табысын арттыру барысында капитал құрылымын басқару тиімділігін жоғарылатудың мәні зор. Нарықтық даму жағдайында кәсіпорындағы қаржылық менеджменттің капиталды басқарудағы оңтайландыру мәселелерін зерттеу мен шаруашылық жүргізуші субъектінің капиталын, қаржыларды басқару шешімдері отандық кәсіпорындардың қаржылық қызметіне ықпалын анықтау маңызды және ұдайы өзекті саналады.

Кәсіпкерлік қызметті қаржыландыру капиталды басқару нысаны ретіндегі қаржылық менеджменттің ақша ағыны мен айналым қаражатының тиімділігін қамтуға бағытталған. Капитал құрылымын басқару – қаржылық қатынастардың тиімді ұйымдастырылуын, ақша ағындарын, барлық қаржылық жағдайдағы ақша ресурстарын анықтайтын арнайы жүйе. Қаржылық менеджментте басқарудың бір бағыты ретіндегі капитал –

компанияның қаржы көзі, яғни табыс әкелетін теңгерім пассив. Кәсіпорын капиталының қолдану жағдайын бағалау, құрылымын талдаудың ақпараттық базасы ретінде қолданылатын қаржылық талдаудың қорытындылары қарастырылған. Нарықтық экономикада бәсекенің дамуына қаржылық менеджменттің капитал құрылымын басқару шешімдерінің рөлі арта түсуде. Қазіргі жағдайда кәсіпорындар қаржылық шешімді басқаруда оның капиталмен қамтылуын, ресурстық әлеуетін, төлем қабілетін анықтауы шарт. Бұл қаржылық қатынасты, кәсіпорын капиталын және құрылымын оңтайландыруды, басқару тиімділігін арттыруды көздейді. Қаржылық жағдай көрсеткіштері табыс пен қаржылық жетістікті анықтаса, капитал құрылымы ресурстарды тиімді орналастыру жағдайын айқындайды. Қаржы менеджментінің капиталды басқару саласын зерттеу, капиталдың құрылымын анықтау мен жетілдіру жүйесі қаржылық серіктестер мен инвестор, кредиторлардың қызығушылығын қанағаттандырады. Кәсіпорынның капитал құрылымын оңтайландыруды зерттеу бүгінгі өзекті мәселесі болып қала береді.

**Түйін сөздер:** кәсіпорын, капитал, салым, қаржы, айналым қаражаты, негізгі құралдар, табыс, шығын, залал, инвестиция, меншікті капитал, қарыз капиталы.

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### ОСНОВНЫЕ ПРОБЛЕМЫ ОПТИМИЗАЦИИ СТРУКТУРЫ КАПИТАЛА ПРЕДПРИЯТИЯ И МИРОВЫЕ МОДЕЛИ

**Аннотация.** Деятельность по управлению финансами предприятия является процессом эффективного использования финансовых ресурсов, включающим в себя финансовые отношения, поступление денежных потоков, обеспечение капиталом на должном уровне. Инвестиционные решения принимаются при эффективном размещении финансовых вложений. Финансовые решения предназначены для размещения денежных средств, определения состава и структуры капитала, финансирования долгосрочных и краткосрочных активов, оптимального и эффективного использования собственного и заемного капитала. В период неопределенности и конкуренции на рынке оптимизация капитала предприятия, его структуры приведет к укреплению финансового положения, а негативные финансовые решения в управлении структурой капитала – к ухудшению состояния предприятия. В результате эффективного управления капиталом предприятия обеспечивают сочетание всех финансовых, инвестиционных и операционных денежных потоков, что положительно сказывается на финансовом развитии. При управлении структурой капитала особое место занимает финансовый менеджмент как важное звено в финансовом механизме. Большое значение имеет повышение эффективности управления структурой капитала и повышение доходности владельцев капитала. В условиях рыночного развития важное место занимает изучение проблем оптимизации управления капиталом в финансовом менеджменте на предприятии и раскрытие влияния на финансовую деятельность отечественных предприятий, решений по управлению финансами и капиталом хозяйствующего субъекта, при этом сохраняя свою актуальность.

Финансирование предпринимательской деятельности направлено на обеспечение эффективности оборотных средств и денежных потоков финансового менеджмента как формы управления капиталом. Управление структурой капитала – особая система, определяющая эффективную организацию финансовых отношений, денежных потоков, денежных ресурсов для всех финансовых состояний. Одним из направлений управления в финансовом менеджменте является капитал – финансовый источник компании, то есть пассивы в балансе, приносящие доход. Рассмотрены результаты финансового анализа, используемые в качестве информационной базы анализа структуры, оценки состояния использования капитала предприятия. В рыночной экономике при развитии конкуренции возрастает роль решений по управлению структурой капитала в финансовом менеджменте. В современных условиях предприятия должны определять обеспеченность капиталом в управлении финансовыми решениями, ресурсный потенциал, платежеспособность. Это предполагает оптимизацию финансовых отношений, капитала предприятия и его структуры, повышение эффективности управления. Если показатели финансового положения отражают доходность, финансовые достижения, то структура капитала определяет эффективное размещение ресурсов. Исследования сферы управления капиталом в финансовом менеджменте, система определения и совершенствования структуры капитала удовлетворяют интерес как для финансовых партнеров, так и для инвесторов и кредиторов. Исследование вопросов оптимизации структуры капитала предприятия на сегодняшний день остается актуальным.

**Ключевые слова:** предприятие, капитал, вклад, финансы, оборотные средства, основные средства, доход, расход, убыток, инвестиции, собственный капитал, заемный капитал.

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**A. B. Amerkhanova**L. N. Gumilyov Eurasian National University, Nur-Sultan, Kazakhstan.  
E-mail: amerkhanova080@gmail.com**ELECTRONIC COMMERCE DEVELOPMENT TRENDS  
IN KAZAKHSTAN**

**Abstract.** In the process of rapid development of information technology and the active use of the Internet for commercial purposes, there is a transformation of the trading system. The active development of information technologies and the Internet creates a fundamentally new environment for business development: the formation of new markets, the emergence of demand for new goods and services, the creation of fundamentally new offers. The widespread use of information technology, along with globalization, is the factor that determines the nature of the development of the modern economy and the problems that need to be studied in the new conditions. Such new phenomena include the development of electronic business, in particular electronic commerce.

Online stores are increasingly being crowded out globally. However, despite the fact that traditional retail purchases, since it has proven itself in a large number of consumers in its developed countries, e-commerce is still at an early stage of development in emerging markets, so it is necessary to disclose what factors contribute to its development. The rapid development of electronic sales of consumer goods in the Republic of Kazakhstan indicates an increase in the number of online stores with a wide range of goods and services. E-commerce in the Republic of Kazakhstan today is one of the most dynamically developing sales formats: the number of Internet users is growing, as well as the number of online store customers.

Already today, the contribution of e-commerce to the economy of Kazakhstan is very significant, therefore, it is necessary to take a balanced approach to the regulation of this sphere. The article explores the main types and models of e-commerce in Kazakhstan. The main factors that influence the processes of the formation of a modern economy, which is more based on the automation of the basic routine operations of buying, selling and providing services to such aggregated economic entities as households, business, banking and the state, are determined and analyzed.

**Key words:** electronic business, electronic commerce, trade, Internet technologies.

In modern conditions, e-commerce is one of the most important directions in the development of the regional economy. Electronic Commerce (e-commerce) is rapidly developing field of the economy, which very quickly penetrates into all areas of human activity.

Currently, e-commerce is in the stage of intensive growth, which will continue for several years. This includes electronic data exchange, electronic money transfer, electronic trading, electronic payment systems, electronic marketing, electronic banking and electronic insurance services.

Today, the economy is focused on using the latest productive technologies and using the achievements of scientific thought. New directions contribute to the emergence of an information environment that replaces the traditional economy. Within such realities, the economic side of society is not only subject to changes in its content, the need for modernization is realized, including in virtual reality [1].

A review of the literature on this topic has shown that many scientific articles have been devoted to the issues of globalization of e-commerce, which confirm the irreversibility of these processes and explore the opening opportunities for the development of e-business: these are electronic stock markets, projects related to trade in consumer goods and industrial goods, and new modern electronic trading platforms for searching for suppliers and contractors to fulfill public and private orders.

However, it should be noted that despite the deep analysis in the scientific literature on the role of e-commerce in the world economy, the factors of e-business development in Kazakhstan have not enough been studied. Probably, this is due to the lack of any government regulation on the field of activities

related to the Internet in general and e-commerce business in particular. Currently, government agencies are beginning to understand the importance of moving major financial transactions to the field of online commerce, and therefore this area requires careful regulation by all authorities. These operations are, of course, related to the following areas: making online payments for services, banking financial transactions, buying and selling consumer goods, organizing private and public procurement, providing public online services, etc [2].

Electronic Commerce (e-commerce) as Internet trade is considered by Western economists, such as D. Amory I. Goldovsky. According to their point of view "e-Commerce refers to the sale of goods, in which at least the organization of demand for goods is carried out through the Internet."

L. S. Klimchenya defines e-Commerce as an integral part of e-business, and describes e-trading as a component of e-Commerce [3].

O. A. Kobelev considers e-Commerce as the main and very important part of e-Commerce, describing it as "business activity for carrying out commercial operations using electronic means of data exchange".

At present, there is no common point of view among scientists on what areas of human activity should be included in the concept of "e-Commerce". As a rule, it is strongly associated with trading operations performed via the Internet. A broader approach assumes that "e-Commerce" refers to any transaction involving the transfer of ownership rights or the right to use goods and services made through the use of electronic means of communication. A special feature of transactions made via the Internet is the identity of the electronic signature and similar accounting documents on paper version [4].

E-Commerce is an integral part of the modern economy. The Internet offers customers more and more opportunities to purchase goods and services, and commercial organizations are increasing their presence in this network when carrying out business activities.

According to the opinion of many analysts and experts, by 2020, the volume of e-Commerce in the traditional B2C segment in the world may amount to 3.2 trillion dollars, and the global B2B (e-Commerce between companies) market will account for 6.7 trillion dollars [5].

More than half of the global digital trade market is occupied by the United States and China. And the share of EU countries account for less than 1% of global purchases. Meanwhile, the global trend is that digital trade is growing faster than traditional trade.

As of the beginning of 2019, the online trading market of the Republic of Kazakhstan was estimated at 287 billion tenge, the total growth for the year was 23.2%.

The share of online trading from the total volume of trade was only 2.9%, which indicates a significant growth potential. The forecast for the overall global growth of the online trading market is 11% per year. At the same time, the potential of Kazakhstan is quite high, given the level of Internet penetration in Kazakhstan. According to World Bank, Ovum (World Cellular Information Service), 76.4% of the populations in Kazakhstan were Internet users in 2017. In this rating, Kazakhstan was in second place after the UK (94.8% of users), even ahead of the US (76.2%), Poland (76%) and Russia (76%). To the positive picture is added the growing number of connections via smart phones: at the end of 2018, there were 18.2 million of them, and by 2022, 25.6 million are forecasted. By this time, smart phones should take up 82% of the total number of mobile connections. As for the non — cash payments market, Kazakhstan ranks first in the world in terms of the growth rate of card payments—from 2013 to 2017, the weighted average growth was 20.5% per year. In absolute terms, both in terms of quantity and amount of money, the share of online payments increased more than twice on average in 2017 and 2018, according to the NBRK [6].

According to experts, the e-Commerce market in Kazakhstan may amount to 928 billion tenge in 2022. That is, according to conservative estimates based on the global average growth, the increase will be 6%. This is more than 1% of Kazakhstan's GDP.

Let's start with the volume of transactions on the Internet for cards. In 2018, it amounted to 2.9 trillion tenge against 1.06 trillion a year earlier. As we can see, the year – on-year growth here is simply staggering without any exaggeration—it is almost threefold. By the way, by the end of December, online transactions account for more than 59% of all non-cash transactions. The dynamics here strongly correlates with the number of transactions on the Internet for cards. The average receipt for transactions on the Internet is also growing, although it is not at the same rate – since the beginning of the year, it is about 35%.

The main factors that have a positive impact on online trading in Kazakhstan are:

–Growth in the number of Internet users. The Internet is becoming faster and more accessible, as the result KazNet's Internet audience is growing.

–Growth in the number and variety of online stores. Online Commerce is looking for a new forms, new products, and a new geography of influence.

–Growth in the number of payment cards. According to the national Bank of the Republic of Kazakhstan, as of February 1, 2011, the number of payment cards is 8.5 million, and the number of holders is 7.8 million, which is 10.2% and 8.7% higher than in 2009 [7].

– Improvement of the legal environment for internet trade. For example, Kazakhstan recently adopted a law on electronic money. Various institutions are being created to help developing the IT sector in Kazakhstan.

The lists of factors that are hindering the growth of online commerce are:

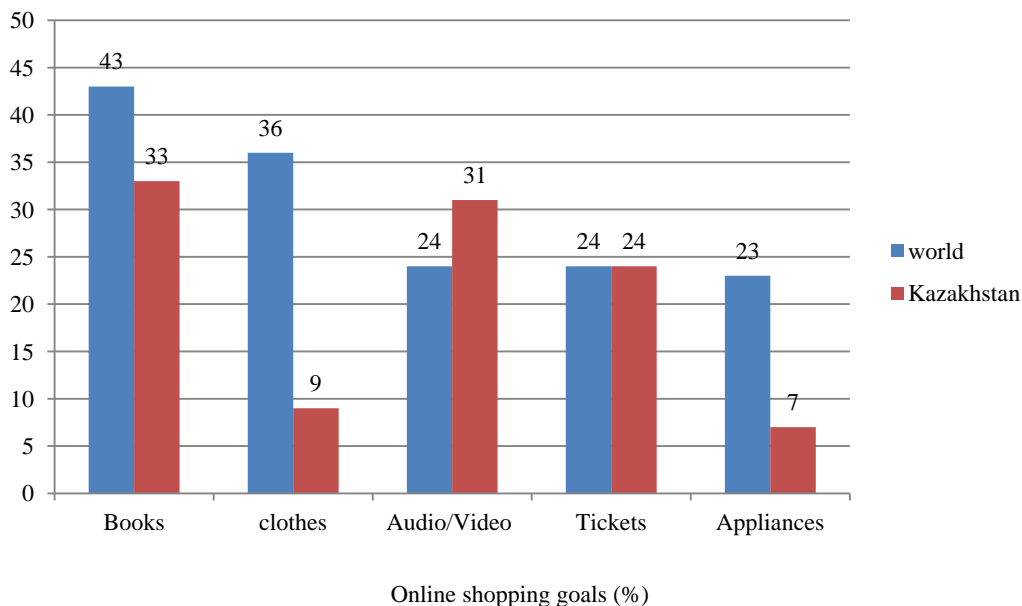
–First of all, users ' distrust for this type of commercial operations, ignorance and unwillingness to use it

– Geographical restrictions of existing online shops in Kazakhstan. Most online stores in Kazakhstan operate only in Almaty and Nur-Sultan.

– Insufficient coordination of financial transaction mechanisms, and lack of understanding of such operations on the part of both the site administration and consumers. This factor is quite natural for a young market, and it should take some time to optimize all operations and processes in this market.

According to the organization responsible for the development of KazNet (JSC "Kazcontent") the most popular purchase goals in Kazakhstan are the following:

- Books (33%),
- Audio/Video (31%),
- Tickets (24%).



Even despite the impressive amount of \$ 240 million, Kazakhstan's e-Commerce market is still at the very beginning of development, and it is far from the indicators of countries with a developed IT sphere. The American e-Commerce market is estimated at about \$ 150 billion, while in Russia this figure was about \$5 billion. If we compare the level of Internet penetration (number of users) with the volume of the Internet Commerce market in Kazakhstan and developed countries, we can see the following figures: Kazakhstan is lagging behind in development of Internet Commerce from the Russian Federation more than 2 times (the size of the market on Internet-trade in Russia per user was about \$100, and in Kazakhstan, about \$42), and from the most developed economy and IT sector in the world (USA) lags almost 20 times (in the US, statistically 1-user Internet account for about \$1 thousand Internet based trade) [8].

E-Commerce has been developing rapidly in recent years, with an increasing number of electronic payment systems such as: Yandex Money, Web money, Qiwi. An increasing number of citizens use online payments instead of cash. There is already active agitation on the part of banks, encouraging them to make purchases using their electronic cards, offering various bonuses for this. Perhaps in the future, the need for cash payments will disappear altogether, and anyone will be able to purchase and pay for the goods and services they need using specialized web services, and money will only exist in electronic form [9].

Certainly, the opportunities for developing e-Commerce in Kazakhstan are far from being exhausted. Today, companies will not be able to compete fully if they do not use the Internet in their activities and e-Commerce tools. Most companies in Kazakhstan understand this situation and they are actively developing this segment, despite the fact that the infrastructure component of e-Commerce is not as well developed in the country (mainly due to uneven settlement, low developed level road infrastructure, climate component and long distances).

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### **ҚАЗАҚСТАНДА ЭЛЕКТРОНДЫҚ КОММЕРЦИЯНЫҢ ДАМУ ТЕНДЕНЦИЯЛАРЫ**

**Аннотация.** Ақпараттық технологиялардың қарқынды дамуы және Интернетті коммерциялық мақсатта белсенді пайдалану процесінде сауда жүйесінің өзгеруі және қайта құрылуы жүреді. Ақпараттық технологиялар мен Интернеттің белсенді дамуы бизнесті дамыту үшін түбегейлі жаңа орта қалыптастырады: жаңа нарықтардың қалыптасуы, жаңа тауарлар мен қызметтерге сұраныстың пайда болуы, түбегейлі жаңа ұсыныстар жасау. Ақпараттық технологияны кеңінен қолдану жаһанданумен қатар қазіргі экономиканың даму сипатын және жаңа жағдайда зерттеуді қажет ететін проблемаларды анықтайтын фактор болып табылады. Мұндай жаңа құбылыстарға электронды бизнестің, атап айтқанда электронды сауданың дамуы жатады.

Интернет-дүкендер бүкіл әлемде толып жатыр. Алайда, дәстүрлі бөлшек сатып алу, дамыған елдердегі тұтынушылардың көпшілігінде өзін дәлелдегендіктен, электронды коммерция дамушы нарықтарда әлі де ерте даму сатысында, сондықтан оның дамуына қандай факторлар ықпал ететінін ашып көрсету қажет. Қазақстан Республикасында тұтынушылық тауарларды электронды сатудың қарқынды дамуы тауарлар мен қызметтердің кең спектрі бар интернет-дүкендер санының өскендігін көрсетеді. Бүгінгі таңда Қазақстан Республикасындағы электрондық коммерция - қарқынды дамып келе жатқан сатылым форматтарының бірі: Интернет пайдаланушыларының саны өсуде, сондай-ақ интернет-дүкендер клиенттерінің саны өсуде.

Қазірдің өзінде электрондық коммерцияның Қазақстан экономикасына қосқан үлесі өте маңызды, сондықтан осы саланы реттеуде теңгерімді көзқарас қажет. Мақалада Қазақстандағы электрондық сауданың негізгі түрлері мен модельдері қарастырылған. Қазіргі кездегі экономиканың қалыптасу процестеріне әсер ететін негізгі факторлар анықталды және талданды, бұл үй шаруашылықтары, бизнес, банк және мемлекет сияқты агрегатталған шаруашылық жүргізуші субъектілерге сатып алу, сату және қызмет көрсету бойынша негізгі күнделікті операцияларды автоматтандыруға негізделген.

**Түйін сөздер:** электрондық бизнес, электрондық коммерция, сауда, интернет-технологиялар.

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### **ТЕНДЕНЦИИ РАЗВИТИЯ ЭЛЕКТРОННОЙ КОММЕРЦИИ В КАЗАХСТАНЕ**

**Аннотация.** В процессе бурного развития информационных технологий и активного использования сети Интернет в коммерческих целях происходит трансформация и преобразование системы торговли. Активное развитие информационных технологий и сети Интернет создают принципиально новые условия для развития бизнеса: формирование новых рынков, возникновение спроса на новые товары и услуги, создание принципиально новых предложений.



Повсеместное использование информационных технологий, наряду с глобализацией является тем фактором, который определяет характер развития современной экономики и тех проблем, которые необходимо исследовать в новых условиях. К таким новым явлениям следует отнести развитие электронного бизнеса, в частности электронной коммерции.

Интернет-магазины все чаще вытесняют в глобальном масштабе. Однако, несмотря на то, традиционные розничные покупки, поскольку что она хорошо зарекомендовала себя в развитых большое количество потребителей приняла его странах, электронная торговля все еще находится на ранней стадии развития на развивающихся рынках, поэтому необходимо раскрыть, какие факторы способствуют ее развитию. Бурное развитие электронных продаж товаров широкого потребления в Республике Казахстан свидетельствует об увеличении количества интернет-магазинов с широким ассортиментом товаров и услуг. Электронная коммерция в Республике Казахстан сегодня является одним из наиболее динамично развивающихся форматов продаж: растет число пользователей Интернета, а также количество клиентов интернет-магазина.

Электронная коммерция как способ использования информационных технологий и Интернета, является стратегическим направлением для дальнейшего развития торговли. Для Казахстана это становится особенно важным в период членства во Всемирной торговой организации и Евразийском экономическом союзе в рамках развития информационного общества и цифровой экономики.

Уже сегодня вклад электронной коммерции (e-commerce) в экономику Казахстана весьма значим, поэтому к регулированию этой сферы необходимо подходить взвешенно. В статье исследуются основные виды и модели электронной коммерции в Казахстане. Определяются и анализируются основные факторы, влияющие на процессы по формированию современной экономики, в большей степени базирующейся на автоматизации основных рутинных операций по покупке, продаже и оказанию услуг таким агрегированным экономическим субъектам, как домашнее хозяйство, бизнес, банковская сфера и государство.

**Ключевые слова:** электронный бизнес, электронная коммерция, торговля, Интернет-технологии.

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